

QM320SG

ift Certification Scheme for Licensor of Windows and External Pedestrian Doorsets according to EN 14351-1:2006 + A2:2016 as well as Curtain Walls according to EN 13830:2003



Product quality
Licensor
DIN 14351-1/ EN 13830

n°195 XXX

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1 Basis

1.1 Purpose and scope

This certification scheme defines the requirements and procedure for the certification of licenser of windows and external pedestrian doorsets according to EN 14351-1:2006 + A2:2016 and / or curtain walls according to EN 13830:2003.

The specified requirements go beyond the required provisions of EN 14351-1:2006 + A2:2016 or EN 13830:2003 and are thus an additional quality feature.

This certification scheme creates the basis for obtaining the ift Product Passport or ift System Passport, which can be used as part of the CE marking for manufacturers according to EN 14351-1:2006 + A2:2016 or EN 13830:2003 in accordance with the Construction Products Regulation 305/2011 EV for the preparation of the Declaration of Performance. Furthermore, the documents create a basis for licensees to obtain the "ift-certified" mark according to the ift certification scheme QM 320 (windows and external pedestrian doorsets according to EN 14351-1:2006 + A2:2016) or QM 329 (curtain walls according to EN 13830:2003) or the RAL quality mark according to RAL-GZ 695:2016 (windows, facades and external pedestrian doorsets - Quality control RAL-GZ 695).

1.2 Basis of testing and certification

This Certification Scheme lays down the requirements for certification and surveillance of licenser of windows and external pedestrian doorsets covered by EN 14351-1:2006 + A2:2016 or EN 13830:2003 on basis of EN ISO 17065. For certification and surveillance, ift-Q-Zert must be provided with the following evidence:

- Verification of harmonized performance characteristics; test reports from notified testing bodies (Annex 1); as a basis for the preparation of an ift System Passport
- Verification of non-harmonised performance characteristics – test reports issued by testing bodies accredited to EN ISO 17025 and approved by ift-Q-Zert; as a basis for the preparation of an ift System Passport
- Verification of quality-determining characteristics of the supplier components (Annex 1),
- Technical documentation according to the Construction Products Regulation (e.g. installation instructions, order catalog and production catalog as well as instructions for use or maintenance)
- A system description (e.g. based on order or production catalogs); as a basis for the preparation of an ift System Passport
- Certification contract with ift-Q-Zert for certification and surveillance within the scope of this Certification Scheme.

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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 Licensor

Legal entity that provides the essential constituents of the components and supplies them to third parties (e.g. licensee or manufacturer) for further processing/fabrication into finished components. The licensor provides the licensee with test results (system passports), test documentation, specifications and guidelines for processing the individual components, updates on product changes and quality criteria of the processing operations.

1.3.4 Manufacturer/Licensee

Legal entity that manufactures construction products from the individual components of the licensor or a manufacturer by definition of the Construction Products Regulation 305/2011 EV.

1.3.5 Construction product

For the purposes of this certification scheme, a construction product is understood to be a window system, external pedestrian doorset system or curtain wall system assembled by the licensor. The liability for conformity of workmanship/details lies with the manufacturer of the construction products. The licensor defines the specifications for proper assembly of the construction products as well as the essential specifications for factory production control.

1.3.6 ift System Passport / ift Product Passport

A summary report issued by ift Rosenheim, which determines the performance characteristics of the windows and external pedestrian doorsets or curtain walls specified by the licensor, determined by testing, calculation or evaluation according to EN 14351-1:2006 + A2:2016 or EN 13830:2003. This can be used as the basis for drawing up the declaration of performance according to the Construction Products Regulation 305/2011 EV for the licensee.

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" (QM201).

2.1 Certification procedure

- Conclusion of a certification and surveillance contract,
- Definition of the scope of product certification/certificate (EN 14351-1:2006 + A2:2016 or EN 13830:2003),
- Evaluation of test evidence/reports and product documentation,
- If necessary, implementation of any type testing that may still be required,
- Preparation of ift Product Passport / ift System Passport,
- Initial audit,
- If passed, certification.

3 Type-testing

3.1 Test evidence / reports

As part of the type testing, the licenser must provide evidence of the product properties in accordance with EN 14351-1:2006 + A2:2016 or EN 13830:2003 from a notified and/or accredited testing body recognized by ift-Q-Zert. The verifications are summarized in an ift Product Passport or ift System Passport.

