



SLOVENSKI STANDARD
kSIST FprEN 15727:2009

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Ventilation for buildings - Ducts and ductwork components, leakage classification and testing

Lüftung von Gebäuden - Luftleitungen und Luftleitungsbauteile, Klassifizierung entsprechend der Luftdichtheit und Prüfung

Ventilation des bâtiments - Composants de réseaux, classification de l'étanchéité et essais

Ta slovenski standard je istoveten z: FprEN 15727

ICS:

91.140.30 Ú!^: !æ^çæ) á Á|ã æ\ã Ventilation and air-conditioning
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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (FprEN 15727:2009) has been prepared by Technical Committee CEN/TC 156 “Ventilation for buildings”, the secretariat of which is held by BSI.

This document is currently submitted to the Unique Acceptance Procedure.

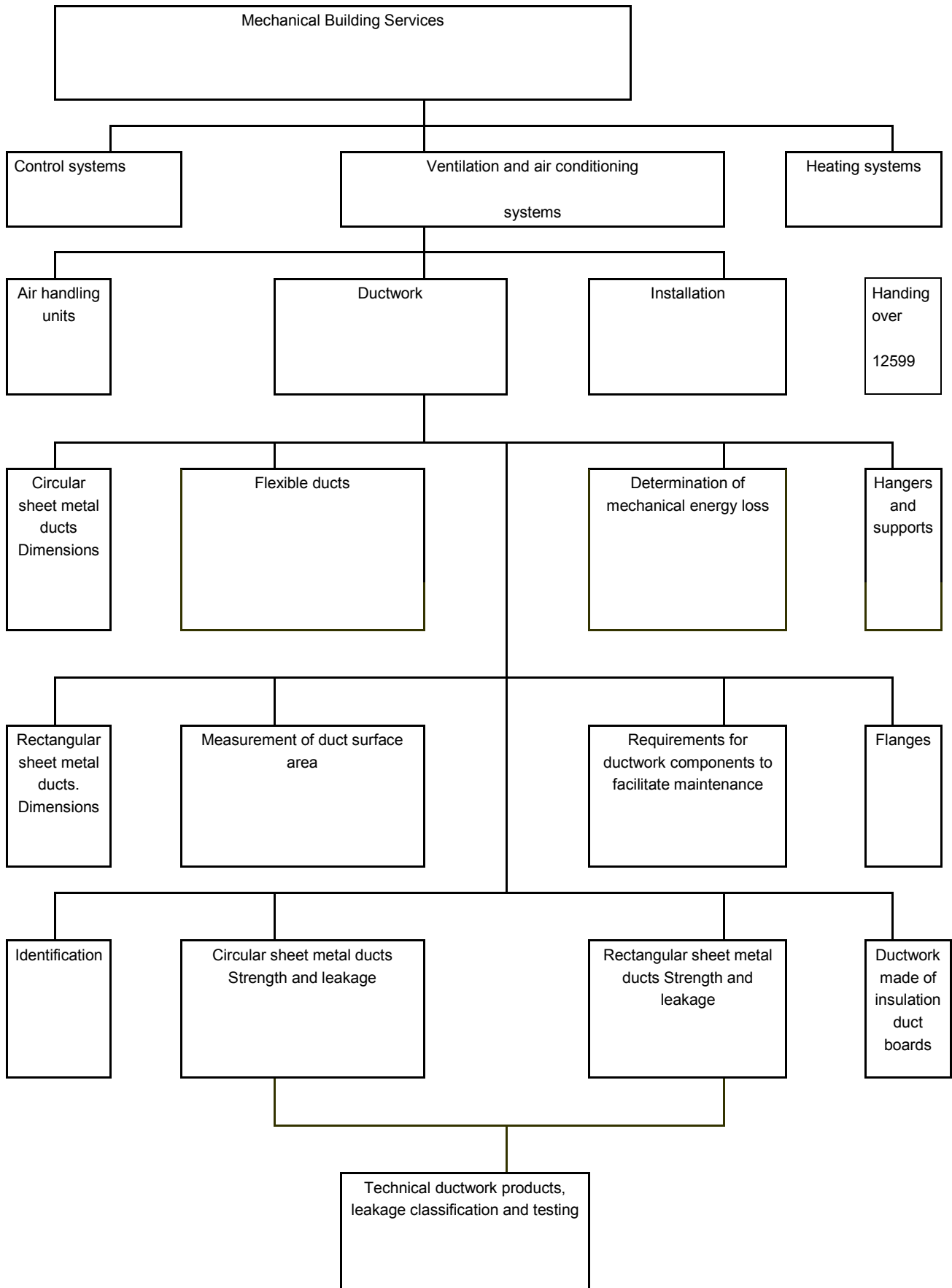


Figure 1 – The position of this standard in the field of mechanical services is shown in figure

1 Scope

This document applies to technical ductwork products, intended for installation in ductwork conforming to EN 1505 and EN 1506, used in air conditioning and ventilation systems defined in the scope of CEN/TC 156. This document specifies the leakage requirements for technical ductwork products, i.e. components in the ductwork that has more functions than conveying air, such as sound attenuators, filter boxes and duct fans etc.

The following products are not within the scope of this document:

- Ductwork components like bends, reducers and T-pieces are not within the scope of this document. EN 12237 and EN 1507 apply.
- Flexible ducts according to EN 13180.
- Ducts made of insulation ductboards according to EN 13403.
- Dampers according to EN 1751.
- Air handling units according to EN 1886.

This document is a parallel standard to EN 12237, EN 1507 and EN 1751, based on the same leakage classification.

2 Normative references

The following referenced documents are indispensable for the application 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 1507, *Ventilation for buildings — Sheet metal air ducts with rectangular section — Requirements for strength and leakage*

EN 12237, *Ventilation for buildings — Ductwork — Strength and leakage of circular sheet metal ducts*

