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

GB 30721-2014

**Minimum allowable values of energy efficiency and energy
efficiency grades for water-source (ground-source) heat pumps**

水(地)源热泵机组能效限定值及能效等级

(English Translation)

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4.3 of this Standard is mandatory, the rest are recommended.

This Standard was drafted according to the rules given by GB/T 1.1-2009.

This Standard was proposed by the Resources Conservation and Environmental Protection Department of the National Development and Reform Commission, and the Energy Saving and Comprehensive Utilization Department of the Ministry of Industry and Information Technology.

This Standard shall be under the jurisdiction of the National Energy Foundation and Management Standardization Technical Committee (SAC/TC 20).

Drafting organizations of this Standard. Hefei General Machinery Research Institute, China National Institute of Standardization, Vicki (Zhejiang) Air Conditioning Equipment Co., Ltd., Shenzhen McQuay Air Conditioning Co., Johnson Controls Building Equipment Technology (Wuxi) Co., Ltd., Shandong Fulda Air Conditioning Equipment Co., Ltd., Shanghai Futian Air Conditioning Refrigeration Equipment Co., Ltd., Shandong Hongli Air Conditioning Equipment Co., Ltd., Ningbo WaterFurnace Shenglong HVACR Climate Solutions Co., Ltd., Zhejiang Dun'an Electrical Technology Co., Ltd., Nanjing TICA Air Conditioning Equipment Co., Ltd., Trane Air Conditioning Systems (China) Co., Ltd., Lotus Air Conditioning (Jiangsu) Co., Ltd., Guangdong OAK Air Conditioning Refrigeration Co., Ltd., and Hefei General

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Minimum allowable values of energy efficiency and energy efficiency grades for water-source (ground-source) heat pumps

1 Scope

This Standard specifies the minimum allowable values of energy efficiency, evaluation values of energy conservation, energy efficiency grades, test methods, and inspection rules for water-source (ground-source) heat pumps.

This Standard applies to the water-source (ground-source) heat pumps of household, commercial and industrial uses, and other similar uses that use electrical and mechanical compression systems and use water as cold (hot) source.

This Standard does not apply to cooling-only-type and heating-only-type water-source (ground-source) heat pumps.

2 Normative references

The following documents are essential for the application of this document. For dated references, only dated edition applies to this document. For undated references, the latest edition (including all amendments) applies.

GB/T 19409 Water-source (ground-source) heat pumps

3 Terms and definitions

The terms and definitions defined in GB/T 19409 AND the following terms and definitions apply to this document.

3.1

Annual coefficient of performance for water-source (ground-source) heat

pumps; ACOP

The annual coefficient of performance obtained by comprehensively WEIGHTING the efficiency for water-source (ground-source) heat pumps when operating at full-load under nominal cooling conditions and nominal heating conditions WITH several office

7 Labeling of energy efficiency grades

Manufacturers shall determine the energy efficiency grades for water-source (ground-source) heat pumps according to the requirements and the test results of this Standard.

Manufacturers shall indicate the energy efficiency grades for water-source (ground-source) heat pumps and the standard number it bases in the factory-exit documents of products.

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