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

中华人民共和国国家标准

GB 16410-2007

Replace GB 16410-1996

Domestic Gas Cooking Appliances

家用燃气灶具

Issued on June 13, 2007

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**Issued by General Administration of Quality Supervision, Inspection
and Quarantine of the People's Republic of China**

**Standardization Administration of the People's Republic of
China**

Foreword

This standard is a partially mandatory standard. 5.2.1, 5.2.2 a, c, 5.2.5 c, 5.2.6 b, 5.2.7.1 b, 5.2.7.3, 5.2.10.2, 5.3.1.4, 5.3.1.5, 5.3.1.10 d, f, 5.3.1.12, 5.3.1.14, 5.3.2.6, 5.3.6, 5.3.7.5 a, 5.4.2.2, 5.4.2.3, 5.4.10.1, 5.4.16.1, 8.1.1 (except f), 8.1.2 a, 8.2.1, 8.2.4 c, d, h and the boldface part of Table 2, Table 3, Table 4, Table 5, Table 6, Table 7 and Table 8 are mandatory articles. The rest parts are voluntary articles.

The following contents of this standard are revised by referring to relevant international and foreign standards:

The standard state, maximum normal temperature rise, extra heat endurance of burner and test methods make reference to EN 30-1-1:1998 “Domestic Gas Cooking Appliances Part 1-1: General Rules on Safety”.

The valve closure time of flame failure safeguard makes reference to EN 30-1-1:1998 “Domestic Gas Cooking Appliances Part 1-1: General Rules on Safety” and JIS S 2103:1996 “Domestic Gas Cooking Appliances”.

The oven service performance requirements and test methods make reference to JIS S 2103:1996 “Domestic Gas Cooking Appliances” and JIS S 2093:1996 “Test Methods for Domestic Gas Cooking Appliances”.

The computing formula for carbon monoxide percentage concentration in dry Hue gas refers to JIS S 2103:1996 “Domestic Gas Cooking Appliances”.

The main variations of this standard compared with GB 16410-1996 “Domestic Gas Cooking Appliances”:

— This standard is a partially mandatory standard. The 1996 version is a fully mandatory standard;

— Gas-electric combined stove are added into the scope of application;

— In terms and definitions, 2 are deleted, 5 are revised and 16 are added;

— The temperature of standard conditions is adjusted from 0°C as defined in 1996 version to 15°C;

— The main fire heat load of cooking appliances with two openings or more than two openings is adjusted from not less than 2.9 kW as defined in 1996 version to: gas stove and gas-electric combined stove with two openings or more than two openings shall have a main fire and its converted actual heat input shall be: common stove >3.5kW, infrared stove >3.0kW;

— The requirements of the state with wind are cancelled;

— It is stipulated that every burner of the cooking appliance shall have flame failure safeguard;

— Special requirements on the use of stove appliance with AC supply are added;

— The requirements on material of cooking appliance are revised to requirements on performance of material;

— Articles on packing materials and packing wastes are added;

— Computing formula for actual heat input is added;

— Computing formula for converted actual heat input is revised;

— Computing formula for carbon monoxide percentage concentration in dry flue gas is revised;

— Requirements and methods for drop and stacking test.

The Appendix A is an informative appendix.

This standard will come into effect in 9 months after the date of issuance.

This standard was proposed by the Standardization Administration of the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China.

This standard belongs under the Hardware Association of China Association for Standardization.

This standard was drafted by: Zhongshan Vantage Gas Appliance Stock Co., Ltd., National Commodity & Hardware Standardization Center, Jiangsu Product Quality Supervision & Inspection Center, Zhejiang Dandy Kitchen Utensils Co., Ltd., National Gas Appliance Supervision and Inspection Center, National Gas Appliance Product Quality Supervision & Inspection Center (Foshan), National Quality Supervision & Inspection Center for Daily-use Metal Products, Gas Stove Research Institute of Haier Group, Foshan Midea Kitchen Appliances Manufacturing Co., Ltd., Guangdong Macro Gas Appliance Co., Ltd., Jiangsu Gomon Kitchen Appliance Co., Ltd., Zhejiang Putian Electric Co., Ltd., Hangzhou Laoban Industrial Group Co., Ltd., Shaanxi Tianzhou High-tech Co., Ltd. and Guangdong Changqing (Group) Co., Ltd.

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This standard will replace the following versions:

— CJ 4 - 1983;

— GB 16410-199 6.

Domestic Gas Cooking Appliances

1 Scope

This standard provides the terms and definitions, product classification, requirements, test methods, inspection rules, marks, package, transportation and storage for Domestic Gas Cooking Appliances.

This standard is applicable to domestic gas cooking appliances using town gas and domestic gas- electric combined cooking appliances using town gas, including:

- a) Gas stoves with nominal heat input of single burner $\leq 5.23\text{kW}$;
- b) Gas oven and gas barbecue with nominal heat input $\leq 5.82\text{kW}$;
- c) Gas ovens and gas barbecues with nominal heat input meeting the requirements of a) and b);
- d) Gas rice cookers with maximum rice volume per time $\leq 4\text{L}$ and nominal heat input $\leq 4.19\text{kW}$;
- e) Gas-electric combined cooking appliances with nominal heat input meeting requirements of a), b) and d) and total nominal input power $\leq 5.00\text{kW}$.

This standard applies to the domestic gas cooking appliances using gas out of the categories in GB/T 13611 Town gas Classification.

