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**Tlačna oprema - Terminologija in simboli - Tlak, temperatura, prostornina**

Pressure equipment - Terminology and symbols - Pressure, temperature, volume

Druckgeräte - Terminologie und Symbole - Druck, Temperatur, Volumen

Équipement sous pression - Terminologie et symboles - Pression, température, volume

**Ta slovenski standard je istoveten z: EN 764:1994**[SIST EN 764:1997](https://standards.iteh.ai/catalog/standards/sist/0462a276-59d6-41e0-8d11-298476fe0358/sist-en-764-1997)<https://standards.iteh.ai/catalog/standards/sist/0462a276-59d6-41e0-8d11-298476fe0358/sist-en-764-1997>**ICS:**

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EUROPEAN STANDARD

EN 764

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 1994

UDC 621.642-98:66.0:532.11:536.5:531.731:001.4

Descriptors: Pressure equipment, pressure, temperature, volume, vocabulary

English version

**Pressure equipment - Terminology and symbols -  
Pressure, temperature, volume**

Equipement sous pression - Terminologie et  
symboles - Pression, température, volume

Druckgeräte - Terminologie und Symbole - Druck,  
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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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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### Foreword

SIST EN 764:1997

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According to the resolution BTS 2 44/1990, this European Standard was prepared by the Technical Committee CEN/TC 54 "Unfired pressure vessels" of which the secretariat is held by BSI.

CEN/TC 54 has decided to submit the final draft for formal vote by its resolution 19/1992. The result was positive.

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 January 1995, and conflicting national standards shall be withdrawn at the latest by June 1997.

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



## 1 Scope

This European Standard defines the basic terminology and symbols to be used for pressure equipment with regard to pressure, temperature and volume, except for simple pressure vessels in accordance with European Union directive 87/404/EEC and related standards.

NOTE 1: In addition to terms used in the three official CEN languages (English, French and German), this European standard gives in annex A the equivalent terms in the Danish, Dutch, Finnish, Greek, Icelandic, Italian, Norwegian, Portuguese, Spanish, and Swedish languages; these are published under the responsibility of the respective member bodies for those countries. However, only the terms and definitions given in the official languages can be considered as EN terms and definitions.

NOTE 2: This European standard does not stipulate the units to be used for the quantities defined. These shall be taken from the application standard.

## 2 Normative reference

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

ISO 31-0 Quantities and units - General principles

## 3 General

3.1 All fluid pressures referred to (except 4.4, 4.6 and 4.13) are relative to atmospheric pressure (i. e. they are gauge pressures). As a consequence, vacuum is designated by a negative value.

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3.2 Symbols are given in the form required by ISO 31-0. Upper case letters may also be used.

3.3 Additional suffixes, such as min. or max., may be necessary.

## 4 Definitions and symbols

The following definitions and symbols apply to pressure equipment:

4.1 **pressure equipment:** equipment intended to maintain a pressure difference between distinct environments.

4.2 **compartment:** a single fluid space within a unit of pressure equipment.

4.3 **component:** a part of pressure equipment or assembly which can be considered as an individual item for the calculation.

4.4 **absolute pressure:** pressure for which the zero value is associated with absolute vacuum.

**4.5 gauge pressure:** pressure for which the value is equal to the algebraic difference between the absolute pressure and atmospheric pressure.

Thus defined, gauge pressure may be negative for a compartment "in partial vacuum" or "under vacuum" for example.

**4.6 differential pressure:** pressure for which the algebraic value is equal to the difference of pressure on both sides of a component.

NOTE: The gauge pressure is a particular case of the differential pressure.

**4.7 operating pressure  $p_o$ :** the fluid pressure occurring during specified operating conditions.

**4.8 operating temperature  $t_o$ :** the fluid temperature occurring during specified operating conditions.

**4.9 allowable pressure  $p_a$ :** a limit to the operating pressure normally at the top<sup>1)</sup> of each compartment of the pressure equipment, specified for safety reasons.<sup>2), 3)</sup>

**4.10 allowable temperature  $t_a$ :** a limit to the operating temperature, specified for safety reasons.<sup>2), 3)</sup>

**4.11 design pressure  $p_d$ :** the pressure at the top<sup>1)</sup> of each compartment of the pressure equipment chosen for the derivation of the calculation pressure of each component.<sup>4)</sup>

**4.12 design temperature  $t_d$ :** the temperature chosen for the derivation of the calculation temperature of each component.<sup>4)</sup>

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**4.13 calculation pressure  $p_c$ <sup>5)</sup>:** the differential pressure used for the purpose of calculations of a component.<sup>5)</sup>

<sup>1)</sup> This location is specified as a reference point to account for the effects of static head of the contained fluid. There may be cases where another location needs to be specified.

