

HUECK product pass for windows according to EN 14 351 - 1 2014-W-11

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Basic information

EN 14 351 - 1 (2010 - 08)
 Windows and pedestrian doors

Test reports

EHL 2015-02-11

ift 14-000016-PR09
 ift 14-000016-PR10
 ift 14-000016-PR16
 ift 14-000016-PR17
 ift 14-000639-PR01
 ift 14-002284-PR13
 ift 14-002395-PR02

PIV 45-27/14
 PIV 45-29/15
 PIV 45-76/15
 PIV 45-103/14

The Hueck product 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 are valid for the defined application range.

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

Content

The Hueck system pass comprises a total of 7 pages:

1. Summary of performance characteristics in according with EN 14 351 - 1
2. General conditions
3. Short description of the product family
4. Overview of performance characteristics

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System **HUECK Lambda WS 090 IS**

Product family 1. Turn, tilt and turn, tilt window and window doors
 2. Fixed glazing
 3. Double casement window

Frame material Aluminum plastic compound

Properties / classes (according to EN 143351 - 1, annex ZA.1)

Resistance to wind load	Resistance to snow and loads	Safety in case of fire	Water tightness	Dangerous substances	Impact resistance	Load bearing capacity of safety devices
up to C4 / B4	npd	npd	up to E 900	see chapter 4	npd	passed

Height and width	Automatic opening device	Acoustic performance	Thermal performance	Radiation properties	Air permeability	Operating forces
2)	2)	up to R _w (C; C _{tr}) 49 (-1; -4) dB	1)	1)	4	1

Further properties / tests

Mechanical strength	Ventilation	Bullet resistance	Explosion resistance	Mechanical durability	Behaviour between different climates	Burglar resistance
4	npd	npd	npd	3	2)	up to RC 2

1) project certificate - if required

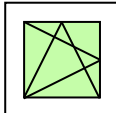
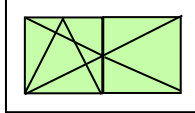
2) non mandated property for windows

Lüdenscheid, 01. December 2015

i.V.

Günther Weiß

1. Summary of performance characteristics in according with EN 14351-1

Lfd. Nr.	Performance characteristics according to EN 14 351 - 1	Product family 1 / 2	Product family 2
			
		Turn, tilt and turn, tilt window and window door and fixed glazing	Double casement window
4.2	Resistance to wind load	C4 / B4	C3 / B4
4.3	Resistance to snow and permanent load	not applicable	
4.4	Safety in case of fire	npd	npd
4.5	Water tightness	9A	E 900
4.6	Dangerous substances	The manufacturer has to declare substances which when used as prescribed cause danger to hygiene, health or the environment by emission or migration in accordance with the local requirements.	
4.7	Impact resistance	npd	npd
4.8	Load-bearing capacity of safety devices	passed	npd
4.9	Height and width	not applicable	
4.10	Automatic opening device	not applicable	
4.11	Acoustic performance	R _w (C; C _{tr}) up to 49 (-1; -4) dB	npd
4.12	Thermal performance	U _w values for standard size 1.23 m x 1.48 m or 1,48 m x 2.18 m or project related have to be declared U _r ≥ 1,1 W/m ² K	
4.13	Radiation properties	The total solar energy transmittance g and light transmittance are τ object based evidence by the CE marking of the glazing	
4.14	Air permeability	4	4
4.16	Operating forces	1	npd
4.17	Mechanical strength	4	npd
4.18	Ventilation	npd	npd
4.19	Bullet resistance	npd	npd
4.20	Explosion resistance	npd	npd
4.21	Mechanical durability	3	npd
4.22	Behaviour between different climates	not applicable	
4.23	Burglar resistance	up to RC 2	npd

2. General information for Hueck product pass

The performance characteristics listed were tested and classified in accordance with the product standard EN 14351-1 test and classification standards by approved testing laboratories.

