

TEST REPORT

Project Titel: Line Load Testing of OnLevel TL-3080 System
in Accordance with Scandinavian Rules

System: TL-3080

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Author: Frank Verhey
Dipl.-Ing. (FH)
Technical Manager
OnLevel GmbH
Budberger Straße 5
46446 Emmerich am Rhein

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1. Test method

The TL-3080 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 375mm 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.

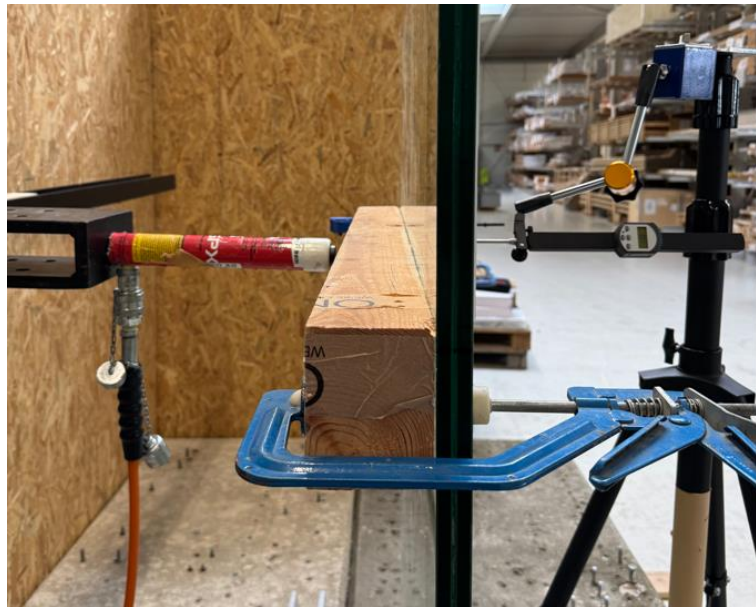
The load was applied via a hydraulic ram and the deflection measured with a digital dial indicator. All calibrated up to date.

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 Danmark 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-3080



Hydraulic pressure gauge



Digital dial indicator
(accuracy 0,01mm)

REGULATION CODES:

NS-EN 1991-1-1



NS3510

Norway**ESSENTIAL BALUSTRADE RULES**

* No windloads!

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

Table 1- Summary of Performance of OnLevel Balustrade 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
3080	1000	16,76	10,7mm	29,9mm	1,0kN/m
3080	1000	20,76	7,9mm	23,9mm	1,0kN/m
3080	1100	16,76	15,9mm	37,5mm	1,0kN/m
3080	1100	20,76	10,5mm	29,6mm	1,0kN/m
3080	1200	16,76	19,7mm	48,18mm	1,0kN/m
3080	1200	20,76	14,9mm	35,3mm	1,0kN/m
3080	1300	16,76	23,5mm	57,0mm	0,5kN/m
3080	1300	20,76	18,9mm	44,0mm	1,0kN/m

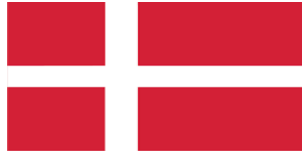
Pendulum Test was carried out by the LGA Germany

See approval P-239922-LGA

Pendulum height = 700mm

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 Balustrade 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
3080	1000	16,76	10,7mm	29,9mm	0,5kN/m
3080	1000	20,76	7,9mm	23,9mm	1,0kN/m
3080	1100	16,76	15,9mm	37,5mm	0,5kN/m
3080	1100	20,76	10,5mm	29,6mm	0,5kN/m
3080	1200	16,76	19,7mm	48,18mm	0,5kN/m
3080	1200	20,76	14,9mm	35,3mm	0,5kN/m
3080	1300	16,76	23,5mm	57,0mm	0,5kN/m
3080	1300	20,76	18,9mm	44,0mm	0,5kN/m

Pendulum Test was carried out by the LGA Germany

See approval P-239922-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 Balustrade System

