



NATIONAL TEST CERTIFICATE  
(ABP)

# EASY GLASS<sup>®</sup> HYBRID

TOP MOUNT (MOD.6919)

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Labor für Stahl- und Leichtmetallbau GmbH  
(Laboratory for Steel and Light Metal  
Construction)

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Bay 27

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## General Building Inspection Test Certificate

**Test certificate number:** P-2015-3025

**Subject:** Punctiform mounted laminated safety glazing  
according to  
Building Rule List A Part 3 - Issue 2014/2  
Building type according to serial number 2.12

**System:** EASY GLASS® HYBRID

**Intended use:** Fall protection according to the technical rule for  
the use of fall protection glazing (TRAV)

**Fall protection category:** C1

**Client:** Q-railing Europe GmbH & Co. KG  
Marie-Curie-Straße 8 - 14  
46446 Emmerich am Rhein

**Date of issue:** 18/03/2015

**Valid until:** 19/03/2020

On the basis of this general building inspection test certificate, the above-cited subject is applicable according to the regional building code.

The general building inspection test certificate extends to 7 pages and 13 annexes.



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## I. General provisions

1. The general building test inspection certificate does not replace approvals, permits and certificates required for the execution of construction projects.
2. The general building test inspection certificate is without prejudice to the rights of third parties, in particular private property rights.
3. Manufacturers of building types have to make copies of the test certificate available to the user of the building type, notwithstanding further regulations in the "Special Provisions", and it should be noted that the general building test inspection certificate must be available at the point of use. On request, the relevant authorities must be provided with copies of the general building test inspection certificate.
4. The general building test inspection certificate may only be reproduced in its entirety. The publication of excerpts requires the consent of the Labor für Stahl- und Leichtmetallbau GmbH. Texts and drawings of advertising brochures shall not contradict the general building test inspection certificate. Translations of the general building test inspection certificate must contain the words "From Labor für Stahl- und Leichtmetallbau GmbH, unaudited translation of the original German version"..

## II. Special provisions

### 1 Subject and application area

#### 1.1 Subject

Subject of the general building inspection test certificate is the post/railing system sold by Q-railing Europe GmbH & Co. KG, EASY GLASS® HYBRID according to Building Rule List A Part 3 - Issue 2014/2.

#### 1.2 Application area

The above cited subject is used in accordance with the technical rule for the use of safety glazing (TRAV) according to **category C1**.



## 2 Requirements for the building type

### 2.1 Description of the construction

#### 2.1.1 Mounting

The glazing is mounted on the upper and lower glass edge linearly in aluminium sections (see Annex 1 to 3). The lower mounting section is attached directly to the floor. The upper mounting section also presents the handrail section at the same time and is secured to the vertical steel post sections (Annexes 5 to 8).

The glass metal contact on the upper mounting is hindered through the insertion of a continuous EPDM profile (see Annex 4). At the bottom of the mounting, the glass is set on plastic inserts (see Annex 5). The distance between inserts is a maximum of 250 mm.

#### 2.1.2 Glazing

The following glass assemblies are possible:

##### Glass construction:

		Structure 1	Structure 2	Structure 3
tempered glass (ESG)		4,00 mm	5,00 mm	6,00 mm
Polyvinylbutyral film (PVB film)	minim	0,76 mm	0,76 mm	0,76 mm
tempered glass (ESG)		4,00 mm	5,00 mm	6,00 mm
<b>Total glass thickness, approx.</b>		<b>8,8 mm</b>	<b>10,8 mm</b>	<b>12,8 mm</b>

Only glass products according to Building Rule List A Part 1 or with general building inspection approval for use according to TRAV should be used. Instead of ESG, ESG-H also may be used.

The glass quality is confirmed by the manufacturer or supplier of factory certificates or declarations of conformity.

### 2.2 Applicable test procedures

The test of the fall protection function of the glazing was carried out in accordance with Section 6 of TRAV. The detection of resistance under shock loading was tested on the relevant dimensions of the glazing described by means of pendulum impact tests. The results of the tests are documented in the test report 2015-3029



## 2.3 Usage, maintenance and repair

The construction in the building is to be used in such a way, assured through appropriate measures, that it permanently meets the requirements in terms of fall protection. When demonstrating safe anchorage of glazing constructions on the building, the relevant technical building regulations must be observed.

## 3 Applicable area for the measurement

### 3.1 Applicable area

The general building inspection test certificate is valid for the building type described in point 2. The glazing has a fall-preventing function according to Category C1. In the following table, the permissible dimensions are given.

**Table 1:** Dimensions

Glass width w [mm]		Glass height h [mm]	
min	max	min	max
500	any	1000	1200

Deviations from the rectangular shape according to TRAV, Annex D are allowed.

The steel posts can be mounted in front of or placed (see annexes 10 and 11). Alternatively, the handrail can also be attached to the masonry (see annex 12).

## 4 Proof of compliance

### 4.1 General

The building type which appears in this general building inspection test certificate requires according to Building Rule List A Part 3, the proof of compliance by the user (contractor). The contractor declares herein to the client that the type used matches in all details this certificate.

### 4.2 Production check

At each application of the building type, a production check is to be set up and performed. Under the production check, the contractor agrees to continuous monitoring of production, with which it is ensured that the building type made by him complies with the provisions of this certificate.

The production control shall contain the description and verification of raw materials and components.



The results of the production control are recorded and evaluated. The records shall contain at least the following information:

- Identification of the building type comprising description of the components
- Date of manufacture and testing of construction
- Results of the review and comparison with the requirements
- Signature of person responsible for the production check

The records shall be kept for at least five years and be made available on the request of the competent overall building inspection authority.

## 5 Applicable provisions

For the applications, the provisions of the technical rules for the use of fall protection glazing (TRAV) -version January 2003 are to be observed. Reference is also made to the following standards and codes:

- [a] Building Rule List A, List B and List C; Issue 2014/2
- [b] Technical rules for the use of linearly installed glazing (TRLV), version 2006-08
- [c] EN 12600; Glass in building - pendulum impact test - Impact test method and classification for flat glass, version 2003-04
- [d] EN 14449; Glass in building - Laminated glass and laminated safety glass, version 2005-07
- [e] DIN 572, Part 1-2; Glass in building - Basic products from soda lime silicate, version 2004-09
- [f] DIN 12150, Part 1; Glass in building - Thermally toughened soda lime silicate safety glass, version 2000-11
- [g] DIN 18008 Part 1-2; Glass in building - Design and construction rules, version 2010-12
- [h] Test report 2015-3029; Pendulum impact tests according to the technical regulations for the use of safety glazing (TRAV) of Labor für Stahl und Leichtmetallbau GmbH

### III. Legal bases

This general building inspection test certificate is provided on the basis of Article 7 and 19 of the Bavarian Construction Regulations (BayBO) of 14. August 2007 in association with the Building Rule list A.



According to § 25 Clause 2 of the MBO in association with Article 23 Clause 2 of the Bavarian Construction Regulations (BayBO) of 14 August 2007, a provided general building inspection test certificate applies in all regions of the German Federal Republic.

#### IV. Legal remedies

Legal objections to this general building inspection test certificate may be filed within one month after publication. The objection must be filed in writing or in transcript at Labor für Stahl- und Leichtmetallbau GmbH.

