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FTI Fasad Teknoloji Merkezi / *FTI Façade Testing Institute*

Merkez / *Head Office*

Atilla İlhan Caddesi No:10 PK. 34750 Küçükbakkalköy - Ataşehir / İstanbul / TÜRKİYE

Tel: +90 216 575 88 80 Fax: +90 216 575 89 21 mail: info@fti-europe.com

Laboratuvar / *Laboratory*

Çakıl Mahallesi Şehit Tamer Aydın Sok. No:60 / A 34540 Çatalca / İstanbul / TÜRKİYE

Tel : +90 212 776 42 25 Fax: +90 212 776 40 58-59 mail: info@fti-europe.com

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0531-T

AB-0531-T
020.557.1 / 2016
05 / 2016

DENEY SERTİFİKASI / *Test Certificate*

Müşterinin Adı ve Adresi / *Customer's Name & Address:* Asist Alüminyum Profil San. ve Tic. A.Ş.

Kırklareli OSB. 2.Cadde No:2 Kızılcıkdere / Kırklareli / TÜRKİYE

Referans No / *Reference No:* 2015.462

Numunenin Adı ve Tarifi / *Sample's Name & Description:* Asistal LS 60 Series Hebe-Schiebe System

Numunenin Kabul Tarihi / *Receipt Date of Test Item:* 15 / 04 / 2016

Uygulanan Normlar / *Norms Applied:* TS EN 1026, TS EN 1027, TS EN 12211

Sonuçlar / *Results:*

Air Permeability - EN 12207 : Class 4 (for negative) ; Class 3 (for positive)

Watertightness - EN 12208 : Class 9A

Wind Resistance - EN 12210 : Class C3 (± 1200Pa ; for L/300 criteria)

Test Tarihi / *Date of Test*

22 / 04 / 2016

Sayfa Sayısı / *Number of Pages*

1 / 22

Türk Akreditasyon Kurumu (TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği (EA) ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanınma anlaşması imzalamıştır.

The Turkish Accreditation Agency (TURKAK) is signatory to the multilateral aggreements of the European co - operation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognation of test reports.

Uygulanan metodlar, test sonuçları ve genişletilmiş ölçüm belirsizlikleri (talep edilirse), bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir. Bu sertifika yanlız test edilen numuneye ait sonuçları içerir ve ekte sunulan ilgili test raporu ile birlikte geçerlidir.

The applied methods, test results and the uncertainties (if requested) with confidence probability are given on the following pages which are part of this report. This certificate includes the test specimen which is identified above and its valid with the related test report which is presented as annex.

Mühür / *Seal*

FAÇADE TESTING INSTITUTE FTI

Tarih / *Date*

05 / 05 / 2016

Test Faaliyetleri Yöneticisi

Testing Manager

Semat ÇOLAK

Laboratuvar Müdürü

Laboratory Manager

Öner ARSLAN

F.15.22 REV NO: D TEMMUZ 2015

TEST REPORT

Report Number	:	020.557.1 / 2016
Report Date	:	05 / 05 / 2016
Testing Reference	:	TS EN 14351-1 + A1 Windows and Doors - Product Standard
Product	:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM
Client	:	Asist Alüminyum Profil San. ve Tic. A.Ş.

1. PREFACE

This report comprises of tests and results, which were performed by FTI Facade Testing Institute at the address; Çakıl Mah. Şehit Teğmen Tamer Aydın Sok. No:60/A 34540 Çatalca - Istanbul / TURKIYE. Test sample is a window system which name is ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM which has been produced and designed by Asist Alüminyum Profil San. ve Tic. A.Ş.
Tests were carried out on 22 / 04 / 2016 for the determination of air infiltration, water penetration (under static pressure) and wind resistance performances.
Test sample has been sent to FTI Façade Testing Institute's testing laboratories on 15 / 04 / 2016.

2. CLIENT

Asist Alüminyum Profil San. ve Tic. A.Ş.
Kırklareli OSB. 2.Cadde No:2
Kızılcıkdere / Kırklareli / TÜRKİYE

3. TEST METHODS

The above mentioned tests have been carried out as per the test methods provided in project specifications and classified on the standards indicated below. Tests have been reported as the number of 020.557.1/2016.
Test report has been prepared by Mr. Sinan BAYRAKTAR

EN 14351-1+ A1	* Windows and Doors – Product Standard
EN 1026	* Windows and Doors – Air Permeability – Test Method
EN 12207	* Windows and Doors – Air Permeability – Classification
EN 1027	* Windows and Doors – Watertightness – Laboratory Tests under Static Pressure
EN 12208	* Windows and Doors – Watertightness – Classification
EN 12211	* Windows and Doors – Resistance to Wind Load – Test Method
EN 12210	* Windows and Doors – Resistance to Wind load – Classification

4. TEST DATE AND PARTICIPANTS

Tests were performed on 22 / 04 / 2016 with the following participants:

Mr. Öner ARSLAN	FTI	Laboratory Manager
Mr. Serhat ÇOLAK	FTI	Testing Manager
Mr. Murat GÖL	FTI	Testing Engineer
Mr. Sinan BAYRAKTAR	FTI	Testing Engineer

and the witnesses;

Mr. Gökhan ÇAYLI	Asist Alüminyum Profil San. ve Tic. A.Ş.

5. DESCRIPTION OF TEST SAMPLE

Type of sample	HEBE-SCHIEBE SYSTEM
System Name	ASISTAL LS 60 SERIES
Dimension of Sample (L x H)	2000 mm x 2000 mm
Surface area of Sample	4,00 m^2
Operable Joint Length	12 m
Glass Type	6 mm Tempered Glass + 16 mm Air Space + 6 mm Tempered Glass

6. CONDITIONS

	22 / 04 / 2016
Local Temperature	16 ºC
Humidity	68 %
Atmospheric Pressure	1011 Mbar

7. TEST PERFORMANCE

7.1 Pressure Sequence

Related to EN 14351-1 + A1 standard, process are shown in Table 1 below.

STEPS		POSITIVE PRESSURE (Pa)	NEGATIVE PRESSURE (Pa)
1	PA	600	600
2	PW	750	-
3	PD	1200	1200
4	PE	1800	1800

Table 1. Pressure sequence

PA: Pressure for Airtightness ; PW: Pressure for Watertightness ;
PD: Design Pressure ; PE: Extreme Pressurre

7.2 Air Permeability

Before starting the test, 3 pulses at 990 Pa is applied to the sample. During the tests, the pressure at the following values is applied for 10 seconds. The measurements of air permeability based on overall area and operable joint length are shown as below.

Air permeability measurements based on overall area;

POSITIVE PRESSURE			
ϕ_1	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m²)
ϕ_1	50	1,76	0,44
ϕ_1	100	7,64	1,91
ϕ_1	150	14,05	3,51
ϕ_1	200	22,39	5,60
ϕ_1	250	28,52	7,13
ϕ_1	300	33,08	8,27
ϕ_1	450	43,45	10,86
ϕ_1	600	52,98	**13,25**

***Test No : 2015.462.17** / 22.04.2016*

NEGATIVE PRESSURE			
ϕ_2	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m²)
ϕ_2	50	0,04	0,01
ϕ_2	100	0,16	0,04
ϕ_2	150	1,78	0,44
ϕ_2	200	3,36	0,84
ϕ_2	250	4,84	1,21
ϕ_2	300	6,28	1,57
ϕ_2	450	10,64	2,66
ϕ_2	600	14,07	**3,52**

***Test No : 2015.462.18** / 22.04.2016*

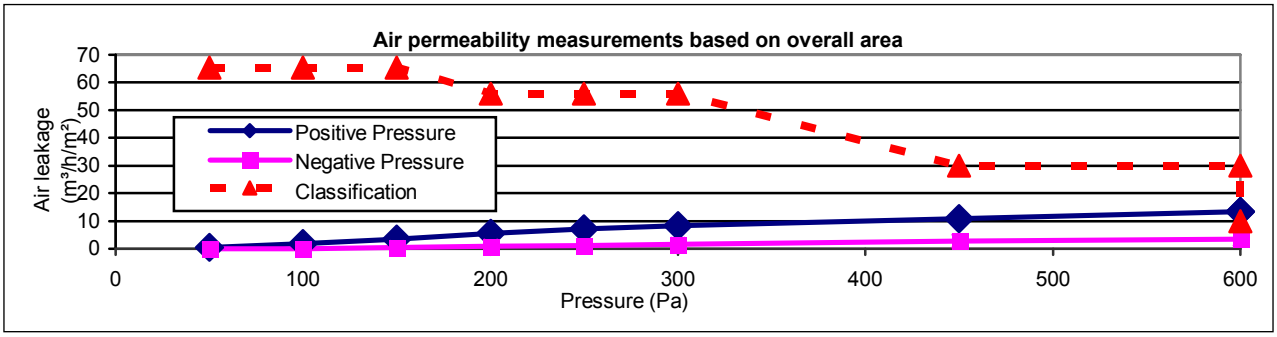
Air permeability measurements based on operable joint length;

