

Certification scheme for windows and external pedestrian doorsets according to EN 14351-1:2006 + A2:2016

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1 Basis

1.1 Objective and scope

This Certification Scheme lays down the requirements and the procedure for the certification of windows and external pedestrian doorsets in accordance with EN 14351-1:2006 + A2:2016.

The requirements specified for the levels of certification “ift-standard” and “ift-quality” go beyond the requirements set out in EN 14351-1:2006 + A2:2016 and are therefore an additional quality marking. This is documented by affixing the “ift-certified” mark to the windows and external pedestrian doorsets for the levels “ift-standard” or “ift-quality”.

The certificate level “ift-quality” forms the basis for the fulfilment of the requirements of the RAL-GZ 695:2016 quality regulations and test specifications and for the award of the RAL quality mark.

1.2 Basis of testing and certification

This Certification Scheme lays down the requirements for the certification and surveillance of windows and external pedestrian doorsets within the scope of EN 14351-1:2006 + A2:2016 on the basis of EN ISO/IEC 17065. For the certification and surveillance of windows and external pedestrian doorsets the following must be verified/presented to ift-Q-Zert:

- for verification of harmonised performance characteristics (unless the values cannot be determined under one's own responsibility) – test reports issued by 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,
- conformity with the requirements of the levels of certification set out in Annex 1 or Annex 2,
- technical documentation in accordance with 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

Legal entity that commissions a testing body with the identification and/or testing of one or several product characteristic(s) of a product/component and that receives from the testing body evidence of performance/verification/a report on 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 System supplier/licensor

Legal entity that provides the essential constituents of the components and supplies them to third parties for further processing/fabrication into finished components. The system supplier provides the processor/fabricator with test documents, instructions and guidelines on how to process the individual constituents, and updates on product changes and on the quality criteria for the processes.

1.3.4 Manufacturer/licensee

Legal entity that produces construction products from the individual constituents.

1.3.5 Construction product

Under this Certification Scheme, construction products are defined as windows and external pedestrian doorsets manufactured in their entirety by the manufacturer. This applies also if the components are combined into operational construction products only during installation. The liability for conformity of workmanship/details lies with the manufacturer of the construction products. The manufacturer specifies the requirements for the orderly assembly of the construction products and monitors their compliance.

1.3.6 Levels of certification

This Certification Scheme distinguishes between the levels of certification “ift-standard” and “ift-quality”. The level of certification “ift-quality” is a criterion qualifying the manufacturer for the award of the RAL quality mark in accordance with RAL-GZ 695:2016. Annexes 1 and 2 describe the individual levels of certification.

1.3.7 ift system passport/ift product passport

Summary report issued by the ift Rosenheim, which confirms the compliance of the performance characteristics, specified by the manufacturer, of windows and external pedestrian doorsets, determined on the basis of testing, calculation or evaluation in accordance with EN 14351-1:2006 + A2:2016. It can be used by the manufacturer as the basis for conducting the manufacturer type test (TT) for CE marking.

2 Procedure and scope of certification

The general procedure and the scope of the measures required for initial certification and renewal of certification are documented by ift-Q-Zert in the applicable “General requirements for the certification, surveillance/inspection of products and services” (Allgemeine Bedingungen für die Zertifizierung, Überwachung/Inspektion von Produkten und Dienstleistungen).

2.1 Certification procedure

- Conclusion of a certification and surveillance contract,
- Definition of the scope of product certification/certificate in accordance with the product standard EN 14351-1:2006 + A2:2016,
- Evaluation of test evidence/reports and product documentation,
- Any type testing that is still necessary,
- Preparation of the ift product passport/ ift system passport, as necessary,
- Initial audit/inspection,
- If passed, certification.

3 Type test

3.1 Documentary evidence/verification

For the type test, the manufacturer is obliged to have compliance of the product characteristics demonstrated, as necessary, on the basis of the Cascading TT procedure in accordance with EN 14351-1:2006 + A2:2016 under consideration of the contents of Annexes 1 to 2, by a notified and/or accredited testing body approved by ift-Q-Zert. This verification shall be provided in the form of an ift product passport or RAL system passport.

