

Profile systems

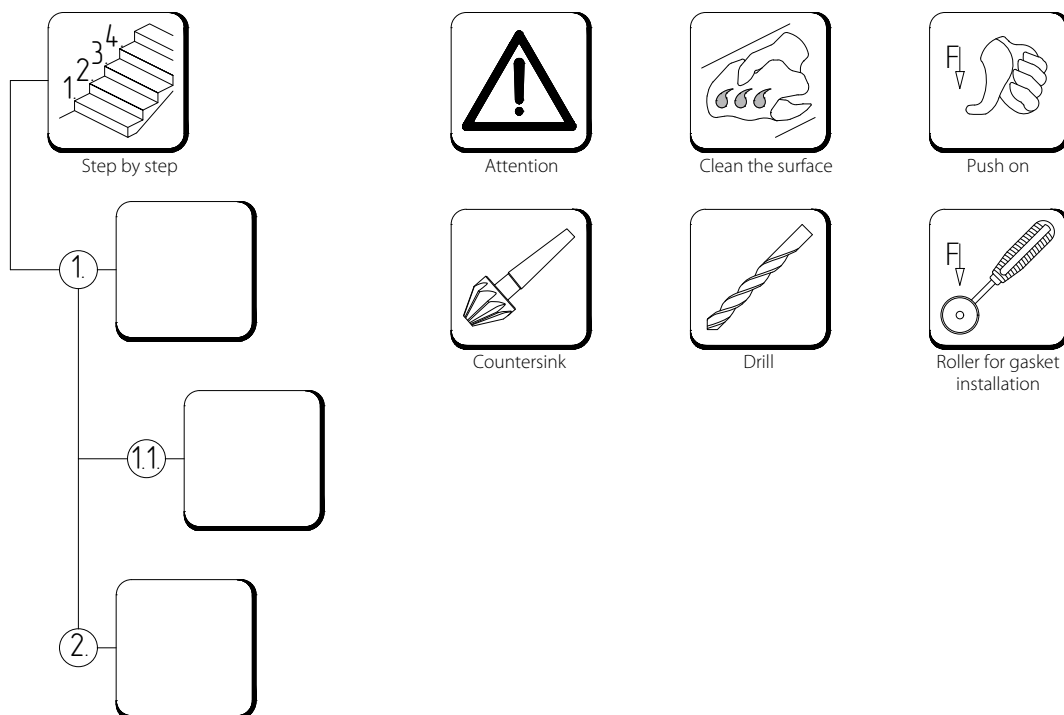
ALUTECH ALT JB Juliet balconies system



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Information pictograms

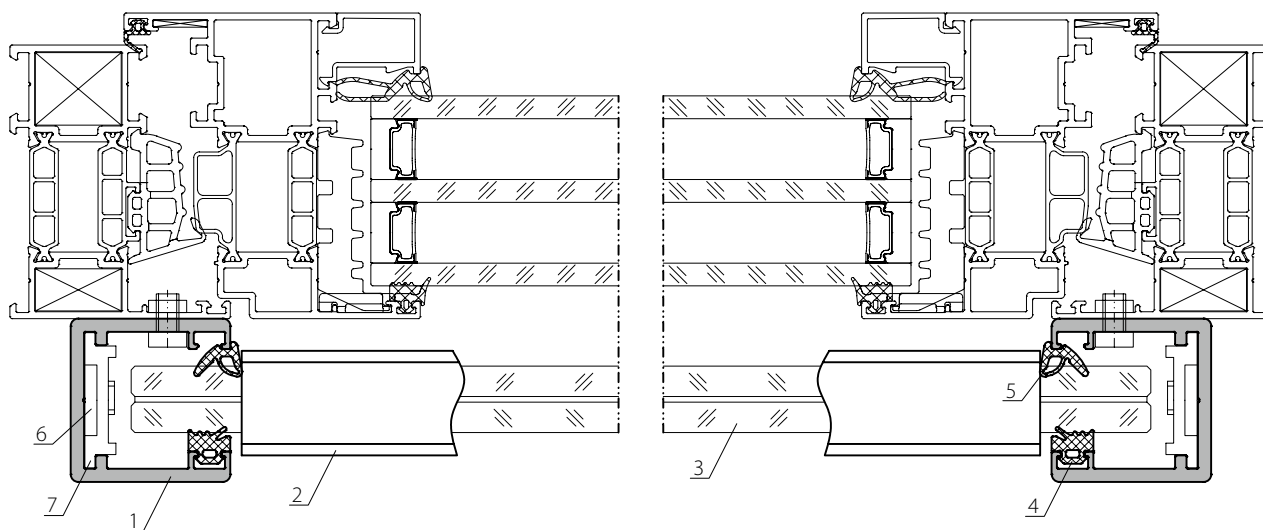


System description

Juliet balconies system



Fig.1



- 1—Guide profile; 2—U-profile; 3—Triplex screen; 4—EPDM rubber gasket; 5—EPDM rubber gasket; 6—Corner; 7—Plug

System description

ALT JB system allows to implement an integrated approach to the design of the buildings with glass screens for balconies and french windows.

Choosing ALT JB system the client has:

- Reliable and safe railing in the openings with sashes.
- Natural interior lighting.
- Wide viewing angle of the surrounding area.
- Aesthetic design.

In-house production allows to flexibly react on customer preferences, take into account their specific requirements to each product and ensure the production of any, even non-standard order in the shortest terms.

Juliet balconies system (Fig. 1) is designed as an additional element of protection for the french windows. This engineering development ensures an integrated approach to the design of the building by means of modern solutions.

Distinctive peculiarities of the system are:

- the railing consists of non-corrosive aluminum cut-to-size profiles and other components;
- the geometry of the elements, as well as presence of decorative plugs, contribute to complete finished appearance of the unit.

Triplex made of tempered glass is recommended as a screen.

It is also advised to protect the edges of the laminated glass from atmospheric moisture by using sealing compounds according to the recommendations of the infill manufacturers.

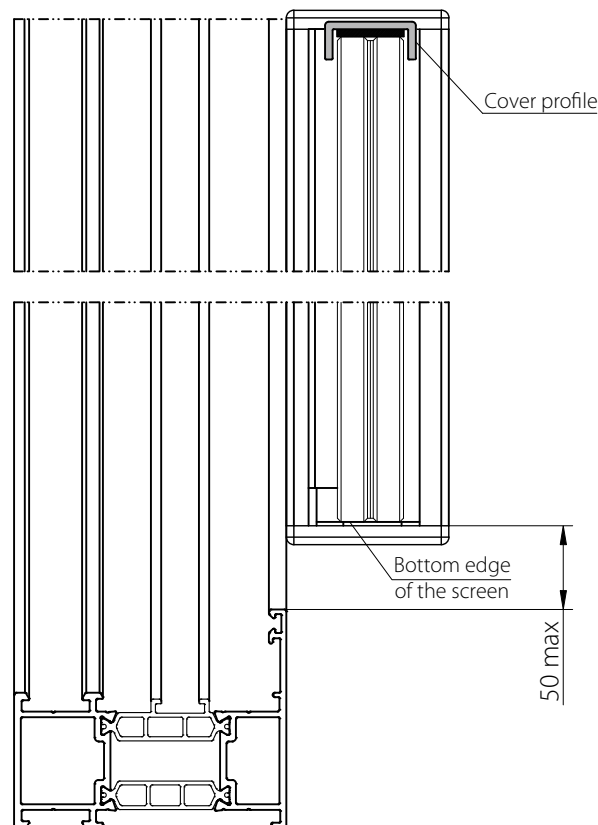


Fig. 2

All accessible edges of laminated glass must be protected from impacts by means of adjacent parts of the protective railing or a balcony door with a distance of no more than 50 mm (Fig. 2), or by the use of special cover profiles.

System description

The width of the protective screen is chosen based on the level of infill deflection from horizontal load applied to its upper edge. Cover profiles of the upper edge are not taken into account. The deflection should not exceed the value of $L/100$, where L — is the width of the protective screen (Fig. 3).

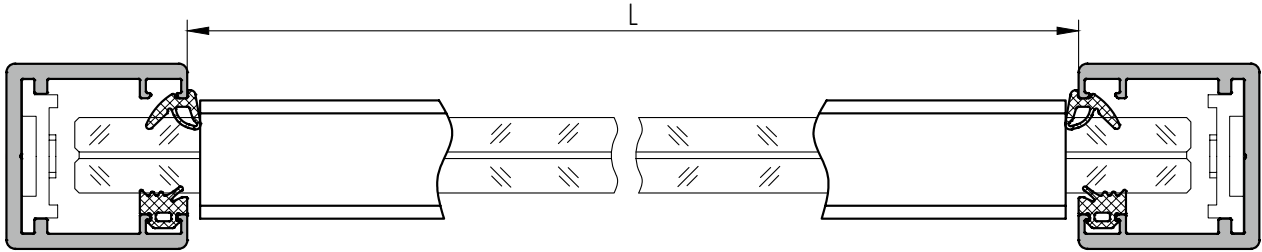


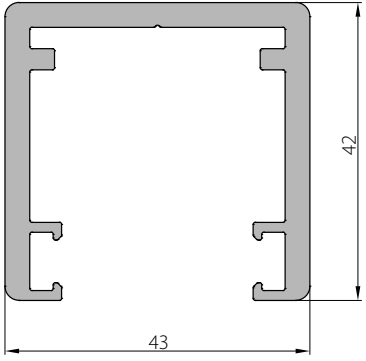
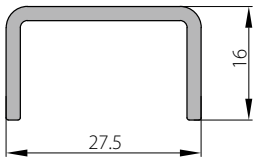
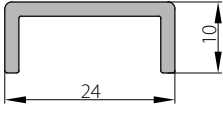
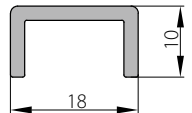
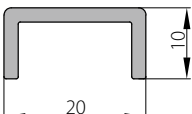
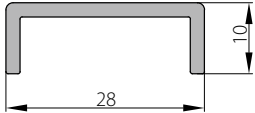
Fig.3

The recommended width of the screen is shown in the Table.

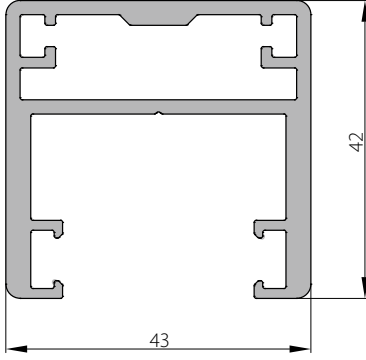
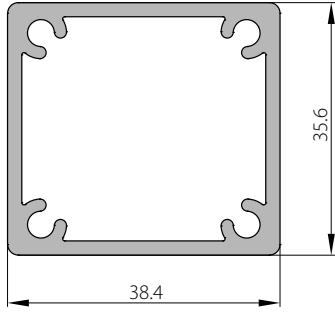
Laminated glass formula	Recommended max. screen width L, mm
5-0.76(1.52)-5	1500
6-0.76(1.52)-6	2000
8-0.76(1.52)-8	2500
10-0.76(1.52)-10	3000

While making estimations in the system, it is necessary to apply the current statutory regulations of the country.

