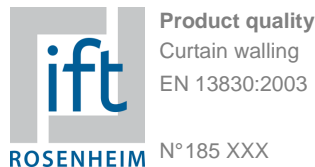


Certification Scheme for Curtain Walls according to EN 13830:2003



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1 Basis

1.1 Purpose and Scope

This certification scheme defines the requirements and procedure for the certification of curtain walls according to EN 13830:2003.

The specified requirements in the certification levels "ift-Standard" and "ift-Quality" go beyond the required provisions of EN 13830:2003 and are thus an additional quality feature. This is documented by marking the curtain walls with the "ift-certified" mark at the levels "ift-Standard" or "ift-Quality".

The level "ift-Quality" creates the basis for fulfilling the requirements of the Quality Regulations and Test Specifications RAL-GZ 695:2016 (Windows, facades and external pedestrian doorsets - RAL-GZ 695) and thus obtaining the RAL quality mark.

1.2 Basis of testing and certification

This Certification Scheme lays down the requirements for certification and surveillance of curtain walls covered by EN 13830:2003 on basis of EN ISO 17065. For certification and surveillance of curtain walls, ift-Q-Zert must be provided with the following evidence:

- For verification of harmonized performance characteristics (insofar as values cannot be determined independently) test reports from notified testing bodies,
- For verification of non-harmonised performance characteristics – test reports issued by testing bodies accredited to EN ISO 17025 and approved by ift-Q-Zert,
- The requirements described in the certification levels according to Annex 1 or Annex 2,
- Technical documentation according to the Construction Products Regulation,
- Verification of factory production control,
- Certification contract with ift-Q-Zert for certification and surveillance within the scope of this Certification Scheme.

1.3 Terms and definitions

1.3.1 Owner of test report

Entity which commissions a testing body with identifying or testing specific or more than one product characteristic of a product/component and receives from the testing body evidence of performance/a report of the results obtained.

1.3.2 Production site

Production location where the products/components/building materials are produced and/or processed/fabricated.

1.3.3 Licenser

Legal entity that provides the essential constituents of the components and supplies them to third parties for further processing/fabrication into finished components. The licenser provides the manufacturer with test documentation, specifications and guidelines for processing the individual components, updates on product changes and quality criteria of the processes.

1.3.4 Manufacturer/Licensee

Legal entity that manufactures construction products from individual components.

1.3.5 Construction product

For the purposes of this certification scheme, a construction product is understood to be a curtain wall assembled by the manufacturer. This also applies if the components are only assembled into ready-to-function building products during assembly. The liability for conformity of workmanship/details lies with the manufacturer of the construction products. The manufacturer defines the specifications for proper assembly of the construction products.

1.3.6 Certification levels

Within this certification scheme, a distinction is made between the certification levels "ift-Standard" and "ift-Quality". With the certification level "ift-Quality", the manufacturer fulfills a requirement for obtaining the RAL quality mark according to RAL-GZ 695. Annex 1 and Annex 2 describe the individual certification levels.

1.3.7 ift System Passport / ift Product Passport

A summary report issued by ift Rosenheim, which determines the performance characteristics of the curtain walls specified by the manufacturer and confirms them by testing, calculation or evaluation according to EN 13830:2003. This can be used as a basis for the manufacturer's own type test (TT) as part of the CE marking.

2 Procedure and contents of certification

The general procedure and the contents of the measures required for initial certification and renewal of certification are documented by ift-Q-Zert in the applicable "General requirements for certification, surveillance and inspection of products and services".

2.1 Certification procedure

- Conclusion of a certification and surveillance contract,
- Definition of the scope of product certification/certificate according to EN 13830:2003,
- Evaluation of test evidence/reports and product documentation,
- Implementation of any type testing that may still be required,
- If necessary, Compilation of ift Product Passport,
- Initial audit,
- If passed, certification.

3 Type-testing

3.1 Test evidence / reports

As part of the type testing, the manufacturer must provide evidence of the product properties, if applicable, according to the Cascading-TT method in accordance with EN 13830:2003, taking into account the contents described in Annexes 1 to 2, from a notified and/or accredited testing body recognized by ift-Q-Zert. The verification must be provided by an ift-Product Passport/System Passport.

4 Initial audit

The objective of the initial inspection is to check the personnel and manufacturing conditions for manufacturing curtain walls according to EN 13830:2003 on the basis of this certification scheme.

