ift System Passport

Curtain walling according to EN 13830:2003-09

Number	**19-003439-PR01** (SP-B01-UZ02-en-02)
Validity	The validity of this ift System Passport is linked to the validity of the ift Certificate of Conformity and of the ift Certification and Surveillance Contract No. 181SG 8030800.
Client (System supplier)	Hydro Building Systems Germany GmbH Einsteinstr. 61 89077 Ulm Germany
System	**WICTEC EL**
Product family	Unitised construction
Framing material	Aluminium profiles with thermal barrier

Performance characteristics (as per EN 13830:2003-09 Annex ZA.1)

Characteristics	Reaction to fire	Resistance to fire	Fire propagation	Watertightness	Resistance to own dead load	Resistance to wind load	Impact resistance
Class / value	npd*)	npd	npd*)	up to RE_{1200}	npd*)	**)	up to I5 / E5

Characteristics	Thermal shock resistance	Resistance to horizontal load	Air permeability	Water vapour permeability	Conductivity	Airborne sound insulation	Mechanical durability
Class / value	npd*)	npd*)	up to AE	npd*)	npd*)	npd*)	***)

*) *evidence for purpose-designed systems – as necessary*

**) *design load (in kN/m²) positive pressure +1.1; negative pressure -1.1; safety load (in kN/m²) positive pressure +1.65; negative pressure -1.65*

***) *maintenance instructions as per EN 13830:2003-09, Annex B*

ift Rosenheim
05.05.2021

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Basis
EN 13830:2003-09
Curtain wall product standard
ift Certification scheme for licenser of windows and external doors as per EN 14351-1:2006 + A2:2016 as well as curtain walling as per EN 13830:2003 (QM320SG)
ift Certification and Surveillance contract N°181SG 8030800
System documents of licensers
ift System Passport 19-003439-PR01 (SP-B01-UZ02-de-02) dated 05.05.2021

Instructions for use
The **ift**-system passport demonstrates the general performance of the designated product family - determined on the basis of testing, calculation or assessment.
The values / classes indicated refer to both the object described in the individual evidence of performance and the defined field of application.
Application of the performance characteristics is subject to the national technical provisions referring to building construction and the respective contractual provisions.
This system Pass can be used by the manufacturer to draw up the declaration of performance in accordance with the Construction Products Regulation 305/2011/EC and for issuing the ift Certificate of Conformity, which documents the conformity of the finished products and the factory quality/production control through regular third party audits of the manufacturers by the **ift** Rosenheim.

Notes on publication
The **ift**-Guidance Sheet "Conditions and Guidance for the Use of **ift** Test Documents" applies. This system passport shall only be published in its unabbreviated form.

Contents
The product passport contains a total of 8 pages

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Client: Hydro Building Systems Germany GmbH
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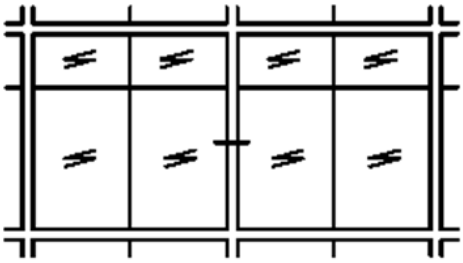
1 Summary of performance characteristics

1.1 Summary of performance characteristics as per EN 13830:2003-09

Section	Symbol	Characteristics as per EN 13830:2003-09	Product family
			
			Unitised construction
4.1		**Resistance to wind load**	Test loads **± 1.1 kN/m²** Safety load **± 1.65 kN/m²**
4.2		**Dead load (self-weight)**	npd
4.3		**Impact resistance internal**	**I5**
		Impact resistance external	**E5**
4.4		**Air permeability**	**AE**
4.5		**Watertightness**	**RE** 1200
4.6		**Airborne sound insulation**	npd
4.7		**Conductivity**	npd
4.8		**Fire resistance Integrity (E)**	npd
		Fire resistance Integrity and insulation (EI)	npd
4.9		**Reaction to fire**	npd
4.10		**Fire propagation**	npd
4.11		**Mechanical durability**	Maintenance instructions as per EN 13830:2003-09, Annex B
4.12		**Water vapour permeability**	npd
4.15		**Thermal shock resistance**	npd
4.17		**Resistance to horizontal loads**	npd
meets the system requirements for the following certification level: (see ift Certification scheme QM 329, Annex 2)			

Note: The listed performance characteristics represent the product characteristics of the tested specimen. The possibility of combining performance characteristics shall be verified in each individual case.