Order information

Name, article, drawing	Profile colour	Code	Weight, kg/m	Bar length, m	Exterior perimeter, mm	Moment of inertia, cm ⁴		Moment of resistance, cm ³		Quantity in pack		Weight of a pack, gross, kg
						Jx	Jy	Wx	Wy	pcs	m	
Guide profile AYPC.115.0009 	00 RAL 9016 RAL 9006 A00-D6	10304400 10304421 10304431 103044808	1.26	6.2	298	—	—	—	—	4	24.8	31.3
U-profile AYPC.115.0010 	00 RAL 9016 RAL 9006 A00-D6	10304700 10304721 10304731 103047808	0.29	6.2	111	—	—	—	—	8	49.6	14.4
U-profile AYPC.115.0014 	00 RAL 9016 RAL 9006 A00-D6	10304800 10304821 10304831 103048808	0.22	6.2	82.4	—	—	—	—	12	74.4	16.0
U-profile AYPC.115.0015 	00 RAL 9016 RAL 9006 A00-D6	10304900 10304921 10304931 103049808	0.18	6.2	70.4	—	—	—	—	12	74.4	13.6
U-profile AYPC.115.0016 	00 RAL 9016 RAL 9006 A00-D6	10305000 10305021 10305031 103050808	0.19	6.2	71.5	—	—	—	—	12	74.4	14.4
U-profile AYPC.115.0017 	00 RAL 9016 RAL 9006 A00-D6	10305100 10305121 10305131 103051808	0.24	6.2	87.5	—	—	—	—	12	74.4	17.6

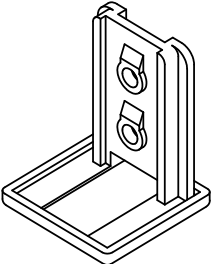
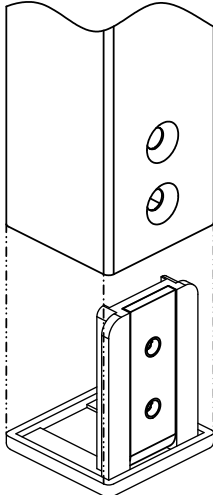
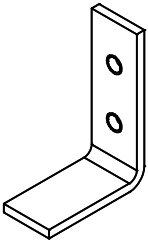
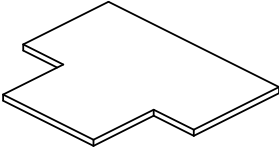
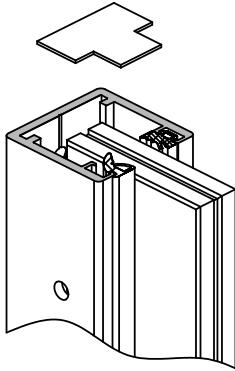
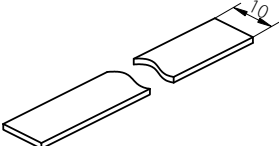
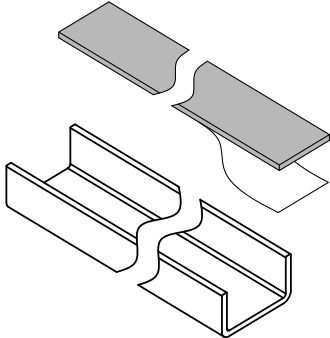
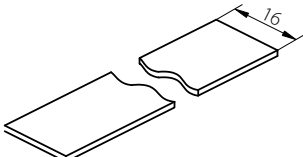
Order information

Name, article, drawing	Profile colour	Code	Weight, kg/m	Bar length, m	Exterior perimeter, mm	Moment of inertia, cm ⁴		Moment of resistance, cm ³		Quantity in pack		Weight of a pack, gross, kg
						Jx	Jy	Wx	Wy	pcs	m	
Guide profile AYPC.115.0018 	00 RAL 9016 RAL 9006 A00-D6	10305200 10305221 10305231 103052808	1.26	6.2	259.5	—	—	—	—	4	24.8	38.5
Reinforcement profile AYPC.C43.0706 	00	10453500	0.924	3.25	145.4	—	—	—	—	4	13	12.0


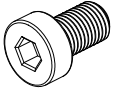
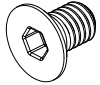
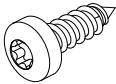
Order information

Name, article, drawing	Colour	Code	Weight, kg/m	Quantity in pack, m	Weight of a pack, gross, kg
EPDM rubber gasket FRK15 	—	11215200	0.078	200	16.8
EPDM rubber gasket FRK17 	—	11215400	0.083	150	17.2
EPDM rubber gasket FRK18 	—	11215500	0.092	125	17.4
EPDM rubber gasket FRK127 	—	11316600	0.055	250	15.6
EPDM rubber gasket FRK191 	—	10830300	0.067	125	9

Order information

Name, article, drawing	Colour	Code	Weight, kg	Unit measure	Quantity in pack	Weight of a pack, gross, kg	Application
<p>Plug AYPC.115.0906</p> 	10 (Black) 03 (Grey)	10304500 10304503	0.019	pcs	20	0.36	
<p>Corner AYPC.115.0907</p> 	—	10304600	0.03	pcs	20	0.8	
<p>Insert AYPC.115.0908</p> 	—	10314700	0.0017	pcs	20	0.03	
<p>Two-sided adhesive tape DSAT10</p> 	—	10314800	0.014	m	16.5	0.237	
<p>Two-sided adhesive tape DSAT16</p> 	—	10314900	0.022	m	16.5	0.377	

Order information

Name, drawing	Catalogue article	Commercial article	Colour	Code	Weight, kg/100 pcs	Unit measure	Quantity in pack	Weight of a pack, gross, kg
Nut 	M6DIN562	M6-A2DIN562	—	18121000	0.19	100 pcs	1	0.22
Screw 	M6x10DIN7984	M6x10-A2DIN7984	—	18121100	0.36	100 pcs	1	0.39
Screw 	M6x10DIN7991	M6x10-A2DIN7991	—	18112600	0.31	100 pcs	1	0.34
Self-tapping screw 	3.9x13DIN7981	3.9x13-A2ISO14585	—	18100600	0.140	100 pcs	1	0.170
	3.9x38DIN7981	3.9x38-A2ISO14585	—	18102400	0.248	100 pcs	1	0.278



Fasteners are made of class A2 austenitic stainless steel.

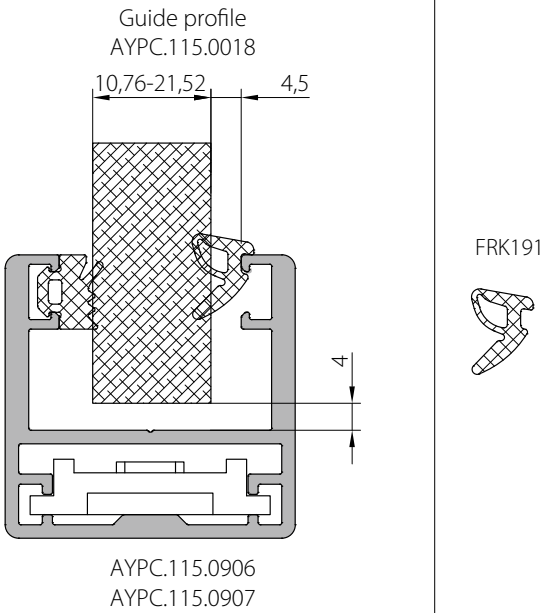
Table of glazing

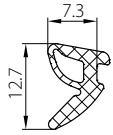
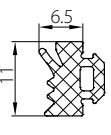
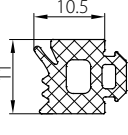
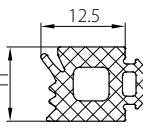
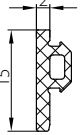
Profile system	Inner gasket	Infill unit thickness, mm	Outer gasket	U - profile	Two-sided adhesive tape
<p>Guide profile AYPC.115.0009</p> <p>10,76-21,52 4,5</p> <p>10,5</p> <p>AYPC.115.0906 AYPC.115.0907</p> <p>FRK191</p>		10.76–11.52	FRK18	AYPC.115.0015	DSAT10
		12.76–13.52	FRK17	AYPC.115.0016	DSAT10
		16.76–17.52	FRK15	AYPC.115.0014	DSAT16
		20.76–21.52	FRK127	AYPC.115.0017 AYPC.115.0010	DSAT16

Gaskets	Inner gasket	Outer gasket			
Article	FRK191	FRK15	FRK17	FRK18	FRK127

The data given in the Table is for reference only, the values are not the only correct and are intended for preliminary calculations. In practice, these recommendations should be verified depending on the actual parameters: infill unit production accuracy (tolerances); accuracy of gaskets production (tolerances); conditions of gaskets installation and system assembly; bead profile tolerance and tolerance for the combined profile assembly. The gasket must be installed with tension for proper system operation.