Munich, 19/03/2015

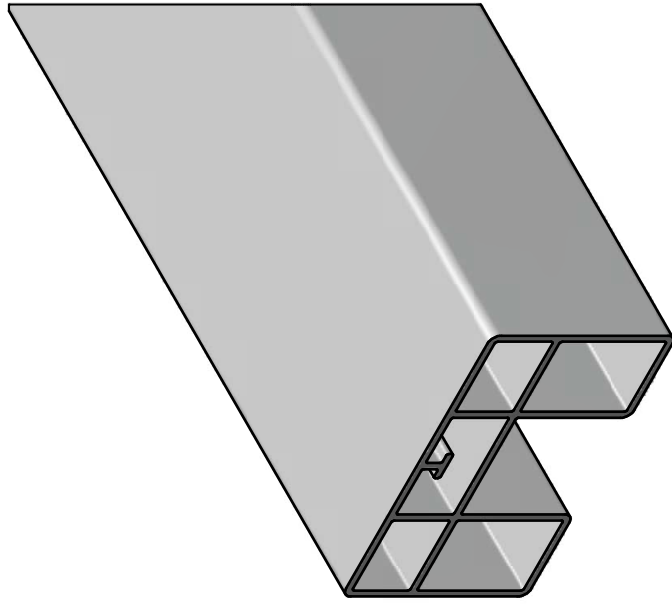
For the management and experts



Qualified Engineer (FH) A. Lorenz

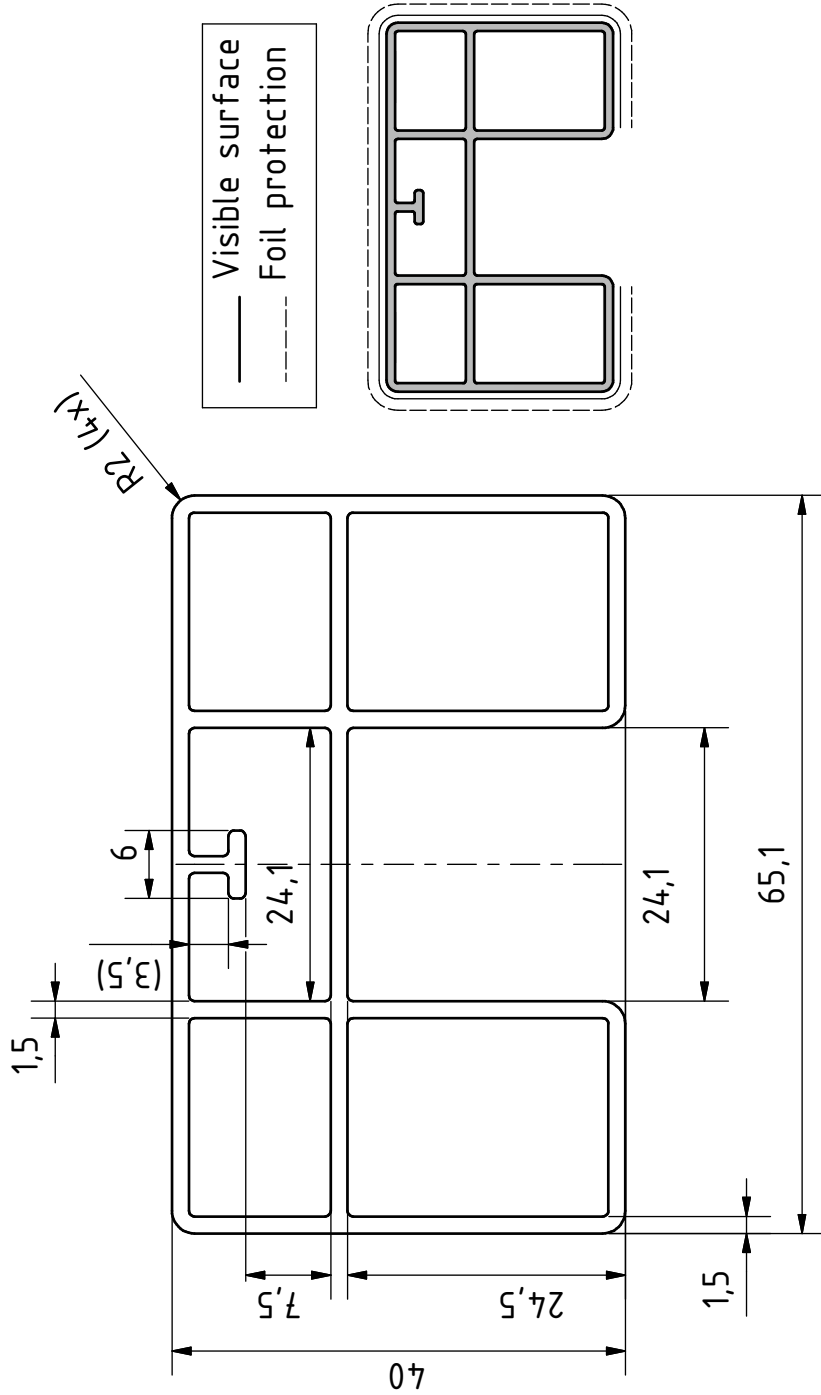
(Representing PÜZ Office Director)





annex 1

+30  
+0



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Date	Name
22-9-2014	LBR
12-9-2014	MVN

General tolerance according  
EN 755-9 -01

Scale: 1,5 : 1 | Weight: 6505 g | Rev.No.: 0

Material: EN AW-6063 T6

Finish:

Product line:

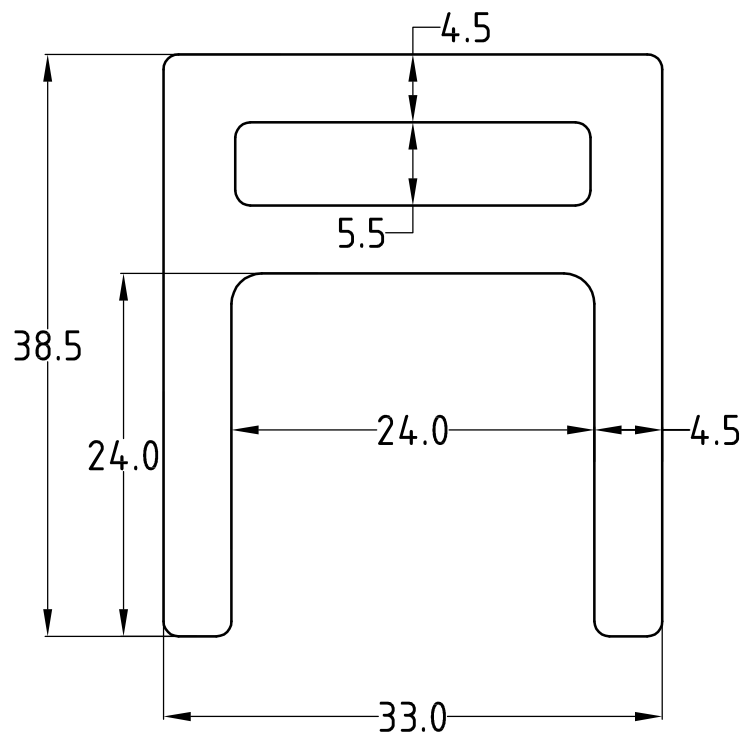
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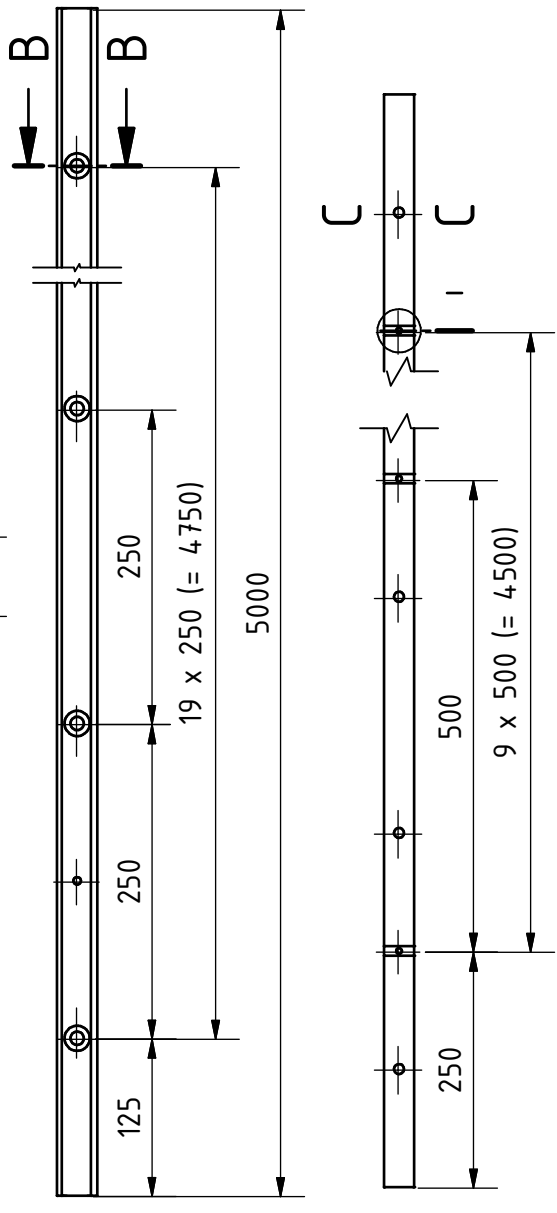
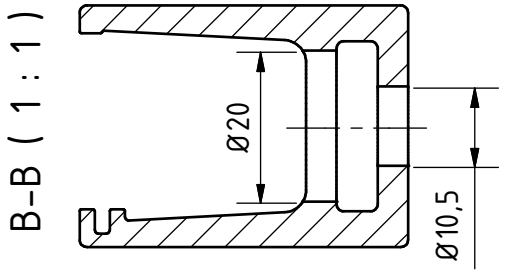
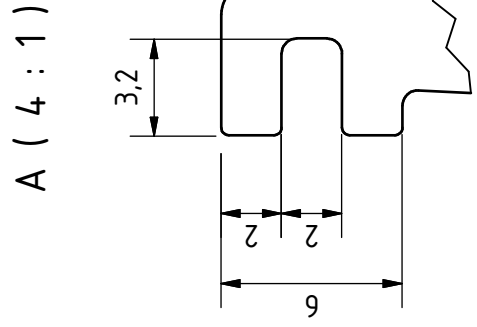
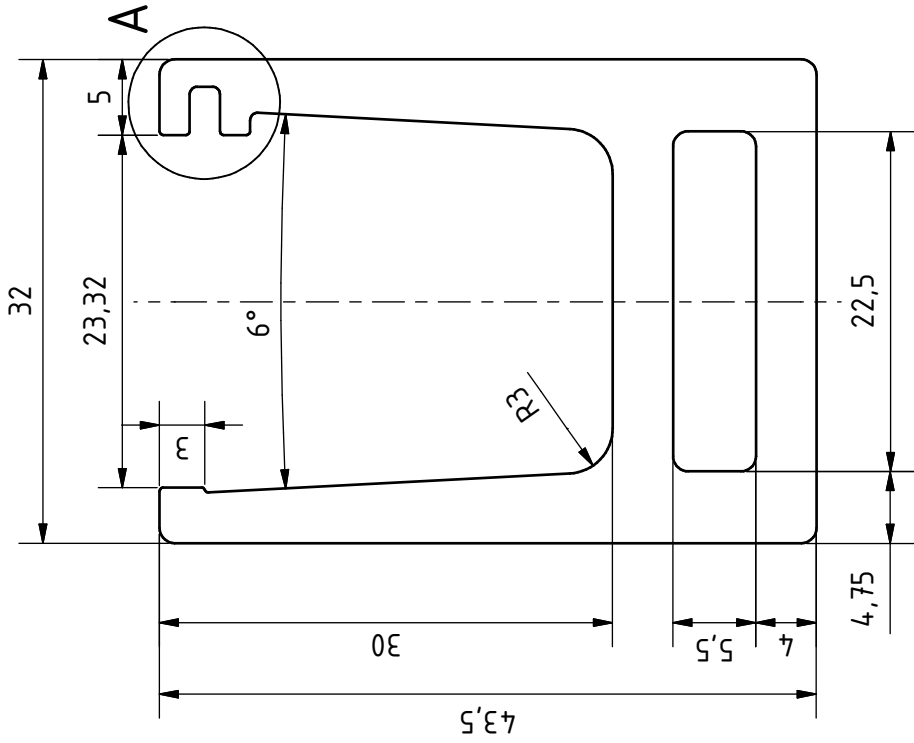
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16692065408

