

INTERNATIONAL FIRE CONSULTANTS LTD



COMMERCIAL IN CONFIDENCE

This document is provided for the purpose of demonstrating compliance with the appropriate performance levels required by a designated third party. It should not be divulged to any other parties without the approval of the client named below.

This document remains the property of the client.

ASSESSMENT REPORT IFCA/04211 REVISION A

Extent of approval of SFB 2074 and SFB 2060 systems when used to provide 30 minute fire resistance assemblies as outlined in Field of Application Report IFCA/99123 Revision B

Prepared on behalf of: Sapa Building System AB 574 81 Vetlanda

Sweden

NOTE: This report should not be manipulated, abridged or otherwise presented without the written consent of International Fire Consultants Ltd

Original Issue – December 2004 Revision A – July 2007

Ref: X/Assess/2004/04211A/#8482

CONTENTS

1.	INTRODUCTION	3
	EXTENT OF APPROVAL	
	CONCLUSION	
	LIMITATIONS	
	VALIDITY	
APF	PENDIX A	6
APF	PENDIX B	7
APF	PENDIX C	8

1. INTRODUCTION

This report should be read in conjunction with Field of Application Report IFCA/99123 Revision B, which considers the extent of approval and outlines the field of application for SFB 2074 and SFB 2060 systems when used to provide 30 minute fire resistant assemblies.

The drawings included in this report are designed to demonstrate the extent of approval for the SFB 2074 and SFB 2060 systems to give 30 minutes integrity, and, where appropriate, 30 or 15 minutes insulation performance, under the conditions of a BS476: Part 22: 1987 fire resistance test.

2. EXTENT OF APPROVAL

The extent of approval for the SFB 2074 and SFB 2060 systems is outlined in drawings in the following appendices:

- Appendix A outlines the approved configurations, construction and installation details for the SFB 2074 system doorsets and partitions.
- Appendix B outlines the approved configurations, construction and installation details for the SFB 2060 system doorsets in SFB 2074 system partitions.
- Appendix C outlines the general manufacturing details.

3. CONCLUSION

Based upon the analysis in Field of Application Report IFCA/99123 Revision B International Fire Consultants Ltd would conclude the following:

If SFB 2074 system assemblies were manufactured and installed in accordance with all aspects of Field of Application Report IFCA/99123 Revision B, they would satisfy the integrity and insulation criteria for 30 minutes, if tested in accordance with the conditions of BS476: Part 22: 1987.

If SFB 2060 system assemblies were manufactured and installed in accordance with all aspects of the Field of Application Report, they would satisfy the integrity criteria for 30 minutes, if tested in accordance with the conditions of Section 6 or the integrity and insulation criteria for 30 minutes, if glazing were in excess of 80% of the assembly area, if tested in accordance with the conditions of Section 7 of BS476: Part 22: 1987.

If SFB 2074 system assemblies were manufactured and installed in accordance with all aspects of the Field of Application Report, they would satisfy the integrity criteria for 30 minutes and the insulation criteria for up to 30 minutes if tested in accordance with the conditions of BS476: Part 22: 1987.

4. LIMITATIONS

This Assessment Report, which is only valid for the Sapa assemblies and addresses itself solely to the ability of the assemblies described in Field of Application Report IFCA/99123 Revision B to satisfy the criteria of the fire resistance test. It does not imply any suitability for use with respect to other unspecified criteria.

This document only considers the Sapa assemblies described in Field of Application Report IFCA/99123 Revision B, and assumes that the surrounding construction will provide no less restraint than the tested assembly, and that it will remain in place and be substantially intact for the full fire resistance period.

Where the constructional information in that report is taken from details provided to International Fire Consultants Ltd (IFC) and/or from fire resistance test reports referenced therein, it is, therefore, limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed, it should not be taken to infer approval of variation in such details from those tested or otherwise approved.

Where the assessed constructions have not been subject to an on-site audit by International Fire Consultants Ltd, it is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations herein.

Any materials specified have been selected and judged primarily on their fire performance. IFC do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations.

This Report is provided to the sponsor on the basis that it is a professional independent engineering opinion as to what the fire performance of the construction/system would be should it be tested to the named standard. It is IFC's experience that such an opinion is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless IFC have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, IFC cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and IFC cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

5. VALIDITY

This report has been prepared based on International Fire Consultants Ltd's present knowledge of the products described, the stated testing regime and the submitted test evidence. For this reason anyone using this document after July 2008 should confirm its ongoing validity.

Prepared by:

David Cooper BEng (Hons) AUS

Consultant

International Fire Consultants Ltd

Checked by:

David J Ive

Senior Consultant

International Fire Consultants Ltd

Authorised for issue by:

Peter E Jackman IEng MIFireE FBEng AIWSc

Technical Director

International Fire Consultants Ltd

Revision A – July 2007: Review and revalidation for an additional 12 months.

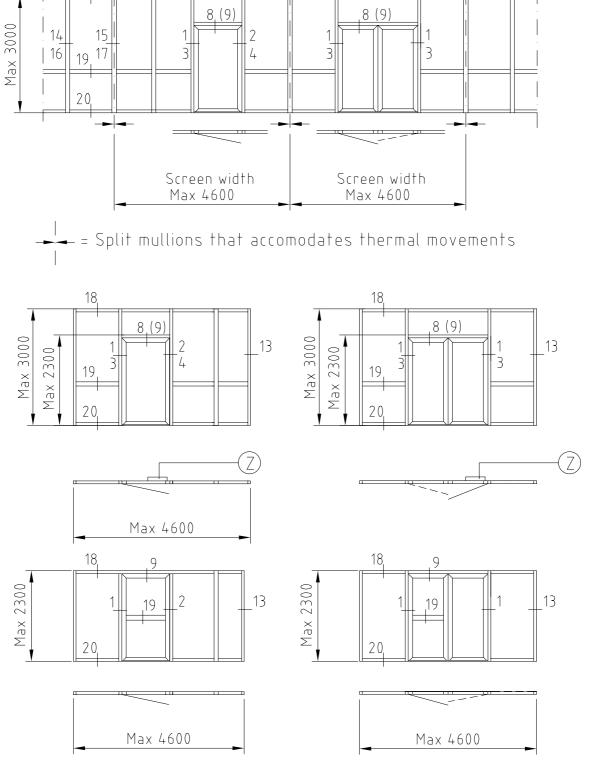
APPENDIX A

Configurations, construction and installation details for SFB 2074 system doorsets and partitions

Sapa Figures

P2004 - 811	P2004 - 825	P2004 - 834
P2004 - 812	P2004 - 826	P2004 - 835
P2004 - 813	P2004 - 827	P2004 - 861
P2004 - 814	P2004 - 828	P2004 - 862
P2004 - 815	P2004 - 829	P2004 - 863
P2004 - 821	P2004 - 830	P2004 - 881
P2004 - 822	P2004 - 831	P2004 - 891
P2004 - 823	P2004 - 832	P2004 - 892
P2004 - 824	P2004 - 833	

The figures in this Appendix are not included in the sequential page numbering of this report



In a Curtain Wall application the screen can be performed with inwards or outwards opening doors

REFERENCE:

Size limits for doors, see drawing No. P2004–812 Glass unit and infill panels, see drawing No P2004–814 Bill of materials, see drawing No P2004–831, –832 and –833 Section tables, see drawing No P2004–834 and –835

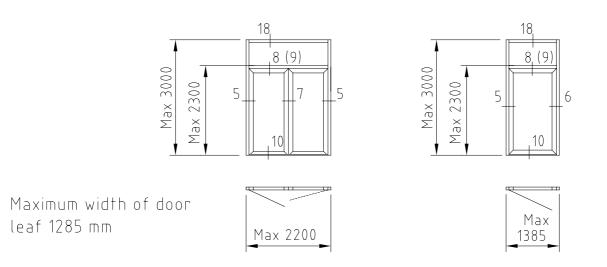


18

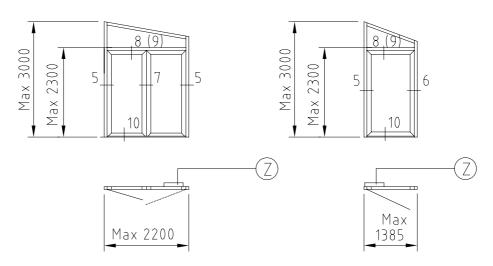
Elevations, doors with side and top lights
30 minute fire resisting constructions

FIRE SCREEN 2074

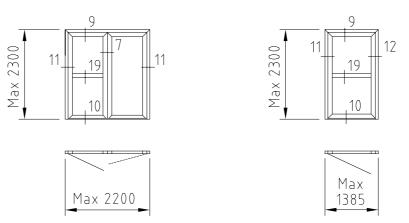
1:100 04-10 P2004-811



Alternative with inclined top light



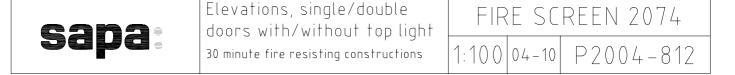
Single and double door without side and top light

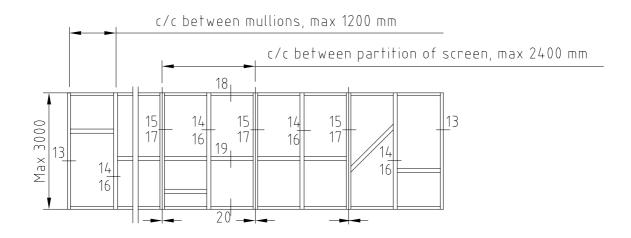


In a Curtain Wall application teh screen can be performed with inwards or outwards opening doors.

