

ift System Passport

Curtain walling according to EN 13830:2003-09



Number	15-001309-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 No. 185S 7612120-2.
Client (System supplier)	SCHÜCO International KG Karolinenstr. 1-15 33609 Bielefeld Germany
System / System versions	FWS 60 / FWS 60.HI / FWS 60.SI / FWS 60.SI Green
Product families	Stick construction
Framing material	Aluminium



SCHÜCO

Performance characteristics (as per EN 13830:2003 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 loads	Air permeability	Water vapour permeability	Conductivity	Airborne sound insulation	Mechanical durability
Class / value	npd*)	npd*)	up to AE	npd*)	$U_{cw} \leq 0.80 \text{ W/(m}^2\text{K)}$	$R_w(C; C_{tr})$ up to 46 (-0; -1) dB	***)

Further characteristics / Evidence

Characteristics	Dynamic watertightness test as per ENV 13050	Transom-mullion-connections	Clamping connections	Burglar resistance	Lightning protection	Bullet resistance	Pendulum tests
Class / value	no water penetration ****)	abZ ETA	abZ	up to RC3	up to N	up to FB4 NS	up to Category A

*) evidence for purpose-designed systems – as necessary

**) design load (in kN/m^2) positive pressure +2.0; negative pressure -2.0; safety load (in kN/m^2) positive pressure +3.0; negative pressure -3.0

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

****) no water penetration at p_{min} 250 Pa/ p_{max} 750 Pa

ift Rosenheim
06.11.2019

Dirk Köberle, Dipl.-Ing. (FH)
Deputy Head of Testing Department
Building Component Testing

Gerhard Fellermeier, Dipl.-Ing. (FH)
Project Engineer
Certification & Surveillance Body

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° 185S 7612120
System documents of
licensors
ift System Passport
15-001309-PR01 (SP-B01-
UZ02-de-02) dated
16.09.2019

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 19 pages

1 Summary of performance characteristics	2
2 Overview of the performance of individual product families	4
3 System description	12
4 General Information on ift-System Passport	18
5 Special instructions for use	19

1 Summary of performance characteristics

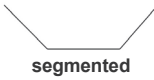
1.1 Summary of performance characteristics as per EN 13830

Section	Symbol	Characteristics as per EN 13830	Product family	
				
			Stick construction 60 mm	
			 segmented	 a i
			✓	✓
		System boundaries max. field grid dimension:	3,000 mm x 3,550 mm	3,240 mm x 6,000 mm 6,000 mm x 3,240 mm
4.1		Resistance to wind load	Design load $\pm 2.0 \text{ kN/m}^2$ / Safety load $\pm 3.0 \text{ kN}$	Design load $\pm 0.8 \text{ kN/m}^2$ / Safety load $\pm 1.2 \text{ kN}$
4.2		Dead load (self-weight)	npd	
4.3		Impact resistance internal	up to I5	
		Impact resistance external	up to E5	
4.4		Air permeability	up to AE	
4.5		Watertightness	up to RE ₁₂₀₀	up to RE ₇₅₀
4.6		Airborne sound insulation	Rw(C;Ctr) up to 46 (-0;-1) dB	
4.7		Conductivity	$U_{cw} \leq 0.80 \text{ W/(m}^2\text{K)}$	
4.8		Fire resistance Integrity (E)	up to E 120 (i→o) (part configuration, according to EN 1364-4:2007)	
		Fire resistance Integrity and insulation (EI)	up to EI 120 (i←o) (part configuration, according to EN 1364-4:2007)	
4.9		Reaction to fire	npd	
4.10		Fire propagation	npd	
4.11		Mechanical durability	Maintenance instructions as per EN 13830, 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.