Table of glazing

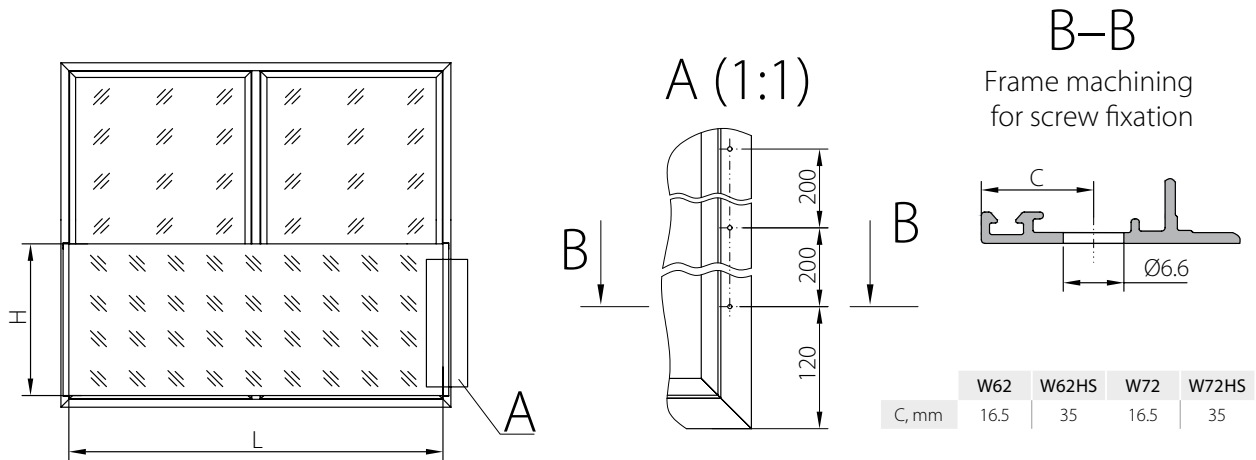
Profile system	Inner gasket	Infill unit thickness, mm	Outer gasket	U - profile	Two-sided adhesive tape
 <p>Guide profile AYPC.115.0018</p> <p>10,76-21,52 4,5</p> <p>AYPC.115.0906 AYPC.115.0907</p> <p>4</p> <p>FRK191</p>		10.76–11.52	FRK18	AYPC.115.0015	DSAT10
		12.76–13.52	FRK17	AYPC.115.0016	DSAT10
		16.76–17.52	FRK15	AYPC.115.0014	DSAT16
		20.76–21.52	FRK127	AYPC.115.0017 AYPC.115.0010	DSAT16

Gaskets	Inner gasket	Outer gasket			
					
Article	FRK191	FRK15	FRK17	FRK18	FRK127

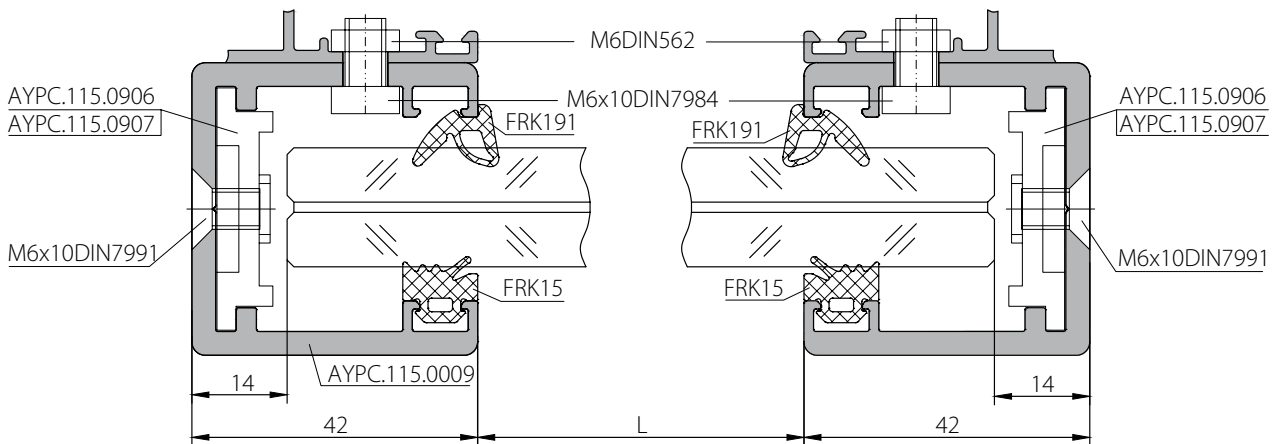
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Mounting methods

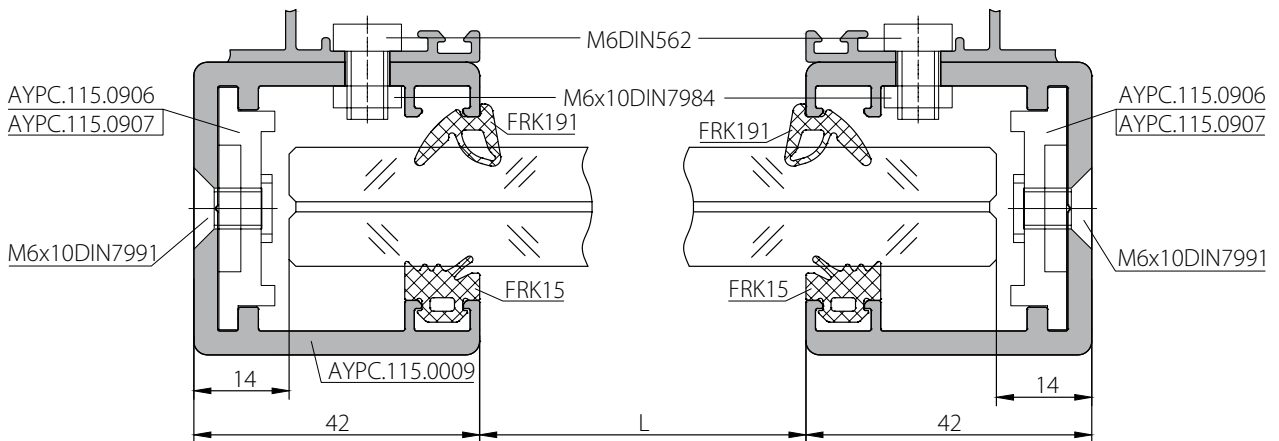
Surface mounting



Surface mounting, fastening type 'Nut—screw'



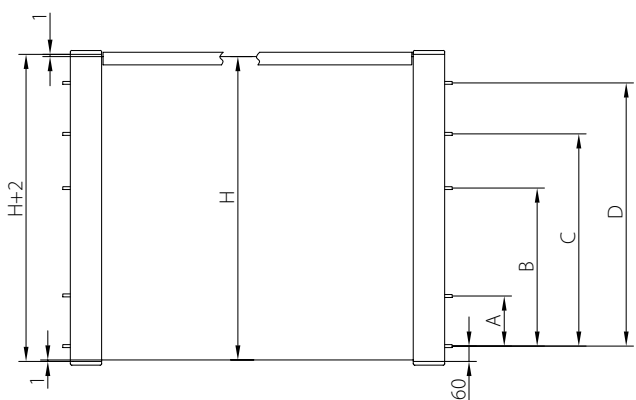
Surface mounting, fastening type 'Screw—nut'



Installation height of the top of horizontal railing from the finished floor level is not less than 1200 mm. Recommended max screen width (L) is indicated in the table (see page 6). Quantity of holes and fixings is shown in the indicated above machining scheme for AYPC.115.0018 guide profile.

Mounting methods

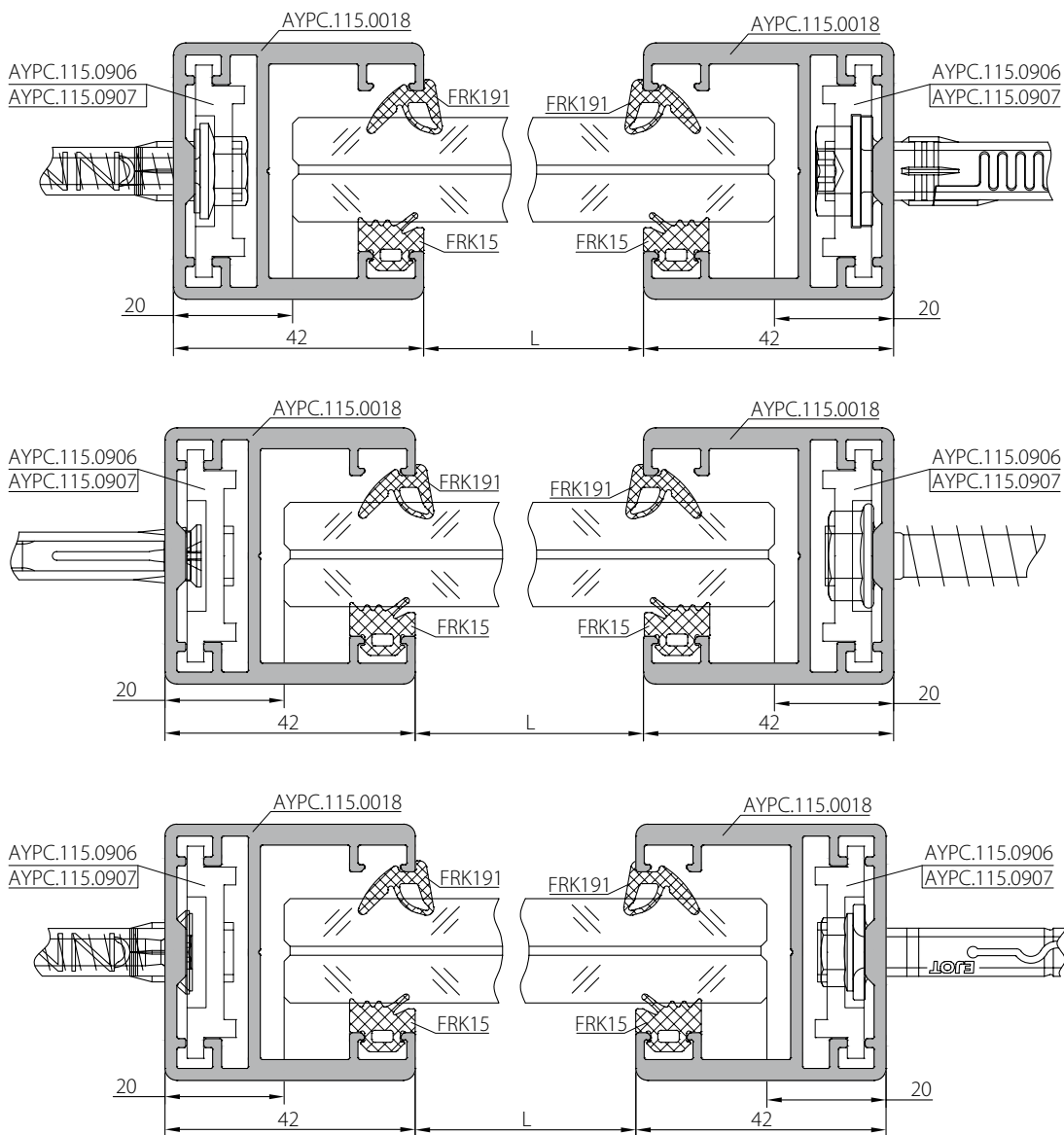
Installation of the screen into the aperture



	Height (H), mm					
	500	700	900	1000	1100	1200
A, mm	—	—	225	325	425	525
B, mm	200	400	600	700	800	900
C, mm	300	500	700	800	900	1000
D, mm	400	600	800	900	1000	1100
	Quantity of holes/fixings, pcs					
	8	8	10	10	10	10



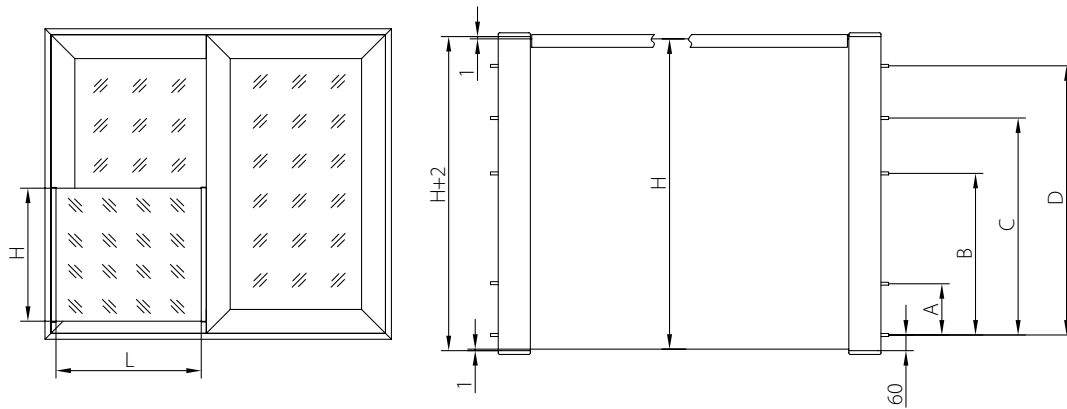
Type of fastening should be chosen depending on the material of the opening (concrete, dense or hollow building material).