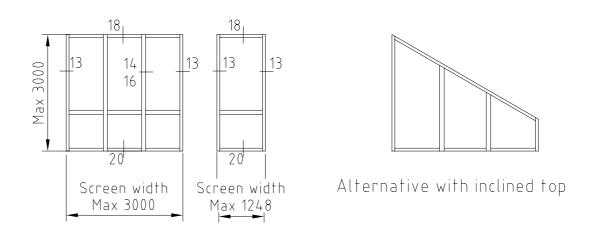
REFERENCE:

Glass and infil panels, see drawing No. P2004–814 and –815 Bill of materials, see drawing No P2004–831, –832 and –833 Section tables, see drawing No P2004–834 and –835





= Split mullion that accomodates thermal movements

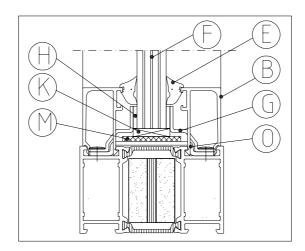


One or several transom bars can be used Maximum 45° angle for inclined bars

REFERENCE:

Bill of materials, see drawing No P2004–831, -832 and -833 Section tabled, see drawing No P2004–834 and -835





Explanation

- F. Fire glass unit/ Infill panel
- O. Base clips
- G. Glazing clips
- B. Glazing bead
- E. Gasket
- H. Glazing strip
- K. Setting block
- M. Intumescent strip

SINGLE GLASS UNIT

Туре	Thickness	Max dim. (WxH) ,mm
Contraflam 30-N2 Pyrostop 30-20D Pyrostop 30-10D Pyrodur 30-201* Pyrodur 30-10 * Pyrobel 16 Pyrobel 16 EG Swissflam 30 - N2 Interfire EI30	16 mm 18 mm 15 mm 10 mm 11 mm 16 mm 20 mm 16 mm 24 mm	1140 × 2030 (2092×800) 1140 × 2092 (2092×800) 1140 × 2092 (2092×800) 1200 × 2000 (2092×617) 1200 × 2000 (2092×617) 1132 × 2081 (2092×617) 1132 × 2081 (2092×617) 1140 × 2030 (2092×800) 1140 × 2092 (2092×800)

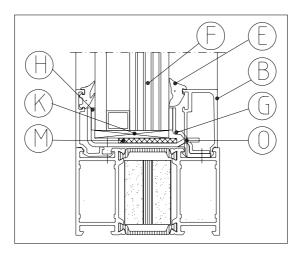
^{* 15} minutes insulation only

REFERENCE:

Positioning of glazing clips and setting blocks, see drawing P2004–881 Bill of materials, see drawing P2004–831 to -835 Glazing instructions, see drawing P2074–905 to -924



51	ngle	glass	s dime	SUSIOUS	
30	minute	fire r	esistina	ı construction	ıs



Explanation

- F. Fire glass unit/ Infill panel
- O. Base clips
- G. Glazing clips
- B. Glazing bead
- E. Gasket
- H. Glazing strip
- K. Setting block
- M. Intumescent strip

DOUBLE GLASS UNIT AND INFILL PANEL

Туре	Thickness	Max dim. (WxH) ,mm
Contraflam 30-N2 Pyrostop 30-25D* Pyrobel 16 DGU* Swissflam 30 - N2*	32 mm 32-36 mm 36 mm 32 mm	1140 x 800 (1150x800) 1140 x 2092 (2092x800) 1132 x 2081 (2092x617) 1140 x 800 (1150x800)
Stp-G panel 2x15 gypsum, 1mm enameled steel sheet or 1mm stainless steel sheet both sides.	32 mm	
15+6+15 mm gypsum, 1mm enameled steel sheet or 1mm stainless steel sheet both sides.	38 mm	600 x 2400 1100 x 1100
Alp-G panel 2x15 gypsum, 1.5mm anodized or powder painted aluminium sheet both sides.	33 mm	2150 x 700
15+6+15 mm gypsum, 1.5mm anodized or powder painted aluminium sheet both sides.	39 mm	

^{*} Must be installed with non-fire glass on the perceived fire risk face

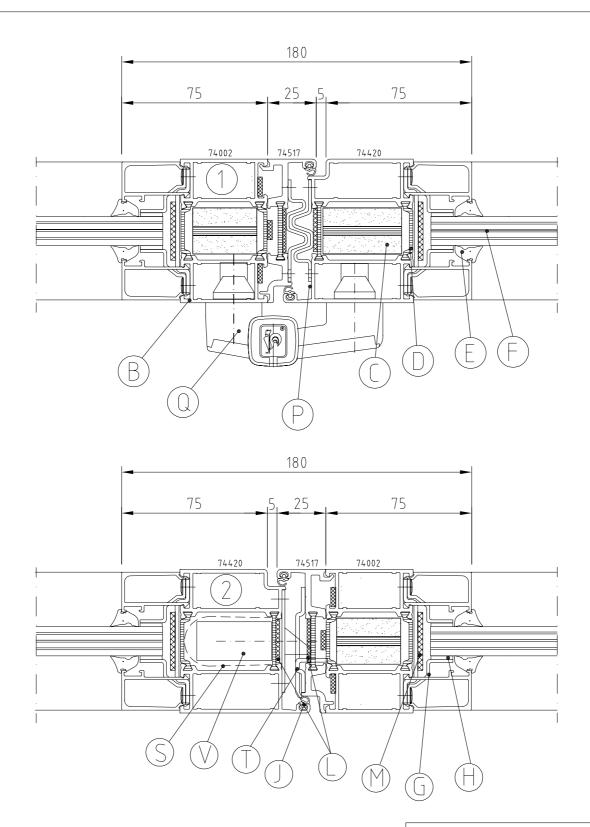
REFERENCE:

Positioning of glazing clips and setting blocks, see drawing P2004–881 Bill of materials, see drawing P2004–831 to -835 Glazing instructions, see drawing P2074–905 to -924

Sa	pa	

Dimensions of double glass units and infill panels. 30 minute fire resisting constructions FIRE SCREEN 2074

- 04-10 P2004-815



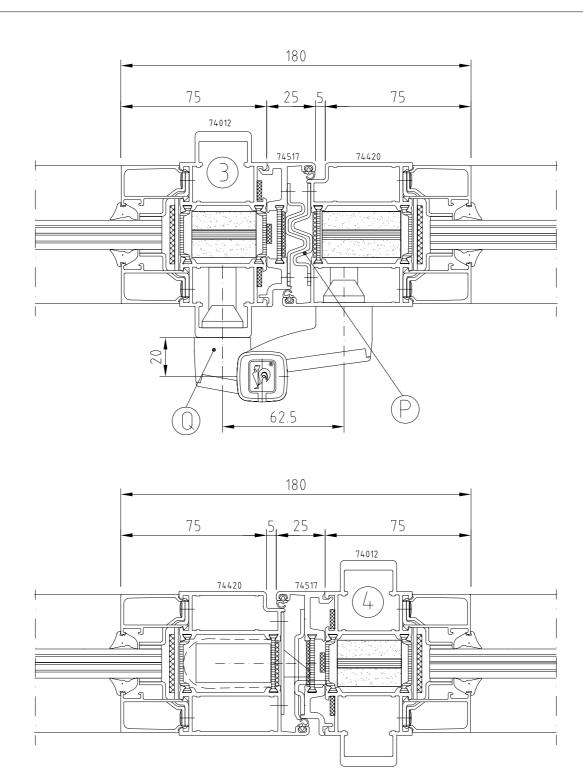
Frame member

Extrusions according to section 1 and 2 <u>may</u> be used for heights <u>up to</u> 2300 mm.

REFERENCE:

Bill of materials, see drawing No P2004–831, -832 and -833 Section tables, see drawing No P2004–834 and -835

saba	Section 1 – 2	FIRE SCREEN 2074		
sapa:	30 minute fire resisting constructions	1:2	04-10	P2004-821



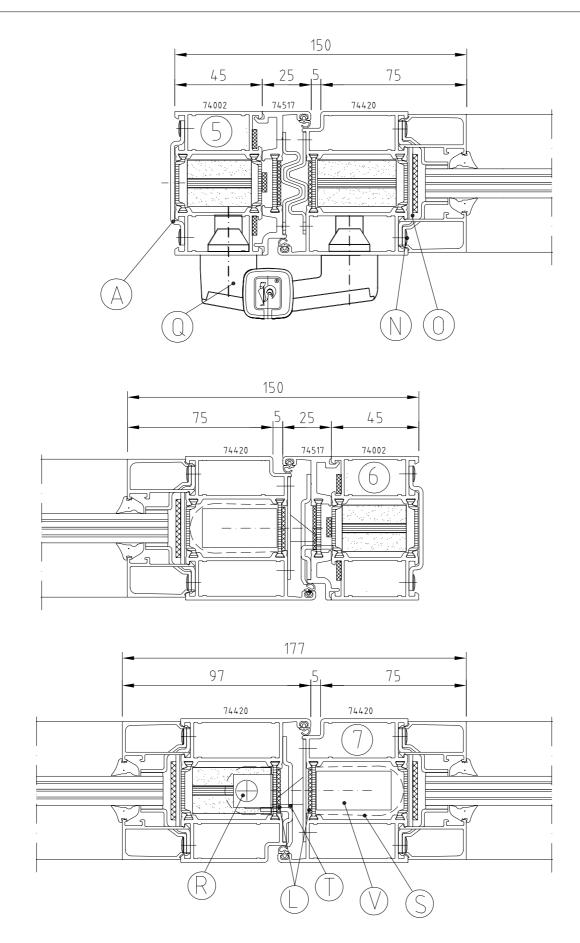
Frame member

Extrusions according to section 3 and 4 <u>must</u> be used in screens with heights <u>over</u> 2300 mm.

