



European Technical Assessment **ETA 06/0143** of 14/12/2015

I General Part

Technical Assessment Body issuing the ETA	VTT Expert Services LTD
Trade name of the construction product	Cover – Frameless balcony and terrace glazing system
Product family to which the construction product belongs	Balcony (and terrace) glazing system without vertical frames
Manufacturer	CoverGlobal Ltd. Yrittäjätie 16 B 4 FIN 01800 Klaukkala
Manufacturing plant	CoverGlobal Ltd. Yrittäjätie 16 B 4 FIN 01800 Klaukkala
This European Technical Assessment contains	10 pages including 1 Annex which form an integral part of this assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document EAD 020002-00-0404, edition September 2015.
This ETA replaces	ETA 06/0143 issued on August 24, 2006

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II Specific Part

1 Technical description of the product

The balcony and terrace glazing system consist of polyester powder painted or anodised horizontal aluminium profiles, stainless steel hinges, plastic rollers, toughened glass panes and sealing strips. The system has no vertical frames. The system may also include external sills if requested. Description of components and their types is in Annex 1.

When the system is used as balcony glazing, it is fixed to balcony railing and roof. When the system is used in terraces it is fastened to floor and roof constructions. Glass panes are fastened into aluminium glazing bead with rivets and adhesive. Glass units can one by one be glided laterally and turned inwards so that the balcony front is free from glazing. Installation guide by the manufacturer gives instructions and restrictions regarding the number of glass units which can be in open position besides each other, and also gives guidance of additional reinforcement in case of excessive loads.

Glass pane width (without glazing bead) is 958 mm or less. Thickness of the glass panes is chosen to be 6, 8 or 10 mm depending on the glass pane size and wind load resistance requirements. The maximum height of 8 mm glass for wind load class 3 is about 2500 mm. The maximum height of 10 mm glass for wind load class 2 is about 3200 mm.

Fastening screws or anchors for assembly of the system into balcony parapet or railing and roof construction are defined in the installation instructions but are not covered by this ETA. Balcony railings are not covered by this ETA.

2 Specification of the intended uses in accordance with the applicable EAD

Intended uses

The balcony glazing is used to protect balcony or terrace interior from rain, snow, wind and dirt. The glazed balcony is not warm or half warm space. It is not totally water tight or air tight.

The system can be fastened into concrete, brick, steel, aluminium or timber substrates.

The system is not intended to act as barrier against falling. In case of risk of falling, a separate barrier is needed that shall fulfil local requirements concerning safety.

Working life and durability

The provisions made in this ETA are based on an assumed working life of the balcony glazing system of 25 years¹.

¹ This means that it is expected that when this working life has elapsed, the real working life may be, in normal use conditions, considerably longer without major degradation affecting the essential requirements of the works. The indications given as to the working life of a Cover – Frameless balcony and terrace glazing system cannot be interpreted as a guarantee given by the producer or the assessment body. They should only be regarded as a means for the specifiers to choose the appropriate criteria for balcony glazing systems in relation to the expected, economically reasonable working life of the works.

Design

Glass pane thickness and pane sizes are chosen case by case based on structural design calculations made by the manufacturer who has design tables or software for the purpose. In the design, local regulations concerning wind pressure and safety shall be taken into account. This European technical assessment is based on the assumption that the design has been made correctly according to the regulations valid on the building site.

Execution of construction works

The completed building (the works) shall comply with the building regulations (regulations on the works) applicable in the Member States in which the building is to be constructed. The procedures foreseen in the Member State for demonstrating compliance with the building regulations shall also be followed by the entity held responsible for this act. An ETA for a balcony glazing system does not concern this process in any way.

3 Performance of the product and references to the methods used for its assessment

Table 1. Basic requirements for construction works and essential characteristics

Basic requirement and essential characteristics	Performance
BWR 3. Hygiene, health and the environment	
Content, emission and/or release of dangerous substances	Clause 3.1
Ventilation and dampness	Clause 3.1
BWR 4. Safety and accessibility in use	
Resistance to wind load	Clause 3.2
Impact resistance	Clause 3.2
Properties of glass panes and other parts	Clause 3.2
<ul style="list-style-type: none">• Corrosion resistance	
<ul style="list-style-type: none">• Resistance to racking	
<ul style="list-style-type: none">• Resistance to static torsion	
BWR 5. Protection against noise	No performance assessed

3.1 Hygiene, health and environment, BWR 3

Dangerous substances

According to the written declaration of the manufacturer, Cover balcony glazing system does not contain other harmful or dangerous substances listed in EOTA TR 34 dated May 2014.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

Ventilation and dampness

When the system is closed, the air vent slots between steering profile and glasspanels is about 2-3 mm (upper & lower) and between the adjacent glass panes 1-3 mm to ensure the sufficient ventilation of the balcony and prevent dampness or condensation.