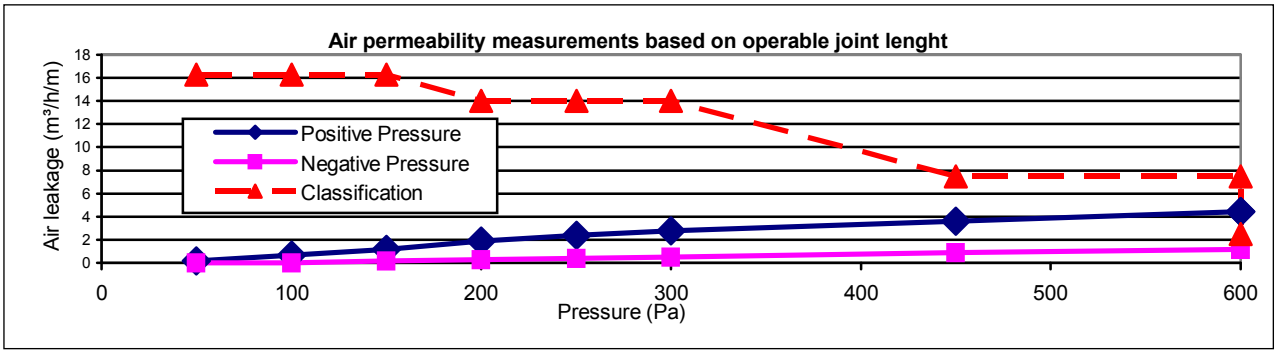
POSITIVE PRESSURE			
ϕ_3	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m)
ϕ_3	50	1,76	0,15
ϕ_3	100	7,64	0,64
ϕ_3	150	14,05	1,17
ϕ_3	200	22,39	1,87
ϕ_3	250	28,52	2,38
ϕ_3	300	33,08	2,76
ϕ_3	450	43,45	3,62
ϕ_3	600	52,98	**4,42**

***Test No : 2015.462.17** / 22.04.2016*

NEGATIVE PRESSURE			
ϕ_4	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m)
ϕ_4	50	0,04	0,00
ϕ_4	100	0,16	0,01
ϕ_4	150	1,78	0,15
ϕ_4	200	3,36	0,28
ϕ_4	250	4,84	0,40
ϕ_4	300	6,28	0,52
ϕ_4	450	10,64	0,89
ϕ_4	600	14,07	**1,17**

***Test No : 2015.462.18** / 22.04.2016*





7.3 Watertightness Under Static Pressure

Before starting the test, 3 pulses at 825 Pa were applied to the sample. Waiting duration between each impacts were 3 seconds. An adjustable device for spraying water 2,0 l/m².min so that a constant and continuous film was applied to the outside surface of the specimen.

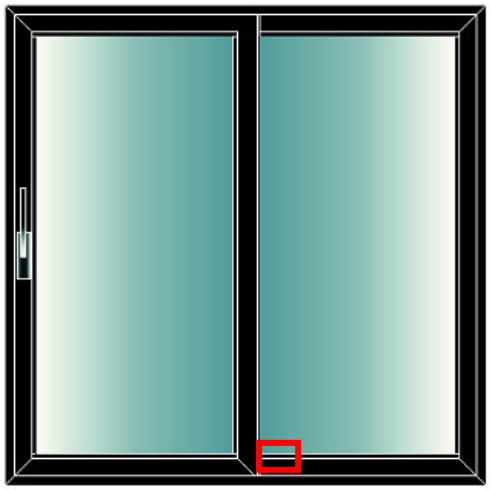
The amount of water applied to the facade = 2,0 l/min x 4,00 m² = 8,00 l/min. = 480,0 l/h

Observations

Pressure Value (Pa)	Time Period (min)	Observations
0	15	No water leakage was observed.
50	5	No water leakage was observed.
100	5	No water leakage was observed.
150	5	No water leakage was observed.
200	5	No water leakage was observed.
250	5	No water leakage was observed.
300	5	No water leakage was observed.
450	5	No water leakage was observed.
600	5	No water leakage was observed.
750	5	Water leakage was observed* (**** Figure 1)***

Test No : 2015.462.16 */ 22.04.2016*

** Water came from water drainage channel to inner channel.*



**** Figure 1: Schematic demonstration of where water leaked.***

7.3. Resistance to Wind Load

Before starting the test, 3 pulses at 1320 Pa for positive and negative design load test. Waiting duration between each impacts were 3 seconds. During the tests, the test pressure values are applied for 30 seconds.
Acceptable proportion at resistance to wind load:
Position: Vertical distance for mullion at middle axis
Scale: **Vertical 2000 mm**
The measured frontal deflection between points of the structural support should not exceed the minimum of 1/300 or 1/200 or 1/150 of the framing member's span. The limit values are as below:
L=2000 L/ 300 = 6,66 mm L/200 = 10,00 mm L/150 = 13,33 mm

Specimen dimensions and sensor replacement coordinates;

	X coordinates (mm)	Y coordinates (mm)
External Dimensions	2000	2000
Sensor 1 Replacement	1020	80
Sensor 2 Replacement	1020	920
Sensor 3 Replacement	1020	1920

Frontal deflection measurement results on the profile;

Positive Pressure (Pa)	Point 1 (mm)	Point 2 (mm)	Point 3 (mm)	Frontal Deflection λ_1 (mm)
0	0,0	0,0	0,0	0,0
1200	1,94	5,01	3,53	2,27
0	0,01	0,03	0,00	0,03

***Test No : 2015.462.20** / 22.04.2016*

Negative Pressure (Pa)	Point 1 (mm)	Point 2 (mm)	Point 3 (mm)	Frontal Deflection λ_2 (mm)
0	0,0	0,0	0,0	0,0
1200	1,82	5,03	3,84	2,20
0	0,00	0,03	0,00	0,03

***Test No : 2016.462.19** / 22.04.2016*

Relevant to limit values, the specimen's frontal deflection values are suitable according to requirements of EN 12210 standard as seen above table. As a consequence, no damage was observed at ± 1200 Pa on the sample at the end of the wind resistance test.

