

TEST REPORT

Project Titel: Line Load Testing of OnLevel TL-6081 System
in Accordance with Scandinavian Rules

System: TL-6081

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Work Location: OnLevel GmbH

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1. Test method

The TL-6081 profile was bolt to the top of a concrete block, which was fixed to the floor of the test facility. The 1,0m length of the profile was bolted to the block at 250mm centers such that the Flex-Fit inlay was to the outside face of the glass (see Figure 1.) Mounting distance 312,5mm (3 pieces per meter).

The horizontal imposed line load was applied to the glass at different heights above the datum level of the floor. Glass 8/8/2 and glass 10/10/2, laminated tempered with PVB foil.

The deflection was measured at the top central point with the loading point.

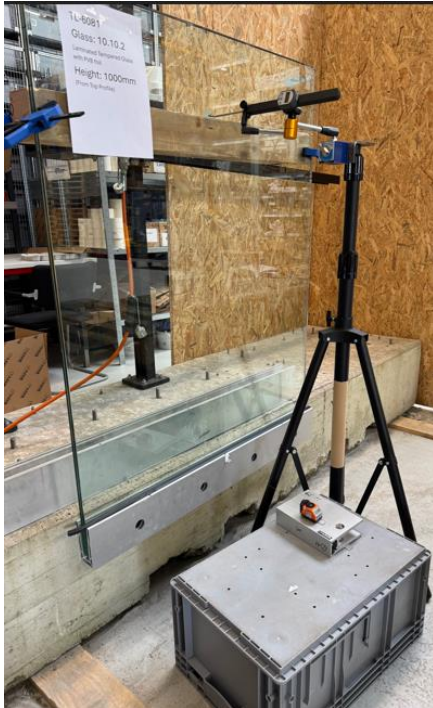
The load was applied via a hydraulic ram and the deflection measured with a digital dial indicator. All calibrated up to date.

2. Requirements

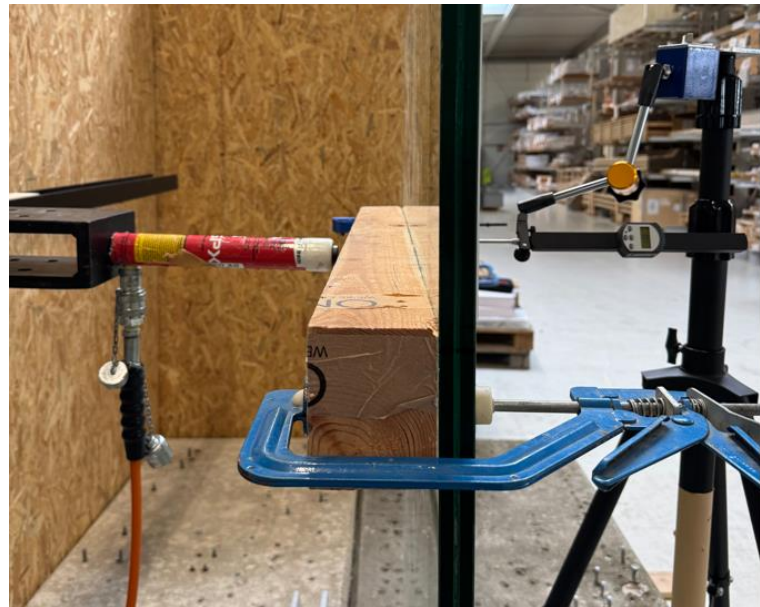
The test was carried out in accordance with the Scandinavian guidance. The maximum allowable deflection for a free-standing glass panel is in Denmark 25mm, in Sweden 30mm and in Norway 50mm.

The loads archived by the OnLevel glazing system tested under horizontal imposed line loads to the maximum deflection are given in the tables below.

3. Test arrangement



Test arrangement



Profile TL-6081



Hydraulic pressure gauge



Digital dial indicator
(accuracy 0,01mm)

REGULATION CODES:

DS-EN 1991-1-1

Denmark**ESSENTIAL BALUSTRADE RULES**

* No windloads!