Installation height of the top of horizontal railing from the finished floor level is not less than 1200 mm. Recommended max screen width (L) is indicated in the table (see page 6). Quantity of holes and fixings is shown in the indicated above machining scheme for AYPC.115.0018 guide profile.

Mounting methods

Mounting into ALT SL160 system



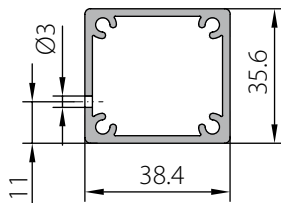
Height (H), mm

	500	700	900	1000	1100	1200
A, mm	—	—	225	325	425	525
B, mm	200	400	600	700	800	900
C, mm	300	500	700	800	900	1000
D, mm	400	600	800	900	1000	1100

Quantity of holes/fixings, pcs

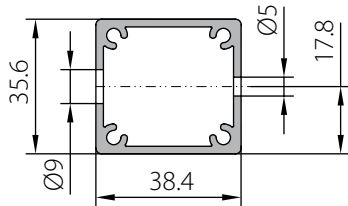
8	8	10	10	10	10
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Reinforcement profile
AYPC.C43.0706

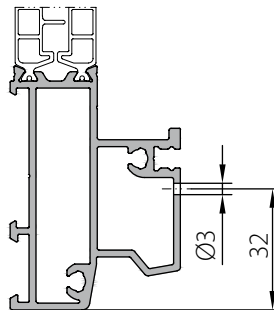


Reinforcement profile
AYPC.C43.0706

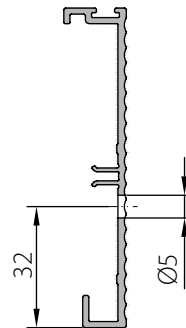
Machine with an offset of 30 mm
relatively to the previous machining



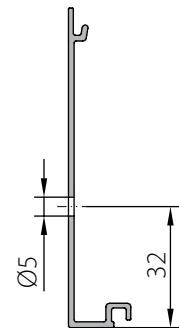
Frame profile
AYPC.SL160.0101



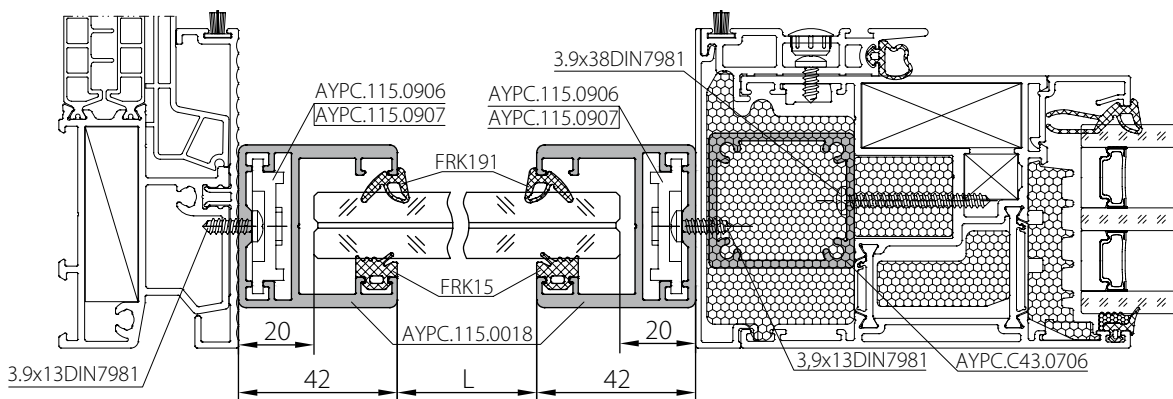
Threshold profile
AYPC.SL160.0810



Cover cap profile
AYPC.SL160.0802



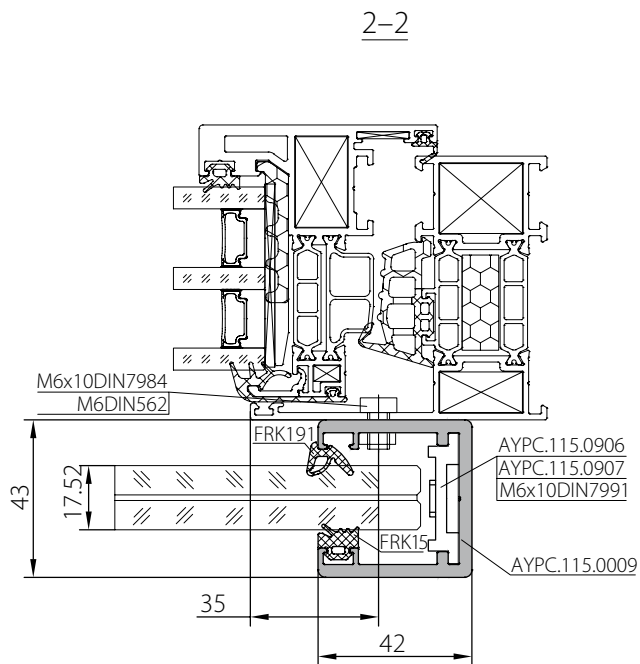
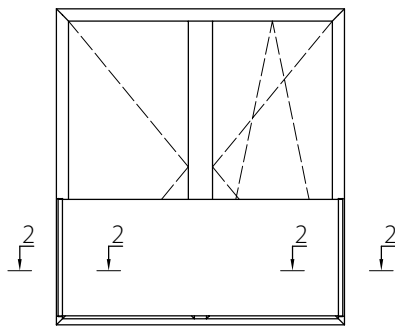
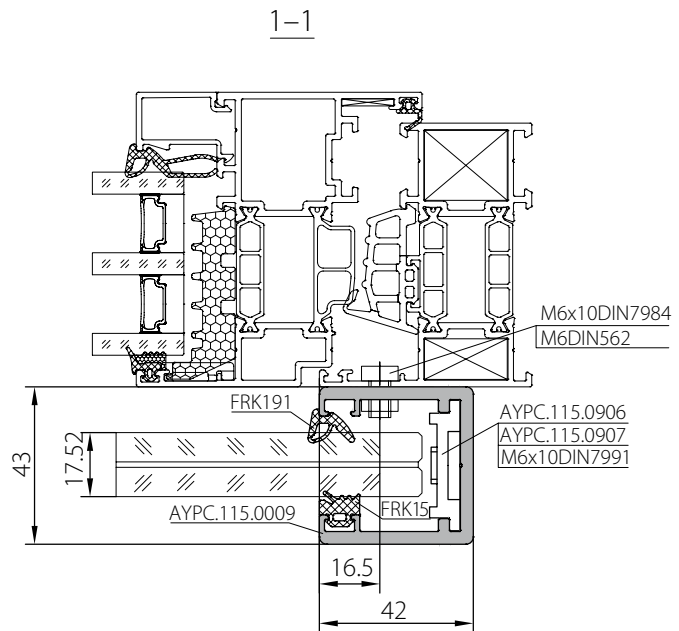
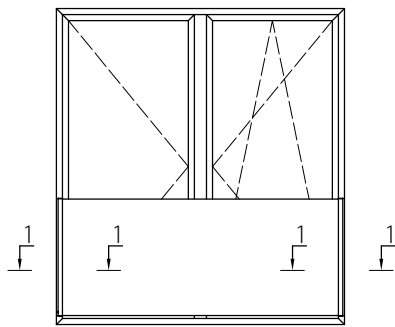
Scale 1:2



Installation height of the top of horizontal railing from the finished floor level is not less than 1200 mm. Recommended max screen width (L) is indicated in the table (see page 6). Quantity of holes and fixings is shown in the indicated above machining scheme for AYPC.115.0018 guide profile.