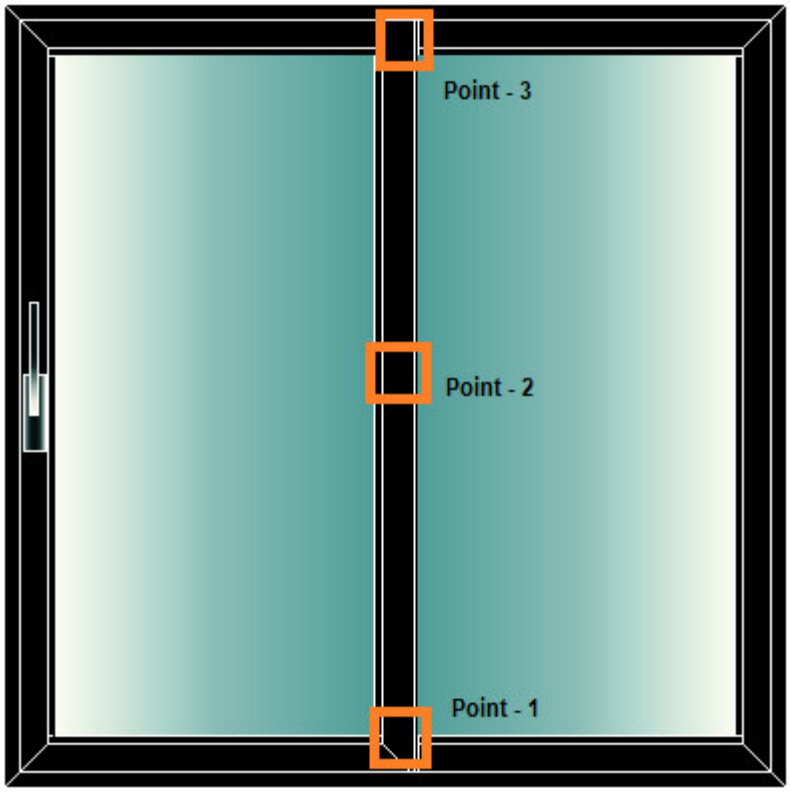
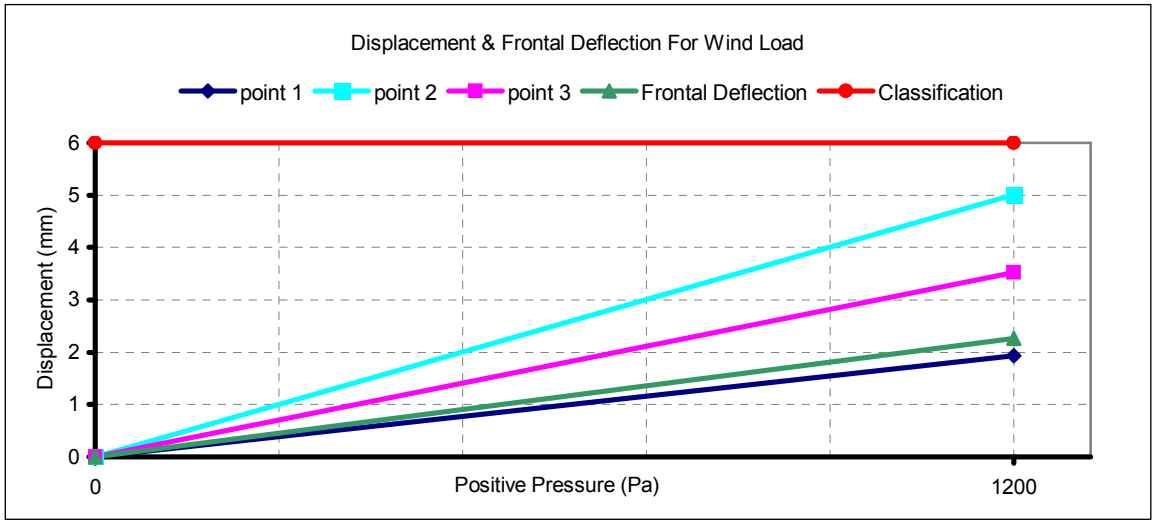
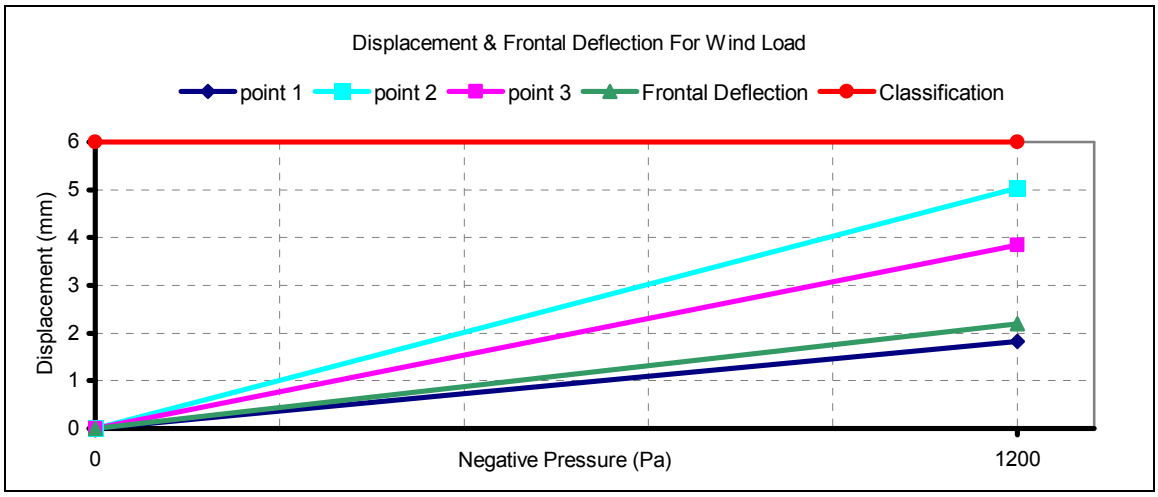
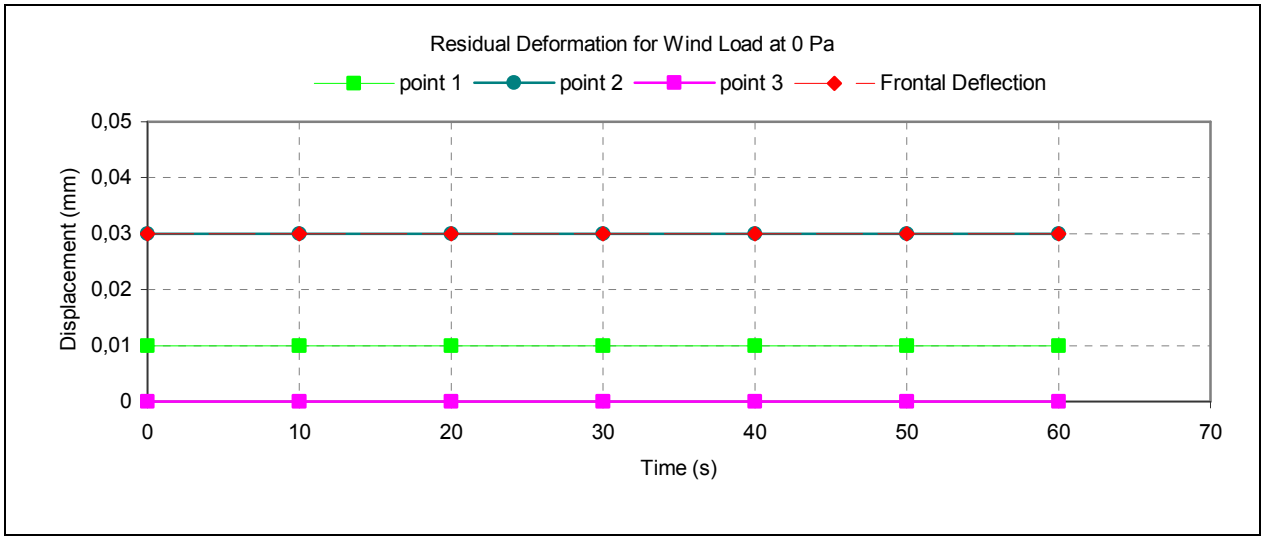
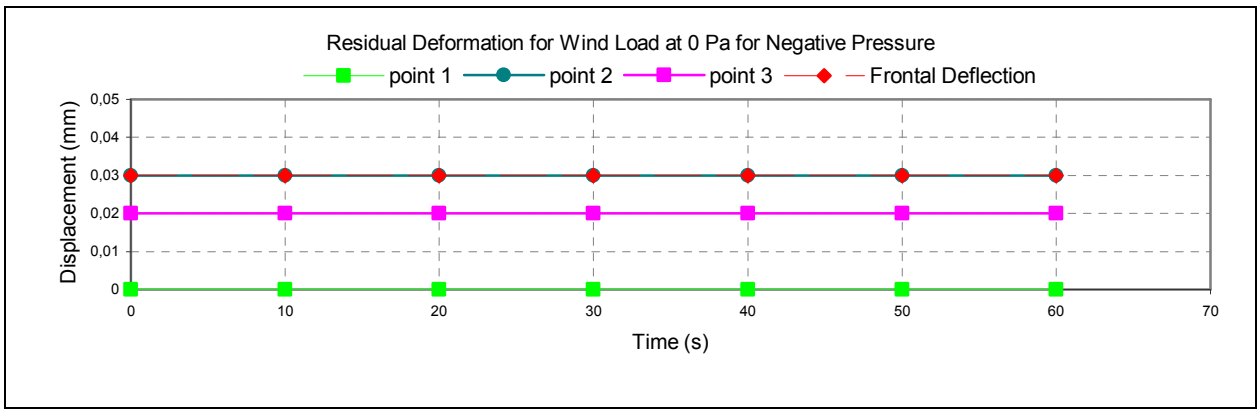


Figure 2. The view of specimen's frontal deflection's measurements location


Displacement & Frontal Deflection For Wind Load
point 1
point 2
point 3
Frontal Deflection
Classification
Displacement (mm)
0
1
2
3
4
5
6
0
Positive Pressure (Pa)
1200


Displacement & Frontal Deflection For Wind Load
point 1
point 2
point 3
Frontal Deflection
Classification
Displacement (mm)
0
1
2
3
4
5
6
0
Negative Pressure (Pa)
1200





7.5 Cycle

The test specimen was subjected to 50 cycles including negative and positive pressures, with the following features:

-Test pressure equal 600 Pa ;

- First step was negative, next was positive as was the last sequence of 50 impulses;

- Value ± 600 Pa was maintained at for 5 s. After completion of the 50 cycles, there was no damage observed on the sample at the end of the test. ± 600 Pa were applied for 50 cycle.