EN 12792:2003, *Ventilation for buildings — Symbols, terminology and graphical symbols*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12792:2003, together with the following, apply.

3.1.1

nominal diameter d_n

nominal diameter according to EN 1506 for ductwork of circular cross-section

3.1.2

side lengths a and b

side lengths according to EN 1505 for a ductwork of rectangular cross-section

FprEN 15727:2009 (E)**3.1.3****total joint length L**

total length of the periphery of the joints of technical products

3.1.4**product surface area A_p**

actual external envelope surface area for the technical ductwork product under test, excluding possible flanges and insertion parts

3.1.5**virtual product surface area A_c**

quantity used for calculation of the permitted leakage for the product under test according to this document

NOTE A_c may deviate from the product surface area.

3.1.6**test pressure p_{test}**

static pressure difference between the pressure within the product to be tested and the pressure of the ambient air

3.1.7**static pressure limit p_s**

maximum design operating pressure for the ductwork according to its air tightness class

NOTE The static pressure limits, positive and negative, for the appropriate air tightness class are specified in Table 3 and Table 4.

3.1.8**air leakage rate q_{vl}**

air leakage flow rate of the product under test

3.1.9**measured air leakage rate $q_{vlmeasured}$**

air leakage flow rate before correction

3.1.10**air temperature t**

temperature of the ambient air during the test

3.1.11**atmospheric pressure p_a**

barometric pressure of ambient air during the test

3.1.12**air leakage factor f_c**

leakage flow rate per unit surface area of the product

3.1.13**air leakage limit f_{max}**

maximum permitted leakage factor for the product according to its air tightness class

3.1.14**technical ductwork product**

component, including its connection pieces, installed in the ductwork that has one or more functions more than conveying air

NOTE 1 Sound attenuators, filter boxes and duct fans are typical examples of technical ductwork products and can be tested separately according to this standard. These technical ductwork products are also a part of the ductwork and can be included in the tests in duct systems according to EN 12237 and EN 1507.