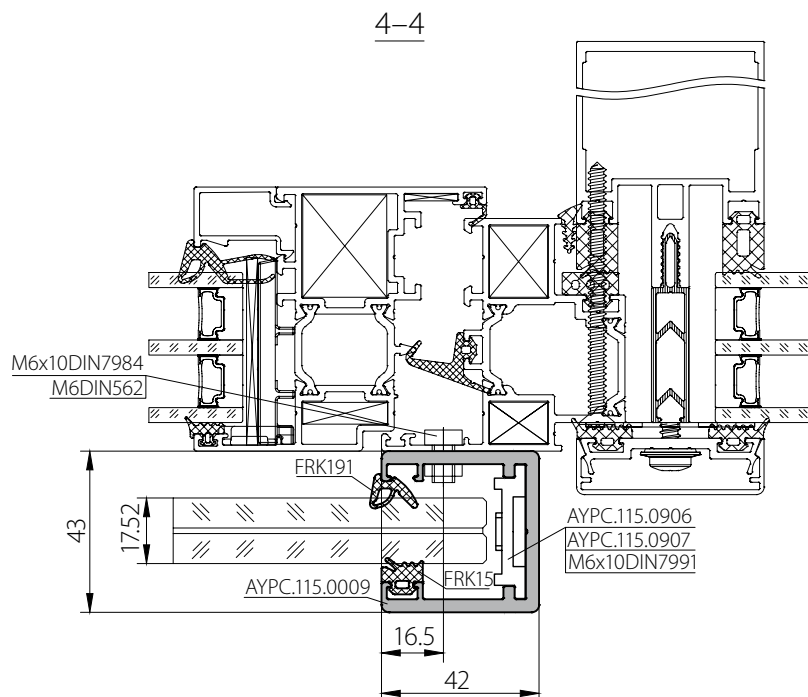
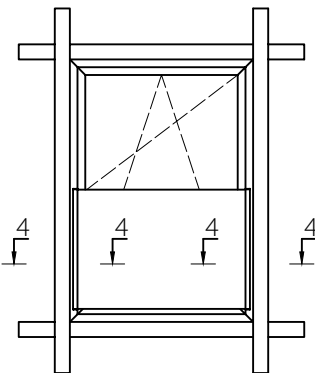
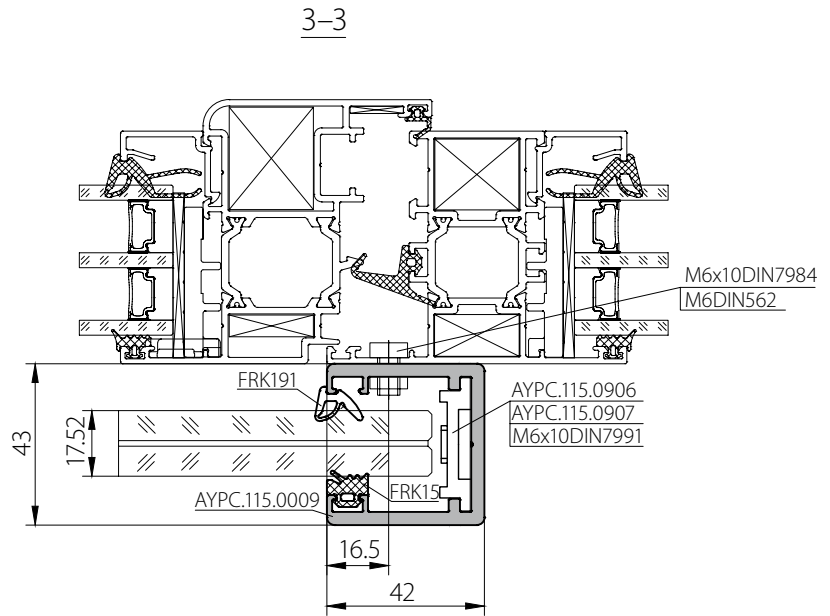
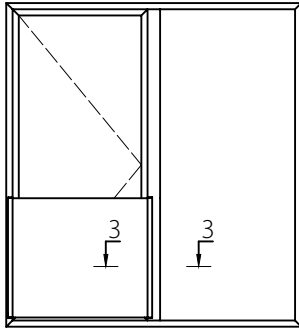
Sections and junctions

Scale 1:2



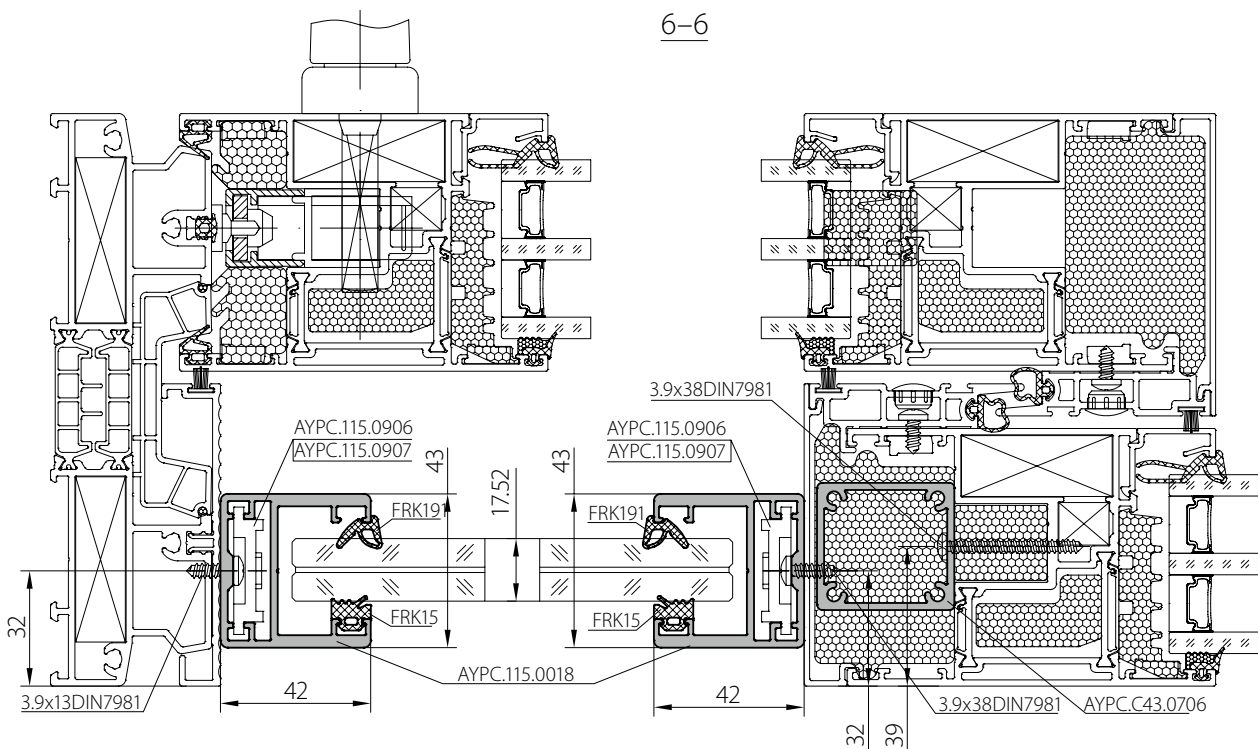
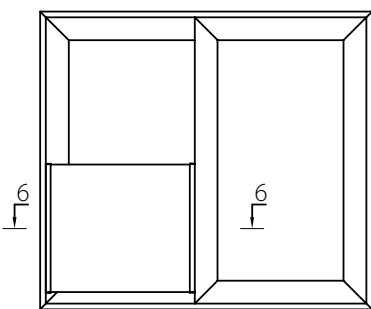
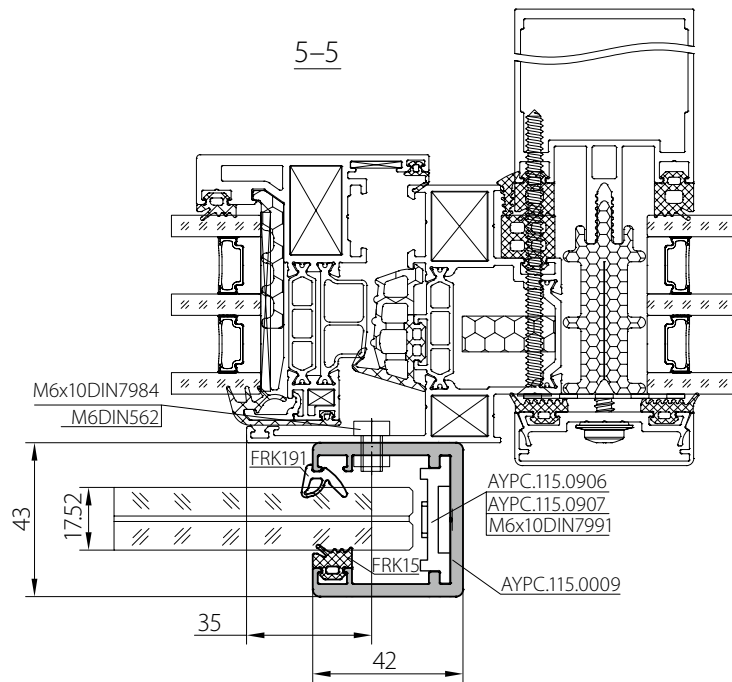
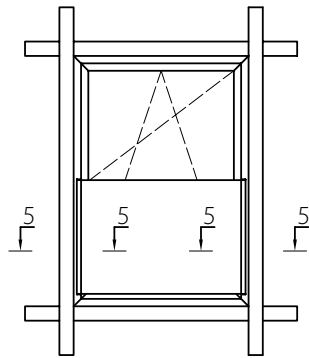
Sections and junctions

Scale 1:2



Sections and junctions

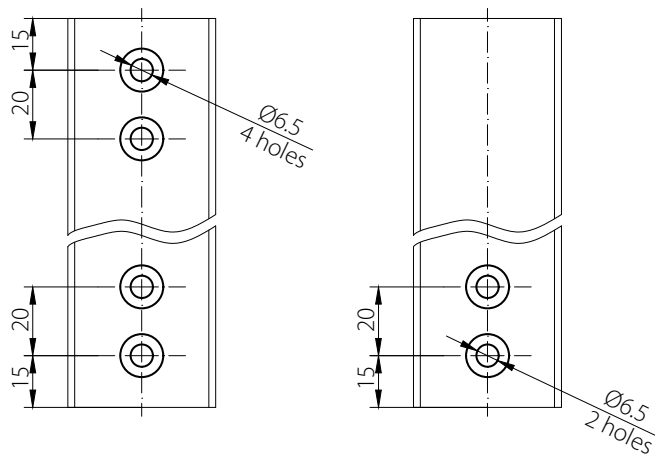
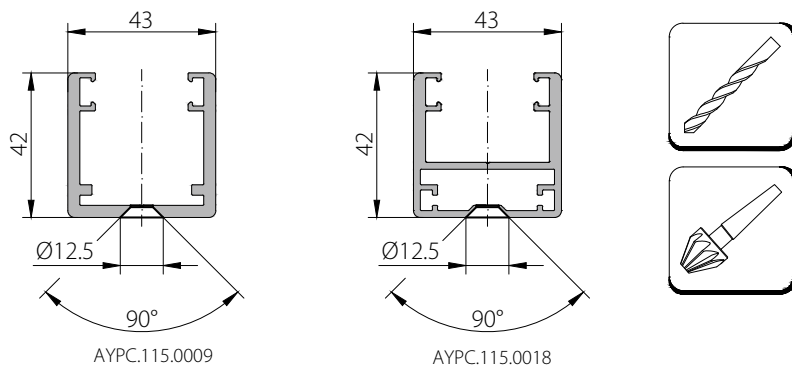
Scale 1:2