(***Test no: 2015.462.23*** / 22.04.2016)

7.6 Air Permeability (Repeat)

Before starting the test, 3 pulses at 990 Pa is applied to the sample. During the tests, the pressure at the following values is applied for 10 seconds.

Air permeability measurements based on overall area ;

POSITIVE PRESSURE			
ϕ_5	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m²)
ϕ_5	50	2,88	0,72
ϕ_5	100	11,68	2,92
ϕ_5	150	17,70	4,42
ϕ_5	200	23,26	5,82
ϕ_5	250	28,15	7,04
ϕ_5	300	31,17	7,79
ϕ_5	450	40,08	10,02
ϕ_5	600	47,45	**11,86**

***Test No : 2016.462.21** / 22.04.2016*

NEGATIVE PRESSURE			
ϕ_6	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m²)
ϕ_6	50	1,40	0,35
ϕ_6	100	1,75	0,44
ϕ_6	150	0,44	0,11
ϕ_6	200	0,79	0,20
ϕ_6	250	1,73	0,43
ϕ_6	300	2,97	0,74
ϕ_6	450	6,29	1,57
ϕ_6	600	9,57	**2,39**

***Test No : 2016.462.22** / 22.04.2016*

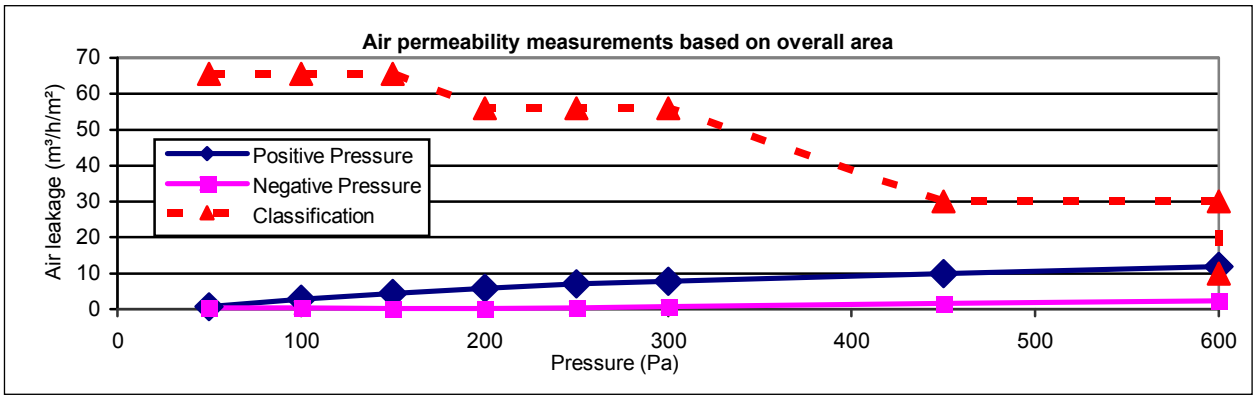
Air permeability measurements based on operable joint length;

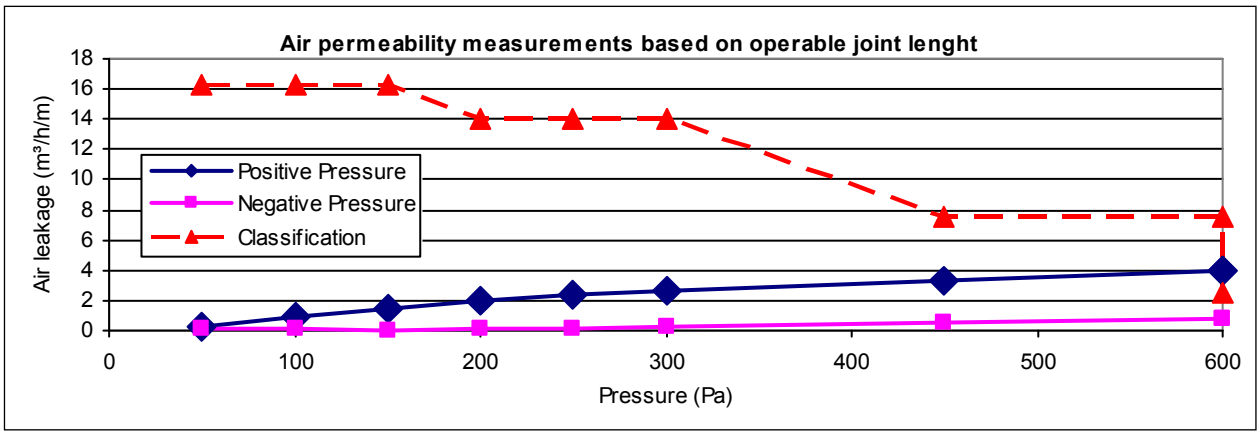
POSITIVE PRESSURE			
ϕ_7	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m)
ϕ_7	50	2,88	0,24
ϕ_7	100	11,68	0,97
ϕ_7	150	17,70	1,47
ϕ_7	200	23,26	1,94
ϕ_7	250	28,15	2,35
ϕ_7	300	31,17	2,60
ϕ_7	450	40,08	3,34
ϕ_7	600	47,45	**3,95**

***Test No : 2016.462.21/** 22.04.2016*

NEGATIVE PRESSURE			
ϕ_8	Test Pressure (Pa)	Air Leakage (m³/h)	Air Leakage (m³/h/m)
ϕ_8	50	1,40	0,12
ϕ_8	100	1,75	0,15
ϕ_8	150	0,44	0,04
ϕ_8	200	0,79	0,07
ϕ_8	250	1,73	0,14
ϕ_8	300	2,97	0,25
ϕ_8	450	6,29	0,52
ϕ_8	600	9,57	**0,80**

***Test No : 2016.462.22** / 22.04.2016*





7.7 Increased Load Test (Safety Test - Secure Load)

Test Pressure	Applied		Observations
	Positive	Negative	
PE = 1800 Pa	1800	1800	No damage was observed on the sample

