

Irrigation equipment - Safety devices for chemigation -  
Part 1: Small plastics valves for chemigation (ISO  
13693-1:2013)

## EESTI STANDARDI EESSÕNA

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English Version

## Irrigation equipment - Safety devices for chemigation - Part 1: Small plastics valves for chemigation (ISO 13693- 1:2013)

Matériel d'irrigation - Dispositifs de sécurité pour  
l'application de produits chimiques par irrigation -  
Partie 1: Petites vannes en matière plastique pour  
l'application de produits chimiques par irrigation (ISO  
13693-1:2013)

Bewässerungsausrüstung - Sicherheitseinrichtungen  
für Düngemittelzusätze - Teil 1: Kleine  
Kunststoffventile für den Düngemittelzusatz (ISO  
13693-1:2013)

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

The text of ISO 13693-1:2013 has been prepared by Technical Committee ISO/TC 23 “Tractors and machinery for agriculture and forestry” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13693-1:2017 by Technical Committee CEN/TC 334 “Irrigation techniques” the secretariat of which is held by UNE.

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of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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### Endorsement notice

The text of ISO 13693-1:2013 has been approved by CEN as EN ISO 13693-1:2017 without any modification.

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# Irrigation equipment — Safety devices for chemigation —

## Part 1: Small plastics valves for chemigation

### 1 Scope

This part of ISO 13693 specifies the general requirements and test methods for small plastics-bodied valves used for chemigation, hereinafter referred to as “the device”, intended for operation in irrigation pipe systems which may contain fertilizers and chemicals of the type and concentration used in agriculture.

It is applicable to controllable safety devices (also known as backflow preventers) with a reduced pressure zone (RPZ), intended to prevent backflow by back-siphonage or backpressure of irrigation water into an upstream potable water distribution system, whenever the pressure in the latter is lower than that in the system located downstream.

It is applicable to such devices of nominal size up to and including DN 50 (2”), with a nominal pressure of PN10, that are capable of working without modification or adjustment

- at any pressure up to 1 MPa (10 bar),
- with any pressure variation up to 1 MPa (10 bar), and
- in permanent duty at temperatures up to 45 °C and for 1 h at 65 °C.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 9635-1, *Agricultural irrigation equipment — Irrigation valves — Part 1: General requirements*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9635-1 and the following apply.

#### 3.1

**controllable safety device with a reduced pressure zone**

**controllable safety device with RPZ**

device containing two independently-acting *check valves* (3.7) together with a hydraulically operated, mechanically independent pressure relief valve located between the check valves

#### 3.2

**backflow**

flow against the intended direction of flow

#### 3.3

**back-siphonage**

*backflow* (3.2) due to a reduction in system pressure, which causes a sub-atmospheric pressure at a site in the system