

PRODUCT PASS

1 GENERAL EXPLANATION

The following paragraphs indicate the performances which can be declared on the Declaration of Performance (DoP) in accordance with Regulation (EU) no. 305/2011 of the European Parliament and of the Council of 9 March 2011.

The listed characteristics are the essential characteristics for external pedestrian doorsets according to hEN 14351-1:2006+A2:2016 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets.

All essential characteristics should be mentioned on the DoP. Where no performance is required, NP (No Performance Declared) can be used.

The mentioned performances are performances which can be achieved for the given dimensions when the product is fabricated following the Reynaers instruction manual (catalogue). The performances as mentioned will meet the requirements of the majority of projects.

Higher performances for smaller dimensions or lower performances for larger dimensions might be possible. In this case contact your Reynaers office. For AWW performances, the maximum dimensions indicated in the system catalogue must be respected.

It is obviously allowed to declare lower performances than those mentioned in the product pass. E.g. when resistance to wind load of 1600 Pa was tested, also 1200 Pa can be declared.

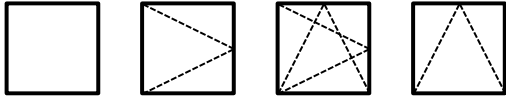
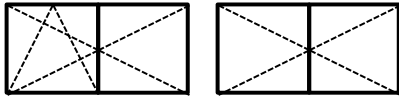
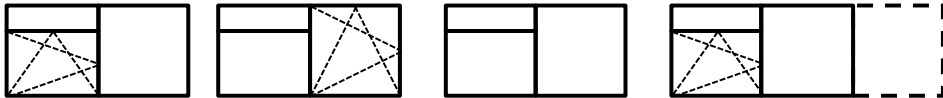
In the second part of the table the non-essential characteristics are indicated. These are the characteristics which give information about the performance of a product, but which are not legally required in any European country and thus not mandatory to declare.

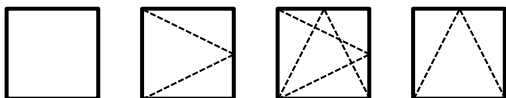
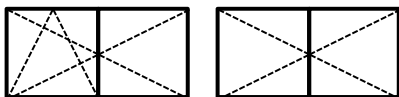

2 NOTIFIED BODIES

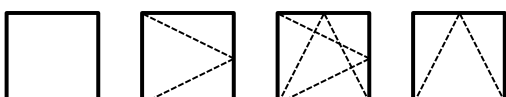
ID	Name	Address	Country
0074	CENTRE D'EXPERTISE DU BÂTIMENT ET DES TRAVAUX PUBLICS	Domaine De Saint-Paul – 102, Route de Limours 78471 Saint-Remy-Les-Chevreuse Cedex	France
0432	MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN	Auf den Thränen 2 59597 Erwitte	Germany
0679	CENTRE SCIENTIFIQUE ET TECHNIQUE DU BÂTIMENT	84, Avenue Jean Jaurès Champs-sur-Marne F-77447 Marne-la-Vallée Cedex 2	France
0744	SOCOTEC	Les Quadrants – 3,Avenue du Centre – Guyancourt 78182 St-Quentin en Yvelines	France
0749	BELGIAN CONSTRUCTION CERTIFICATION ASSOCIATION	Aarlenstraat 53 1040 Brussel	Belgium
0757	IFT ROSENHEIM	Theodor-Gietl-Strasse 7-9 83026 Rosenheim	Germany
0845	DANISH INSTITUTE OF FIRE AND SECURITY TECHNOLOGY	Jernholmen, 12 2650 Hvidovre	Denmark
0960	SKG-IKOB	Poppenbouwing 56 4191 NZ Geldermalsen	Netherlands
1136	BELGIAN BUILDING RESEARCH INSITUTE	Lombardstraat 42 1000 Brussel	Belgium
1234	EFFECTIS NEDERLAND	Brandpuntlaan Zuid 16, Postbus 554 2665 ZN Bleiswijk	Netherlands
1288	WINTTECH ENGINEERING LIMITED	Halesfield 2 Telford,Shropshire TF7 4QH	United Kingdom
1309	PRÜFINSTITUT SCHLÖSSER UND BESCHLÄGE, VELBERT	Wallstrasse 41 42551 Velbert	Germany
1488	INSTYTUT TECHNIKI BUDOWLANEJ	ul. Filtrowa 1 00-611 Warszawa	Poland
1671	PEUTZ	Lindenlaan 41, Molenhoek PO Box 66 6585 ZH MOOK	Netherlands
1749	TNO DEFENCE, SECURITY AND SAFETY	Lange Kleiweg 137, Postbus 45 2280 AA Rijswijk	Netherlands
1769	UNIVERSITY OF GENT	Sint-Pietersnieuwstraat 41 9000 Gent	Belgium
2211	INSTITUTO DE INVESTIGAÇÃO E DESENVOLVIMENTO TECNOLÓGICO PARA A CONSTRUÇÃO, ENERGIA, AMBIENTE E SUSTENTABILIDADE	Rua Pedro Hispano Pólo II da Universidade de Coimbra 3030-289 Coimbra	Portugal