Private	Public	BALUSTRADE HEIGHTS		DEFLECTION
0,5kN/m	1,0kN/m	Drop	Height	max. 25mm
			1000mm	
		Stairs/over ground floor	1200mm	

Table 1- Summary of Performance of OnLevel Balustade System
 Tested under Horizontal Imposed Line Load
 Line load height above concrete base-top of profile

Deflection results					
Profile	Height mm	Glass thickness	0,5kN	1,0kN	Working Line Load
6081	1000	16,76	14,3mm	38,2mm	0,5kN/m
6081	1000	20,76	9,8mm	20,3mm	1,0kN/m
6081	1100	16,76	17,5mm	46,6mm	0,5kN/m
6081	1100	20,76	10,9mm	25,0mm	1,0kN/m
6081	1200	16,76	22,5mm	53,7mm	0,5kN/m
6081	1200	20,76	12,7mm	29,8mm	0,5kN/m

Pendulum Test was carried out by the LGA Germany

See approval P-239902-LGA

Pendulum height = 700mm

REGULATION CODES:

SS-EN 1991-1-1

**Sweden****ESSENTIAL BALUSTRADE RULES**

* No windloads!

Private	Public	BALUSTRADE HEIGHTS		DEFLECTION
0,5kN/m	1,0kN/m	Drop	Height	max. 30mm
		interiur	900mm	
		3mtr. over ground and outside use	1100mm	

Table 1- Summary of Performance of OnLevel Balustade System
 Tested under Horizontal Imposed Line Load
 Line load height above concrete base-top of profile

Deflection results					
Profile	Height mm	Glass thickness	0,5kN	1,0kN	Working Line Load
6081	900	16,76	11,5mm	31,5mm	0,5kN/m
6081	900	20,76	8,5mm	14,8mm	1,0kN/m
6081	1000	16,76	14,3mm	38,2mm	0,5kN/m
6081	1000	20,76	9,8mm	20,3mm	1,0kN/m
6081	1100	16,76	17,5mm	46,6mm	0,5kN/m
6081	1100	20,76	10,9mm	25,0mm	1,0kN/m
6081	1200	16,76	22,5mm	53,7mm	0,5kN/m
6081	1200	20,76	12,7mm	29,8mm	1,0kN/m

Pendulum Test was carried out by the LGA Germany

See approval P-239902-LGA

Pendulum height = 700mm

REGULATION CODES:

NS-EN 1991-1-1

NS3510

Norway**ESSENTIAL BALUSTRADE RULES**

* No windloads!

Private interior	Private	Public	BALUSTRADE HEIGHTS		DEFLECTION
0,5kN	1,0kN	1,5kN	Drop	Height	max. 50mm
			0,5m-10m	1000mm	
			10m+	1200mm	