3.2 Minimum requirements

For the window or external pedestrian door system and for curtain walls, the performance characteristics and test sequences specified in Annex 1 and corresponding minimum requirements apply. In addition, for the window or external pedestrian door system, the supplier components must demonstrate quality-determining requirements according to Annex 1, Table 2.5.

3.3 Compilation of ift Product Passport/ift System Passport

The verifications submitted within the certification is summarized in an ift Product Passport or ift System Passport "Quality", provided that all requirements according to Annex 1 are completely fulfilled. If not all requirements are met, an ift System Passport "Standard" is created. The ift Product Passport or ift System Passport is issued for an unlimited period of time. As part of the annual audit, an evaluation is made regarding the actuality of the systems described and the evidence listed.

If a RAL System Passport according to RAL-GZ 716:2016 is already available, it can be integrated into the certification. The preparation of an ift Product Passport/ift System Passport is then not required.

4 Initial audit

The initial audit serves to determine the personnel and procedural prerequisites for the implementation of the requirements for licenser of windows and external pedestrian doorsets according to EN 14351-1:2006 + A2:2016 or curtain walls according to EN 13830:2003.

5 Certificate

5.1 Validity of the certificate

The ift Certificate of Conformity is issued for a period of 3 years. Use of the 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 for another 3 years 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" (QM201).

The certificate remains valid only as long as the provisions and requirements of this certification scheme as well as the product and the process 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 the certification body without being asked. ift-Q-Zert will also inform the certified companies of any changes in the certification process.

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. An 8-week period is decisive here.

5.2 Marking

The licenser is entitled to use the ift-certified mark. Marking in catalogues, technical documentation or advertising documents as well as in digital form is permitted. See also "General requirements for certification, surveillance/inspection of products and services" (QM201).

The right to affix of the ift-certified 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 Requirements for licenser

6.1 Cascaded procedure

The licenser of windows and external pedestrian doorsets or curtain walls undertakes to provide a system or procedure to ensure that the requirements of EN 14351-1:2006 + A2:2016 or EN 13830:2003 are met for the manufacturer or licensee. This requirement is based on Article 36 of the Construction Products Regulation (Cascaded or Shared-TT).

For this purpose, the licenser must compile technical documentation with the following contents:

- System description,
- Verifications (including type reports and ift Product Passport or ift System Passport),
- Processing guidelines and specifications for factory production control,
- Manufacturing specifications or descriptions,
- Instructions for use and maintenance and assembly instructions.

6.2 Internal process/procedure requirements at the licenser

The licenser shall establish and maintain a systematic, documented, and effective procedure or process to ensure consistent and adequate quality of the components it manufactures or trades. A quality management system according to ISO 9001:2015 is a suitable and supporting tool.

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" (QM201).

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.

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

- Training of internal technical staff regarding scope of evidences (e.g. variant formation for objects), application of product standard,
- Information flow between the licenser and the licensee (technical documentation, object handling, verification and testing and CE marking),
- Procedures for changes and updates to existing systems or for new developments (scope of evidences, ift Product Passport, ift System Passport, test planning), document control,

- Review of the necessary evidences according to EN 14351-1:2006 + A2:2016 or EN 13830:2003 or the actuality of the ift Product Passports or ift System Passports,
- Inspection of procedure to record and handle customer complaints.

If the requirements for the components according to Annex 1, Table 5 are not met, additional auditing of the production process at the production site is required.

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 licenser 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 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

As a rule, the deadline provided for discharge of deviations detected during the surveillance should not exceed three 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

Minimum requirements to windows external pedestrian doorsets

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, ift-Q-Zert 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

N°	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 wind pressure</u> – 3 pressure pulses $P_{max} + 10\% \geq 500$ Pa – Pressure steps – Open/close <u>Negative wind 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 actions</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	

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N°	Performance characteristics	Scope of test/test method	Basis*	Comment
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, profile) permissible only if controlled drainage to 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	Load-bearing capacity of safety devices	Requirement fulfilled	EN 14351-1:20016 + A2:2016 and EN 14609	This requirement applies only if the test specimen is equipped with separate safety
1.1.10	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.

Table 1.2 Mechanical characteristics of windows – Test sequence

N°	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 present, must 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	Reveal and rebate hindrance test**	no failure	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

N°	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 wind pressure</u> – 3 pressure pulses $P_{max} + 10\% \geq 500$ Pa – Pressure steps – Open/close <u>Negative wind pressure</u> – 3 pressure pulses $P_{max} + 10\% \geq -500$ Pa – Pressure steps (negative pressure) – Open/close	EN 12207 EN 1026	
2.1.3	Test of resistance to wind load ¹⁾	– Three pressure pulses with $P1 + 10\%$ – Pressure increase in steps up to $P1$ and $P1$ – 50 cycles with $0.5 \times P1$ <u>Wind actions</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 - 350N Class 3 – 4	EN 1192 EN 948	
2.1.9	Load-bearing 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.

