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**Agricultural irrigation equipment —  
Pressure losses in irrigation valves —  
Test method**

*Matériel agricole d'irrigation — Pertes de pression dans les vannes  
d'irrigation — Méthode d'essai*



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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](http://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](http://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 voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 18, *Irrigation and drainage equipment and systems*.

This third edition cancels and replaces the second edition (ISO 9644:2008), which has been technically revised. The main changes compared to the previous edition are as follows:

- addition of [Annexes A](#) and [B](#).

# Agricultural irrigation equipment — Pressure losses in irrigation valves — Test method

## 1 Scope

This document applies to manually-activated valves only.

This document specifies a test method for determining the pressure loss in agricultural irrigation valves under steady-state conditions when water flows through them. The scope and accuracy of the valve performance specifications presented will assist agricultural irrigation system designers in comparing pressure losses through various types of valves.

The measurement of pressure losses provides a means for determining the relationship between pressure loss and flow rate through the valve.

This document also describes the method of reporting pertinent test data.

No attempt is made to define product use, design or applications.

The test method is suitable for valves with equal inlet and outlet nominal sizes.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **nominal size**

#### **DN**

conventional numerical designation used to indicate the size of an irrigation valve

### 3.2

#### **volume flow rate**

#### **flow rate**

#### $q_V$

volume of water flowing through the valve per unit time

### 3.3

#### **pressure loss**

#### $\Delta p$

difference in pressure due to water flow between two specified points in a system or in part of a system