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

GB/T 5796.3-2022

Trapezoidal screw threads - Part 3: Basic dimensions

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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 3 of GB/T 5796 "Trapezoidal Thread". GB/T 5796 has released the following parts.

- Part 1. Tooth type;
- Part 2. Diameter and pitch series;
- Part 3. Basic dimensions;
- Part 4. Tolerances.

This document replaces GB/T 5796.3-2005 "Trapezoidal Thread Part 3. Basic Dimensions". Compared with GB/T 5796.3-2005,

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Change the normative references GB/T 5796.1 and GB/T 5796.2 to informative references (see References, 2005 edition of chapter 2).

This document is modified to adopt ISO 2904:2020 "ISO Metric Trapezoidal Thread Basic Dimensions".

The technical differences between this document and ISO 2904:2020 and their reasons are as follows.

---Added a thread contact height code (H0) and two tooth height codes (H4 and h3) (see Chapter 4) for deriving the basic size

inch formula and Figure 1 dimensions;

--- Deleted two tooth type rounding radius codes (R1 and R2) (see Chapter 4 of ISO 2904.2020), the basic size of the thread is not included

Including the radius size of the tooth type rounding;

--- Change the prompt in Table 1 from a statement-type clause to a requirement-type clause (see Chapter 5) to clarify its requirement attributes.

The following editorial changes have been made to this document.

--- Change the file name to "Trapezoidal Thread Part 3.Basic Dimensions";

--- Revised references.

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 5796 "Trapezoid Thread" consists of 4 parts.

--- Part 1.Tooth shape. It establishes the basic dimension formula of thread diameter for part 3 and part 4 and determines the start of thread tolerance zone

Location provides the technical foundation.

--- Part 2.Diameter and pitch series. It establishes the basic dimension table of thread diameter and determines the thread diameter for part 3 and part 4

The difference table provides a specification basis for nominal diameter and pitch.

--- Part 3.Basic dimensions. It provides a technical basis for determining the limit size of the thread diameter.

--- Part 4.Tolerances. It provides technical basis for product production and inspection.

The four parts of tooth type, diameter and pitch series, basic dimensions and tolerances constitute the complete technical parameter system of "Trapezoid Thread". put them together

It is convenient for users to find and use within a standard.

Trapezoidal threads part 3.basic dimensions

1 Scope

This document specifies the basic dimensions of the trapezoidal thread, the diameter and pitch combination series conform to the provisions of GB/T 5796.2, and its basic dimensions

The inch value is relative to the design tooth shape specified in GB/T 5796.1.

This document applies primarily to mechanical transmission threads, and may also be used for fastening threads.

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 14791 Thread Terminology (GB/T 14791-2013, ISO 5408.2009, IDT)

3 Terms and Definitions

Terms and definitions defined in GB/T 14791 apply to this document.

4 code

The following codes apply to this document.

D1.Basic minor diameter of internal thread;

D2.Basic pitch diameter of internal thread;

D4.Basic major diameter of internal thread;

d. basic major diameter of external thread (nominal diameter);

d2.basic pitch diameter of external thread;

d3.basic diameter of external thread;

H0.thread contact height;

H4.Internal thread height;

h3.thread height of external thread;

P. pitch;

ac. Clearance at major and minor diameters.

5 Basic Dimensions

The basic size position of each diameter is shown in Figure 1, and the basic size value should meet the requirements of Table 1.

Calculate the basic dimension value of each diameter in Table 1 according to the following formula, and round the value to the third decimal place.

$$D1=d-2H0=dP$$

$$D2=d2=d-H0=d-0.5P$$