1.2 Performance characteristics according to further standards / regulations

Further evidence of additional performance characteristics was provided for this product family and is listed in the following:

Section	Symbol	Characteristics	Product family	
				
			Stick construction 60 mm	
			 segmented	
			✓	✓
-		Dynamic watertightness test as per EN 13050	P_{min} 250 Pa / P_{max} 750 Pa	
-		Transom-mullion-connections (T-connection) for facade constructions	National technical approval is available ETA is available (for T-joints in combination with glass supports and intersection glass supports)	
-		Clamping connections for facade systems with aluminium mullion and transom profiles	National technical approval is available	
-		Burglar resistance as per EN 1627	up to RC3	
-		Lightning protection	up to N	
-		Bullet resistance as per EN 1522	up to FB4 NS	
-		Pendulum tests	up to category A	

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
Stick construction FWS 60, FWS 60.HI, FWS 60.SI	Expert statement 14-001595-PR01 ift Rosenheim maximum field dimensions 3,240 mm x 6,000 mm 6,000 mm x 3,240 mm	14.12.2015	AE	static: RE₁₂₀₀	Design load ± 0.8 kN/m²	I5 / E5
				dynamic: P_{min} 250 Pa P_{max} 750 Pa	Safety load ± 1.2 kN/m²	
Stick construction FWS 60, FWS 60.HI, FWS 60.SI, FWS 60.SI Green	Expert statement 15-002814-PR01 ift Rosenheim Overall dimension Test sample (W x H): 6,050 mm x 7,260 mm max. field grid dimension: 3,000 mm x 3,550 mm	16.01.2018	AE	static: RE₁₂₀₀	Design load ± 2.0 kN/m²	I5 / E5
				dynamic: P_{min} 250 Pa P_{max} 750 Pa	Safety load ± 3.0 kN/m²	

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 Direct airborne sound insulation

Product	Evidence of Performance	Date	additional information	
				Direct airborne sound insulation
Fixed facade element, one-piece FWS 60	Test report 15-000241-PR02 ift Rosenheim Overall dimension Test sample (W x H): 1,230 mm x 1,480 mm	02.11.2015	Cover plate 110910 Glazing 54dB 18 LSG inactive leaf/27/12 LSG	R_w (C; C_{tr}) = 46 (0;-1) dB

Product	Evidence of Performance	Date	additional information	 Direct airborne sound insulation	
Stick construction FWS 60, FWS 60.HI, FWS 60.SI	Expert statement 15-000241-PR03 ift Rosenheim Overall dimension Test sample (W x H): 1,230 mm x 1,480 mm	23.11.2015	see Expert statement Extrapolation for - alternative insulation variants - alternative supporting structure profiles - alternative pressure plates / cover profiles (group 1 or 2)		
			Group	Group of cover profiles (1 or 2) see Expert statements	
			1 and 2	Glazing 32dB, 4/12/4/12/4	$R_w (C; C_{tr}) = 32 (-1;-4) \text{ dB}$
				Glazing 35 dB, 6/16/4	$R_w (C; C_{tr}) = 35 (-2;-5) \text{ dB}$
				Glazing 36 dB, 6/12/4/12/4	$R_w (C; C_{tr}) = 37 (-2;-5) \text{ dB}$
				Glazing 39 dB, 10/20/4	$R_w (C; C_{tr}) = 37 (-2;-5) \text{ dB}$
			1 and 2	Glazing 39 dB, 8/12/4/12/6	$R_w (C; C_{tr}) = 38 (-2;-4) \text{ dB}$
			1 and 2	Glazing 42 dB, 8 LSG/ 12/4/12/6	$R_w (C; C_{tr}) = 39 (-1;-3) \text{ dB}$
			1	Glazing 46 dB, 10/12/6/12/ 8 LSG inactive leaf	$R_w (C; C_{tr}) = 44 (-1;-4) \text{ dB}$
			2		$R_w (C; C_{tr}) = 43 (-1;-3)$
			1	Glazing 50 dB, 12 LSG inactive leaf/ 12/6/12/ 8 LSG inactive leaf	$R_w (C; C_{tr}) = 46 (-1;-4) \text{ dB}$
			2		$R_w (C; C_{tr}) = 45 (-1;-3) \text{ dB}$
			1	Glazing 51dB, 15 LSG inactive leaf/ 24/8 LSG inactive leaf	$R_w (C; C_{tr}) = 46 (-1;-3) \text{ dB}$
			2		$R_w (C; C_{tr}) = 46 (-2;-4)$
Stick construction FWS 60, FWS 60.HI, FWS 60.SI	Expert statement 15-000241-PR03 ift Rosenheim Overall dimension Test sample (W x H): 1,230 mm x 1,480 mm	23.11.2015	1	Glazing 54dB, 18 LSG	$R_w (C; C_{tr}) = 46 (-0;-1) \text{ dB}$
			2	inactive leaf/ 27/12 LSG inactive leaf	$R_w (C; C_{tr}) = 46 (-1;-3) \text{ dB}$

Scope: According to the requirements or restrictions set out in the reference standards and documents.

