

HUECK product pass for windows according to EN 14 351 - 1 2017-W-01

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Basic information

EN 14 351 - 1 (2016 - 12)
 Windows and pedestrian doors

Test reports

ift 14-002284-PR20
 ift 14-002284-PR23
 ift 14-002284-PR29
 ift 14-002284-PR44
 ift 16-000185-PR01
 ift 16-000185-PR02

PIV 45-120/15
 PIV 45-150/15

VT 15-0432-02
 VT 15-0440-03

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 the benefits of each product family

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System **HUECK Lambda WS 075 FC**

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

Frame material Aluminium plastic compound

Properties / classes (according to EN 14351 - 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 C5 / B5	npd	npd	up to E1350	see chapter 4	npd	passed

Height and width	Automatic opening device	Acoustic performance	Thermal performance	Radiation properties	Air permeability	Operating forces
2)	2)	npd	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	npd	2)	up to RC 2 / RC 2 N

Loading capacity T-connector	Safety against falling out
npd	passed

1) project certificate - if required

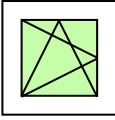
2) non mandated property for windows

Lüdenscheid, 31. March 2017

i.A. 

Magnus Holz

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

No.	Performance characteristics according to EN 14 351 - 1		Product family 1, 2
			
			Turn, tilt and turn, tilt window and window door and fixed glazing
4.2	Resistance to wind load	EN 12 210	C5 / B5
4.3	Resistance to snow and permanent load		not applicable
4.4	Safety in case of fire		npd
4.5	Water tightness	EN 12 208	up to E 1350
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
4.8	Load-bearing capacity of safety devices		passed
4.9	Height and width		not applicable
4.10	Automatic opening device		not applicable
4.11	Acoustic performance		npd
4.12	Thermal performance		Uw 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 $U_r = 1,2 - 2,4 \text{ W/m}^2\text{K}$
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	EN 12 207	4
4.16	Operating forces	EN 13 115	1
4.17	Mechanical strength	EN 13 115	4
4.18	Ventilation		npd
4.19	Bullet resistance		npd
4.20	Explosion resistance		npd
4.21	Mechanical durability		npd
4.22	Behaviour between different climates		not applicable
4.23	Burglar resistance		up to RC 2 (N)

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 system

This short description summarizes the main features of the system HUECK Lambda WS 075.

Frame material	Aluminium plastic compound profiles
Profile depth	Frame 75 mm Sash 85 mm
Frame connection	profiles mitred, moulded and glued by means of corner brackets alternatively butt jointed with T-connectors, nailed and glued
Gaskets	
Centre gasket	Sealing profile Z 921 456 (foam rubber) with preformed corner pieces Z 921 459 (EPDM), supplier HUECK
Inside rebate gasket	Sealing profile Z 922 128 (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
Pressure equalization	revolving slot of 1 mm between the window frame and sash

Glazing	insulating glass or panels with a thickness of element of 8 – 63 mm (sash) rsp. 8 – 53 mm (fixed frame or transom)
Outer glazing gasket	Sealing profile Z 921 511 or Z 921 677, 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 equalisation	sash: 2 slots 5 mm x 30 mm at the bottom, at the top of the side pro- files one slot 5 mm x 30 mm
Fittings	visible tilt and turn Z 981 321, supplier HUECK visible tilt and turn Z 981 021, supplier ROTO concealed tilt and turn Z 981 301, supplier HUECK concealed tilt and turn Z 981 003, supplier ROTO secondary leaf visible Z 981 328, supplier HUECK secondary leaf visible Z 981 252, supplier ROTO fittings with other rotation and stay-arm hinge length are accept- ed