The product pass is based on test reports mentioned in section 4. The detailed description of the various test specimens is found in the test reports.

The portability rules are taken from Annex E of the product standard EN 14351-1.

3. Product family

3.1 Short description of the systems

This short description summarizes the main features of the system series HUECK Lambda WS 090 IS.

Frame material	Aluminium plastic compound profiles
Profile depth	Frame 90 mm Sash 100 mm
Frame connection	profiles mitred and moulded or nailed or glued by means of corner brackets, alternatively butt jointed with T-connectors, nailed and glued
Gaskets	
Centre gasket	Sealing profile Z 921 000 with vulcanized corner pieces Z 921 014 glued, EPDM black, supplier Hueck
Inside rebate gasket	Sealing profile Z 914 266 EPDM black, supplier Hueck, revolving, jointed at top and glued
Drainage	Fixed frames and transom profiles: slots 8 mm x 30 mm with caps Z 921 100, Z 906 510 or Z 903 541 quantity depending on width of the window
Pressure equalization	revolving slot of 1 mm between the window frame and sash
Glazing	insulating glass or panels with a thickness of element of 38 - 56 mm (sash) resp. 23 - 54 mm (fixed frame or transom)
Outer glazing gasket	Sealing profile Z 921 016, EPDM black, supplier Hueck, revolving, jointed at top and glued
Inner glazing gasket	Sealing profile Z 914 262, EPDM black, supplier Hueck, revolving, jointed at top and glued or depending on thickness of the glazing seal profiles with the same strength of other similar material properties and geometries

Vapour pressure	sash: equalisation 2 or 3 (depending on width of the window) slots 5 mm x 30 mm at the bottom, at the top of the side profiles drill \varnothing 5 mm each
Fittings	visible tilt and turn Z 981 020, supplier Hueck concealed tilt and turn Z 981 003, supplier Hueck (fittings with other rotation and stay-arm hinge length are possible)

The name of the window series *Lambda duo 90 IF* has been changed to *HUECK Lambda WS 090 IS*. As there are no changes in construction test reports for *Lambda duo 90 IF* are still valid for *HUECK Lambda WS 090 IS*.

4. Overview of performance characteristics

Section of Product standard EN 14351-1		Variety / Type / Execution	Proof	Value / Class	Application area
4.2	Resistance to wind load	Tilt and turn window with side light Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-000016-PR09 20.05.2014	C4 / B4	Transfer to -100% of the frame width and frame height of the specimen The deflection of mullions and transoms can also be calculated
		Tilt and turn window with bottom light Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 12-000016-PR10 20.05.2014	C4 / B4	
		Double casement window Sash: 984 mm x 1952 mm Fixed frame: 2000 mm x 2000 mm	ift 12-000016-PR17 30.07.2014	C3 / B4	
4.3	Resistance to snow and constant load			npd	Only applies to skylight windows
4.4	Safety in case of fire			npd	Only applies to skylight windows
4.5	Water tightness	Tilt and turn window with side light Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-000016-PR09 20.05.2014	9A	Transfer of -100% to +50% of the total area of the specimen
		Tilt and turn window with bottom light Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 12-000016-PR10 20.05.2014	9A	
		Double casement window Sash: 984 mm x 1952 mm Fixed frame: 2000 mm x 2000 mm	ift 12-000016-PR17 30.07.2014	E 900	
4.6	Dangerous substances	The manufacturer has to declare substances which when used as prescribed cause danger for hygiene, health or environmental by emission or migration in accordance with the local requirements.			
4.7	Impact Resistance			npd	
4.8	Load-bearing capacity of safety devices	Tilt and turn window / window door Sash: 1598 mm x 1448 mm 948 mm x 2348 mm	ift 14-002284-PR13 21.05.2015	passed	Transfer to smaller or the same widths or heights of the specimen
4.9	Width and height			npd	Only for external doors
4.10	Ability to release			npd	Only for exterior doors in escape and rescue routes
4.11	Acoustic performance	Tilt and turn window 17 laminated acoustic / 16 / 13 laminated acoustic	ift 14-000639-PR01 PB Z22 11.08.2014	R _w (C;C _{tr}) 47 (-2;-5)	Transmission window size to other formats in accordance with EN 14351-1, annex B, table B.3
		Expert statement Insulating glass with different sound reduction	ift-14-002395-PR02 GAS 2 01.09.2014		