REFERENCE:

Bill of materials, see drawing No P2004–831, -832 and -833 Section tables, see drawing No P2004–834 and -835

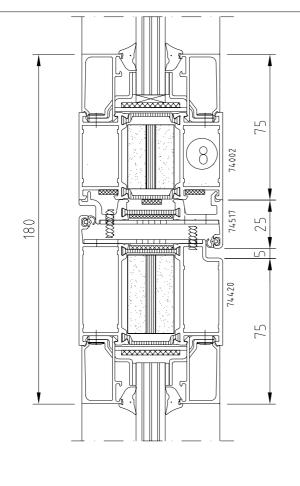




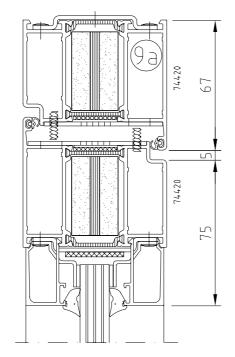
REFERENCE:

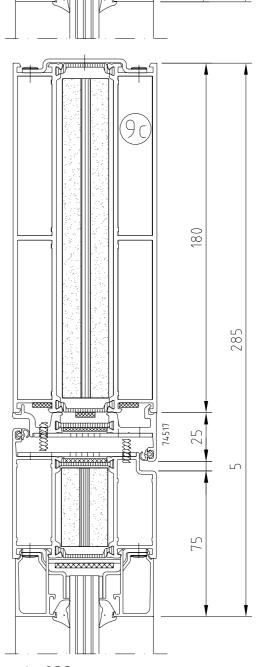
Bill of materials, see drawing No P2004–831, –832 and –833 Section tables, see drawing No P2004–834 and –835

saba	Section 5 - 7	FIRE SCREEN 207		REEN 2074
sapa	30 minute fire resisting constructions	1:2	04-10	P2004-823



Section 9: Design – integrated rebate





150

REFERENCE:

Bill of materials, see drawing No P2004-831, -832 and -833 Section tables, see drawing No P2004-834 and -835

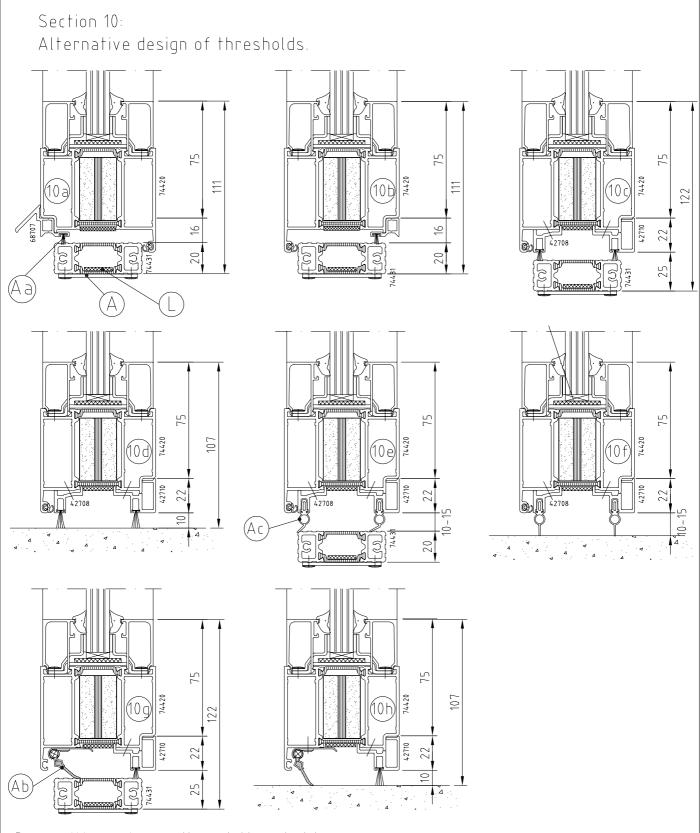


Section 8 - 9

FIRE SCREEN 2074

30 minute fire resisting constructions

04-10 | P2004-824 1:2



Door with smoke sealing at threshold.

When a smoke seal is used, full sealing should be achieved in closed position.

REFERENCE:

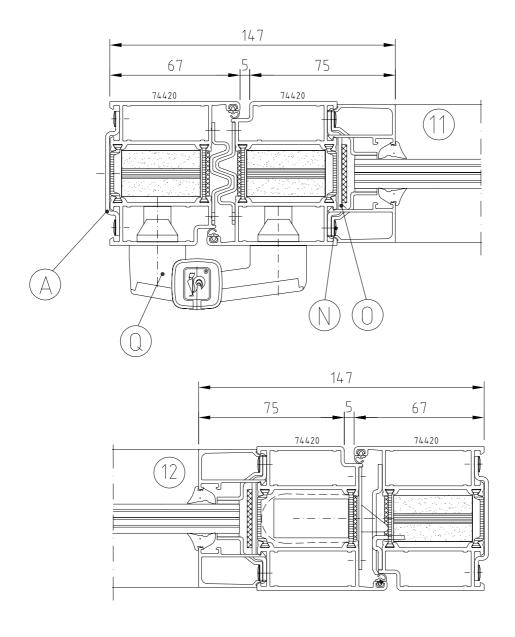
Bill of materials, see drawing No P2004–831, –832 and –833 Section tables, see drawing No P2004–834 and –835

C I		10
Sect	\cup	10
$\supset \subset \subset \Gamma$	\cup	10

30 minute fire resisting constructions

1:2.5 04-

04-10 P2004-825



REFERENCE:

Bill of materials, see drawing No P2004–831, –832 and –833 Section tables, see drawing No P2004–834 and –835



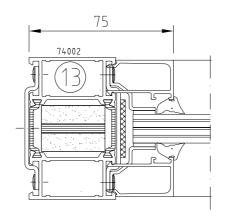
Section 11 - 12

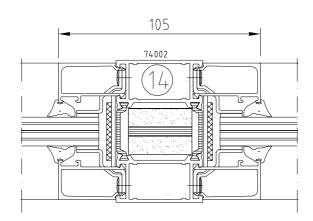
FIRE SCREEN 2074

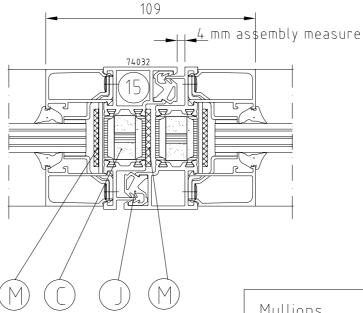
30 minute fire resisting constructions

1:2 04-10

P2004-826







<u>Mullions</u>

Extrusions according to section 14 and 15 may be used for heights up to 2300 mm

REFERENCE:

Bill of materials, see drawing No P2004-831, -832 and -833 Sections tables, see drawing No P2004-834 and -835

Sa	P	8	- 000 - 000

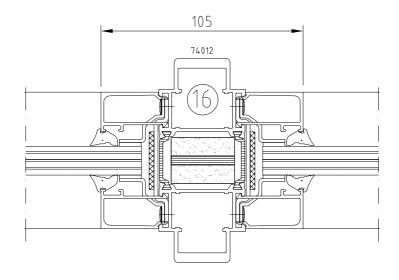
Section 13 - 15

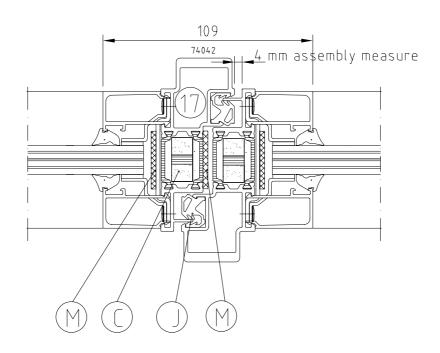
FIRE SCREEN 2074

30 minute fire resisting constructions

1:2

04-10 P2004-827





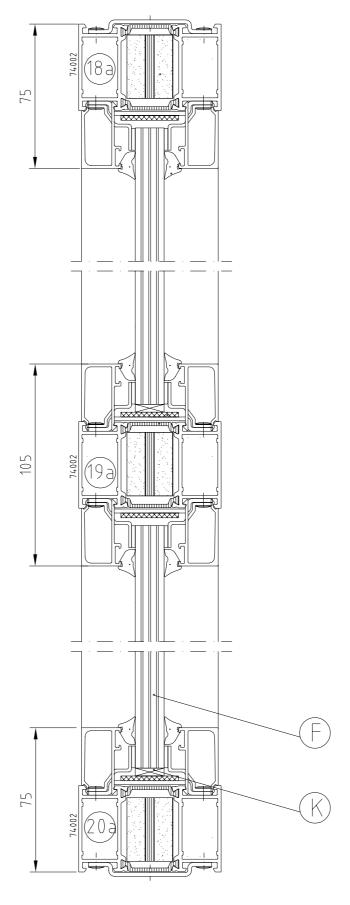
<u>Mullions</u>

Extrusions according to section 16 and 17 <u>must</u> be used in screens with heights over 2300 mm

REFERENCE:

Bill of materials, see drawing No P2004–831, –832 and –833 Sections tables, see drawing No P2004–834 and –835

saba	Section 16 - 17	FIR	FIRE SCREEN 2074		
saha	30 minute fire resisting constructions	1:2	04-10	P2004-828	



REFERENCE:

Bill of materials, see drawing No P2004–831, –832 and –833 Sections tables, see drawing No P2004–834 and –835

3 0 40	000 0000 0000 0000 0000 0000 0000 0000 0000

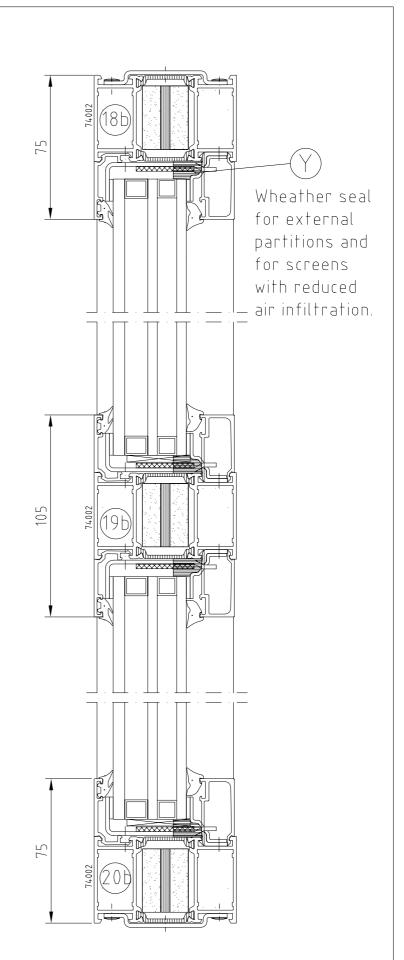
Section 18a – 19a

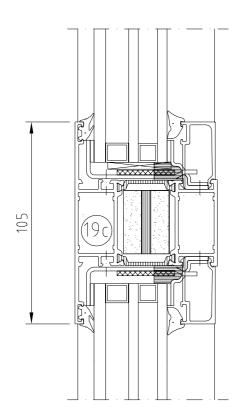
FIRE SCREEN 2074

30 minute fire resisting constructions

1:2 04-10

P2004-829





Alternative design with outward fixed flange for sealed insulating fire glass unit

REFERENCE:

Bill of materials, see drawing No P2004–831, –832 and –833 Sections tables, see drawing No P2004–834 and –835



Section 18b - 20b Insulated fire-rated glass 30 minute fire resisting constructions FIRE SCREEN 2074