Table 1- Summary of Performance of OnLevel Balustade System

Tested under Horizontal Imposed Line Load

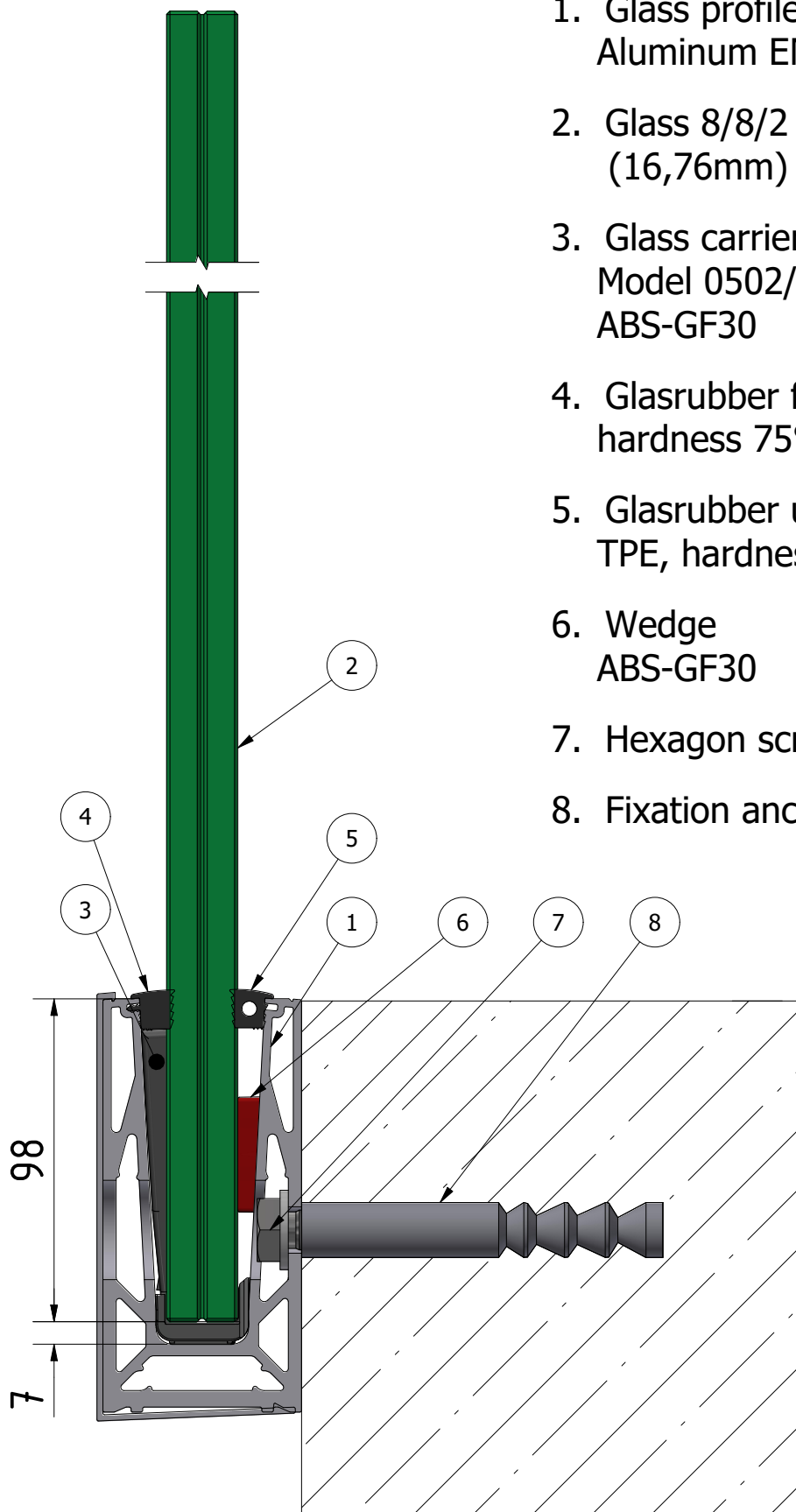
Line load height above concrete base-top of profile

Deflection results					
Profile	Height mm	Glass thickness	0,5kN	1,0kN	Working Line Load
6081	1000	16,76	14,3mm	38,2mm	1,0kN/m
6081	1000	20,76	9,8mm	20,3mm	1,0kN/m
6081	1100	16,76	17,5mm	46,6mm	1,0kN/m
6081	1100	20,76	10,9mm	25,0mm	1,0kN/m
6081	1200	16,76	22,5mm	53,7mm	0,5kN/m
6081	1200	20,76	12,7mm	29,8mm	1,0kN/m