Sheet:  
1 / 1  
A4

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annex 3



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Date	Name
27.08.2014	GMK
29.09.2014	MVN

General tolerance according  
EN 755-9 -01

Scale: 2 : 1 | Weight: 7408 g | Rev.No.: 0

Material: EN AW-6063 T6  
Finish: raw

Product line: Easy Glass Thin

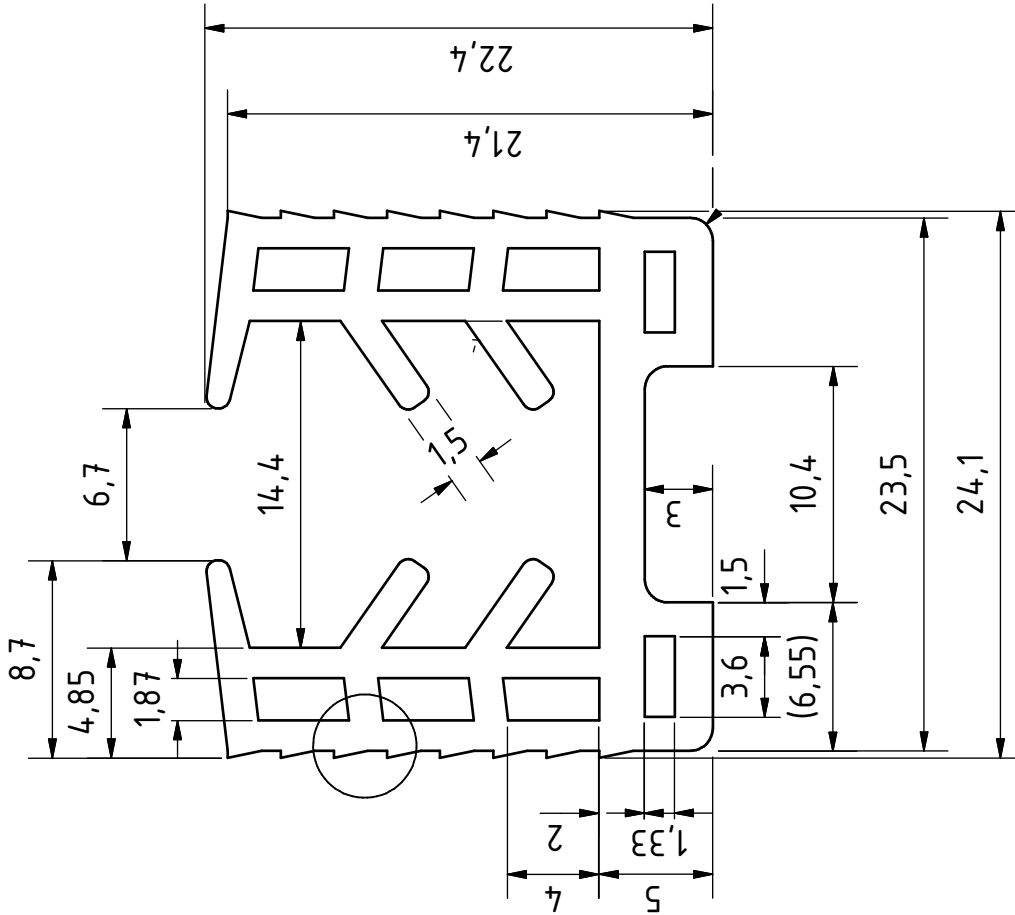
Description: Base shoe

Drawing no.: 16691950000  
Sheet: 1 / 1  
A4

3D view



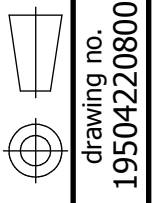
annex 4



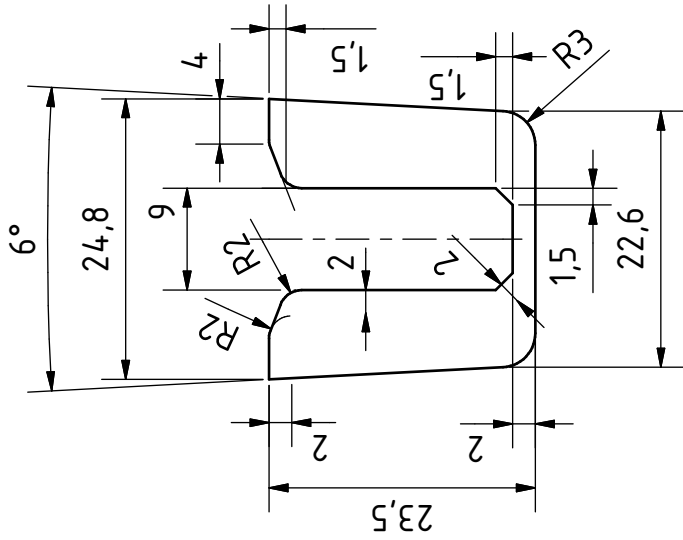
Material: EPDM 65 $\pm$ 5 shore A

Drawn	YP
Rev.No.	1
Date	05.10.2011
Scale	3:1

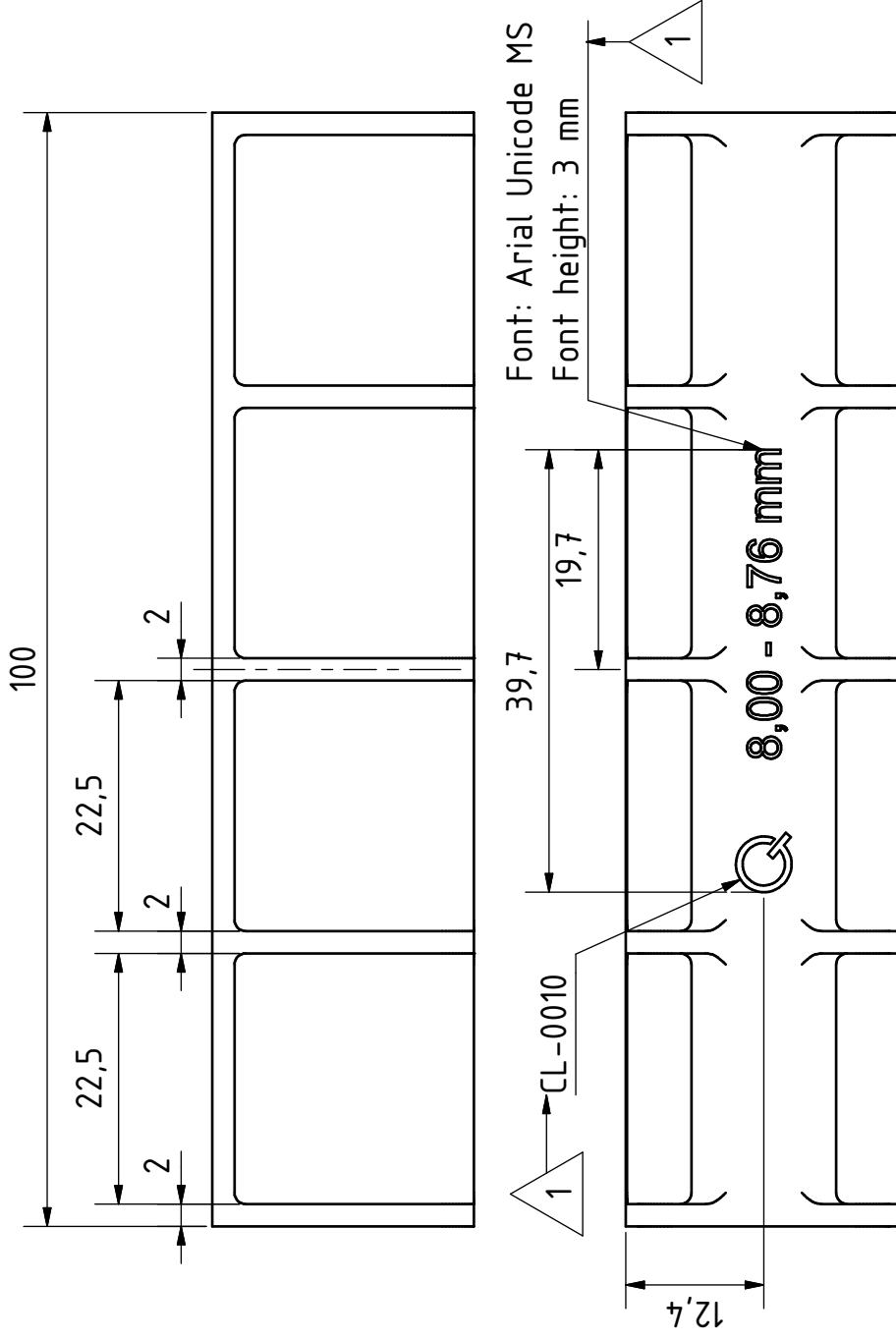
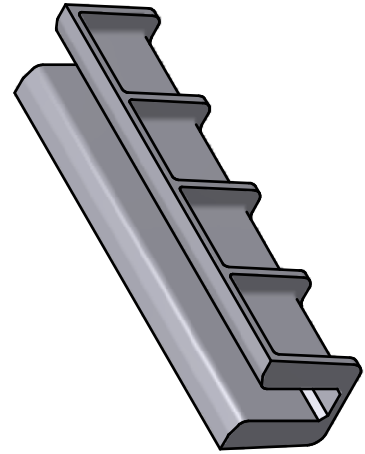
**Q-railing**  
19504220800



