



SLOVENSKI STANDARD
SIST EN 1775:1998/A1:2003
01-januar-2003

Gas supply - Gas pipework for buildings - Maximum operating pressure up to and including 5 bar - Functional recommendations

Gasversorgung - Gasleitungsanlagen für Gebäude - Maximal zulässiger Betriebsdruck bis einschließlich 5 bar - Funktionale Empfehlungen

Alimentation en gaz - Tuyauteries (de gaz pour les bâtiments) - Pression maximale de service inférieure ou égale a 5 bar - Recommandations fonctionnelles

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(standard in preparation)

Ta slovenski standard je istoveten z: EN 1775:1998/A1:2000

[SIST EN 1775:1998/A1:2003](https://standards.iteh.ai/catalog/standards/sist/701c452d-f1b0-4b95-961e-70dccc660a56/sist-en-1775-1998-a1-2000)

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ICS:

91.140.40 Sistemi za oskrbo s plinom Gas supply systems

SIST EN 1775:1998/A1:2003 **en**

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English version

Gas supply - Gas pipework for buildings - Maximum operating pressure up to and including 5 bar - Functional recommendations

Alimentation en gaz - Tuyauteries de gaz pour les bâtiments - Pression maximale de service inférieure ou égale à 5 bar - Recommandations fonctionnelles

Gasversorgung - Gasleitungsanlagen für Gebäude - Maximal zulässiger Betriebsdruck bis einschließlich 5 bar - Funktionale Empfehlungen

This amendment A1 modifies the European Standard EN 1775:1998; it was approved by CEN on 18 June 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents	Page
Foreword	3
2 Normative references	4
3 Definitions	4
3.2 Definitions relating to the gas installation	4
3.4 Definitions relating to jointing methods	5
3.8 Definitions relating to assembling processes for metallic materials	5
4 Design	6
4.1 General	6
4.3 Elements of pipework	7
4.4 Installation	7
5 Construction	7
5.2 Pipework elements and jointing methods	7
5.5 Means of isolation	8
5.6 Regulators and meters	8
Annex B (informative) Construction of welded, brazed, soldered joints and polyethylene fusion joints	9
B.1 General	9
B.2 Welding of steel	10
B.3 Brazing and soldering of copper and copper alloys	12
B.4 Fusion jointing of polyethylene	14
Bibliography	17

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[SIST EN 1775:1998/A1:2003](https://standards.iteh.ai/catalog/standards/sist/701c452d-flb0-4b95-961e-76dcc0660d36/sist-en-1775-1998-a1-2003)
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Foreword

This Amendment EN1775:1998/A1:2000 to EN 1775:1998 has been prepared by Technical Committee CEN/TC 234 "Gas supply", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 1775:1998 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2001, and conflicting national standards shall be withdrawn at the latest by January 2001.

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

This Amendment A1 gives additional recommendations for commercial, public access and high rise buildings.

This Amendment A1 also provides recommendations on welded, brazed soldered joints and on polyethylene fusion joints.

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2 Normative references

Add the following references :

EN 1057, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications.*

EN 10242:1994, *Threaded pipe fitting in malleable cast iron.*

3 Definitions

3.2 Definitions relating to the gas installation

Add the following definitions :

3.2.10

location accessible to the public

an area in a building where the public can be admitted

NOTE Access can be free or require payment or authorization.

3.2.11

residential building

a building which contains one or more dwelling places but excludes areas intended principally for professional activities and locations accessible to public

3.2.12

public access building

a building containing principally areas where the public can be admitted

EXAMPLE Such a building can be a school, a hospital, a movie theatre, a railway station, a shop.

NOTE The public may not be given access to all parts of the building (e.g. operating theatres of a hospital, etc.).

3.2.13

commercial building

a building containing only areas reserved for professional activities, with the exception of industrial production plants

EXAMPLE Such a building can be an office block, a repair shop.

3.2.14

mixed use building

a building containing more than one of the following locations:

- residential locations;
- public access locations;
- commercial locations

NOTE Partial occupancy of one or more dwellings in a residential building by professional activities such as doctor's surgeries, dental surgeries, etc. does not mean that the corresponding building is classified as a mixed use building.

3.2.15

high rise building

a building of which the height from the floor of the highest occupied level to ground level is:

- for a residential building greater than 50 m;
- any other building, excluding industrial production plant, greater than 30 m.

NOTE The safety of the gas installation is related to the use of the building and the vertical height of the sections of pipework.

3.2.16

duct

a space specifically designed and constructed for the passage of building services

EXAMPLE Building services include for example gas pipework, water systems, power and telecommunication cables.

3.4 Definitions relating to jointing methods

Add the following definitions:

3.4.5

brazed joint

joint formed by brazing

3.4.6

welded joint

joint formed by welding

3.4.7

electrofusion joint

joint formed between polyethylene components using fittings which have an integrated electric heating element

3.4.8

butt fusion joint

joint formed between polyethylene components where the two pipe ends are heated and brought together to be fused directly without the use of a separate fitting or filler material

Add the following subclause :

3.8 Definitions relating to assembling processes for metallic materials

3.8.1

welding

union of two or more parts by heat or pressure or a combination of both, such that the materials form a continuity. A filler metal having a melting point similar to that of the materials to be welded may be used

[EN 1057]¹⁾

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3.8.2

fusion welding

welding involving localized melting without application of force and with or without the addition of filler metal

3.8.3

arc welding

fusion welding in which heat for welding is obtained from an electric arc

1) Adopted from the International Institute of Welding (IIW)