3.2 Safety and accessibility in use, BWR 4

Resistance to wind load

Glass pane thickness and pane size are chosen case by case based on structural design calculations made by the manufacturer. Results of the tested samples are given below.

Maximum height of the system	width of glass units mm	Thickness of glass pane mm	Test pressure ¹ Pa	Relative frontal deflection	
				negative pressure	positive pressure
2173	485	6	1200	0,04	0,04
2495	950/750/570	8	1200	0,05	0,04
2477	748	8	1200	0,04	0,04
3182	958	10	800	0,04	0,03
3200	958	10	800	0,04	0,04

¹ Pressure value P1, EN 12211, defined by the manufacturer

Impact resistance

The classification of the impact resistance of Cover – Frameless balcony and terrace glazing system is following:

6 mm thick glass, Class 1 (drop height 200 mm).

8 and 10 mm thick glasses, Class 1 (drop height 200 mm) and Class 3 (drop height 450 mm).

The glasses are classified in accordance with EN 13049.

Properties of glass panes and other parts

UV-radiation resistance

Changes of dimensions in tests were between -0,8 % - +1,0% and changes in the weight - 0,3 - +4,2%. The plastic parts of the glazing system did not show visually any changes on the appearance.

Corrosion resistance

The metallic components have at least the moderate corrosion resistance in mild environments.

Resistance to racking

Cover – Frameless balcony and terrace glazing system 8 mm (height of system 2495 mm, width of the glass 950 mm) and 10 mm (height of system 3200 mm, width of the glass 958 mm) resists racking load of 250 N.

Determination of resistance to racking of an open glass pane expressed as any change in function after the tests. No maximum or residual deformations were determined according to EN 14608.

Resistance to static torsion

Cover – Frameless balcony and terrace glazing system 8 mm (height of system 2495 mm, width of the glass 950 mm) and 10 mm (height of system 3200 mm, width of the glass 958 mm) resists static torsion of 200 N.

Determination of resistance to static torsion of an open glass pane expressed as any change in function after the test.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

For the products covered by this ETA the applicable European legal act is: Decision 96/580/EC

The system to be applied is: 3

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at VTT Expert Services Ltd.

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by VTT Expert Services Ltd



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Table1. Main components of the balcony glazing system

Component	Specification	Remarks
Aluminium profiles and components EN AW 6060 / EN AW 6063	EN 755, EN 573-3, EN 515 EN 577-9	Certificate of compliance with the order
<ul style="list-style-type: none"> • anodised or • polyester powder coated 	EN ISO 2360, EN ISO 12373-1 EN ISO 2360, EN ISO 2409 CoverGlobal Specification No 1	
Glass	EN 572-2, EN 12150-1, EN 12600, EN 1096 -1	Certificate of compliance with the order
<ul style="list-style-type: none"> • thermally toughened float glass 	CoverGlobal Specification No 2	
Hinges and sliding parts	Grades 303, 304 or 306	Property data sheets by the raw material/ product producer
Screws and nuts	CoverGlobal Specification No 3	
Lock		
Plastic parts	CoverGlobal Specifications No 4, 5, 6, 7 and 8	Property data sheets by the raw material producer
- Wheels, POM		
- Spinning part, POM		
- Regulation module, PA 6 + GF 30 %		
- Wheel guide, PA 6 + GF 30 %		
- Handles, PA 6		
- Ventilation device, PA 6 and PA 6,6		
- Corner support, PA 6		
- Opening hole clip, PP		
Seals	CoverGlobal Specification No 9	Can be changed
<ul style="list-style-type: none"> • PVC side sealing • Silicon sealing • PVC h-list • Brush sealing 		