<sup>2)</sup> The locations of limiting pressures and/or temperatures are not necessarily co-incident.

<sup>3)</sup> Depending on the operating conditions, one or more allowable pressure/temperature sets may be specified, which may include sets for normal and exceptional conditions.

<sup>4)</sup> During the life of the pressure equipment the loadings are time dependent and determined by the combined effects of pressure, temperature and other factors. For complex equipment many such loadings may need consideration, governing loadings are not necessarily those which act at the same time and the same location. When cumulative damage may occur, e. g. in the creep range, the choice of design conditions may be affected.

<sup>5)</sup> Depending on the component and the operating conditions the design process may be governed by one or more sets of calculation pressures/temperatures.

<sup>6)</sup> In formulas for calculations the suffix "c" may be omitted.

- 4.14 calculation temperature  $t_c$ :** the temperature used for the purpose of calculations of a component.<sup>5)</sup>
- 4.15 test pressure  $p_t$ :** the pressure to which the equipment is subjected for test purposes.
- 4.16 test temperature  $t_t$ :** the temperature at which the pressure test of the pressure equipment is carried out.
- 4.17 accumulation:** the maximum amount by which the pressure may exceed the allowable pressure  $p_s$ , while a safety device is operating.
- 4.18 volume  $V$ :** the internal volume of a compartment, including the volume of nozzles to the first connection (flange, coupling, weld) and excluding the volume of internal structures (e.g. baffles, agitators).

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<sup>5)</sup> See page 4

## Annex A (informative)

### Glossary

Language symbols are according to ISO 639:

da: Danish  
de: German  
el: Greek  
en: English  
es: Spanish  
fi: Finnish  
fr: French  
is: Icelandic  
it: Italian  
nl: Dutch  
no: Norwegian  
pt: Portuguese  
sv: Swedish

to 4.1:

da: trykbærende udstyr  
de: Druckgerät  
el: εξοπλισμός πίεσης  
en: pressure equipment  
es: aparato a presión  
fi: paineastia  
fr: équipement sous pression  
is: þrýstítæki  
it: apparecchio a pressione  
nl: druk-apparaat  
no: trykkipækjent utstyr  
pt: equipamento sob pressão  
sv: tryckbärande anordning

to 4.2:

da: tryktrum  
de: Druckraum  
el: διαμέρισμα  
en: compartment  
es: compartimento  
fi: tila  
fr: compartiment  
is: þrýstirými  
it: camera  
nl: ruimte  
no: trykkrom  
pt: compartimento  
sv: trycktrum

to 4.3:

da: komponent  
de: Bauteil  
el: συστατικό  
en: component  
es: componente  
fi: osakokonaisuus  
fr: composant  
is: þrýstihluti  
it: componente  
nl: onderdeel  
no: komponent  
pt: componente  
sv: komponent

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## to 4.4:

da: absolut tryk  
de: Absolutdruck  
el: απόλυτη πίεση  
en: absolute pressure  
es: presión absoluta  
fi: absoluutinen paine  
fr: pression absolue  
is: raunþrýstingur  
it: pressione assoluta  
nl: absolute druk  
no: absolutt trykk  
pt: pressão absoluta  
sv: absoluttryck

## to 4.6:

da: differenstryk  
de: Differenzdruck  
el: διαφορική πίεση  
en: differential pressure  
es: presión diferencial  
fi: paine-ero  
fr: pression différentielle  
is: þrýstimunur  
it: pressione differenziale  
nl: verschildruk  
no: differensialtrykk  
pt: pressão diferencial  
sv: differenstryck

to 4.7:  $p_o$ 

da: driftstryk  
de: Arbeitsdruck  
el: πίεση λειτουργίας  
en: operating pressure  
es: presión de servicio  
fi: käyttöpain  
fr: pression en service  
is: vinnuþrýstingur  
it: pressione di esercizio  
nl: gebruiksdruk  
no: driftstrykk  
pt: pressão de serviço  
sv: drifttryck

## to 4.5:

da: overtryk  
de: Überdruck  
el: πίεση μετρητή  
en: gauge pressure  
es: presión relativa  
fi: ylipaine  
fr: pression effective  
is: yfirþrýstingur  
it: pressione effettiva  
nl: overdruk  
no: overtrykk  
pt: pressão relativa  
sv: övertryck

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to 4.8:  $t_o$ 

da: driftstemperatur  
de: Arbeitstemperatur  
el: θερμοκρασία λειτουργίας  
en: operating temperature  
es: temperatura de servicio  
fi: käyttölämpötila  
fr: température en service  
is: vinnuhiti  
it: temperatura di esercizio  
nl: gebruikstemperatuur  
no: driftstemperatur  
pt: temperatura de serviço  
sv: drifttemperatur