1:2 | 04-10 | P2004-830

	Designation	Part No Sapa	Material	Remarks	Reference
A	Assembly fitting	12046 12055 12060	Stainless steel BS304S15	Thickness = 2 mm, Length = 20 mm	P2004-823
В	Aluminium extrusions		Alloy EN-AW-6063-T6	Surface treatment: anodized or laquered	P2004-821 P2004-834 P2004-835
C	Fire insulation	18308 18309 18311 18322 18323 18336	9 mm gypsum wallboard 4.8 mm board (Karlit, hard, extra) 9 mm gysum wallboard Sandwich element Glued with Casco 1273	Density: 800 kg/m ³ Density: 960 kg/m ³ Density: 800 kg/m ³ Glue amount per layer = 150 g/m ²	P2004-821 P2004-827 P2004-828
D	Thermal break		Polyamide PA 66 GF25	Thickness = 1.8 mm	P2004-821
E	Glazing gasket		EPDM	Alt. gasket containing EPDM-cellular rubber or Chloroprene	P2004-821
F	Fire glass unit/ Infill panel		Alt. brand of 15 mm gypsum b Gyproc GF 15 Danogips Brandskydd DB 15 Norgips Brandskydd B	oard:	P2004-814
			6 mm gypsum board	Standard quality	
G	Glazing clips	12815 - 12819, 12821	Stainless steel BS304S15	Thickness = 1.5 (2.0) mm, Length = 50 mm	P2004-821 P2004-881
Н	Glazing strip		Intumex alt. Fiberfrax	1x14 mm 3.2x12 mm To be fixed to pos. G	P2004-821
	Fire insulation		Gypsum wallboard 15 mm	Gyproc GF 15	P2004-864
J	Weather strip/gasket	18354 18357	EPDM	Material and dimension according to good practice.	P2004-821 P2004-827
K	Setting and location blocks		Beech or other wood material with similar density	Material and dimension according to good practice.	P2004-829
L	Intumescent strip	18321	Intumex alt. Pyroplex	plastic covered, 2x23 mm	P2004-821 P2004-825
	1	Dill of	materials	FIDE CODEENI	2071

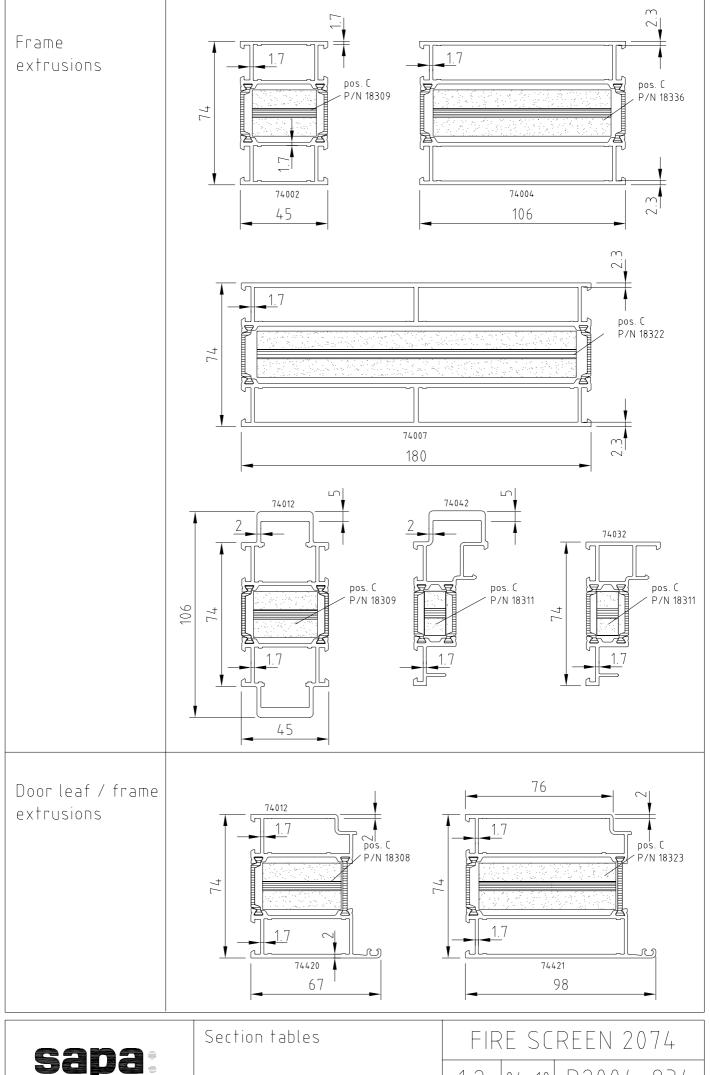
saba	Bill of materials	FIR	REEN 2074	
	30 minute fire resisting constructions		04-10	P2004-831

	Designation	Part No Sapa	Material	Remarks	Reference
М	Intumescent strip	18307	Pyroplex or Intumex LSK	Dim. 2 x 30 mm Dim. 2.5 x 30 mm	P2004-821 P2004-827 P2004-828
N	Pop rivet		Stainless steel	4.0x10.5 mm	P2004-823
0	Base clip/glazing clip	12047 12814 12819	Stainless steel BS304S15	Thickness = 2 mm, Length = 50 mm	P2004-823
Р	Hinge side securing device	14038	Stainless steel BS304S15	3 pcs per hinge side (2 pcs placed in level with hinges and 1 right between them)	P2004-822
Q	Hinges	14015 14034 14043 14044	Aluminium with stainless steel pin Ø12mm and plastic bushings	Dr Hahn series 60 AT or series 3	P2004-821
R	2 pcs single action flush bolt	14411 14412 14415 14416 14434	Cast in zink alloy or steel	Intumescent for lock housing, see pos. S 1 placed at the top and 1 at the bottom	P2004-823
	or 1 double action flush bolt	combinat	matic flush bolts in ion with coordinator and ser on each door leaf	Automatic flush bolt ASSA 2396, Sapa P/N 14441	
S	Intumescent sheet	18305 18306 18313 18314	Pyroplex alt. Intumex Interdens	250 × 150 mm Pyroplex, Thickn. = 1 mm Interdens, Thickn. = 2 mm	P2004-821
Τ	Striking plate		Stainless steel BS304S15 rd approved electric strikes aled cables		P2004-821
U	Intumescent strip	18303	Pyroplex or Intumex LSK	Dim. 2 x 10 mm Dim. 2.5 x 10 mm	P2004-824
V	Mortice lock with latch		Latch and the parts that affects it has to be made of steel or alloy with a melting point of at least 850°C Or standard approved automatic opening device	The latch has to be impossible to inactivate and it must have a grip of 7 mm in striking plate	P2004-821
X	Top locking device	14426	Stainless steel BS304S15 adjustable pin, stainless steel, M4	To be secured with Locktite.	P2004-824
Y	Sealing compound	12222	Pyrosil B		P2004-830 P2004-861 P2004-862
		Bill of	materials	FIRE SCREEN	2074

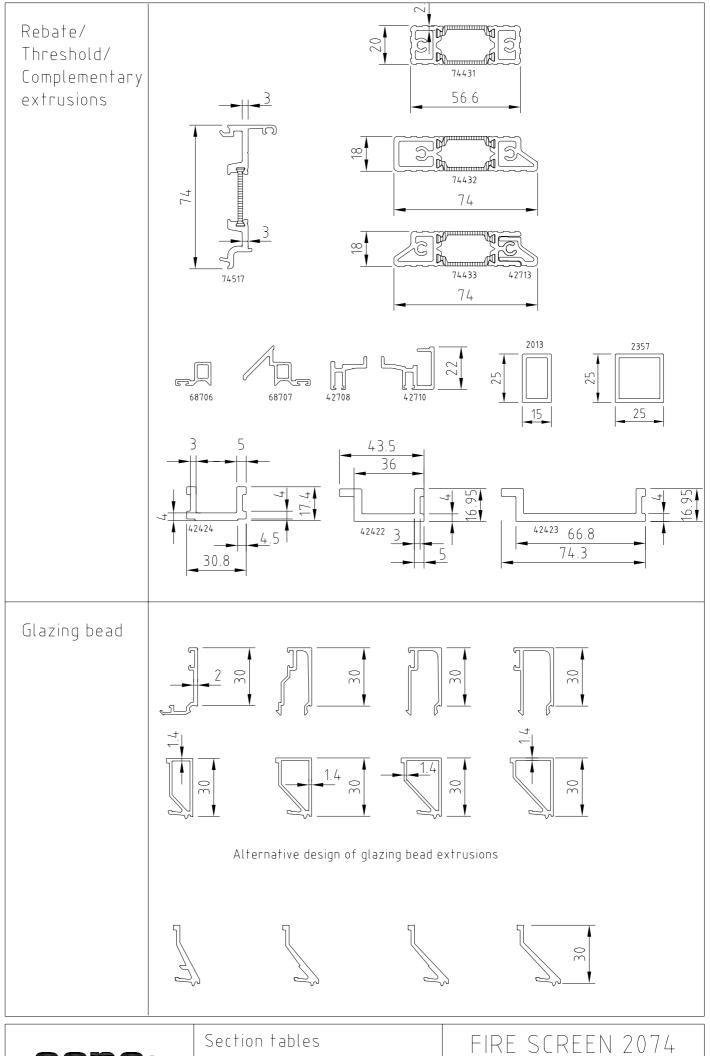
cana	Bill of materials	FIRE SCREEN 2074		
sapa:	30 minute fire resisting constructions	_	04-10	P2004-832

	Designation	Part No Sapa	Material	Remarks	Reference		
Z	Door closer alt. approved automtic/do	or opener	Cast in aluminium	door opener without hold open device	P2004-811 P2004-812		
Aa	Wool pile	18101 18105 18106	Nylon		P2004-826		
АЬ	Smoke seal		Total, Finndin&Co, Sweden Gasket of chloroprene		P2004-825		
Ас	Smoke seal	18400	Gasket of EPDM		P2004-825		
	Bill of materials FIRE SCREEN 2077.						

eana.	Bill of materials	FIRE SCREEN 2074		
sapa	30 minute fire resisting constructions	_	04-10	P2004-833



1:2 P2004-834 04-10 30 minute fire resisting constructions

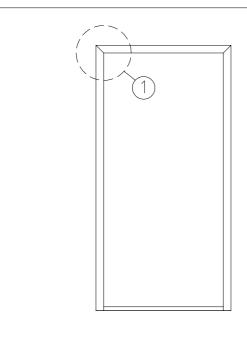


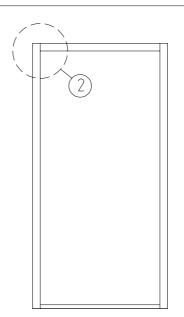


30 minute fire resisting constructions

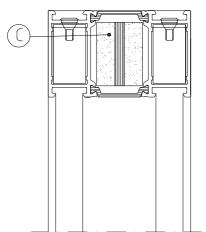
1:2 04-10

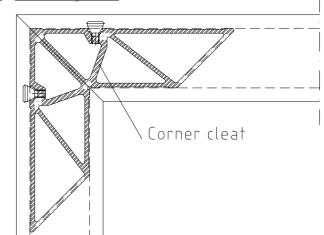
P2004-835

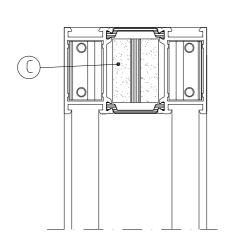


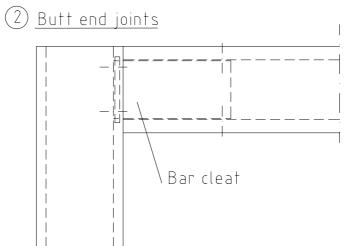


1) Mitred joints









In all butted joints with fire insulation, according to pos. C, intumescent strip to be applied, pos. M.