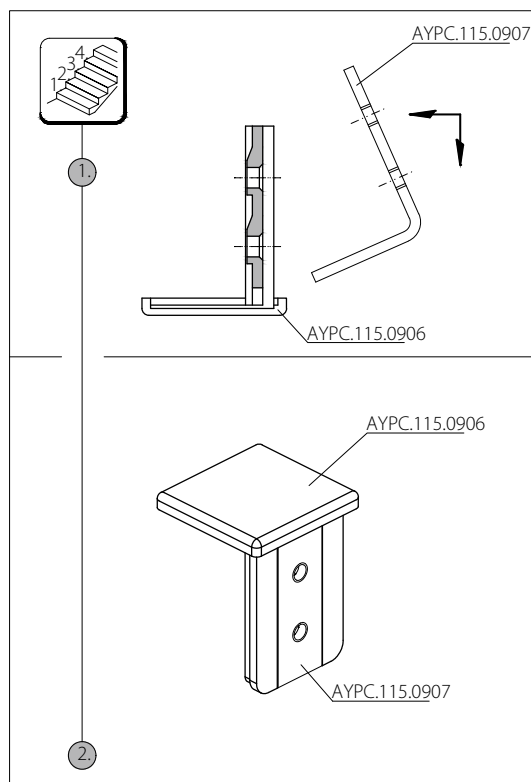
Machining and assemblage

1

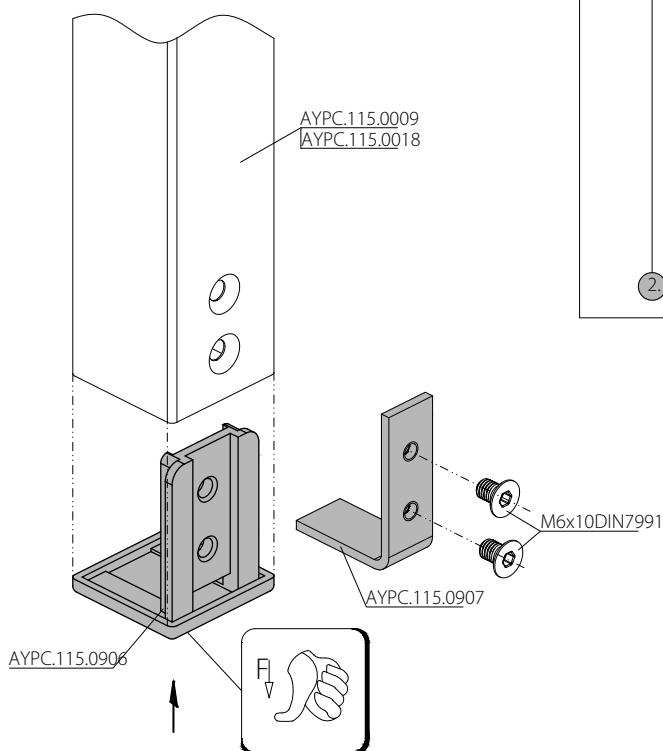
Guide profile machining AYPC.115.0009 and AYPC.115.0018



AYPC.115.0906 plug and AYPC.115.0907 corner assembly scheme



Bottom AYPC.115.0906 plug and AYPC.115.0907 corner installation

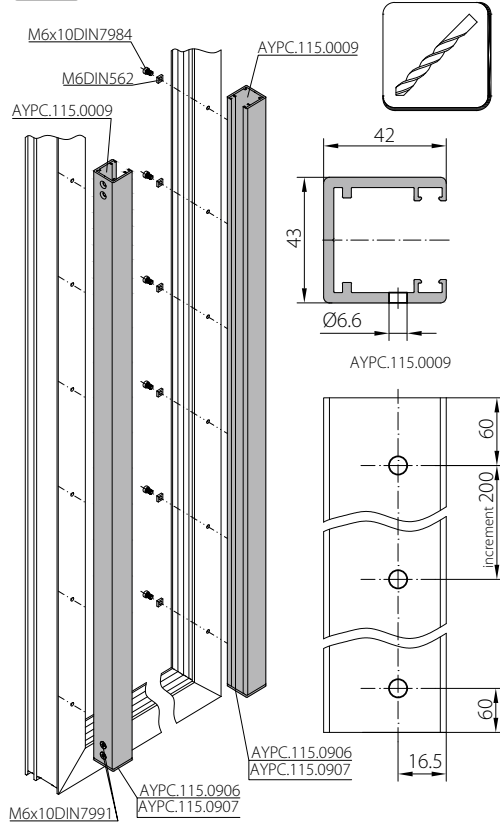


Machining and assemblage

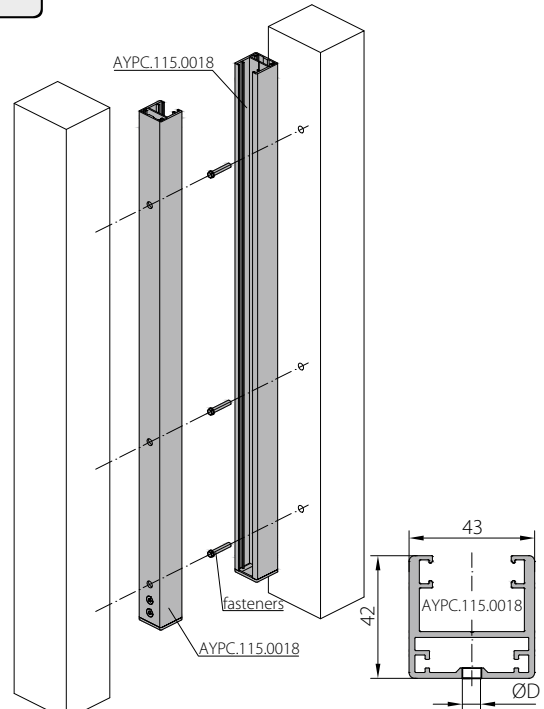
2

AYPC.115.0009 and AYPC.115.0018 guide profile machining and installation

2a Surface mounting



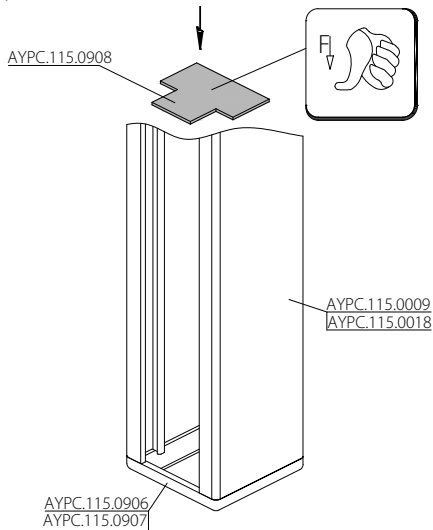
2b Installation into the aperture



Quantity of holes and distance between them (see page 15). Hole size (ØD) depends on the type of fasteners (see page 15).

3

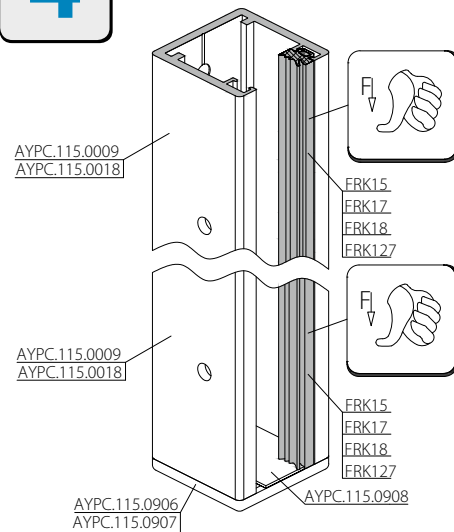
Bottom AYPC.115.0908 paronite insert installation



The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.

4

Outer gasket installation



The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.

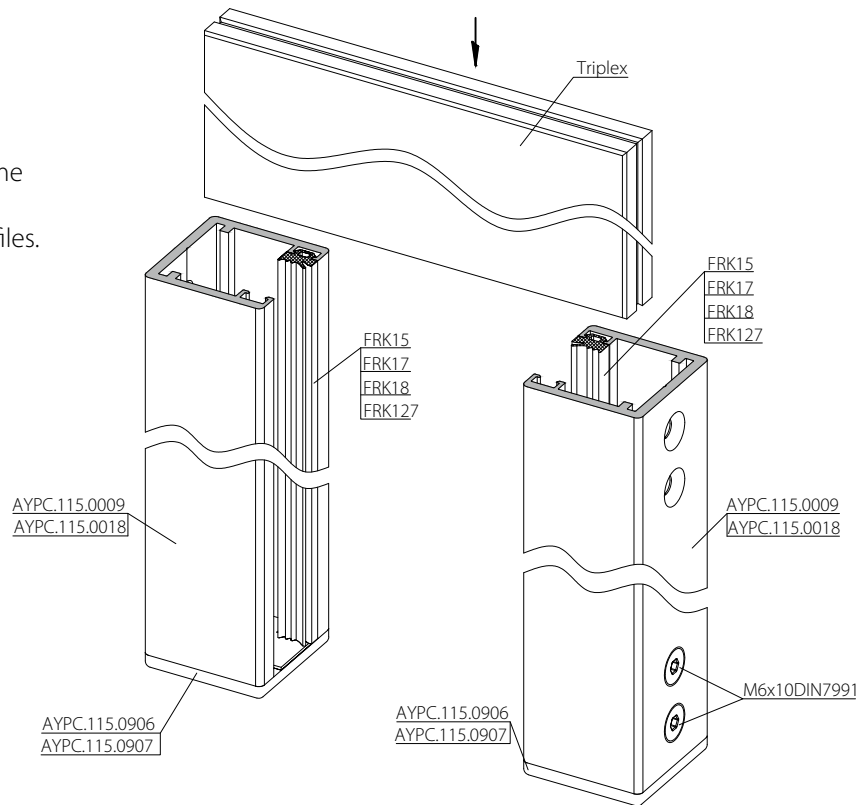
Machining and assemblage

5

Triplex installation

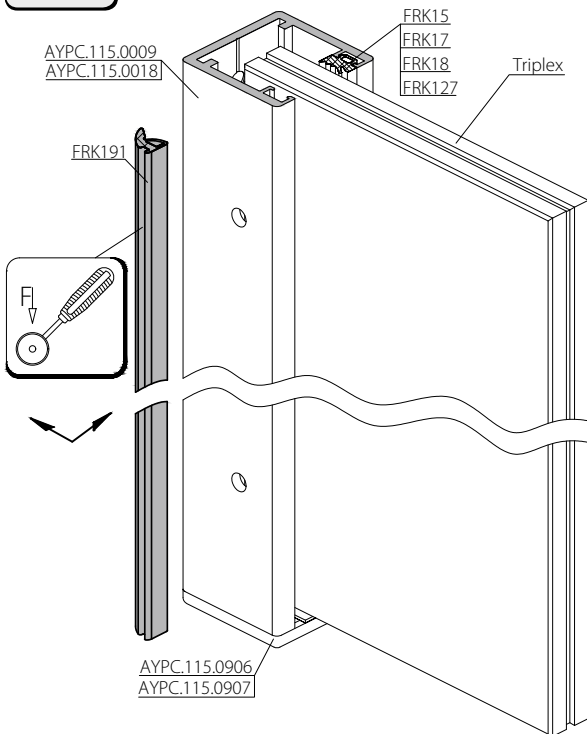


The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.