***Test No : 2015.462.24** / 22.04.2016*

***Test No : 2015.462.25** / 22.04.2016*

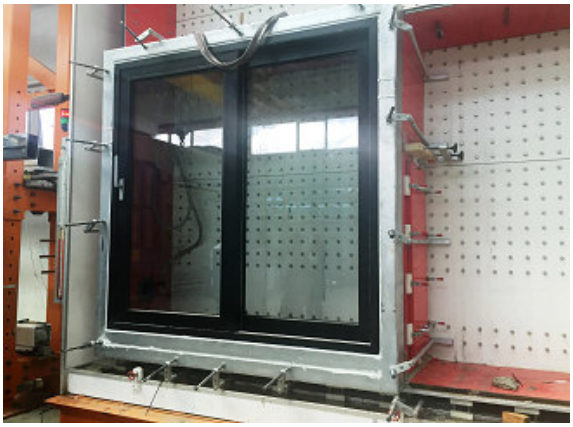
8. RESULTS

	CONDITIONS	RESULTS		CLASSIFICATION	FINAL
AIR PERMEABILITY EN 12207	at 900 Pa ϕ_1 < 10 m³/(h.m²) at 900 Pa ϕ_2 < 2,5 m³/(h.m)	Positive Pressure	ϕ_1=13,25 ϕ_2=4,42	**Class 3**	**Class 3**
	at 900 Pa ϕ_3 < 10 m³/(h.m²) at 900 Pa ϕ_4 < 2,5 m³/(h.m)	Negative Pressure	ϕ_3=3,52 ϕ_4=1,17	**Class 4**	**Class 4**
WATERTIGHTNESS (Static Pressure) EN 12208	There should be no water leakage at 750 Pa	Water leakage was observed at 750 Pa		**Class 9A**	**Class 9A**
RESISTANCE TO WIND LOAD (Design Load) EN 12210	1200 Pa, C = L/300 = 6,66 mm λ_1 < C	Positive Pressure	λ_1 = 2,27 mm	**Class C3**	**Class C3**
	1200 Pa, C = L/300 = 6,66 mm λ_2 < C	Negative Pressure	λ_2 = 2,20 mm	**Class C3**	**Class C3**
CYCLE TEST	There should be no damage during the test + 600 Pa and – 600 Pa for 50 cycle	No damage was observed on the sample.		**OK**	**OK**
AIR PERMEABILITY EN 12207 (Repeat)	at 600 Pa ϕ_1 < 10 m³/(h.m²) at 600 Pa ϕ_2 < 2,5 m³/(h.m)	Positive Pressure	ϕ_5=11,86 ϕ_6=3,95	**Class 3**	**Class 3**
	at 600 Pa ϕ_3 < 10 m³/(h.m²) at 600 Pa ϕ_4 < 2,5 m³/(h.m)	Negative Pressure	ϕ_7=2,39 ϕ_8=0,80	**Class 4**	**Class 4**
AIR PERMEABILITY (Compare)	ϕ_5 < 15,09 m³/(h.m²) ϕ_6 < 5,30 m³/(h.m)	Positive Pressure	ϕ_5=11,86 ϕ_6=3,95	**OK**	**OK**
	ϕ_7 < 4,22 m³/(h.m²) ϕ_8< 1,40 m³/(h.m)	Negative Pressure	ϕ_7=2,39 ϕ_8=0,80	**OK**	
RESISTANCE TO SAFETY LOAD EN 12210	There should be no damage at +1800 Pa and -1800 Pa.	There was no damage on the sample.		**OK**	**OK**