Joints in screens for outdoor use have to be sealed with sealing compound Pyrosil B, pos. Y.

REFERENCE:

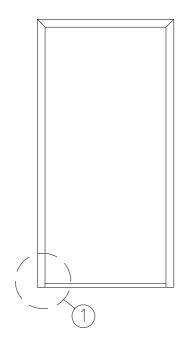
Bill of materials, see drawing No P2004-831, -832 and -833

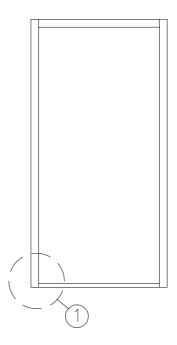
Assembling, mitred and butt end joints 30 minute fire resisting constructions

FIRE SCREEN 2074

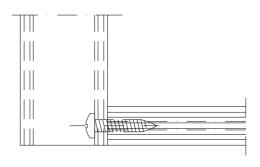
1:2

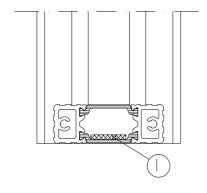
04-10 P2004-861

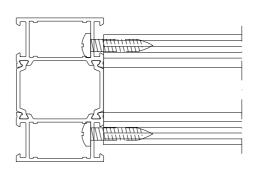




DETAIL 1







In all butt joints with fire insulation, according to pos. I, intumescent strip to be applied, pos. M.

Joints in screens for outdoor use have to be sealed with sealing compound Pyrosil B, pos. Y.

REFERENCE:

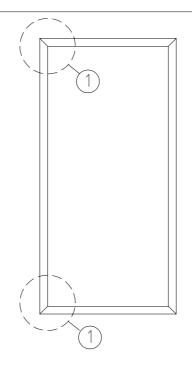
Bill of materials, see drawing No P2004-831, -832 and -833



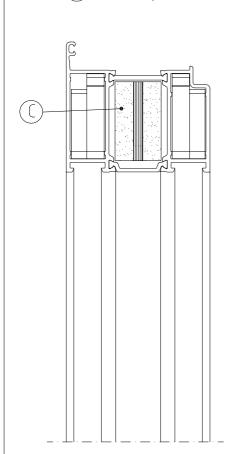
Assembling frame/threshold
30 minute fire resisting constructions

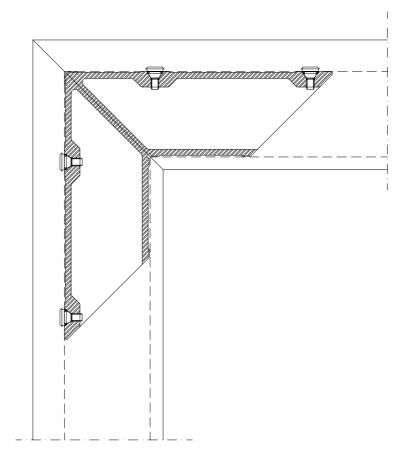
FIRE SCREEN 2074

1:2 | 04-10 | P2004-862



1 Mitred joints





In all butt joints with fire insulation, according to pos. C, intumescent strip to be applied, pos. M.

Joints in screens for outdoor use have to be sealed with sealing compound Pyrosil B, pos. Y.

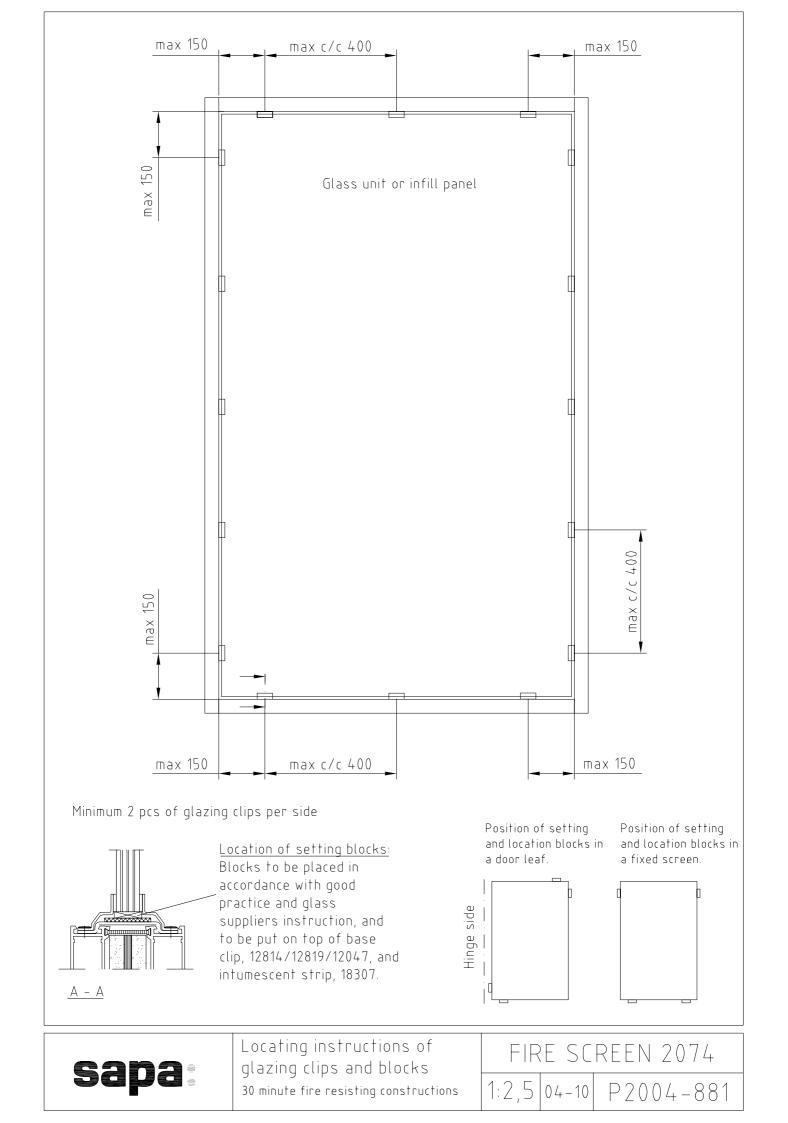
REFERENCE:

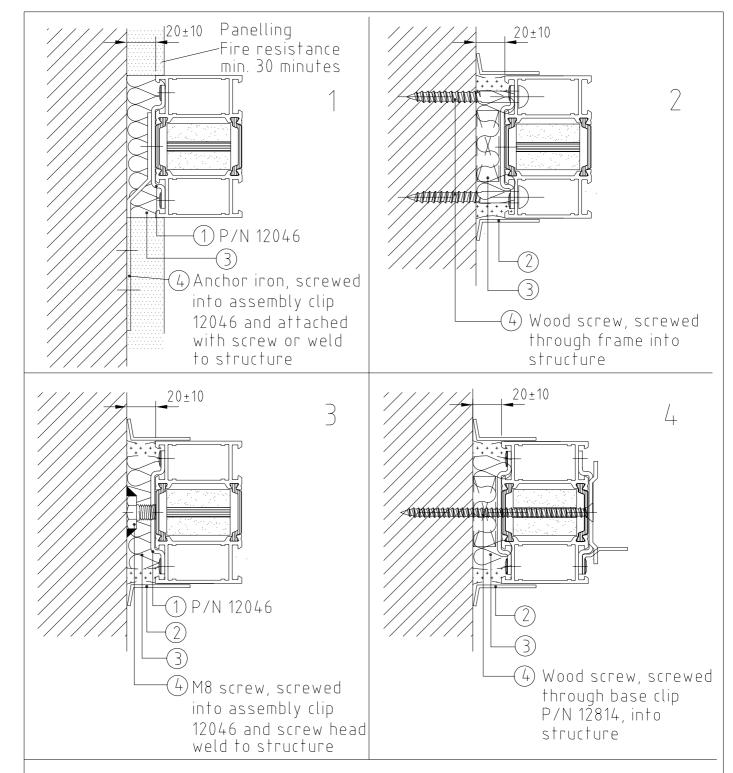
Bill of materials, see drawing No P2004-831, -832 and -833



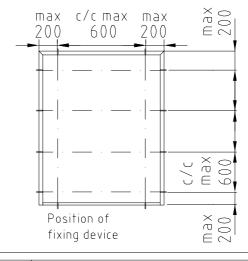
Assembling of door leaf Mitred joints 30 minute fire resisting constructions FIRE SCREEN 2074

1:2 | 04-10 | P2004-863





- ① Assembly fittings according to each section
- (2) Angular profile alt. sealing compound
- 3 Insulation with mineral wool
- (4) Fixing device