2 Overview of the performance of individual product families

The tables below show the essential evidences.

Table 1 Evidences Air permeability, Watertightness, Resistance to wind load, Impact resistance

Product	Evidence of Performance	Date	Air permeability	Watertightness	Resistance to wind load	Impact resistance
Unitised construction WICTEC EL, Overall dimension Test sample (W x H) 8,000 mm x 5,035 mm max. field grid dimension: 2,000 mm x 2,340 mm	Test report 108 29634 **ift** Rosenheim	04.04.2006	**AE**	**RE 1200**	Test loads **± 1.1 kN/m²** Safety load **± 1.65 kN/m²**	**I5 / E5**

Scope: All facades of the same design (e.g. screw fixing of pressure plates, connectors, cleats, etc.) and same material with slightly smaller or same grid dimensions are subject to compliance with deflection limit of framing (structural evidence) or according to the requirements or restrictions set out in the reference standards and documents.

Table 2 Evidences Thermal transmittance

Product	Evidence of Performance	Date	Additional information	Thermal transmittance
Unitised construction profile combination WICTEC EL continuous webs made of polyamide 6.6 with 25% glass fibre Illpor foam in area of thermal break Design value thermal conductivity λ = 0.035 W/(m·K) Surface treatment in vertical process Cavity surfaces plate finish	Evidence of Performance 422 30216 **ift** Rosenheim	21.08.2005	**Profile cross section 1** Frame profile consisting of profile n°110076 2x cover plate profile n°130129 Projected width: 70 mm Structural depth: 201 mm Glazing thickness 28 mm	**U_f = 3.0 W/m²K**
			Profile cross section 2 Frame profile consisting of profile n°110076 and 110243 cover plate profile n°130129 Projected width: 70 mm Structural depth: 201 mm Glazing thickness 28 mm	**U_f =3.2 W/m²K**
			Profile cross section 3 Frame profile consisting of profile n°110178 2x Cover plate profile n°130468 Projected width: 90 mm Structural depth: 201 mm Glazing thickness 28 mm	**U_f = 3.1 W/m²K**

Client: Hydro Building Systems Germany GmbH
89077 Ulm (Germany)

Product	Evidence of Performance	Date	Additional information	Thermal transmittance
Unitised construction profile combination WICTEC EL continuous webs made of polyamide 6.6 with 25% glass fibre Illpor foam in area of thermal break Design value thermal conductivity λ = 0.035 W/(m·K) Surface treatment in vertical process Cavity surfaces plate finish	Evidence of Performance 422 30216 **ift** Rosenheim	21.08.2005	**Profile cross section 4** Frame profile consisting of profile n°110077 Cover plate profile n°130131 Projected width: 60 mm Structural depth: 200.5 mm Glazing thickness 28 mm	**U_f = 2.7 W/m²K**

Scope: According to the requirements or restrictions set out in the relevant reports.
Evaluation / calculation of thermal transmittance UCW of a curtain wall element shall be carried out according to prEN 13947.

3 Range of application

The scope of ift System Passport is defined by the listed verifications according to section 2 and the field of direct application according to the product standard EN 14351-1. The test specimens for the tests performed were selected by the licenser on basis of its technical documentation. Updating the technical documentation is the responsibility of the licenser.

3.1 Brief description of significant technical system characteristics

Table 3 Brief description of significant technical system characteristics

Product family	Unitised construction WICTEC EL
Framing material	Aluminium profiles with thermal barrier
Profiles	
Corner connections	mitred, bonded and compressed with corner cleats or mechanically secured with stud, T-joints screw-fastened or with connector external cover profiles butt-jointed
Seals/Gaskets	
Element gaskets/seals	Material EPDM Element gaskets/seals horizontally continuous, Overlapping of horizontal and vertical gaskets/seals
Glazing	
External glass seal	Material EPDM, at corners circumferential
External glass seal	Material EPDM, butt-jointed and glued, additionally in corner area between seal and filling with elastic sealant
Vapour pressure equalisation / Drainage	Slots 5 mm x 15 mm 2 openings up to 800 mm frame opening over 800 mm frame opening, max. distance 600 mm between each other, inner and outer opening offset by 50 mm additionally, at top of outer cover profiles immediately in front of outer glazing gaskets, slots 5 mm x 15 mm, 2 openings per axis
	Drainage of expansion joint areas element by element, for a detailed description of drainage and pressure/vapour pressure equalisation system, see system description on pages 30 to 32

