

STN	Hydrometria Požiadavky na výkon a skúšobné postupy pre zariadenia na monitorovanie vody Zariadenia na stanovenie prietoku Časť 1: Prístroje pre otvorené korytá	STN EN 17694-1 75 1109
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Hydrometry - Minimum performance requirements and test procedures for water monitoring equipment - Devices for the determination of flow
- Part 1: Open channel instrumentation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/23

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Hydrometry - Minimum performance requirements and test procedures for water monitoring equipment - Devices for the determination of flow - Part 1: Open channel instrumentation

Hydrométrie - Exigences minimales de performance et modes opératoires d'essai pour les équipements de surveillance de l'eau - Dispositifs de mesure de l'écoulement - Partie 1 : Instruments de mesure pour écoulements à surface libre

Hydrometrie - Leistungsanforderungen und Prüfverfahren für Wasserüberwachungsgeräte - Geräte zur Bestimmung des Durchflusses - Teil 1: Messgeräte für offenes Gerinne

This European Standard was approved by CEN on 13 February 2023.

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EN 17694-1:2023 (E)**European foreword**

This document (EN 17694-1:2023) has been prepared by Technical Committee CEN/TC 318 “Hydrometry”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.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 standard is published in two parts:

- EN 17694-1, *Hydrometry — Minimum performance requirements and test procedures for water monitoring equipment — Devices for the determination of flow — Part 1: Open channel instrumentation*
- EN 17694-2, *Hydrometry — Minimum performance requirements and test procedures for water monitoring equipment — Devices for the determination of flow — Part 2: Closed conduit instrumentation*

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document is a product standard for open channel instrumentation for the determination of the flow of waters in artificial channels (e.g. effluent discharges from industrial installations, wastewaters from sewage treatment works, water irrigation channels, and water transfer channels). An open channel instrument (OCI) is either a level sensor used in conjunction with a gauging structure or a velocity area instrument or a velocity sensor. It is normally fixed in position and used to determine either volumetric flow-rate and/or total volume passed. This document specifies general requirements, minimum performance requirements, and test procedures. These specifications are derived from ISO 11655 [1]. An OCI that is shown, by means of the tests, to conform with the general requirements and performance requirements is considered to be fit for purpose. However, this document does not cover the installation and on-going use of an OCI for which relevant standards exist.

The acronym "OCI" is used throughout this document except where it is necessary to be specific about the particular type or component (e.g. sensor) of an instrument.

Measurement ranges are not specified as part of the performance requirements, though a minimum ratio (maximum measured value: minimum measured value) is specified. It is for the manufacturer of the OCI to decide on the measurement range over which the performance requirements are shown to be met by the specified test procedures.

Water monitoring equipment is widely used for compliance monitoring purposes under national and European regulations.

EN 17694-1:2023 (E)**1 Scope**

This document specifies general requirements, minimum performance requirements and test procedures for open channel instrumentation used to determine either volumetric flow-rate and/or total volume passed of waters in artificial open channels. It covers the following technology categories:

- Level sensors with associated electronics designed to be used with a conventional gauging structure. (The requirements and test procedures for gauging structures, such as weirs and flumes, are excluded. The stage discharge characteristics for many of these structures are established and published in national and international standards).
- Water velocity sensors.
- Integrated velocity area instruments comprising level and velocity sensors that may be separate or combined in a single assembly.
- Velocity sensors that determine the mean water velocity through a channel.

It is recognized that for some OCIs, certain tests cannot be carried out.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 ISO 772, *Hydrometry - Vocabulary and symbols (ISO 772)*

CEN ISO/TS 25377, *Hydrometric uncertainty guidance (HUG) (ISO/TS 25377)*

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