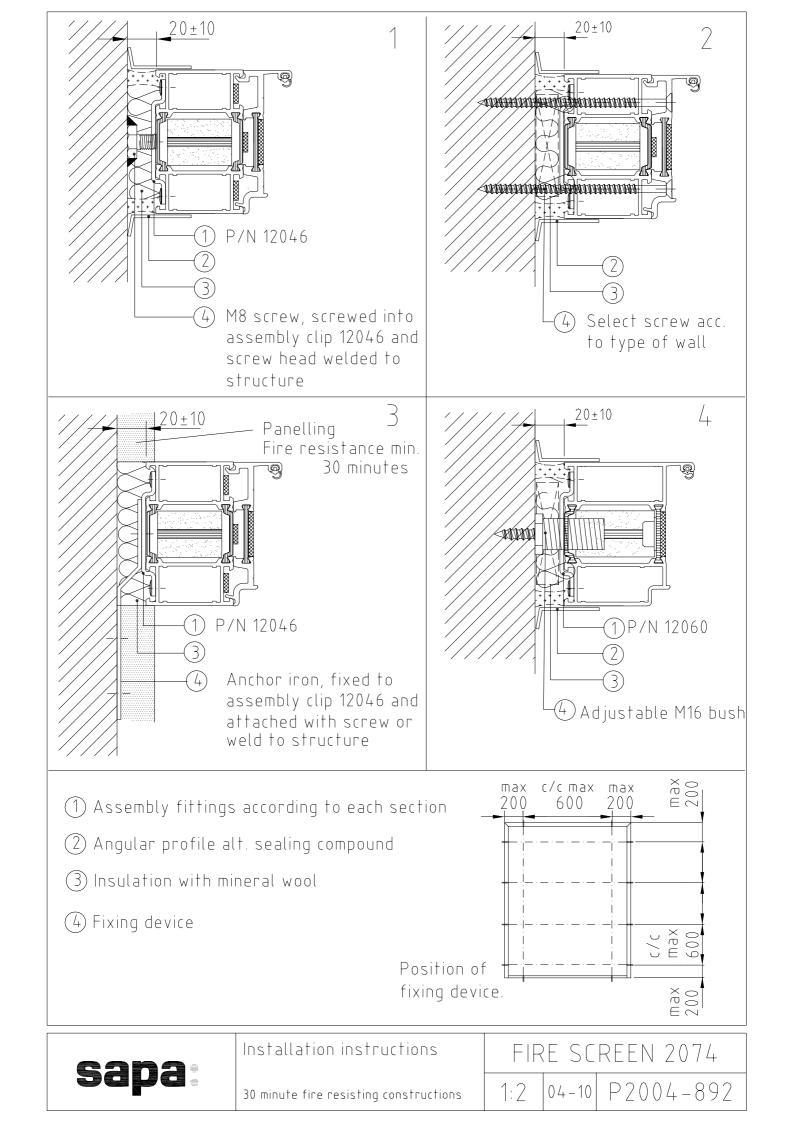


Installation instructions

30 minute fire resisting constructions

FIRE SCREEN 2074

1:2 04-10 P2004-891



APPENDIX B

Configurations, construction and installation details for SFB 2060 system doorsets in SFB 2074 system partitions

Sapa Figures

P2004 - 611

P2004 - 612

P2004 - 621

P2004 - 622

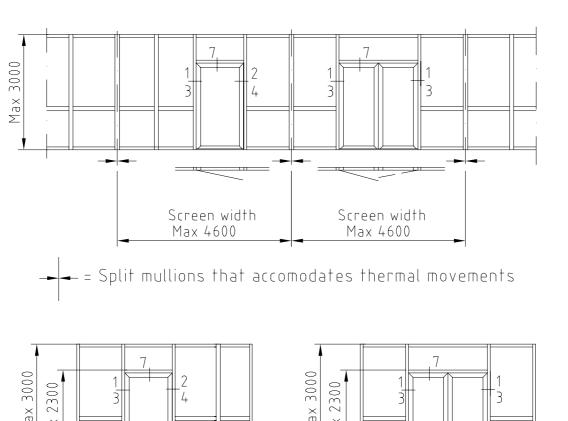
P2004 - 623

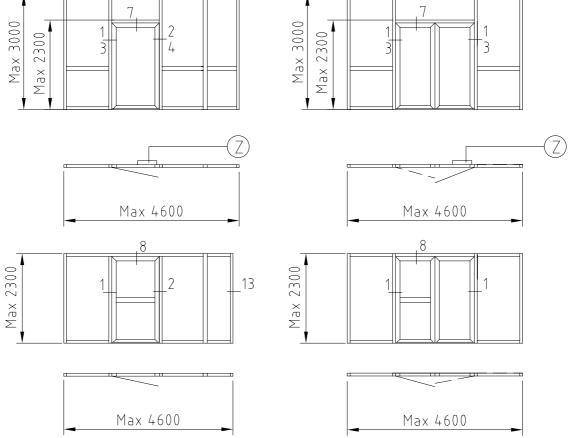
P2004 - 624

P2004 - 631

P2004 - 691

The figures in this Appendix are not included in the sequential page numbering of this report





In a Curtain Wall application the screen can be performed with inwards or outwards opening doors

REFERENCE:

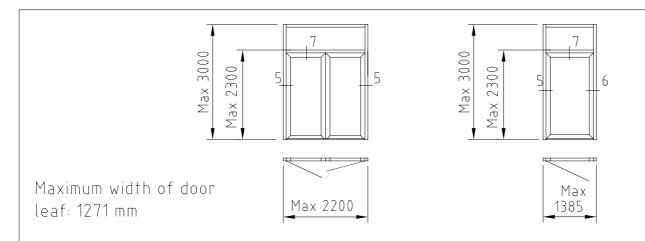
Size limits for doors, see drawing No P2004-612 Glass and infil panels, see drawing No. P2004-814 Principle section of side/top lights and bars, see drawing No P2004-811 Bill of materials, see drawing No P2004-631



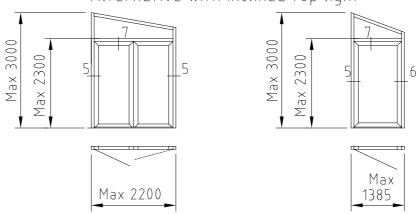
Elevations, doors with side and toplight
30 minute fire resisting constructions

FIRESCREEN 2074

1:100 04-09 P2004-611



Alternative with inclined top light



In a Curtain Wall application the screen can be performed with inwards or outwards opening doors

REFERENCE:

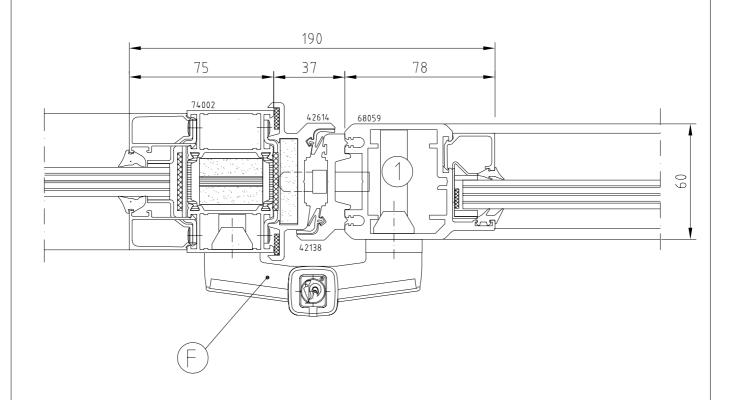
Fire glass unit and infill panels, see drawing No P2004–814 Principle section of side/top lights and bars, see drawing No P2004–811 Bill of materials, see drawing No P2004–631

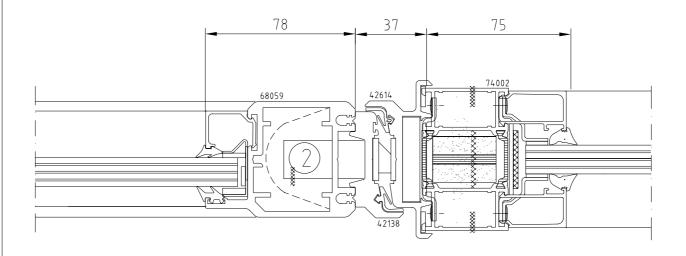


Elevations, single and double doors with toplight
30 minute fire resisting constructions

FIRESCREEN 2074

1:100|04-09| P2004-612





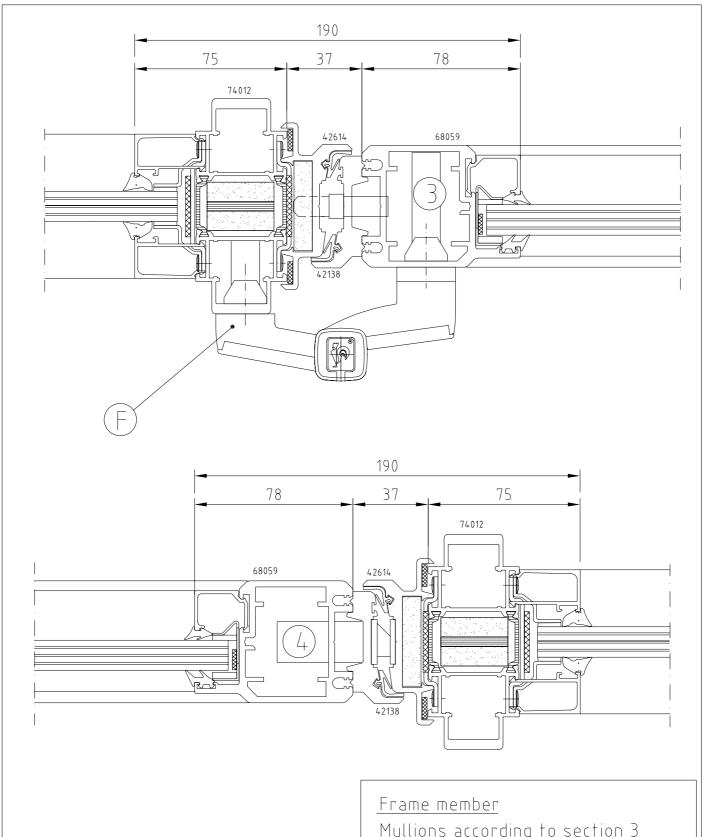
Frame member

Mullions according to section 1 and 2 may be used for screen heights up to 2300mm

REFERENCE:

Bill of materials, see drawing No P2004-631

cana	Section 1 – 2	FIF	RESCI	REEN 2074
sapa	30 minute fire resisting constructions	1:2	04-09	P2004-621