drawing no.  
19504220800



3D View



annex 5

General radius: 1 mm  
3D Model 19313000800ipt is leading in geometry  
Missing dimensions should be obtained from the 3D model  
and comply with the tolerances mentioned on the drawing



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Drawn	Checked	Date	Name
GMK	MYN	14.08.2014	29.09.2014

MSR	DATE
06.10.2014	

DESCRIPTION	DATE
added logo and glasstickness	

REV	DESCRIPTION	DATE
1		
0		

Scale: 3 : 2 | Weight: 16 g | Rev.No.: 1

Material: ABS

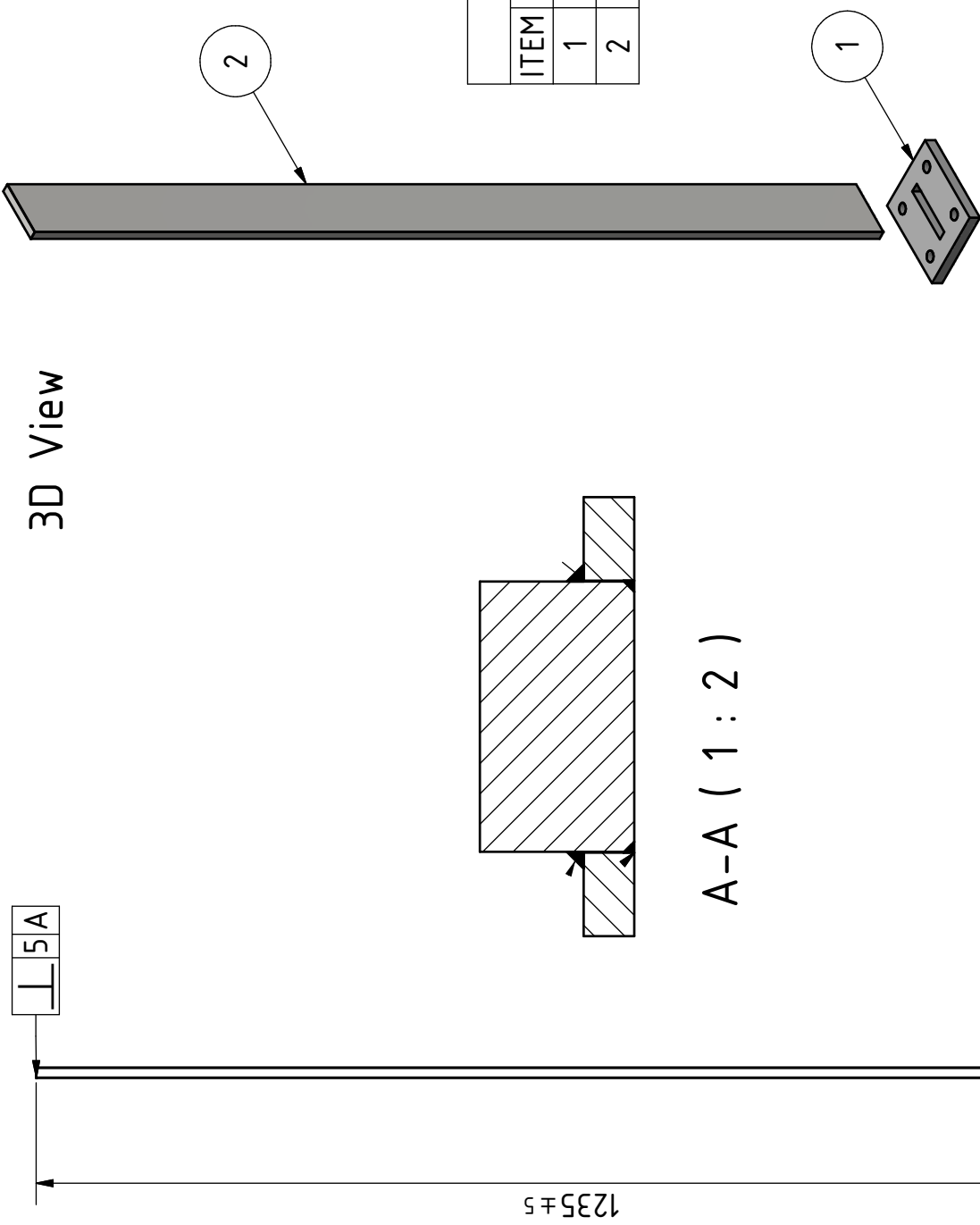
Finish: acc. VDI 3400 sample no. 21 color: RAL 7004

Product line: Easy Glass Thin

Description: Inlay for 8.00-8.76 glass

Drawing no.: 19313000800  
Sheet: 1 / 1  
A4

# 3D View



A-A ( 1 : 2 )

PARTS LIST			
ITEM	QTY	PART NUMBER	REV. DESCRIPTION
1	1	11302308000	0
2	1	11302228000	0

annex 6



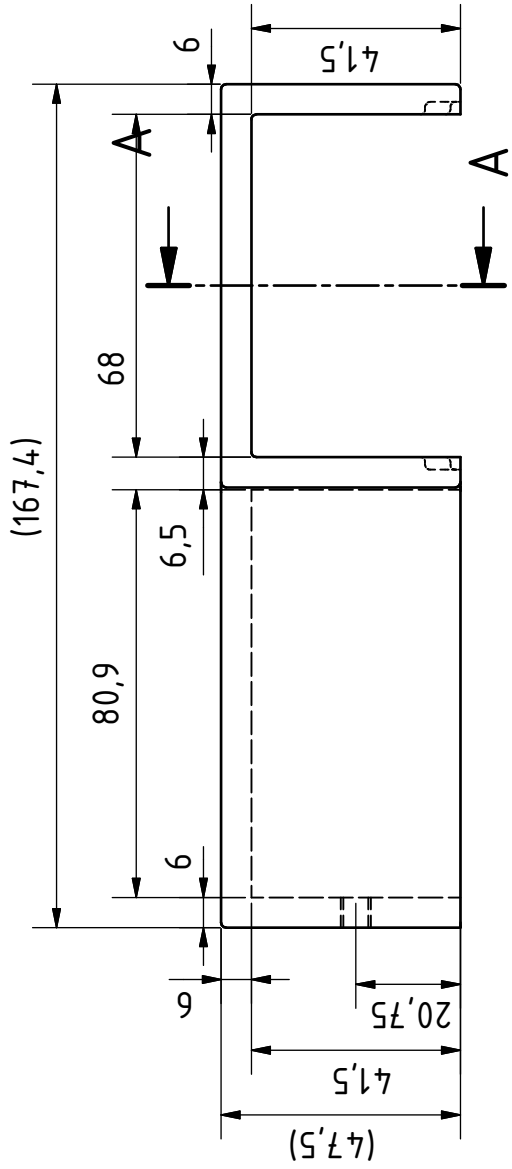
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Date	Name
26-8-2014	GMK
26-9-2014	MVN

