

ICS 23.100.20

CCS J 20



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

GB/T 2348-2018

Replacing GB/T 2348-1993

**Fluid power systems and components -- Cylinder bores and
piston rod diameters**

Issued on: December 28, 2018

Implemented on: July 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 symbols and units

5 size

5.1 The cylinder bore is shown in Figure 1. The specific values are shown in Table 2.

Foreword

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

This standard replaces GB/T 2348-1993 "Hydraulic and pneumatic systems and component cylinder inner diameter and piston rod outer diameter", and GB/T 2348-

Compared with.1993, the main technical changes are as follows.

---"Cylinder inner diameter" was changed to "caliber diameter", "piston rod outer diameter" was changed to "piston rod diameter" (see Chapter 1, Chapter 4, Chapter 5,.1993 edition)

Chapter 1, Chapter 2);

--- Added normative references (see Chapter 2);

--- Added terms and definitions (see Chapter 3);

--- Added symbols and units (see Chapter 4);

--- Added schematic diagram of cylinder diameter and piston rod diameter (see Figure 1);

--- Increased cylinder diameter 60, removed the brackets of cylinder diameters 90, 140, 220, 280 (see Table 2, Table 1 of the.1993 edition);

--- Increased piston rod diameters (30), (60), (120), 400, 450 (see Table 3, Table 2 of the.1993 edition);

--- Increased the ratio of the two chambers (see Chapter 6);

--- Added labeling instructions (see Chapter 7).

This standard uses the redrafting method to modify the ISO 3320.2013 "fluid drive system and component bore and piston rod diameter and surface

The product is more than a series of meters.

The technical differences between this standard and ISO 3320.2013 and their reasons are as follows.

---About the normative reference documents, this standard has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replace ISO 3 with GB/T 321 equivalent to the international standard;

* Replace ISO 6099 with GB/T 9094 equivalent to the international standard;

* Replace ISO 5598 with GB/T 17446, which is equivalent to the international standard.

--- Cylinder diameters 90, 140, 220, 280 cancel the brackets to meet the actual production needs of China (see Table 2 and Table 4).

---ISO 3320.2013 Table 2 Note 1 and Note 2 are changed to paragraphs and notes, delete "should be used only for special occasions"; Table 3 Note 1 and Note 2 change

For paragraphs and notes, delete "should be used only for special occasions".

--- Increase the bore diameter 60 and the corresponding data (see Table 4).

---ISO 3320.2013 Formula 1 (1) and formula (2) are deleted in Chapter 4, adding "x10⁻²" to the unit conversion.

(See Chapter 4).

--- Remove the definition of area ratio in 6.1 of ISO 3320.2013, simplifying the contents of 6.2 and 6.3 in ISO 3320.2013.

This standard also made the following editorial changes.

--- Modified the standard name;

--- The symbol is changed to italic (see Chapter 4, Chapter 5, Chapter 6).

This standard was proposed by the China Machinery Industry Federation.

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

This standard was drafted. Xuzhou Xugong Hydraulic Parts Co., Ltd., Bosch Rexroth (Changzhou) Co., Ltd., Hefei Changyuan Hydraulic Co., Ltd.

Company, Yangzhou Jiangdu Yongjian Co., Ltd., Jiangyin Hongteng Machinery Co., Ltd., Wuhan University of Science and Technology, Sichuan Changjiang Hydraulic Parts Co., Ltd.

the company.

1 Scope

This standard specifies the cylinder bore of the hydraulic cylinder and cylinder, the diameter of the piston rod and the ratio of the two chambers.

This standard applies to hydraulic cylinders and cylinders in fluid transmission systems.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

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

GB/T 321 priority number and priority number system (GB/T 321-2005, ISO 3.1973, IDT)

GB/T 9094 hydraulic cylinder cylinder installation size and installation type symbol (GB/T 9094-2006, ISO 6099.2001, IDT)

GB/T 17446 fluid drive system and component vocabulary (GB/T 17446-2012, ISO 5598.2008, IDT)

3 Terms and definitions

The terms and definitions defined in GB/T 17446 apply to this document.

4 symbols and units

Symbols and units shall comply with the provisions of GB/T 9094, see Table 1.

Table 1 Symbols and units

Name symbol unit

Bore diameter AL mm

Piston rod diameter MM mm

Rodless cavity effective area A1 cm²

Rod cavity effective area A2 cm²

Two cavity area ratio phi -

among them.

$$A1 = \pi AL^2 \times 10^{-2/4} \quad (1)$$

$$A2 = \pi (AL^2 - MM^2) \times 10^{-2/4} \quad (2)$$

$\phi=A1/A2$ (3)

chinastandards.org · PREVIEW