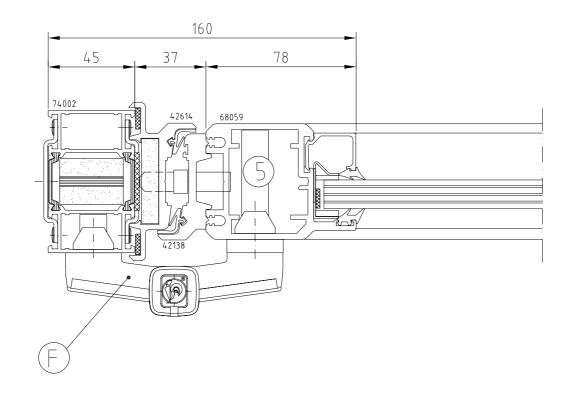


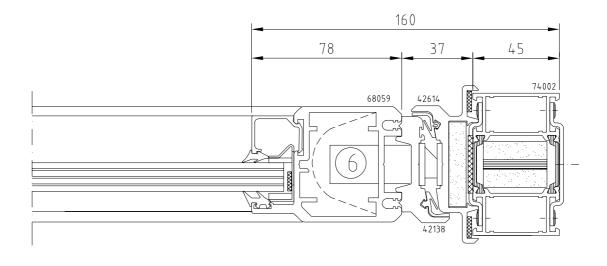
Mullions according to section 3 and 4 <u>must</u> be used in screens with heights over 2300mm

REFERENCE:

Bill of materials, see drawing No P2004-631

Section 3 - 4		FIRESCREEN 2074			
sapa:	30 minute fire resisting constructions	1:2	04-09	P2004-622	

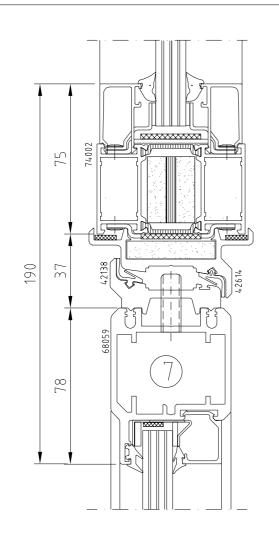


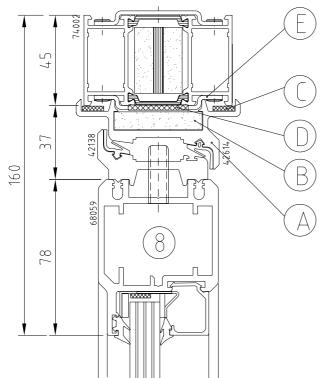


REFERENCE:

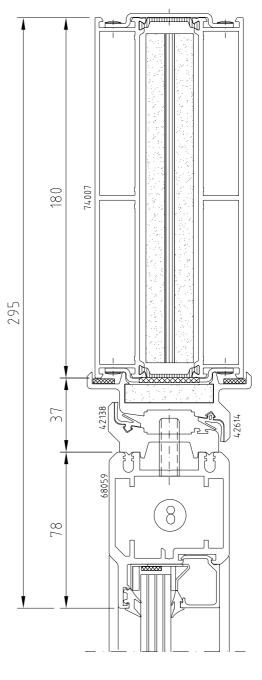
Bill of materials, see drawing No P2004-631







Section 8: Design (- extrusion) for automatic door opener



REFERENCE:
Bill of materials, see drawing No P2004-631



Section 7 - 8

1 11 \

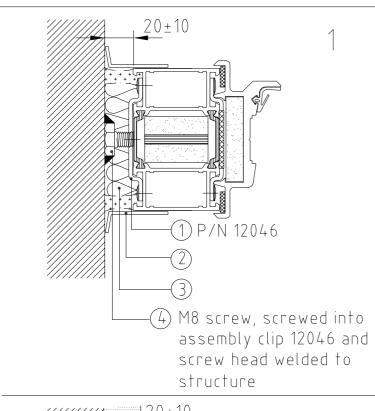
30 minute fire resisting constructions

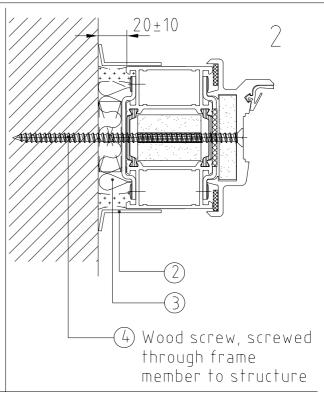
FIRESCREEN 2074

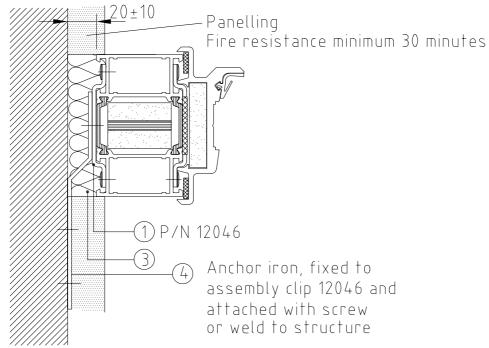
1:2 | 04-09 | P2004-624

	Designation	Part No Sapa	Material	Remarks	Reference
A	Aluminium extrusions 3.5	42614	Alloy EN-AW-6063-T6	Surface treatment: Anodized alt. powder coated	P2004-624
В	Fire insulation	18312	Gysum wallboard	Gyproc U GU 9, or similar	P2004-624
C	Intumescent strip	18303	Intumex LSK alt. Pyroplex	2.5x10 mm 2x10 mm	P2004-624
D	Intumescent strip	18307	Intumex LSK alt. Pyroplex	2.5x30 mm 2x30 mm	P2004-624
E	Assembly clips	12047	Stainless steel BS304S15	Thickn.=2mm L=50mm Fixed with 2 pcs pop rivets, diam. 4 mm made of stainless steel	P2004-624
F	Hinges	14032 14033	Aluminium with stainless steel pin Ø12 mm and bushing for fire resistance doors	Dr. Hahn serie 60 AT	P2004-621 P2004-622 P2004-623

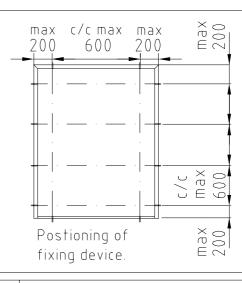
Sapa Bill of materials		FIRESCREEN 2074		
saha	30 minute fire resisting constructions	_	04-09	P2004-631







- 1 Assembly fittings according to each section
- ② Angular profile or sealing compund
- (3) Insulation with mineral wool
- (4) Fixing device





Installation instructions

30 minute fire resisting constructions

FIRESCREEN 2074

1:2 |04-09| P2004-691

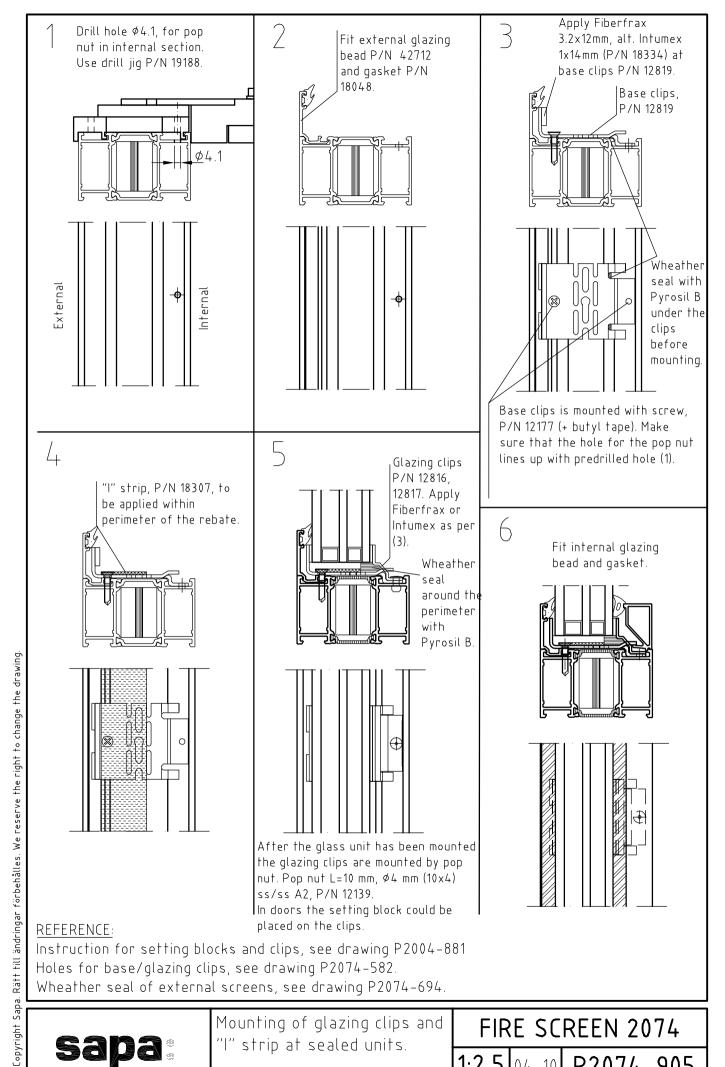
APPENDIX C

General constructional details for SFB 2074 and SFB 2060 systems

Sapa Figures

P2074 - 905	P2074 - 914
P2074 - 906	P2074 - 915
P2074 - 907	P2074 - 916
P2074 - 908	P2074 - 917
P2074 - 909	P2074 - 918
P2074 - 910	P2074 - 919
P2074 - 913	P2074 - 920

The figures in this Appendix are not included in the sequential page numbering of this report



Mounting of glazing clips and "I" strip at sealed units.