Example pictures of the balcony glazing system structure

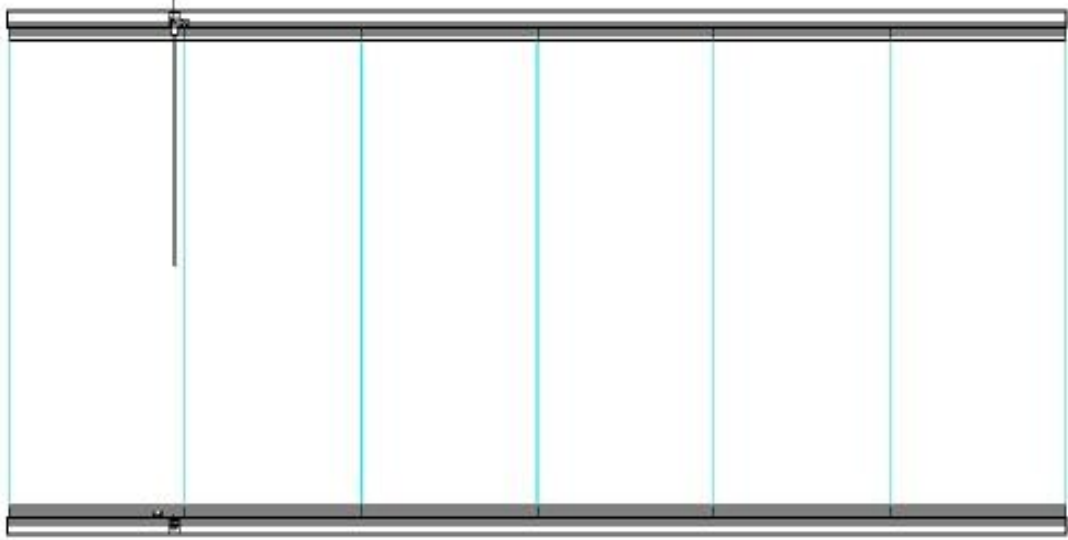


Figure 1. Glazing system as closed (facade)

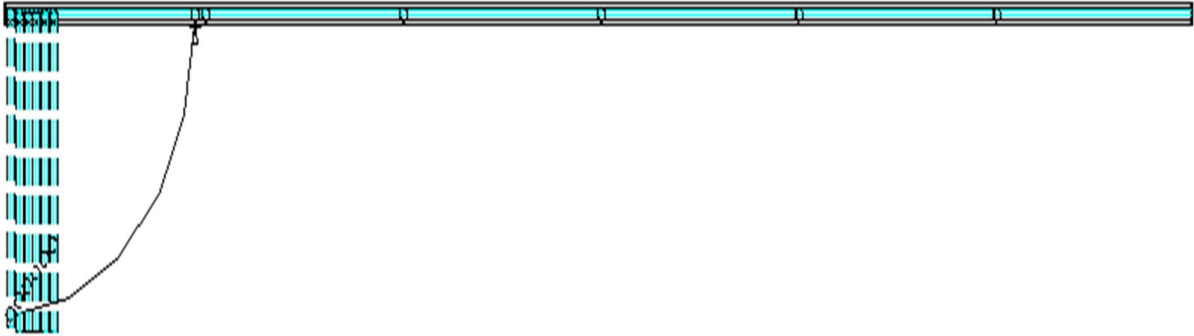


Figure 2. Glazing system as opened (plan)

