

# INTERNATIONAL STANDARD

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**11738**

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## **Agricultural irrigation equipment — Control heads**

*Matériel agricole d'irrigation — Installations de tête*



Reference number  
ISO 11738:2000(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11738 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 18, *Irrigation and drainage equipment and systems*.

Annex A of this International Standard is for information only.

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# Agricultural irrigation equipment — Control heads

## 1 Scope

This International Standard specifies requirements for the components and method of installation of pressurized irrigation system control heads, referred to hereinafter as irrigation control heads, with a nominal size of up to and including 200 mm.

This International Standard is applicable only to the above-ground components of irrigation control heads for sprinkler irrigation and micro-irrigation (mini-sprinklers, drip irrigation, etc.). It is applicable to the basic irrigation control head, on which other irrigation control and command components (electrical, electronic and hydraulic) may be assembled, but does not deal with these additional components.

This International Standard is not applicable to systems and/or components that may be required to prevent the water from freezing in the irrigation control head, such as dry-barrel hydrants or other types of hydrants.

This International Standard does not specify construction or operating requirements for the individual components that make up the irrigation control head. These requirements are specified in the relevant standards for each component.

Systems whose irrigation control heads contain components for the injection of agricultural chemicals should be protected by backflow prevention system interlocks, injection line check valves and other safety devices in accordance with local standards or regulations. This International Standard does not cover such equipment.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7-1:1994, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*.

ISO 7005-1:1992, *Metallic flanges — Part 1: Steel flanges*.

ISO 7005-2:1988, *Metallic flanges — Part 2: Cast iron flanges*.

ISO 4064-1:1993, *Measurement of water flow in closed conduits — Meters for cold potable water — Part 1: Specifications*.

ISO 4064-3:1999, *Measurement of water flow in closed conduits — Meters for cold potable water — Part 3: Test methods and equipment*.

ISO 4422 (all parts), *Pipes and fittings made of unplasticized poly(vinyl chloride) (PVC-U) for water supply — Specifications*.

ISO 4427:1996, *Polyethylene (PE) pipes for water supply — Specifications*.

ISO 7714:—<sup>1)</sup>, *Agricultural irrigation equipment — Volumetric valves — General requirements and test methods.*

ISO/TR 8059:1986, *Irrigation equipment — Automatic irrigation systems — Hydraulic control.*

ISO 9625:1993, *Mechanical joint fittings for use with polyethylene pressure pipes for irrigation purposes.*

ISO 9635:1990, *Irrigation equipment — Hydraulically operated irrigation valves.*

ISO 9911:1993, *Agricultural irrigation equipment — Manually operated small plastics valves.*

ISO 9912-2:1992, *Agricultural irrigation equipment — Filters — Part 2: Strainer-type filters.*

ISO 9912-3:1992, *Agricultural irrigation equipment — Filters — Part 3: Automatic self-cleaning strainer-type filters.*

ISO 9952:1993, *Agricultural irrigation equipment — Check valves.*

ISO 10522:1993, *Agricultural irrigation equipment — Direct-acting pressure-regulating valves.*

ISO 11419:1997, *Agricultural irrigation equipment — Float type air release valves.*

### 3 Terms and definitions

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

#### 3.1

##### **activating valve**

manually operated valve, hydraulically operated valve, electrically operated valve, volumetric valve or any other type of valve that is used to initiate and shut off the flow of water through an irrigation control head

#### 3.2

##### **automatic self-cleaning strainer-type filter**

filter having automatic flushing capability that automatically activates flushing by pressure differential, by duration of filtration, by volume of water filtered, or by some other physical quantity or by any combination of these

#### 3.3

##### **air release valve**

valve which opens automatically to allow air from the atmosphere to enter the water pipeline during drainage of the line and/or venting of air from the water pipeline to the atmosphere during filling or during normal operation of the pipeline under pressure

#### 3.4

##### **backflow preventer**

mechanical assembly designed to prevent unintended flow of water backwards into the distributing pipes of a water supply system in order to protect against entry of substances that may constitute a hazard to health or the environment

#### 3.5

##### **check valve**

valve which is opened by the flow of water and closed by the weight of a check mechanism or by mechanical pressure caused, for example, by a spring, permitting flow in one direction only and preventing reversal of flow

#### 3.6

##### **fertilizer injector tank**

pressure vessel connected to an irrigation system in an in-line or on-line configuration, together with the pipes and fittings connecting it to the irrigation system, for the purpose of injecting chemicals into the irrigation system

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1) To be published. (Revision of ISO 7714:1995)