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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 8102-2020

Replacing GB/T 8102-2008

Pneumatic fluid power - Single rod cylinders, bores from 8 mm to 25 mm - Mounting dimensions

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 8102-2008 "Installation Dimensions of Single Rod Cylinders with Cylinder Inner Diameter 8mm~25mm", and is compatible with GB/T 8102-2008

Compared with.2008, the main technical changes are as follows.

---Modified the content of "Normative Reference Documents" (see Chapter 2);

---Modified the "size" content (see Chapter 4);

--- Deleted "dia. D1" (see Figure 2 and Table 2);

---Added a description in the table (see Table 3);

---Modified "Figure 4" (see Figure 4);

---Modified "Figure 5 and Table 5" (see Figure 5 and Table 5).

The translation method used in this standard is equivalent to ISO 6432.2015 "Pneumatic single rod cylinder, 1000kPa (10bar) series, cylinder diameter 8mm~

25mm basic size and installation size".

The Chinese documents that have a consistent correspondence with the international documents cited in this standard are as follows.

---GB/T 2348-2018 fluid transmission system and component bore and piston rod diameter (ISO 3320.2013, MOD)

---GB/T 2349-1980 hydraulic pneumatic system and component cylinder piston stroke series (eqvISO 4393.1978)

---GB/T 2350-2020 Fluid transmission system and component piston rod thread type and size series (ISO 4395.2009,

MOD)

---GB/T 9094-2020 Fluid transmission system and component cylinder installation size and installation type code (ISO 6099.2018,

IDT)

---GB/T 14038-2008 pneumatic connection port and stud end (ISO 16030.2001/Amd.1.2005, IDT)

---GB/T 17446-2012 Fluid Power System and Components Vocabulary (ISO 5598.2008, IDT)

This standard has made the following editorial changes.

---The standard name was changed to "Installation Dimensions of Single Rod Cylinder with Pneumatic Bore from 8mm to 25mm";

---The pressure unit "kPa" in the international standard is changed to "MPa";

---The "bar" unit in the text is deleted.

This standard was proposed by China Machinery Industry Federation.

This standard is under the jurisdiction of the National Hydraulic and Pneumatic Standardization Technical Committee (SAC/TC3).

Drafting organizations of this standard. Yueqing Hengyi Pneumatic Co., Ltd., Zhejiang Yiri Pneumatic Technology Co., Ltd., National Pneumatic Product Quality Supervision

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Introduction

In a pneumatic system, power is transmitted and controlled by compressed air in the loop.

Cylinder is an element in pneumatic system that converts gas energy into mechanical energy and realizes linear motion. It includes moving in the cylinder

Parts such as pistons and piston rods.

In order to fix the cylinder on the mechanical device, the cylinder can also be equipped with mounting accessories.

Pneumatic single rod cylinder with 8mm to 25mm bore

Installation size

1 Scope

This standard specifies the installation dimensions of a single-rod cylinder with a maximum working pressure of 1MPa and a cylinder diameter of 8mm to 25mm to meet the requirements of product interaction.

Transsexual requirements.

Note. This standard only provides basic guidelines, allowing manufacturers to design their own cylinders, and does not limit technological development.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

ISO 3320 Fluid Power System and Components Bore Diameter and Piston Rod Diameter and Area Ratio Metric Series

ISO 4393 fluid transmission system and element cylinder piston stroke basic series

ISO 4395 fluid transmission system and component cylinder piston rod end type and size

ISO 5598 Fluid Power System and Components Vocabulary

ISO 6099 fluid transmission system and component cylinder installation size and installation type code

ISO 16030 pneumatic connection port and stud end

3 Terms and definitions

The terms and definitions defined in ISO 5598 apply to this document.

4.1 Basic dimensions

The basic dimensions are shown in Figure 1 and Table 1.

4.2 Installation dimensions

The installation dimensions are shown in Figure 2~Figure 5 and the corresponding Table 2~Table 5.

Note. "" after the letter means to add a stroke.

The dimensional tolerances in the table only apply to cylinders with a stroke less than 100mm. When the stroke is greater than 100mm, the dimensional tolerance is determined by the manufacturer and

User negotiation.