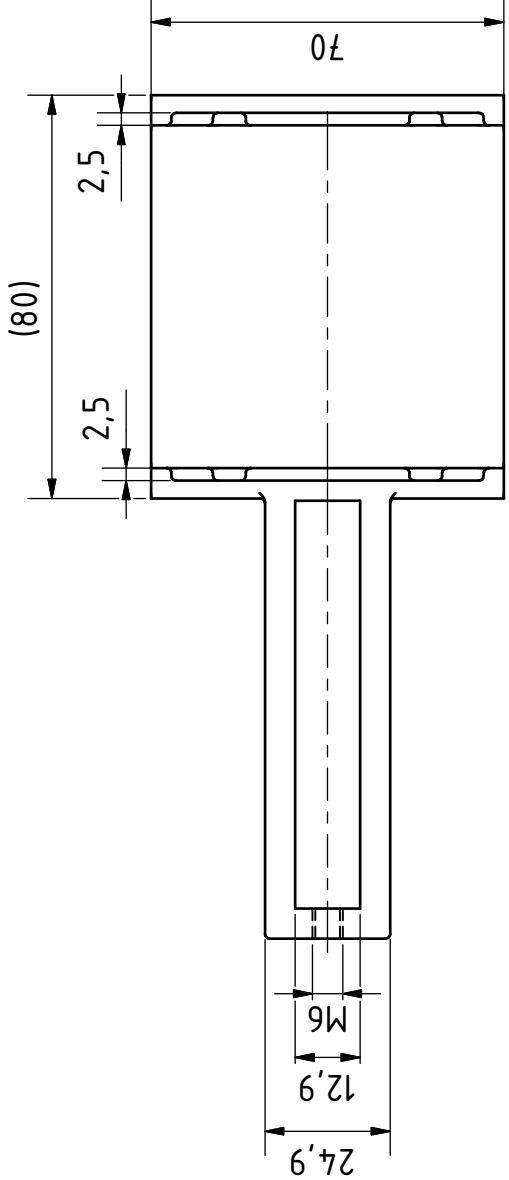
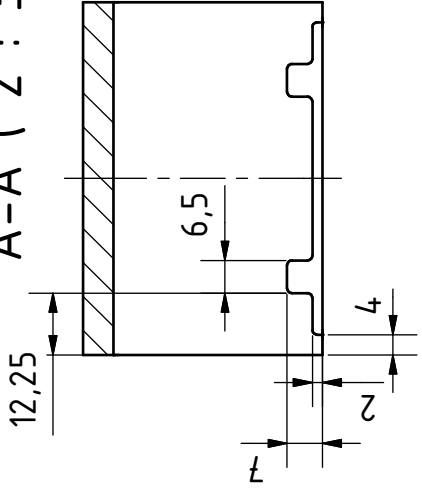
General tolerance according  
DIN ISO 2768-mK

Scale: 1 : 8	Weight: 11 kg	Rev.No.: 0
Material: Welded	S235JR	
Finish:	Easy Glass Thin	
Description: Post 1235mm		
Drawing no.:	11054808034	Sheet: 1 / 1
		A4

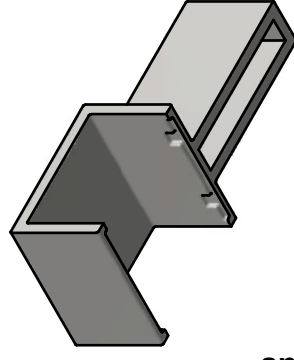
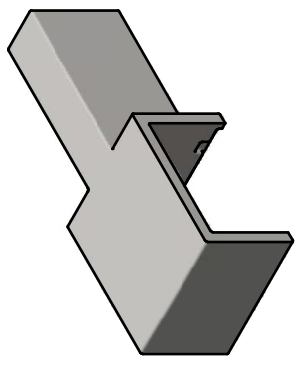
REV	DESCRIPTION	DRAWN	DATE
0			



A-A ( 2 : 3 )



3D View



annex 7

General radius: R1



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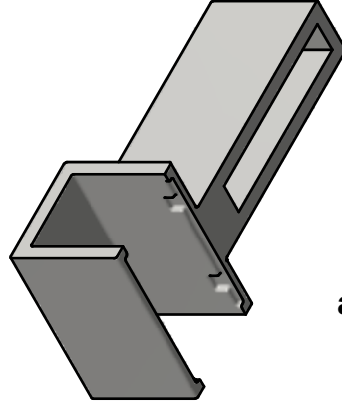
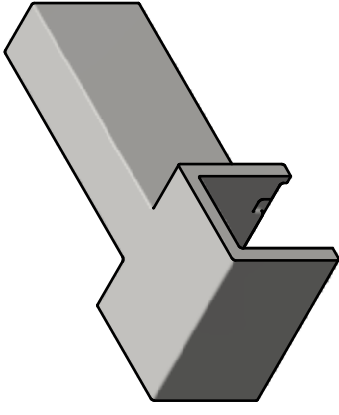
Date	Name
22/09/2014	GMK
26/09/2014	MVN

General tolerance according  
ISO 8062-3 DCTG-10

Scale: 2 : 3	Weight: 1000 g	Rev.No.: 0
Material: QT400-15		
Finish: powder coated min. 100µ color RAL 000 90 00		
Product line: Easy Glass Thin		
Description: Caprail connector		
Drawing no.:	11308665434	Sheet: 1 / 1
		A4

REV	DESCRIPTION	DRAWN	DATE
0			

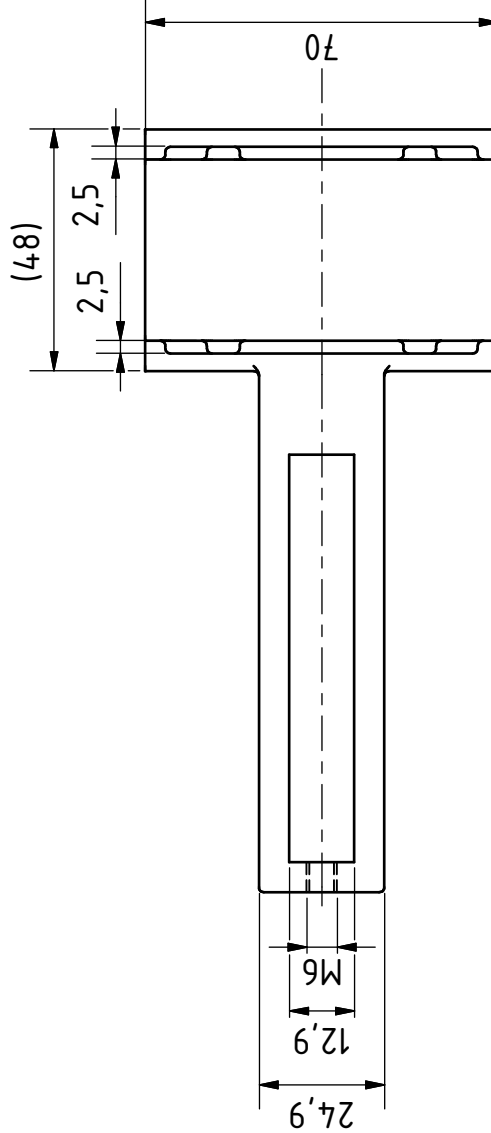
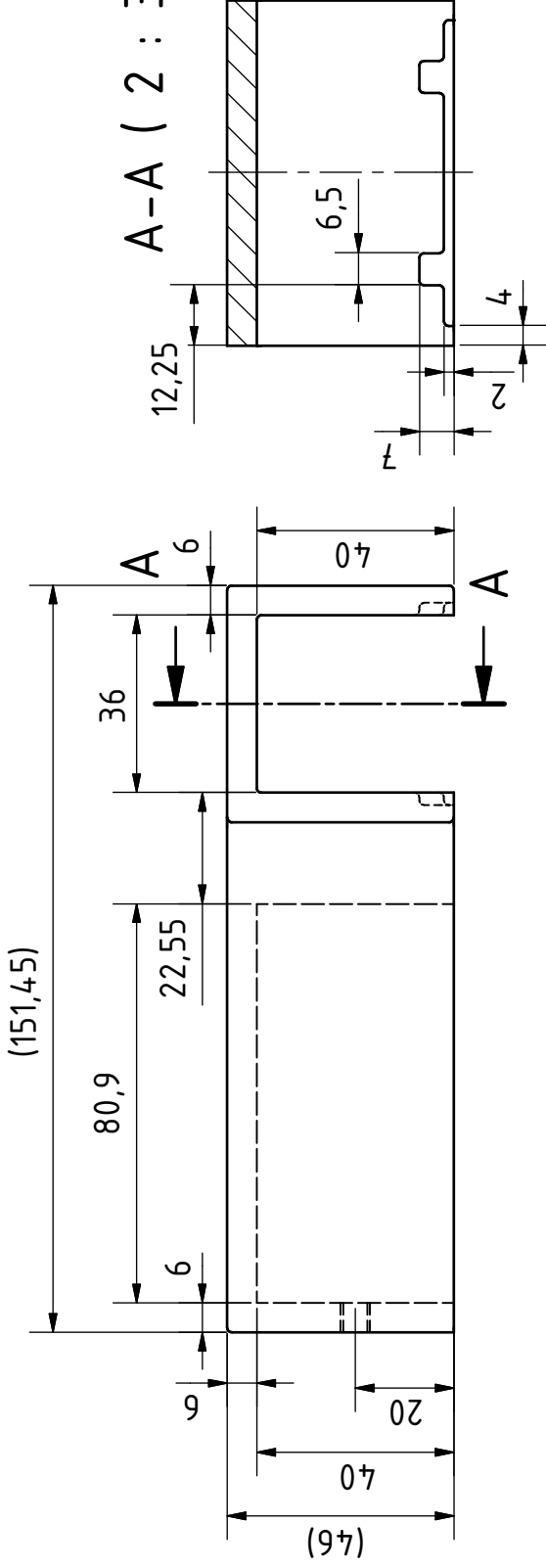
# 3D View



annex 8

General radius: R1

A-A ( 2 : 3 )



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Date	Name
27/08/2014	GMK
26/09/2014	MVN