Table 3 Evidences Thermal transmittance

Product	Evidence of Performance	Date	additional information	
				Thermal transmittance
Stick construction FWS 60.SI	Certificate 1161 Passivhaus Institut Dr. Wolfgang Feist Darmstadt	-/-	Aluminium stick construction with rebate insulation made of PE and PET foam with Al pressure profile. Reduction of radiant heat exchange due to low emitting adhesive foil, Glass thickness 46 mm, Glazing depth 18 mm (Details see certificate)	$U_{cw} \leq 0.80 \text{ W/(m}^2\text{K)}$ $U_{cw, \text{ built-in}} \leq 0.85 \text{ W/(m}^2\text{K)}$

Table 4 Evidences Resistance to fire (part configuration, according to EN 1364-4:2007)

Product	Evidence of Performance	Date	additional information	 Resistance to fire
Stick construction FWS 60	Expert statement (2100/522/15) – TP MPA Braunschweig	30.07.2015	Curtain walling (part configuration as parapet in combination with flashings)	E 120 (i→o) EI 120 (i←o)-ef
Curtain walling (parapet) „FW 50 Brüstung/ Schürze“	Test report 3059/309/10 – TP ¹⁾ MPA Braunschweig	12.10.2010	Testing of a curtain wall as an elevated parapet in combination with flashings without fire-resistant glazing to determine the fire resistance duration	-
	Classification report K-3729/989/10-MPA BS ¹⁾ MPA Braunschweig	04.03.2011	Fire exposure from inside	E 120 (i→o)
			Fire exposure from outside	EI 120 (i←o)-ef
			Horizontal linear gap seal	EI 120
Curtain walling (flashings) „FW 50 Brüstung/ Schürze“	Test report 3609/060/10 – TP ¹⁾ MPA Braunschweig	01.10.2010	Testing of a curtain wall as an elevated parapet in combination with flashings without fire-resistant glazing to determine the fire resistance duration	-
	Classification report K-3728/988/10-MPA BS ¹⁾ MPA Braunschweig	04.03.2011	Fire exposure from inside	E 120 (i→o)
			Fire exposure from outside	EI 120 (i←o)-ef
			Horizontal linear gap seal	EI 120

Table 5 Evidences Transom-mullion-connections in combination with glass supports and intersection glass supports

Product	Evidence of Performance	Date	additional information	 Transom-mullion-connections
Transom-mullion-connections with and without intersection glass support FWS 60	National technical approval Z-14.4-464	31.07.2017	-/-	The permissible values / loads in combination of the connections and profiles can be found in the national technical approval.
Transom-mullion-connections in combination with glass supports FWS 60	National technical approval Z-14.4-754	07.12.2015	-/-	The permissible values / loads in combination of the connections and profiles can be found in the national technical approval.
Transom-mullion-connections with intersection glass supports FWS 60	European Technical Assessment ETA-18/0240	25.05.2018	-/-	The permissible values / loads in combination of the connections and profiles can be found in the ETA.

Scope: According to the requirements or restrictions set out in the reference standards and documents.

Table 6 Evidences Clamping connections

Product family	Evidence of Performance	Date	additional information	 Clamping connections
Clamping connection FWS 60	National technical approval Z-14.4-452	27.07.2017	-/-	The permissible values / loads in combination of the connections and profiles can be found in the national technical approval.

Scope: According to the requirements or restrictions set out in the reference standards and documents.

