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

GB/T 3668.10-2025

Replacing GB/T 3668.10-1983

**Modular units for machine tool construction - Part 10:
Dimensions of spindle noses and adjustable adaptors for
multi-spindle heads**

组合机床通用部件 第10部分：多轴箱主轴端部和可调接杆尺寸
(English Translation)

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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 10 of GB/T 3668 "General Components for Modular Machine Tools". GB/T 3668 has already published the following parts.

---Part 1: Multi-spindle housing and input shaft dimensions;

---Part 2: Bracket Dimensions;

- Part 3: Dimensions of the rotary table and the polygonal central base for the rotary table;
- Part 4: Slide Table Dimensions;
- Part 5: Power Box Dimensions;
- Part 6: Dimensions of the Side Base of the Slide Table;
- Part 7: Dimensions of the Central Base and Columns;
- Part 8: Dimensions of the Column Side Base;
- Part 9: Spindle Component Dimensions;
- Part 10: Dimensions of Multi-Spindle Head Spindle Ends and Adjustable Connector;
- Part 11: Dimensions of Guide Rail Columns;
- Part 12: Dimensions of Floor-Standing Rail-Mounted Columns;
- Part 13: Dimensions of flanges and end-face drive keys for mounting multi-axis boxes.

This document supersedes GB/T 3668.10-1983 "Dimensions of Spindle Ends and Adjustable Connecting Rods for Multi-Spindle Boxes, General Components of Modular Machine Tools".

Compared with GB/T 3668.10-1983, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- The scope has been changed, expanding the range of products to which the standard applies (see Chapter 1, Chapter 1 of the 1983 edition);
- A new chapter on "Terms and Definitions" has been added (see Chapter 3);
- Added information about units in the figure layout (see Figures 1, 2, 3, and 4);
- The tolerances for the adjustable connecting rod outer diameters d and d_1 in the table have been changed, and the tolerance grade has been changed from h6 to g6 (see Tables 2 and 3, 1983).

(Tables 2 and 3 of the version)

- Appendix A has been deleted (see Appendix A of the 1983 edition).

This document is modified to adopt ISO 2905:1985 "General components for combination machine tools - Spindle ends and adjustable connecting rods for multi-spindle boxes".

The technical differences between this document and ISO 2905:1985, and the reasons therefor, are as follows.

- ISO 296 (see 5.5) has been replaced with the normatively referenced GB/T 1443-2016 to adapt to my country's technical conditions and improve reliability.

Operability;

---ISO 2901 (see 5.4) has been replaced with the normatively referenced GB/T 5796.1-2022 to adapt to my country's technical conditions and improve...

Operability;

---ISO 2903 (see 5.4) has been replaced with the normatively referenced GB/T 5796.4-2022 to adapt to my country's technical conditions and improve...

Operability.

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 Metal Cutting Machine Tools (SAC/TC22).

Introduction

Modular machine tools and their automated production lines are mainly suitable for processing large quantities of parts in industries such as automobiles and construction machinery. In the modular machine tool industry, the general-purpose section...

The components are highly serialized and specialized, yet each exists as an independent product. The spindle end and adjustable connecting rod of the multi-axis headstock of the modular machine tool are key components.

One of the components. The quality of the multi-spindle head end and the adjustable connecting rod directly affects the machining accuracy of the combined machine tool, especially its precision.

To ensure the maintenance and reliability of products. GB/T 3668 aims to define the design, manufacture, inspection, and inter-component connection of general-purpose components for modular machine tools.

The knot and interchangeability consist of 13 parts.

---Part 1: Multi-spindle housing and input shaft dimensions. The purpose is to determine the dimensions required during the manufacturing process of the multi-spindle housing and input shafts.

All indicators and parameters that must be followed to ensure the performance and quality of components.

---Part 2: Bracket Dimensions. The purpose is to determine the standards that must be followed during the manufacturing process of bracket products to ensure component

performance and quality.

Various indicators and parameters.

---Part 3: Dimensions of the rotary table and its polygonal center base. The purpose is to determine the dimensions of the rotary table and its...

The manufacturing process of polygonal center bases for rotary worktables must adhere to various indicators to ensure component performance and quality.

parameter.

---Part 4: Slide Table Dimensions. The purpose is to determine the principles that must be followed during the manufacturing process of slide table products to ensure component performance and quality.

Various indicators and parameters.

---Part 5: Power Setter Dimensions. The purpose is to determine the requirements that must be followed during the manufacturing process of the power setter to ensure component performance and quality.

Various quantitative indicators and parameters.

---Part 6: Slide Table Side Base Dimensions. The purpose is to determine the assurance components that must be adhered to during the manufacturing process of the slide table side base.

Performance and quality indicators and parameters.

---Part 7: Dimensions of the Intermediate Base and Columns. The purpose is to determine the dimensions that must be followed during the manufacturing process of the intermediate base and column products.

Ensure that all indicators and parameters for component performance and quality are met.

---Part 8: Dimensions of the Column Side Base. The purpose is to determine the safety features that must be adhered to during the manufacturing process of the column side base product.

Performance and quality indicators and parameters.

---Part 9: Spindle Component Dimensions. The purpose is to determine the principles that must be followed during the manufacturing process of spindle components to ensure component performance.

And various indicators and parameters of quality.

---Part 10: Multi-spindle headstock spindle end and adjustable extension rod dimensions. The purpose is to determine the dimensions of the multi-spindle headstock spindle end and