4 Initial audit/inspection

The objective of the initial audit is to check the personnel and technical manufacturing conditions for the manufacture of windows and external pedestrian doorsets in accordance with EN 14351-1:2006 + A2:2016 on the basis of this Certification Scheme.

5 Product certificate

5.1 Validity of the certificate

The product certificate is generally issued for a period of 3 years. Use of the product certificate is restricted to the period of validity of the interpretative documents/the documents serving as the basis.

For re-certification the certificate will be renewed in the case of positive assessment.

The procedure for amending/extending the certified scope as well as for the suspension and revocation of certification is described in the applicable “General requirements for certification, surveillance/inspection of products and services” by the ift Rosenheim.

The certificate remains valid only as long as the provisions and requirements of this Certification Scheme as well as the product remain unchanged. The certification body must be informed, without prompting, of any changes to the product that have an effect on the characteristics verified by the type test.

In the event of failure to comply with the actions or provisions specified in this Certification Scheme, the certificate, as well as the right to affix the mark to the respective products, will be withdrawn.

5.2 Marking

The certified products shall be marked with the ift mark indicating the respective level of certification and shall be traceable to the manufacturer/product certificate. Alternatively, the marking may be contained in the documents accompanying the product. The applicable documents referring to marking and listed in Section 2 (Procedure and scope of certification) shall be observed. In addition marking is allowed in catalogues, technical documentation, advertising documents or on packaging as well as in digital form. See also “General requirements for certification, surveillance/inspection of products and services”.

The right to affix the quality mark expires automatically with expiry of 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 windows and external pedestrian doorsets undertakes to establish a factory production control system in accordance with EN 14351-1:2006 + A2:2016 that ensures consistency of the performance of the windows and external pedestrian doorsets. The content of factory production control is specified in the respective level of certification.

7 Third-party control/surveillance

7.1 General

Scope, conditions, rights and duties are detailed by the ift surveillance and certification body in the applicable documents “General requirements for certification, surveillance/inspection of products and services” (Allgemeine Bedingungen für die Zertifizierung, Überwachung/Inspektion von Produkten und Dienstleistungen).

7.2 Intervals and scope

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:

- Necessary documentary evidence/reports in accordance with EN 14351-1:2006 + A2:2016,
- Factory production control,
- Marking and classification of the components,
- Qualification of employees, maintenance and repair as well as test and measuring equipment,
- Procedure for recording and handling customer complaints.

7.3 Audit report/actions

An audit report is prepared on the findings of the third-party audit. If there are non-conformities or product defects, the cause of the non-conformity must be identified and corrective action taken by the manufacturer to rectify the defect. The certification body must be informed of this action. After rectification of the defect, the certification body decides whether further actions are required.

7.3.1 Rectification of non-conformities – special audit

Special audits may become necessary as a consequence of:

- negative assessment in a third-party audit or
- complaints received from the market about the certified construction products.

7.3.2 Deadlines for rectification of non-conformities

Non-conformities referring to the essential characteristics of a construction product as set out in Article 4 of the Construction Products Regulation shall be rectified without delay. In justified cases ift-Q-Zert reserves the right to inform the responsible market surveillance authority. As a rule, the deadline provided for rectification of non-conformities detected during the third-party control should not exceed one month. The maximum deadline for rectification of non-conformities detected during a special audit is one month.

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

Continuous quality assurance/control and implementation of the requirements set out in the Construction Products Regulation for entitlement to Declarations of Performance (DoP) and the CE marking of construction products.

The requirements for windows and external pedestrian doorsets for the level of certification “ift-standard” are as follows:

Type test (TT)

The type test for windows and external pedestrian doorsets is conducted in accordance with EN 14351-1:2006 + A2:2016 (harmonised 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 for the specified characteristics may be selected as desired, provided that it conforms to the requirements specified by the standards. As part of the certification procedure, the certification body will check whether the results of the construction products under certification are representative. Reports/evidence from system suppliers can also be used to this end. The minimum requirements for the place of use and type of use must be fulfilled without fail.