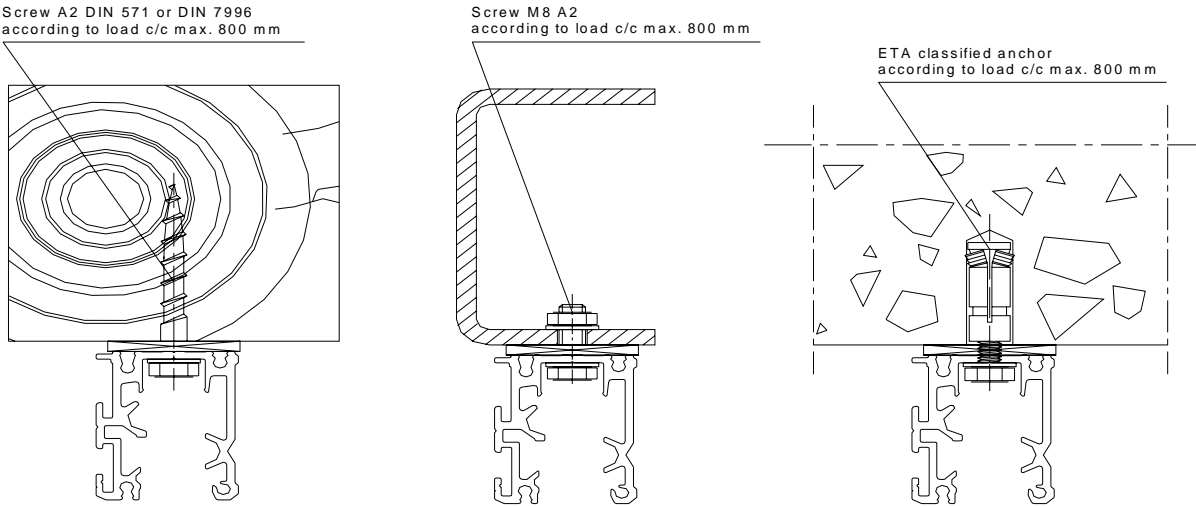


Figure 3. Examples of ways of installation of glazing system into frame or balcony roof