Pendulum Test was carried out by the LGA Germany

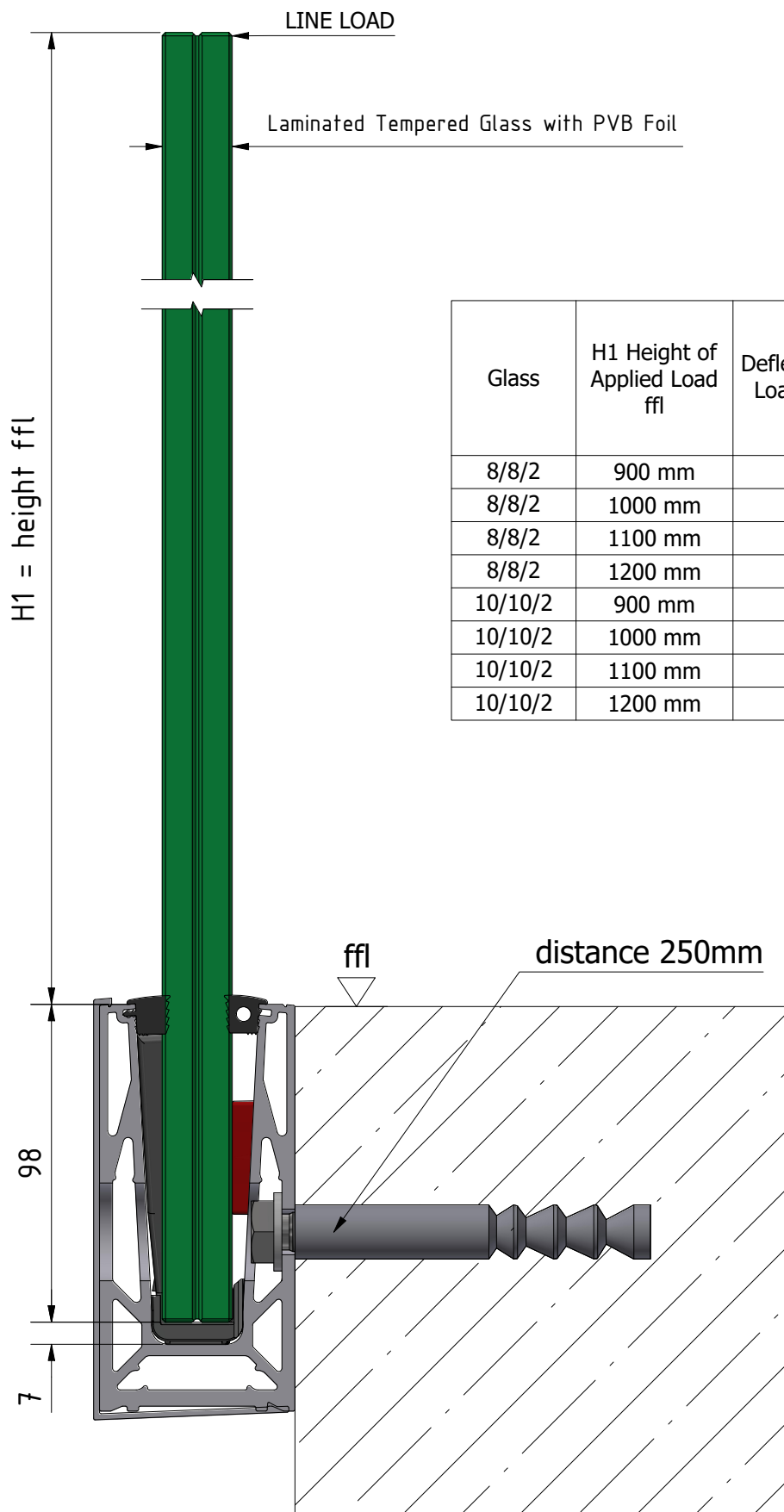
See approval P-239902-LGA

Pendulum height = 700mm



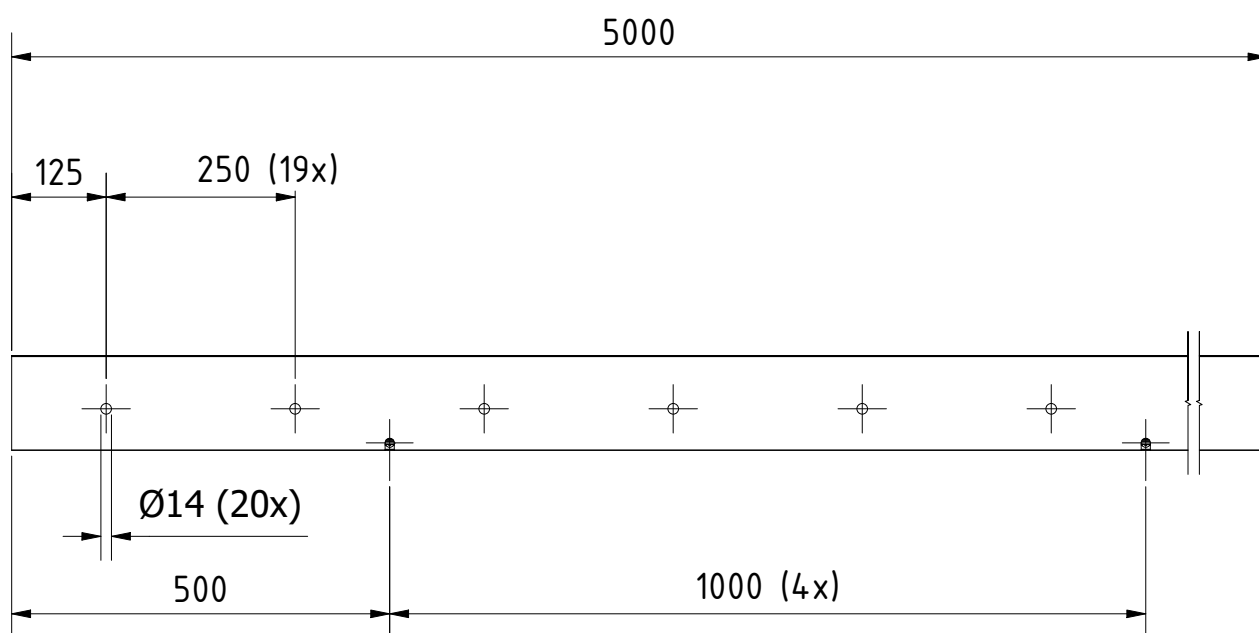
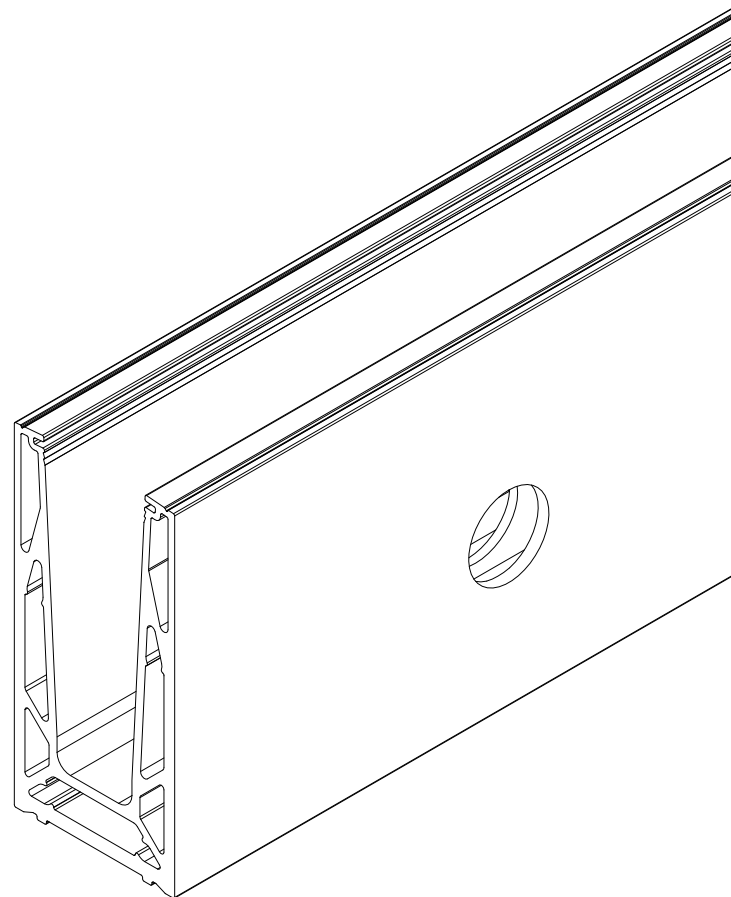
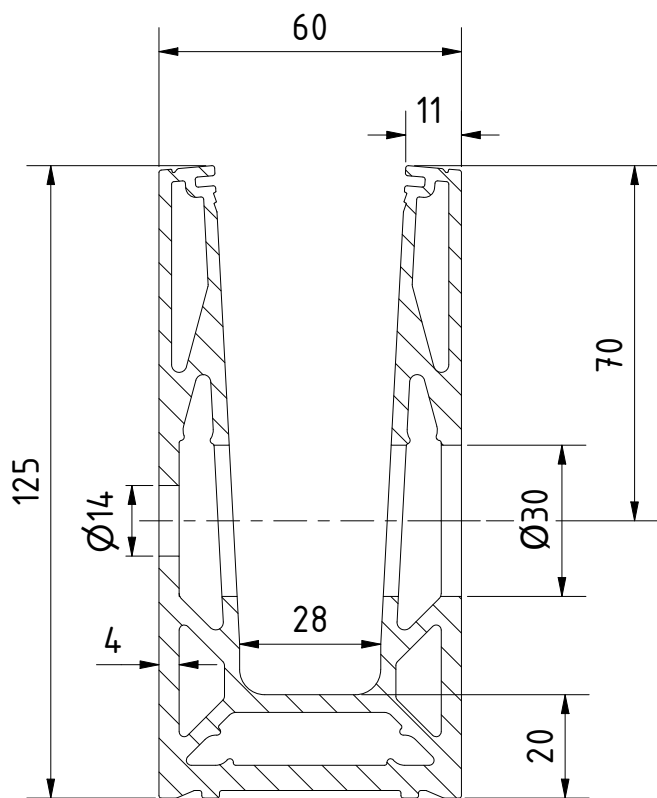
1. Glass profile TL-6081,side mount
Aluminum EN AW 6063-T6
2. Glass 8/8/2
(16,76mm) ,10/10/2 (20,76mm)
3. Glass carrier set
Model 0502/05058
ABS-GF30
4. Glasrubber falling side
hardness 75° shore A
5. Glasrubber user side
TPE, hardness 75° shore A
6. Wedge
ABS-GF30
7. Hexagon screw M12x40mm
8. Fixation anchor VMZ-IG 105 M12