Factory production control (FPC)

Factory production control in accordance with EN 14351-1:2006 + A2:2016 shall include at least the following:

- General
Organisation, documentation, processes, scope and sampling
- Personnel
Qualification, training and education
- Equipment
Selection, monitoring and maintenance/repair of test equipment
- Raw materials and components
Suitability/conformity and conformity of supplies and constituents and their surveillance
- Manufacturing processes
Planning and implementation of production under controlled conditions
- Inspection/testing and evaluation of the product
Documented and regular verification of conformity with the declared performance characteristics
- Traceability and marking
Traceability of products to production site by marking or product code
- Non-conforming products
Documented processes for handling non-conforming products
- Corrective actions
Procedures to rectify non-conformities and prevent future non-conformities and to eliminate the cause of non-conformity.

Third party control/surveillance

During the initial inspection, random checks are carried out for all criteria listed under “Factory production control (FPC)”.

The annual third-party audit includes the inspection of the documented factory production control. The third-party audit does not involve the inspection of the entire production in terms of quality and technology but evaluates the implementation/maintenance of the FPC. The audit is based on the requirements from the system supplier/manufacturer, the specifications of the Certification Scheme and the content of the available test documentation.

Furthermore, a random check is performed as to whether the declared values for CE marking are fulfilled by the existing type test (TT), for the place of use and type of use.

For the type test the constituents tested and/or approved by the manufacturer shall be used. In the context of certification the certification body may approve the exchange of constituents.

Annex 2: Procedure and requirements for level of certification “ift-quality”

Advanced level for companies wishing to include and evaluate further quality characteristics for product certification in addition to the statutory minimum requirements. “ift-quality” represents a very high quality rating for windows and external pedestrian doorsets. In addition to the statutory quality requirements referring to the intended use and additional quality-determining performance characteristics set out in the respective standards, only certified accessories are used. This guarantees a high level of quality and suitability for use.

The additional minimum requirements for windows and external pedestrian doorsets for the level of certification “ift-quality” are as follows:

Type test (TT)

The system test is conducted on windows in accordance with Tables 1.1 and 1.2 and on external pedestrian doorsets in accordance with Tables 2.1 and 2.2 on the basis of EN 14351-1:2006 + A2:2016. Any applicable statutory requirements must however also be fulfilled (ensuring marketability of the products). The test sequence for the specified characteristics shall be in accordance with Tables 1.1 to 2.2 for windows and external pedestrian doorsets. As part of the certification procedure, the certification body will check whether the results of the products/systems under certification are representative.

Table 1.1: Test sequence for windows:
Tightness, deformation/deflection and impact resistance of windows

No.	Performance characteristics	Scope of test/test method	Basis*	Comment
1.1.1	Operating forces for classification	Max. 100 N or 10 Nm Class 1 – 2 (hand operated)	EN 13115 EN 12046-1	
1.1.2	Air permeability test for classification	Class 2 – 4 – Open/close <u>Positive pressure</u> – 3 pressure pulses $P_{max} + 10\% \geq 500$ Pa – Pressure steps – Open/close <u>Negative pressure</u> – 3 pressure pulses $P_{max} + 10\% \geq -500$ Pa – Pressure steps (negative pressure) – Open/close	EN 12207 EN 1026	
1.1.3	Test of resistance to wind load	– Three pressure pulses with $P1 + 10\%$ – Pressure increase in steps up to $P1$ and $-P1$ – Three negative pressure pulses with $-P1 + 10\%$ – Pressure increase in steps with $-P1 + 10\%$ – 50 cycles with $0.5 \times P1$ <u>Wind loads</u> – Classes 1 – 5, or E xxxx <u>Deflection</u> – Classes B – C	EN 12210 EN 12211	Class E xxxx requires specification of test pressure
1.1.4	Repeat test of air permeability (positive and negative pressures)	Class 2 – 4 + 20%	EN 12207 EN 1026	
1.1.5	Watertightness test	Class 4A – 9A, or E xxxx	EN 12208 EN 1027	Class E xxxx requires specification of test pressure. Water leakage into construction (glazing rebate, profiles) is permitted only if controlled drainage to the outside is ensured. Frame joints must be tight in water drainage area.
1.1.6	Safety test	Wind loads Class 1 – 5; E xxxx	EN 12210 EN 12211	
1.1.7	Test of resistance to racking	600 - 800 N Class 3 – 4	EN 13115 EN 14608	
1.1.8	Torsion test	300 - 350 N Class 3	EN 13115 EN 14609	
1.1.9	Loadbearing capacity of safety devices	Requirement fulfilled	EN 14351-1 and EN 14609	This requirement applies only if the test specimen is equipped with separate safety devices.