Laboratory entrance of the sample

Laboratory entrance of the sample

Assembly process



Assembly process

Testing process

Testing process

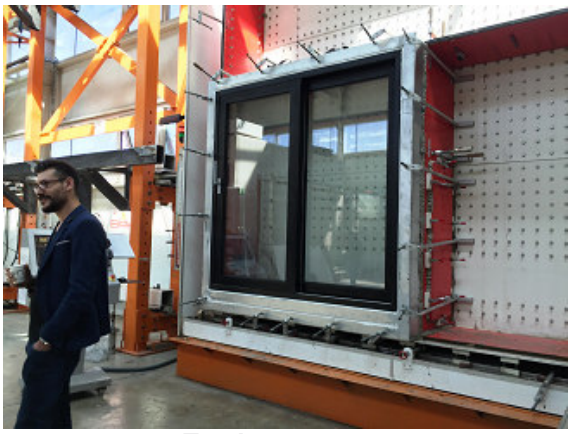
Testing process

Testing process

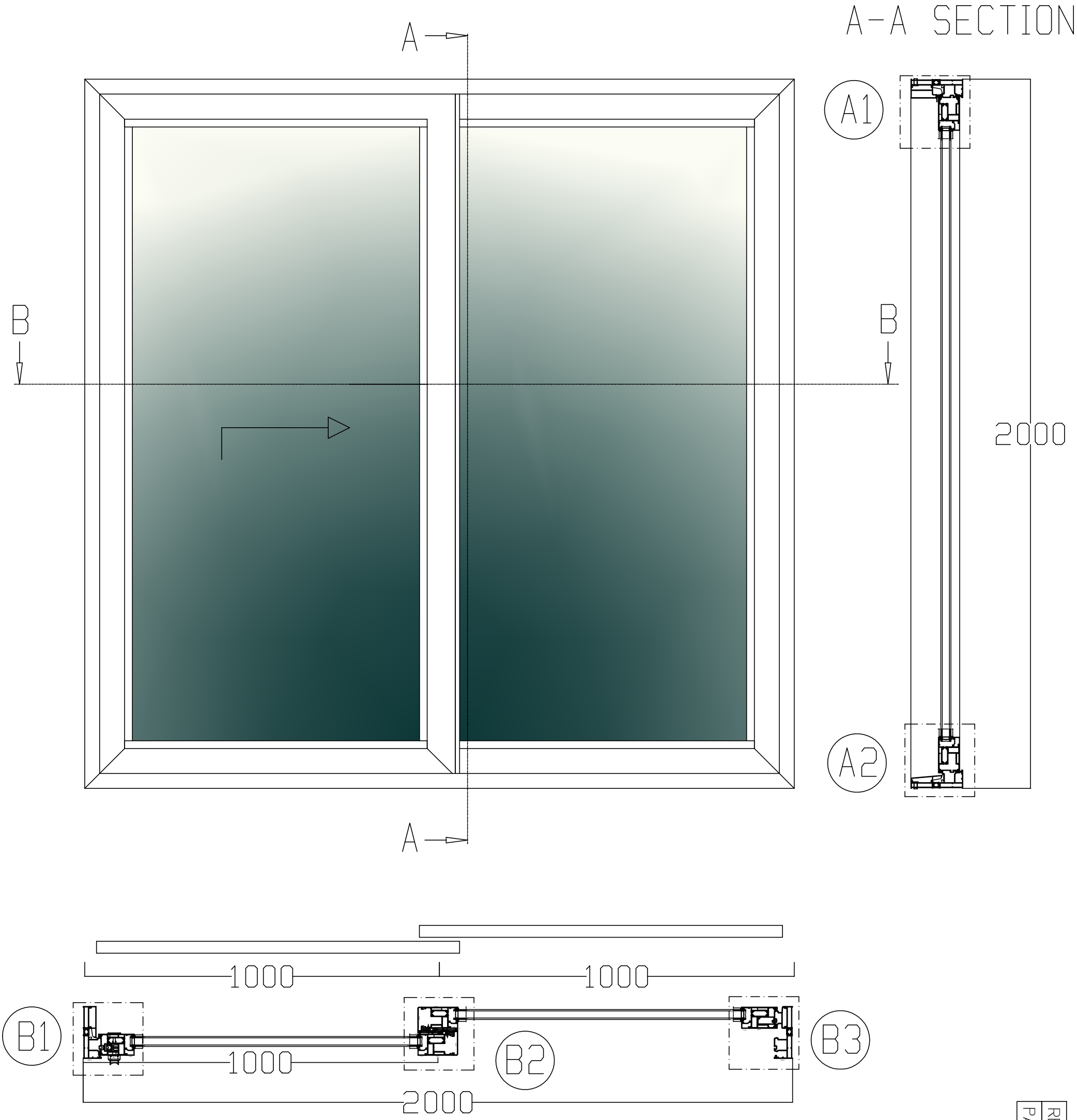
Testing process

Testing process

Testing process



Testing process



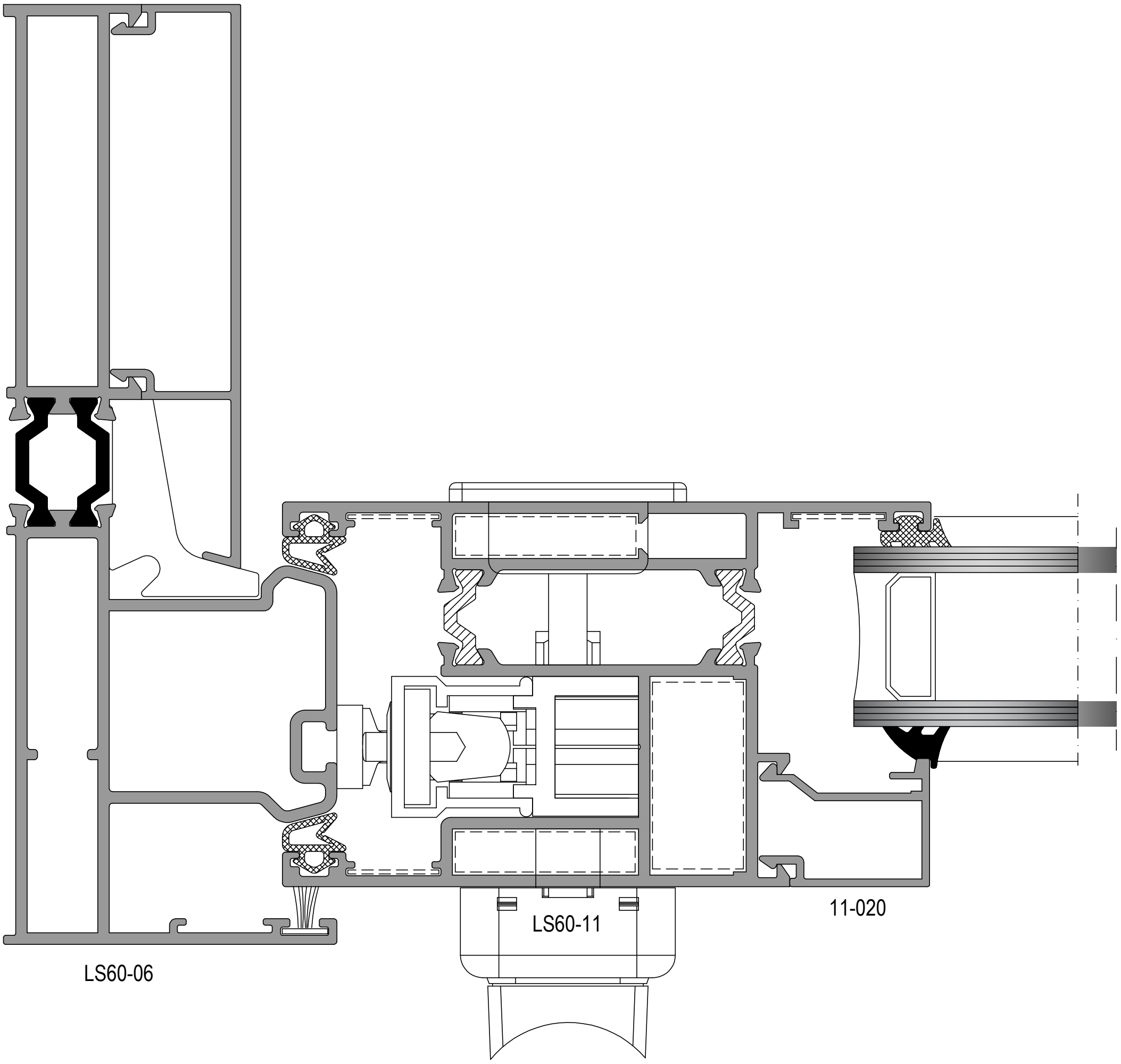
A-A SECTION

B-B SECTION

REPORT NO: 020.557.I/2016

PAGE NO: 16 / 22

NOTIFIED BODY NO:	NB-2547	PROJECT	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.ÇOLAK	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	Ö.ARSLAN	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		

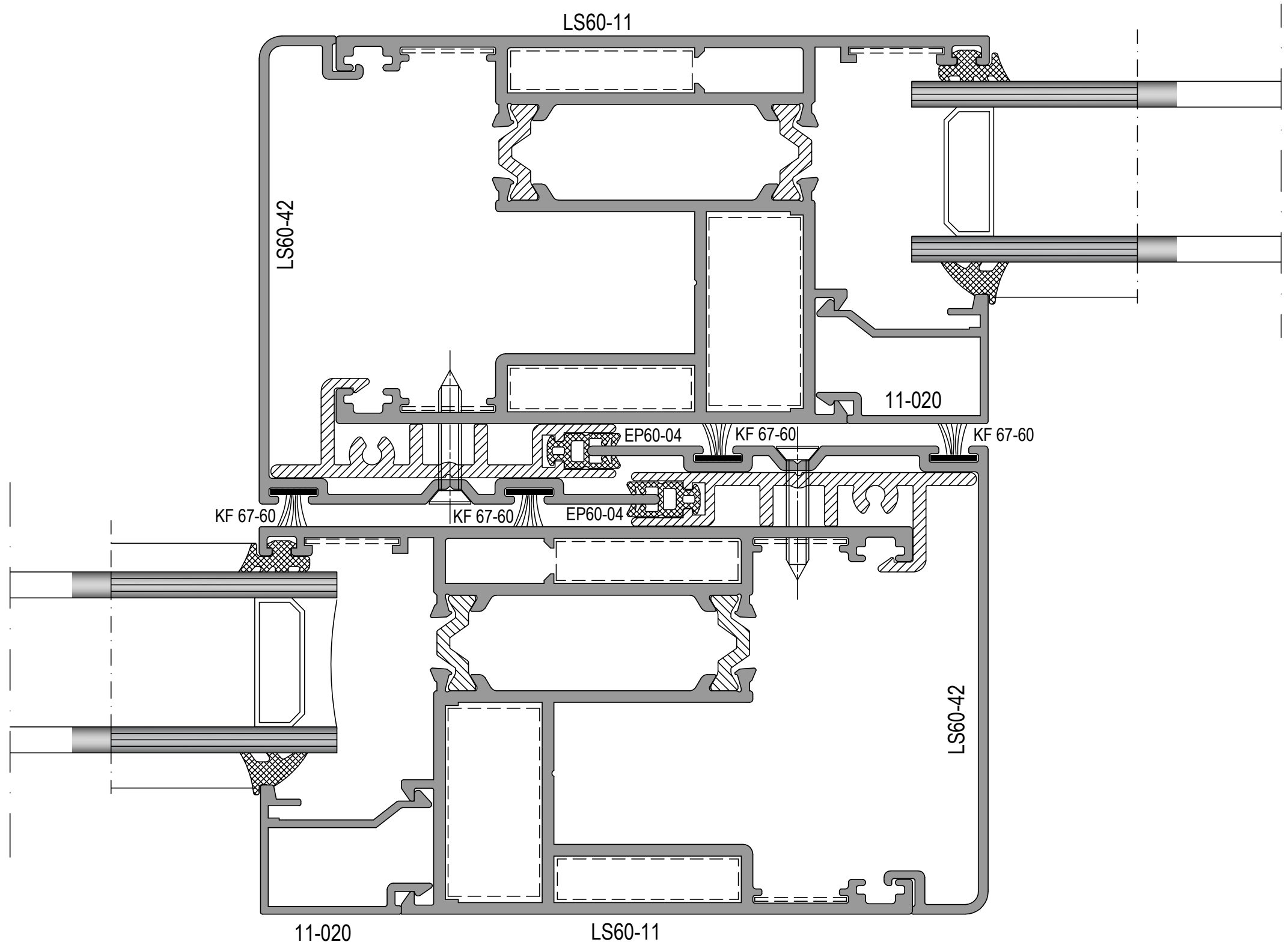


B1

B-B SECTION

REPORT NO:	020.557.I/2016
PAGE NO:	17 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM B-B SECTION BI ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		

