

STN	Vtokové mreže dažďových vpustov a poklopy vstupných šácht na jazdné plochy a pešie zóny. Časť 1: Definície, triedenie, všeobecné zásady navrhovania, funkčné požiadavky a skúšobné metódy.	STN EN 124-1
		13 6301

Gully tops and manhole tops for vehicular and pedestrian areas - Part 1: Definitions, classification, general principles of design, performance requirements and test methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/15

Obsahuje: EN 124-1:2015

Spolu s STN EN 124-2, STN EN 124-3, STN EN 124-4, STN EN 124-5 a STN EN 124-6 ruší
STN EN 124 (13 6301) z decembra 1997

121681

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2015
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

English Version

Gully tops and manhole tops for vehicular and pedestrian areas - Part 1: Definitions, classification, general principles of design, performance requirements and test methods

Dispositifs de couronnement et de fermeture pour les zones
de circulation utilisées par les piétons et les véhicules -
Partie 1 : Définitions, classification, principes généraux de
conception, exigences de performances et méthodes
d'essai

Aufsätze und Abdeckungen für Verkehrsflächen - Teil 1:
Definitionen, Klassifizierung, allgemeine Baugrundsätze,
Leistungsanforderungen und Prüfverfahren

This European Standard was approved by CEN on 12 March 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	4
1 Scope	6
2 Normative references	6
3 Terms and definitions, symbols, units and abbreviated terms	7
3.1 Terms and definitions	7
3.2 Symbols and abbreviated terms	11
4 Classification.....	11
4.1 Basis of the classification.....	11
4.2 Classification in the context of intended use	11
5 Materials	13
5.1 General.....	13
5.2 Cover fillings	13
5.3 Frames in combination with concrete	13
6 Design requirements	13
6.1 Vents in covers	13
6.2 Clear opening of manhole tops for man entry	14
6.3 Depth of insertion	14
6.4 Clearance.....	14
6.5 Compatibility of seatings	15
6.6 Securing of the cover/grating within the frame	15
6.7 Handling of covers and gratings.....	16
6.8 Slot dimensions of gratings	16
6.9 Dirt pans and dirt buckets	17
6.10 Positioning of covers and gratings.....	18
6.11 Flatness of manhole covers and gratings.....	18
6.12 Concaveness of gratings	18
6.13 Surface conditions.....	18
6.14 Manhole tops with sealing features	18
6.15 Frame bearing area.....	18
6.16 Frame depth	18
6.17 Opening angle of hinged covers/gratings.....	19
6.18 Covers with fillings.....	19
7 Performance requirements	19
7.1 Appearance	19
7.2 Load bearing capacity.....	19
7.3 Permanent set.....	19
7.4 Skid resistance.....	20
7.5 Child safety.....	21
8 Testing	22
8.1 General.....	22
8.2 Permanent set (see 7.3).....	22
8.3 Load bearing capacity (see 7.2)	22
8.4 Verification of design requirements	22
8.5 Child safety.....	24
9 Assessment and verification of constancy of performance (AVCP).....	24

Annex A (normative) Permanent set test	25
A.1 Test Samples	25
A.2 Permanent set test load, (F_P)	25
A.3 Apparatus	25
A.4 Procedure	26
Annex B (normative) Test of load bearing capacity	29
B.1 Test samples	29
B.2 Test load (F_T)	29
B.3 Test procedure	29
B.4 Test report	29
Annex C (normative) Test to determine the unpolished skid resistance value (USRV) of manhole covers	30
C.1 General	30
C.2 Apparatus	30
C.3 Calibration of pendulum friction test equipment	30
C.4 Selection of test samples	30
C.5 Test procedure	30
Annex D (normative) Tilt test	33
D.1 General	33
D.2 Test procedure	33
Annex E (normative) Testing of securing of covers/gratings within the frame	36
E.1 General	36
E.2 Vertical pull-out test procedure	37
Annex F (informative) Recommendations for installation	41
F.1 General	41
F.2 Place of installation and selection of appropriate manhole tops and gully tops	41
F.3 Preparations before installation	41
F.4 Operative skill, training and installation equipment	41
F.5 Bedding and packing materials	42
F.6 Condition of supporting chamber	42
F.7 Fixing of manhole tops or gully tops	42
F.8 Post installation check and cleaning	42
Annex G (informative) Explanations on testing of manhole tops with multiple covers and testing the skid resistance	44
G.1 Explanation to A.4	44
G.2 Explanation to 7.4.2	44
Bibliography	45

