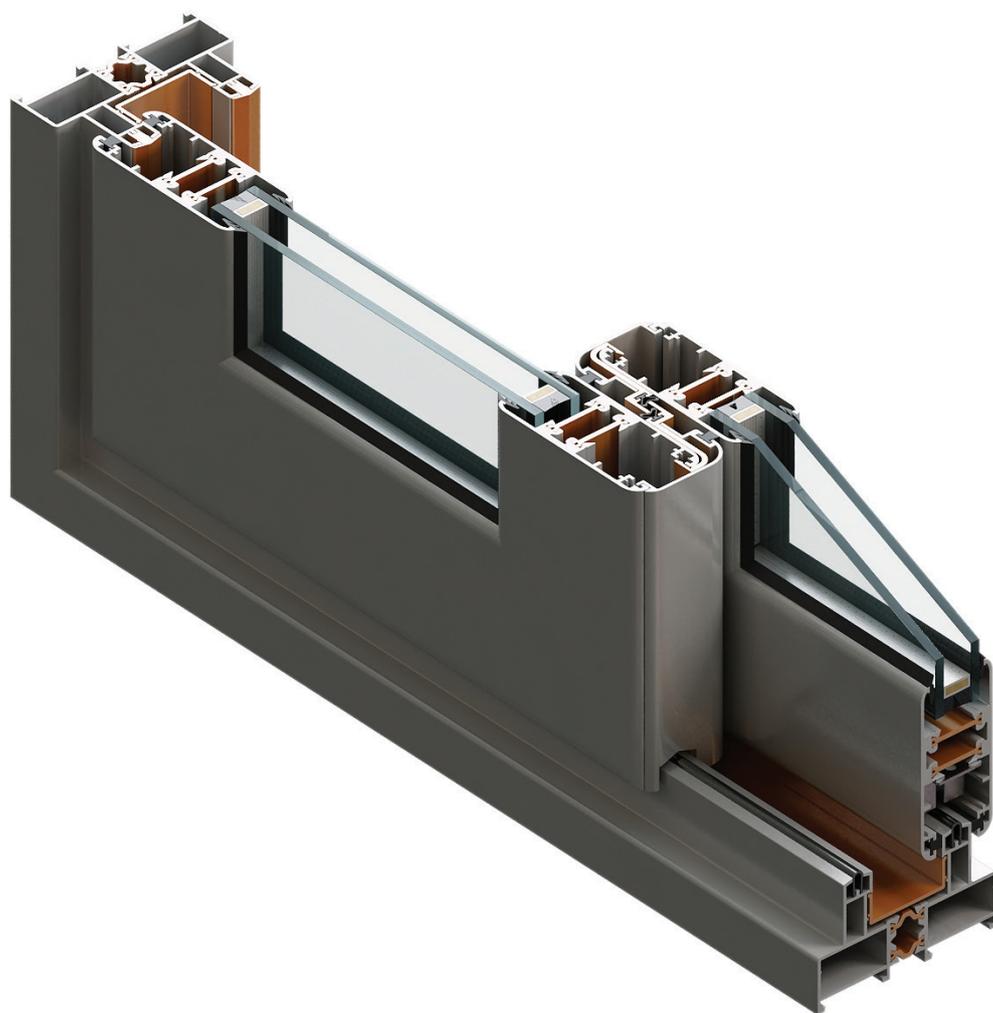
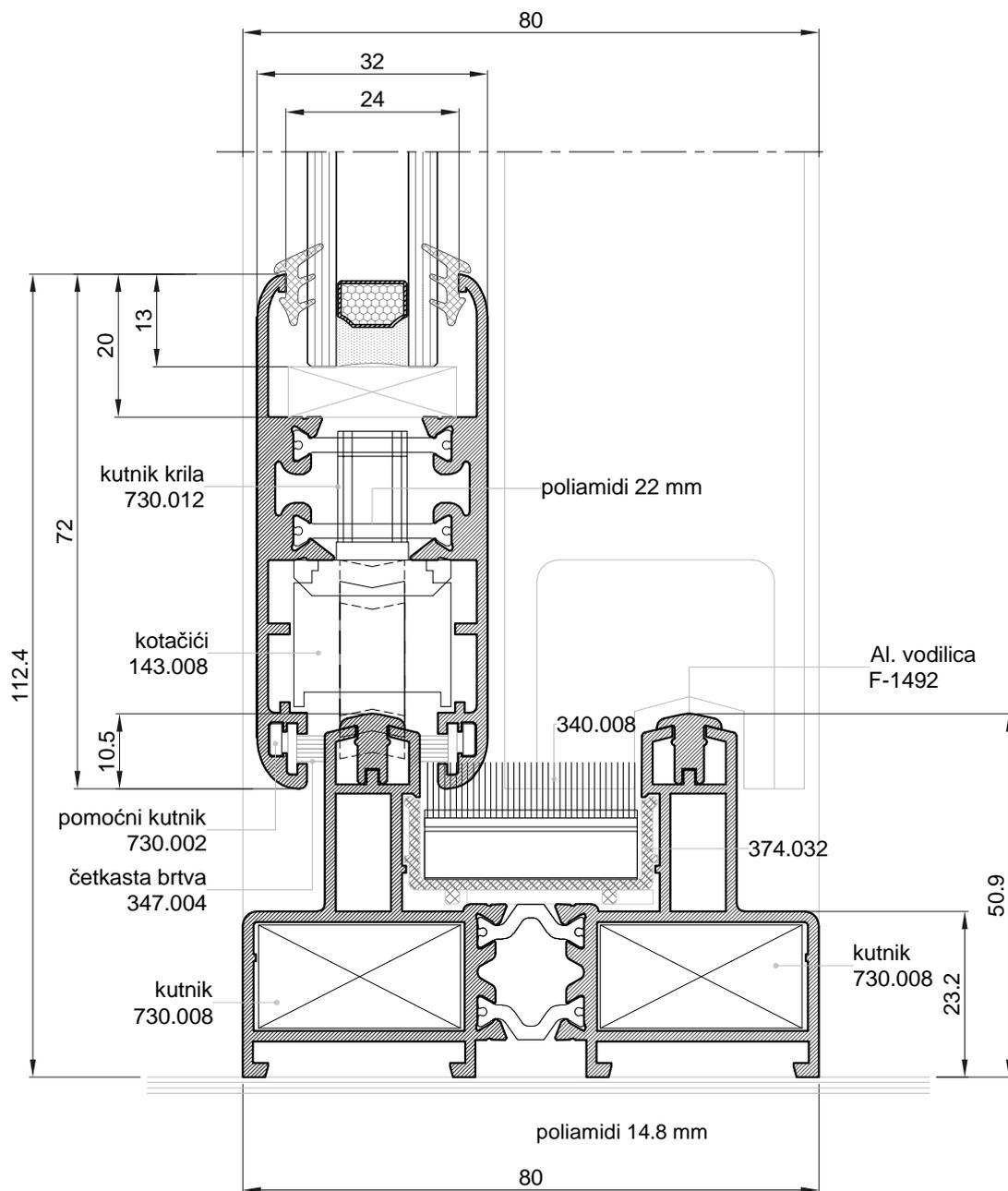


