

<b>STN</b>	<b>Tvarovky z temperovanej liatiny s koncami pre zverné spoje pre ocel'ové rúry</b>	<b>STN EN 10344</b>  13 8203
------------	---	--

Malleable cast iron fittings with compression ends for steel pipes

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. 04/25

Obsahuje: EN 10344:2024

**140350**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2025  
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii  
v znení neskorších predpisov.

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 10344**

December 2024

ICS 23.040.40

English Version

**Malleable cast iron fittings with compression ends for steel  
pipes**

Raccords à compression en fonte malléable pour tubes  
en acier

Tempergussfittings mit Klemmanschlüssen für  
Stahlrohre

This European Standard was approved by CEN on 15 November 2024.

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, Türkiye 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**

**EN 10344:2024 (E)**

<b>Contents</b>	<b>Page</b>
European foreword.....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	6
4 Types of fittings .....	9
5 Materials.....	9
5.1 General.....	9
5.2 Material of the fitting body .....	9
5.3 Elastomers .....	9
6 Corrosion protection.....	9
6.1 General.....	9
6.2 Hot dip galvanizing.....	10
6.2.1 General.....	10
6.2.2 Chemical composition of the hot dip zinc coating.....	10
6.2.3 Coating mass per surface unit and layer thickness.....	10
6.2.4 Surface conditions of the hot dip zinc coating .....	10
6.3 Non-metallic coating .....	10
6.4 Dangerous substances.....	11
6.4.1 General.....	11
6.4.2 Hot dip zinc coating.....	11
6.4.3 Dispatch conditions of finished fittings .....	11
6.4.4 Non-metallic coating .....	11
7 Design .....	11
7.1 General.....	11
7.2 Geometrical characteristics .....	11
7.3 Minimum bore.....	12
7.4 Pipe threads .....	12
7.5 Surfaces.....	12
7.6 Transition fittings .....	12
7.6.1 Transition with jointing thread .....	12
7.6.2 Transition for polyethylene pipe .....	12
7.6.3 Transition for other pipes.....	12
7.7 Load transmission .....	12
8 Performance requirements.....	13
8.1 Yield strength .....	13
8.2 Tightness.....	13
8.2.1 Internal pressure strength .....	13
8.2.2 Leak tightness.....	13
8.3 Pressure and temperature limits .....	13
8.4 Dimensional tolerances .....	14
8.5 Reaction to fire.....	14
8.6 Durability .....	14
8.6.1 Durability of fittings.....	14
8.6.2 Durability of elastomeric seals .....	14
8.7 Dangerous substances.....	14

<b>9</b>	<b>Test requirements.....</b>	<b>14</b>
<b>9.1</b>	<b>General .....</b>	<b>14</b>
<b>9.2</b>	<b>Component test .....</b>	<b>16</b>
<b>9.2.1</b>	<b>Testing of malleable cast iron .....</b>	<b>16</b>
<b>9.2.2</b>	<b>Testing of plastic components .....</b>	<b>16</b>
<b>9.2.3</b>	<b>Testing of sealing materials.....</b>	<b>17</b>
<b>9.2.4</b>	<b>Testing of hot dip zinc coating .....</b>	<b>17</b>
<b>9.2.5</b>	<b>Analysis of polycyclic aromatic hydrocarbons .....</b>	<b>17</b>
<b>9.2.6</b>	<b>Testing of non-metallic coating .....</b>	<b>17</b>
<b>9.2.7</b>	<b>Material tests.....</b>	<b>17</b>
<b>9.2.8</b>	<b>Visual inspection.....</b>	<b>17</b>
<b>9.2.9</b>	<b>Geometrical characteristics.....</b>	<b>18</b>
<b>9.2.10</b>	<b>Leak tightness of fitting body .....</b>	<b>18</b>
<b>9.3</b>	<b>Assembly tests .....</b>	<b>18</b>
<b>9.3.1</b>	<b>General .....</b>	<b>18</b>
<b>9.3.2</b>	<b>Leak tightness under internal pressure .....</b>	<b>18</b>
<b>9.3.3</b>	<b>Leak tightness under pressure cycling .....</b>	<b>19</b>
<b>9.3.4</b>	<b>Leak tightness after repeated movements .....</b>	<b>19</b>
<b>9.3.5</b>	<b>Resistance to pull-out.....</b>	<b>22</b>
<b>9.3.6</b>	<b>Resistance to vibrations.....</b>	<b>23</b>
<b>9.3.7</b>	<b>Leak tightness after temperature changes.....</b>	<b>23</b>
<b>9.3.8</b>	<b>Behaviour in case of negative pressure (vacuum) .....</b>	<b>23</b>
<b>9.3.9</b>	<b>Leak tightness under high temperature for gas installation inside of buildings .....</b>	<b>24</b>
<b>9.3.10</b>	<b>Surface protection – Testing by salt spray test.....</b>	<b>24</b>
<b>10</b>	<b>Assessment of conformity .....</b>	<b>24</b>
<b>11</b>	<b>Designation of fittings.....</b>	<b>25</b>
<b>11.1</b>	<b>Elements of the designation for ordering.....</b>	<b>25</b>
<b>11.2</b>	<b>Additional notes on designation of size.....</b>	<b>25</b>
<b>11.3</b>	<b>Examples of designation .....</b>	<b>25</b>
<b>12</b>	<b>Marking .....</b>	<b>26</b>
	<b>Annex A (normative) Surface protection - Salt spray test.....</b>	<b>27</b>
	<b>Bibliography .....</b>	<b>28</b>