Tested under Horizontal Imposed Line Load

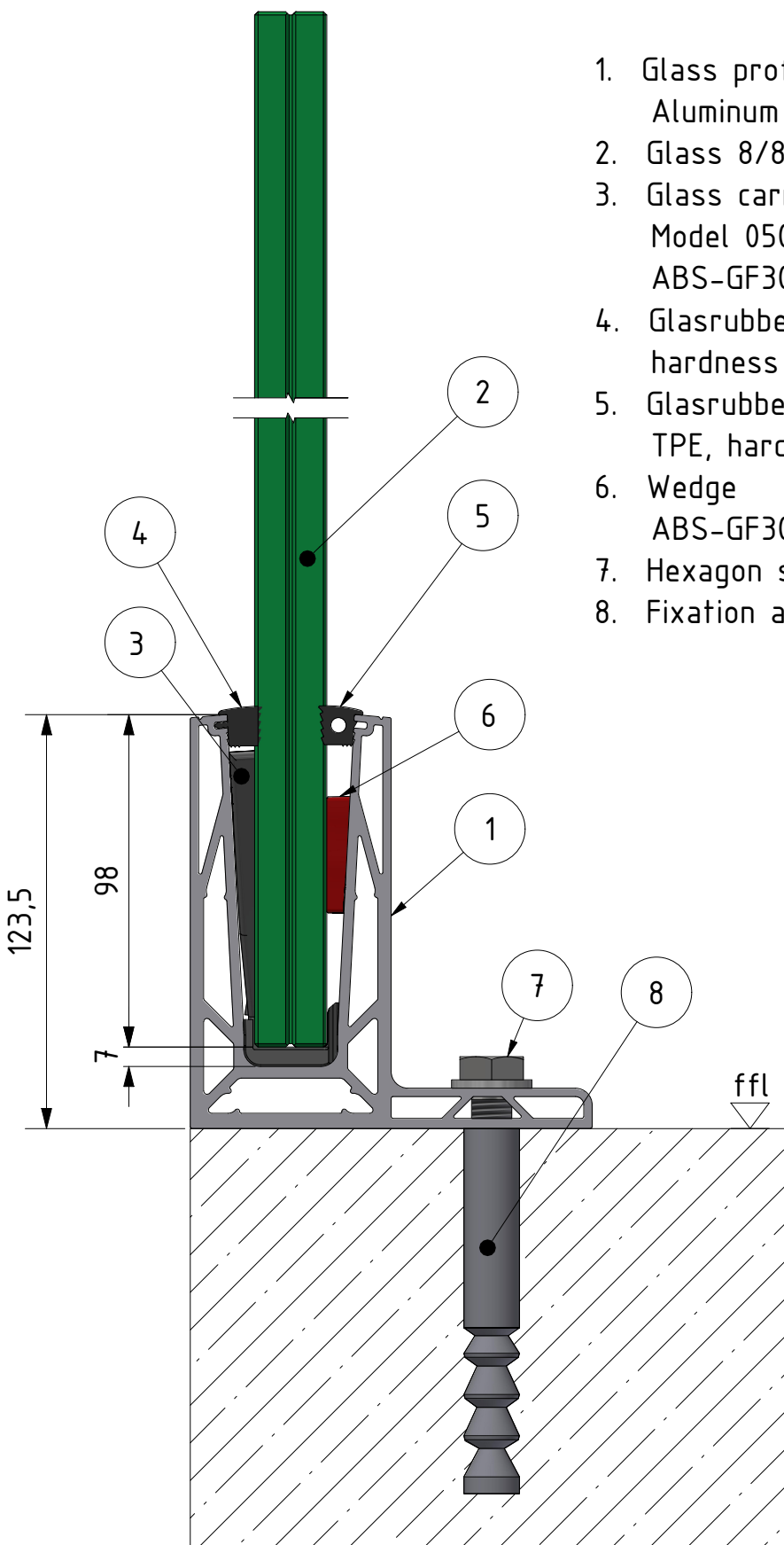
Line load height above concrete base-top of profile

Deflection results					
Profile	Height mm	Glass thickness	0,5kN	1,0kN	Working Line Load
3080	900	16,76	8,6mm	21,0mm	1,0kN/m
3080	900	20,76	6,5mm	17,6mm	1,0kN/m
3080	1000	16,76	10,7mm	29,9mm	1,0kN/m
3080	1000	20,76	7,9mm	23,9mm	1,0kN/m
3080	1100	16,76	15,9mm	37,5mm	0,5kN/m
3080	1100	20,76	10,5mm	29,6mm	1,0kN/m
3080	1200	16,76	19,7mm	48,18mm	0,5kN/m
3080	1200	20,76	14,9mm	35,3mm	0,5kN/m
3080	1300	16,76	23,5mm	57,0mm	0,5kN/m
3080	1300	20,76	18,9mm	44,0mm	0,5kN/m