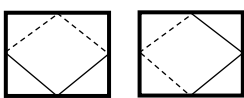
3 VARIANTS

Different variants have been grouped based on similar design and following the guidelines of the harmonised standard.

Inward opening	
5.1	
5.2	
5.3	

Inward opening Hidden Vent	
5.4	
5.5	
5.6	

Outward opening	
5.7	

Pivot Window	
5.8	

4 EXPLANATIONS AND SYMBOLS

H: Element Height

B: Element Width

Fh: Vent Height

Fb: Vent Width

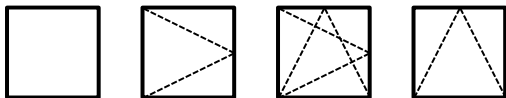
npd: No Performance Declared

CWFT: Classification Without Further Testing

⁽⁴⁾ Fixed windows: Standard glazing beads: $p < 2000$ Pa, $W \times H < 1400 \times 2400$ mm; $p < 1200$ Pa, $W \times H < 3200 \times 3200$ mm. Tubular glazing beads: $p < 2000$ Pa, $W \times H < 3200 \times 3200$ mm.

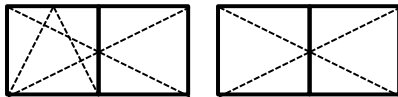
5 PERFORMANCE

5.1 Inward opening



Characteristic		Performance		Notified body - Report	Limits (mm)	
Essential characteristics						
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa)	[0960] – 09.145 [0960] – 10.124	FbxFh<1401x2396 ⁽⁴⁾	
	4.5	Watertightness	9A (600 Pa) E750 (750 Pa)	[0960] – 09.145 [0960] – 10.124	FbxFh<1401x2396	
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.			
	4.8	Load-bearing capacity of safety devices	Pass (350N/60s)	[0960] – 10.135	FbxFh < 1401x2396	
	4.11	Acoustic performance	Glass: 34 (-1;-4) 42 (-1;-5) 51 (-2;-7)	Window: 37 (-1;-4) 40 (-1;-3) 44 (-2;-5)	[1136] – AC 3721 [1136] – AC 3722 [1136] – AC 3723	BxH = 1230x1480
	4.12	Thermal transmittance	U _w to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the U _f -value tables. U _f -values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.			
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass			
	4.14	Air permeability	4	[0960] – 09.145 [0960] – 10.124	FbxFh<1401x2396	
Non-essential characteristics						
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4		
	4.7	Impact resistance	npd			
	4.16	Operating forces	1	[0960] – 10.135 [0960] – 08.1073	FbxFh<1401x2396 FbxFh<1252x1952	
	4.17	Mechanical strength	4	[0960] – 10.135 [0960] – 08.1073	FbxFh<1401x2396 FbxFh<1252x1952	
	4.18	Ventilation	npd			
	4.19	Bullet resistance (BP version)	npd			
	4.20	Explosion resistance	npd			
	4.21	Resistance to repeated opening and closing	3 (20.000)	[0960] – 10.135	FbxFh<1401x2396	
	4.22	Behaviour between different climates	npd			
	4.23	Burglar resistance (AP version)	WK2 / RC2 WK 3	[0960] – SKG.0837.0285.04 [0960] – SKG.0837.0246.03	See report	

