

# Industrial-process control valves —

**Part 3-1: Dimensions — Face-to-face  
dimensions for flanged, two-way,  
globe-type, straight pattern and  
centre-to-face dimensions for flanged,  
two-way, globe-type, angle pattern  
control valves**

The European Standard EN 60534-3-1:2000 has the status of a  
British Standard

ICS 23.060.40

## National foreword

This British Standard is the official English language version of EN 60534-3-1:2000, including corrigendum July 2000. It is identical with IEC 60534-3-1:2000.

The UK participation in its preparation was entrusted by Technical Committee GEL/65, Measurement and Control, to Subcommittee GEL/65/2, Elements of systems, which has the responsibility to:

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### Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 8, an inside back cover and a back cover.

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### Amendments issued since publication

Amd. No.	Date	Comments
11086	September 2000	Annex ZA was updated.

EUROPEAN STANDARD

**EN 60534-3-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2000

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English version

**Industrial-process control valves**  
**Part 3-1: Dimensions - Face-to-face dimensions for flanged, two-way, globe-type, straight pattern and centre-to-face dimensions for flanged, two-way, globe-type, angle pattern control valves**  
(IEC 60534-3-1:2000)

Vannes de régulation des processus industriels  
Partie 3-1: Dimensions - Ecartements hors-bridés des vannes de régulation deux voies droites à soupapes et à brides et dimensions centre/bride des vannes de régulation deux voies coudées à brides  
(CEI 60534-3-1:2000)

Stellventile für die Prozeßregelung  
Teil 3-1: Abmessungen - Einbaulängen von geflanschten Durchgangsventilen und geflanschten Eckventilen  
(IEC 60534-3-1:2000)

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 65B/392/FDIS, future edition 1 of IEC 60534-3-1, prepared by SC 65B, Devices, of IEC TC 65, Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60534-3-1 on 2000-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2001-01-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2003-04-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60534-3-1:2000 was approved by CENELEC as a European Standard without any modification.

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## INDUSTRIAL-PROCESS CONTROL VALVES –

### Part 3-1: Dimensions – Face-to-face dimensions for flanged, two-way, globe-type, straight pattern and centre-to-face dimensions for flanged, two-way, globe-type, angle pattern control valves

#### 1 Scope

This part of IEC 60534 specifies face-to-face (FTF) and centre-to-face (CTF) dimensions for given nominal sizes and pressure ratings of flanged, two-way, globe-type, straight pattern and angle pattern control valves. The nominal sizes included are DN 15 to DN 400 for straight pattern control valves and DN 25 to DN 400 for angle pattern control valves.

#### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60534-1:1987, *Industrial-process control valves – Part 1: Control valve terminology and general considerations*

#### 3 Definitions

For the purposes of this part of IEC 60534, the terms and definitions of clause 3 of IEC 60534-1 and the following shall apply.

##### 3.1

##### **face-to-face dimension (FTF) (for straight pattern valves)**

distance between the faces of the connecting end flanges upon which the gaskets are compressed, that is, the contact surfaces (see figure 1)

##### 3.2

##### **centre-to-face dimension (CTF) (for angle pattern valves)**

distance between the plane located at the face of either body end port and perpendicular to its axis and the axis of the other body end port (see figure 1)

#### 4 Nominal sizes and pressure ratings

##### 4.1 Nominal sizes

Nominal sizes shall be as shown in tables 1 to 4.

##### 4.2 Pressure ratings

Pressure ratings shall be grouped by Class and nominal pressure (PN) as shown in tables 1 to 4.

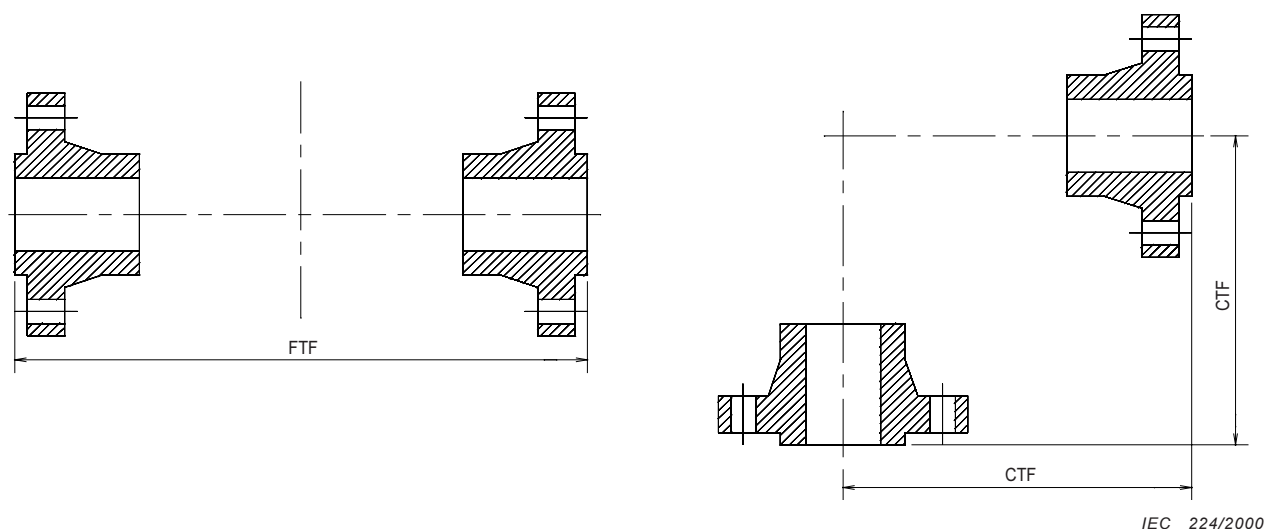


Figure 1 – Face-to-face and centre-to-face dimensions

## 5 Face-to-face and centre-to-face dimensions

FTF and CTF dimensions shall be taken from tables 1 to 4. These tables shall be used only in conjunction with the range of nominal sizes and groups of pressure ratings given in the tables.

