

The certification body of TÜV Informationstechnik GmbH
hereby awards this certificate to the company

**Qingdao Haier Joint Stock Co., Ltd.
Qianwangang Road, Haier Industrial
Zone, Qingdao, Shandong 266510,
P. R. China**

to confirm that its refrigerator

**Haier BCD-412
WDCV/WDCN/WDVH/WDVI**

fulfils all relevant requirements of the criteria

**DIN EN ISO 9241-11:1999
ISO/IEC 25051:2006, Chapter 5**

in the underlying contexts of use. The requirements and contexts
of use are summarized in the appendix to the certificate.

The appendix is part of the certificate and consists of 4 pages.

The certificate is valid only in conjunction with the corresponding
evaluation report until 2016-08-31.



Certificate-Registration-No.:
TUVIT-PQ6230.14

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Voluntary Validation
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Essen, 2014-08-29

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Head of Certification Body

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Certificate

Certification System

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The certification body of TÜV Informationstechnik GmbH performs its certification on the basis of the following product certification system:

- German document: “Zertifizierungsschema für TÜViT Trusted-Zertifikate der Zertifizierungsstelle TÜV Informationstechnik GmbH“, version 1.0 as of 2010-05-18, TÜV Informationstechnik GmbH

Evaluation Report

- “Usability Test Refrigerator Haier refrigerators according to DIN EN ISO 9241-11:1999 and ISO/IEC 25051:2006”, version 1.0 as of 2014-08-20, Evaluation Body IT Usability of TÜV Informationstechnik GmbH

Evaluation Requirements

- DIN EN ISO 9241: “Ergonomics of human-system interaction”
 - Part 11: “Guidance on usability” (1999)
- ISO/IEC 25051: “Software-Engineering – Software product Quality Requirements and Evaluation (SQuaRE) – Requirements for quality of Commercial Off-The-Shelf (COTS) software product and instructions for testing“ (2006)
 - Chapter 5: “Requirements for COTS software product”
- German document: “Leitfaden Usability – DAkkS Prüfverfahren für die Konformitätsprüfung interaktiver Systeme auf Grundlage von DIN EN ISO 9241, Teile 11 und 110”, version 1.3, 2010, DAkkS Deutsche Akkreditierungsstelle GmbH
 - Chapter 4: Test Procedure for conformity testing of interactive systems according to DIN EN ISO 9241, parts 11 and 110

- Chapter 5: Test modules for operability according to ISO/IEC 25051

Evaluation Target

Target of evaluation is the refrigerator

- Haier BCD-412WDCV/WDCN/WDVH/WDVI

The evaluation is based on following contexts of use:

- home use for a family with four persons

The evaluation was commissioned by the company Qingdao Haier Joint Stock Co., Ltd.

Legally required electrical safety (e. g. according to EU directive 2006/95/EC or a similar Chinese regulation), machine safety (e. g. according to EU Directive 2006/42/EC or a similar Chinese regulation) and product safety (e. g. according to the German GS sign) are not part of the certification.

Evaluation Result

Requirements for the evaluation were derived from DIN EN ISO 9241-11:1999 and ISO/ICE 25051:20006, chapter 5, in the context of use of the tested product.

The testing showed that there are no significant deviations when the product was tested according to the test procedure for interactive systems.

Summary of the Evaluation Requirements

Part 11 of DIN EN ISO 9241 describes following key criteria for software usability:

- **Usability**

Extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.

- **Effectiveness**

Accuracy and completeness with which users achieve specified goals.

- **Efficiency**

Resources expended in relation to the accuracy and completeness with which users achieve a specific goal.

- **User satisfaction**

Freedom from discomfort and positive attitudes towards the use of the product.

Chapter 5 of ISO/IEC 25051 contains:

- **Quality requirements of product description, user documentation and software product**

The product description explains to the user the intended use of the product. Within the user documentation the essential work tasks and necessary work steps with respect to the product are described. The functions of the product which are necessary for the execution of the work tasks are practicable and lead to correct and complete results.

The “DAkKS Leitfaden Usability” contains:

- **Test procedure for the conformity test of interactive systems based on DIN EN ISO 9241, parts 11 and 110**

The test procedure serves to determine the usability of interactive software in the specified context of use. It is tested that in case of detected use problems they do not

decrease the effectiveness or efficiency of the task processing or user satisfaction. Possible use problems are traced back to the breach of design principles.

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- **Test modules for operability based on ISO/IEC 25051**

ISO/IEC 25051 defines basic quality requirements for software products (functional correctness, presence of correct user documentation) which are precondition for the attainment of the objectives of usage.