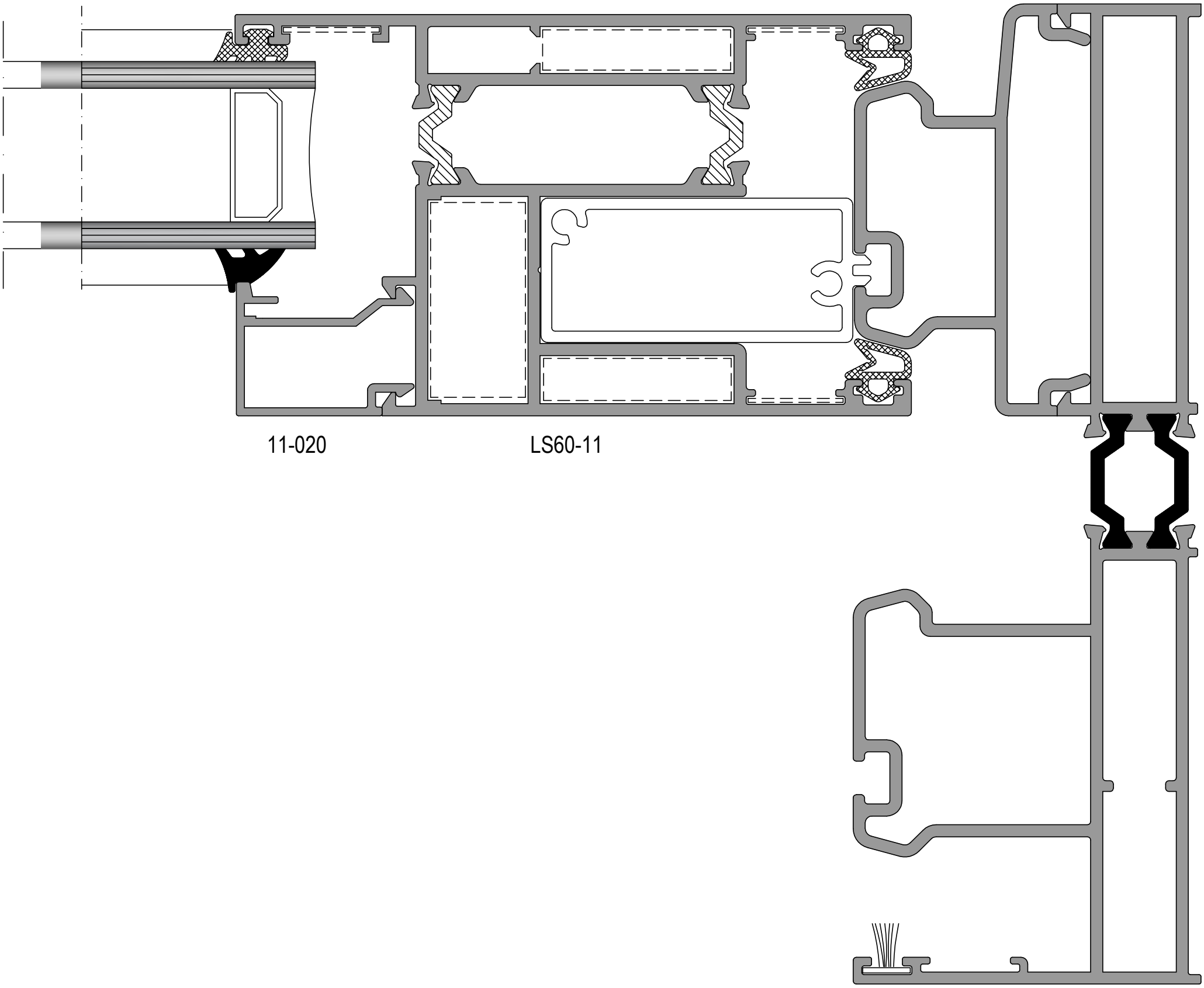


B2

B-B SECTION

REPORT NO:	020.557.I/2016
PAGE NO:	18 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM B-B SECTION B2 ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		

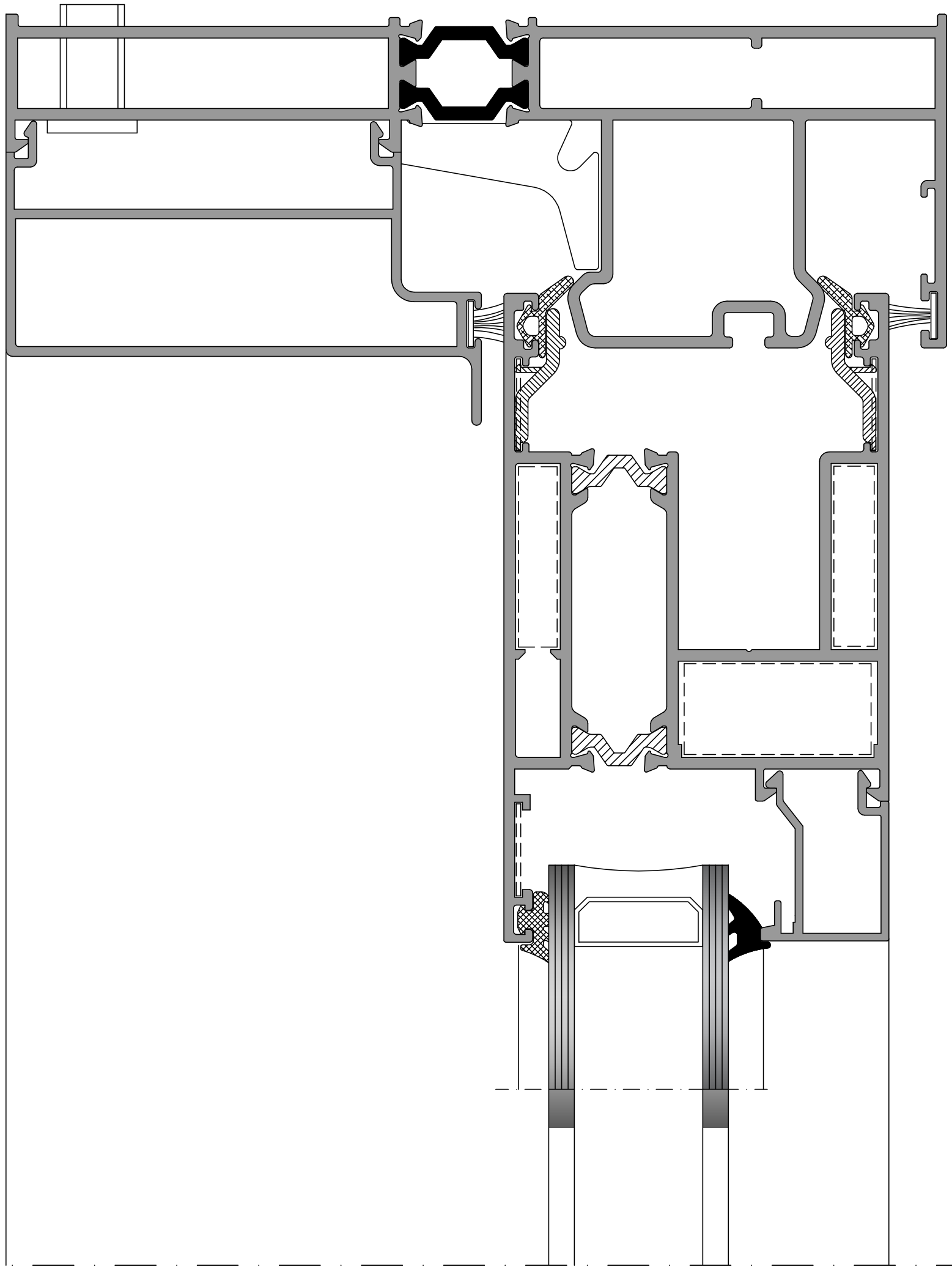


B3

B-B SECTION

REPORT NO:	020.557.I/2016
PAGE NO:	19 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM B-B SECTION BI ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		

