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

GB/T 33924.1-2026

Replacing GB/T 33924-2017

**Pneumatic fluid power - Mounting dimensions of accessories
for cylinders - Part 1: Rod-end spherical eyes**

气动缸的附件安装尺寸 第1部分：杆端关节轴承

(English Translation)

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Reference

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 33924 "Accessory Mounting Dimensions for Pneumatic Cylinders". GB/T 33924 has the following publications.

part.

---Part 1: Rod End Joint Bearing;

---Part 2: Rod-End Earrings this document supersedes GB/T 33924-2017 "Installation Dimensions of Spherical Earrings at the Piston Rod End of Cylinders" and is consistent with GB/T 33924-2017.

Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows.

---The scope of application of this document has been changed (see Chapter 1, Chapter 1 of GB/T 33924-2017);

---The tolerance for the bore diameter CN has been changed (see Table 1, Table 1 of GB/T 33924-2017);

---Added external thread specifications and installation dimension requirements for rod end spherical plain bearings (see Chapter 4);

---The marking method for rod end spherical bearings has been changed (see Chapter 6,

Chapter 6 of GB/T 33924-2017).

This document is modified to adopt ISO 8139:2018 "Installation of rod end spherical bearings for pneumatic transmission 1000kPa (10bar) series cylinders".

size".

The technical differences between this document and ISO 8139:2018, and the reasons therefor, are as follows.

---ISO 5598 (see Chapter 3) has been replaced with the normatively referenced GB/T 17446 to adapt to my country's technical conditions and improve operability.

---Added external thread specifications and installation dimension requirements for rod end spherical plain bearings (see Chapter 4) to adapt to my country's technical conditions and improve...

Operability;

---ISO 6099 has been replaced with the normatively referenced GB/T 9094 (see Chapter 4) to adapt to my country's technical conditions and improve operability.

Actual nature;

---Change the tolerance "H9" for the aperture CN in Tables 1 and 2 to "H7" to adapt to my country's technical conditions and improve operability;

---The marking method for rod end bearings has been changed (see Chapter 6) to adapt to my country's technical conditions and improve operability.

The following editorial changes have been made to this document.

---Change the standard title to "Accessory Mounting Dimensions for Pneumatic Cylinders Part 1: Rod End Spherical Bearings";

---The URLs for the terminology databases maintained by ISO and IEC for standardization have been removed;

---Corrected the error in Figure 1 and changed the dimension line for "EN";

---Figure 1 has been redrawn according to my country's mechanical engineering drawing standards.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Hydraulics and Pneumatics (SAC/TC3).

Introduction

Floating joints, etc.; to meet the needs of different application scenarios, the types and functions of cylinder mounting accessories are constantly being enriched and improved.

The emergence of this component provides more options for cylinder installation and application.

The rod end mounting accessory enables a non-rigid connection between the cylinder and the mechanism, improving the cylinder's installation efficiency, operational stability, and reliability.

GB/T 33924 aims to standardize the dimensional requirements for cylinder accessory installation and is proposed to consist of two parts.

---Part 1: Rod End Joint Bearing. The purpose is to determine the mounting dimensions of the piston rod end joint bearing for the cylinder.

---Part 2: Rod End Lug. The purpose is to determine the installation dimensions of the piston rod end lug for the cylinder.

Pneumatic cylinder accessory installation dimensions Part 1: Rod End Joint Bearing

1 Scope

This document specifies the mounting dimensions of the cylinder piston rod end spherical bearing to meet its interchangeability requirements.

This document applies to series gas cylinders with a nominal pressure of 1.0 MPa manufactured in accordance with GB/T 8102, GB/T 32336 and GB/T 28781.

Cylinder rod end spherical bearing.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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

This document.

GB/T 9094 Fluid Transmission Systems and Components - Cylinder Mounting Dimensions and Mounting Type Designations (GB/T 9094-2020, ISO 6099.

2018, IDT)

GB/T 17446 Glossary of Fluid Transmission Systems and Components (GB/T 17446-2024,

ISO 5598:2020, MOD) the terms and definitions defined in GB/T 17446 apply to this document.

4 Installation dimensions

Rod end bearings are divided into internal thread rod end bearings and external thread rod end bearings.

The installation dimensions of the internal thread rod end spherical plain bearing should be as shown in Figure 1 and Table 1, and the installation dimensions of the external thread rod end spherical plain bearing should be as shown in Figure 2 and Table 1.

Table 2. The identification codes for installation dimensions and installation types shall comply with the provisions of GB/T 9094.