BRITISH STANDARD

BS EN
12220:1998

Ventilation for buildings — Ductwork — Dimensions of circular flanges for general ventilation

The European Standard EN 12220:1998 has the status of a British Standard

ICS 91.140.30

National foreword

This British Standard is the English language version of EN 12220:1998.

The UK participation in its preparation was entrusted to Technical Committee RHE/2, Air distribution and air diffusion, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 5 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 August 1998

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12220

April 1998

ICS 23.040.60; 91.140.30

Descriptors: Buildings, ventilation, air conditioning, aeraulic pipes, metal plates, pipe flanges, dimensions

English version

Ventilation for buildings — Ductwork — Dimensions of circular flanges for general ventilation

Réseau de conduits — Brides circulaires pour ventilation générale — Dimensions

Lüftung von Gebäuden — Luftleitungen — Maße von runden Flanschen für allgemeine Lüftungszweche

This European Standard was approved by CEN on 13 February 1998.

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CEN

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

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

Ref. No. EN 12220:1998 E

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 156, *Ventilation for buildings*, the secretariat of which is held by BSI.

This standard is one of a series of standards for ductwork used for ventilation and air conditioning of buildings for human occupancy.

The position of this standard in the field of the mechanical building services is shown in Figure 1.

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 October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

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.

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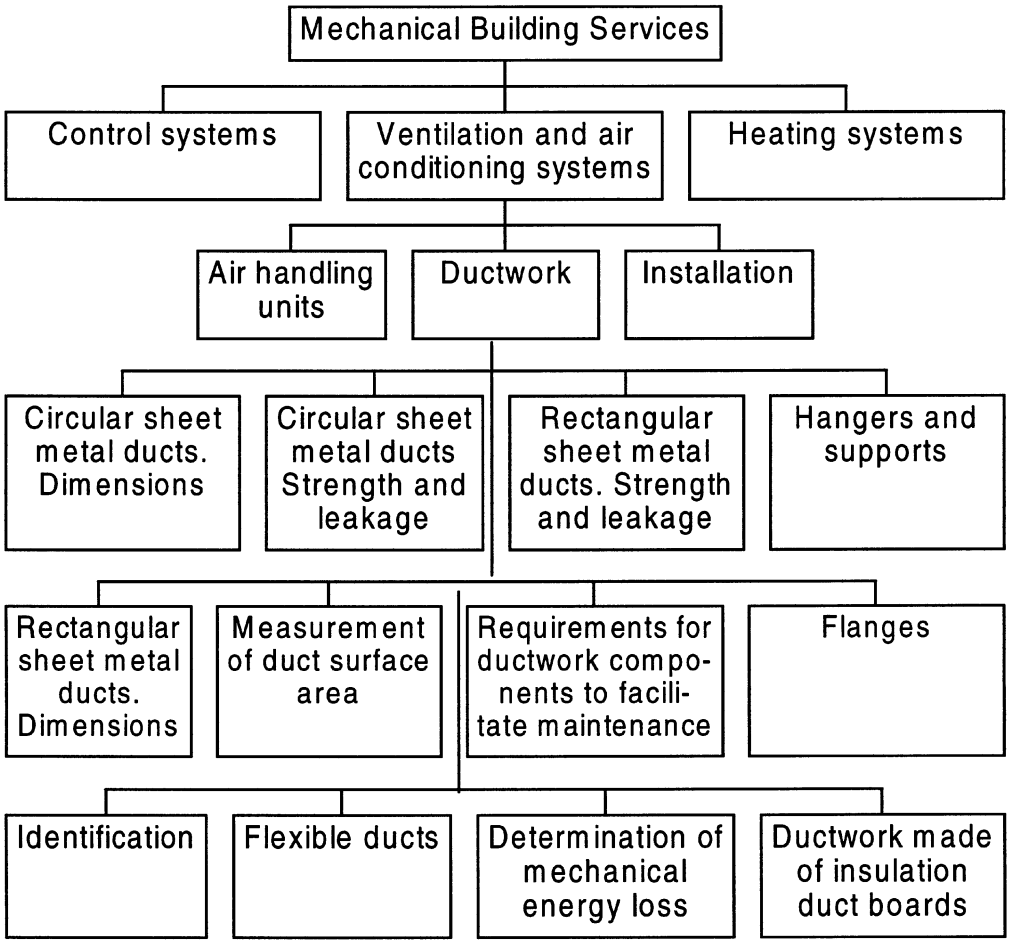


Figure 1 — Position of EN 12220 in the field of mechanical building services

Introduction

This standard has been prepared by CEN/TC 156 to specify dimensions and tolerances for circular flanges used in ventilation systems.

It should be noted that circular ducts are normally joined without flanges. The purpose of this standard is intended to ensure uniformity of connections between circular ducts and items of equipment, e.g. sound attenuators, filters, etc.

1 Scope

This European Standard specifies dimensional characteristics of circular flanges for sheet metal ductwork. It applies to ductwork used in ventilating and air conditioning systems in buildings subject to human occupancy.

For flange dimensions of industrial fans see ISO 6580 and ISO 13351.

2 Normative references

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 the 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.