5.2 Inward opening



Characteristic		Performance		Notified body - Report	Limits (mm)	
Essential characteristics						
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa)		[0960] – 09.1061	FbxFh < 1375x1708
	4.5	Watertightness	9A (600 Pa)		[0960] – 09.1061	FbxFh < 1375x1708
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.			
	4.8	Load-bearing capacity of safety devices	Pass (350N/60s)		[0960] – 10.135	FbxFh<1401x2396
	4.11	Acoustic performance	Glass: 50 (-2;-8)	Window: 43 (-2;-6)	[1136] – AC 4767	BxH = 1230x1480
	4.12	Thermal transmittance	Uw to be calculated in function of the project. Uf-values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.			
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass			
	4.14	Air permeability	4		[0960] – 09.1061	FbxFh < 1375x1708
Non-essential characteristics						
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4		
	4.7	Impact resistance	npd			
	4.16	Operating forces	1		[0960] – 10.135 [0960] – 08.1073	FbxFh<1401x2396 FbxFh<1252x1952
	4.17	Mechanical strength	4		[0960] – 10.135 [0960] – 08.1073	FbxFh<1401x2396 FbxFh<1252x1952
	4.18	Ventilation	npd			
	4.19	Bullet resistance (BP version)	npd			
	4.20	Explosion resistance	npd			
	4.21	Resistance to repeated opening and closing	3 (20.000)		[0960] – 10.135	FbxFh<1401x2396
	4.22	Behaviour between different climates	npd			
	4.23	Burglar resistance (AP version)	WK2 / RC2		[0960] – SKG.0837.0285.04	See report

5.3 Inward opening



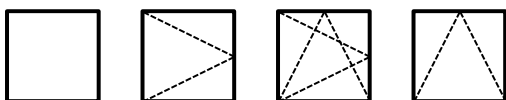
Characteristic		Performance		Notified body - Report	Limits (mm)	
Essential characteristics						
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa) ⁽¹⁾		[0960] – 08.1073	⁽³⁾ ⁽⁴⁾
	4.5	Watertightness	9A (600 Pa)		[0960] – 08.1073 ⁽²⁾	⁽³⁾
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.			
	4.8	Load-bearing capacity of safety devices	See relevant test reports for opening parts			
	4.11	Acoustic performance	Glass: 50 (-2;-8) 48 (-2;-8)	Window: 46 (-2;-8)	[1488] – LA/972/03	BxH = 1950x1628
	4.12	Thermal transmittance	U _f -values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2. U _w to be calculated in function of the project.			
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass			
	4.14	Air permeability	4	[0960] – 08.1073 ⁽²⁾	⁽³⁾	
Non-essential characteristics						
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4		
	4.7	Impact resistance	npd			
	4.16	Operating forces	See relevant test reports for opening parts			
	4.17	Mechanical strength	See relevant test reports for opening parts			
	4.18	Ventilation	npd			
	4.19	Bullet resistance (BP version)	npd			
	4.20	Explosion resistance	npd			
	4.21	Resistance to repeated opening and closing	See relevant test reports for opening parts			
	4.22	Behaviour between different climates	npd			
	4.23	Burglar resistance (AP version)	WK2 / RC2 WK 3	[0960] – SKG.0837.0285.04 [0960] – SKG.0837.0246.03	See report	

⁽¹⁾ Deflection to be calculated in function of wind load and allowable deformation.

⁽²⁾ Test report proves the watertightness and air permeability of a T-connection.

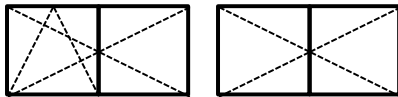
⁽³⁾ For dimensions of the opening parts: see relevant section for the opening elements.

5.4 Inward opening Hidden Vent



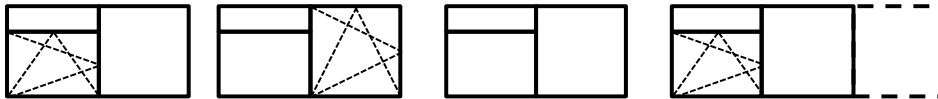
Characteristic		Performance		Notified body - Report	Limits (mm)	
Essential characteristics						
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa)	[0960] – 08.186 rev.A [1488] – LK-02344/09/7	FbxFh<1160x1650 ⁽⁴⁾ FbxFh<921x1758 ⁽⁴⁾	
	4.5	Watertightness	9A (600 Pa) E750 (750 Pa)	[0960] – 08.186 rev.A [1488] – LK-02344/09/7	FbxFh<1160x1650 FbxFh<921x1758	
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.			
	4.8	Load-bearing capacity of safety devices	Pass (350N/60s)	[1488] – LK-02344/09/7	FbxFh < 921x1758	
	4.11	Acoustic performance	Glass: 34 (-1;-4) 41 (-2;-4) 45 (-1;-4)	Window: 36 (-2;-6) 40 (-2;-5) 44 (-1;-5)	[1488] – LA/1482_c1/07 [1488] – LA/1482_c2/07 [1488] – LA/1482_c3/07	BxH = 1230x1480
	4.12	Thermal transmittance	Uw to be calculated in function of the project. Uf-values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.			
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass			
	4.14	Air permeability	4	[0960] – 08.186 rev.A [1488] – LK-02344/09/7	FbxFh<1160x1650 FbxFh<921x1758	
Non-essential characteristics						
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4		
	4.7	Impact resistance	npd			
	4.16	Operating forces	1	[0960] – 08.186 rev.A [1488] – LK-02344/09/7	FbxFh<1160x1650 FbxFh<921x1758	
	4.17	Mechanical strength	4	[0960] – 08.186 rev.A [1488] – LK-02344/09/7	FbxFh<1160x1650 FbxFh<921x1758	
	4.18	Ventilation	npd			
	4.19	Bullet resistance (BP version)	npd			
	4.20	Explosion resistance	npd			
	4.21	Resistance to repeated opening and closing	npd			
	4.22	Behaviour between different climates	npd			
	4.23	Burglar resistance (AP version)	WK2 / RC2	[0960] – SKG.0837.0285.04	See report	