General tolerance according  
ISO 8062-3 DCTG-10

Scale: 2 : 3 | Weight: 1016 g | Rev.No.: 0

Material: QT400-15

Finish:

Product line: Easy Glass Thin

Description: Caprail connector

Drawing no.:

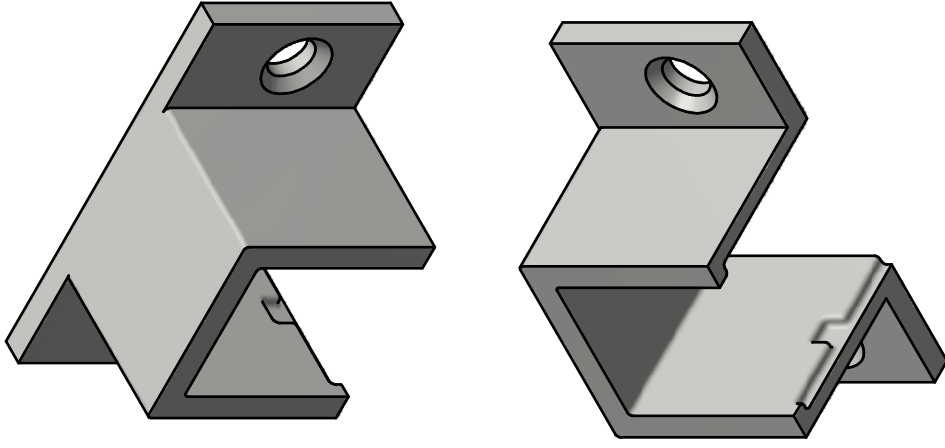
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Sheet: 1 / 1  
A4

REV	DESCRIPTION	DRAWN	DATE
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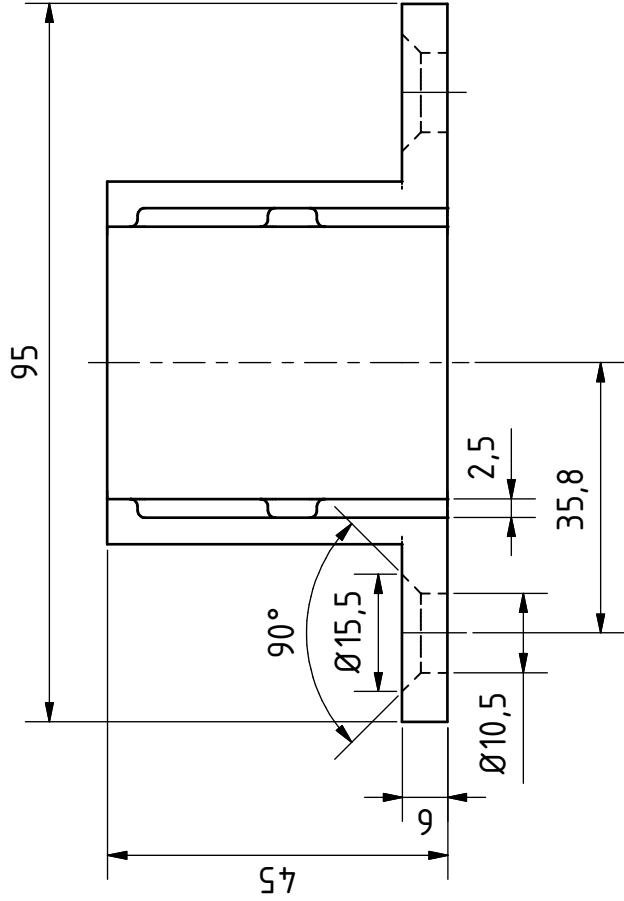
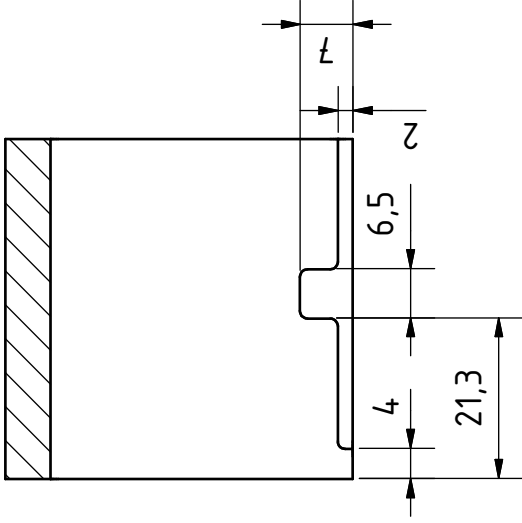
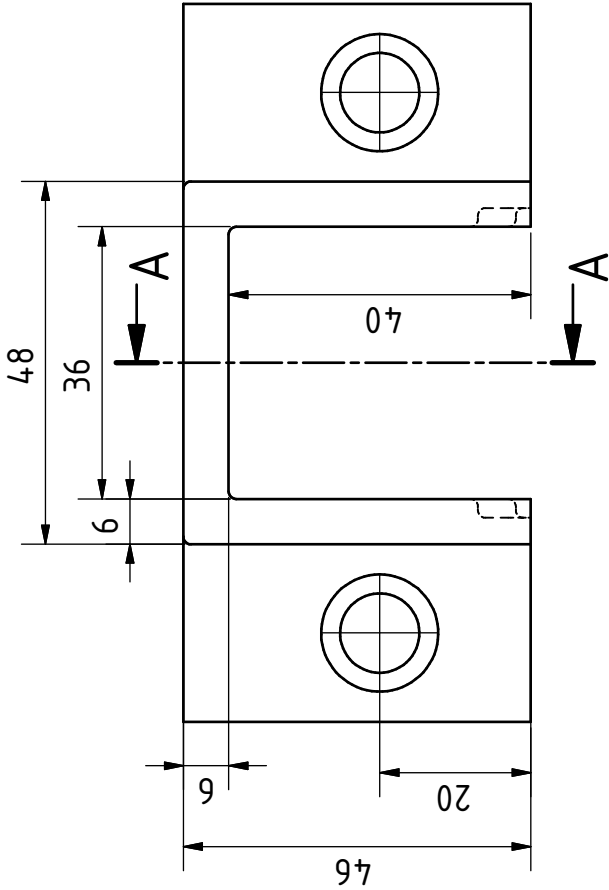


3D View



annex 9

A-A ( 1 : 1 )



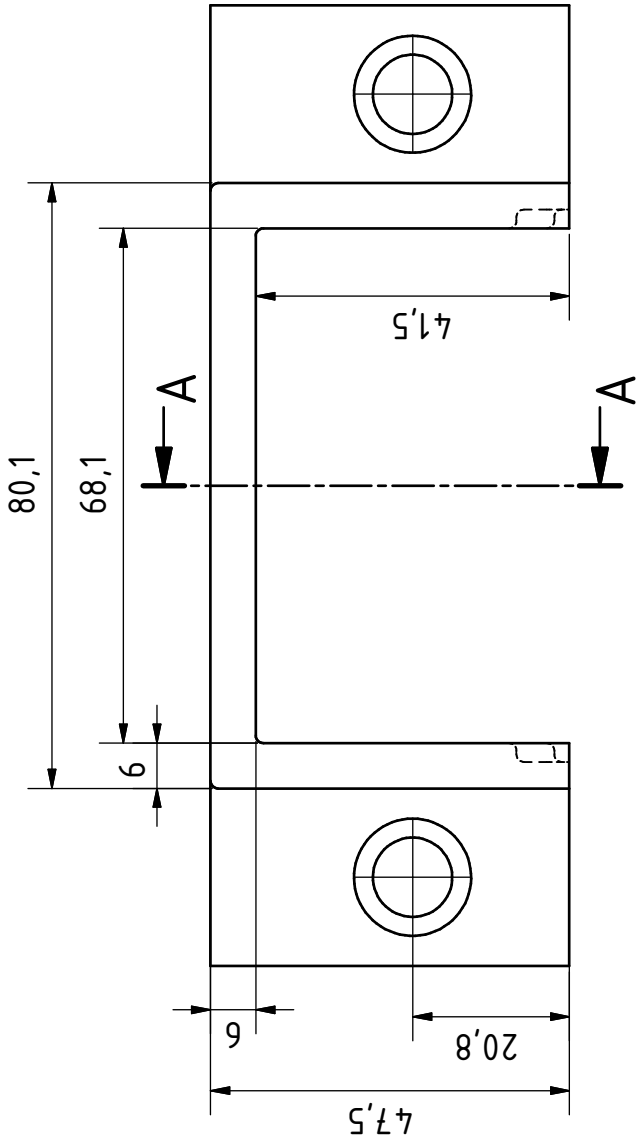
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Date	Name
28/08/2014	GNK
26/09/2014	MVN

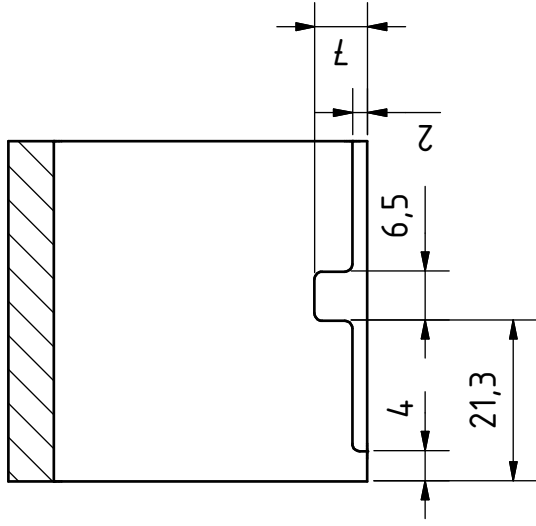
General tolerance according ISO 8062-3 DCTG-10