Table 7 Evidences Burglar resistance

Product	Evidence of Performance	Date	additional information	
				Burglar resistance
Stick construction FWS 60, FWS 60.HI, FWS 60.SI	Expert statement 15-000806-PR02 ift Rosenheim max. field grid dimension: 3,240 mm x 6,000 mm	27.11.2015	see Expert statement Extrapolation for - alternative insulation variants - alternative supporting structure profiles - max. grid dimensions / axial dimensions - max. applicable glass thickness	RC 2 / RC 2 N
Stick construction FWS 60, FWS 60.HI, FWS 60.SI	Expert statement 15-000806-PR03 ift Rosenheim max. field grid dimension: 3,240 mm x 6,000 mm	08.12.2015	see Expert statement Extrapolation for - alternative insulation variants - alternative supporting structure profiles - max. grid dimensions / axial dimensions - max. applicable glass thickness	RC 3

Scope: All facades with the same or larger dimensions in compliance with the specifications, e.g. for pressure plate screw connection or securing the fixing of glazing or according to the requirements or restrictions set out in the reference standards and documents.

Table 8 Evidence Lightning protection

Product family	Evidence of Performance	Date	additional information	
				Lightning protection
Lightning protection braid	Test report 30635/02-03-07 ELEMKO S.A. 32200, Thiva, Greece	09.01.2015	Transmission only upon consultation between manufacturer and testing body. The information on the scope contained in the test report must be observed.	N

Table 9 Evidences Bullet resistance

Product family	Evidence of Performance	Date	additional information	 Bullet resistance
FW 50 ⁺ , FW 60 ⁺ façade element	Evidence of performance DSM 00 038, Beschussamt Ulm	06.03.2000	Transmission only upon consultation between manufacturer and testing body (Beschussamt Ulm)	FB4 NS
FW 60 ⁺ Facade element with connection to window and door system	Test report S 12 0030 05 / B Beschussamt Ulm	28.06.2012	Transmission only upon consultation between manufacturer and testing body (Beschussamt Ulm)	FB4 NS
FW 60 ⁺ Facade element door ADS 90 BR	Test report S 12 0030 06 / B Beschussamt Ulm	28.06.2012	Transmission only upon consultation between manufacturer and testing body (Beschussamt Ulm)	FB4 S

The tests were carried out on facades from the systems FW 50⁺ / FW 60⁺, the transmission to FWS 60 has to be agreed separately with the testing body, was recorded here for information purposes. (The essential construction details are identical for the systems FW50⁺ / FW60⁺ and FWS50 / FWS60)

Table 10 Evidences Pendulum tests

Product	Evidence of Performance	Date	additional information	
				Pendulum tests
Facade system of the profile series FWS 60	National technical test certificate (AbP) VT 15-038.1P Verrotec GmbH	20.10.2015	The information on the scope contained in the national technical test certificate must be observed.	Category A
Clamping connection for safety barrier glazing of facade system FW 60 ⁺ (*)	National technical test certificate (AbP) 01/2015 Technische Universität Braunschweig	01.03.2015	The information on the scope contained in the national technical test certificate must be observed.	Category A
Facade system of the profile series FWS 60	National technical test certificate (AbP) VT 17-072.1P Verrotec GmbH	25.04.2019	The information on the scope contained in the national technical test certificate must be observed.	Category A

(*) The tests were carried out on facades from the systems FW 50⁺ / FW 60⁺, the transmission to FWS 60 has to be agreed separately with the testing body, was recorded here for information purposes.

Table 11 Evidences for vendor parts

Vendor part / Component	Type / Manufacturer	Evidence / Certificate	Comments
Seals/Gaskets	EPDM / Schüco International KG	see test evidence / reports from Table 1	-/-
Profiles	FWS 50 / Schüco International KG	-/-	without thermally insulated composite profiles

Scope: According to the requirements or restrictions set out in the reference standards and documents.

3 System description

The list of evidences according to section 2 was basis for the ift system passport in accordance with certification scheme QM320SG. This list may not completely cover all possible variants specified in the system description. The ift System Passport is defined by the listed verifications and the field of direct application according to the product standard. The licenser is responsible for updating the system description.

