



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

GB/T 15242.4-2021

**Dimensions series of rod and piston dynamic seals for
hydraulic cylinders - Part 4: Dimensions and tolerances of
bearing rings groove**

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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" Drafting.

This document is the fourth part of GB/T 15242 "Dimensions Series of Hydraulic Cylinder Piston and Piston Rod Dynamic Seal Device", GB/T 15242 has

The following parts have been released.

---Part 1.Coaxial seal size series and tolerances;

---Part 2.Support ring size series and tolerances;

---Part 3.Coaxial seal groove dimension series and tolerances;

---Part 4.Support ring installation groove dimension series and tolerances.

This document replaces GB/T 15242.4-1994 "hydraulic cylinder piston and piston rod dynamic seal device supporting ring installation groove size series and

Tolerance, compared with GB/T 15242.4-1994, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) Modified normative reference documents (see Chapter 2, Chapter 2 of the.1994 edition);

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

c) The symbol S has been deleted, and some symbols have been modified and added (see Chapter 4, Chapter 3 of the.1994 edition);

- d) The serial number has been added (see Chapter 5);
- e) Modified the schematic diagram of the groove type, and added the schematic diagram of the support ring in the figure (see Figure 1 and Figure 2, and Figure 1 and Figure 2 of the.1994 edition)
figure 2);
- f) Modified and supplemented part of the dimension series of the supporting ring installation groove, and added the specification code in the dimension series and tolerance table (see
Table 1 and Table 2,.1994 edition of Table 1 and Table 2);
- g) The requirements for the installation clearance of the piston and piston rod have been increased (see Chapter 7).

This document refers to ISO 10766.2014 ``Rectangular Support Ring Groove Ruler for Pistons and Piston Rods of Hydraulic Transmission Hydraulic Cylinders

"Inch" was drafted, and the degree of consistency is non-equivalent.

Introduction

The coaxial seal and its installation groove, the support ring and its installation groove are part of the piston or piston rod dynamic sealing device, and its size is

Compatible with each other, GB/T 15242 "hydraulic cylinder piston and piston rod dynamic seal device size series" stipulates the dimensions and specifications of these components.

Poor, consists of four parts.

---Part 1.Coaxial seal size series and tolerances. Specify coaxial seals and related dimensions for pistons or piston rods

And tolerance.

---Part 2.Support ring size series and tolerances. Specify the supporting ring for the piston or piston rod and its related dimensions and tolerances.

---Part 3.Coaxial seal groove dimension series and tolerances. Specifies the installation groove of the piston or the coaxial seal on the piston

Relevant dimensions and tolerances.

---Part 4.Support ring installation groove dimension series and tolerances. Specify the relevant dimensions and dimensions of the support ring on the piston or piston rod tolerance.

Hydraulic cylinder piston and piston rod dynamic sealing device size series

Part 4.Support ring installation groove dimension series and tolerances

1 Scope

This document specifies the symbol, serial number, type, size series and the installation groove of the supporting ring of the hydraulic cylinder piston and piston rod dynamic seal device.

Tolerance, clearance.

This document is applicable to the mounting grooves of the support ring for the piston and piston rod of the reciprocating hydraulic cylinder.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 15242.2 Hydraulic cylinder piston and piston rod dynamic sealing device dimension series Part 2.Support ring dimension series and tolerances

GB/T 17446 Vocabulary of fluid transmission systems and components

3 Terms and definitions

The terms and definitions defined in GB/T 15242.2 and GB/T 17446 apply to this document.

4 Symbols and abbreviations

The following symbols and abbreviations apply to this document.

b ---The width of the groove for the installation of the support ring;

D ---The bottom diameter of the bore of the hydraulic cylinder or the groove of the piston rod support ring;

d --- the diameter of the piston rod or the bottom diameter of the groove of the piston support ring;

F --- Piston or piston ring installation clearance;

R,r---round corner radius;

T --- the depth of the groove for the installation of the support ring;

GD ---support ring for piston rod;

SD ---Support ring for piston.

5 serial number

See GB/T 15242.2 for the serial number.

6.1 The groove type, size series and tolerances of the supporting ring for the piston

6.1.1 The schematic diagram of the support ring for the piston and the groove pattern are shown in Figure 1.