

CCS B 91



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 18691.4-2021

**Agricultural irrigation equipment - Irrigation valves - Part 4: Air
valves**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is part 4 of GB/T 18691 "Irrigation Valves for Agricultural Irrigation Equipment": GB/T 18691 has released the following parts:

- Part 1: General requirements;
- Part 2: Isolation valve;
- Part 3: Check valve;
- Part 4: Intake and exhaust valves;
- Part 5: Control valve:

This document replaces GB/T 18691:4-2011 "Irrigation Valves for Agricultural Irrigation Equipment Part 4: Inlet and Exhaust Valves", which is the same as GB/T 18691:4-

Compared with:2011, except for structural adjustment and editorial changes, the main technical changes are as follows:

- Changed the design requirements (see Chapter 4, Chapter 4 of the:2011 edition);
- Changed the exhaust function requirements (see 5:4:1, 5:3:1 of the:2011 edition);
- Changed the air intake function requirements (see 5:4:2, 5:3:2 of the:2011 edition);
- Changed the ventilation function requirements (see 5:4:3, 5:3:3 of the:2011 edition);
- Changed the reliability test requirements (see 5:6:3, 5:5:3 of the:2011 edition):

This document uses the translation method equivalent to ISO 9635-4:2014 "Irrigation valves for agricultural irrigation equipment - Part 4: Intake and exhaust valves":

The following editorial changes have been made to this document:

--- Replace "bar" with "MPa" conversion;

--- Corrected the typographical error in the original international standard, "5:3:3, 5:4:1, 5:4:2" in the first column of Table 1 is replaced by "-":

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

GB/T 18691 "Irrigation Valves for Agricultural Irrigation Equipment" is planned to be composed of the following five parts according to product characteristics:

--- Part 1: General requirements: The purpose is to give general requirements for the design, performance and consistency evaluation of irrigation valves:

--- Part 2: Isolation valve: The purpose is to give the design, performance, consistency evaluation and other requirements of the isolation valve, and to give the unique characteristics of the isolation valve:

technical requirements:

--- Part 3: Check valve: The purpose is to give the design, performance, consistency evaluation and other requirements of the check valve, and to give the unique characteristics of the check valve:

technical requirements:

--- Part 4: Intake and exhaust valves: The purpose is to give the design, performance, consistency evaluation and other requirements of the intake and exhaust valves, and to give the intake and exhaust valves:

Valve-specific technical requirements:

--- Part 5: Control valve: The purpose is to give the design, performance, consistency evaluation and other requirements of the control valve, and to give the unique characteristics of the control valve:

technical requirements:

Among them, GB/T 18691:1 specifies the general requirements for irrigation valves: Except for the common requirements of general requirements, the rest of the standards are based on the general requirements of irrigation valves:

The category specifies the specific technical requirements for this type of irrigation valve:

Based on GB/T 18691:1, GB/T 18691 completely gives four types of agricultural products including isolation valve, check valve, intake and exhaust valve, and control valve:

The technical requirements and evaluation methods of industrial irrigation valves provide a standard basis for the manufacture and product upgrading of agricultural irrigation valves:

Agricultural irrigation equipment irrigation valve

Part 4: Intake and exhaust valves

1 Scope

This document specifies the design requirements, performance requirements, conformity assessment, marking and packaging of intake and exhaust valves: This intake and exhaust valve is suitable for water temperature

Irrigation systems that do not exceed 60°C and whose water may contain certain types and concentrations of fertilizers or chemicals commonly used in agriculture:

This document applies to hydraulically driven irrigation intake and exhaust valves with a nominal size of not less than DN15:

The operation can be realized by applying force to the closing parts or by applying force to the opening and closing parts through a float through a mechanical lever: This type of valve is also available with an adjustable pilot valve

Apply force to operate:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document:

GB/T 18691:1-2021 Irrigation Valves for Agricultural Irrigation Equipment Part 1: General Requirements (ISO 9635-1:2014, IDT)

GB/T 18691:2-2021 Irrigation Valves for Agricultural Irrigation Equipment Part 2: Isolation Valves (ISO 9635-2:2014, IDT)

3 Terms and Definitions

The terms and definitions defined in GB/T 18691:1-2021 and the following terms and definitions apply to this document:

3:1

Intake and exhaust valve airvalve

float-type purger

Automatic float valve for in-duct intake and exhaust control:

NOTE: These valves may be single float or double float with one or more of the following functions: exhaust, intake:

3:2

exhaust function air release function

The function of removing air from water pipes or equipment:

3:3

Air intake function

vacuum release function

A function that allows gas to enter water pipelines or equipment:

3:4

ventilation function

Continuous ventilation function continuous acting air vent function

The function of discharging the trapped air in the pipeline under a certain pressure: