STÅLPROFILSYSTEM SP 6000

NOW ALSO IN STAINLESS!

Profile system with a breached thermal bridge for glazed facades, slanted window sections, glazed roof and lantern lights

COMPLETE PARTITIONS WITH GLASS, INCLUDING ASSEMBLY!

CONTENTS

- Arches
- Calculated U-value
- Broken thermal bridge
- Airborne sound reduction
- Windload- and weather tested
- Fire resistance class E 15
- SP 60000 is patent protected

STÅLPROFILSYSTEM SP 6000

The system has been developed for facades, angled window sections, glazed roofs and lantern lights. The interior profiles are in steel or stainless steel and the exterior facing profiles are available in aluminium, sendzimir galvanised material, stainless steel or copper. The system is tested for airborne noise reduction and comes with a breached thermal bridge for maximum U-value.

STÅLPROFILSYSTEM SP 60000

Patent protected facade system. Stålprofilsystem SP 60000 is tested for weather in a RAWI-BOX at NBI, The Norwegian Building and Construction Research Institute. The system comprises interior steel profiles with exterior facing in aluminium and interior/exterior rubber gaskets that do not need to be sealed.

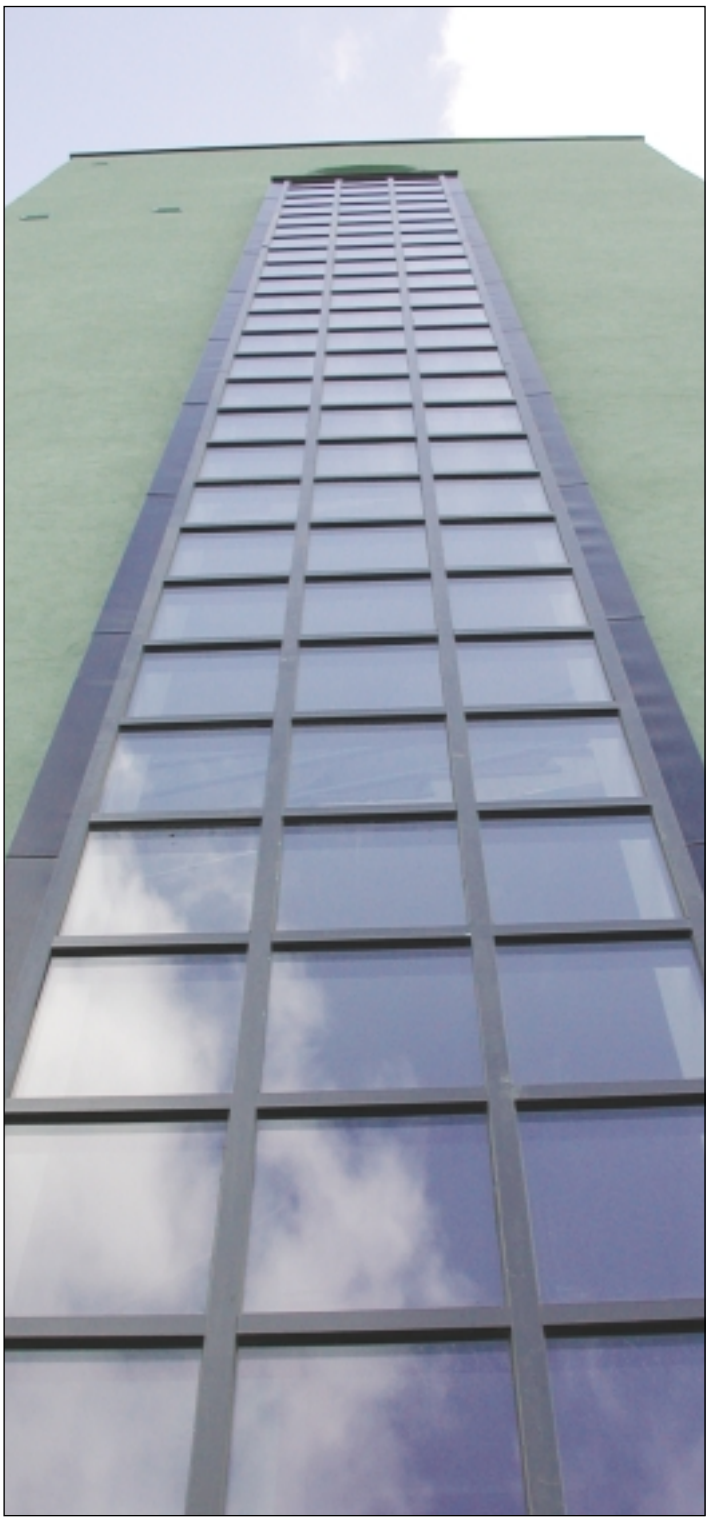
SYSTEM SUMMARY STÅLPROFILSYSTEM

Item Stainless	SP 6000 SP 96000	SP 60000	SP 35000 SP 95000	SP 55000 SP 955000	SP 75000 SP 975000	SP 56500 SP 956500	SP 58000 SP 958000	SP 76500 SP 976500	SP 79000 SP 979000	SP 711000
Height	50/75/120	50/75/120	50	50	50	65	80	65	90	110
Thermal bridge	•	•	-	10	-	25	10	-	-	-
Fire resistance	-	-	-	-	10	-	-	25	50	2 x 25
Wall sections	•	•	E 30/E 60	•	E 30/E 60	•	•	EI 30/E 60	E 60/EI 60	EI 90
Door without midrail	-	-	EI 30/EI 60	•	EI 30/EI 60	•	•	EI 30/A 60/E 60	E 60/EI 60	-
Door with midrail	-	-	A 30	•	A 30	•	•	EI 30/A 60/E 60	E 60/EI 60	-
Window	-	-	E 30/E 60	•	E 30/E 60	•	•	EI 30/E 60	E 60/EI 60	-
Sliding door	-	-	E 30/EI 30/A 30	•	E 30/EI 30/A 30	•	•	EI 30	-	-
Arches	•	-	•	•	•	•	•	EI 30/A 60/E 60	E 60/EI 60	-
Rounded windows	-	-	•	•	•	•	•	EI 30	E 60/EI 60	-
Finger trap gasket	-	-	•	•	•	•	-	•	-	-
Module locks	-	-	•	•	•	•	•	•	•	-
Burglary resistant	-	-	CI 1-3	-	-	-	CI 1-3	-	-	-
Bullet proof	-	-	C1-C5 SF	C1-C5 SF	C1-C5 SF	C1-C5 SF	C1-C5 SF	C1-C5 SF	C1-C5 SF	-
U-value	•	•	-	-	-	•	-	•	•	-
Noise reduction	•	•	-	•	•	•	-	•	•	-

Note: The values for fire resistant and safety classes above are the maximums. Some constructions have lower fire resistant and safety classes.
Fire resistant classes above comply with SITAC type approval certificates. Please refer to each systems catalogue for further details.

STÅLPROFIL ONLINE AND ON CD

You can now get the latest updates and news from Stålprofil by visiting our web site at *www.stalprofil.se* The site contains profiles and drawings from Stålprofil in downloadable file formats. Our latest catalogue is also available for download as PDF files. All of the drawings are in DWG format compatible with AutoCAD and DXF for other technical drawing software. To simplify the construction process our drawings have been created in layers and have insertion points. To further facilitate construction we have also created a library of symbols that are compatible with AutoCAD and can be easily used with the software. There is a CD available containing the drawings and profile systems. You can request the catalogue and receive the accompanying CD by e–mailing us at *cd@stalprofil.se* or fax to *+46 522–120 46*.



CONTENT

STÅLPROFILSYSTEM SP 6000

STÅLPROFILSYSTEM SP 6000 with a breached thermal bridge from Stålprofil has been constructed and developed for use in environments that make great demands on good insulation, architectural design, stability and safety regarding glazed facades and roofs, angled window sections, and lantern lights.

SP 6000 was designed for Scandinavian climate conditions and is an ideal solution at a competative price level for office premises, hotels, airports, shopping and cultural centres, sports halls, industrial and administrative buildings as well as glazed squares, pedestrian areas and lantern lights.

Construction and material

The profile system is constructed around a specially designed steel support profile which acts as the static support section. The design allows for high static loads to be absorbed at a very low deadweight.

The supporting profile is 60 mm wide with alternating depth allowing flexibility with regard to architectural design. For further details and a choice of profiles please refer to the profile dimension table.

The exterior facing profile is available in aluminium, sendzmir galvanised steel, stainless or copper. The facing profile in aluminium is also available in special designs for unique constructions.

Specially designed drainage profiles in aluminium with rubber gaskets allowing maximum tightness are included in glazed roof and lantern light profiles.

The drainage profiles have an even contact surface against the supporting profiles which means that standard tubes type KKR or RHS can also be used as supporting profiles. This flexibility allows you to construct glazed roofs and lantern lights in a variety of designs.

Profile system SP 6000 is designed to offer alternative and flexible solutions to your construction demands and are adaptable for use with opening aluminium windows.

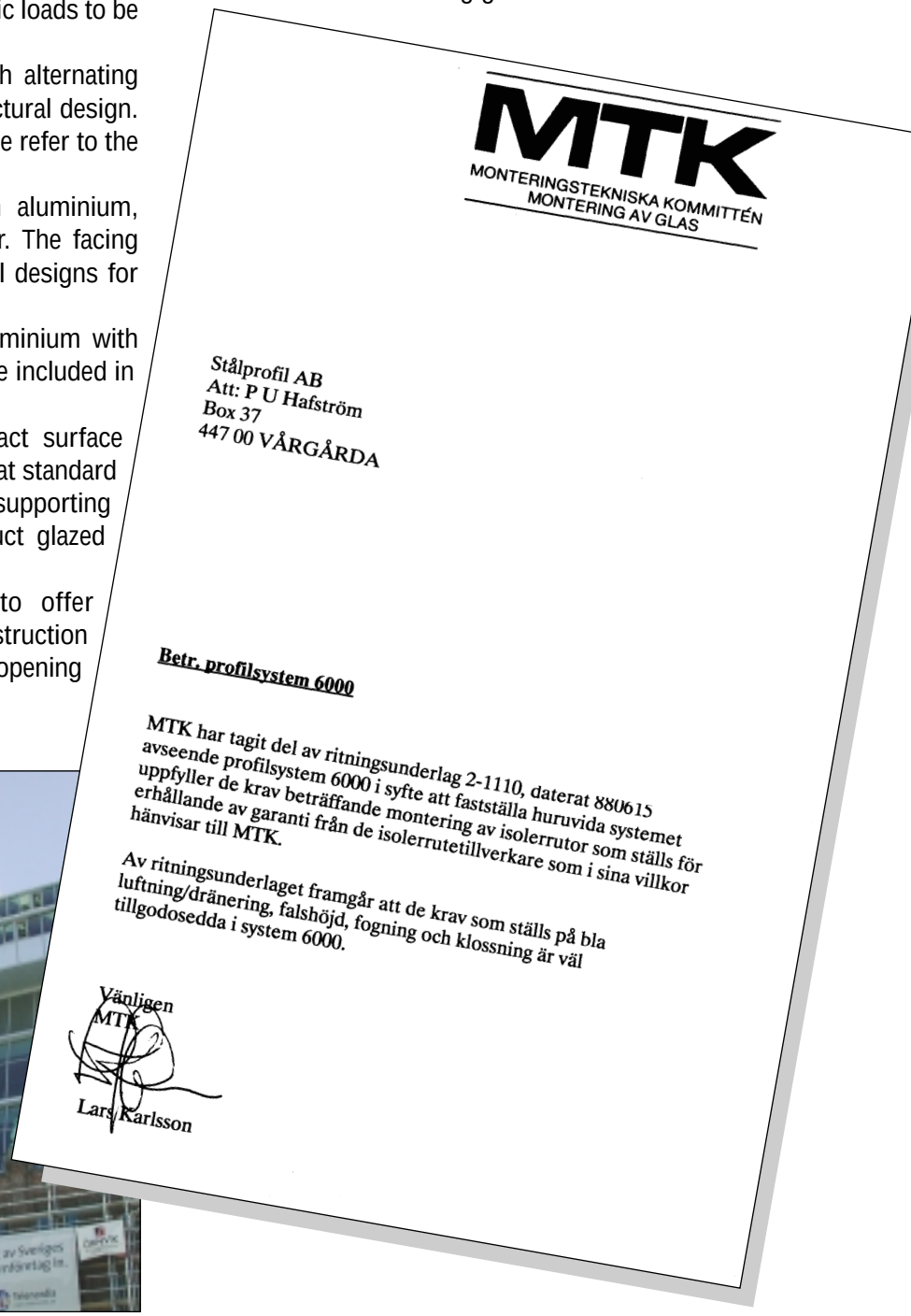
Through its simplicity the specialised design of SP 6000 reduces assembly and glazing time. For further details please refer to the principal drawing.

Surface Treatment – laquering

The steel interior profiles are sand blasted and primed with a zinc based primer with subsequent laquering in the colour of choice. Alternatively the interior profiles can be delivered in galvanic yellow chromated quality, primed and laquered in the colour of choice.

MTK Technical Construction Commitee

System SP 6000 has been approved by MTK, The Technical Construction Commitee. The requirements of MTK and glass manufacturers regarding assembly – coarse height 19 mm, ventilation and drainage, sealing and wood blocking have been met and comply with the requirements of the manufacturers of insulating glass.



MTK
MONTERINGSTEKNISKA KOMMITTÉN
MONTERING AV GLAS

Stålprofil AB
Att: P U Hafström
Box 37
447 00 VÅRGÅRDA

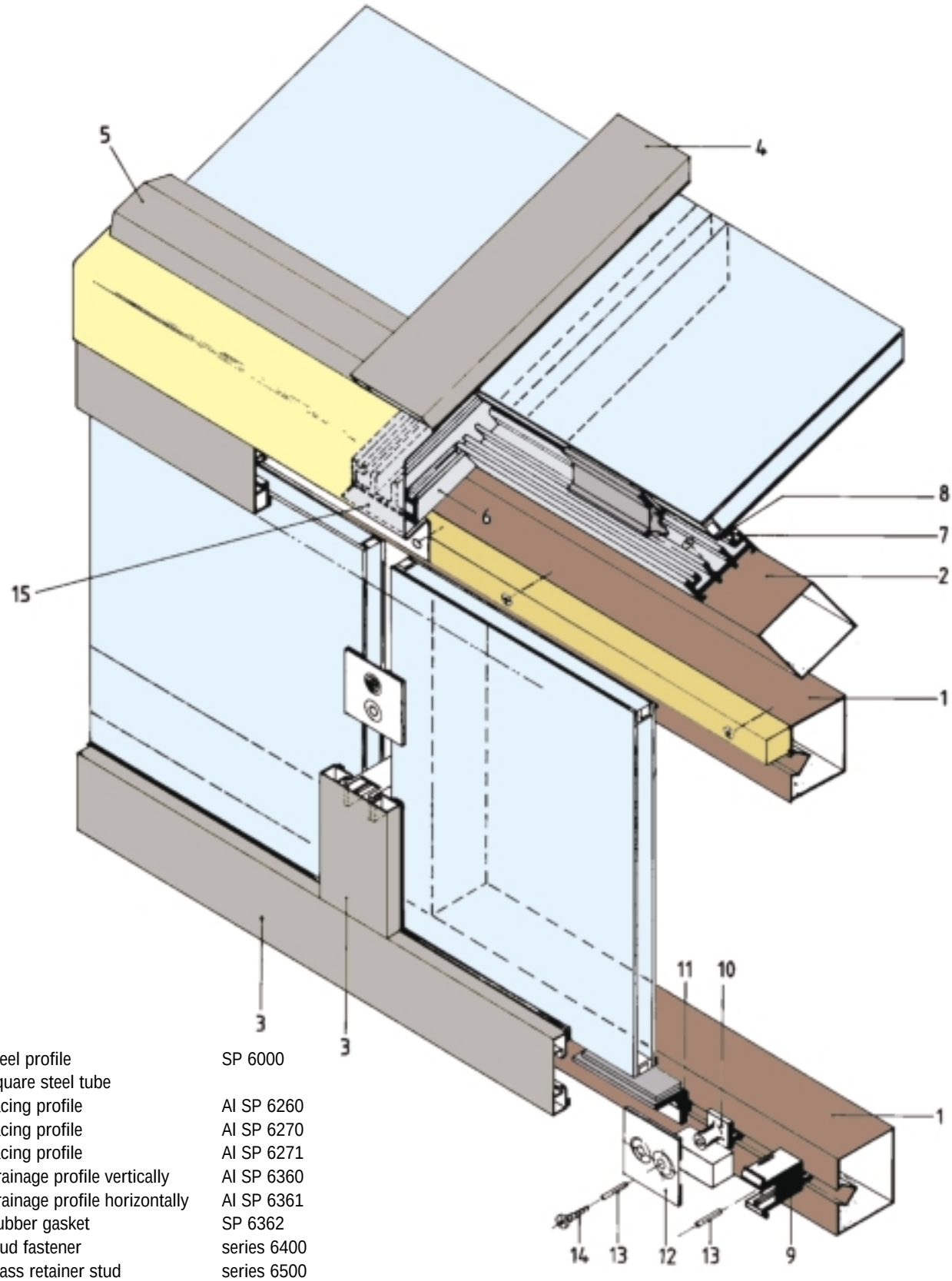
Betr. profilsystem 6000

MTK har tagit del av ritningsunderlag 2-1110, daterat 880615 avseende profilsystem 6000 i syfte att fastställa huruvida systemet uppfyller de krav beträffande montering av isolerrutor som ställs för erhållande av garanti från de isolerrutetillverkare som i sina villkor hänvisar till MTK.

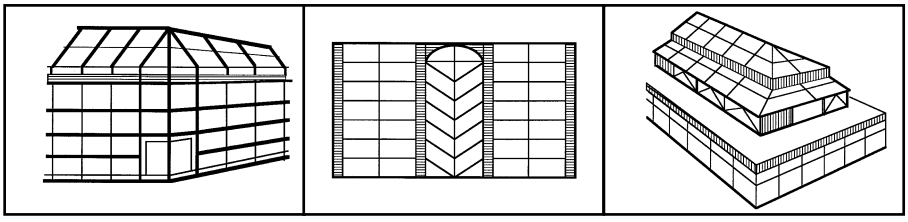
Av ritningsunderlaget framgår att de krav som ställs på bla luftning/dränering, falshöjd, fogning och klossning är väl tillgodosedda i system 6000.

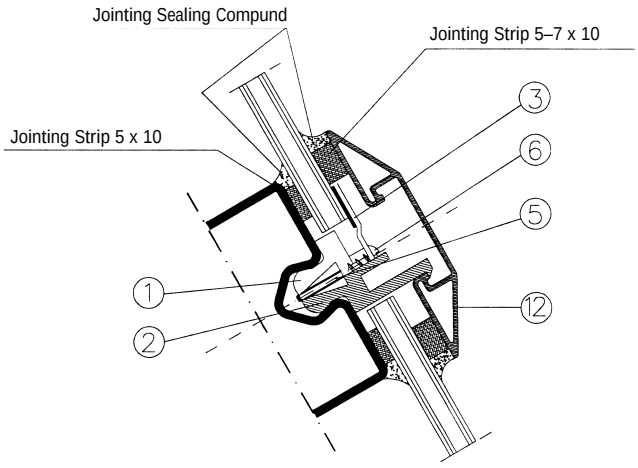
Vänligen
MTK

Lars Karlsson

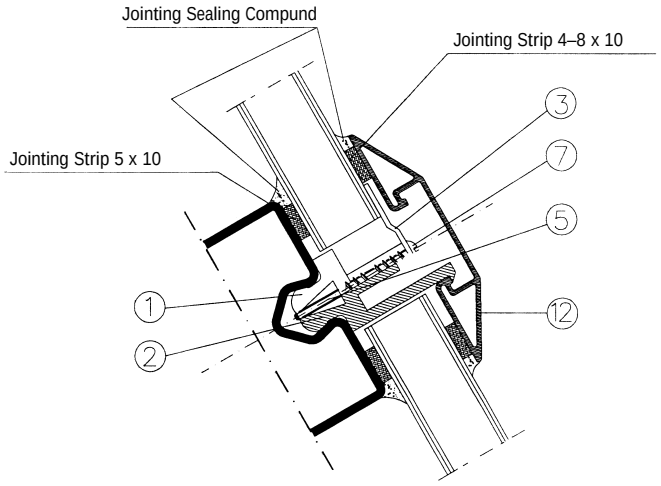


1.	Steel profile	SP 6000
2.	Square steel tube	
3.	Facing profile	Al SP 6260
4.	Facing profile	Al SP 6270
5.	Facing profile	Al SP 6271
6.	Drainage profile vertically	Al SP 6360
7.	Drainage profile horizontally	Al SP 6361
8.	Rubber gasket	SP 6362
9.	Stud fastener	series 6400
10.	Glass retainer stud	series 6500
11.	Glass carrier	series 6600
12.	Glass retainer pad	SP 6599
13.	Rivet	
14.	PT-screw	
15.	Drainage hole	

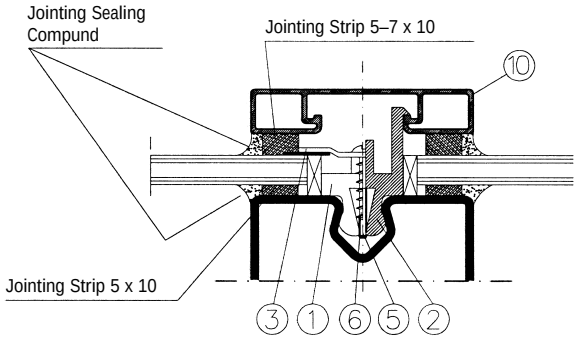




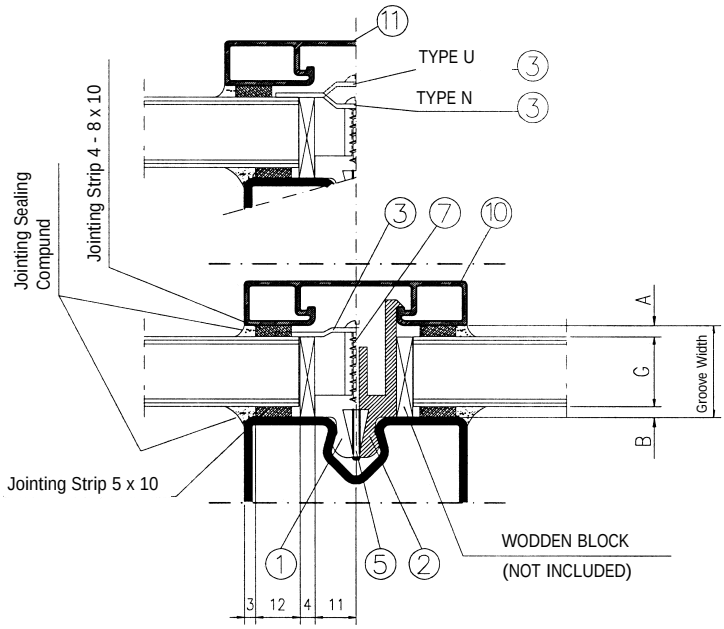
A. EXECUTION ROOF ≥60 GLASS 8–10 mm HORIZONTAL PROFILE



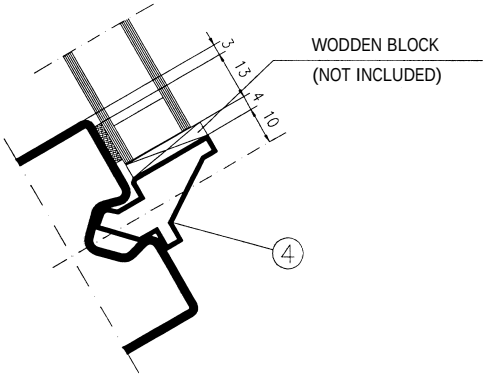
B. EXECUTION ROOF ≥60 GLASS 19 mm HORIZONTAL PROFILE



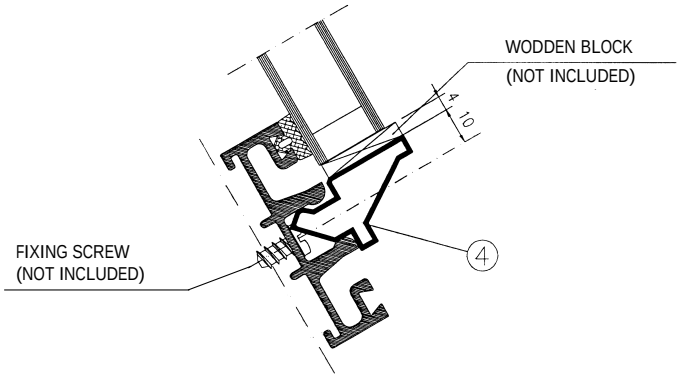
D. EXECUTION FRONT GLASS 8–10 mm



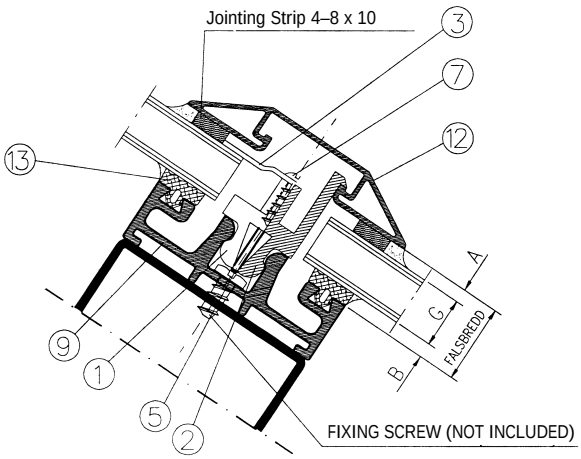
E. EXECUTION FRONT, ROOF ≥60 VERTICAL PROFILE GLASS 19 mm



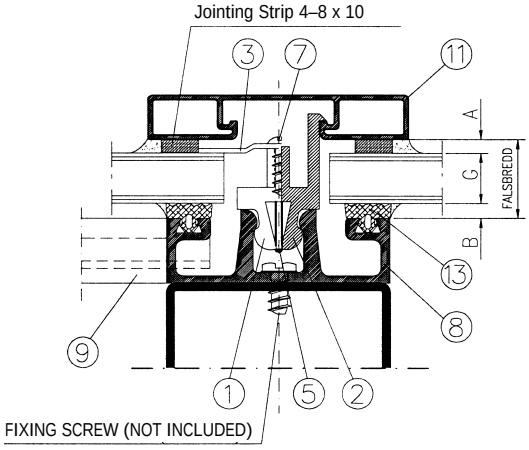
G. EXECUTION FRONT, ROOF ≥60



H. EXECUTION ROOF <60



C. EXECUTION ROOF <60 HORIZONTAL PROFILE



F. EXECUTION ROOF ≤60 VERTICAL PROFILE

GLASS THICKN. "G"	STUD FASTENER ②	GLASS RETAINER STUD ①	GLASS RETAINER PAD ③	GLASS CARRIER ④	GLAZING DEPTH A+B+G	SPACE FOR JOINTING STRIP	JOINTING SIZE a"A"	JOINTING SIZE "B"
8	SP 6408	SP 6508	N	SP 6608	17	9	7	5
10	↓		N		17	7	5	5
19	SP 6419	SP 6519	U		27	8	6	5
20			U		27	7	5	5
21	↓		U		27	6	4	5
22	SP 6422	↓	U	↓	29	7	5	5
23	↓	SP 6523	U	SP 6623	29	6	4	5
24	SP 6424		U		32	8	6	5
25			U		32	7	5	5
26	↓		N		32	6	4	5
27	SP 6427		N		35	8	6	5
28		↓	N		35	7	5	5
29	↓	SP 6529	U		35	6	4	5
30	SP 6430		U		38	8	6	5
31			U		38	7	5	5
32	↓		N		38	6	4	5
33	SP 6433		N		42	9	7	5
34			N		42	8	6	5
35		↓	N	↓	42	7	5	5
36	↓	SP 6536	N	SP 6636	42	6	4	5
37	SP 6437		U		44	7	5	5
38	↓		U		44	6	4	5
39	SP 6439		U		46	7	5	5
40	↓		N		46	6	4	5
41	SP 6441		N		50	9	7	5
42			N		50	8	6	5
43	↓	↓	N		50	7	5	5
48	SP 6448	SP 6548	N		58	10	8	5
49			N		58	9	7	5
50			N		58	8	6	5
51	↓	↓	N	↓	58	7	5	5

REMARK
Estimate that the jointing strip at "A" will be compressed 1 mm and that the jointing strip at "B" will be compressed 2 mm during assembly.

If SP 6261 will be used it´s possible to reduce the jointin strip, see page 21.

DET A, B, D, E for fixing to profile SP 6050, 6075, and 60120.
DET C, F for fixing to square or rectangular tubes

Pos	Item	Material	Det. nr	Note
13	GASKET	EPDM RUBBER	SP 6362	For SP 6360-6361
12	FACING PROFILE	ALUMINIUM	SP 6271	B= 70,~30
11	FACING PROFILE	ALUMINIUM	SP 6270	B= 70, 90
10	FACING PROFILE	ALUMINIUM	SP 6260	B= 60, 90
9	DRAINAGE PROFILE	ALUMINIUM	SP 6361	WITH LEGS
8	DRAINAGE PROFILE	ALUMINIUM	SP 6360	PLAN
7	PT SCREW KB 60x18	STEEL	WN 1442	X=SHORTENED
6	SCREW SFS PLASTITE	STEEL FZB	2025/55cx25	END.SP 6508
5	RIVET 4x21,5	STEEL FZB	SP 6598	
4	GLASS CARRIER	ALUMINIUM	SP 6608	SE TABLE
3	GLASS RETAINER PAD	PLATE SS 1142	SP 6599	MONT. SE TABLE
2	STUD FASTENER	PA-6 GL.FIBRE	SP 6408	SE TABLE
1	GLASS RETAINER STUD	PA-6 GL.FIBRE	SP 6508	SE TABLE

NOTE:

SP 6000 system has a coarse height of 19 mm and complies with the guarantee requirements of MTK and insulating glass manufacturers.

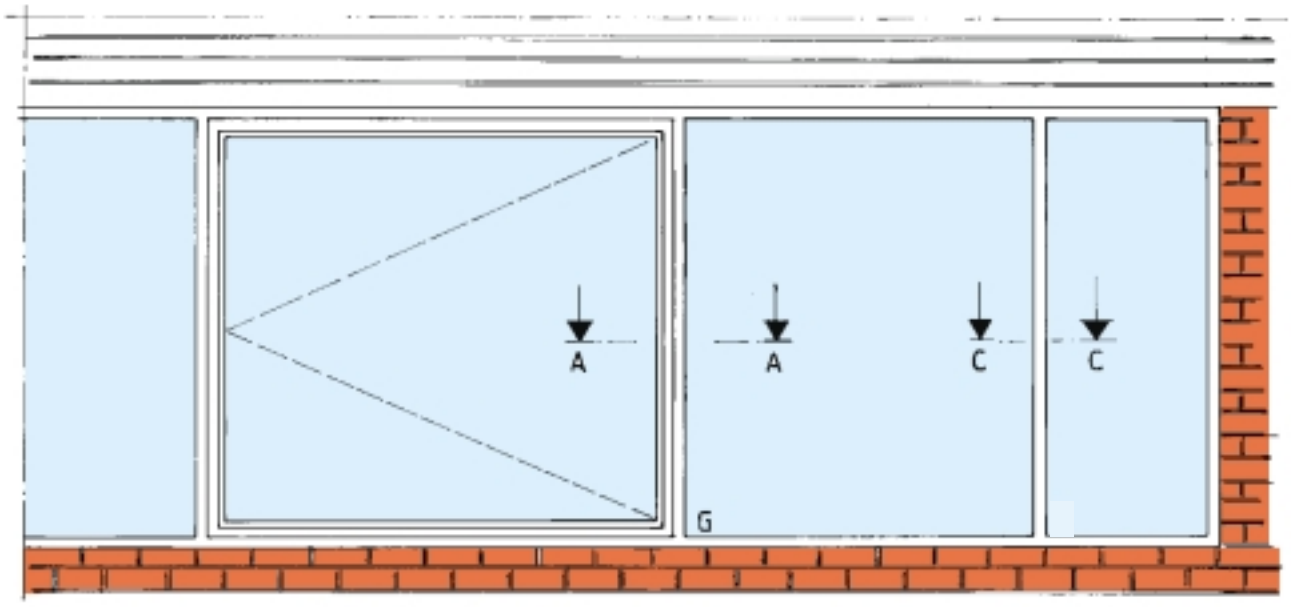
The facing profile in system SP 6000 for glazed roofs and lantern lights, (cat. Nos SP6270 & SP6271) is 70 mm wide. This means that the jointing band for sealing is completely even with the glass underneath and edge to edge with the facing profile, promoting a tight and reliable construction.

Alternate designs

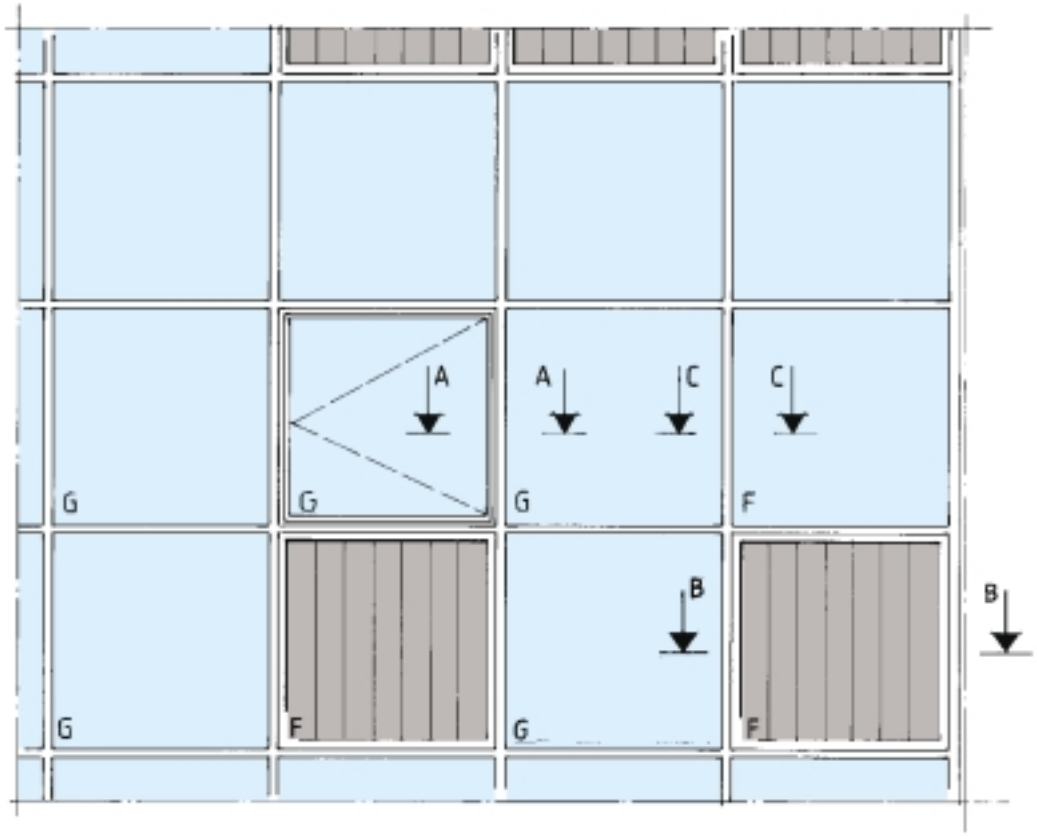
Section A-A: Opening aluminium window with breached thermal bridge

B-B: Sheet metal section with intermediate insulation

C-C: Glazed section with insulating glass and filling

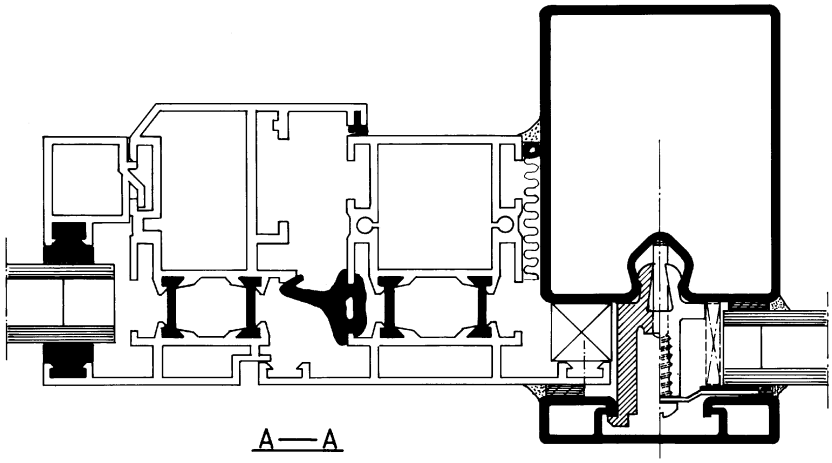


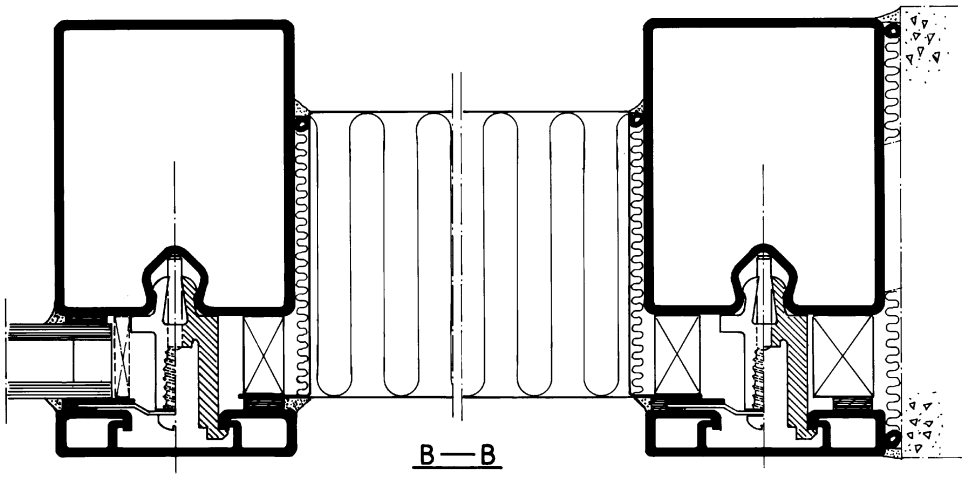
FACADE

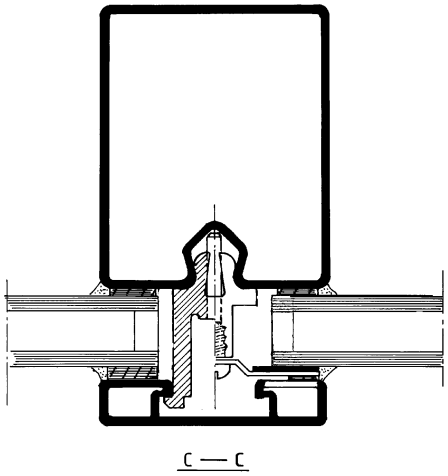


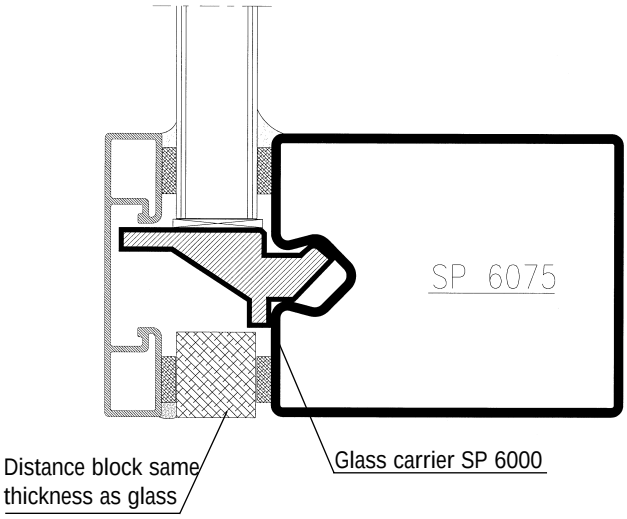
FACADE

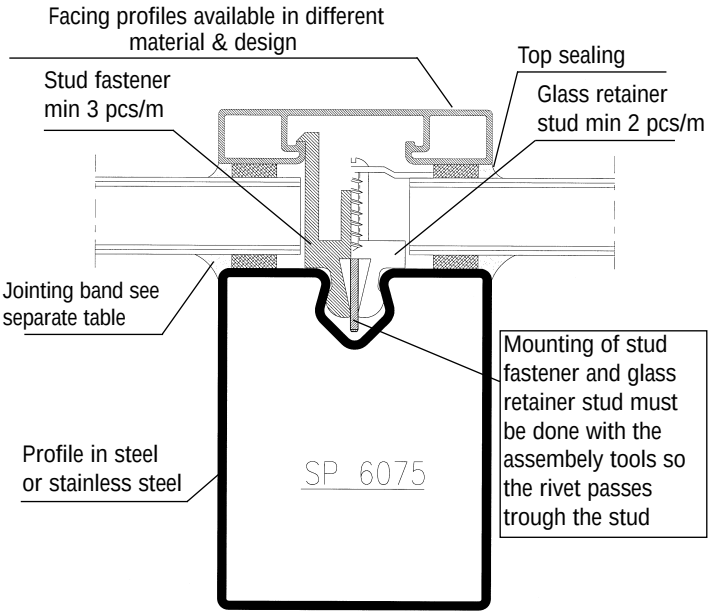
Scale 1:2

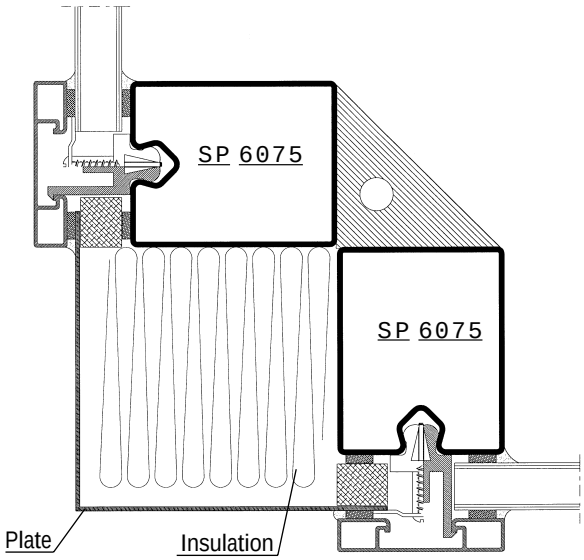




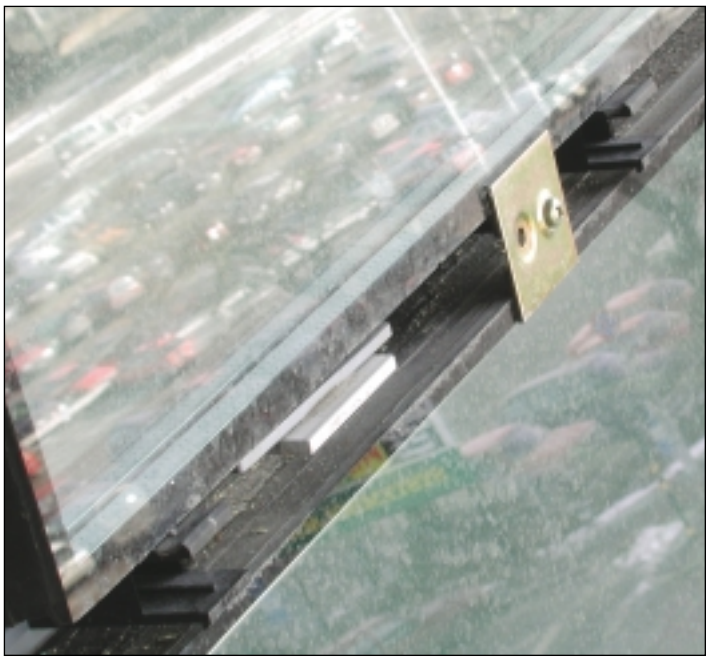


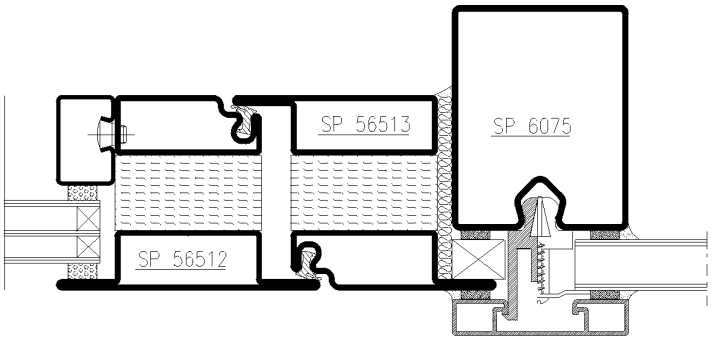




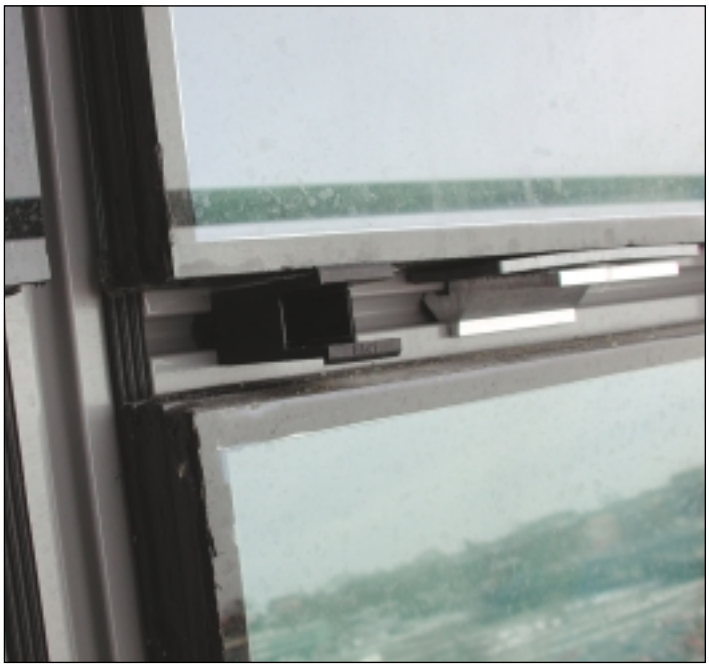


Suggestion corner solution





Door integreated with SP 6000



DETERMINATION OF AIR-LEAKAGE AND
SAFETY AGAINST WINDLOADS

SP 6000 FACADE SECTION

Exerpt from Swedish National Testing and Research Institute section for Energy technique/Building Physics, test 91E6 0251

STÅLPROFIL AB

Type	SP 6000
Format	24x25
Test date	22.05.1992

Comments test object

The test object was a glazed facade section comprising of four fixed parts. Description and drawing are in appendix 2. The test object was supplied by the customer.

Comments air tightness

Refer to diagram below
A detailed account of air leakage can be found in appendix 1

Water tightness SS 81 81 27

Class D.
No rain leakage.

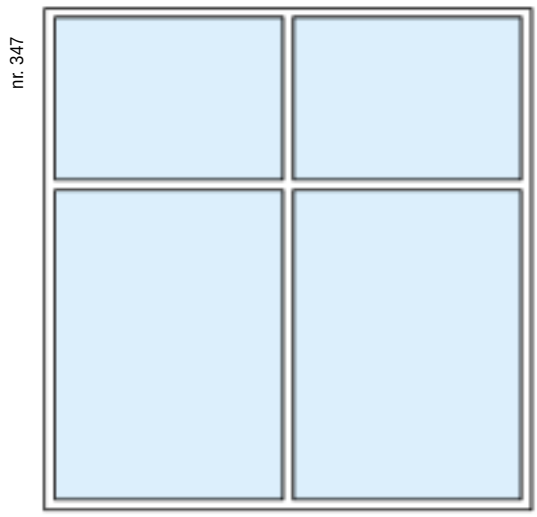
Equipment

Test rig:	ETL 801
Measuring equipment:	ETL 809

Estimated uncertainty

Difference in air pressure:	± 2 Pa.
Air flow:	± 5 %.
Deformation (windload):	± 0,1 mm.

View inside



Comments water tightness

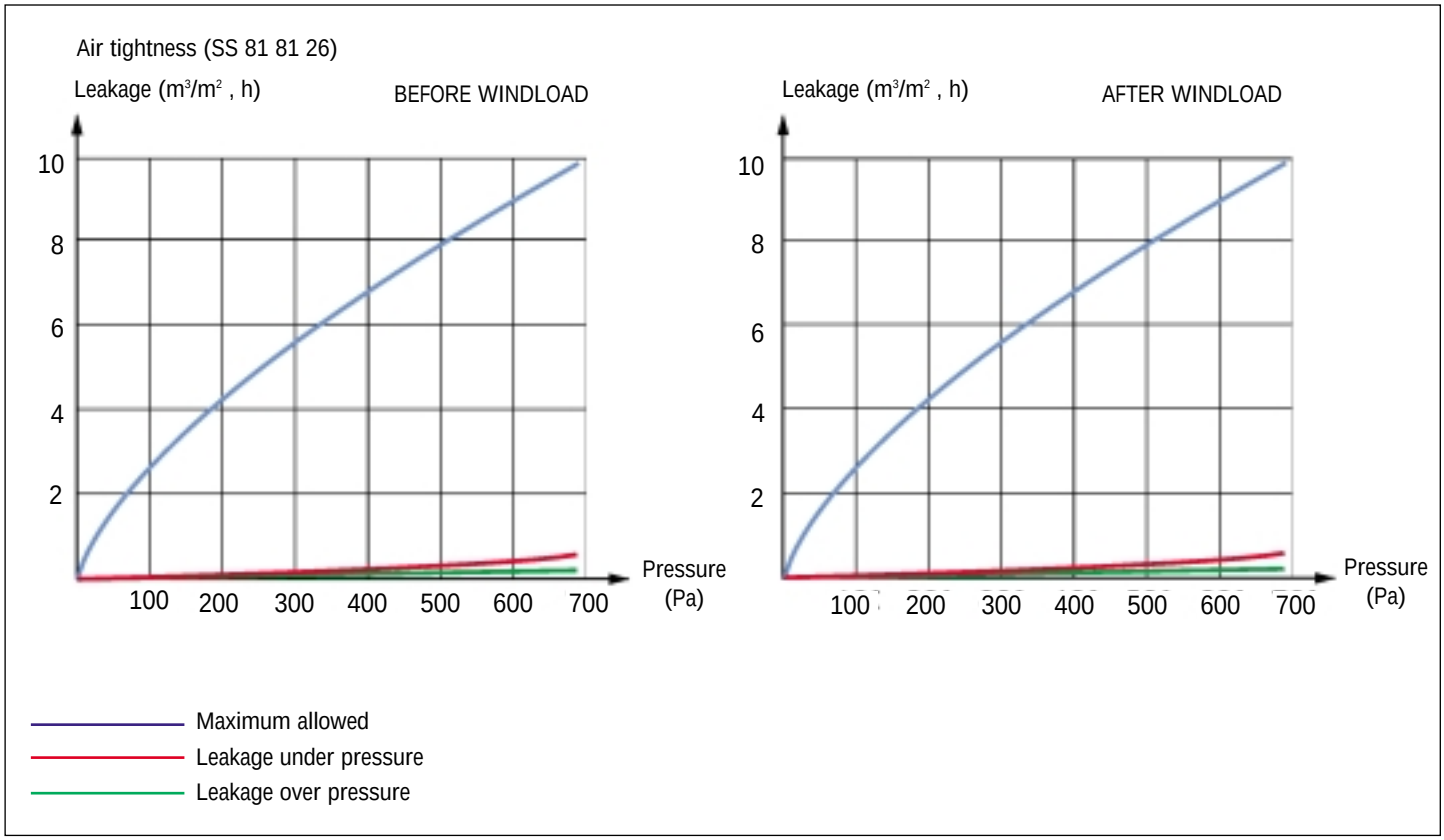
After the test for rain tightness according to SS 81 81 27 a test was per-formed according to NBI with pulsating pressure up to 800 Pa overpressure.

Result

No water leakage.

Safety against wind load SS 81 81 28

Deformations	**(specimen length 1980 mm)**
Pressure, Pa	**Arrow height mm/mid member**
0	-0,88
800 over pressure	+0,64
800 under pressure	-2,56



SP PROVNING · FORSKNING

REPORT

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Tel +46 (0)33 16 51 60

Datum / *Date*
1997-05-06

Beteckning / *Reference*

Sida / *Page*
1 (1)

Translation and abstract of report 96E6 3337 A dated 1996-05-23.

Determination of the U-value for steel profile system

The work requested

The client supplied drawings of the principle construction of the profile system SP 6000, SP 60000, for calculation of the U-value using the FRAME-program (FRAMEplus 4.1).

U-value of the glazing unit

Calculation of the glazing units free exposed along the whole surfaces of the glass (without profiles or facing profiles).

No	Glazing unit	U-value, W/(m² · K)			
		A = 1 m x 1 m	A = 1,4 m x 1,4 m	A = 1,8 m x 1,8 m	A = 2,2 m x 2,2 m
G1	D4-12	3.05	3.00	2.95	2.90
G2	D4-12, KEK	2.15	2.05	2.00	2.00
G3	D4-12, KEK, Ar	1.90	1.80	1.75	1.70
G4	T4-12	2.15	2.05	2.05	2.00
G5	T4-12, KEK	1.70	1.60	1.55	1.55
G6	T4-12, KEK, Ar	1.50	1.40	1.35	1.30

A = area (m²) of the facade section
KEK = low emissivity coating, Pilkington K-glass

U-value of the facade section

Calculation of the facade section with profile system SP 6000, SP 60000.

No	Glazing unit	U-value, W/(m² · K)			
		A = 1 m x 1 m	A = 1,4 m x 1,4 m	A = 1,8 m x 1,8 m	A = 2,2 m x 2,2 m
G1	D4-12	3.20	3.10	3.05	3.00
G2	D4-12, KEK	2.35	2.20	2.15	2.10
G3	D4-12, KEK, Ar	2.10	1.95	1.85	1.80
G4	T4-12	2.35	2.20	2.15	2.10
G5	T4-12, KEK	1.90	1.75	1.70	1.80
G6	T4-12, KEK, Ar	1.70	1.55	1.50	1.40

A = area (m²) of the facade section
KEK = low emissivity coating, Pilkington K-glass

The second decimal of the U-values have been rounded off to the nearest 0 or 5.

SP 511

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SP, Swedish National Testing and Research Institute, Box 857, SE-501 15 BORÅS, SWEDEN, Telephone + 46 33 16 50 00, Telefax + 46 33 13 55 02, E-mail info@sp.se, Reg.No 556464-6874

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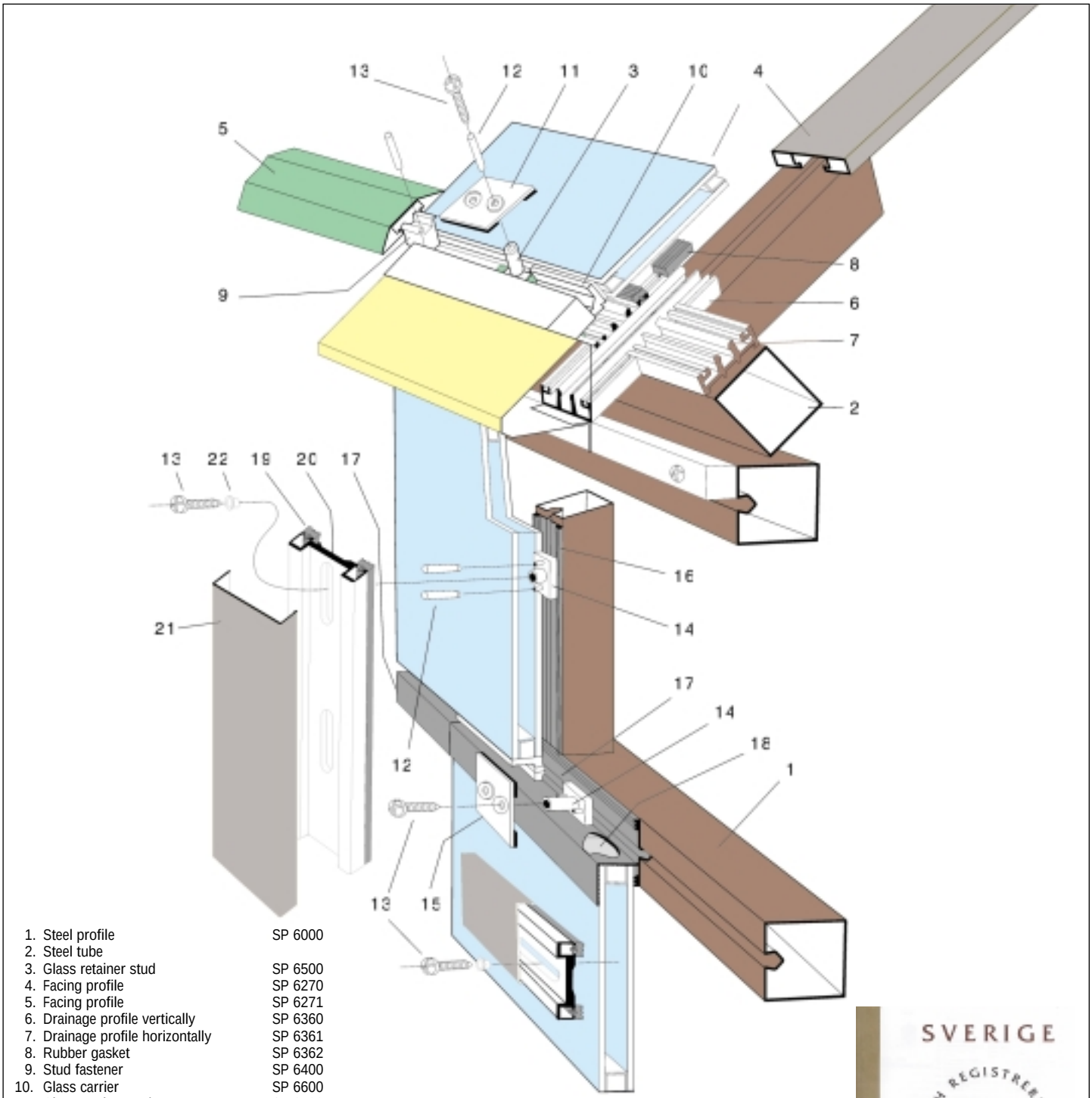
STÅLPROFILSYSTEM SP 60000

SP 60000 comprises of a steel support profile, aluminium facing profiles and interior/exterior rubber gaskets that do not need sealing. In all other respects the system is the same as SP 6000.

The profile system is designed for use as wall and facade sections where the demand for tightness, U-value and noise reduction are major priorities.

The rubber gaskets do not need to be sealed and the system has been rigorously tested by Byggforsk, the Norwegian building and construction research institute in Trondheim.

SP 60000 withstood a pulsating hurricane force shower with a wind speed of 42 m/s with no leakage. Water was also forced under the facing profile at the same strength and wind speed with no resulting change in tightness or decrease in drainage function. This 4th generation facade system from Stålprofil is patented.



1.	Steel profile	SP 6000
2.	Steel tube	
3.	Glass retainer stud	SP 6500
4.	Facing profile	SP 6270
5.	Facing profile	SP 6271
6.	Drainage profile vertically	SP 6360
7.	Drainage profile horizontally	SP 6361
8.	Rubber gasket	SP 6362
9.	Stud fastener	SP 6400
10.	Glass carrier	SP 6600
11.	Glass retainer pad	SP 6599
12.	Rivet	
13.	PT screw	
14.	Glass and gasket retainer stud	SP 66500
15.	Glass retainer pad	SP 66599
16.	Interior rubber gasket vertically	SP 66350
17.	Interior rubber gasket horizontally	SP 66351
18.	Aluminium tape	SP 66352
19.	Rubber gasket	SP 66362
20.	Lower profile	SP 66253
21.	Facing profile	SP 66254
22.	Corrosion isolator	SP 66353

SVERIGE

PATENT- OCH REGISTRERINGSVERKET

PATENT

MED STÖD AV PATENTLAGEN HAR PATENT ENLIGT BIFOGADE PATENTSKRIFT MEDDELATS AV PATENT- OCH REGISTRERINGSVERKET

Carl-Gustaf Thunström

INTRODUCTION

At the request of

Stålprofil AB, Vårgårda, Sverige

the Norwegian Building Research Institute (NBI) has performed an air and rain tightness test on System SP 60 000 FASAD.

The test element was sent to NBI by the client, and installed into the test chamber by two representatives from Stålprofil AB. The representatives were present during the test.

DESCRIPTION OF THE PRODUCT
SYSTEM SP 60 000 FASAD

The external dimensions of the element were 2450 mm x 2450 mm, and was divided by three vertical mullions and two horizontal transoms within the outer framework. The felt had nine openings and one of them in an upper corner was larger in size. Sealed double glazing units were installed in all openings. The drainage system on top of the steel construction, consists of extruded rubber profiles. The facade system was drained so that penetrated water in the rebates of the horizontal transoms is led outwards through weeping holes in the external glass seal. The bottom part of the internal glass seal has a protruding rubber lip that covers the underlying glass edge. Vertical rubber profiles run continuously, and the water is drained out at the bottom of the facade system. The corner joints between horizontal and vertical rubber profiles are sealed with butyl tape and a butyl based sealant. See appendix 1-4.

Test method

The rain tightness test is carried out in the NBI "RAWI-BOX" in accordance with NT-BUILD 116. During the test the element is exposed to 1,7 l/m min. down flowing water and 0,3 l/m²min. driving rain blown against the test element by means of movable air jets. The test procedure describes pulsating wind pressure increased step by step to the maximum. The test consists normally of 5 pressure steps with a duration of 10 minutes each, totally 50 minutes. The maximum pressure in each pressure step is given in table 1.

10 mm holes were cut in the external glass seal at the horizontal bottom edge of every glass unit. This was done to test the ability of the facade system to drain water away from the glass rebates.

Possible leakages are revealed by observation on the "warm" side of the element during the test.

The air penetration test was carried out accordning to NBI-94. The joint between the test element and the test apparatus was sealed by air tight tape. The measurements were carried out with the 10 mm holes in the external glass seal. The results are given in table 2.

NORWEGIAN BUILDING RESEARCH INSTITUTE 3/O3680/30

Table 1.

Results rain tightness, SYSTEM SP 60 000 FASAD

Pressure and leakages are shown in the table below.

Construction	Pressure	Result
Facade element as arrived at NBI	0-200	Tight
	0-400	"
	0-600	"
	0-800	"
	0-1100	"
With 10 mm holes cut out of the outer glass seal at the lower edge of the glass units	0-200	Tight
	0-400	"
	0-600	"
	0-800	"
	0-1100	"

Table 2.

Results air tightness, SYSTEM SP 60 000 FASAD

Test area: 5.76 m²

Pressure difference	Air leakage with external positive pressure		Air leakage with external negative pressure		Air leakage, mean values	
Pa	m³/h	m³/m²h	m³/h	m³/m²h	m³/h	m³/m²h
50	1.0	0.17	1.4	0.24	1.2	0.21
100	1.6	0.28	1.9	0.33	1.8	0.31
300	3.6	0.63	3.8	0.66	3.7	0.65
500	5.2	0.90	5.2	0.90	5.2	1.13
700	6.5	1.13	6.5	1.13	6.5	0.90

CONCLUSION

The facade system SP 60 000 FASAD as tested satisfies the requirements as to air and rain tightness.

Trondheim, 8 December 1994

NORWEGIAN BUILDING RESEARCH INSTITUT
TRONDHEIM DIVISION

Tor S. Johansen

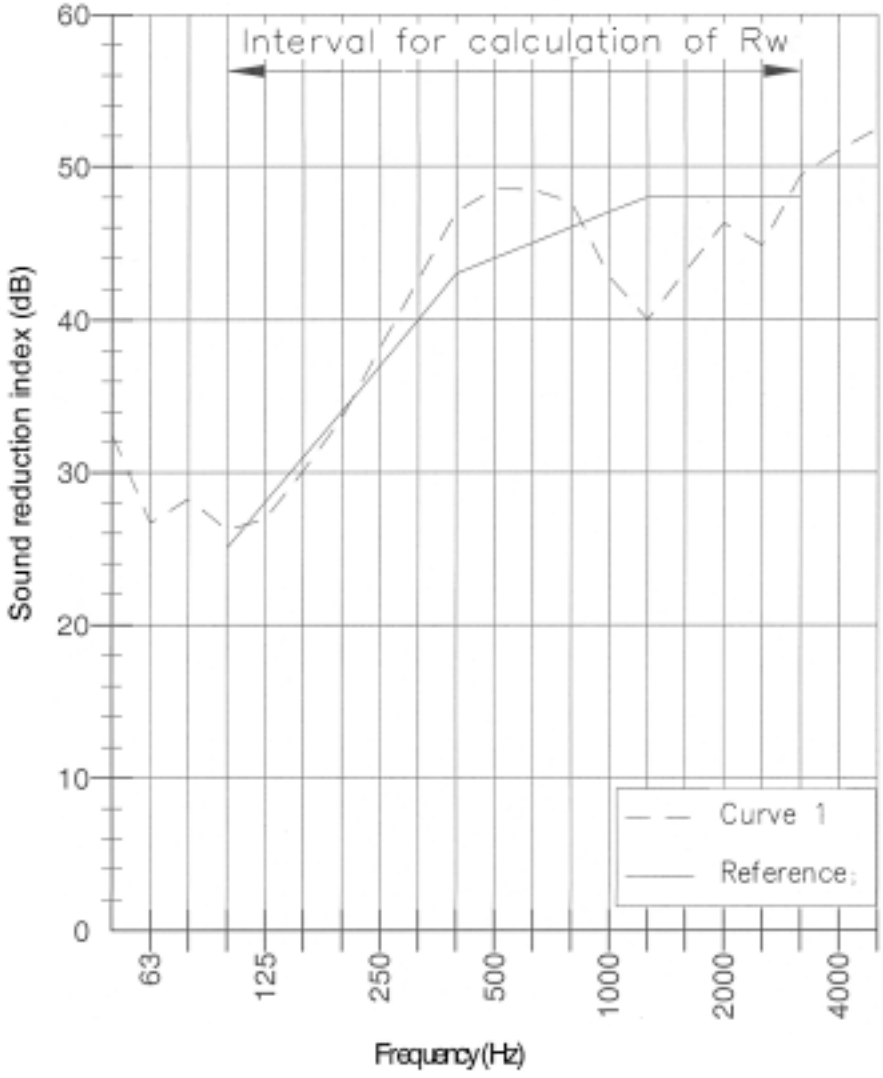
SP PROVNING·FORSKNING

Enhet/*Department*	REPORT	Enclosure 1
Acoustics	Datum/*Date* 2000-05-09	Beteckning/*Reference* P005803-A
Handläggare/*Handled by* Joachim Stadig	Ert datum/*Your date*	Er referens/*Your reference* Roland Olsson

Determination of sound insulation in a laboratory according to SS EN ISO 140-3:95

Client: Stålprofil AB
Date of test: 2000-04-18
Test object: Glass facade

Result: Area of the test opening and module: 10,96 m^2, single room mounting, single wall
Curve 1 - Test object
Curve 2 - Reference Curve



Frecuency (Hz)	Curve 1 (dB)
50	32,5
63	26,7
80	28,3
100	26,2
125	26,9
160	30,1
200	33,6
250	38,2
315	42,6
400	47
500	48,5
630	48,5
800	47,6
1000	42,8
1250	40
1600	43,1
2000	46,3
2500	44,9
3150	49,4
4000	51
5000	52,5

Rw	44
(C; Ctr)	(-1;-5)
(C; Ctr) 50-3150	(-2;-5)
(C; Ctr) 50-5000	(-1;-5)
Rmean	41
Sum. Dev.	24,3
Max. Dev.	8
Frequency	1250

SP Swedish National Testing- and Research Institute
Acoustics

Hans Jonasson
Technical Manager

Joachim Stadig
Technical Officer

ASSEMBLING INSTRUCTIONS FOR SP 60 000

SUMMING UP PAGE

THE ASSEMBLING INSTRUCTIONS SHOULD BE STUDIED CAREFULLY AND FOLLOWED BEFORE PRODUCTION START TO REACH THE DEMANDS OF FUNCTION.

The vertical profiles are welded to the upper bar so that the vertical joints run continously. The profiles must be cleaned from dust caused by welding and similarities, even in the grooves of the profiles.

The vertical rubber bead SP 66350 is mounted without joints on the profiles, with exact fitting into the groove of the profile. The mounting is carried out in a way that secures free passage of water.

The horizontal rubber bead is cut with a certain extra measure, and is mounted between the vertical rubber beads. In the joints, strips of butyl, ø 6–8 mm, must be fixed under compression, a lip is cut to overlap the vertical rubber bead depending on the size of the glass pane. Between the horizontal profile–groove and the vertical the rubber bead should be fixed with dots of glue or adhesive on both sides tape so the beads will be stable during mounting of studs.

Before mounting of the glass pane, aluminiumfoil is fixed on the upper side of the pane. Fixation is made with the tape 1–2 mm down on each side of the pane.

Mounting of glass retainer studs should be performed to get the right distance, as removal of the studs should be avoided. As the rivets are in, the studs cannot be dismounted without change of the rubber bead.

The glass carrier is screwed into the profile with self drilling screws.

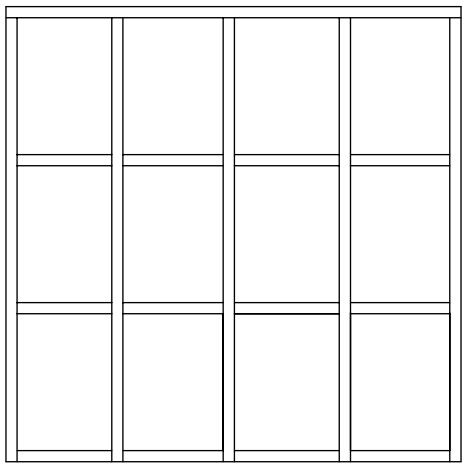
The sealing bead SP 66362 is mounted in the groove of the aluminium profile SP 66353. 10 mm drainage holes are made in the rubber beads, facing downwards, min. two per pane or C/C 300 mm.

The covering profile SP 66254 is clipped on the aluminium profile SP 66253.

STÅLPROFIL AB

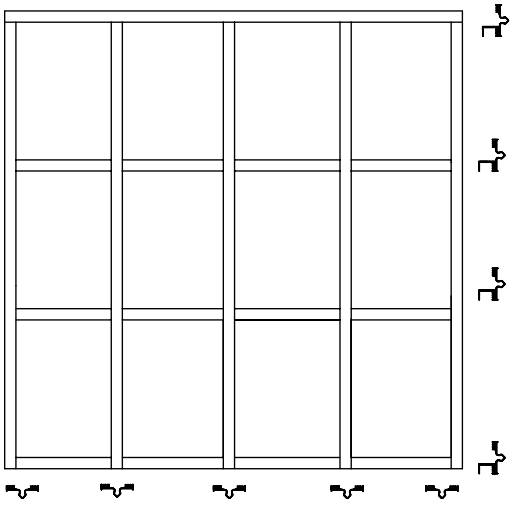
Version 2. 970213

The vertical profiles are welded to the upper bar so that the vertical joints run continoulsly. The profiles must be cleaned from dust caused by welding and similarities, even in the grooves of the profiles.



Konstr.	Ritad	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
	R.O							
Firma: STÅLPROFIL AB			Titel: ASSEMBLING INSTRUCTIONS SP 60000				Regist.nr	Dat. 970213
							Ritn.–nr A.I PAGE 1	

Rubber bead section SP 60 000
View showing mounting of rubber bead.



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	R.O							
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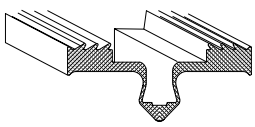
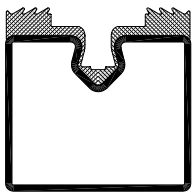
							Ritn.–nr A.I PAGE 2	



The vertical rubber bead SP 66350 is mounted without joints on the profiles, with exact fitting to the groove of the profile. The mounting is carried out in a way that secures free passage of water.
A type of trundle fitting to the rail of the profile could well be used.



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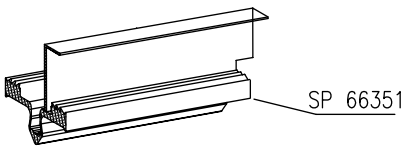
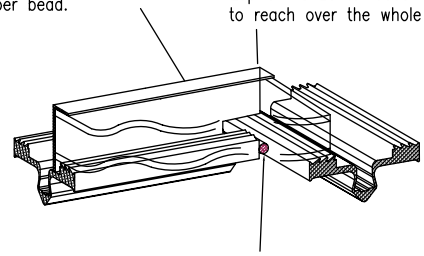
	R.O							
Firma: STÅLPROFIL AB			Titel: ASSEMBLING INSTRUCTIONS SP 60000				Regist.nr	Dat. 970213
							Ritn.–nr A.I PAGE 3	



The horizontal rubber bead is cut with a certain extra measure and is mounted between the vertical rubber beads. I the joints, strips of butyl, ø 6–8 mm, must be fixed under compression, lip is cut to overlap the vertical rubber bead considering the size of the glasspane. Between the horizontal profile–groove and the vertical rubber bead, butyl mass must be filled in.

Bottoming with butyl mass between the bottom of the profile and vertical rubber bead.

Lap of horizontal bead is cut to reach over the whole pane.



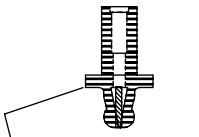
Joints of rubber bead are heavily compreesd with strips of butyl ø6.

Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Registr.nr	Dat. 970213
							Ritn.–nr A.I PAGE 4	

NOTE! DIFFERENT LENGTH ON BEAD AND GLAS RETAINER STUD

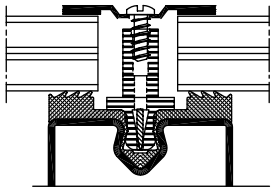
Study also page 11 and 12 in this leaflet so that no details are missed

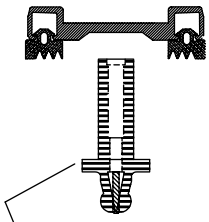
Glas Retainer plate SP 66599



Glas Retainer stud SP 66500

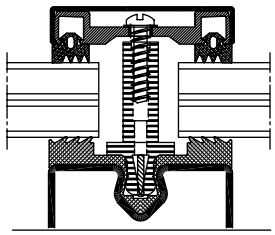
Mounting distance 1 stud/m





Bead Retainer stud SP 66500

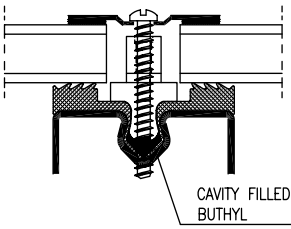
Mounting distance max C/C 300



Mounting of glas and bead retainer studs should be done in a way that correct distance is achieved, as demounting of the studs should be avoided. When the pins have been driven in they can not be demounted without change of the rubber bead. One advice is to measure the distance between the holes in aluminium profile SP 66253 before mounting the studs, as when as dipping the studs into clean water before the mounting.

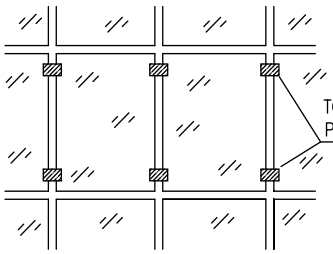
Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Registr.nr	Dat. 970213
							Ritn.–nr AI. PAGE 5	

MOUNTING AND SAFETY STUD FOR SP 60000



MOUNTING AND SAFETY STUD FOR GLAS RETAINER WITH THROUGH–GOING SCREW.
THE CAVITY BETWEEN STUD AND RUBBER BEAD TO BE FILLED WITH BUTYHL TOWARDS THE STUD

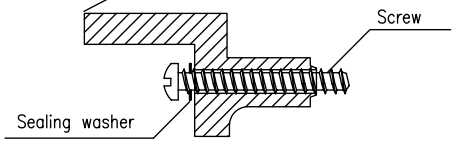
CAVITY FILLED WITH BUTHYL



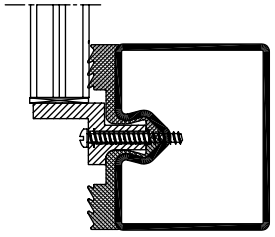
TO BE MOUNTED INTO VERTICAL PROFILES AS SHOWN.

Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Registr.nr	Dat. 970213
							Ritn.–nr AI. PAGE 6	

Glass carrier type SP 66600



The glass carrier is screwed into the profile with self drilling screws.



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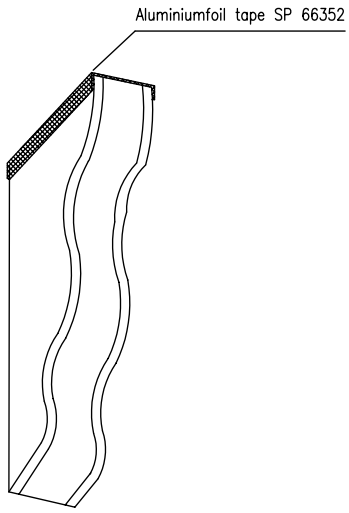
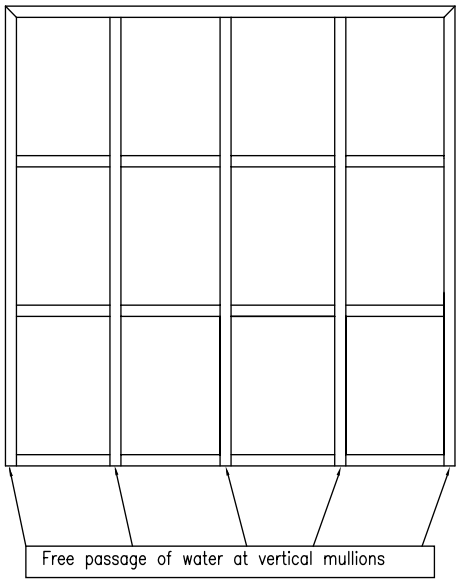
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTUCTIONS SP 60000				Registr.nr	Dat. 970213
							Ritn.–nr AI. PAGE 7	

Before the glass pane is mounted an aluminiumfoil is fixed on the upper side of the pane. Fixation is made with the tape 1–2 mm down on each side of the pane.

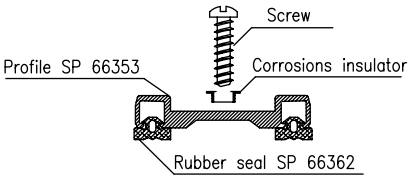


Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Reglst.nr	Dat. 970213
							Ritn.–nr A.I PAGE 8	

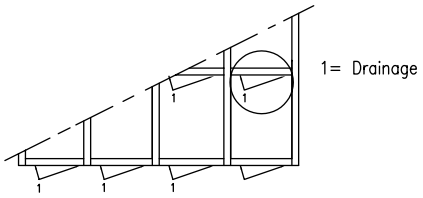
View showing joining of aluminium bead SP 66353.

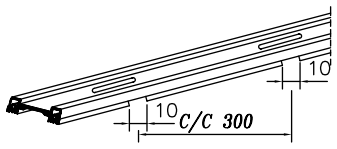


Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Reglst.nr	Dat. 970213
							Ritn.–nr A.I PAGE 9	



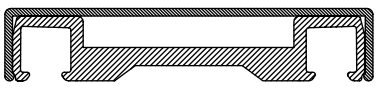
The sealing bead SP 66362 is mounted in the groove of the aluminium profile SP 66253. 10 mm drainage holes are made in the rubber beads, facing downwards, min. two per pane or C/C 300 mm.



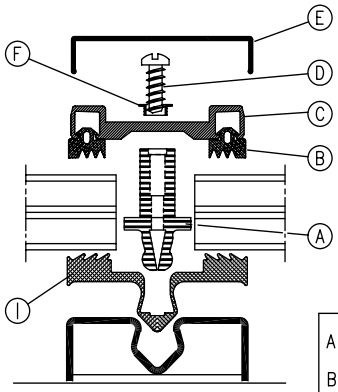


Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Reglst.nr	Dat. 970213
							Ritn.–nr A.I PAGE 10	

The covering profile SP 66254 is clipped on the profile SP 66253.



Konstr.	Ritad R.O	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
Firma STÅLPROFIL AB			Titel ASSEMBLING INSTRUCTIONS SP 60000				Reglst.nr	Dat. 970213
							Ritn.–nr A.I PAGE 11	



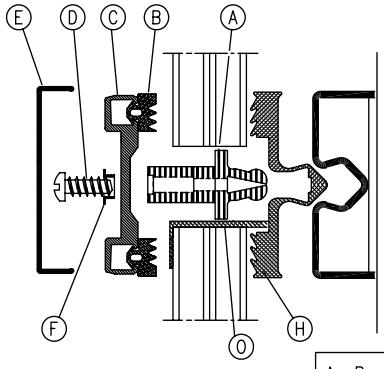
VERTICAL SECTION

A	Bead fastener SP 66500
B	Seal SP 66362
C	Bead SP 66253
D	Pt screw KB
E	Cover SP 66254
F	Insulator
I	Rubber bead SP 66350

Konstr.	Ritad	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
	R.O							

Firma	Titel	Reglst.nr	Dat.
STÅLPROFIL AB	ASSEMBLING INSTRUCTIONS SP 60000		970213

Ritn.-nr A.I PAGE 12



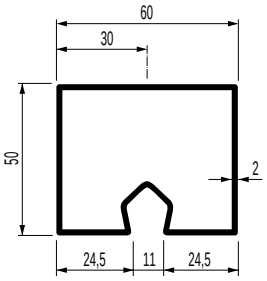
HORIZONTAL SECTION

A	Bead fastener SP 66500
B	Seal SP 66362
C	Bead SP 66253
D	Pt screw KB
E	Cover SP 66254
F	Insulator
H	Rubber bead SP 66351
O	Al. SP 66352

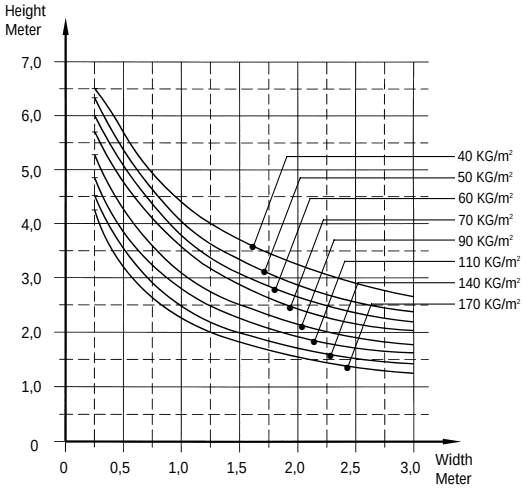
Konstr.	Ritad	Kop.	Kontr.	Stand.	Godk.	Skala	Ersätter	Ersatt av
	R.O							

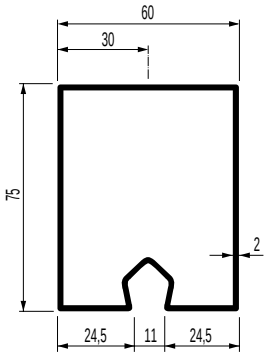
Firma	Titel	Reglst.nr	Dat.
STÅLPROFIL AB	ASSEMBLING INSTRUCTIONS SP 60000		970213

Ritn.-nr A.I PAGE 13

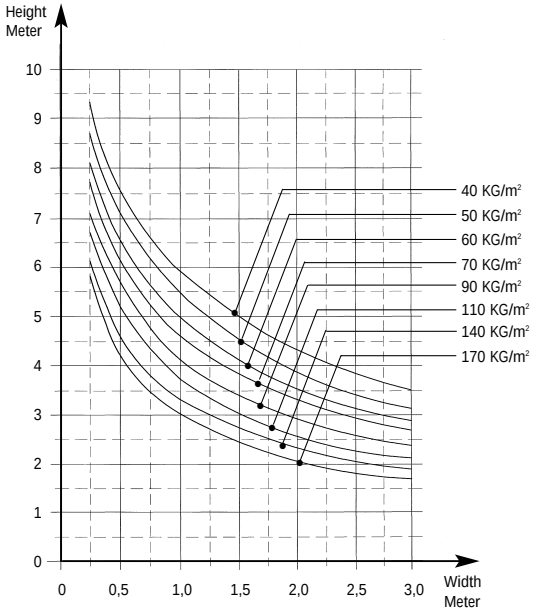


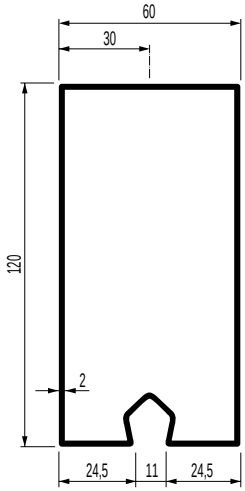
Cat.nr. SP 6050
Weight = 3,550 Kg/m
I x = 16,950 cm^4



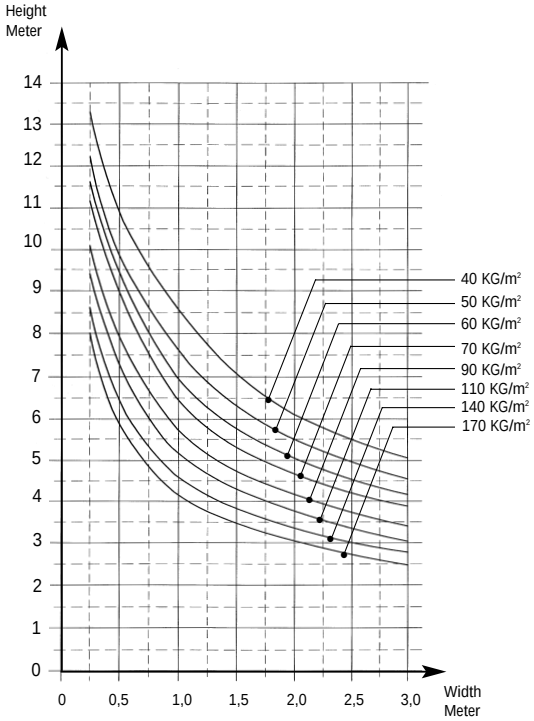


Cat.nr. SP 6075
Weight = 4,340 Kg/m
I x = 45,110 cm^4

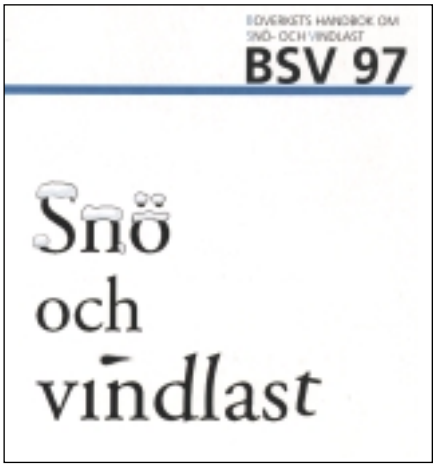




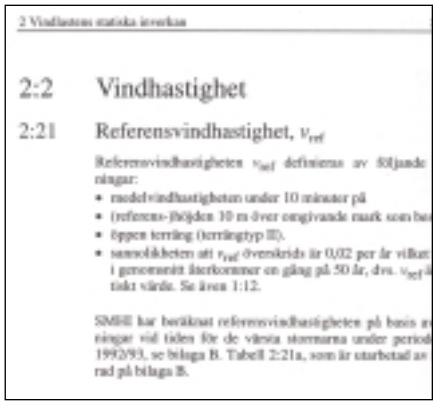
Cat.nr. SP 60120
Weight = 5,8 Kg/m
I x = 142,3 cm^4



Windloads can be calculated with the help of The Swedish Housing and Building Departments manual **on Snow and Windloads**.
Publication from Boverkets manual on snow and windloads 2nd edition, November 1999 Please see below some excerpts from the manual.



