



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

GB/T 5900.1-2021

**Machine tools - Connecting dimensions of spindle noses and
work holding chucks - Part 1: Conical connection**

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Foreword

GB/T 5900 Machine Tools - Connecting Dimensions of Spindle Noses and Work

Holding Chucks can be divided into the following 4 parts:

- Part 1: Conical Connection;
- Part 2: Cam Lock Type;
- Part 3: Bayonet Type;
- Part 4: Cylinder Connection.

This Part is Part 1 of GB/T 5900.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part replaced GB/T 5900.1-2008 Machine Tools - Connecting Dimensions of Spindle Noses and Work Holding Chucks - Part 1: Conical Connection.

Compared with GB/T 5900.1-2008, the major technical changes of this Part are as follows besides the editorial modifications:

- Add "This Part is applicable to common lathes and CNC lathes, and other machine tools can also be used as reference.";
- Delete "Note: The cam lock type, bayonet type and cylindrical type are specified in ISO 702-2, ISO 702-3, and ISO 702-4, respectively." (see Clause 1 of this Edition; Clause 1 of 2008 Edition);
- Revise Figure 1 and Table 1 (see 3.1 of this Edition; 3.1 of 2008 Edition);
- Revise Figure 2 and Table 2 (see 3.2 of this Edition; 3.2 of 2008 Edition);
- Add "3.3 For connection size of Type-A0 spindle end and faceplate, and Type-A

spindle end and faceplate connection assembly diagram, please refer to Appendixes A and B."

This Part adopts the redrafting method to modify and use ISO 702-1:2009 Machine Tools - Connecting Dimensions of Spindle Noses and Work Holding Chucks - Part 1: Conical connection".

The technical differences between this Part and ISO 702-1:2009 and the causes are as follows:

--- Add "This Part is applicable to common lathes and CNC lathes, and other machine tools can also be used as reference." to clarify the scope of application of this Part;

--- Delete "Note: The cam lock type, bayonet type and cylindrical type are stipulated in ISO 702-2, ISO 702-3, ISO 702-4, respectively." to adapt to the technical conditions of China;

--- Add "3.3 For connection size of Type-A0 spindle end and faceplate, and Type-A spindle end and faceplate connection assembly diagram, please refer to Appendixes A and B." to adapt to the technical conditions of China.

This Part also made the following editorial modifications:

--- Delete the foreword and introduction of the international standard;

--- Add Appendix A (informative) "Connection size of Type-A0 spindle end and faceplate";

--- Add Appendix B (informative) " Type-A spindle end and faceplate connection assembly diagram ".

This Part was proposed by China Machinery Industry Federation.

This Part shall be under the jurisdiction of National Technical Committee on Metal-Cutting Machine Tool of Standardization Administration of China (SAC/TC 22).

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The historical editions replaced by this Standard are as follows:

--- GBT 5900.1-1986, GB/T 5900.1-1997, GB/T 5900.1-2008.

Machine Tools - Connecting Dimensions of Spindle

Noses and Working Holding Chucks - Part 1: Conical

Connection

1 Scope

This Part specifies the interchangeable dimensions between the taper end (Type A) of the lathe spindle and the corresponding connecting surface of the faceplate or chuck.

This Part is applicable to common lathes, CNC lathes, and other machine tools can also be used as reference.

2 Interchangeability

All linear dimensions and tolerance units in this Part are expressed in millimetres (mm).

Although the size values and assembly bolts are different in metric and imperial systems, the connection dimensions in Tables 1 and 2 can ensure the interchangeability of metric and imperial chucks (there is also an explanation in the note to Table 2).

3.1 Spindle noses

See Figure 1 and Table 1.

--- Type-A1: The screw holes are distributed on two distribution circles with diameters d_2 and d_3 ;

--- Type-A2: The screw holes are distributed on a distribution circle with a diameter of d_3 .

(Type-A2 includes No. 3 and No. 4; and Type-A1 and Type-A2 include No. 5 to No. 28)

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