EN 1506, *Ventilation for buildings — Sheet metal air ducts and fittings with circular cross section — Dimensions.*

ISO 6580, *General purpose industrial fans — Circular flanges — Dimensions.*

ISO 13351, *Industrial fans — Dimensions.*

CR 12792, *Ventilation for buildings — Symbols and terminology.*

3 Definitions and symbols

For the purposes of this standard, the definitions given in CR 12792 together with the following apply:

3.1
nominal diameter, d

the reference dimension in mm used for designation, calculation and application of flanges

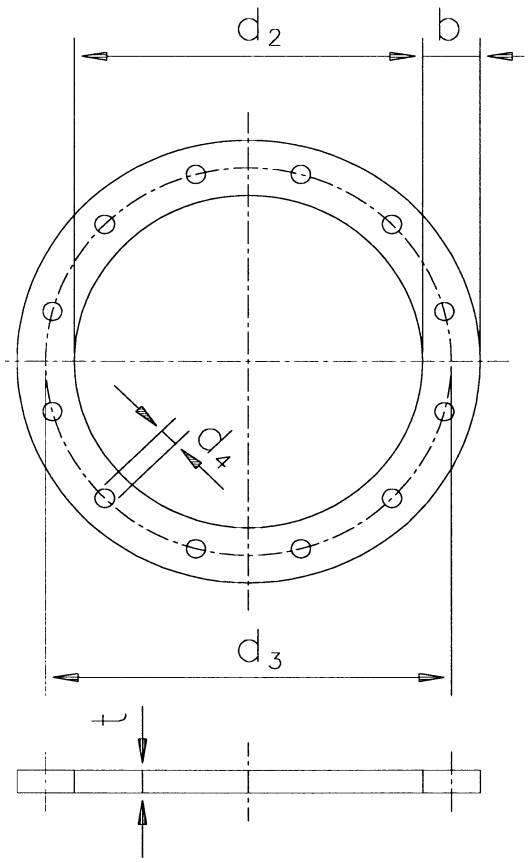
3.2
deviation

the difference between the upper or lower limit of the size and the corresponding nominal size

4 Dimensions

Flange dimensions are shown in Figure 2.

The flange construction shown in Figure 2 is an example, other constructions are possible.



NOTE For b and t see Table A.1.

Figure 2 — Circular flange

Table 1 — Circular flanges — dimensions

Nominal diameter d mm	d_2[a] mm	Deviations mm	Pitch circle diameter, d_3 ± 0,5 mm	Hole diameter, d_4 ± 0,5 mm	Number of holes	Bolt
80	82	$+1$ 0	112	9,5	4	M 8
100	102		132			
125	127		157			
150[b]	152	$+1,5$ 0	182	9,5	6	M 8
160	162		192			
200	203		233			
250	253		283			
300[b]	303	$+1,5$ 0	337	9,5	8	M 8
315	318		352			
355[b]	358		392			
400	404		438			
450[b]	454		488			
500	504		538			
560[b]	564	$+2$ 0	600	9,5	12	M 8
630	634		670			
710[b]	714		750			
800	804		840		16	
900[b]	904		940			
1 000	1 005		1 041			
1 120[b]	1 125	$+2$ 0	1169	9,5	24	M 8
1 250	1 255		1 299			

[a] The inside diameter d_2 of the flanges is based on spiral wound ducts. For other types of ducts the dimension d_2 can be different.
[b] Additional sizes.

NOTE It is intended that additional sizes, which are used in some countries, should be phased out and may be removed from a future edition of the standard.

Annex A (informative)
Examples of thickness, breadth and materials of flanges

Table A.1 — Examples of dimensions of flanges

Nominal diameter *d* mm	*b* *t*[a] mm
80 100 125	25 × 3
150[b] 160 200 250	25 × 4
300[b] 315 355[b] 400 450[b] 500	30 × 4
560[b] 630 710[b] 800 900[b] 1 000	35 × 4
1 120[b] 1 250	40 × 5

[a] The dimensions *b* and *t* are here specified for steel Fe 360 B or similar qualities and for the construction shown in Figure 2. If other constructions or materials are used, the dimensions can be different.
[b] Additional sizes.

The flanges are normally galvanized, but other types of surface treatment are possible.

Annex B (informative)
Examples of different constructions of flanges

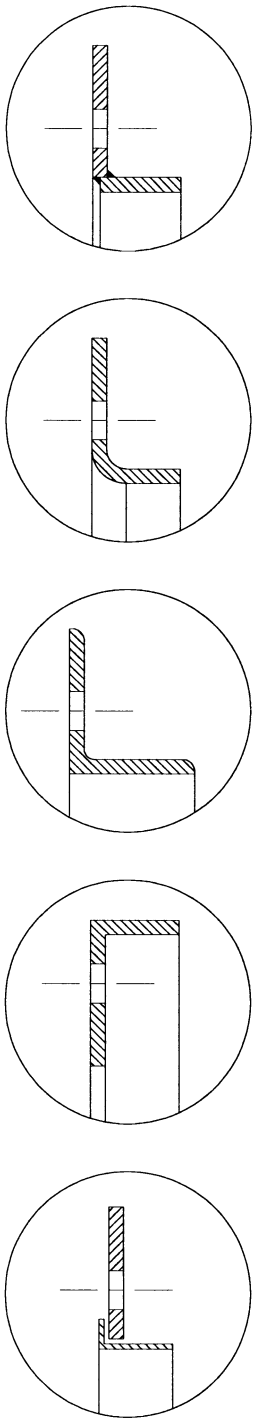


Figure B.1

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