5 Product certificate

5.1 Validity of the certificate

The product certificate is issued regularly for a period of 3 years. Furthermore, the use of the product certificate is restricted to the period of validity of the interpretative documents/the documents serving as the basis.

Within the recertification, the certificate is extended accordingly if the evaluation of the certification requirements is positive.

The procedure for modifying or extending the certified scope as well as the suspension and revocation of certification is specified by ift-Q-Zert in the applicable "General requirements for certification and surveillance/inspection of products and services".

The certificate remains valid only as long as the provisions and requirements of this certification scheme as well as the product as such remain unchanged. Any changes to the product that have an effect on the characteristics verified by the type test, shall be communicated to ift-Q-Zert without being asked.

In case of failure to comply with the provisions and measures specified by this certification scheme, the certificate as well as the right of affixing the mark to the respective products, will be withdrawn.

5.2 Marking

The certified products must be marked with the ift mark, stating the respective certification level, traceable to the manufacturer/product certificate. Alternatively, marking in the documentation accompanying the product is permissible. The applicable documents listed in Section 2 - procedure and contents of certification - shall be observed. In addition, marking in catalogues, technical documentation, advertising documents or packaging as well as in digital form is permitted. See also "General requirements for certification, surveillance/inspection of products and services".

The right of affixing the quality mark expires automatically by terminating the certification and surveillance contract, or in the event of non-compliance with the criteria laid down by this certification scheme.

6 Factory production control

6.1 General

The manufacturer of curtain walls undertakes to establish a system of factory production control according to EN 13830:2003 to assure consistent characteristics of curtain walls. The content of the factory production control is described in the respective certification level.

7 Third party control

7.1 General

Contents, rights and duties are described by ift-Q-Zert in the applicable relevant documents "General requirements for certification, surveillance/inspection of products and services".

7.2 Intervals and contents

The third-party audit is performed once a year in the form of a regular site inspection of the surveilled location (production site).

In the framework of the third-party control/surveillance at least the following is audited:

- Review of the necessary evidences according to EN 13830:2003,
- Audit/inspection of factory production control,
- Marking and classification of components,
- Review of employee qualifications, maintenance and repair, as well as testing and measuring tools,
- Inspection of procedure to record and handle customer complaints.

7.3 Audit report/actions

An audit report is prepared on the findings of the surveillance. If there are non-conformities or deficiencies, the cause of the non-conformity must be identified and corrective action taken by the manufacturer to rectify the defect. ift-Q-Zert must be informed of this action. After rectification of the defect, ift-Q-Zert decides whether further actions are required.

7.3.1 Remedy of deviations - Special audit

Special audits may become necessary as a consequence of:

- negative evaluation of surveillance or
- complaints received from the market about the certified construction products.

7.3.2 Deadlines to remedy deviations

Deviations from essential characteristics of a construction product according to Article 4 of the Construction Products Regulation shall be eliminated immediately. In justified cases, ift-Q-Zert reserves the right to inform the responsible market surveillance. As a rule, the deadline provided for discharge of other deviations detected during the surveillance should not exceed one month. As a rule, the deadline provided for discharge of deviations detected during the special audit is set at a maximum of one month.

Annex 1: Procedure and requirements for the certification level “ift-Standard”

Execution of continuous quality assurance and implementation of the requirements from the Construction Products Regulation on basis for issuing the declaration of performance and CE marking of construction products.

The following requirements apply to curtain walls at the certification level “ift-Standard”:

Type test (TT)

Type testing on curtain walls is carried out according to EN 13830:2003 (harmonized performance characteristics according to the declaration of performance). Any applicable statutory requirements must however also be fulfilled (ensuring marketability of the products). The test sequence regarding the required properties can be arbitrary, but standard specifications must be observed. As part of the certification procedure, the certification body will check whether the results of the products/systems under certification are representative. Evidences from licensers can also be used for this purpose. In principle, the minimum requirements for the place and type of use must be met.

Factory production control (FPC)

The factory production control according to EN 13830:2003 shall include the following points at least:

- General
Organization, documentation, processes, scope and sampling
- Personnel
Qualification, training and education
- Equipment
Test equipment selection, monitoring and maintenance
- Source materials and building components
Suitability/conformity and compliance of supplier products and components and their monitoring
- Production processes
Planning and implementation of production under controlled conditions
- Test and assessment of product
Documented and scheduled control of compliance with the declared performance characteristics
- Traceability and marking
Traceability of products to the production site through marking or product codes
- Defective products
Documented procedures on the treatment of defective products

■ Corrective measures

Procedures for the correction and future prevention of errors and the elimination of the cause of the error

Third party control

During the initial audit, all criteria mentioned under the item "Factory production control (FPC)" are randomly checked.

The annual third party control includes the verification of the documented factory production control. Within the third party control, no complete technical and qualitative monitoring of production is carried out, but rather the implementation/maintenance of the FPC is assessed. The basis for the monitoring are the specifications of the licensor/manufacturer, the specifications in the certification scheme and the contents of the existing test documentation. Furthermore, random samples are taken to check whether the declared values within the scope of the CE marking for the place of use and the type of use are fulfilled by the present type test (TT). The components tested and/or approved by the manufacturer as part of the type test must be used.

Annex 2: Procedure and requirements for the certification level "ift-Quality"

Expansion stage for companies that, in addition to the legally required minimum requirements, want to include and assess further quality features within the scope of product certification. "ift-Quality" offers a very high value for curtain walls. In addition to the legally required performance characteristics for the intended use and other standard quality-determining performance characteristics, only certified accessories are used. This guarantees a high level of quality and usability.

Type test (TT)

The curtain wall is tested on the basis of EN 13830:2003. Any applicable statutory requirements must however also be fulfilled (ensuring marketability of the products). The test sequence shall be performed according to Table 1 and Table 1.1. The minimum classification in terms of required properties is shown in Table 2 for curtain walls.

Table 1 Test sequence of curtain walls: Air permeability, water tightness, wind load

Test sequence	Basis*	Comments
1. Test of air permeability	EN 12152 EN 12153	Classification
2. Test of watertightness	EN 12154 EN 12155	Classification
3. Resistance to wind load - Deflection	EN 13116 EN 12179	
4. Test of air permeability	EN 12152 EN 12153	
5. Repeat test of watertightness	EN 12154 EN 12155	
6. Resistance to wind load - Safety test	EN 13116 EN 12179	

*The version according to EN 13830:2003 applies

Table 1.1 Optionally further tests¹⁾

Watertightness with alternating air pressure and spraying with water	ENV 13050	to be performed between tests 5 and 6
Range test	EN 13051	
Impact test	EN 14019	

¹⁾ Additional "optional" tests may be required on an object-related basis. These can be taken into account in the system test. These object-related requirements may be listed as an option in the system test report as well as in the evidence of suitability.

The following additional minimum requirements apply to curtain walls at the certification level "ift-Quality":

Table 2 Minimum requirements for curtain walls

Performance characteristic as per EN 13830:2003	Minimum requirement
Watertightness according to EN 12154	R 4
Air permeability according to EN 12152	A 1

ift-Q-Zert reserves the right to conduct additional tests if this is deemed necessary for the overall evaluation of the system. It is also possible for manufacturers to certify both mandated and additional non-mandated performance characteristics of their products in the process of product certification. Furthermore, additional products/product features can be added via a modular structure.

Factory production control (FPC)

The manufacturer must comply with the requirements defined by the certification body.

Supplemented FPC according to EN 13830:2003 includes the documentation of compliance with additional requirements of the level "ift-Quality".

Third party control

During the initial audit, all criteria mentioned under the item "Factory production control (FPC)" are checked once.

There is regular third party control by inspection of the production. Within the third party control, a complete technical and qualitative monitoring of production is carried out. The basis for the monitoring are the specifications of the licensor/manufacturer, the specifications in the certification scheme and the contents of the existing test documentation.

Further tests with test rigs (e.g. mechanical strength or similar) are not mandatory within the scope of the FPC or third party control. In addition, further conformity procedures can be integrated into the third party control (e.g. quality management system according to EN ISO 9001). Third party control by the certification body takes place once a year. The compilation of a product or system passport by the certification body is required if this is not already available.

Notes:

Based on the product standards EN 13830:2003 in the level "ift-Standard", the "ift-certified" mark assures the conformity of the performance characteristics of the product standard for curtain walls the performance declared by the manufacturer and compliance with the required factory production control. In the level "ift-Quality", the usability of curtain walls is confirmed by defining minimum requirements and performance characteristics.

Within the RAL quality assurance as per RAL-GZ 695:2016, compliance with the special quality-determining characteristics for curtain walls and RAL assembly is determined in addition to and building on level "ift-Quality".

