

CS 77 Windows

PRODUCT PASS

Date: **18-01-2024**

Language: **English**



Together for better
www.reynaers.com

1 GENERAL EXPLANATION

The performances indicated in this product pass can be used for a Declaration of Performance (DoP) in accordance with EU Regulation no. 305/2011. The characteristics are in accordance with the harmonized product standard EN 14351-1:2006+A2:2016 (Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets).

At least one performance of an essential characteristic shall be mentioned on the DoP. Non-essential characteristics are not legally required in any European country and thus not mandatory to declare. Where no performance is declared "NPD" (No Performance Declared) can be used.

The performances indicated can be achieved for the configuration and dimensions as tested and when the product is fabricated in accordance with the instructions of Reynaers (system catalogue). It is obviously allowed to declare lower performances; e.g. when resistance to wind load of 1600 Pa was tested, also 1200 Pa can be declared for the same configuration and dimensions.

Higher performances for smaller dimensions, lower performances for larger dimensions, or similar performances for larger dimensions but with the appropriate selection of profiles and/or reinforcements are possible. Validate your performances and deflections, adhering to the maximum admissible dimensions indicated in the system catalogue.

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 | WINTech 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 |

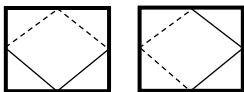
3 VARIANTS

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 | |
| 5.8 | |
| 5.9 | |

| Pivot Window | |
|--------------|---|
| 5.10 |  |

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

⁽¹⁾ Because of the same profile design, characteristics are based on test results for CS68

⁽²⁾ Valid for a fixed window

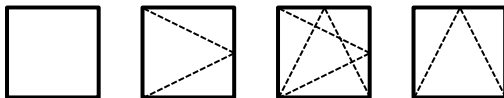
⁽³⁾ Deflection to be calculated in function of wind load and allowable deformation.

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

⁽⁵⁾ For dimensions of the opening parts: see relevant section for the opening elements.

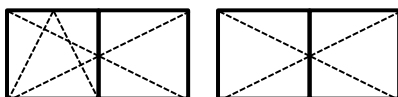
5 PERFORMANCE

5.1 Inward opening



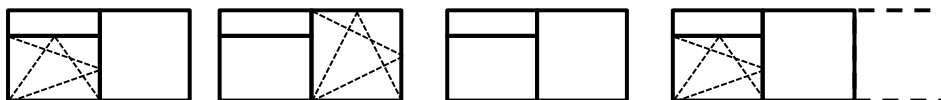
| Characteristic | | | Performance | | Notified body - Report | | Tested size [mm] | |
|-------------------------------|-------|--|--|--|--|--|---|--|
| Essential characteristics | | | | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C4 (1600 Pa) C5 (2000 Pa) | | [0960] – 17.00889 Rev A [2211] - CXL 099/17 | | 1200x2800 1300x1755 ⁽⁴⁾ | |
| | 4.5 | Watertightness | E750 (750 Pa) E1200 (1200 Pa) | | [0960] – 17.00889 Rev A [2211] - CXL 099/17 | | 1200x2800 1300x1755 | |
| | 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 | | 0960] – 20.00012 rev A | | 1200x2800 | |
| | 4.11 | Acoustic performance | Glass: 34 (-1;-4) 42 (-1;-5) 50 (-2;-8) 40 (-1;-3) 45 (-2;-6) 47 (-1;-4) 49 (-2;-7) 52 (-1;-5) | Window: 36 (-1;-4) 40 (-2;-4) 42 (-2;-4) 38 (-1;-3) 43 (-2;-5) 44 (-1;-2) 45 (-1;-4) 46 (0;-2) | [1136] – AC 3724 [1136] – AC 3725 [1136] – AC 3726 [0960] – 17.01314 ⁽²⁾ [0960] – 17.01315 ⁽²⁾ [0960] – 17.01318 ⁽²⁾ [0960] – 17.01317 ⁽²⁾ [0960] – 17.01316 ⁽²⁾ | | 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] – 17.00889 Rev A [2211] - CXL 099/17 | | 1200x2800 1300x1755 | |
| Non-essential characteristics | | | | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | | | |
| | 4.7 | Impact resistance | npd | | | | | |
| | 4.16 | Operating forces | 1 | | [0960] – 10.135 ⁽¹⁾ 0960] – 20.00012 rev A | | 1401x2396, 110 kg 1200x2800, 101 kg | |
| | 4.17 | Mechanical strength | 4 | | [0960] – 10.135 ⁽¹⁾ 0960] – 20.00012 rev A | | 1401x2396, 110 kg 1200x2800, 101 kg | |
| | 4.18 | Ventilation | npd | | | | | |
| | 4.19 | Bullet resistance (BP version) | FB4 (NS) FB6 (S) FB6 (NS) FSG (S) | | [1749] – 05BP735 [1749] – 05BP2217 [1749] – 05BP2214 [1749] – 05BP2224 | | Remark: classes S or NS depending on ammunition | |
| | 4.20 | Explosion resistance | npd | | | | | |
| | 4.21 | Resistance to repeated opening and closing | 3 (20 000) | | [0960] – 10.135 ⁽¹⁾ 0960] – 20.00012 rev A | | 1401x2396, 110 kg 1200x2800, 101 kg | |
| | 4.22 | Behaviour between different climates | npd | | | | | |
| | 4.23 | Burglar resistance (AP version) | RC2 RC3 | | [0960] – SKGIKOB.0837.0285.06 [1136] - CAR 12056 | | See report | |