3.8.4

metal-arc welding

arc welding using a consumable electrode

3.8.5

shielded metal-arc welding

metal arc-welding using a consumable covered electrode

3.8.6

gas metal-arc welding

arc welding using a consumable wire electrode in which the shielding is provided by an inert gas (MIG) or an active gas (MAG)

3.8.7

gas welding

fusion welding in which the heat for welding is produced by the combustion of a fuel with oxygen gas

3.8.8

oxy-acetylene welding

gas welding in which the fuel gas is acetylene

3.8.9

soldering and brazing²⁾

operations in which metal parts are joined by means of capillary action of a filler metal in the liquid state with a melting temperature lower than that of the parts to be joined and wetting the parent metal(s), which does not participate in the making of the joint

[EN 1057]

3.8.9.1

brazing; hard soldering

jointing by means of capillary action of a filler metal having a melting (liquidus) temperature higher than 450 °C

[EN 1057]

3.8.9.2

soldering; soft soldering

jointing by means of capillary action of a filler metal having a melting (liquidus) temperature lower than 450 °C

[EN 1057]

4 Design

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4.1 General

Add the following new subclause : [SIST EN 1775:1998/A1:2003](https://standards.iteh.ai/catalog/standards/sist/701c452d-flb0-4b95-961e-76dcc0660d36/sist-en-1775-1998-a1-2003)

4.1.3 In public access buildings, commercial buildings, high rise buildings and mixed use buildings, the position of the pipework buried in floors and walls shall be shown on site drawings, which shall be kept up to date.

NOTE This is optional for residential locations situated in mixed use buildings.

and change the numbering of the two subsequent subclauses accordingly.

2) Based upon the definitions in ISO 857.

4.3 Elements of pipework

Add the following new subclause :

4.3.4 For public access buildings, commercial buildings and high rise buildings, the type, number and strength of pipework supports shall be appropriate to the pipework materials.

NOTE 1 The pressure test procedure (e.g. a hydrostatic test) can also affect spacing and strength of supports.

NOTE 2 In high rise buildings where the MOP is above 2 bar, the use of steel pipes should be considered.

4.4 Installation

4.4.1 Sizing

Add the following new subclause :

4.4.1.6 In high rise buildings, consideration shall be given to the change in pressure due to the height of the building, in particular for low pressure pipework.

NOTE Following formula can be used :

$$\Delta p = K(1 - d) \Delta H$$

where:

K is equal to 0,123 millibars per metre;

Δp is the pressure change due to altitude, in millibars;

ΔH is the altitude change, in metres (negative when pipe leads to lower level);

d is the density of gas relative to air (dimensionless).

and change the numbering of the two subsequent subclauses accordingly.

5 Construction

5.2 Pipework elements and jointing methods

5.2.2 Threaded joints **iTeh STANDARD PREVIEW**

Insert the following new subclause: (standards.iteh.ai)

5.2.2.3 Threaded pipe fittings made in malleable cast iron shall comply with EN 10242:1994, as appropriate.

and change the numbering of the two subsequent subclauses accordingly.

5.2.3 **Change heading to:**

Welded, brazed, soldered and fusion joints

Add the two following new notes:

NOTE 1 Annex B contains guidelines on welded, brazed, soldered joints and polyethylene fusion joints.

NOTE 2 The application of soldered joints may not be permitted in some countries.

5.5 Means of isolation

5.5.1 *Add the following paragraphs:*

In high rise buildings, a means of isolation shall be located in the pipework outside the building.

For public access buildings or commercial buildings, installation of such a means shall be considered.

5.6 Regulators and meters

5.6.2 *Insert additional paragraphs :*

When installed in communal parts inside high rise buildings, meters and regulators shall be:

— either resistant to high temperatures;

NOTE See 4.2.

— or fitted in spaces which provide protection in the event of fire.

They can also be located outside the building.

Delete Annex B, insert the following annexes:

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Annex B (informative)

Construction of welded, brazed, soldered joints and polyethylene fusion joints

B.1 General

This informative annex sets down recommendations for jointing procedures, qualification of personnel and choice of materials relative to the good execution of joints made by welding of steel, soldering and brazing of copper and its alloys, and by fusion of polyethylene.

The general recommendations of this clause shall be applied to all welded, brazed, soldered joints and polyethylene fusion joints. In addition, specific recommendations given in B.2, B.3 and B.4 shall be applied as relevant to the jointing methods.

B.1.1 Operatives

Operatives shall be trained to perform joints fit for purpose.

Update training should take place when necessary, and particularly for those operatives who make joints infrequently.

Training should be performed by instructors who have wide practical and theoretical experience in the procedures. Instructors should keep themselves up-to-date with the latest good practices, they should be able to analyse the causes of failures, and capable of organizing the resultant necessary additional training.

Training can comprise 'on the job' instruction under the direction of competent operatives.

Training should incorporate the following matters, depending on the jointing methods, as a minimum:

- pipes and fittings materials and thicknesses;
- visual inspection of joints;
- basics of destructive and non-destructive testing;
- selection, handling, storage and use of pipes, fittings, fluxes, filler rods and gases as appropriate;
- suitable equipment (welding and fusion machines, clamps, ancillary tooling);
- effect of weather conditions on joint quality;
- preparation and cleanliness of pipe ends and fittings;
- personal, third party and environmental safety.

Training should give the operative:

- the ability to consistently perform satisfactory joints in compliance with corresponding procedures;
- an awareness of and ability to implement safety procedures;
- an appreciation of what produces unsatisfactory joints.

Evidence should be provided that training is appropriate for the sitework to be executed.