

HUECK system pass for façades in accordance with EN 13 830 2014-F-04

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Fundamentals

EN 14 830 (2003 - 11)
 Curtain walling

Test reports

EHL 20101222
 ift 155 27872
 PIV 23-12/07E
 PIV 45-42/11
 SG 1247-002-09
 SG 1247-003-09
 SG 7298-001-10
 SG 7298-003-10
 Wintech R 10091
 Wintech R 10091-2
 Wintech R 10091-3
 Wintech R 11879

The Hueck system pass describes the general properties of the given product family according to the specifications given in the product standard.

The classifications apply to the described specimen shown in the tables and to the application range defined in the Hueck system pass.

For the applicability of performance characteristics local building laws and contractual agreements apply.

Contents

The Hueck system pass comprises a total of 7 pages:

1. Summary of performance characteristics in accordance with EN 13830
2. Summary of performance characteristics in accordance with other standards/regulations
3. General information on the Hueck system pass
4. Short description of the product family
5. Overview of the performance characteristics
6. Overview of the performance characteristics in accordance with other standards / guidelines

Customer Hueck GmbH & Co. KG
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System **Trigon Unit**

Product family Unitized façade

Frame material Aluminium profiles with plastic spacer profiles or insulating foam elements

Properties / classes (according to EN 13 830, annex ZA.1)

Resistance to wind	Resistance to dead weight	Impact resistance	Air permeability	Water tightness	Airborne sound insulation	Thermal transmission
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up to design ±2.4 kN/m ² security ± 3.6 kN/m ²	1)	I5/E5	up to AE 900	up to RE ₁₂₀₀	up to 41 dB	1)
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Fire resistance	Fire behaviour	Spread of fire	Durability	Water vapour permeability	Resistance to changes in temperature	Resistance to horizontal loads
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npd	npd	1)	2)	1)	1)	1)
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Further properties / proofs

Burglar resistance	CWCT certificate	AAMA / ASTM tests	Seismic shock resistance	Flanking sound transmission
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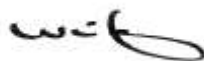
up to WK / RC 2	passed	passed	passed	up to 63 dB (vert.) 62 dB (hor.)
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1) object-specific proof – if required

2) maintenance instructions according to EN 13 830, Annex B

Lüdenscheid, 06. May 2014

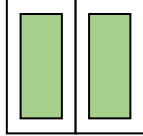
i.V.



Günther Weiß

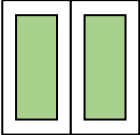
1 Summary of performance characteristics in accordance with EN 13830

The summary for the specific product family compares the performance characteristics defined according to product standard EN 13 830, Section 4 Requirements, with the actual performance characteristics that could be proved.

Section	Characteristic in accordance with EN 13 830	Standard	Product family
			
			Unitized facade
4.1	Resistance to wind load	EN 12 179	design 2.4 kN/m ² safety 3.6 kN/m ²
4.2	Resistance to dead load		
4.3	Impact resistance	EN 12 600	from inside I5 from outside E5
4.4	Air permeability	EN 12 152	up to AE 900
4.5	Water tightness	EN12 154	static bis RE ₇₅₀ dynamic 250 / 750 Pa
4.6	Airborne sound insulation	EN ISO 717-1	npd
4.7	Thermal transmission	EN ISO 12 631	object-specific proof
4.8	Fire resistance	prEN 13 501-2	npd
4.9	Fire behaviour	EN 13 501-1	npd
4.10	Spread of fire		npd
4.11	Durability		npd
4.12	Water vapour permeability		object-specific proof
4.13	Potential equalization		npd
4.14	Seismic shock resistance	AAMA 501.4	passed
4.15	Resistance to changes in temperature		npd
4.16	Building and thermal movements		object-specific proof
4.17	Resistance to dynamic horizontal loads		object-specific proof

2 Summary of performance characteristics according to other standards / regulations

The following other performance characteristics could be proved for the product family:

Section	Characteristic in accordance with EN 13 830	Standard	Product family
			
			unitized façade
1	Burglar resistance	EN 1627 ff	up to WK / RC 2
2	CWCT tests	CWCT standard for systemised building envelopes	passed
3	ASTM / AAMA tests	AAMA 501-04 AAMA 501-05 ASTM 283-04 ASTM 330-02 ASTM 331-00	passed
4	Flanking sound transmission	DIN EN ISO 10 848	horizontal up to 62 (-2; -7) dB vertical 60 (-2; -8) dB

3. General information on the Hueck System Pass

The indicated performance characteristics have been tested and evaluated by approved test institutes in accordance with the test and classification standards mentioned in product standard EN 13830.

The test reports on which the system pass is based are mentioned in section 4. A detailed description of the test specimens used for the individual tests can be found in the test reports.