4 General Information on ift-System Passport

4.1 Specified performance characteristics according to the product standard

All listed performance characteristics as per Section 1.1 were tested and evaluated to the test and classification standards contained in the product standard EN 13830:2003-09. They are based on the evidence of performance/reports presented by the client. At the request of the client, reduced classes/values were displayed if necessary. For more detailed information refer to the respective individual evidence of performance/test reports referring to the performance characteristics listed in Section 2.

4.2 Comparison of requirements for curtain walls "ift Standard" to "ift Quality"

Table 4 Comparison of requirements according to ift certification scheme QM 320SG

Performance characteristic according to EN 13830:2003-09	**Classification standard / Verification method**	**Minimum requirement**	
		“ift Standard”	**“ift Quality”**
Resistance to wind load	EN 13116	none	none
Dead load (self-weight)	EN 1991-1-1	none	none
Impact resistance	EN 14019	none	none
Air permeability	EN 12152	none	**A1**
watertightness	EN 12154	none	**R4**
Airborne sound insulation	EN ISO 717-1	none	none
Conductivity	EN ISO 12631 (calculation) EN ISO 12567-1 (test)	none	none
Resistance to fire	EN 13501-2	none	none
Reaction to fire	EN 13501-1	none	none
Fire propagation	EN 1364-4	none	none
Resistance to dynamic horizontal load	EN 1991-1	none	none

4.3 Comparison of requirements for vendor parts "ift Standard" to "ift Quality"

Table 5 Requirements for vendor parts according to ift-certification scheme QM320SG

Vendor part / Component		**Requirement** (the current version always applies)	
		"ift Standard"	**"ift Quality"**
Seals/Gaskets		none	Certification scheme QM338* / Alternatively, verification by test report or by testing of air permeability and watertightness as well as operating forces
Profiles	Wood	none	ift-Guideline HO-10/1
	uPVC	none	RAL-GZ 716* Part 1
	Aluminium	none	RAL-GZ 695*, Annex 1

* 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.

4.4 Usability of results (optional extras)

The test results determined within the ift licenser certification meet the minimum requirements for rank "ift Standard" and/or "ift Quality".

The test results determined within the ift licenser certification for rank "ift Quality" meet the minimum requirements as per RAL-GZ 695.

4.5 Basis of the ift-system passport

- Existing surveillance contract n°181SG 8030800 be tween ift Rosenheim and the client
- Evidences according to section 2
- System description section 3
- annual surveillance of client (licenser)

5 Special instructions for use

The special instructions for use listed in the following are rules for the implementation of the different performance characteristics specified by the product standard. They are based on the normative provisions and the experience of the **ift** Rosenheim.

This product standard applies to curtain walling kit ranging from a vertical position to ± 15° from th e vertical.

According to the product standard and the Construction Products Regulation, the manufacturer is responsible for ensuring the declared properties.

The overview given in this System Passport is based on the evidence provided. No legal claim can be derived from this.

Notes:

- Insert units (windows and doors) require classification of performance according to EN 14351-1.
- The structural properties of thermal-break profiles shall be taken into account.
- Mullion and transom connectors shall be classified separately.
- Maximum frontal deflection of the curtain walling's framing members shall not exceed l/200 and/or 15 mm.
- Infill panels shall be dimensioned according to the relevant regulations; in Germany the following standards and regulations apply in particular
  - DIN EN 1991-1-4, Actions on structures – General actions – Wind actions
  - DIN 18008-2, Glass in Building - Design and construction rules - Part 2: Linearly supported glazing
  - DIN 18008-4, Glass in Building - Design and construction rules - Part 4: Additional requirements for anti-drop device
- Durability of the performance characteristics of the curtain walling was not verified. It shall be ensured for the specified service life of the product by using appropriate state of the art materials and finishes.
- Connection of the curtain wall to the building structure shall ensure durable load transmission. Design of the connection to the building structure shall be airtight. Absence of condensation shall be ensured based on the national provisions.
- The updating of other applicable, temporary documents is the responsibility of the client (licenser).

ift Rosenheim
05.05.2021