5.5 Inward opening Hidden Vent



Characteristic		Performance	Notified body - Report	Limits (mm)	
Essential characteristics					
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa)	[1488] – LK-02344/09/7	FbxFh < 921x1758
	4.5	Watertightness	E750 (750 Pa)	[1488] – LK-02344/09/7	FbxFh < 921x1758
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.		
	4.8	Load-bearing capacity of safety devices	Pass (350N/60s)	[1488] – LK-02344/09/7	FbxFh < 921x1758
	4.11	Acoustic performance	npd		
	4.12	Thermal transmittance	Uw to be calculated in function of the project. Uf-values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.		
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass		
	4.14	Air permeability	4	[1488] – LK-02344/09/7	FbxFh < 921x1758
Non-essential characteristics					
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4	
	4.7	Impact resistance	npd		
	4.16	Operating forces	1	[1488] – LK-02344/09/7	FbxFh < 921x1758
	4.17	Mechanical strength	4	[1488] – LK-02344/09/7	FbxFh < 921x1758
	4.18	Ventilation	npd		
	4.19	Bullet resistance (BP version)	npd		
	4.20	Explosion resistance	npd		
	4.21	Resistance to repeated opening and closing	npd		
	4.22	Behaviour between different climates	npd		
	4.23	Burglar resistance (AP version)	WK2 / RC2	[0960] – SKG.0837.0285.04	See report

5.6 Inward opening Hidden Vent



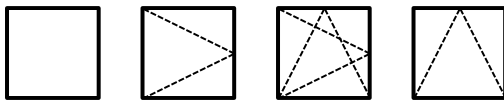
Characteristic		Performance	Notified body - Report	Limits (mm)	
Essential characteristics					
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa) ⁽¹⁾	[1488] - LK-02344/09/6a	(3) (4)
	4.5	Watertightness	E1200 (1200Pa)	[1488] - LK-02344/09/6a ⁽²⁾	(3)
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.		
	4.8	Load-bearing capacity of safety devices	See relevant test reports for opening parts		
	4.11	Acoustic performance	npd (See 6)		
	4.12	Thermal transmittance	Uw to be calculated in function of the project. Uf-values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.		
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass		
	4.14	Air permeability	4	[1488] - LK-02344/09/6a ⁽²⁾	(3)
Non-essential characteristics					
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4	
	4.7	Impact resistance	npd		
	4.16	Operating forces	See relevant test reports for opening parts		
	4.17	Mechanical strength	See relevant test reports for opening parts		
	4.18	Ventilation	npd		
	4.19	Bullet resistance (BP version)	npd		
	4.20	Explosion resistance	npd		
	4.21	Resistance to repeated opening and closing	npd		
	4.22	Behaviour between different climates	npd		
	4.23	Burglar resistance (AP version)	WK2 / RC2	[0960] – SKG.0837.0285.04	See report

⁽¹⁾ Deflection to be calculated in function of wind load and allowable deformation.

⁽²⁾ Test report proves the watertightness and air permeability of a T-connection.

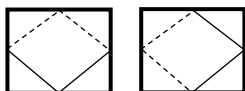
⁽³⁾ For dimensions of the opening parts: see relevant section for the opening elements.