**EN 10344:2024 (E)****European foreword**

This document (EN 10344:2024) has been prepared by Technical Committee CEN/TC 459 “ECISS - European Committee for Iron and Steel Standardization”<sup>1</sup>, the secretariat of which is held by AFNOR.

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 June 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

---

<sup>1</sup> Through its sub-committee CEN/TC 459/SC 10 “Steel tubes, and iron and steel fittings” (secretariat: UNI).

## 1 Scope

This document specifies the requirements for the design, performance and testing of fittings made of malleable cast iron (see also Clause 5, Materials) with compression ends for steel pipes.

This document applies to steel piping systems for different application fields, such as supply and distribution of gas, water for general purposes (e.g. irrigation) as well as for human consumption, aqueous liquids and pressurized air.

This document contains requirements and tests relating to compression fittings which can be connected to smooth walled steel pipes. The fittings can also incorporate other types of connection, such as threaded ends in conformance with EN 10226-1, flanged ends, compression ends for connection for pipes other than steel, and can also take on various structural shapes, such as straight adaptor piece, elbow or T-piece. Their range of sizes covers nominal sizes DN 10 to DN 100 (fitting size 3/8 to 4).

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 549, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 682, *Elastomeric Seals — Materials requirements for seals used in pipes and fittings carrying gas and hydrocarbon fluids*

EN 806-2, *Specification for installations inside buildings conveying water for human consumption — Part 2: Design*

EN 1562, *Founding — Malleable cast irons*

EN 1775:2007, *Gas supply — Gas pipework for buildings — Maximum operating pressure less than or equal to 5 bar — Functional recommendations*

EN 10204, *Metallic products — Types of inspection documents*

EN 10216-1, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 1: Non-alloy steel tubes with specified room temperature properties*

EN 10217-1, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 1: Electric welded and submerged arc welded non-alloy steel tubes with specified room temperature properties*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads — Dimensions, tolerances and designation*

EN 10226-3, *Pipes threads where pressure tight joint are made on the threads — Part 3: Verification by means of limit gauges*

EN 10255, *Non-alloy steel tubes suitable for welding and threading — Technical delivery conditions*

EN 10284, *Malleable cast iron fittings with compression ends for polyethylene (PE) piping systems*

**EN 10344:2024 (E)**

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

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

EN ISO 228-2, *Pipe threads where pressure-tight joints are not made on the threads — Part 2: Verification by means of limit gauges (ISO 228-2)*

EN ISO 1460, *Metallic coatings — Hot dip galvanized coatings on ferrous materials — Gravimetric determination of the mass per unit area (ISO 1460)*

EN ISO 2178, *Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method (ISO 2178)*

EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN ISO 19892, *Plastics piping systems — Thermoplastics pipes and fittings for hot and cold water — Test method for the resistance of joints to pressure cycling (ISO 19892)*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**