Pendulum Test was carried out by the LGA Germany

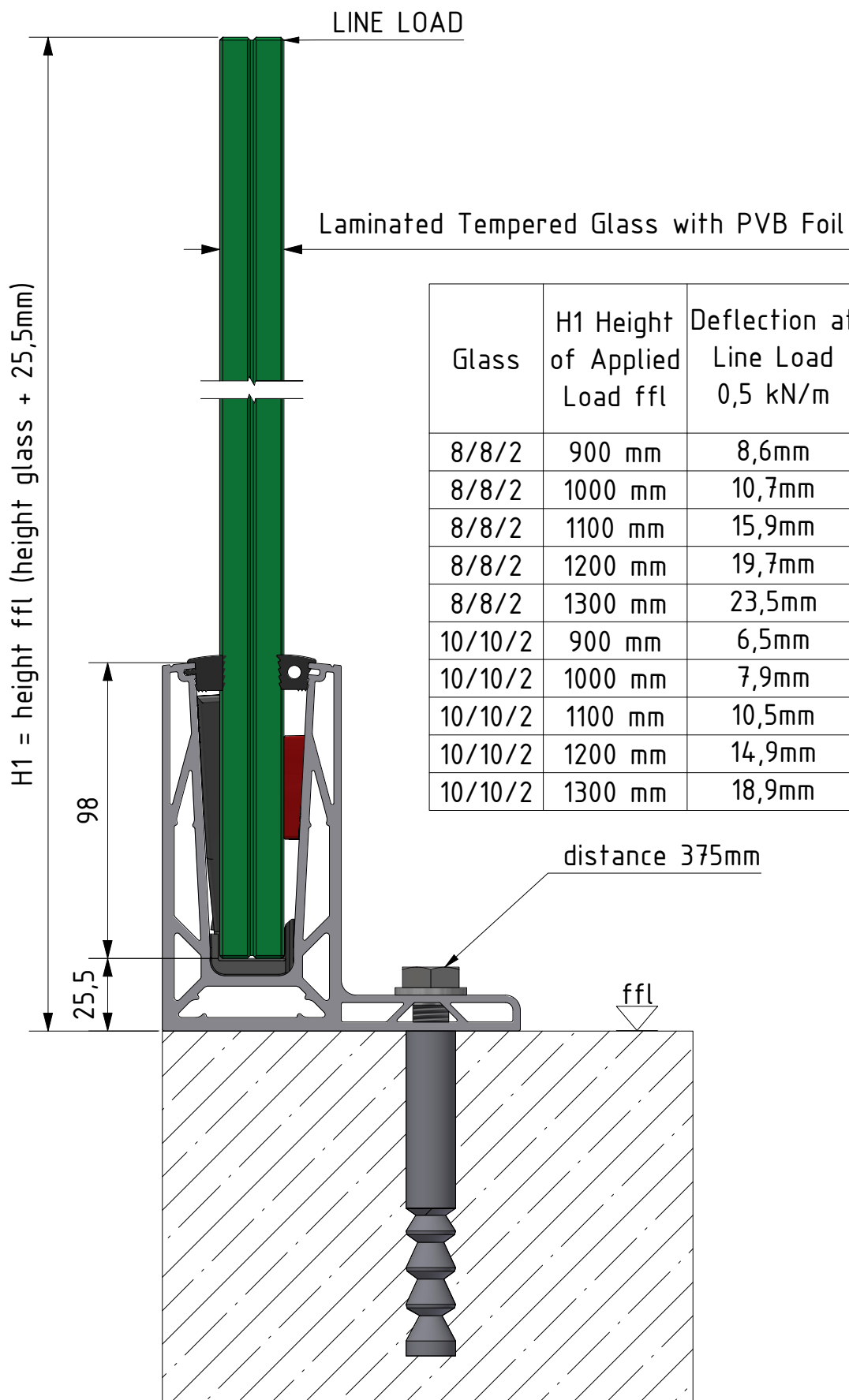
See approval P-239922-LGA

Pendulum height = 700mm



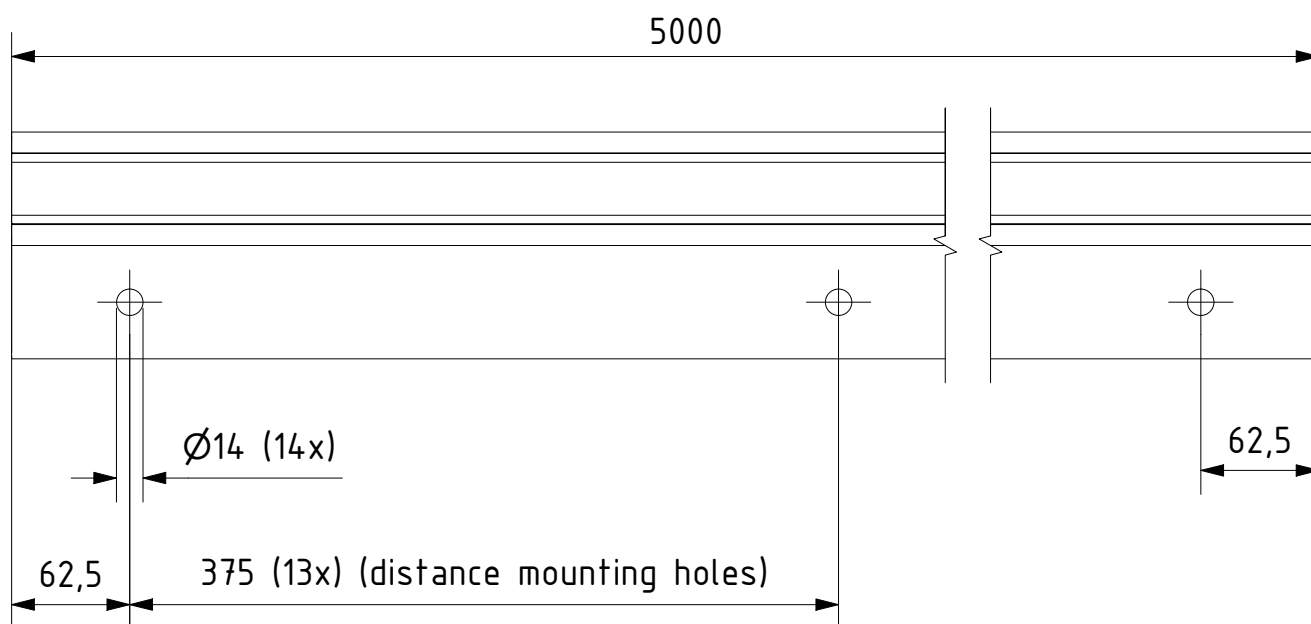