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No.	Performance characteristics	Scope of test/test method	Basis*	Comment
1.1.1 0	Impact resistance	Class 1 – 5	EN 13049	Impact resistance tested on at least one test specimen. Test is conducted on the test specimen with the potentially most critical results.

Table 1.2: Mechanical characteristics of windows – Test sequence

No.	Performance characteristic	Scope of test/test method	Basis*	Comment
1.2.1	Operating forces	Max. 100 N or 10 Nm Class 1 – 2 (hand operated)	EN 13115 EN 12046-1	
1.2.2	Simulated use (Resistance to repeated opening and closing)	10,000 – 20,000 cycles Class 2 – 3	EN 12400 EN 1191	Opening restrictors, if any, shall also be tested
1.2.3	Operating forces	Max. 100 N or 10 Nm Class 1 – 2 (hand operated)	EN 13115 EN 12046-1	
1.2.4	rebate-hindrance test**	No fail	EN 13126-8	

**this test can be done on a separate test specimen

Table 2.1: Tightness, deformation/deflection and impact resistance of external pedestrian doorsets

No.	Performance characteristic	Scope of test/test method	Basis*	Comment
2.1.1	Operating forces for classification	Class 2 – 4 (hand- and finger operated)	EN 12217 EN 12046-2	
2.1.2	Air permeability test for classification ^{1) 2)}	Class 1 – 4 – Open/close <u>Positive pressure</u> – 3 pressure pulses P _{max} + 10% ≥ 500 Pa – Pressure steps – Open/close <u>Negative pressure</u> – 3 pressure pulses P _{max} + 10% ≥ -500 Pa – Pressure steps (negative pressure) – Open/close	EN 12207 EN 1026	
2.1.3	Test of resistance to wind load	– Three pressure pulses with P ₁ + 10% – Pressure increase in steps up to P ₁ and - P ₁ – 50 cycles with 0.5 x P ₁ <u>Wind loads</u> – Classes 1 – 5, or E xxxx <u>Deflection</u> – Classes B – C	EN 12210 EN 12211	Class E xxxx requires specification of test pressure
2.1.4	Repeat test of air permeability (positive and negative pressures) ¹⁾	Class 1 – 4 + 20%	EN 12207 EN 1026	
2.1.5	Watertightness test ¹⁾	Class 3 – 9°, or E xxxx	EN 12208 EN 1027	Class E xxxx requires specification of test pressure. Water leakage into construction (glazing rebate, profile) permissible only if controlled drainage to outside is ensured. Frame joints must be tight in water drainage area.
2.1.6	Safety test ^{1) 2)}	Wind loads Class 1 – 5; E xxxx	EN 12210 EN 12211	
2.1.7	Test of resistance to racking	600 - 800 N Class 3 – 4	EN 1192 EN 947	
2.1.8	Torsion test	300 - 350 N Class 3 – 4	EN 1192 EN 948	
2.1.9	Loadbearing capacity of safety devices	Requirement fulfilled	EN 14351-1:2006 + A2:2016 and EN 14609	This test applies only if the test specimen is equipped with separate safety devices.