5.7 Outward opening



Characteristic		Performance		Notified body - Report	Limits (mm)	
Essential characteristics						
EN 14351-1	4.2	Resistance to wind load	npd			
	4.5	Watertightness	npd			
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.			
	4.8	Load-bearing capacity of safety devices	npd			
	4.11	Acoustic performance	Glass: 50 (-3;-8)	Window: 44 (-1;-4)	[0960] – 12.1064-1	BxH = 1222x1472
	4.12	Thermal transmittance	U _w to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the U _f -value tables. U _f -values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.			
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass			
	4.14	Air permeability	npd			
Non-essential characteristics						
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4		
	4.7	Impact resistance	npd			
	4.16	Operating forces	npd			
	4.17	Mechanical strength	npd			
	4.18	Ventilation	npd			
	4.19	Bullet resistance (BP version)	npd			
	4.20	Explosion resistance	npd			
	4.21	Resistance to repeated opening and closing	npd			
	4.22	Behaviour between different climates	npd			
	4.23	Burglar resistance (AP version)	WK2 / RC2	[0960] – SKG.0837.0285.04	See report	

5.8 Pivot Window



Characteristic		Performance	Notified body - Report	Limits (mm)	
Essential characteristics					
EN 14351-1	4.2	Resistance to wind load	C4 (1600 Pa)	[1488] – 00948-14-R73NK	FbxFh < 1400x1600 ^(*)
	4.5	Watertightness	9A (600 Pa)	[1488] – 00948-14-R73NK	FbxFh < 1400x1600 ^(*)
	4.6	Dangerous substances	In the materials delivered by Reynaers, no dangerous substances as indicated in hEN 14351-1 are used.		
	4.8	Load-bearing capacity of safety devices	npd		
	4.11	Acoustic performance	npd (See 6)		
	4.12	Thermal transmittance	U _w to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the U _f -value tables. U _f -values are calculated under certification of BCCA: certificate BPCB-420-72-10077/2.		
	4.13	Radiation properties	These properties must be evaluated by the CE-label of the glass		
	4.14	Air permeability	4	[1488] – 00948-14-R73NK	FbxFh < 1400x1600 ^(*)
Non-essential characteristics					
EN 14351-1	4.4.1	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E	EC decision 96/603/EC certificate P155748 [0432] – 230006500-4	
	4.7	Impact resistance	npd		
	4.16	Operating forces	npd		
	4.17	Mechanical strength	npd		
	4.18	Ventilation	npd		
	4.19	Bullet resistance (BP version)	npd		
	4.20	Explosion resistance	npd		
	4.21	Resistance to repeated opening and closing	npd		
	4.22	Behaviour between different climates	npd		
	4.23	Burglar resistance (AP version)	npd		

^(*) Horizontal Pivot Window

6 INFORMATION ACOUSTIC PERFORMANCE

6.1 Window Rw (C;Ctr) declaration based on tabulated values

According to annex B of EN 14351-1, when no test results are available, the determination of the acoustic performances can be done as follows:

a) IGU Rw → Window Rw

IGU Rw (dB)	Window Rw (dB)	Required seals
27	30	1
28	31	1
29	32	1
30	33	1
32	34	1
34	35	1
36	36	2
38	37	2
40	38	2

b) IGU Rw+Ctr → Window Rw+Ctr

IGU Rw+Ctr (dB)	Window Rw+Ctr (dB)	Required seals
24	26	1
25	27	1
26	28	1
27	29	1
28	30	1
30	31	1
32	32	2
34	33	2
36	34	2

c) C = -1 dB

d) $Ctr = (Window\ Rw+Ctr) - (Window\ Rw)$

⇒ CE marking Window: Rw (C;Ctr) based on steps a), c) and d)

Example:

IGU Rw = 34 (-1;-4)

→ Window Rw = 35 dB

→ IGU Rw+Ctr = 30 dB → Window Rw+Ctr = 31 dB

→ C = -1 dB

→ Ctr = 31 dB – 35 dB = -4 dB

► CE marking Window: 35 dB (-1;-4), valid for window size 1,23 x 1,48 m

6.2 Extrapolation rules for different window sizes

For windows with other dimensions, the extrapolation rules for test results and tabulated values are indicated in following table:

Window size range		Sound insulation value for window
Test results for test specimen of any size (see 5)	Tabulated values (see 6.1)	
-100% to +50% of test specimen overall area	overall area $\leq 2,7 \text{ m}^2$	Rw and Rw+Ctr are correct
+50% to +100% of test specimen overall area	$2,7 \text{ m}^2 < \text{overall area} \leq 3,6 \text{ m}^2$	Correct Rw and Rw+Ctr with -1 dB
+100% to +150% of test specimen overall area	$3,6 \text{ m}^2 < \text{overall area} \leq 4,6 \text{ m}^2$	Correct Rw and Rw+Ctr with -2 dB
> +150% of test specimen overall area	$4,6 \text{ m}^2 < \text{overall area}$	Correct Rw and Rw+Ctr with -3 dB