This standard is not applicable to the gas cooking appliances used in mobile transport vehicle.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, standard sequent amendments to (excluding correction contents), or revisions of, any of these publications do not apply, however, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 191—2000 “Packaging—Pictorial Markings for Handling of Goods”

GB/T 1019—1989 “General Requirements for Packings of Household Electrical Appliances”

GB/T 1690—1992 “Rubber, Vulcanized—Determination of the Effect of Liquids”

GB/T 1740—1979 “Methods of Test for Resistance to Heat and Humidity of Paint Films”

GB/T 1765—1979 “Method of Producing of Paint Films for Testing Heat and Humidity Resistance, Salt-fog Resistance and Accelerated Weathering”

GB/T 1771 — 1991 “Paints and Varnishes—Determination of Resistance to Neutral Salt Spray”

GB/T 2828.1—2003 “Sampling Procedures for Inspection by Attributes—Part 1: Sampling Schemes Indexed by Acceptance Quality Limit (AQL) for Lot-by-lot Inspection”

GB/T 2903—1998 Copper/Copper-Nickel (Constantan) Thermocouple Wires”

GB/T 3768-1996 “Acoustics—Determination of Sound Power Levels of Noise Sources Using Sound Pressure—Survey Method Using an Enveloping Measurement Surface over A Reflecting Plane”

GB/T 3772—1998 “Platinum-10% Rhodium/Platinum Thermocouple Wires”

GB 4208—1993 “Degrees of Protection Provided by Enclosure (IP Code)”

GB 4706.1 — 1998 “Safety of Household and Similar Electrical Appliances—Part 1: General Requirements”

GB 4706.22—2002 “Safety of Household and Similar Electric Appliances—Particular Requirements for Stationary Cooking Ranges, Hobs, Ovens and Similar Appliances”

GB/T 4857.3 — 1992 “Packaging—Complete, Filled Transport Packages—Stacking Tests Using Static Load”

GB 5013.4—1997 “Rubber Insulated Cables of Rated Voltages Up to and Including 450/750V —Part 4: Cords and Flexible Cables”

GB 5023.3 “Polyvinyl Chloride Insulated Cables of Rated Voltages Up To and Including 450/750v—Part 3: Sheath-free Cable for Fixed Wiring”

GB/T 7306.1 “Pipe Threads with 55 Degree Thread Angle Where Pressure-tight Joints Are Made on the Threads—Part 1 : Parallel Internal and Taper External Threads”

GB/T 7306.1 “Pipe Threads with 55 Degree Thread Angle Where Pressure-tight Joints Are Made on the Threads—Part 2: Taper Internal and Taper External Threads”

GB/T 7307 Pipe “Threads With 55 Degree Thread Angle Where Pressure-tight Joints Are Not Made on the Threads”

GB 13028 “Isolating Transformers and Safety Isolating Transformers—Requirements”

GB/T 13611 Classification of Town Gas”

GB/T 16411 — 1996 “Universal Test Methods of Gas Burning Appliances for Domestic Use”

QB/T 3826—1999 Corrosion-resistant Testing Method of the Metal Deposits and Conversion Coatings for the Light Industrial Products—Neutral Salt Spraying Test (NSS)”

QB/T 3832—1999 “Evaluation of the Corrosion Test Results of the Metal Deposits for the Light Industrial Products”

CJ/T 3085 — 1999 “Terminology for Town Gas”

3 Terms and Definitions

The terms defined in GB 4706.1-1998, GB 4706.22-2002 and CJ/T 3085-1999 and the following terms are applicable to this standard.

Note: The terms for cooking appliances using AC supply are corresponding to the terms of utensil defined in GB 4706.1-1998, e.g., Class-I cooking appliances correspond to Class-1 utensil, Class-11 cooking appliances correspond to Class-II utensil, Class-111 cooking appliances correspond to Class-111 utensil, electric cooking appliances correspond to electric utensil, and combined cooking appliances correspond to combined utensil.

3.1 Gas Cooking Appliances

The generic term for all cooking appliances with gas burner, including gas stove, gas oven, gas barbecue, freestanding gas cooker, independent hotplate and grill, gas rice cooker and gas-electric combined stove, hereinafter referred to as cooking appliances.

3.2 Gas Stove

The gas burning appliance with built-in bracket supporting the cooking utensil and fire directly heating cook utensil, hereinafter referred to as stove.

3.3 Built-in Gas Stove

The gas stove built in cooking table, hereinafter referred to as built-in stove.

3.4 Gas-electric Combined Stove

The two-purpose cooking appliances combining gas stove and electric stove (including electromagnetic stove) that can use gas and electric energy separately or collectively.

3.5 Gas Oven

The gas burning appliance with food in a box (heating chamber) of constant volume for semi-directly or indirectly heating with advection heat and radiant heat, hereinafter referred to as oven.

3.6 Gas Barbecue

Open gas burning appliance with fire directly roasting food, hereinafter referred to as barbecue.

3.7 Freestanding Gas Cooker

A gas burning appliance combining oven with stove, hereinafter referred to as freestanding gas cooker.

3.8 Independent Hotplate and Grill

A gas burning appliance combining barbecue with stove, hereinafter referred to as hotplate and grill.

3.9 Standard Conditions

The dry gas state under temperature of 15°C and absolute pressure of 101.3kPa.

3.10 Net Wobbe Number

The ratio of the lower heating value to the square root of relative density of gas.

3.11 Nominal Heat Input

The design value of heat input of the cooking appliances when using reference gas under standard conditions and nominal gas supply pressure as identified by the manufacturer.

3.12 Actual Heat Input

The product of lower heating value and actual gas flow under test conditions.

3.13 Converted Actual Heat Input

The product of designed lower heating value and converted actual gas flow under standard conditions.

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