3.1 Profiles

Table 12 Approved main profiles

Type	Variant	Material	Additional information	Evidence of Performance
Mullion profiles	Mullion variants (E3), FWS 60	Aluminium, extruded precision profiles from the alloy	see Schüco drawing K1014058	Expert statement 15-002814-PR01 ift Rosenheim
	Mullion variants FWS 60	EN AW 6060 – T66 (as specified by the manufacturer)	see Schüco drawing K1014053	
Mounting mullion	Mounting mullion variants FWS 60	Aluminium, extruded precision profiles from the alloy EN AW 6060 – T66 (as specified by the manufacturer)	see Schüco drawings K1014058 K1014053	Expert statement 15-002814-PR01 ift Rosenheim
Transom profiles	Transom variants and supplementary profiles FWS 60	Aluminium, extruded precision profiles from the alloy EN AW 6060 – T66 (as specified by the manufacturer)	see Schüco drawing K1014054	Expert statement 15-002814-PR01 ift Rosenheim
Pressure plates	Cover profile variants and end caps FWS 60	Aluminium, extruded precision profiles from the alloy EN AW 6060 – T66 (as specified by the manufacturer)	see Schüco drawing K1014055	Expert statement 15-002814-PR01 ift Rosenheim
Cover plates	Cover profile variants and end caps FWS 60	Aluminium, extruded precision profiles from the alloy	see Schüco drawing K1014055	Expert statement 15-002814-PR01 ift Rosenheim
	Cover profiles SOS FWS 60	EN AW 6060 – T66 (as specified by the manufacturer)	see Schüco drawing K1014606	

Type	Variant	Material	Additional information	Evidence of Performance
T-connector	Knob-T-connector	-	additionally for all T-joints item n° 205827, 2 special screws, see processing drawing	Expert statement 15-002814-PR01 ift Rosenheim
	U-T-connector			
	T-connector heavy loads			
	Spring bolt T-connector			
	T-connector profile slanted connection			
	226081		2 screws item n° 205827	

3.2 Seals/Gaskets

Table 13 Approved seals/gaskets

Function	Item number	Material	Corner design	Evidence of Performance
Seal/gasket cross FWS 60, FWS 60.HI, FWS 60.SI, FWS 60.SI Green	224966	EPDM	Cross joint vertically continuous, horizontally butt-jointed	Expert statement 15-002814-PR01 ift Rosenheim
	268718	EPDM		
	224968	EPDM		
External glazing gasket (at pressure profile)	Glazing gasket variants FWS 60 see Schüco drawing K1013896 K1017167 K1013897	EPDM	vertically continuous, horizontally butt-jointed, sealed in corner area sealing cross item n° 268718 or 224966, EPDM, see processing drawing	Expert statement 15-002814-PR01 ift Rosenheim
			vertically continuous, horizontally butt-jointed, sealed in corner area with sealing plate item n° 281295 or 267964, see processing drawing	
			vertically continuous, horizontally butt-jointed, sealed in crossing area of pressure plates with sealing cross item n° 224968 or 267964	

Function	Item number	Material	Corner design	Evidence of Performance
Internal glazing gasket (in structural support)	Glazing gasket variants FWS 60 see Schüco drawing K1017167 K1013896	EPDM	Variant 1: Vertical seal notched, horizontal seal butt-jointed and sealed with elastic sealant Schüco Flex 2 item n° 298900	Expert statement 15-002814-PR01 ift Rosenheim
			Variant 2: Vertical seal interrupted with transom seal item n° 217587, horizontal seal butt-jointed and sealed with elastic sealant Schüco Flex 2 item n° 298900	
			Variant 3: Same as variant 2 with application transom seal item n° 217587, inserted horizontal and vertical seal with sealing corners; joints between seals and sealing corners sealed with elastic sealant Schüco Flex 2 item n° 298900	
			Variant 4: Vertical seal interrupted with sealing cord item n° 224636, horizontal seal butt-jointed and sealed with elastic sealant Schüco Flex 2 item n° 298900	
		EPDM	made as circumferential sealing frame	
Sealing of mounting mullion	204029 (internal/centre)	EPDM	without, vertically continuous	Expert statement 15-002814-PR01 ift Rosenheim
	246648 (external)	EPDM	without, vertically continuous	
	see Schüco drawing K1013898			

