



SLOVENSKI STANDARD SIST EN ISO 5167-5:2023

01-januar-2023

Nadomešča:

SIST EN ISO 5167-5:2016

Merjenje pretoka fluida na osnovi tlačne razlike, povzročene z napravo, vstavljeno v polno zapolnjen vod s krožnim prerezom - 5. del: Stožčasta merila (ISO 5167-5:2022)

Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 5: Cone meters (ISO 5167-5:2022)

Durchflussmessung von Fluiden mit Drosselgeräten in voll durchströmten Leitungen mit Kreisquerschnitt - Teil 5: Konus-Durchflussmesser (ISO 5167-5:2022)

Mesurage de débit des fluides au moyen d'appareils déprimogènes insérés dans des conduites en charge de section circulaire - Partie 5: Cônes de mesure (ISO 5167-5:2022)

Ta slovenski standard je istoveten z: EN ISO 5167-5:2022

ICS:

17.120.10 Pretok v zaprtih vodih Flow in closed conduits

SIST EN ISO 5167-5:2023

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 5167-5

November 2022

ICS 17.120.10

Supersedes EN ISO 5167-5:2016

English Version

**Measurement of fluid flow by means of pressure
differential devices inserted in circular cross-section
conduits running full - Part 5: Cone meters (ISO 5167-
5:2022)**

Mesurage de débit des fluides au moyen d'appareils
déprimogènes insérés dans des conduites en charge de
section circulaire - Partie 5: Cônes de mesure (ISO
5167-5:2022)

Durchflussmessung von Fluiden mit Drosselgeräten in
voll durchströmten Leitungen mit Kreisquerschnitt -
Teil 5: Konus-Durchflussmesser (ISO 5167-5:2022)

This European Standard was approved by CEN on 25 September 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 5167-5:2022) has been prepared by Technical Committee ISO/TC 30 "Measurement of fluid flow in closed conduits" in collaboration with CCMC.

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of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 5167-5:2016.

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According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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Endorsement notice

The text of ISO 5167-5:2022 has been approved by CEN as EN ISO 5167-5:2022 without any modification.

INTERNATIONAL
STANDARD

ISO
5167-5

Second edition
2022-10

**Measurement of fluid flow by means of
pressure differential devices inserted
in circular cross-section conduits
running full —**

**Part 5:
Cone meters**

*Mesurage de débit des fluides au moyen d'appareils déprimogènes
insérés dans des conduites en charge de section circulaire —*

Partie 5: Cônes de mesure

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Reference number
ISO 5167-5:2022(E)

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

The committee responsible for this document is ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 2, *Pressure differential devices*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS F05, *Measuring instruments*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition of ISO 5167-5 cancels and replaces the first edition (ISO 5167-5:2016), which has been technically revised.

The main changes are as follows:

- this document is consistent with ISO/IEC Guide 98-3;
- errors in [Figure 2](#) and in [5.2.7](#) have been corrected;
- the expansibility uncertainty is given as a relative uncertainty for ease of use with ISO 5167-1 (the calculated flow rate uncertainty is unchanged).

A list of all parts in the ISO 5167 series can be found on the ISO website.

Introduction

ISO 5167, consisting of six parts, covers the geometry and method of use (installation and operating conditions) of orifice plates, nozzles, Venturi tubes, cone meters and wedge meters when they are inserted in a conduit running full to determine the flow rate of the fluid in the conduit. It also gives necessary information for calculating the flow rate and its associated uncertainty. ISO 5167 (all parts) also provides methodology for bespoke calibration of differential pressure meters.

ISO 5167 (all parts) is applicable only to pressure differential devices in which the flow remains subsonic throughout the measuring section and where the fluid can be considered as single-phase, but is not applicable to the measurement of pulsating flow. Furthermore, each of these devices can only be used within specified limits of pipe size and Reynolds number, or alternatively they can be used across their calibrated range.

ISO 5167 (all parts) deals with devices for which direct calibration experiments have been made sufficient in number, spread, and quality to enable coherent systems of application to be based on their results and coefficients to be given with certain predictable limits of uncertainty.

The devices introduced into the pipe are called primary devices. The term primary device also includes the pressure tappings. All other instruments or devices required to facilitate the instrument readings are known as secondary devices, and the flow computer that receives these readings and performs the algorithms is known as a tertiary device. ISO 5167 (all parts) covers primary devices; secondary devices (see ISO 2186) and tertiary devices will be mentioned only occasionally.

Aspects of safety are not dealt with in ISO 5167 (all parts). It is the responsibility of the user to ensure that the system meets applicable safety regulations.

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