5.2 Inward opening



| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|--------------------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C3 (1200 Pa) C4 (1600 Pa) | [0960] – 10.186 [0960] – 23.00436 | 1125x2258 1061x2131 |
| | 4.5 | Watertightness | 9A (600 Pa) | [0960] – 10.186 [0960] – 23.00436 | 1125x2258 1061x2131 |
| | 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 | 0960] – 20.00012 rev A | 1200x2800 |
| | 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 | [0960] – 10.186 [0960] – 23.00436 | 1125x2258 1061x2131 |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 4.7 | Impact resistance | npd | | |
| | 4.16 | Operating forces | 1 | [0960] – 09.1067 [0960] – 10.135 ⁽¹⁾ | 1125x2258 1401x2396, 110 kg |
| | 4.17 | Mechanical strength | 4 | [0960] – 09.1067 [0960] – 10.135 ⁽¹⁾ | 1125x2258 1401x2396, 110 kg |
| | 4.18 | Ventilation | npd | | |
| | 4.19 | Bullet resistance (BP version) | npd | | |
| | 4.20 | Explosion resistance | npd | | |
| | 4.21 | Resistance to repeated opening and closing | 2 (10 000) 3 (20 000) | [0960] – 09.1067 [0960] – 10.135 ⁽¹⁾ | 1125x2258 1401x2396, 110 kg |
| | 4.22 | Behaviour between different climates | npd | | |
| | 4.23 | Burglar resistance (AP version) | RC2 | [0960] – SKGIKOB.0837.0285.06 | See report |

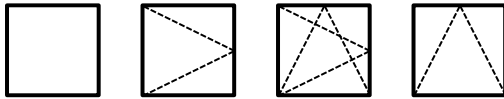
5.3 Inward opening



| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C4 (1600 Pa) ⁽³⁾ | [1488] – NL-0766/C/LL-219/K/08/1a | (4) (5) |
| | 4.5 | Watertightness | 9A (600 Pa) | [1488] – NL-0766/C/LL-219/K/08/1a ^(*) | (5) |
| | 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] – NL-0766/C/LL-219/K/08/1a ^(*) | (5) |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 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) | RC2 | [0960] – SKGIKOB.0837.0285.06 | See report |

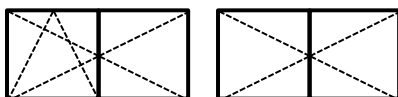
(*) Test report proves the watertightness and air permeability of a T-connection.