Scale: 1 : 1	Weight: 359 g	Rev.No.: 0
Material: QT400-15		
Finish:		
Product line: Easy Glass Thin		
Description: Wall flange		
Drawing no.: 11302133915		
Sheet: 1 / 1		A4

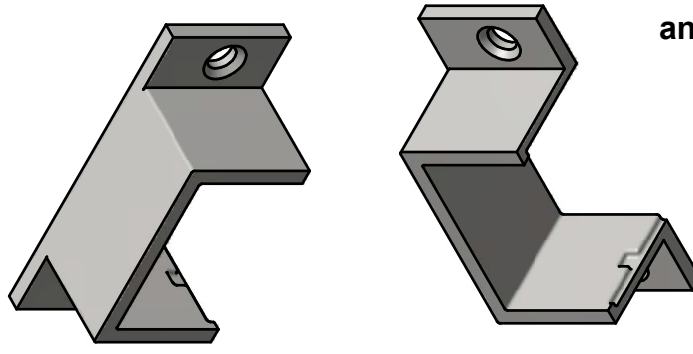
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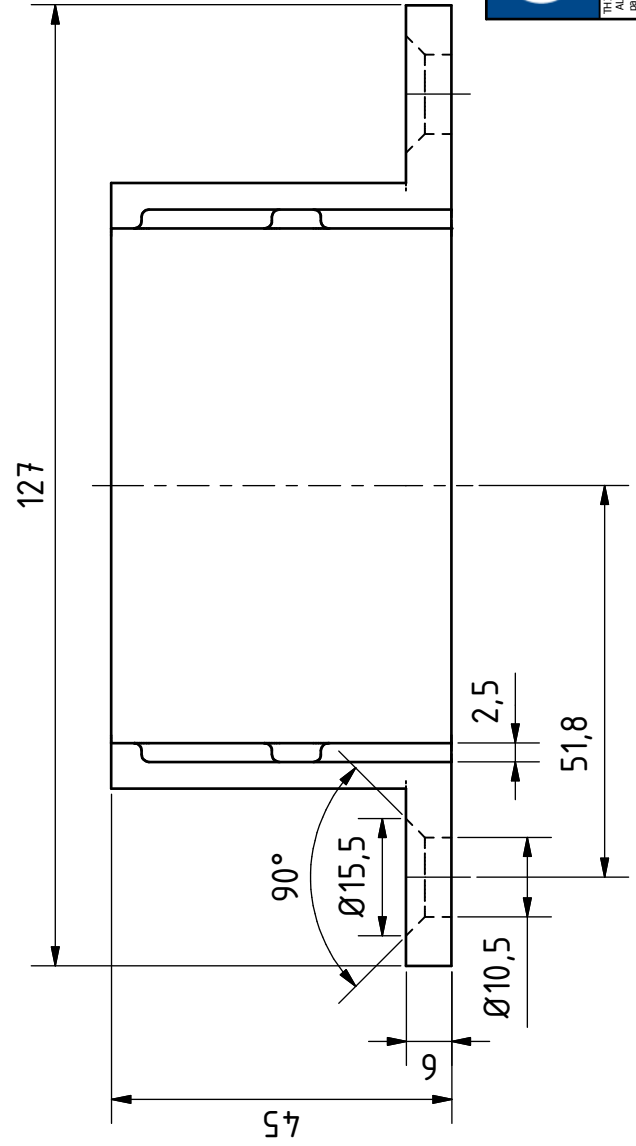
A-A ( 1 : 1 )



3D View



annex 10



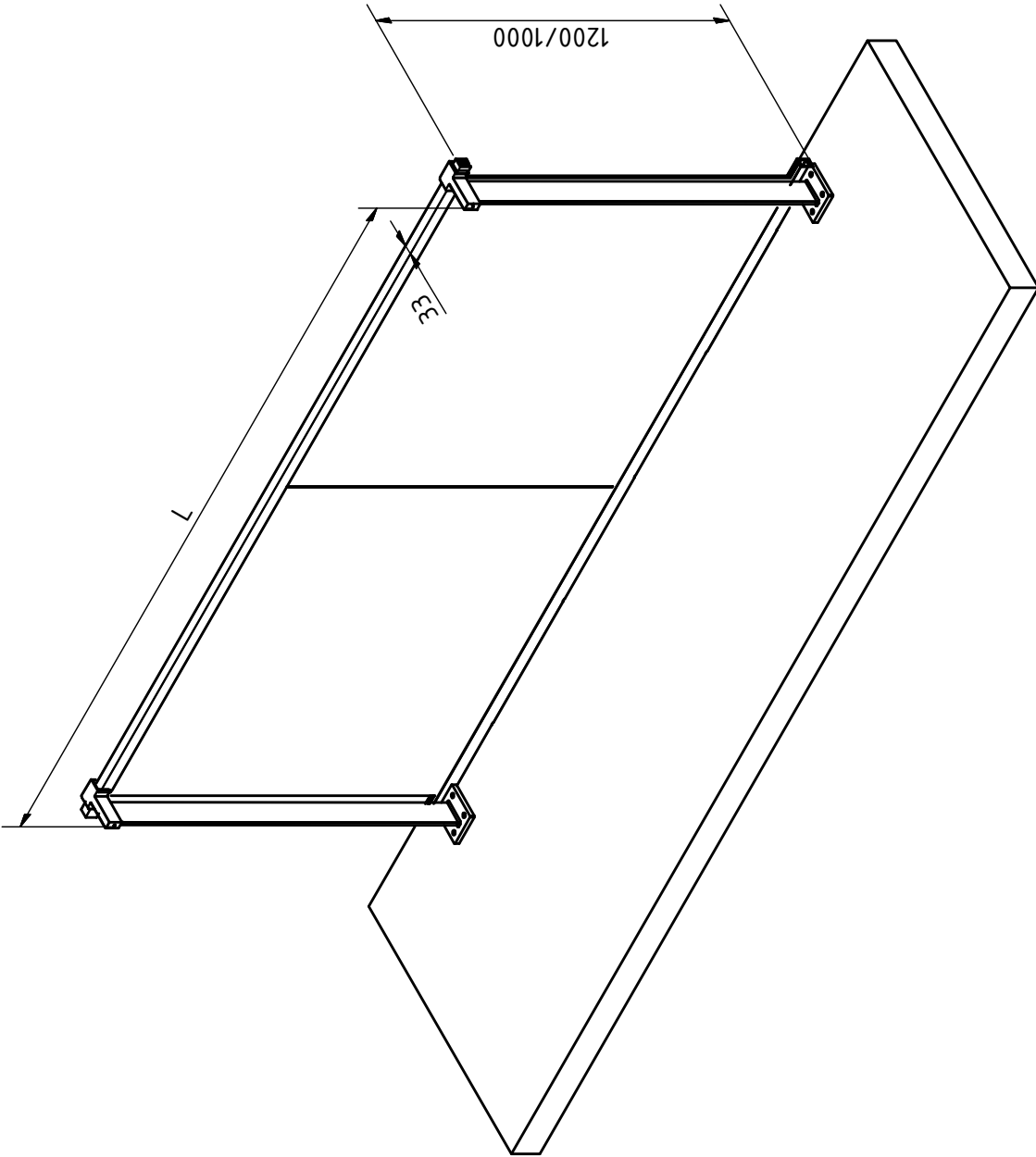
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Date	Name
22/09/2014	GNK
26/09/2014	MVN

General tolerance according  
ISO 8062-3 DCTG-10

Scale: 1 : 1	Weight: 436 g	Rev.No.: 0
Material: QT400-15		
Finish:		
Product line: Easy Glass Thin		
Description: Wall flange		
Drawing no.: 11302165415		
Sheet: 1 / 1		A4

REV	DESCRIPTION	DRAWN	DATE
0			



Scale: 1 : 20 | Weight: N/A | Rev.No.: 0

Material:


Finish:

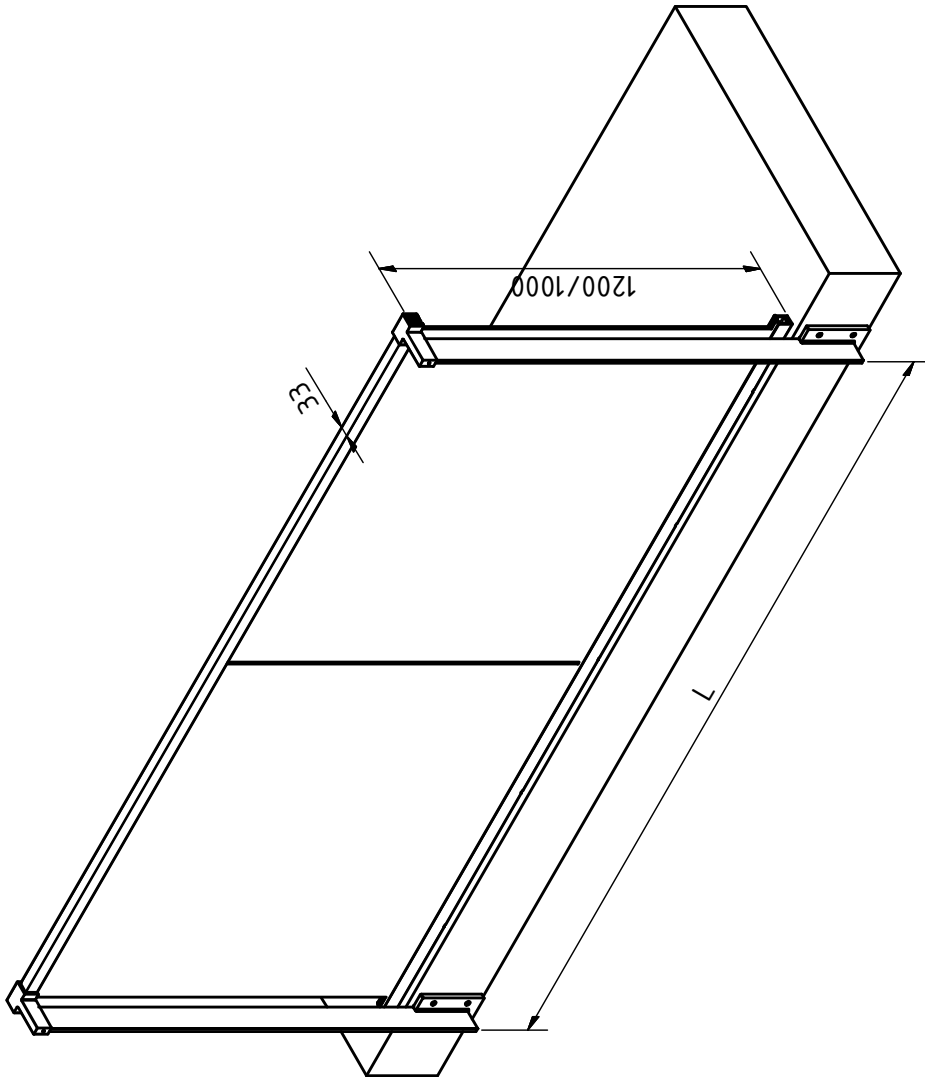
Product line:

Description: E.G Hybrid with top mount posts and 33 mm caprail

Drawing no.:

Sheet: 2 / 4  
A4

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		10.12.2014	LKA
Drawn			
Checked			
General tolerance according			

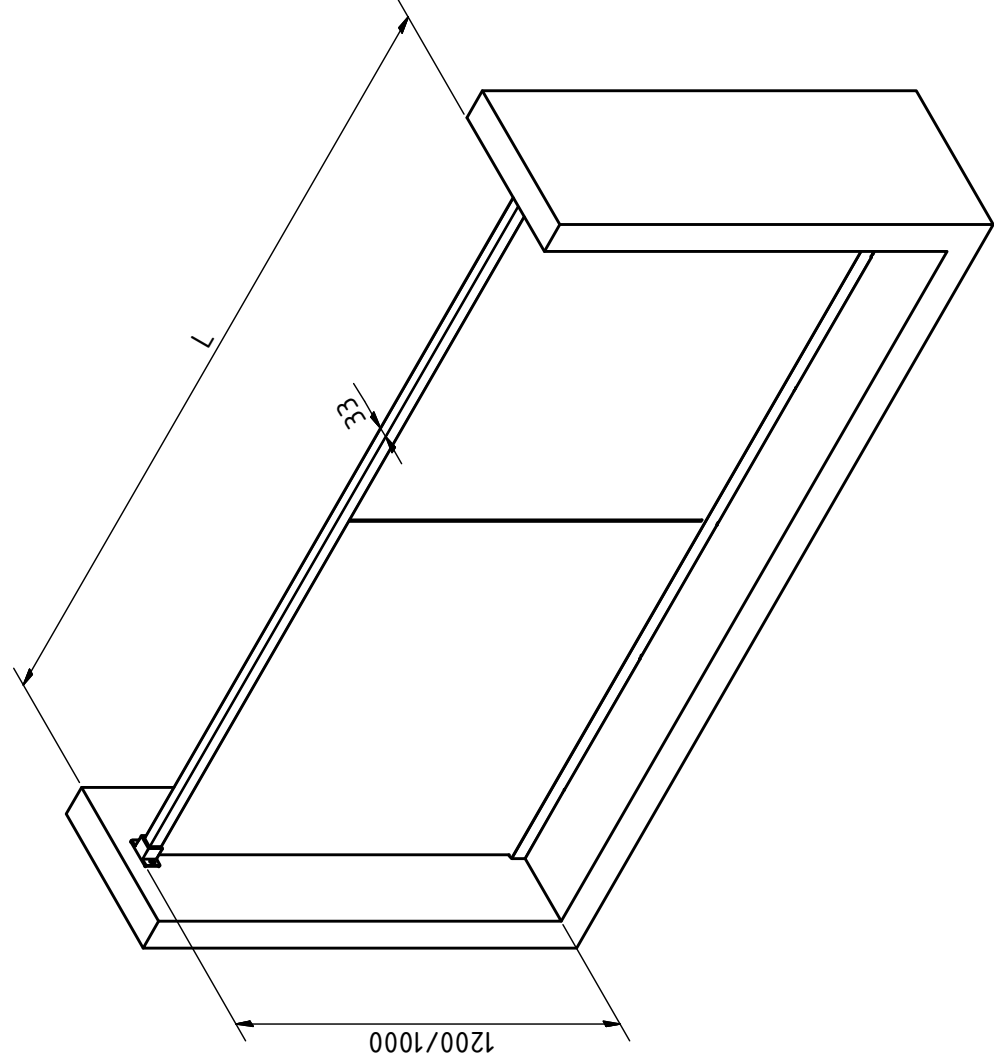
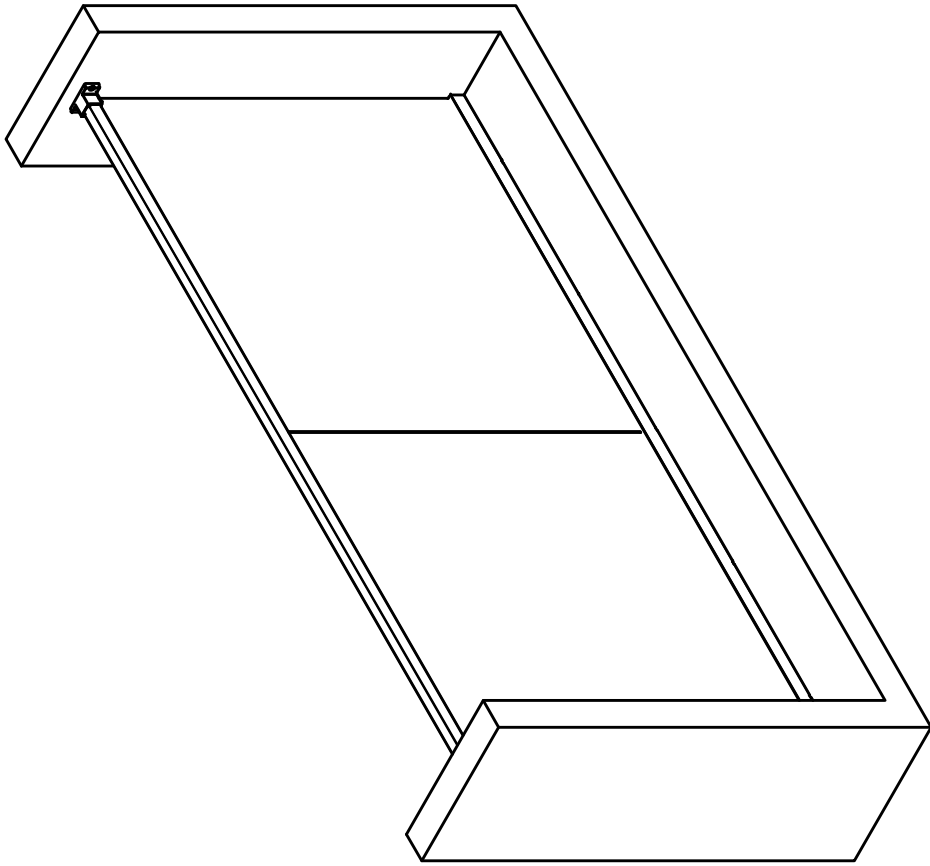


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Drawn	Date	Name
Checked	10.12.2014	LKA

General tolerance according

Scale:	Weight: N/A	Rev.No.: 0
Material:		
Finish:		
Product line:		
Description:	E.G Hybrid with side mount posts and 33mm caprail	
Drawing no.:		Sheet: 4 / 4
		A4



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Drawn	Date	Name
Checked	10.12.2014	LKA

General tolerance according

Scale: 1 : 20 | Weight: N/A



Rev.No.: 0

Material:

Finish:

Product line:

Description: EG Hybrid wall connection- with 33mm caprail

Drawing no.:

Sheet: 2 / 2  
A4

GOOD LUCK WITH  
YOUR INSTALLATION!

VIEL ERFOLG MIT  
IHRER MONTAGE!

SUCCES MET  
DE INSTALLATIE!