Control valve FTF and CTF dimensions taken from a given pressure rating group shall be the same; however, control valves may differ in other respects.

NOTE Pressure ratings have been grouped as shown in the tables in order to restrict the number of FTF and CTF dimensions.

## 6 Tolerances

Tolerances on FTF and CTF dimensions shall be as shown in tables 1 to 4.

## 7 Flange facings

This standard only provides FTF and CTF dimensions for control valves with plain-face or raised-face flanges. The FTF and CTF dimensions include the raised face, if provided, as specified in the appropriate flange standard.

Control valves with flanges having special facings such as ring-joint or tongue-and-groove are not covered by this part of IEC 60534.

**Table 1 – Face-to-face dimensions for flanged, two-way, globe-style, straight pattern control valves: PN-designated valves**

Nominal size (DN)	FTF dimension						Tolerances for FTF	
	PN 10 or 16		PN 25 or 40		PN 63 or 100			
15	130	–	130	–	–	210	±2	
20	150	–	150	–	–	230		
25	160	184	160	197	210	230		
32	180	–	180	–	–	260		
40	200	222	200	235	251	260		
50	230	254	230	267	286	300		
65	290	–	290	–	–	340		
80	310	298	310	317	337	380		
100	350	352	350	368	394	430		
125	400	–	400	–	–	500		
150	480	451	480	473	508	550		
200	600	543	600	568	610	650		
250	730	673	730	708	752	775		
300	850	737	850	775	819	900		±3
350	980	889	980	927	972	1 025		
400	1 100	1 016	1 100	1 057	1 108	1 150		
Basic series	1	37	1	38	39	2	–	

NOTE 1 All dimensions are in millimetres.  
NOTE 2 Series designations taken from EN 558-1.

**Table 2 – Face-to-face dimensions for flanged, two-way, globe-style, straight pattern control valves: Class-designated valves**

Nominal size (DN)	FTF dimension						Tolerances for FTF	
	Class 125 or 150		Class 250 or 300		Class 600			
25	160	184	160	197	210	230	±2	
40	200	222	200	235	251	260		
50	230	254	230	267	286	300		
80	310	298	310	317	337	380		
100	350	352	350	368	394	430		
150	480	451	480	473	508	550		
200	600	543	600	568	610	650		
250	730	673	730	708	752	775		
300	850	737	850	775	819	900		±3
350	980	889	980	927	972	1 025		
400	1 100	1 016	1 100	1 057	1 108	1 150		
Basic series	1	37	1	38	39	2	–	

NOTE 1 All dimensions are in millimetres.  
NOTE 2 Series designations taken from EN 558-2.

**Table 3 – Centre-to-face dimensions for flanged, two-way, globe-style, angle pattern control valves: PN-designated valves**

Nominal size (DN)	CTF dimension						Tolerances for CTF
	PN 10 or 16		PN 25 or 40		PN 63 or 100		
25	100	92	100	98	105	115	±2
40	115	111	115	117	125	130	
50	125	127	125	133	143	150	
80	155	149	155	159	168	190	
100	175	176	175	184	197	215	
150	225	225	225	236	254	275	
200	275	272	275	284	305	325	
250	325	337	325	354	376	–	
300	375	368	375	387	410	–	±3
350	425	445	425	464	486	–	
400	475	508	475	529	554	–	
Basic series	8	40	8	41	42	9	–

NOTE 1 All dimensions are in millimetres.  
NOTE 2 Series designations taken from EN 558-1.

**Table 4 – Centre-to-face dimensions for flanged, two-way, globe-style, angle pattern control valves: Class-designated valves**

Nominal size (DN)	CTF dimension						Tolerances for CTF
	Class 125 or 150		Class 250 or 300		Class 600		
25	70	92	98	102	105	108	±2
40	83	111	117	114	125	121	
50	102	127	133	133	143	146	
80	121	149	159	159	168	178	
100	146	176	184	178	197	216	
150	203	225	236	222	254	279	
200	248	272	284	279	305	330	
250	311	337	354	311	376	394	
300	349	368	387	356	410	419	±3
350	394	445	464	–	486	–	
400	457	508	529	–	554	–	
Basic series	11	40	41	32	42	24	–

NOTE 1 All dimensions are in millimetres.  
NOTE 2 Series designations taken from EN 558-2.



## Bibliography

EN 558-1:1996, *Industrial valves – Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems – Part 1: PN-designated valves*

EN 558-2:1996, *Industrial valves – Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems – Part 2: Class-designated valves*

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**Annex ZA (normative)****Normative references to international publications  
with their corresponding European publications**

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 (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60534-1	1987	Industrial-process control valves Part 1: Control valve terminology and general considerations	EN 60534-1	1993



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