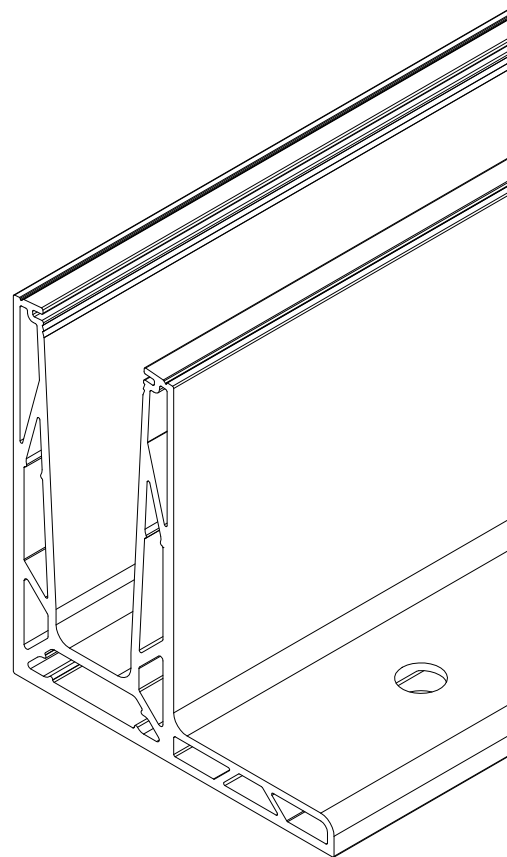
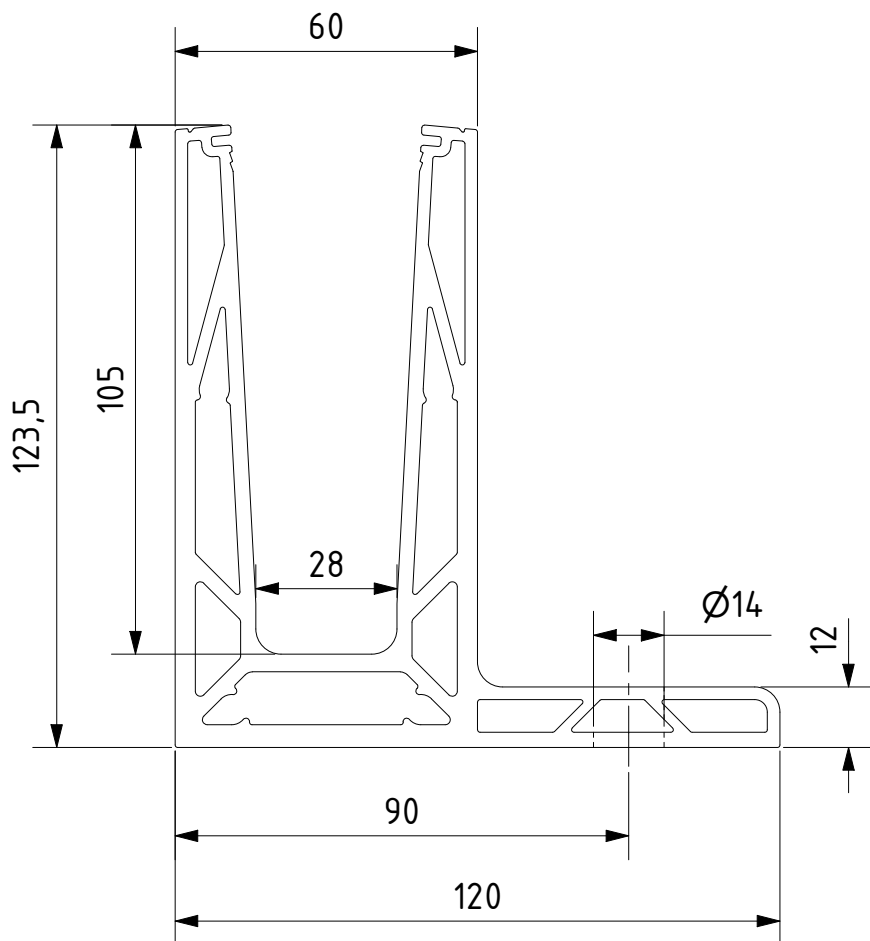
1. Glass profile TL-3080, top mount
Aluminum EN AW 6063-T6
2. Glass 8/8/2 (16,76mm) ,10/10/2 (20,76mm)
3. Glass carrier set
Model 0502/05058
ABS-GF30
4. Glasrubber falling side
hardness 75° shore A
5. Glasrubber user side
TPE, hardness 75° shore A
6. Wedge
ABS-GF30
7. Hexagon screw M12x40mm
8. Fixation anchor VMZ-IG 105 M12