3.3 T-connectors

Table 14 Approved T-connectors

Connector type	Item No.	Material	Comments:	Evidence of Performance
Knob T-connector	see Schüco drawings K1014062 K1013927 K1013931 K1013936	-	additionally for all T-joints item n° 205827, 2 special screws, see processing drawing	Expert statement 15-002814-PR01 ift Rosenheim
U-TV profile				National technical approval Z-14.4-754
Spring bolt T-connector				European Technical Assessment ETA-18/0240
T-connector profile, slanted connection				

3.4 Glass support

Table 15 Approved glass supports

Function	Item number	Material	Comments:	Evidence of Performance
Standard (bolted in transom)	see Schüco drawing K1017167	Aluminium	Glass thickness up to 68 mm	Expert statement 15-002814-PR01 ift Rosenheim
increased glass loads (bolted and screw-fastened in transom)	see Schüco drawing K1017167	Aluminium	Glass thickness up to 68 mm	National technical approval Z-14.4-754
Intersection glass support (screw-fastened in mullion and transom)	see Schüco drawing K1017167	Aluminium	Glass thickness up to 86 mm	European Technical Assessment ETA-18/0240

3.5 Insulators

Table 16 Approved insulators

Type	Item No.	Material	Comments:	Evidence of Performance
Insulators	Schüco FWS 60 see Schüco drawing K1017167	uPVC	Glass thickness 22-62 mm	Expert statement 15-002814-PR01 ift Rosenheim
	Schüco FWS 60.HI see Schüco drawing K1017167	uPVC	Glass thickness 22-62 mm	
	Schüco FWS 60.HI see Schüco drawing K1017167	uPVC	Glass thickness 28-86 mm	

3.6 Specifications for screw connection of pressure profiles

Table 17 Screw connection of pressure profiles

Assignment of profiles according to Section 3.1	Frame material	Screw type	Torque rate	Comments	Screw connection distance	
					among each other	Edge distance
Mullion / transom	Aluminium	as 205891 (oval head)	4.5 Nm	-	300 mm	20 mm

(Further variants (e.g. for burglar resistance, flat cover plate) can be found in the corresponding test reports or processing drawings)

3.7 Vapour pressure equalisation / Drainage

Table 18 Vapour pressure equalisation / drainage

Type	Description	Remark / Evidence, reports
System: Total ventilation	ventilation system see Schüco drawing K1014007 Further details can be found in the processing drawing.	Expert statement 15-002814-PR01 ift Rosenheim
System: Per panel ventilation	ventilation system see Schüco drawing K1014007 Further details can be found in the processing drawing.	Expert statement 15-002814-PR01 ift Rosenheim
Ventilation variants	Functionality of drainage and ventilation of a facade construction in thermally insulated rebate areas	Test report P17-245/2015 Fraunhofer-Institut für Bauphysik IBP

3.8 System accessories

System accessories, e.g. fixings of the facade, wall connection profiles, mullion joint seals, etc., can be found in the relevant evidences or processing drawings.

3.9 Insert elements / filling elements

- Insulating glass units
- Warm panels in sheet glass and sheet metal design
- Cold parapet
- Clamping frame from AWS/ADS systems

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. 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 Minimum requirements to curtain walling

Table 19 Minimum requirements for curtain walling according to ift-certification scheme QM320SG

Performance characteristic according to EN 13830:2003	Classification standard / Verification method	Minimum requirement
Watertightness	EN 12154	R4
Air permeability	EN 12152	A1

4.3 Requirements for vendor parts

Table 20 Requirements for vendor parts according to ift-certification scheme QM320SG

Vendor part / Component	Requirement (the current version always applies)
Seals/Gaskets	Certification scheme QM338* / Alternatively, verification by test report or by testing of air permeability and watertightness as well as operating forces
Profiles	Wood ift-Guideline HO-10/1
	Plastic RAL-GZ 716* Part 1
	Aluminium 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 Quality".

4.5 Basis of the ift-system passport

- Existing surveillance contract n°185S 7612120 between 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 implementation of the different performance characteristics specified by the 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 $\pm 15^\circ$ from the 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).