1. The reference windspeed for the municipality


2 Vindlastens statiska inverkan

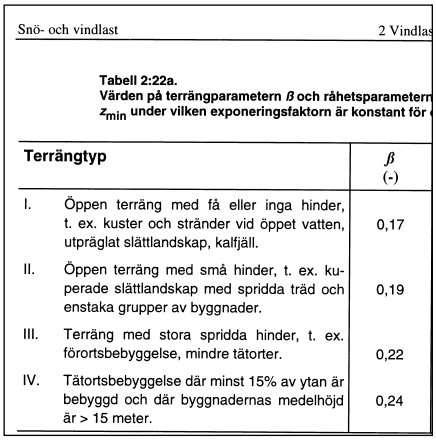
2:2 Vindhastighet

2:21 Referensvindhastighet, v_{ref}

Referensvindhastigheten v_{ref} definieras av följande ningar:
- medelvindhastigheten under 10 minuter på
- (referens-)höjden 10 m över omgivande mark som ha
- öppen terräng (terrängtyp II).
- sannolikheten att v_{ref} överskrids är 0,02 per år vilket i genomsnitt återkommer en gång på 50 år, dvs. v_{ref} p tiskt värde. Se även 1:12.

SMHI har beräknat referensvindhastigheten på basis a ningar vid tiden för de värsta stormarna under period 1992/93, se bilaga B. Tabell 2:21a, som är utarbetad a rad på bilaga B.

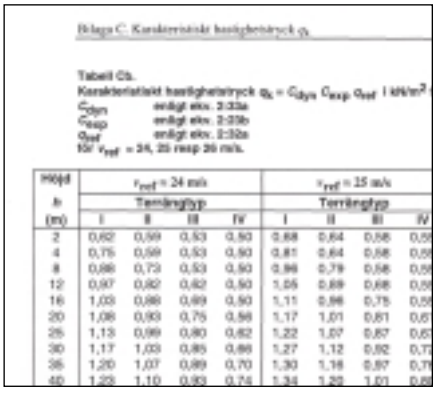
2. Valid types of terrain.


Snö- och vindlast 2 Vindlas

Tabell 2:22a.
Värden på terrängparametern β och råhetsparametern z_{min} under vilken exponeringsfaktorn är konstant för

Terrängtyp		β (-)
I.	Öppen terräng med få eller inga hinder, t. ex. kuster och stränder vid öppet vatten, utpräglat slättlandskap, kalfjäll.	0,17
II.	Öppen terräng med små hinder, t. ex. kuperade slättlandskap med spridda träd och enstaka grupper av byggnader.	0,19
III.	Terräng med stora spridda hinder, t. ex. förortsbebyggelse, mindre tätorter.	0,22
IV.	Tätortsbebyggelse där minst 15% av ytan är bebyggd och där byggnadernas medelhöjd är > 15 meter.	0,24

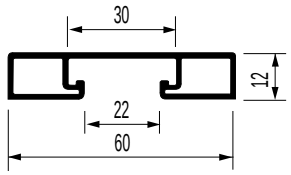
3. Characteristic windspeed pressure.


Bilaga C Karakteristiskt hastighetstryck q_k

Tabell C:b.
Karakteristiskt hastighetstryck $q_k = C_{dyn} \cdot C_{exp} \cdot q_{ref}$ i kN/m^2
C_{dyn} enligt ekv. 2:33a
C_{exp} enligt ekv. 2:33b
q_{ref} enligt ekv. 2:32a
för v_{ref} = 24, 25 resp 26 m/s.

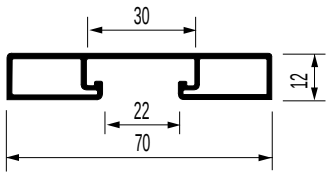
Höjd h (m)	v_{ref} = 24 m/s Terrängtyp I	II	III	IV	v_{ref} = 25 m/s Terrängtyp I	II	III	IV
2	0,62	0,59	0,53	0,50	0,68	0,64	0,58	0,55
4	0,75	0,59	0,53	0,50	0,81	0,64	0,58	0,55
8	0,88	0,73	0,53	0,50	0,96	0,79	0,58	0,55
12	0,97	0,82	0,62	0,50	1,05	0,89	0,68	0,55
16	1,03	0,88	0,69	0,50	1,11	0,96	0,75	0,55
20	1,08	0,93	0,75	0,56	1,17	1,01	0,81	0,61
25	1,13	0,99	0,80	0,62	1,22	1,07	0,87	0,67
30	1,17	1,03	0,85	0,66	1,27	1,12	0,92	0,72
35	1,20	1,07	0,89	0,70	1,30	1,16	0,97	0,76
40	1,23	1,10	0,93	0,74	1,34	1,20	1,01	0,80

Facing profile - Facade



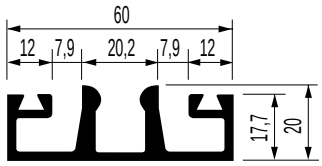
ALUMINIUM Kat.nr. SP 6260
Weight: 0,496 Kg/m • Perimeter: 182 mm

Facing profile
Glazed roof and Lantern lights

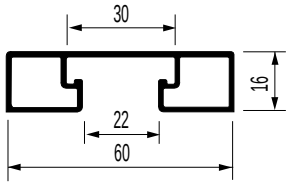


ALUMINIUM Kat.nr. SP 6270
Weight: 0,564 Kg/m • Perimeter: 202 mm

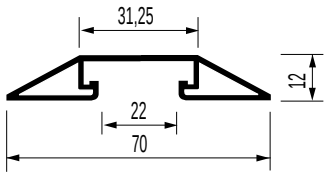
Drainage- and Underprofile
Glazed roof and Lantern lights



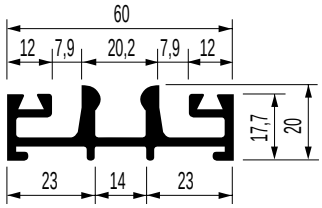
ALUMINIUM Kat.nr. SP 6360
Weight: 1,154 Kg/m • Perimeter: 306 mm



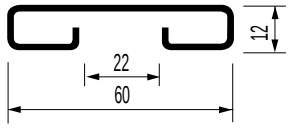
ALUMINIUM Kat.nr. SP 6261
Weight: 0,545 Kg/m • Perimeter: 197 mm



ALUMINIUM Kat.nr. SP 6271
Weight: 0,513 Kg/m • Perimeter: 186 mm



ALUMINIUM Kat.nr. SP 6361
Weight: 1,089 Kg/m • Perimeter: 317 mm

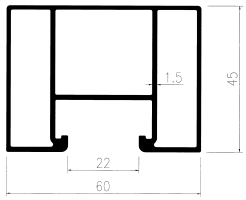


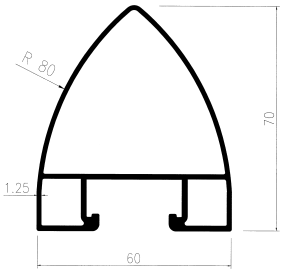
STEEL Kat.nr. SP 6262
Weight: 1,35 Kg/m

STAINLESS STEEL Kat.nr. SP 6264
Weight: 1,16 Kg/m

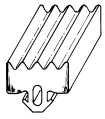
COPPER Kat.nr. SP 6266
Weight: 1,35 Kg/m

Special designed Facing profiles



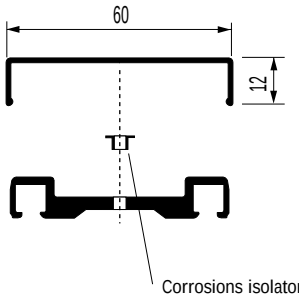


Rubber gasket for
Drainage- and Sealing profile



Kat.nr. SP 6362 Package 100 m/box
For drainage profile SP 6360, 6361

Facing profile - Facade

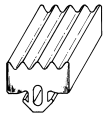


SP 66254
Weight:
0,278 kg/m

SP 66253
Weight:
0,565 kg/m

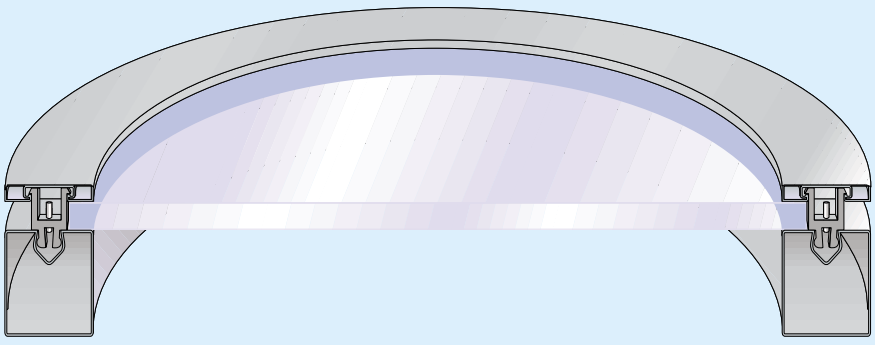
ALUMINIUM Kat.nr. SP 66253+54

Rubber gasket
for facing profile



Kat.nr. SP 66362 Package. 100 m/box
For facing profile SP 66253

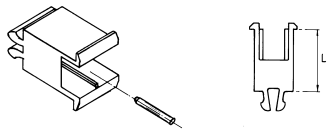
ARCHES SP 6000



Specifikation and assembly pages. 2-3, 4-5, 12-13, 14-15, 16-17, 18-19

SP 6000

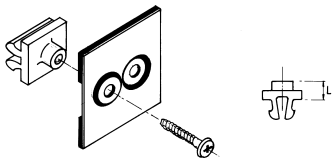
Stud fastener with rivet
Colour: black



Package: 100 pcs/box

Cat.no.	Glass thickness mm	Length mm
SP 6408	8, 10	22
SP 6419	19-21	32
SP 6422	22-23	34
SP 6424	24-26	37
SP 6427	27-29	40
SP 6430	30-32	43
SP 6433	33-36	47
SP 6437	37-38	49
SP 6439	39-40	51
SP 6441	41-43	55
SP 6448	48-51	63

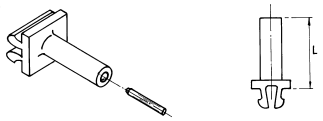
Glass retainer stud with
washer and screw 60x25



Package: 100 pcs/box

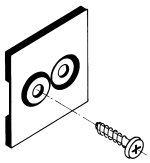
Cat.no.	Glas thickness mm	Length mm
SP 6508	8-10	10,5

Glass retainer stud with rivet
Colour: black



Cat.no.	Glass thickness mm	Length mm
SP 6519	19-22	24
SP 6523	23-28	28
SP 6529	29-35	34
SP 6536	36-43	41
SP 6548	48-51	50,5

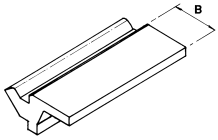
Glass retainer pad with
screw 6x18, alt.6x25



Package: 100 pcs/box

Cat.no.	Pad 50x50 zinkplated with rubber bead and screw
SP 6599	
SP 66599	

Glass carrier
Material: Aluminium



Package: 50 pcs/box

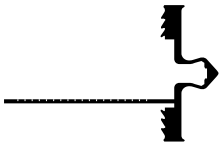
Cat.no.	Glass thickness SP 6000	Length mm
SP 6608	8-10, 19-22	24
SP 6623	23-35	38
SP 6636	36-51	53

SP 60000

Interior
Rubber gasket

Cat.no.	Length
SP 66350	50 m

Interior
Rubber gasket

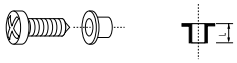


Cat.no.	Glass thickness mm	Length
SP 66351	8-51	40 m

Aluminium tape

Cat.no.	Dimension, mm	Length
SP 66352	25x0,11	55 m

Corrosion isolator
with screw 6x18, alt.6x25



Package: 100 pcs/box

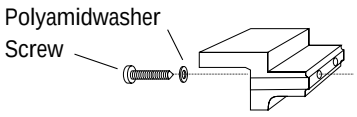
Cat.no.
SP 66353/18
SP 66353/25

Glass and gasket retainer stud with rivet
Colour: Black

Package: 100 pcs/box

Cat.no.	Glass thickness mm	Length mm
SP 66519	19-28	20
SP 66529	29-35	29
SP 66536	36-45	36
SP 66546	46-51	44
SP 66548	46-51	52*
See table page 15		*For Al.bead

Glass carrier with screw + washer
Material: Aluminium



Package: 50 pcs/box

Cat.no.	Glass thickness mm	Length mm
SP 66619	19-22	28
SP 66623	23-26	33
SP 66627	27-30	37
SP 66631	31-34	41
SP 66635	35-38	45
SP 66639	39-42	48
SP 66643	43-46	52

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