Designed by FV	Created 05.12.2024	Modified	Comment	
		Description Detail: Figure 1		
		Article number TL-6081 (side mount)	Size A4	Scale 1:2



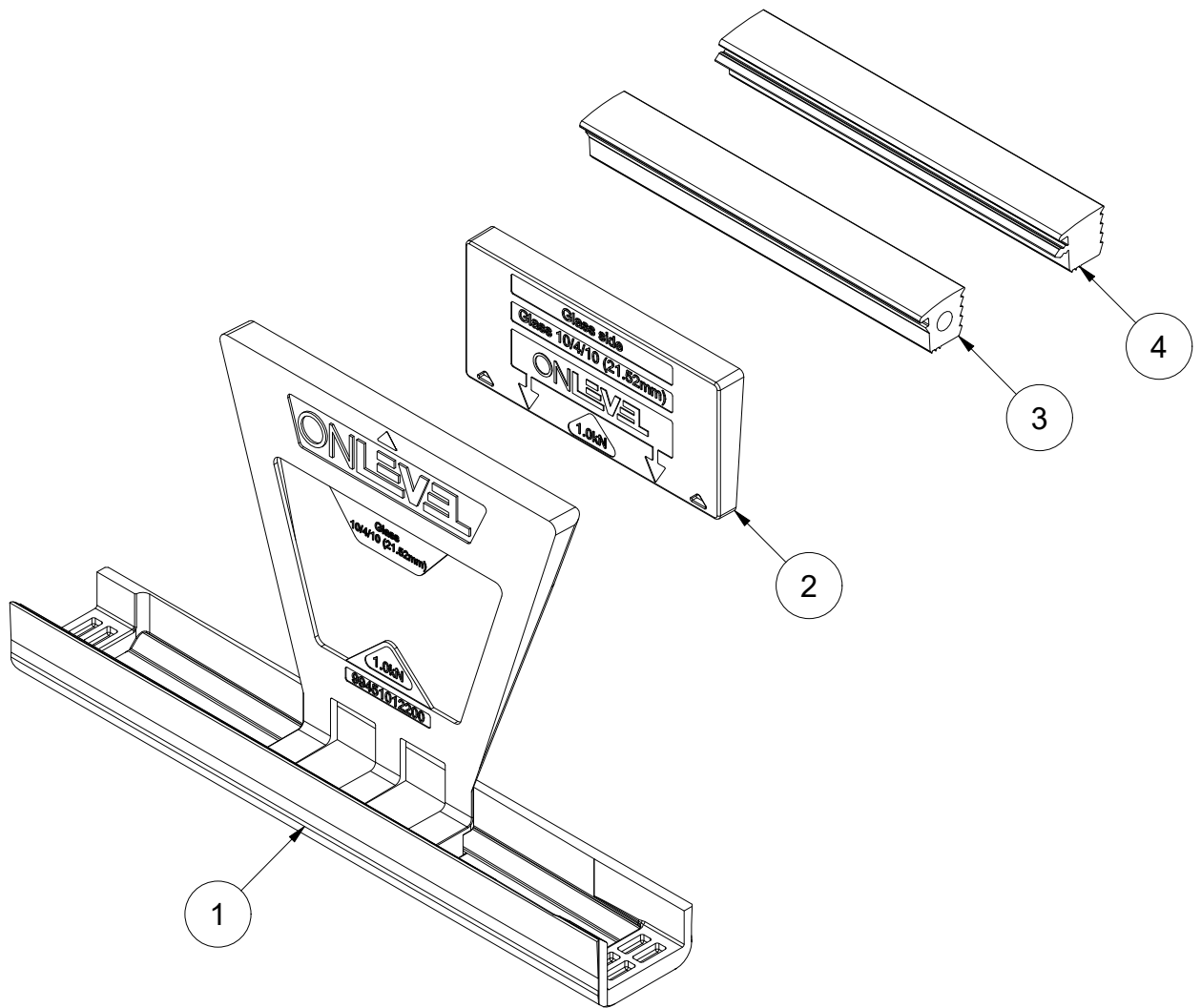
Glass	H1 Height of Applied Load ffl	Deflection at Line Load 0,5 kN/m	Deflection at Line Load 1,0 kN/m
8/8/2	900 mm	11,1mm	31,2mm
8/8/2	1000 mm	14,3mm	38,2mm
8/8/2	1100 mm	17,5mm	46,6mm
8/8/2	1200 mm	22,5mm	53,7mm
10/10/2	900 mm	8,4mm	15,2mm
10/10/2	1000 mm	9,8mm	20,3mm
10/10/2	1100 mm	10,9mm	25,0mm
10/10/2	1200 mm	12,7mm	29,8mm

