

# INTERNATIONAL STANDARD

**IEC**  
**60534-3-1**

First edition  
2000-02

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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**

*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*



Reference number  
IEC 60534-3-1:2000(E)

## Numbering

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Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is to be found at the following IEC sources:

- **IEC web site\***
- **Catalogue of IEC publications**  
Published yearly with regular updates  
(On-line catalogue)\*
- **IEC Bulletin**  
Available both at the IEC web site\* and as a printed periodical

## Terminology, graphical and letter symbols

For general terminology, readers are referred to IEC 60050: *International Electrotechnical Vocabulary (IEV)*.

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: *Letter symbols to be used in electrical technology*, IEC 60417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets* and IEC 60617: *Graphical symbols for diagrams*.

\* See web site address on title page.

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### 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

### *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*

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

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For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60534-3-1 has been prepared by subcommittee 65B: Devices, of IEC technical committee 65: Industrial-process measurement and control.

The text of this standard is based on the following documents:

FDIS	Report on voting
65B/392/FDIS	65B/398/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be published at a later date.

## 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.

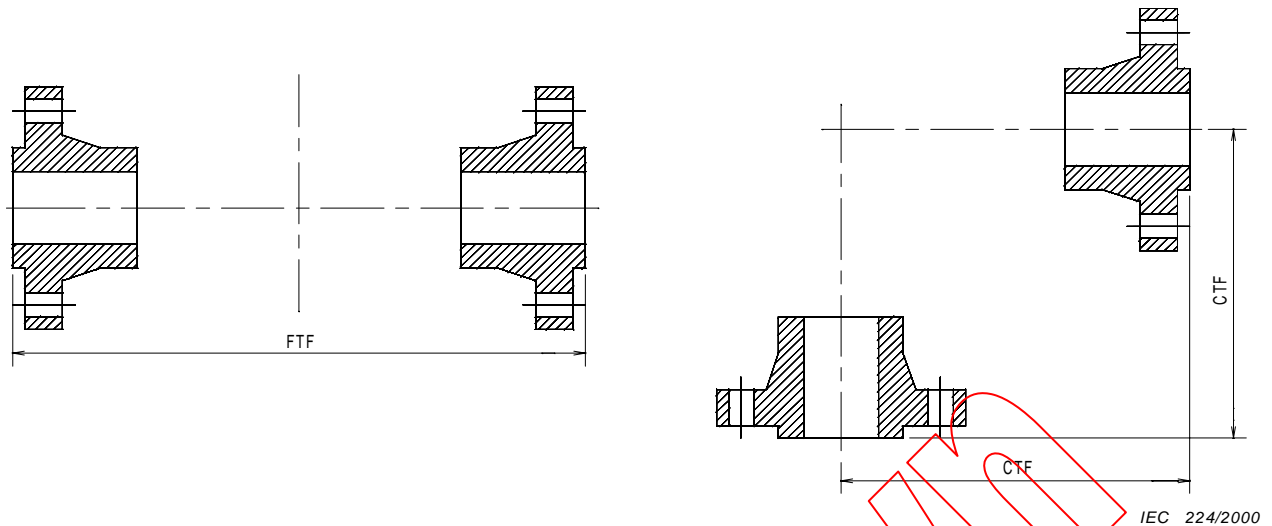


Figure 1 – Face-to-face and centre-to-face dimensions

## 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.