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No.	Performance characteristic	Scope of test/test method	Basis*	Comment
2.1.10	Impact resistance	Class 1 – 5	EN 13049	Impact resistance tested on at least one test specimen. Test is conducted on the test specimen with the potentially most critical results.

1) The specimen is tested in the unlocked condition (latched) and in the locked condition (main and auxiliary locks engaged). Classification of minimum requirements refers to the unlocked condition.

2) The test is conducted here if the test specimen is not required for any additional tests. The test specimen is tested with simulated deformation between different climates (EN 1121).

Table 2.2: Mechanical characteristics of external pedestrian doorsets – test sequence

No.	Performance characteristic	Scope of test/test method	Basis*	Comment
2.2.1	Operating forces	Class 2 – 4	EN 12217 EN 12046-2	
2.2.2	Simulated use (Resistance to repeated opening and closing)	Min. 100,000 cycles Class 5 – 8	EN 12400 EN 1191	
2.2.3	Operating forces	Class 2 – 4	EN 12217 EN 12046-2	
2.2.4	Resistance to hard body impact	Class 3 – 4	EN 1192 EN 950	
2.2.5	Resistance to soft body impact	Class 3 – 4	EN 1192 EN 949	

Table 2.3: Supplementary tests of external pedestrian doorsets

No.	Performance characteristic	Scope of test/test method	Basis*	Comment
2.3.1	Behaviour between two different climates	Class 2 – 4	EN 12219 EN 1121	Evaluation of operability under consideration of 2.1.2.

*EN 14351-1:2006 + A2:2016 is applicable

The certification body reserves the right to conduct additional tests if this is deemed necessary for the overall evaluation of the system. The test sequences shown in Tables 1.1 to 2.2 can be applied to different test specimens from a window or door 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. However, for this the additional minimum requirements set out below must be met:

Factory production control (FPC)

The manufacturer is obliged to ensure conformity with the requirements defined by the certification body.

Supplementary FPC in accordance with EN 14351-1:2006 + A2:2016:

- Sampling based on a test plan (as set out in the certification requirements),
- Test on test rig to determine air permeability and watertightness:
 - monthly on own test rig,
 - or monthly on external test rig,
 - or annually at the facility of a testing body,
- Documentation of compliance with additional requirements of level of certification “ift-quality”.

Third party control/surveillance

During the initial inspection, one-off checks are carried out for all criteria listed under “Factory production control (FPC)”.

Manufacture is subjected to regular third party audits. The third-party audit involves the inspection of the entire production in terms of quality and technology. The audit is based on the requirements from the system supplier/manufacturer, the specifications of the Certification Scheme and the content of the available test documentation.

Additional tests on test rigs (e.g. corner breakage, composite strength, etc.) are not obligatory as part of the FPC or third-party audit. In addition, further conformity procedures can be integrated into the third-party audits (e.g. doorsets with the ability to release). The third-party audit by the certification body is conducted once a year. If not yet available, a product passport/system passport prepared by the certification body is required.

Manufacture is inspected for conformity with the requirements set out for certification. Exchange of constituents by the manufacturer is possible on the basis of the interchangeability rules. The requirements set out in the respective certification schemes apply to the constituents listed in Table 3. Conformity with these requirements is checked as part of certification. Separate certification of the supplied parts by the supplier may become necessary.

Table 3: Requirements for supplied parts

Supplied part/ Constituent	Requirement
Tilt/turn hardware	Certification scheme QM 328* or comparable system or technically comparable system
Sliding door hardware	Certification scheme QM 346* or comparable system or technically comparable system
Parallel-slide-tilt hardware	Certification scheme QM 347* or comparable system or technically comparable system
Seals/gaskets	Certification scheme QM 338* or comparable system or technically comparable system
Locks	Certification scheme QM 342* or comparable system or technically comparable system
Hinges	Certification scheme QM 343* or comparable system or technically comparable system
Profiles	ift Guideline HO-10/1 (Timber), RAL-GZ 716 Part 1 (PVC profiles), RAL-GZ 695, Annex 1 (Aluminium profiles) or corresponding comparable system or technically comparable system
Insulating glass units	Certification scheme QM 327* or comparable system or technically comparable system