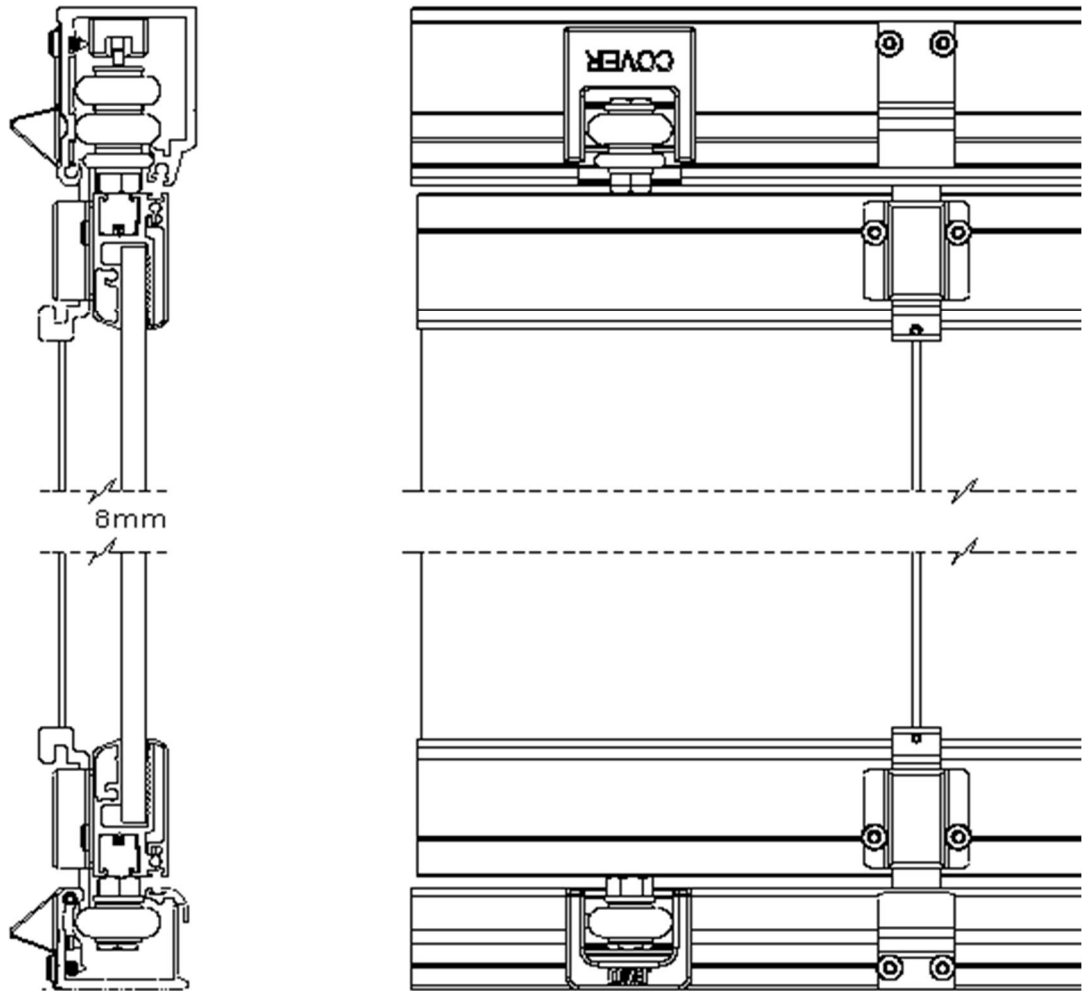


Figure 4. Detail of the locking device

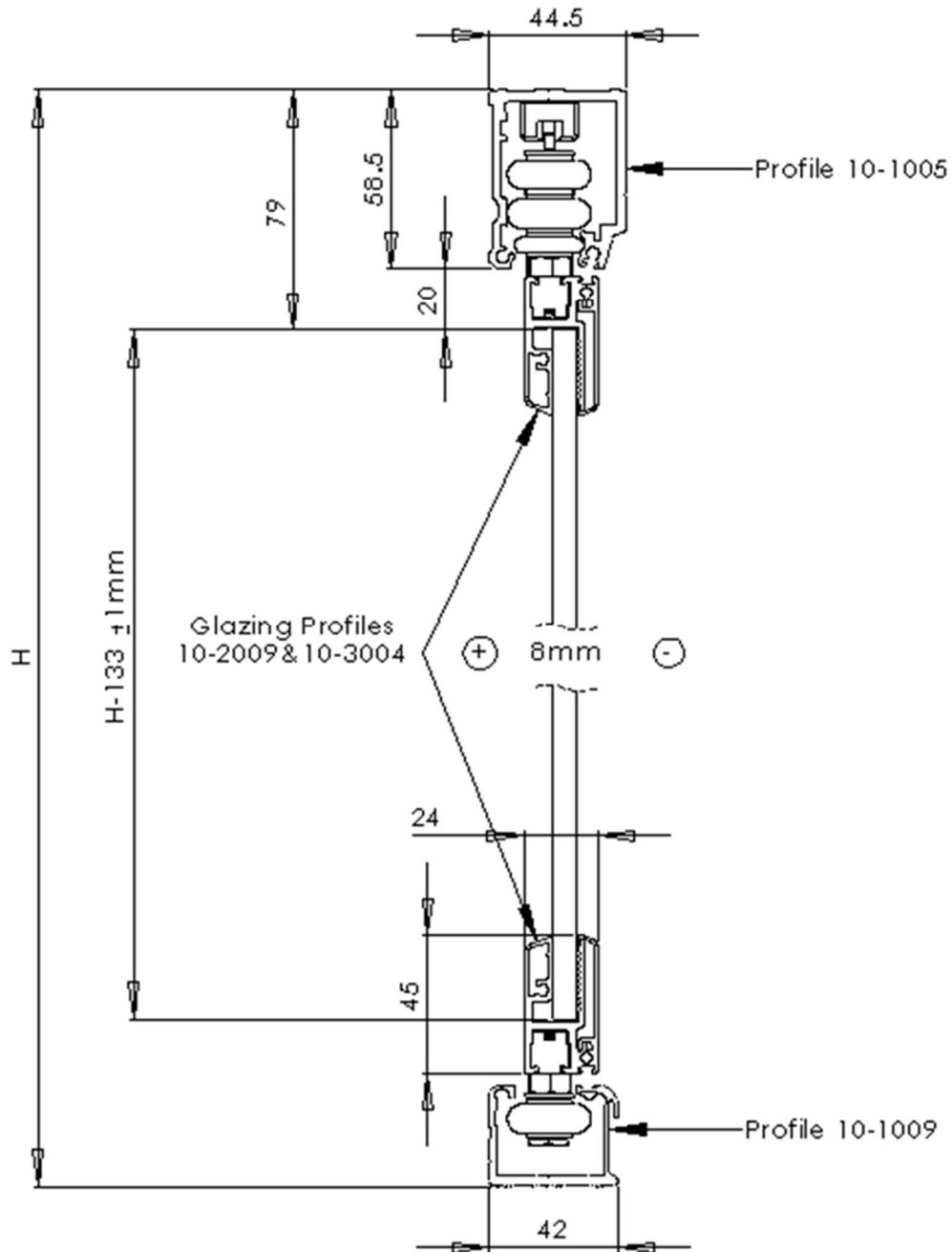


Figure 5. Basic section of the balcony glazing system