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**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2189-2013

**Hardware for furniture - Cup hinges
(English Translation)**

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Foreword

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

This standard is a revision of QB/T 2189-1995 "Hardware for furniture - Cup hinges and their mounting plates - Requirements and testing". Compared with QB/T 2189-1995, the main technical changes are as follows:

- MODIFY the standard name;
- ADD normative references;
- ADD the terms and definitions of catch devices and damper mechanism;
- MODIFY the classification of cup hinge types; INCLUDE it in an informative appendix;
- MODIFY the requirements for closing force;
- ADD the requirements and test methods for opening force;
- ADD the requirements and test methods for vertical static load;
- MODIFY the anti-overflow limit to horizontal static load; MODIFY the requirements and test methods;
- MODIFY the sinking requirements;

- MODIFY the bearing capacity to the durability requirement; MODIFY the requirements and test methods;
- ADD the requirements and test methods of corrosion resistance;
- ADD the inspection rules;
- ADD the markings, instructions for use, packaging, transportation and storage.

This standard was proposed by the China National Light Industry Council.

This standard shall be under the jurisdiction of the National Furniture Standardization Center.

The main drafting organizations of this standard: National Furniture Product Quality Supervision and Inspection Center (Guangdong), Guangdong Zhongqiao Hardware Electrical Manufacturing Co., Ltd.

Participated drafting organizations of this standard: Dongguan Guangrun Furniture Co., Ltd., Zhongshan Zhongtailong Office Supplies Co., Ltd., Guangdong Andes Intelligent Furniture Components Co., Ltd., Guangdong Xingpeng Industrial Co., Ltd., Zhongshan Shengtai Hardware Products Co., Ltd., Foshan Shunde Jusen Hardware Products Co., Ltd., Shunde Vocational and Technical College, Zhongshan Paige Furniture Co., Ltd., Guangdong Xinghui Precision Manufacturing Co., Ltd., Zhongshan Guojing Furniture Co., Ltd.

1 Scope

This standard specifies the terms and definitions, requirements, test methods, inspection rules, markings, instructions for use, packaging, transportation, storage of cup hinges for furniture.

This standard applies to cup hinges for furniture. Other hinges may refer to this standard.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

QB/T 3826 Corrosion-resistant testing method of the metal deposits and conversion coatings for the light industrial products - Neutral salt spraying test (NSS)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Catch device

A device that keeps or attaches a door in a certain position.

Note: The open of catch device does not require auxiliary actions, such as a magnetic stop OR a mechanical device that automatically closes.

3.2

Damper mechanism

A mechanical device that slowly stops the door from moving.

instructions for use provided.

If no instructions for installation, assembly or adjustment are provided, it shall install or assemble the cup hinge in a way, that is the most unfavorable for the cup hinge; meanwhile it shall record it in the inspection report. Cup hinge's fittings shall be tightened before the test. If there is no manufacturer's special instruction, the fittings shall, during the test, not be re-tightened. If, for the purpose of testing the performance of the cup hinge in the worst case, it is necessary to change the cup hinge device, it shall be recorded in the inspection report.

The test shall be carried out at an indoor temperature of 15 °C ~ 25 °C. If the

cup hinge contains parts which are made of hygroscopic plastic (such as polyamide), the cup hinge shall, before the test, be conditioned at a temperature of $(23 \pm 5) ^\circ\text{C}$ and a relative humidity of $(50 \pm 5)\%$ for 7 days.

Before the test, it shall thoroughly inspect the cup hinge and its accessories; record the defects of the cup hinge and its components, to distinguish from the defects caused by the test.

5.2 Test equipment

Unless otherwise specified, any applicable test device can be used for the test; the test result does not depend on the device itself.

5.2.1 Loading

In the static load test, the loading speed shall be as slow as possible, to ensure that the additional dynamic load is negligible. Unless otherwise specified, each load applied shall be maintained for 10 s ~ 15 s.

In the durability test, the loading speed shall ensure that no dynamic heating will occur.

Note: The applied force can be replaced by mass. The conversion relationship is that: 10 N is equivalent to 1 kg.

5.2.2 Accuracy

Unless otherwise specified, use the following measurement accuracy:

- Loading force: $\pm 5\%$ of the rated value;
- Speed: $\pm 5\%$ of the rated value;
- Mass: $\pm 1\%$ of rated value;
- Size: ± 1 mm;

The door can be opened and closed manually. The opening and closing time is

5.5.3 Horizontal static load

This test is only applicable to cup hinges, which have a maximum opening angle of less than 135° .