6

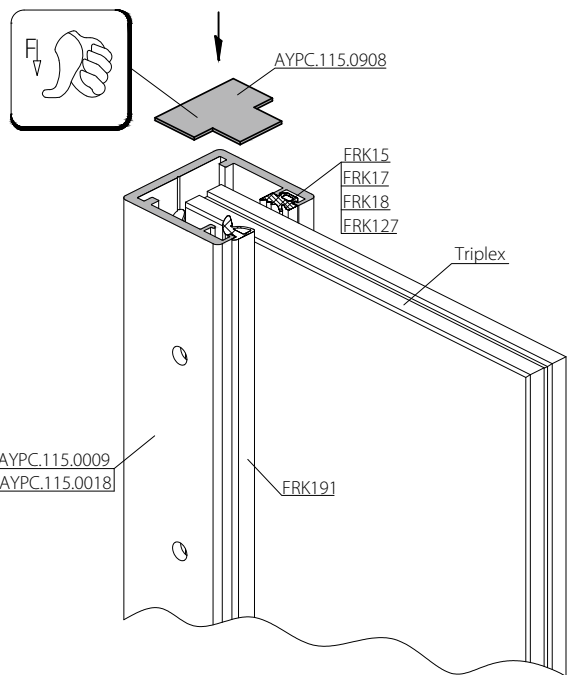
Gasket installation from the inside of the premises



The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.

7

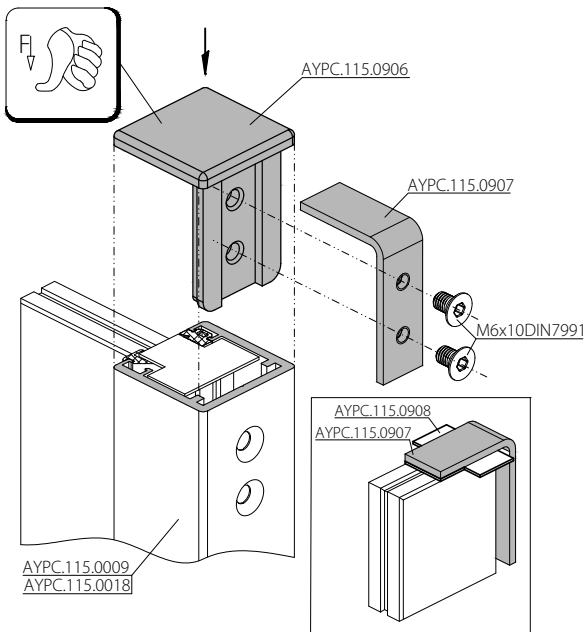
Installation of AYPC.115.0908 gasket on the top



The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.

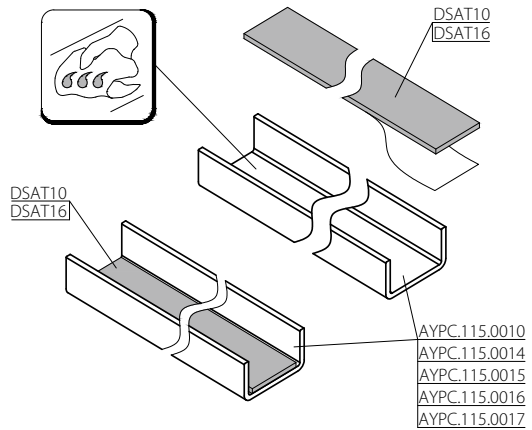
Machining and assemblage

8 AYPC.115.0906 plug and AYPC.115.0907 corner installation on the top



! Do not use M6x10DIN7991 screws while installation of the plug together with the corner into AYPC.115.0018 guide profile.

9 DSAT10/DSAT16 two-sided tape application to the edge profile

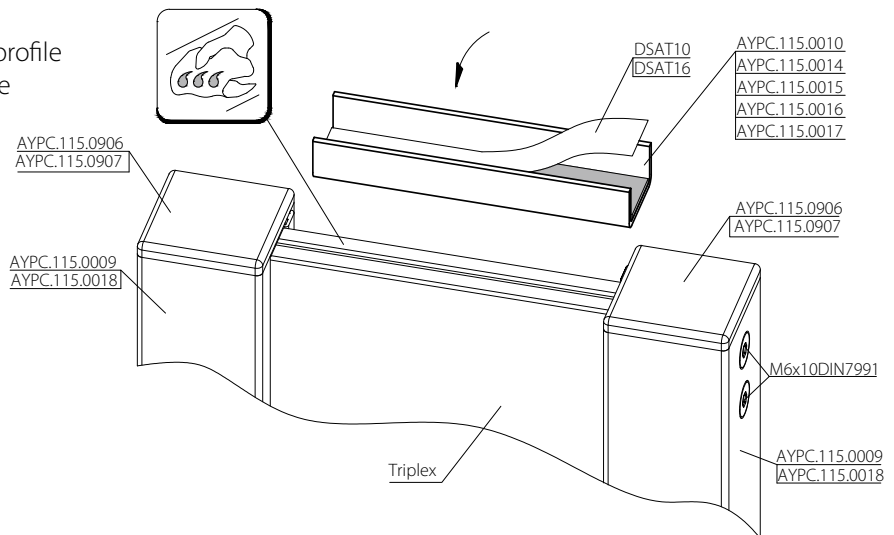


1. Degrease the surface of the edge profile.
2. Peel off the protective film from two-sided tape.
3. Glue the tape to the edge profile.
4. Cut the tape flush with profile ends.

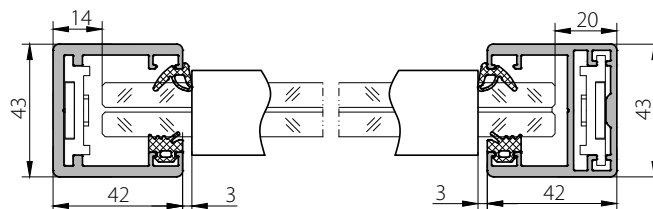
! The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.

10 Glueing of the edge profile on the two-sided tape

1. Degrease the surface of the edge profile.
2. Peel off the protective film from two-sided tape.
3. Glue the tape to the edge profile, keeping 3 mm gaps on each side.

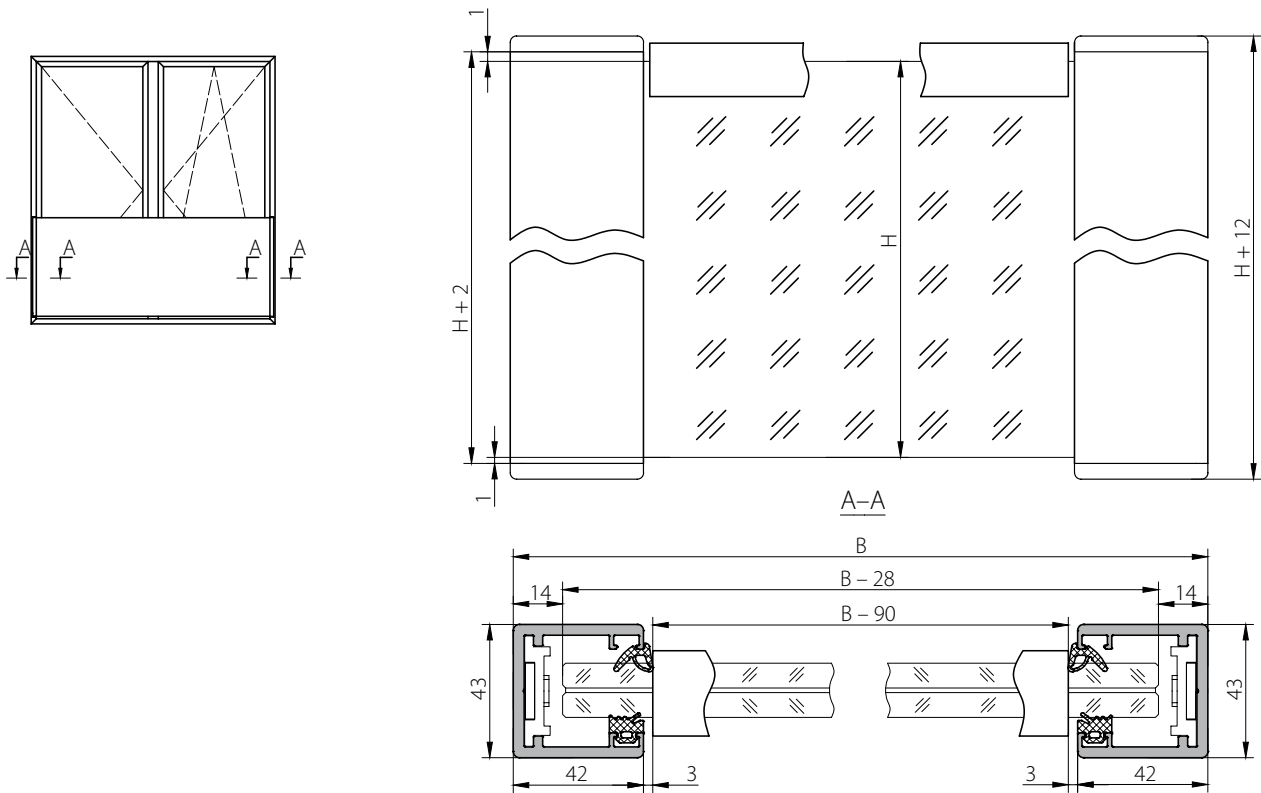


! The operation is the same for both AYPC.115.0009 and AYPC.115.0018 profiles.



System calculation examples

System calculation using surface mounting method



	Name	Article	Cutting plan	Quantity
Aluminium profiles	Guide profile	AYPC.115.0009	H + 2	2
	U-profile	AYPC.115.0010 (.0014-.0017)	B - 90	1
Accessories	Plug	AYPC.115.0906	—	4
	Corner	AYPC.115.0907	—	4
	Paronite insert	AYPC.115.0908	—	4
Gaskets	Rubber gasket	FRK15 (14,16,17,18,19,127)	H + 2	2
	Rubber gasket	FRK191 (110,192)	H - 8	2
Infill unit	Triplex		B - 28, H	1
Fastening elements and related materials	M6x10DIN7984 screw (for system fastening)		—	$n = 2 \cdot c$
	M6DIN562 nut (for system fastening)		—	$n = 2 \cdot c$
	M6x10DIN7991 screw (for AYPC.115.0907 corner and AYPC.115.0906 plug fixation to AYPC.115.0009 profile)		—	8
	DSAT10 (DSAT16) two-sided adhesive tap DSAT10 (DSAT16)		B - 90	1



When calculating the dimensions of the screen take $B = L + 84$ (see page 12).