5.4 Inward opening Hidden Vent



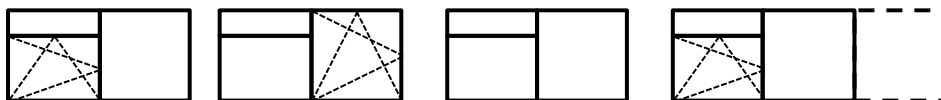
| Characteristic | | | Performance | | Notified body - Report | Tested size [mm] | |
|-------------------------------|-------|--|--|---|---|---|--|
| Essential characteristics | | | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C3/B4 (1200/1600Pa) C4 (1600 Pa) C4 (1600 Pa) | | [1488] – LK-02344/09/3 [1488] – LK-02344/09/4 [1488] – NL-0766/C/LL-219/K/08/2a | 1250x1600 ⁽⁴⁾ 1008x1800 ⁽⁴⁾ 888x1758 ⁽⁴⁾ | |
| | 4.5 | Watertightness | 9A (600 Pa) 9A (600 Pa) E750 (750 Pa) | | [1488] – LK-02344/09/3 [1488] – LK-02344/09/4 [1488] – NL-0766/C/LL-219/K/08/2a | 1250x1600 1008x1800 888x1758 | |
| | 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 | | [1488] – LK-02344/09/3 [0960] – 09.1157 | 1250x1600 982x2283 | |
| | 4.11 | Acoustic performance | Glass: 34 (-1;-4) 41 (-2;-4) 48 (-2;-8) 51 (-1;-4) | Window: 34 (-1;-4) 39 (-1;-4) 47 (-3;-8) 46 (-1;-4) | [1488] – LA/1482_d1/07 [1488] – LA/1482_d2/07 [1488] – LA/1482_d3/07 [0757] – 14-002142-PR01 | 1230x1480 | |
| | 4.12 | Thermal transmittance | Uw to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the Uf-value tables. 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-02344/09/3 [1488] – LK-02344/09/4 [1488] – NL-0766/C/LL-219/K/08/2a | 1250x1600 1008x1800 888x1758 | |
| Non-essential characteristics | | | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | | |
| | 4.7 | Impact resistance | npd | | | | |
| | 4.16 | Operating forces | 1 | | [1488] – LK-02344/09/3 [0960] – 09.1157 | 1250x1600 982x2283, 108kg | |
| | 4.17 | Mechanical strength | 4 | | [1488] – LK-02344/09/3 [0960] – 09.1157 | 1250x1600 982x2283, 108kg | |
| | 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] – 09.1157 | 982x2283, 108kg | |
| | 4.22 | Behaviour between different climates | npd | | | | |
| | 4.23 | Burglar resistance (AP version) | RC2 | | [0960] – SKGIKOB.0837.0285.06 | See report | |

5.5 Inward opening Hidden Vent



| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|-----------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C4 (1600 Pa) | [1488] – NL-0766/C/LL-219/K/08/2a | 888x1758 |
| | 4.5 | Watertightness | E750 (750 Pa) | [1488] – NL-0766/C/LL-219/K/08/2a | 888x1758 |
| | 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-02344/09/3 [0960] – 09.1157 | 1250x1600 982x2283 |
| | 4.11 | Acoustic performance | npd | | |
| | 4.12 | Thermal transmittance | Uw to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the Uf-value tables. 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] – NL-0766/C/LL-219/K/08/2a | 888x1758 |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 4.7 | Impact resistance | npd | | |
| | 4.16 | Operating forces | 1 | [0960] – 09.1157 | 982x2283, 108kg |
| | 4.17 | Mechanical strength | 4 | [0960] – 09.1157 | 982x2283, 108kg |
| | 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] – 09.1157 | 982x2283, 108kg |
| | 4.22 | Behaviour between different climates | npd | | |
| | 4.23 | Burglar resistance (AP version) | RC2 | [0960] – SKGIKOB.0837.0285.06 | See report |

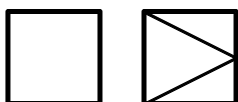
5.6 Inward opening Hidden Vent



| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C3/B4 (1200/1600 Pa) (3) | [1488] - LK-02344/09/3 | (4) (5) |
| | 4.5 | Watertightness | 9A (600Pa) | [1488] - LK-02344/09/3 (*) | (5) |
| | 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-02344/09/3 (*) | (5) |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 4.7 | Impact resistance | Npd | | |
| | 4.16 | Operating forces | 1 | [1488] - LK-02344/09/3 | (5) |
| | 4.17 | Mechanical strength | 4 | [1488] - LK-02344/09/3 | (5) |
| | 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) | RC2 | [0960] – SKGIKOB.0837.0285.06 | See report |