4 Product family

Brief description of the Trigon Unit façade system

This brief description summarizes the main system features of Trigon Unit façade system

Frame material	Aluminium – EN AW-6060 according to EN 755	
Elevation width	frame	33 mm
	transom / mullion	75 mm
	alternative profiles of Trigon 50 series	50 mm
Profile depth	frame	137 mm
	transom / mullion	137 mm
	alternative profiles of Trigon 50 series	up to 133.5 mm
Connection		
frame	profiles mitred and moulded, nailed and glued by means of corner brackets	
transom / mullion	butt jointed und screwed with screws in screw channels alternatively with T connectors (Trigon 50 profiles)	
Glazing	Insulating glass or panels with a thickness of 40 - 51 mm	
Glass sealing	with pre-fabricated EPDM insulating profiles	
outside	914 262 resp. 914 263 black EPDM, supplier Hueck, single piece surrounds recess, jointed at top and glued	
inside	Sealing profile with different thicknesses (4 up to 14 mm) depending on thickness of glass or panel made of black EPDM, supplier Hueck, single piece surrounds recess, jointed at top and glued	
Vapour pressure equalization / drainage	see processing manual	

5 Overview of performance characteristics

Section of product standard EN 13830		Variant / Type / Model	Proof	Value / Class	Field of application
5.1	Resistance to wind load	Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012	2400 Pa / 3600 Pa	Grid dimensions that are smaller than the maximum tested field grid in compliance with the limitation of deflection L/200 or max. 15 mm
5.2	Resistance to dead load	Curtain walls must carry their dead weight and all connections stated in the original planning (e.g. sun protection devices, projecting balconies or similar). The loads must be securely transmitted to the building via the fixing elements intended for this. The dead weight must be determined in accordance with EN 1991-1-1. Proof of stability must be carried out by an object-specific statical proof or by way of type statics. The maximum deflection of all horizontal bearing members due to the vertical load is to be restricted to L/500 or max. 3 mm.			
5.3	Impact resistance	Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012	I5 / E5	All façades with an identical design and identical materials and smaller or similar grid dimensions and similar rigidity in compliance with the limitation of deflection L/300 or max. 15 mm of the bearing members (static proof)
5.4	Air permeability	Grid width 1425 mm height 938 mm – 2510 mm Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012 Wintech R 11879 05.10.2011	AE 750 AE 900	Can be transferred to façades with smaller or identical joint length per square metre of the façade area in compliance with the limitation of deflection
5.5	Water tightness (static)	Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012	RE 1200	Can be transferred to façades with smaller or identical joint length per square metre of the façade area in compliance with the limitation of deflection
5.6	Airborne sound transmission	Glazing 8 mm / 16 mm / 5 _{0.765} mm	SG 7298-001-10 18.11.2010	R _w 41 dB	Sound transmission depends on glass and panel used in the units as well as on the grid of the façade. Shall be check for each project.
5.7	Thermal resistance	U _f values between 0.93 and 2.7 W/m ² K Ψ values of joints between 0.00 and 0.086 W/mK	EHL 20101222 22.12.2010	---	The specific U _f value for the respective profile shall be taken from the illustrations in the proof. The coefficient of thermal transmission U _{cw} of a curtain wall element shall be carried out in accordance with EN ISO 12 631.
5.8	Fire resistance			npd	
5.9	Fire behaviour			npd	
5.10	Spread of fire			npd	The characteristic shall be proved for the specific object.

Section of product standard EN 13830		Variant / Type / Model	Proof	Value / Class	Field of application
5.11	Durability			npd	The manufacturer must make recommendations with regard to the maintenance requirements for the completed curtain wall.
5.12	Water vapour permeability			npd	The characteristic must be proved for the specific object, if required.
5.13	Equi-potentiality			npd	The characteristic must be proved for the specific object, if required.
5.14	Seismic shock resistance	Grid width 1425 mm height 938 mm – 2510 mm tests according to AAMA 501.4:2000	Wintech R 10091-2 11.09.2012	passed	The characteristic must be proved for the specific object, if required.
5.15	Thermal shock resistance			npd	The characteristic of the glass products used must be proved for the specific object, if required.
5.16	Building and thermal movements			npd	The proof must be given for the specific object, if required.
5.17	Resistance to live horizontal loads			npd	Object-specific proof can be given by testing, calculation or evaluation.

6 Overview of performance characteristics according to further standards / guidelines

		Variant / Type / Model	Proof	Value / Class	Field of application
6.1	Hose test CWCT	Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012	passed	
6.2	Burglar re- sistance	Object related tests Fixed unit with panel Object related test PA sash and fixed glazing P4A	PIV 45-42/11 26.03.2012 PIV 23-12/07E 21.04.2008	RC 2 WK 2	
6.3	Water tight- ness (dynamic) Propeller	Grid width 1425 mm height 938 mm – 2510 mm	Wintech R 10091 11.09.2012	600 Pa	All façades with an identical design and identical materials and smaller or similar grid dimensions and similar rigidity in compliance with the limitation of deflection L/300 or max. 15 mm of the bearing members.
6.4	Water tight- ness (dynamic) Fan	Grid width 1425 mm height 938 mm – 2510 mm	ift 155 27872 05.07.2006	250 Pa / 750 Pa	All façades with an identical design and identical materials and smaller or similar grid dimensions and similar rigidity in compliance with the limitation of deflection L/300 or max. 15 mm of the bearing members.
6.5	Flanking sound trans- mission	Horizontal flanking sound transmission 8 mm / 16 mm Argon / VSG 5 _{0.765} Vertical flanking sound transmission 8 mm / 16 mm Argon / VSG 5 _{0.765}	SG 7298-003-10 18.11.2010 SG 1247-002-09 18.11.2010	up to D _{n,f,w} 62 (-2; -7) dB D _{n,f,w} 60 (-2; -8) dB	Sound transmission depends on glass and panel used in the units as well as on the grid of the facade. Shall be check for each project.
6.6	ASTM / AAMA tests	AAMA 501-04 AAMA 501-05 ASTM 283-04 ASTM 330-02 ASTM 331-00	Wintech R 10091 11.09.2013	passed	