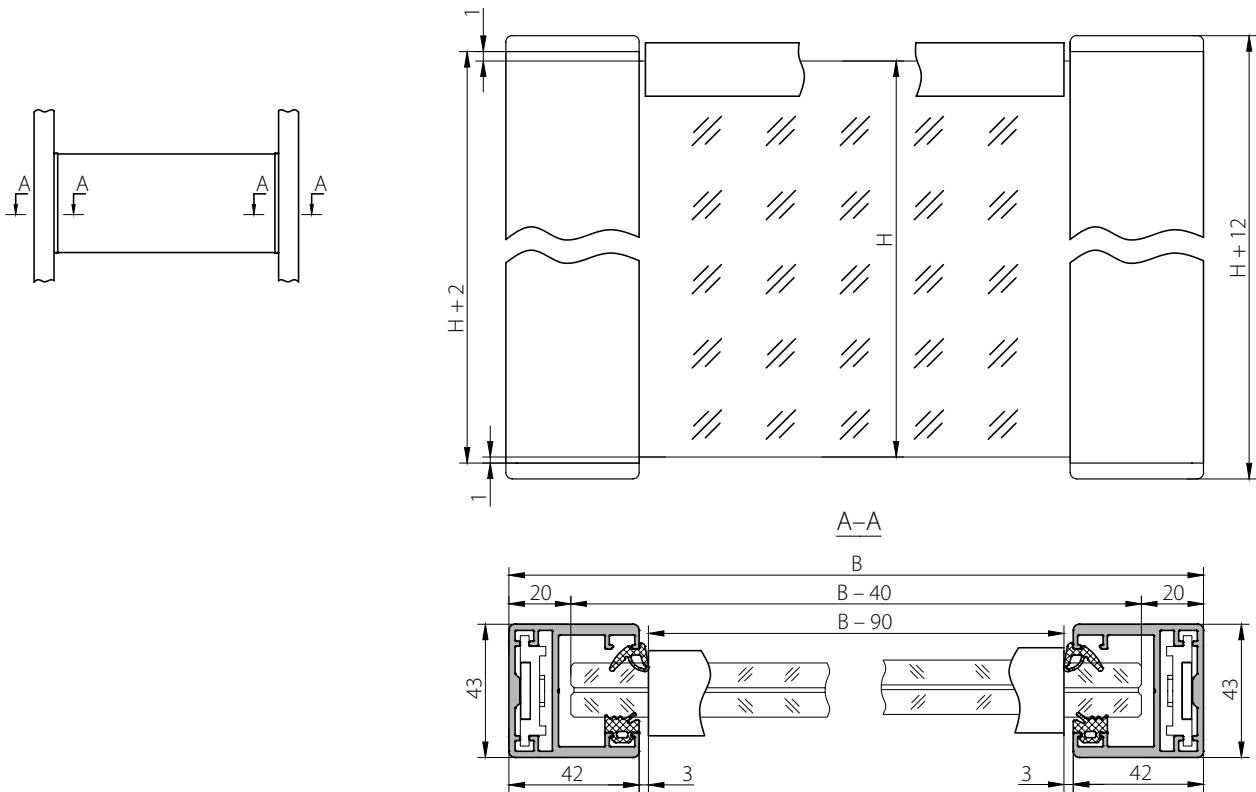
When calculating fasteners take $c = (H - 120/200) + 1$.

The value n , obtained as a result of calculations according to the formula, round up to the nearest whole number.

U-profile, adhesive tape and rubber gasket should be selected depending on triplex thickness (see page 12).

System calculation examples

System calculation with installation into the aperture



	Name	Article	Cutting plan	Quantity
Aluminium profiles	Guide profile	AYPC.115.0009	H + 2	2
	U-profile	AYPC.115.0010 (.0014-.0017)	B - 90	1
Accessories	Plug	AYPC.115.0906	—	4
	Corner	AYPC.115.0907	—	4
	Paronite insert	AYPC.115.0908	—	4
Gaskets	Rubber gasket	FRK15 (14,16,17,18,19,127)	H + 2	2
	Rubber gasket	FRK191 (110,192)	H - 8	2
Infill unit	Triplex		B - 40, H	1
Fastening elements and related materials	Fasteners		—	page 15
	M6x10DIN7991 screw (for AYPC.115.0907 corner and AYPC.115.0906 plug fixation to AYPC.115.0009 profile)		—	4
	DSAT10 (DSAT16) two-sided adhesive tape		B - 90	1

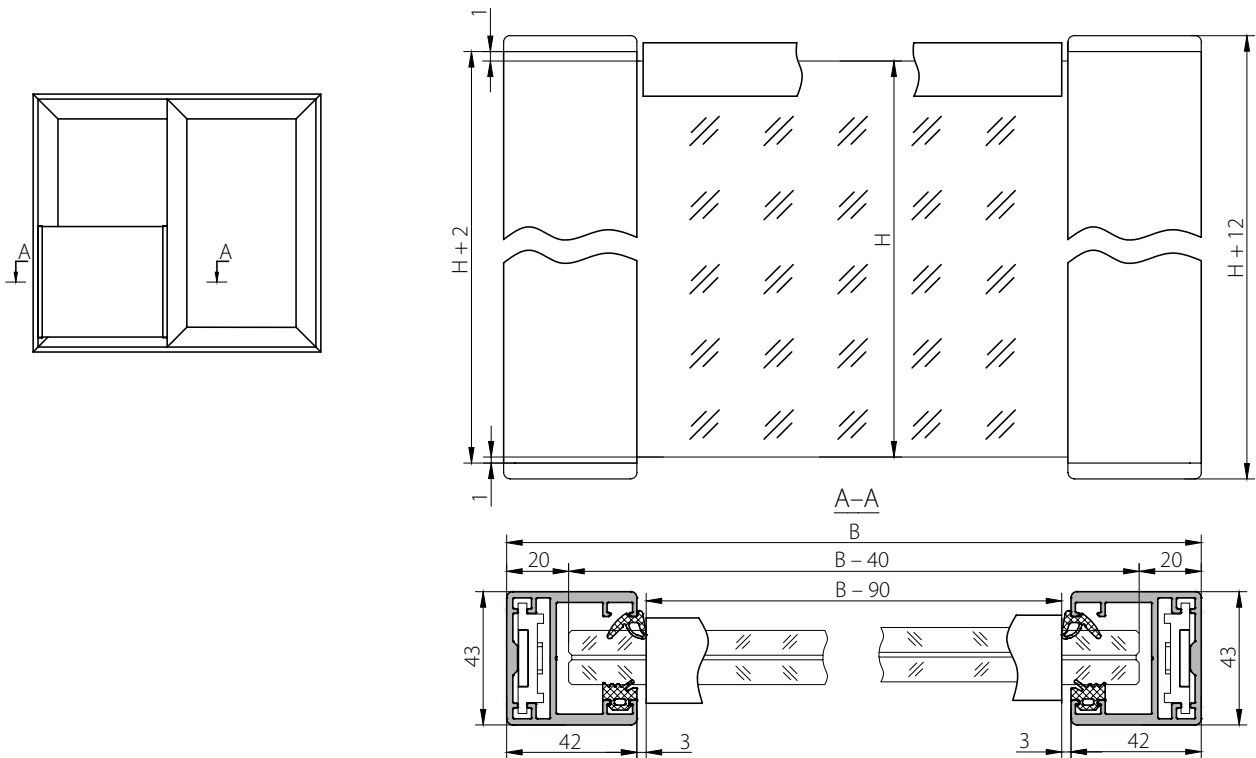


When calculating the dimensions of the railing, take $B = L + 84$ (see page 12).

U-profile, adhesive tape and rubber gasket should be selected depending on triplex thickness (see page 13).

System calculation examples

System calculation with mounting into ALT SL160 system



	Name	Article	Cutting plan	Quantity
Aluminium profiles	Guide profile	AYPC.115.0018	H + 2	2
	U-profile	AYPC.115.0010 (.0014-.0017)	B - 90	1
	Reinforcement profile	AYPC.C43.0706	H + 2	1
Accessories	AYPC.115.0906	Plug	—	4
	AYPC.115.0907	Corner	—	4
	AYPC.115.0908	Paronite insert	—	4
Gaskets	Rubber gasket	FRK15 (14,16,17,18,19,127)	H + 2	2
	Rubber gasket	FRK191 (110,192)	H - 8	2
Infill unit	Triplex		B - 40, H	1
Fastening elements and related materials	3.9×13DIN7981 self-tapping screw		—	page 16
	3.9×38DIN7981 self-tapping screw		—	page 16
	M6×10DIN7991 screw (for AYPC.115.0907 corner and AYPC.115.0906 plug fixation to AYPC.115.0009 profile)		—	4
	DSAT10 (DSAT16) two-sided adhesive tape		B - 90	1



When calculating the dimensions of the railing, take $B = L + 84$ (see page 12).

U-profile, adhesive tape and rubber gasket should be selected depending on triplex thickness (see page 13).



AluminTechno JLLC is a modern highly-effective aluminium extrusion manufacturing enterprise with powder coating and anodizing lines and is a part of ALUTECH Group of Companies.

The enterprise is equipped with the production facilities of the leading manufacturers from the USA, Italy, Germany, etc. Some technological processes and production equipment elements have no analogues in the CIS countries.

The complete production cycle is being performed at the enterprise: from primary aluminium melting to coating of the extruded profiles. The main manufacturing components are modern foundry complexes, high-tech press lines, advanced powder coating and anodizing shops.

The overall production facilities are:

- foundry complex—more than 55 000 tons per year;
- extrusion complex—more than 50 000 tons per year;
- powder coating lines—more than 45 000 tons per year;
- anodizing workshops—more than 10 000 tons per year.

Currently AluminTechno JLLC produces over 1000 different configurations of aluminium profiles, which are used in construction and motor production, aviation, constructional engineering, electric-power industry, furniture and consumer goods industry.

The company's quality management system and Environmental Management System are certified to the requirements of the international standards (ISO 9001:2015 and ISO 14001:2015) and in TUV INTERNATIONAL CERTIFICATION system. TÜV certificates are among the most prestigious quality documents recognized worldwide.



Finish quality of aluminium extrusion produced by AluminTechno JLLC is confirmed by three international certificates: Qualicoat/Seaside and Qualanod. AluminTechno is the only aluminium system manufacturer in the CIS countries holding all these certificates.



Anodized aluminum profiles used in architectural construction are also certified to Cradle to Cradle Certified® Silver. It is a registered trademark of the Cradle to Cradle Products Innovation Institute, which confirms the sustainability of the product life cycle.



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