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

5.7 Outward opening



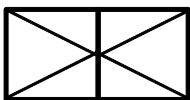
| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | npd | | |
| | 4.5 | Watertightness | E1050 (1050 Pa) | TCD03_004 ⁽¹⁾ | 698x1098 |
| | 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 | 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 | TCD03_004 ⁽¹⁾ | 698x1098 |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 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) | RC2 | [0960] – SKGIKOB.0837.0285.06 | See report |

5.8 Outward opening



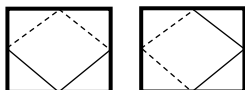
| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|------------------|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C5 (2000 Pa) | [1488] - LZE00-00948/18/R146NZE | 1000x1700 |
| | 4.5 | Watertightness | 9A (600 Pa) | [1488] - LZE00-00948/18/R146NZE | 1000x1700 |
| | 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 | 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] - LZE00-00948/18/R146NZE | 1000x1700 |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 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 | | |

5.9 Outward opening



| Characteristic | | Performance | Notified body - Report | Tested size [mm] |
|--------------------------------------|-------|--|--|---|
| Essential characteristics | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | npd | |
| | 4.5 | Watertightness | E1050 (1050 Pa) | TCD03_004 ⁽¹⁾ 698x1098 |
| | 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 | |
| | 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 | TCD03_004 ⁽¹⁾ 698x1098 |
| Non-essential characteristics | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 |
| | 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) | RC2 | [0960] – SKGIKOB.0837.0285.06 See report |

5.10 Pivot Window



| Characteristic | | | Performance | Notified body - Report | Tested size [mm] |
|-------------------------------|-------|--|--|---|--|
| Essential characteristics | | | | | |
| EN 14351-1 | 4.2 | Resistance to wind load | C4 (1600 Pa) | [1488] – 00948-14-R79NK [0960] – 03.154 | 2200x2000 ^(*) 1490x1640 ^(*) |
| | 4.5 | Watertightness | 9A (600 Pa) | [1488] – 00948-14-R79NK [0960] – 03.154 | 2200x2000 ^(*) 1490x1640 ^(*) |
| | 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 | Uw to be calculated in function of the project. Pre-calculated U-values for dimensions 1230x1480mm and 1480x2180 can be found in the Uf-value tables. 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] – 00948-14-R79NK [0960] – 03.154 | 2200x2000 ^(*) 1490x1640 ^(*) |
| Non-essential characteristics | | | | | |
| EN 14351-1 | 4.4.1 | Reaction to fire | Anodized: A1 Painted: A2 Gaskets: E | EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6 | |
| | 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 | | |

(*) Vertical 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 |

UPDATES

22/4/2022

| | VARIANTS | Characteristic |
|---------------------------------------|----------------|--------------------------|
| THW Variant | 5.8 | |
| 20.00012 rev A | 5.1 + 5.2 | 4.8 - 4.16 - 4.17 – 4.21 |
| ES-210614a, ES-210722b, ES-210722a | 5.1 | 4.19 |
| SKGIKOB.0837.0285.06 | 5.1 ~5.7 + 5.6 | 4.23 |
| CAR 12056 | 5.1 | 4.23 |
| 20.00776.1 | 5.10 | 4.23 |
| EFR-21-001664A | 5.1 ~ 5.10 | 4.4.1 |

18/1/2023

| | VARIANTS | Characteristic |
|------------|----------|----------------|
| 20.00776.1 | 5.10 | 4.23 |

31/07/2023

| | VARIANTS | Characteristic |
|----------|----------|------------------|
| 23.00436 | 5.2 | 4.2 – 4.5 – 4.14 |

18/09/2023

| | VARIANTS | Characteristic |
|--|----------|----------------|
| 05BP735, 05BP2214, 05BP2217, 05BP2224 | 5.1 | 4.19 |

18/01/2024

| | VARIANTS | Characteristic |
|------------------|------------------------|----------------|
| Text revision | GENERAL EXPLANATION | |
| Tested size [mm] | 5.1 – 5.10 | |