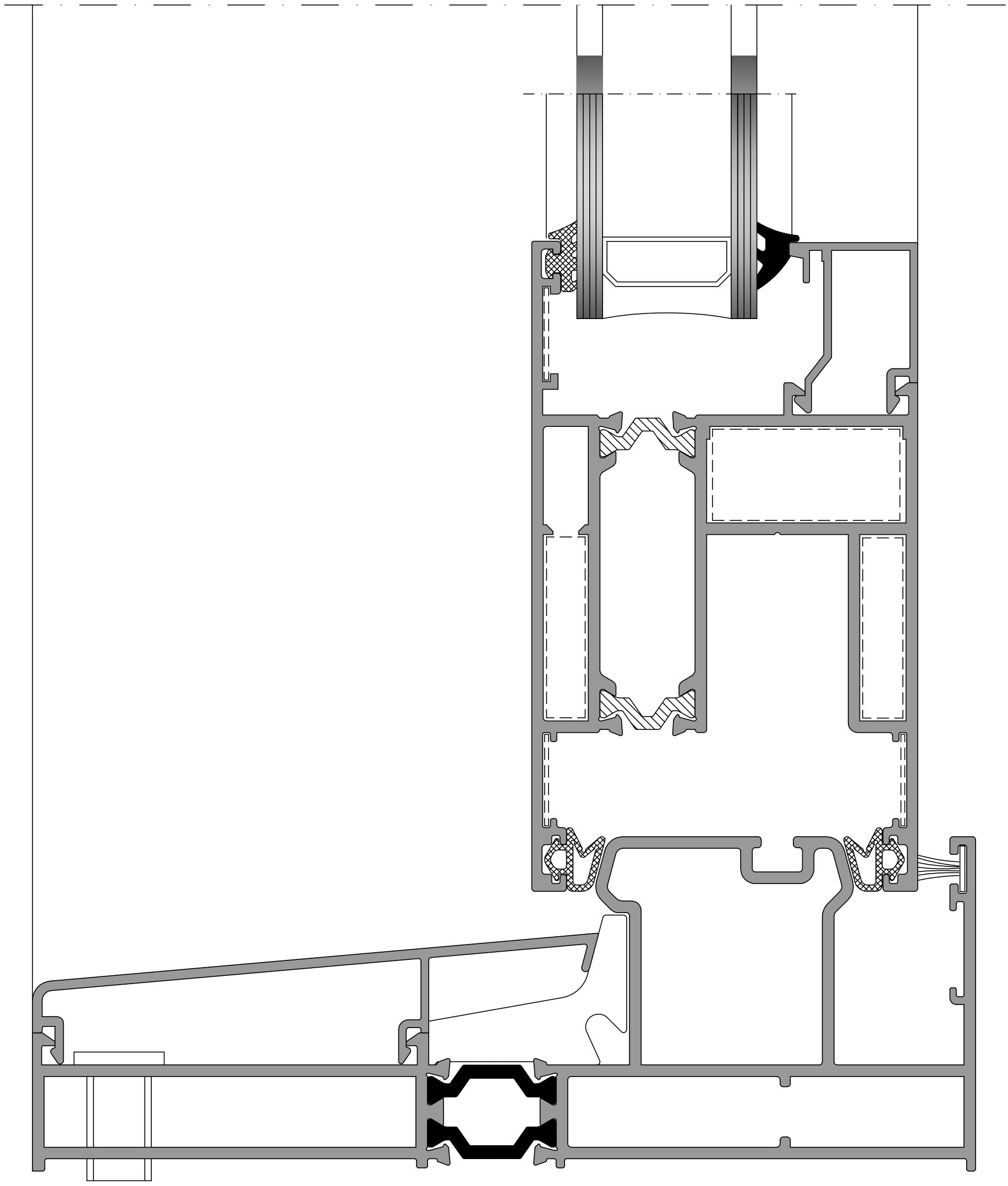


A1

A-A SECTION

REPORT NO:	020.557.I/2016
PAGE NO:	20 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM A-A SECTION AI ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		

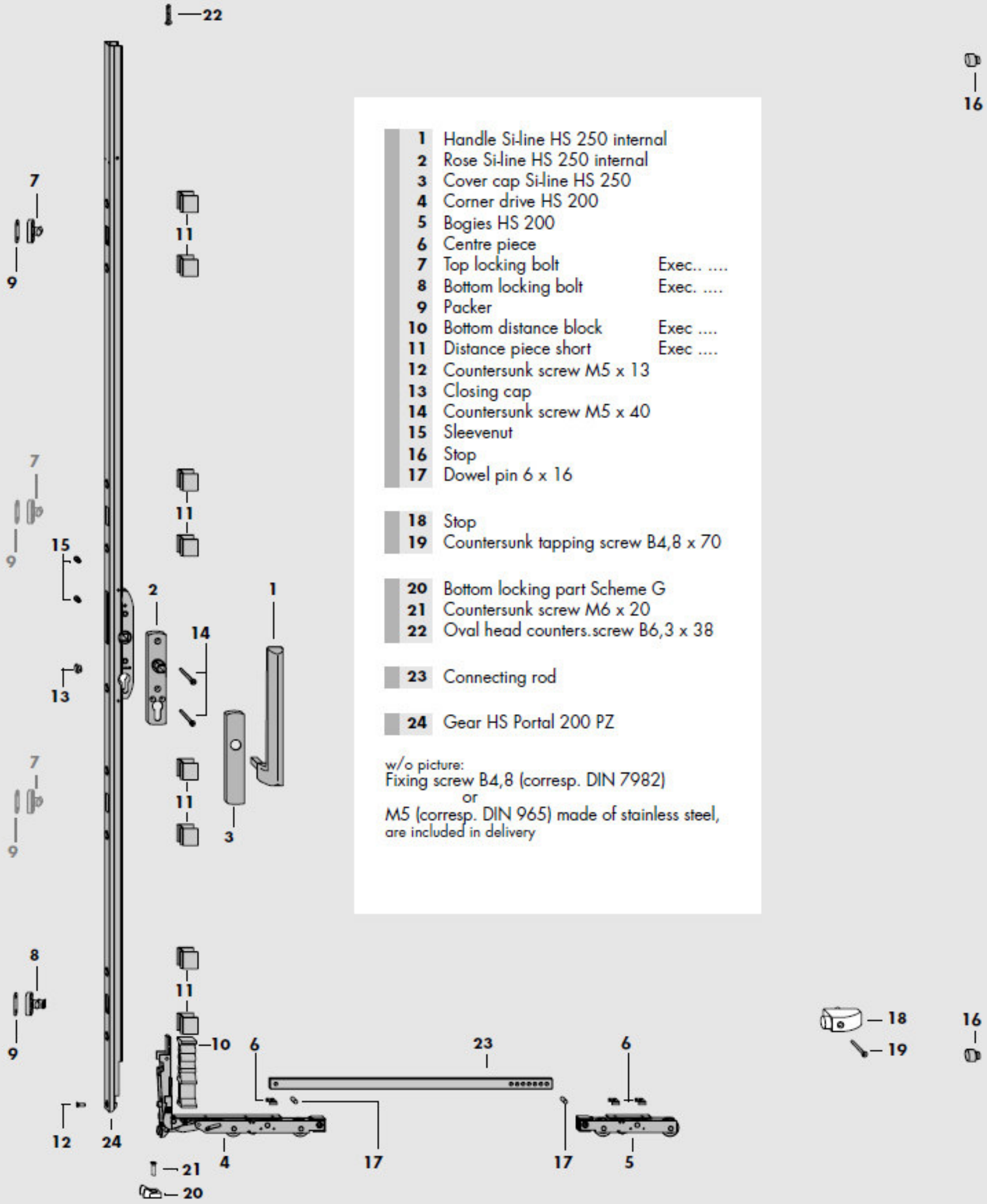


A2

A-A SECTION

REPORT NO:	020.557.I/2016
PAGE NO:	21 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM B-B SECTION BI ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		



1	Handle Si-line HS 250 internal	
2	Rose Si-line HS 250 internal	
3	Cover cap Si-line HS 250	
4	Corner drive HS 200	
5	Bogies HS 200	
6	Centre piece	
7	Top locking bolt	Exec.. ....
8	Bottom locking bolt	Exec. ....
9	Packer	
10	Bottom distance block	Exec ....
11	Distance piece short	Exec ....
12	Countersunk screw M5 x 13	
13	Closing cap	
14	Countersunk screw M5 x 40	
15	Sleevenut	
16	Stop	
17	Dowel pin 6 x 16	
18	Stop	
19	Countersunk tapping screw B4,8 x 70	
20	Bottom locking part Scheme G	
21	Countersunk screw M6 x 20	
22	Oval head counters.screw B6,3 x 38	
23	Connecting rod	
24	Gear HS Portal 200 PZ	

w/o picture:
Fixing screw B4,8 (corresp. DIN 7982)
or
M5 (corresp. DIN 965) made of stainless steel,
are included in delivery

REPORT NO: 020.557.I/2016
PAGE NO: 22 / 22

NOTIFIED BODY NO:	NB-2547	DETAIL:	ASISTAL LS 60 SERIES HEBE-SCHIEBE SYSTEM SASH / LOCKING DETAILS AND ACCESSORIES ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.		
ACCREDITATION NO:	AB-0531-T				
REPORT NO:	020.557.I/2016	PROJECT CODE:	2015.462	DATE:	05.05.2016
PREPARED BY:	S.BAYRAKTAR	CLIENT:	ASIST ALÜMINYUM PROFIL SAN. VE TIC. A.S.	REV.NO:	A
CONTROL BY:	S. COLAK	EXPLANATION:	AIR INFILTRATION, WATER PENETRATION (UNDER STATIC PRESSURE), WIND RESISTANCE, CYCLE TEST AND EXTREME WIND LOAD RESISTANCE.		