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

**GB/T 9160.1-2017**

Replacing GB/T 9160.1-2006

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**Rolling bearings - Accessories - Part 1: Adapter sleeve  
assemblies and withdrawal sleeves**

滚动轴承 附件 第1部分：紧定套和退卸衬套

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### Foreword

GB/T 9160 "Rolling bearings - Accessories" is divided into two parts:

- Part 1: Adapter sleeve assemblies and withdrawal sleeves;
- Part 2: Locknuts and locking devices.

This part is Part 1 of GB/T 9160.

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

This part replaces GB/T 9160.1-2006 "Rolling bearings - Accessories - Part 1: Tapered sleeves". Compared with GB/T 9160.1-2006, apart from editorial changes, the main technical changes are as follows:

- the title of the standard was changed (see the cover and the title page; the cover and title page of the 2006 edition);
- some terms and definitions were added (see 3.2 and 3.3);

- the way the designation method is presented was revised, and type codes were added for adapter sleeve assemblies and adapter sleeves with a 1:30 taper, together with a structural code for designs with hydraulic oil holes (see Clause 5; Clause 5 of the 2006 edition);
- the B3 values of some 31 series and 23 series adapter sleeve assemblies were revised (see Table 4 and Table 8; Table 4 and Table 5 of the 2006 edition);
- reference dimensions were added for some 30 series and 31 series adapter sleeves (see Table 12 and Table 13);
- boundary dimensions were added for adapter sleeve assemblies and adapter sleeves with a 1:30 taper (see Table 10, Table 11, Table 19 and Table 20);
- thread length b and slot width f values were added for some 30, 31, 32 and 39 series withdrawal sleeves and for the 40 and 41 series (see Table 21, Table 22, Table 25 and Tables 28 to 30);
- the taper tolerance tables were revised and tolerance requirements for the 1:30 taper were added (see Table 32 and Table 33; Table 25 of the 2006 edition);
- provisions for adapter sleeve assemblies and withdrawal sleeves with hydraulic oil holes were added (see Annex A);
- a schematic diagram for measuring withdrawal sleeves was added (see Figure C.2).

This part was prepared by the redrafting method with reference to ISO 2982-1:2013 "Rolling bearings - Accessories - Part 1: Dimensions for adapter sleeve assemblies and withdrawal sleeves"; the degree of correspondence with ISO 2982-1:2013 is non-equivalent.

This part was proposed by the China Machinery Industry Federation.

This part is under the jurisdiction of the National Technical Committee on Rolling Bearings of Standardization Administration of China (SAC/TC 98).

The drafting organizations of this part are: Luoyang Bearing Research Institute Co., Ltd. and the Adapter Sleeve Branch of Henan Yuxi Bearing Co., Ltd.

The previous edition of the standard replaced by this part is: GB/T 9160.1-2006.

## 1 Scope

This part of GB/T 9160 specifies the designation method, the dimensions, the technical requirements, the test methods, the inspection rules and the marking and rust-proof packaging of adapter sleeve assemblies, adapter sleeves and withdrawal sleeves with a 1:12 taper and with a 1:30 taper.

This part applies to the manufacture, inspection and acceptance of adapter sleeve assemblies and withdrawal sleeves for rolling bearings whose dimension series conform to

GB/T 273.3.

## 2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 192 General purpose screw threads - Basic profile · GB/T 196 General purpose screw threads - Basic dimensions · GB/T 272 Rolling bearings - Identification code · GB/T 273.3 Rolling bearings - Boundary dimension plans - Part 3: Radial bearings · GB/T 275 Rolling bearings - Fits · GB/T 699 Quality carbon structural steels · GB/T 1800.1 Geometrical product specifications (GPS) - Limits and fits - Part 1: Bases of tolerances, deviations and fits · GB/T 2516 General purpose screw threads - Limit deviations · GB/T 5796.1 Trapezoidal screw threads - Part 1: Profile · GB/T 5796.3 Trapezoidal screw threads - Part 3: Basic dimensions · GB/T 5796.4 Trapezoidal screw threads - Part 4: Tolerances · GB/T 6930 Rolling bearings - Vocabulary · GB/T 7307 55° non-sealing pipe threads · GB/T 9160.2 Rolling bearings - Accessories - Part 2: Locknuts and locking devices · GB/T 8597 Rolling bearings - Rust-proof packaging · GB/T 24605 Rolling bearings - Product marking · GB/T 24608 Rolling bearings and their commodity parts - Inspection rules

## 3 Terms and definitions

The terms and definitions given in GB/T 6930 and the following apply to this document.

3.1 adapter assemblies - An assembly made up of an adapter sleeve, a matching locknut and a lock washer, or a locking clip in the case of large sizes.

3.2 locking clip - The C-shaped part that secures the locknut.

3.3 locking clip assembly - An assembly made up of a locking clip and a bolt.

## 4 Symbols

The following symbols apply to this document.

Unless otherwise stated, the symbols shown in Figures 1 to 5 (tolerance symbols excepted) and the values listed in Tables 3 to 30 are nominal dimensions.

4.1 Symbols for adapter sleeve assemblies (see Figure 1 and Figure 2).

B1 width of the adapter sleeve assembly · B2 distance from the small end face of the bearing tapered bore to the outer end face of the locknut · B3 distance from the small end face of the bearing tapered bore to the outer end face of the locking bolt head · d bearing bore diameter · d1 bore diameter of the adapter sleeve assembly · d2 outside diameter of the locknut of the adapter sleeve assembly

#### 4.2 Symbols for adapter sleeves (see Figure 3 and Figure 4).

a distance from the small-end diameter of the adapter sleeve taper to the thread end face ·  
B1 width of the adapter sleeve · B5 width of the locking slot of the adapter sleeve · B6  
length of the locking slot of the adapter sleeve · D1 large-end diameter of the adapter  
sleeve taper (calculated value) · d1 bore diameter of the adapter sleeve

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