



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

GB/T 33524.2-2017

**Modular taper interface with ball track system -- Part 2:
Dimensions and designation of receivers**

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Foreword

GB/T 33524 "Modular Cone Interface with Steel Ball Tensioning System" is divided into two parts.

--- Part 1. Handle size and marking;

--- Part 2. Mounting hole size and marking.

This part is the second part of GB/T 33524.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to ISO 26622-2.2008 "Modular Conical Interface with Steel Ball Tensioning System Part 2. Ann

Hole size and marking.

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

---GB/T 1182-2008 Product Geometry Specification (GPS) Geometric Tolerance Shape, Orientation, Position and Runout Tolerance

(ISO 1101-2004, IDT)

---GB/T 1184-1996 Shape and position tolerances without tolerance values (eqvISO 2768-2.1989)

---GB/T 1804-2000 Tolerance of linear and angular dimensions for general tolerances without tolerances (eqvISO 2768-1.1989)

This section has the following editorial changes compared to ISO 26622-2.2008.

In the --- mark, ISO 26622-2 is replaced by GB/T 33524.2.

This part was proposed by the China Machinery Industry Federation.

This part is under the jurisdiction of the National Tool Standardization Technical Committee (SAC/TC91).

This section is responsible for drafting units. Chengdu Tool Research Institute Co., Ltd., Zhejiang Province, the focus of cutting tool detection and deep processing technology research key experiments

Room, Chengdu Chengquan Tools Group Co., Ltd.

1 Scope

This part of GB/T 33524 specifies automatic tool changers and manual tool changers (such as lathes, drill presses, milling machines and milling centers).

Mounting hole series size for modular conical interface with steel ball tensioning system.

Torque transmission is achieved by the friction of the shank tail, the clamping elements and the keys.

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.

ISO 1101 Product Geometry Specification (GPS) Geometric Tolerance Shape, Orientation, Position, and Runout Tolerance (Geometrical

Products specifications (GPS)-Geometrical tolerancing-Tolerances of form, orientation, location and

Run-out)

ISO 2768-1 General tolerances Part 1. Linear and angular tolerances without tolerances (General tolerances-Part 1. Tol-

erances for linear and angular dimensions without individual tolerance indications)

ISO 2768-2 General tolerances Part 2. Geometrical tolerances for unnotched tolerances (General tolerances-Part 2. geo-

Metrical tolerances for features without individual tolerance indications)

3.1 General provisions

The shape, orientation, position, and runout tolerance are labeled ISO 1101. Unmarked linear and angular tolerances are in accordance with the "m" level of ISO 2768-1.

Unmarked geometric tolerances are in accordance with the "k" level of ISO 2768-2.

3.2 Conical mounting hole

The dimensions of the module cone mounting holes with the steel ball tensioning system are shown in Figure 1 and Table 1.

Surface roughness in microns

Dimensions in millimeters

a Depends on the clamping mechanism.

Figure 1 Conical mounting hole

Table 1 Dimensions of the taper mounting holes are in millimeters

Nominal size 32 40 50 63 80 100

B1 13.82 16.81 21.81 26.81 33.8 42.79

D1 0-0.1 32 40 50 63 80 100

D2+/-0.0025 23.975 29.97 - - -

D2+/-0.005 - - 39.96 49.96 63.94 81.925

D3a - - - - -

L1+/-0.38 5.895 7.8 8.825 12 15 15

L2+/-0.38 12.575 16 20.125 26.5 35 38

L3 min 20 25 32 40 45 50

L4a - - - - -

T1 0.005 0.005 0.008 0.010 0.010 0.010

a Depends on the clamping mechanism.

4 clamping force

The clamping system shall provide sufficient clamping force to elastically deform the conical portion and ensure that the end face of the mounting hole is in contact with the flange face of the shank

touch. This interface torque transfer capability will increase as the clamping force increases.

Refer to Appendix A for the reference value of the clamping force of the module taper mounting hole.

5 mark

The module cone mounting holes that conform to this section are marked as follows.

- a) "module taper mounting hole";
- b) the standard number (eg "GB/T 33524.2");
- c) codename "TS";
- d) Nominal size in millimeters.

Example.

Module taper mounting holes with a nominal size of 63 mm are marked as.

Module cone mounting hole GB/T 33524.2-TS63

Appendix A

(informative appendix)

Application recommendation

A.1 clamping force

A change in the force range of the module taper shank and the module mounting hole causes a change in the pressing force acting on the flanged shank contact surface. This

It has a decisive influence on the rigidity of the modular conical interface with a steel ball tensioning system.

The range of clamping force is given in Table A.1. The values in Table A.1 are for use only with modular cone mounting holes with steel ball tensioning systems.

Table A.1 Scope of clamping force

Nominal size

Mm

32 40 50 63 80 100

Minimum clamping force

kN

9 13 22 36 53 75

Maximum clamping force