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N°	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

N°	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

N°	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.

*The version EN 14351-1:2006 + A2:2016 applies

ift-Q-Zert 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 licenser to certify both mandated and additional non-mandated performance characteristics in the process of certification. However, for this the additional minimum requirements set out below must be met:

Table 3 Minimum requirements for windows according to EN 14351-1:2006 + A2:2016

N°	Characteristic/basis/value/dimensions/ Classification standard	Minimum classification / value
1	Frame deflection according to EN 12210	B1
2	Fire behaviour (roof window) according to EN 13501-1	E
3	Watertightness according to EN 12208 Exposed (A)	4A
4	Resistance to impact according to EN 13049	1
5	Safety devices according to EN 948 (Requirement applies only to additional safety devices (e.g. cleaning or restrictor stays))	Requirement fulfilled (load 350N)
6	Air permeability according to EN 12207	2
7	Operating forces according to EN 13115	1
8	Mechanical resistance according to EN 13115	3
9	Mechanical durability according to EN 12400	2

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

N°	Characteristic/basis/value/dimensions/ Classification standard	Minimum classification / value	
1	Frame deflection according to EN 12210	B1	
2	Watertightness ⁶⁾ according to EN 12208 Exposed ⁶⁾ (A)	2A* 3A**	
3	Impact resistance - resistance requirements according to EN 13049 (applies to glazed doors only)	1 (200 mm)	
4	Safety devices according to EN 948 (Requirement applies only to additional safety devices (e.g. cleaning or restrictor stays))	Requirement fulfilled (load 350N)	
5	Air permeability according to EN 12207	1	
6	Operating forces according to EN 12217	2	
7	Mechanical resistance according to EN 1192	3	
8	Mechanical durability according to EN 12400	5	
9	Deformation resistance according to EN 12219 (Test climate as per EN 1121)	Material wood: 2 (c)	Material plastic and metal: 2 (d)
10	Width, height, thickness, perpendicularity (only for door leaves) according to EN 1529	3	

* Minimum requirement when tests are carried out with single-point locking system in the test specimen or when tests are only carried out "in latch" and thus only one stop between door leaf and door frame. This is irrespective of the type of locking device. Door hinges are not regarded as stopping points in the terms of the aforementioned rule.

** 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 is irrespective of the type of locking devices. Door hinges are not regarded as stopping points in the terms of the aforementioned rule. The closed condition is to be taken from the test certificate of the testing authority.

⁶⁾ In the case of double-leaf external pedestrian doorsets, a drop-shaped water penetration is permitted in the overlap area.

Table 5 Requirements for vendor parts

Vendor part / Component	Requirement
Turn/Tilt&Turn hardware	Certification scheme QM 328** or comparable system* or technically comparable system*
Fold&Slide hardware	Certification scheme QM 345** or comparable system* or technically comparable system*
Hardware for sliding door	Certification scheme QM 346** or comparable system* or technically comparable system*
Tilt&Slide 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* / Alternatively, verification by test report or by testing of air permeability and watertightness as well as operating forces
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 (wood), RAL-GZ 716** Part 1 (uPVC profiles), RAL-GZ 695**, Annex 1 (aluminum profiles) or in each case comparable system* or technically comparable system*
Weather boards / thresholds	Certification scheme QM 340** or comparable system* or technically comparable system*
Top-hung hardware	Certification scheme QM 364** or comparable system* or technically comparable system*

* If there are no evidences with regard to the required certification schemes, it shall be checked in the individual case whether a comparable certification system or a comparable system to ensure the constant properties of the components exists.

**the current version always applies

Minimum requirements to curtain walling

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 3 and Table 3.1.

Table 6 Test sequence of curtain walls: Air permeability, watertightness, 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	Classification
4. Test of air permeability	EN 12152 EN 12153	Classification
5. Repeat test of watertightness	EN 12154 EN 12155	Classification
6. Resistance to wind load - Safety test	EN 13116 EN 12179	Classification

Table 6.1 Optionally further tests¹⁾

Watertightness with alternating air pressure and spraying with water	ENV 13050	to be performed between test 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.

Table 7 Minimum requirements for curtain walling

Performance characteristic according to 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.