Section of Product standard EN 14351-1		Variety / Type / Execution	Proof	Value / Class	Application area
4.12	Thermal performance	$U_f \geq 1,1 \text{ W/m}^2\text{K}$	EHL 2015-02-11 11.02.2015	project certificate	UW-value in accordance with EN ISO 10077-1, table F.1 can be applied to all element sizes Calculation according to EN ISO 10077-1 for the reference size 1.23 m x 1.48 m elements can be up to 2.3 m ² and for the reference size 1.48 m x 2.18 m be transferred to elements of 2.3 m ² . If $U_g < 1.9 \text{ W/m}^2\text{K}$, the calculation for the reference size can be applied to all element sizes 1.23 m x 1.48 m
4.13	Radiation properties	Übernahme aus CE-Zeichen der Verglasung		project certificate	Applicable to all sizes
4.14	Air permeability	Tilt and turn window with side light Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-000016-PR09 20.05.2014	4	Transfer to -100% to +50% of the total area of the specimen
		Tilt and turn window with bottom light Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 12-000016-PR10 20.05.2014	4	
		Double casement window Sash: 984 mm x 1952 mm Fixed frame: 2000 mm x 2000 mm	ift 12-000016-PR17 30.07.2014	4	
4.16	Operating forces	Tilt and turn window with side light Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-000016-PR09 20.05.2014	1	Transfer to -100% of the total area of the specimen
		Tilt and turn window with bottom light Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 12-000016-PR10 20.05.2014	1	
4.17	Mechanical strength	Tilt and turn window with side light Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-000016-PR09 20.05.2014	4	Transfer to -100% of the total area of the specimen
		Tilt and turn window with bottom light Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 12-000016-PR10 20.05.2014	4	
4.18	Ventilation			npd	Only applies to windows with integrated vent
4.19	Bullet resistance			npd	
4.20	Explosion resistance			npd	
4.21	Mechanical durability	Tilt and turn window / window door Sash: 1598 mm x 1448 mm 948 mm x 2348 mm	ift 14-002284-PR13 20.05.2015	3	

Section of Product standard EN 14351-1		Variety / Type / Execution	Proof	Value / Class	Application area	
4.22	Behaviour between different climates			npd		
4.23	Burglar resistance	Tilt and turn window	PIV 45-29/15 28. 10. 2015	RC 1 N	Single or double sash window with / without fixed glazing sash area 0.6 - 4.0 m ² Hueck GEN 4.0 and Roto Al Designo / Al 540 hardware	
		Tilt and turn window Sash Sash 2:	1300 mm x 1200 mm 1300 mm x 1200 mm	PIV 45-27/14 01.04.2014	RC 2	Transferrable to: +/- 25% of area Distance locking points from corner: +5% / -20% Distance between locking points: +5% / -30%
			PIV 45-76/15 28.10.2015	RC 2 / RC 2 N	Single or double sash window with / without fixed glazing sash area 0.6 - 4.0 m ² Hueck GEN 4.0 and Roto Al Designo / Al 540 hardware	
		Fixed frame	1350 mm x 1250 mm	PIV 45-103/14 06.10.2014	RC 2 / RC 2 N	No limitation of area

5. Overview of performance characteristics according to further standards / guidelines

Reference	Variety / Type / Execution	Proof	Value / class	Application area
misuse operation test	Tilt and turn window / window door Sash: 1598 mm x 1448 mm 948 mm x 2348 mm	ift 14-002284-PR13 20.05.2015	passed	