*The actual version is applicable

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Notes:

The “ift-certified” mark confirms, for the level of certification “ift-standard”, the conformity of the performance characteristics set out in the product standard for windows and external pedestrian doorsets, with the performance declared by the manufacturer, and observance of the mandatory factory production control, on the basis of the product standard EN 14351-1:2006 + A2:2016. The level of certification “ift-quality” confirms the suitability for use of windows and external pedestrian doorsets by defining minimum requirements and performance characteristics.

Under RAL quality assurance in accordance with RAL-GZ 695, the advanced level “ift-quality” additionally confirms compliance with the special quality-determining characteristics of windows and external pedestrian doorsets and RAL quality-assured installation.



Annex 3: Requirements for windows/external pedestrian doorsets for level of certification “ift Qualität”

The Tables below summarise the minimum requirements for windows and external pedestrian doorsets for the “ift-quality” certification level. Higher classes or classifications are possible for the manufacturer but not compulsory for the manufacturer TT.

Any classes or classifications that are not listed can be verified by supplementary testing.

Verification/testing is based on the rules/regulations set out in the latest version of the product standard DIN EN 14351-1:2006 + A2:2016 or the referenced classification standards listed in the tables below:

Table 4: Minimum requirements for windows according to EN 14351-1:2006 + A2:2016

No.	Characteristic/basis/value/dimensions/ classification standard	Minimum classification/ value
1	Frame deflection as per EN 12210	B1
2	Reaction to fire (roof windows) as per EN 13501-1	E
3	Watertightness as per EN 12208 Exposed (A)	4A
4	Impact resistance as per EN 13049	1
5	Safety devices as per EN 14609 (Requirement applies only to additional safety devices (e.g. cleaning or restrictor stays)	Requirements fulfilled (load 350 N)
6	Air permeability as per EN 12207	2
7	Operating forces as per EN 13115	1
8	Mechanical resistance as per EN 13115	3
9	Mechanical durability as per EN 12400	2

Table 5: Minimum requirements for external pedestrian doorsets according to EN 14351-1:2006 + A2:2016

No.	Characteristic/basis/value/dimensions/ classification standard	Minimum classification/ value	
1	Frame deflection as per EN 12210	B1	
2	Watertightness ⁶⁾ as per EN 12208 Exposed ⁶⁾ (A)	2A* 3A**	
3	Impact resistance - resistance requirements as per EN 13049	1 (200mm)	
4	Safety devices as per EN 14609 (Requirement applies only to additional safety devices (e.g. cleaning or restrictor stays)	Requirements fulfilled (load 350 N)	
5	Air permeability as per EN 12207	2	
6	Operating forces as per EN 12217	2	
7	Mechanical strength as per EN 1192	3	
8	Mechanical durability as per EN 12400	5	
9	Deformation resistance as per EN 12219 (test climate as per EN 1121)	Material wood: 2 (c)	Material PVC and metal: 2 (d)
10	Width, height, thickness, squareness (only door leaves) as per EN 1529	3	

* Minimum requirement if tests are conducted with single locking devices in the specimens or if only the "latch engaged" condition is tested and therefore there is only one holding point between the door leaf and door frame. This applies independent of the type of locking devices used. According to the aforementioned rule door hinges are not considered holding points.

** Minimum requirement if tests are conducted with automatic locks with multipoint locking devices in the specimens and they were tested in the locking condition resulting from the door being closed, or for multipoint locks if the locking cylinder is operated by one or two throws and this creates more than one holding point between the door leaf and door frame. This applies independent of the type of locking devices used. According to the aforementioned rule door hinges are not considered holding points. The closing/locking condition is specified in the test report of the testing body.

⁶⁾ For double leaf external pedestrian doorsets drop-like water leakage is permissible in the overlap.