Designed by FV	Created 05.12.2024	Modified	Comment
		Description Detail: Figure 2 (Line Load / Glass Heights)	
		Article number TL-6081 (side mount)	Size A4 Scale 1:2



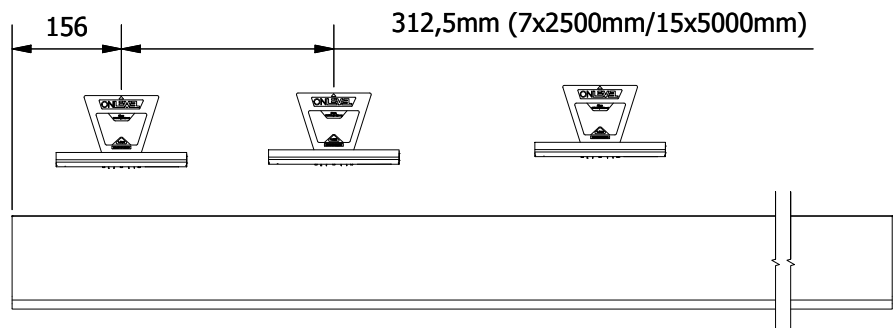
Material: Aluminium 6063-T6

Designed by FV	Created 05.12.2024	Modified	Comment	
		Description Profile TL-6081		
		Article number TL-6081 (side mount)	Size A4	Scale /



ITEM	QTY (L=2500mm)	QTY (L=5000mm)	DESCRIPTION
1	8	16	Flex-Fit 1.0kN carrier
2	8	16	Glass wedge 1.0kN
3	1 L=2500mm)	1 (L=5000mm)	Rubber userside 1.0kN
4	1 L=2500mm)	1 (L=5000mm)	Rubber fallingside 1.0kN

Distance Glass Carrier
/ Glass Wedges:



Designed by FV	Created 05.12.2024	Modified	Comment
		Description Flex-Fits sets (quantity and distance)	
		Article number TL-6081 (side mount)	Size A4 Scale /