
Hydrometry — Open channel flow measurement using triangular profile weirs

*Hydrométrie — Mesure de débit des liquides dans les canaux
découverts au moyen de déversoirs à profil triangulaire*



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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 4360 was prepared by Technical Committee ISO/TC 113, *Hydrometry*, Subcommittee SC 2, *Flow measurement structures*.

This third edition cancels and replaces the second edition (ISO 4360:1984), of which it constitutes a technical revision.

Hydrometry — Open channel flow measurement using triangular profile weirs

1 Scope

This International Standard specifies methods for the measurement of the flow of water in open channels under steady flow conditions using triangular profile weirs. The flow conditions considered are steady flows which are uniquely dependent on the upstream head and drowned flows which depend on downstream as well as upstream levels.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 772, *Hydrometric determinations — Vocabulary and symbols*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 772 apply.

4 Symbols

A	m^2	area of approach channel
B	m	width of approach channel
b	m	breadth of weir crest perpendicular to flow direction
C		discharge coefficient
C_d		coefficient of discharge
C_v		coefficient of velocity
$C_v f$		combined coefficient of velocity
E	m	elevation of ultrasonic air range sensor above hydraulic datum
f		drowned flow reduction factor
g	m^2/s	acceleration due to gravity
H	m	total head relative to crest level
h	m	gauged head relative to crest level (upstream head is inferred if no subscript is used)
N		number of measurements in a set
p	m	height of weir (difference between mean bed level and crest level)
Q	m^3/s	volumetric rate of flow
$u^* ()$		percentage uncertainty in parameter
\bar{v}	m/s	mean velocity
U	%	expanded percentage uncertainty