FIRE SCREEN 2074 1:2,5 P2074-905 04 - 10

Glass type	Glazing bead	Rebate depth	Total glass thickness	Gasket P/N	Glazing clips P/N
Pyrostop 30-10 D EI30 15+1.5 37 kg/m2	21.25 68718 Alt.	28.5	14	7-8 mm 18368	19
	42704	28.5	15 - 16	6-7 mm	12815
Contraflam 30-N2 EI30 16±2 34 kg/m2				18059	, ' , ' , ' , ' , ' , ' , ' , ' , ' , '
Pyrobel 16 EI30	19.75	31.5	17	7-8 mm 18368	22
16 ⁺³ 40 kg/m²	68719 Alt. 42703	31.5	18 - 19	6-7 mm 	12816
Swissflam 30-N2 EI30 16±1.5 34 kg/m2					

① Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

Glass size = Daylight opening + 42mm

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004-881



Glazing instruction Fire glass for internal screen FIRE SCREEN 2074

Glass type	Glazing bead	Rebate depth	Total glass thickness	Gasket P/N	Glazing clips P/N
Pyrostop 30-20 D El30 18+0.5 44 kg/m2 -1.5 2	19.75	31.5	17	7-8 mm 	22
Pyrobel 16 EG EI30	42703	31.5	18 – 19	6-7 mm 	12816
20 ⁺ 2 48 kg/m²	17.5 Alt. 68720	36	20 - 22	7-8 mm 18368	12817
Contraflam 30-N2 EI30 32±2 44 kg/m2	42702 12.5 Alt. 68721	46	30 - 32	7-8 mm 18368 0 18060	36.4
Swissflam 30-N2 EI30 32±1.5 44 kg/m2	42701	46	33 - 34	6-7 mm 18370 0 18059	12814

① Exterior screen

Distance between glass and frame to be sealed all perimeter with Pyrosil B. Rebate to be drained to the outside. Glass size = Daylight opening + 42mm ② Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

REFERENCE

Instruction for setting blocks and clips; see drawing P2004-881

Shemoging of external servens, see drawing 12011 500



Glazing instruction
Fire glass for external screen

FIRE SCREEN 2074

3 Exterior screen

Distance between glass and frame to be sealed all perimeter with Pyrosil B. Rebate to be drained to the outside. Glass size = Daylight opening + 42mm

4 Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004-881

Wheather seek of external servens, see drawing 12071 694

sapa

Glazing instruction
Fire glass for external screen

FIRE SCREEN 2074

1:2,5 | 04-10 | P2074-908

Copyright Sapa. Rätt till ändringar förbehålles. We reserve the right to change the drawing

Infill panel	Glazing bead	Rebate depth	Panel thickness	Gasket P/N	Glazing clips P/N
Stp-G 41,4 kg/m2	68721 Alt.	46	30 - 32	7-8 mm 18368 18360	12818
Alp-G 33,4 kg/m2	42701	46	33 - 34	6-7 mm	12814

① Panel at exterior screen:

Distance between panel and frame to be sealed all perimeter with Pyrosil B.

Rebate to be drained to the outside.

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004–881

Wheather sed of external servens, and drawing 12011 601



Infill panels

Figo poted FIDO

FIRE SCREEN 2074

Infill panel	Glazing bead	Rebate depth	Panel thickness	Gasket P/N (1)	Gasket P/N ②	Glazing clips P/N
Stp-G 47 kg/m2	17.5 68720 42712	50.5	37 - 38	4.5-5.5 mm	7-8 mm	12817
Alp-G 39 kg/m2	Alt. 42702	50.5	39 - 40	4.5-5.5 mm 	6-7 mm	12819

Panel at exterior screen: Distance between panel and frame to be sealed all perimeter with Pyrosil B. Rebate to be drained to the outside.

REFERENCE

Instruction for setting blocks and clips; see drawing P2004-881

Drainaging of enternal servena, see drawing P2074-506



Infill panels

FIRE SCREEN 2074

Finantad FIDA

Infill panel	Glazing bead	Rebate depth	Panel thickness	Gasket P/N ①	Gasket P/N ②	Glazing clips P/N
Stp-G 48,6 kg/m2	17.5	50.5	37 - 38	4.5-5.5 mm 18048	7-8 mm 18368	42
Alp-G 40,6 kg/m2	42712 Alt. 42702	50.5	39 - 40	4.5-5.5 mm 	18060 6-7 mm 18370 03 18059	12817
42±2 3	12.5 68721	55.5	41 - 42	4.5-5.5 mm 	7-8 mm	47.2
	42712 Alt. 42701	55.5	43 - 44	4.5-5.5 mm 	6-7 mm 	12818

Panel at exterior screen:

Distance between panel and frame to be sealed all perimeter with Pyrosil B.

Rebate to be drained to the outside.

REFERENCE:

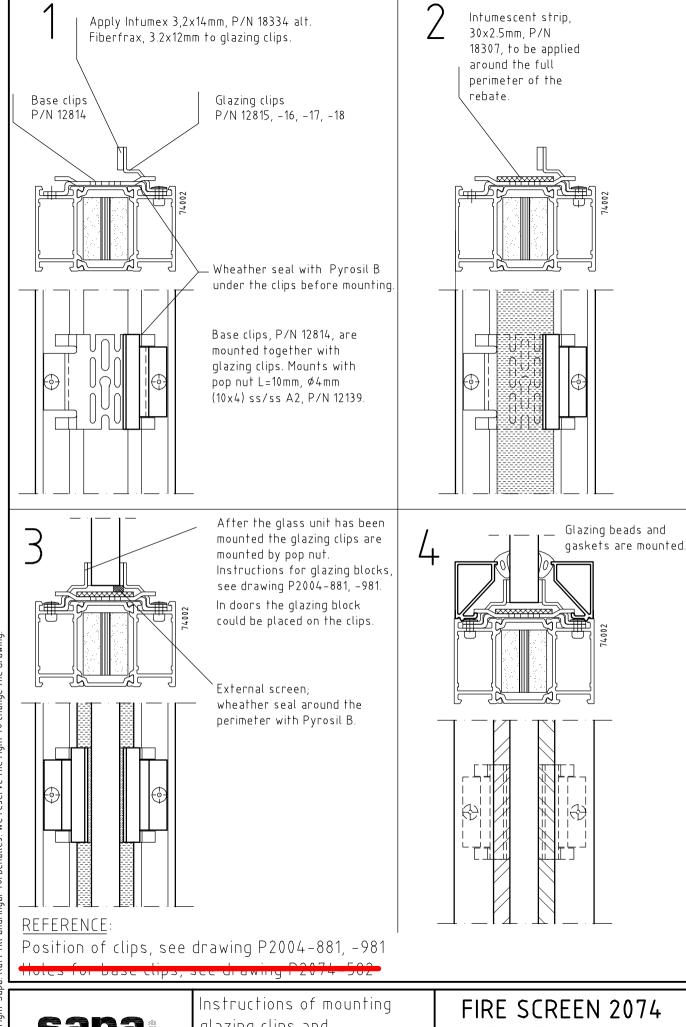
Instruction for setting blocks and clips; see drawing P2004-881

Drainaging of external servens, see drawing P2074-586

Wheather seed of outcode servens are decided P2074-604



Infill panels



Copyright Sapa. Rätt till ändringar förbehålles. We reserve the right to change the drawing

glazing clips and intumescent strip.

1:2 04-10 P2074-914

① Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

Glass size = Daylight opening + 42mm

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004-881



Glazing instruction Fire glass for internal screen FIRE SCREEN 2074

1:2,5 | 04-10 | P2074-915

Glass type	Glazing bead	Rebate depth	Total glass thickness	Gasket P/N	Glazing clips P/N
Pyrostop 30-20 D El30 18+0.5 44 kg/m2 18-1.5	20.5 42743 Alt.	30	14 - 16	7-8 mm 	12815
Pyrobel 16 EG EI30 20 ⁺ 2 48 kg/m²		30	17 - 18	6-7 mm 	12816
	Alt 18 42742	35	19 - 21	7-8 mm 	12047 26 12817 12047
Interfire EI30 24±1 24±1	Alt.	35	22 - 23	6-7 mm 	12817 12047
	16	39	24 - 25	7-8 mm 	-29
	42741	39	26 - 27	6-7 mm 	12821

① Glass in facade
At installation the suppliers Certificate
and instructions should be regarded.
Glass size = Daylight opening + 42mm

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004–881



Glazing instruction

Fire glass for internal screen

Fire rated FIDO

FIRE SCREEN 2074 1:2,5 | 04-10 | P2074-916

Glass type	Glazing bead	Rebate depth	Total glass thickness	Gasket P/N	Glazing clips P/N
Contraflam 30-N2 EI30 32±2 44 kg/m2	12.5	46	30 - 32	7-8 mm 	36.4
	4 6 42740	46	33 - 34	6-7 mm 	12818 + 12047 +
Swissflam 30-N2 EI30 32±1.5 44 kg/m2					
Pyrodur 30-201 EI15, E30 10±1 24 kg/m2	42744	23	8 - 9	7-8 mm	15
		23	10 - 12	6-7 mm 	12822
Pyrodur 30-10 EI15, E30 11±1 27 kg/m2					

① Exterior screen

Distance between glass and frame to be sealed all perimeter with Pyrosil B. Rebate to be drained to the outside. Glass size = Daylight opening + 42mm 2 Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

REFERENCE

Instruction for setting blocks and clips; see drawing P2004-881

Liberth Daniel Control of Control



Glazing instruction
Fire glass for external screen

FIRE SCREEN 2074

3 Exterior screen

Distance between glass and frame to be sealed all perimeter with Pyrosil B.
Rebate to be drained to the outside.
Glass size = Daylight opening + 42mm

4 Glass in facade

At installation the suppliers Certificate and instructions should be regarded.

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004-881

Wheelfier seel of external servens, see drawing P2074-694

sapa

Glazing instruction

Fire glass for external screen

Fire nated FIRE

FIRE SCREEN 2074

1:2,5 | 04-10 | P2074-918

Copyright Sapa. Rätt till ändringar förbehålles. We reserve the right to change the drawing

Copyright Sapa. Rätt till ändringar förbehålles. We reserve the right to change the drawing.
to change
the right
√e reserve
förbehålles. \
rill ändringar
Rätt
t Sapa.
Copyright

Infill panel	Glazing bead	Rebate depth	Panel thickness	Gasket P/N	Glazing clips P/N
Stp-G 41,4 kg/m2	12.5	46	30 - 32	7-8 mm	36.4
		46	33 - 34	6-7 mm	12818
Alp-G 33,4 kg/m2					

① Panel at exterior screen:
Distance between panel and frame to be sealed all perimeter with Pyrosil B.
Rebate to be drained to the outside.

REFERENCE

Instruction for setting blocks and clips; see drawing P2004–881

Wheather seal of external screens, see an awing 12071 Off



Infill panels

FIRE SCREEN 2074

Infill panel	Glazing bead	Rebate depth	Panel thickness	Gasket P/N (1)	Gasket P/N ②	Glazing clips P/N
Stp-Gu 47 kg/m2	4.5	50	37 - 38	4.5-5.5 mm 	7-8 mm 	12816
	18 42742					12819
Alp-Gu 39 kg/m2	4.5 	52	39 - 40	4.5-5.5 mm 	7-8 mm 	43.5
	16 42741					12821

Panel at exterior screen: Distance between panel and frame to be sealed all perimeter with Pyrosil B. Rebate to be drained to the outside.

REFERENCE:

Instruction for setting blocks and clips; see drawing P2004-881
Desiraging of enternal servers, see drawing P2074-586

Whosther and of external acrosse, and drawing P2071 (06



Infill panels

Fire rated EIDA

FIRE SCREEN 2074