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	Fixed glazing Fixed frame: 2350 mm x 2348 mm	ift 16-000185-PR01 13.04.2016	C5 / B5	Transfer to -100% of the frame width and frame height of the specimen
		tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	C5 / B5	The deflection of mullions and transoms can also be calculated
		tilt and turn window with fixed sublight (glazed from outside, hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR44* 22.07.2015	C5 / B5	In compliance with the application diagrams of hardware and separate calculation of the deflection of mullions and transoms, a sash width up to 1500 mm and a sash height up to 2050 mm can be classified to C5 / B5
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	C5 / B5	
		tilt and turn window with fixed sidelight (with expansion joint, hardware ROTO visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-002284-PR23* 08.12.2014	C5 / B5	*test report valid in combination with ift 16-000185-PR02 20.03.2017
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	Fixed glazing Fixed frame: 2350 mm x 2348 mm	ift 16-000185-PR01 13.04.2016	E1350	Transfer of -100% to +50% of the total area of the specimen
		tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	E1050	*test report valid in combination with ift 16-000185-PR02 20.03.2017
		tilt and turn window with fixed sublight (glazed from outside, hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR44* 22.07.2015	E900	
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	E1350	
		tilt and turn window with fixed sidelight (with expansion joint, hardware ROTO visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-002284-PR23* 08.12.2014	E1350	
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	Transfer of bigger total area of the specimen

Section of Product standard EN 14351-1		Variety / Type / Execution	Proof	Value / Class	Application area
4.8	Load-bearing capacity of safety devices	tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	passed	Transfer to smaller or the same box widths or heights of the specimen *test report valid in combination with ift 16-000185-PR02 20.03.2017
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	passed	
		tilt and turn window with fixed sidelight (with expansion joint, hardware ROTO visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-002284-PR23* 08.12.2014	passed	
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			npd	Transmission window size to other formats in accordance with EN 14351-1, annex B, table B.3
4.12	Thermal performance	$U_f = 1,2 \text{ W/m}^2\text{K to } 2,4 \text{ W/m}^2\text{K}$		project certificate	U_w -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 2.3 m ² ($U_g < 1.9 \text{ W/m}^2\text{K}$ for all sizes) and for the reference size 1.48 m x 2.18 m be transferred to elements of 2.3 m ² .
4.13	Radiation properties	given by CE marking of glass unit		project certificate	Transfer to all sizes
4.14	Air permeability	Fixed glazing Fixed frame: 2350 mm x 2348 mm	ift 16-000185-PR01 13.04.2016	4	Transfer of -100% to +50% of the total area of the specimen *test report valid in combination with ift 16-000185-PR02 20.03.2017
		tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	4	
		tilt and turn window with fixed sublight (glazed from outside, hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR44* 22.07.2015	4	
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	4	
		tilt and turn window with fixed sidelight (with expansion joint, hardware ROTO visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-002284-PR23* 08.12.2014	4	

Section of Product standard EN 14351-1		Variety / Type / Execution	Proof	Value / Class	Application area
4.16	Operating forces	tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	1	Transfer to -100% of the total area of the specimen *test report valid in combination with ift 16-000185-PR02 20.03.2017
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	1	
		tilt and turn window with fixed sidelight (with expansion joint, hardware ROTO visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 12-002284-PR23* 08.12.2014	1	
4.17	Mechanical strength	tilt and turn window with fixed sublight (hardware HUECK concealed) Sash: 1550 mm x 1400 mm Fixed frame: 1598 mm x 2499 mm	ift 14-002284-PR29* 13.01.2015	4	Transfer to -100% of the total area of the specimen *test report valid in combination with ift 16-000185-PR02 20.03.2017
		tilt and turn window with fixed sidelight (with expansion joint, hardware HUECK visible) Sash: 900 mm x 2300 mm Fixed frame: 3316 mm x 2348 mm	ift 14-002284-PR20* 08.12.2014	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			npd	
4.22	Behaviour between different climates			npd	
4.23	Burglar resistance	Fixed Glazing Sash: 1345 mm x 1245 mm	PIV 45-120/14 07.12.2015	RC 2 (N)	Transferrable to: +/- 25% of area Distance locking points from corner: +5% / -20% Distance between locking points: +5% / -30%
		single sash tilt and turn window with fixed side-frame (hardware HUECK, visible & concealed) Flügelrahmen: 1265 mm x 1965 mm Festfeld: 900 mm x 2088 mm	PIV 45-150/15 02.12.2015	RC 2 (N)	

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

Reference	Variety / Type / Execution	proof	Value / Class	Application area
Safety against Falling out acc. TRAV	WS 075 FC Fixed frame Glass penetration into the frame at least 8 mm width: 577 mm to 1842 mm height: 627 mm to 3042 mm	VT 15-0440-03 06.10.2016	passed	