Foreword

This document (EN 124-1:2015) 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 December 2015 and conflicting national standards shall be withdrawn at the latest by March 2017.

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.

Together with EN 124-2:2015, EN 124-3:2015, EN 124-4:2015, EN 124-5:2015 and EN 124-6:2015, this document supersedes EN 124:1994.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

EN 124, *Gully tops and manhole tops for vehicular and pedestrian areas*, consists of the following parts:

- *Part 1: Definitions, classification, general principles of design, performance requirements and test methods;*
- *Part 2: Gully tops and manhole tops made of cast iron;*
- *Part 3: Gully tops and manhole tops made of steel or aluminium alloys;*
- *Part 4: Gully tops and manhole tops made of steel reinforced concrete;*
- *Part 5: Gully tops and manhole tops made of composite materials;*
- *Part 6: Gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U).*

EN 124-1 is not a harmonized standard but a supporting standard for the harmonized standards EN 124-2, EN 124-3, EN 124-4, EN 124-5 and EN 124-6.

The main changes with respect to the previous edition are listed below:

- a) the standard was split into 6 parts, where Part 1 contains general design and performance requirements and Parts 2 to 6 performance requirements for manhole tops and gully tops made of specific materials;
- b) definition for "securing feature" added;
- c) definition for "locking accessory" added;
- d) skid resistance test added;
- e) tilt test added;
- f) test of securing of covers/gratings within the frame added;
- g) evaluation of conformity changed to AVCP;
- h) recommendations for installation added.

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, Former Yugoslav Republic of Macedonia, 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.

1 Scope

This European Standard is applicable to manhole tops and gully tops with a clear opening up to and including 1 000 mm for covering gullies, manholes and inspection chambers installed in areas subjected to pedestrian and/or vehicular traffic. It specifies definitions, classification, general principles of design, performance requirements and test methods for gully tops and manhole tops according to:

- EN 124-2, for gully tops and manhole tops made of cast iron;
- EN 124-3, for gully tops and manhole tops made of steel or aluminium alloys;
- EN 124-4, for gully tops and manhole tops made of steel reinforced concrete;
- EN 124-5, for gully tops and manhole tops made of composite materials;
- EN 124-6, for gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U).

Part 1 is only applicable in combination with at least one of the standards EN 124-2, EN 124-3, EN 124-4, EN 124-5 and EN 124-6 each of which has this Part 1 as an integral part.

This European Standard is not applicable to:

- gratings/covers as part of prefabricated drainage channels according to EN 1433,
- floor and roof gullies in buildings which are specified in EN 1253 (all parts),
- surface boxes.

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 124-2:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 2: Gully tops and manhole tops made of cast iron*

EN 124-3:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 3: Gully tops and manhole tops made of steel or aluminium alloys*

EN 124-4:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 4: Gully tops and manhole tops made of steel reinforced concrete*

EN 124-5:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 5: Gully tops and manhole tops made of composite materials*

EN 124-6:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 6: Gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U)*

EN 206:2013, *Concrete — Specification, performance, production and conformity*

EN 13036-4, *Road and airfield surface characteristics — Test methods — Part 4: Method for measurement of slip/skid resistance of a surface: The pendulum test*

EN ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 7500-1:2004, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system (ISO 7500-1:2004)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN