INTERNATIONAL STANDARD

ISO 9635-1

First edition
2006-11-15

Agricultural irrigation equipment — Irrigation valves —

Part 1: General requirements

Matériel agricole d'irrigation — Vannes d'irrigation —

Partie 1: Exigences générales

Reference number
ISO 9635-1:2006(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

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.

ISO 9635-1 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 first edition of ISO 9635-1, together with ISO 9635-2, ISO 9635-3, ISO 9635-4 and ISO 9635-5, cancels and replaces ISO 9635:1990, of which it constitutes a technical revision.

ISO 9635 consists of the following parts, under the general title *Agricultural irrigation equipment — Irrigation valves*:

— *Part 1: General requirements*

— *Part 2: Isolating valves*

— *Part 3: Check valves*

— *Part 4: Air valves*

— *Part 5: Control valves*

Agricultural irrigation equipment — Irrigation valves —

Part 1: General requirements

1 Scope

This part of ISO 9635 specifies construction and performance requirements and test methods for valves, intended for operation in irrigation systems with water at temperatures not exceeding 60 °C, which can contain fertilizers and other chemicals of the types and concentrations used in agriculture.

It is applicable to irrigation valves of 15 mm diameter or greater, designed to operate in the fully open and fully closed positions, but which can also operate for extended time periods in any intermediate position.

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 4633, *Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials*

ISO 5209, *General purpose industrial valves — Marking*

ISO 5752, *Metal valves for use in flanged pipe systems — Face-to-face and centre-to-face dimensions*

ISO 6708:1995, *Pipework components — Definition and selection of DN (nominal size)*

ISO 7005-1, *Metallic flanges — Part 1: Steel flanges*

ISO 7005-2, *Metallic flanges — Part 2: Cast iron flanges*

ISO 7005-3, *Metallic flanges — Part 3: Copper alloy and composite flanges*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 9635-2:2006, *Agricultural irrigation equipment — Irrigation valves — Part 2: Isolating valves*

ISO 9635-3:2006, *Agricultural irrigation equipment — Irrigation valves — Part 3: Check valves*

ISO 9635-4:2006, *Agricultural irrigation equipment — Irrigation valves — Part 4: Air valves*

ISO 9635-5:2006, *Agricultural irrigation equipment — Irrigation valves — Part 5: Control valves*

ISO 9644, *Agricultural irrigation equipment — Pressure losses in irrigation valves — Test method*

ISO 9911:—[1], *Agricultural irrigation equipment — Manually operated small plastics valves*

ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation*

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 12627, *Industrial valves — Butt welding ends for steel valves*

EN 12982, *Industrial valves — End-to-end and centre-to-centre dimensions for butt welding end valves*

3 Terms and definitions

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

3.1
maximum operating torque
maximum limit of torque which, when applied at the shaft, operates the valve and ensures compliance with the required leakage rate

3.2
minimum strength torque
minimum limit of torque which, when applied at the shaft with the obturator either totally open or totally closed, causes no alteration to the functional capability of the valve

3.3
shaft
point where the load (torque) is applied in order to change the position of the valve obturator, which may be the end of the stem, or the input shaft of the reducer when the reducer is an integral part of the valve

3.4
type test
test made to prove that the design meets the corresponding performance requirements in this part of ISO 9635 and the part of ISO 9635 related to the specific valve being tested

3.5
operating mechanism
mechanism which translates the motion of the operating device to the motion of the obturator

[EN 736-2]

3.6
operating device
manual or power operated device used to operate the bare valve

[EN 736-2]

3.7
operating element
component of the operating device by which the mechanical power is introduced

[EN 736-2]

1) To be published. (Revision of ISO 9911:1993)