Designed by FV	Created 05.05.2025	Modified	Comment
		Description Detail: Figure 1	
		Article number TL-3080 (top mount)	Size A4 Scale 1:2



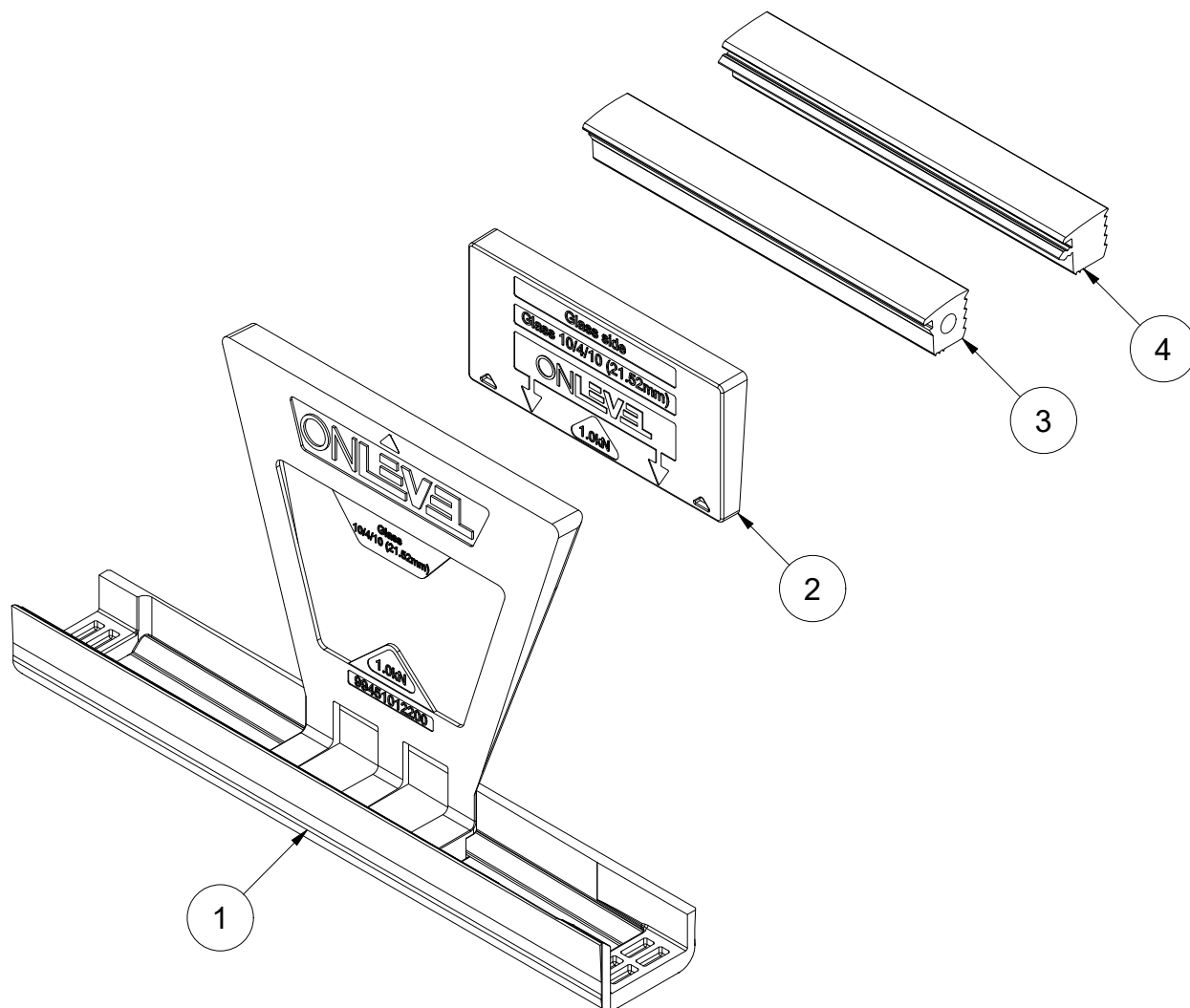
Glass	H1 Height of Applied Load ffl	Deflection at Line Load 0,5 kN/m	Deflection at Line Load 1,0 kN/m
8/8/2	900 mm	8,6mm	21,1mm
8/8/2	1000 mm	10,7mm	29,9mm
8/8/2	1100 mm	15,9mm	37,5mm
8/8/2	1200 mm	19,7mm	48,18mm
8/8/2	1300 mm	23,5mm	57,0mm
10/10/2	900 mm	6,5mm	17,6mm
10/10/2	1000 mm	7,9mm	23,9mm
10/10/2	1100 mm	10,5mm	29,6mm
10/10/2	1200 mm	14,9mm	35,3mm
10/10/2	1300 mm	18,9mm	44,0mm

Designed by FV	Created 05.05.2025	Modified	Comment
		Description Detail: Figure 2 (Line Load/ Glass Heights)	
		Article number TL-3080 (top mount)	Size A4 Scale 1:2



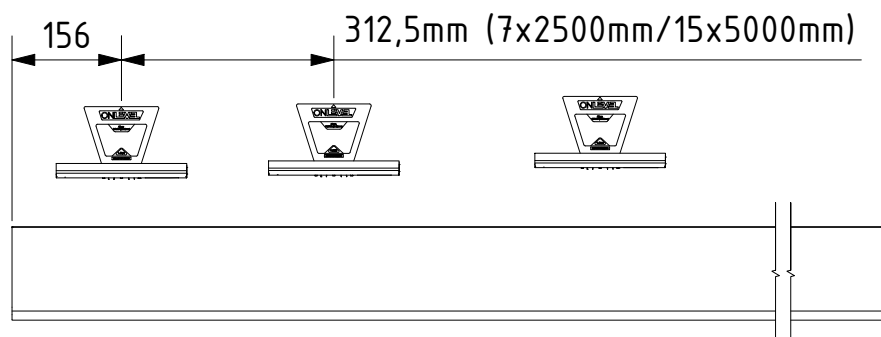
Material: Aluminium 6063-T6

Designed by FV	Created 05.05.2025	Modified	Comment	
		Description Profile TL-3080		
		Article number TL-3080 (top 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 05.05.2025	Modified	Comment
		Description Flex-Fits sets (quantity and distance)	
		Article number TL-3080 (top mount)	Size A4 Scale