FEAL



TERMO 80

KLIZNI PROZORI I VRATA
SLIDING WINDOWS AND DOORS





INSTITUT GRAĐEVINARSTVA HRVATSKE d.d.
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Tel. +385 (0)1 61 25 999
Fax. +385 (0)1 61 25 998, e-mail: lgf@igh.hr



Zahtjev za ispitivanje: prihvaćena ponuda ZF 29-20-206388/06

Nalog za ispitivanje: 258/06

Zagreb, 2006-09-27

IZVJEŠTAJ O ISPITIVANJU BR. 2920-981/06

Naručitelj: FEAL Hrvatska d.o.o.
Rudeška cesta 3a
10000 Zagreb

Radni nalog: 29208804

Proizvođač uzorka: FEAL d.o.o.
poduzeće za preradu aluminija
Široki Brijeg

Proizvođač profila: FEAL d.o.o.
poduzeće za preradu aluminija
Široki Brijeg

Građevni proizvod: element klizna stijena TERMO 80

Uzorak dostavio: naručitelj ispitivanja

Datum zaprimanja uzorka: 2006-06-28

Mjesto ispitivanja: Institut građevinarstva Hrvatske d.d., Zavod za zgradarstvo, Laboratorij građevinske fizike, Janka Rakuše 1, HR-10000 Zagreb

Laboratorijska oznaka uzorka: LGF 352/06

Ispitana svojstva: A dio: Zrakopropusnost
B dio: Vodonepropusnost
C dio: Otpornost na opterećenje vjetrom
D dio: Zvučna izolacija

Voditelj ispitivanja:

Tomislav Vučić
Tomislav Vučić, dipl. ing. sig.



Voditelj laboratorija:

Ivica Kušević
dr. sc. Ivica Kušević, dipl. ing. fizike

Laboratorij očekuje od naručitelja informaciju o izvještaju (rezultatima) na obrascu "PRIGOVOR-REKLAMACIJA-POHVALA" – www.igh.hr

Laboratorij građevinske fizike Zavoda za zgradarstvo, IGH, Zagreb, akreditiran je od Hrvatske akreditacijske agencije (HAA) prema zahtjevima norme HRN EN ISO/IEC 17025:2004 za ispitivanja toplinsko-izolacijskih proizvoda za primjenu u graditeljstvu, izabranih ispitivanja: građevnih materijala i proizvoda s obzirom na toplinu, vlagu i akustička svojstva, toplinskih značajki zgrada, svojstava prozora i vrata, boja i lakova, te građevnih materijala i elemenata u požaru, prema Prilogu potvrde o akreditaciji br. 1033/06.

Laboratorij građevinske fizike Zavoda za zgradarstvo, IGH, Zagreb, ovlašten je od Ministarstva zaštite okoliša, prostornog uređenja i graditeljstva Republike Hrvatske za radnje ispitivanja toplinsko izolacijskih proizvoda, povezanih sustava za vanjsku toplinsku izolaciju (ETICS) i građevnih proizvoda na otpornost prema požaru u poslovima ocjenjivanja sukladnosti građevnih proizvoda, evidencijski broj 1/05.

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pismenog odobrenja Voditelja laboratorija. Ukupan broj stranica: 11.
Dokument: I2920_981_06.doc

Stranica 1 od 11

Izveštaj broj: 2920-981/06

Opis ispitnog uzorka:

Ispitan je uzorak element klizne stijene TERMO 80, vanjskih izmjera: 2,00 m x 1,70 m, izradene od aluminijskih profila proizvođača Feal d.o.o. Široki Brijeg, BiH i PVC profila AM 2000 proizvođača Vitez iz BiH. Uzorak je ostakljen IZO-staklom debljine 20 mm (staklo FLOAT 4 mm + 12 mm zrak + LOW-e staklo 4 mm).

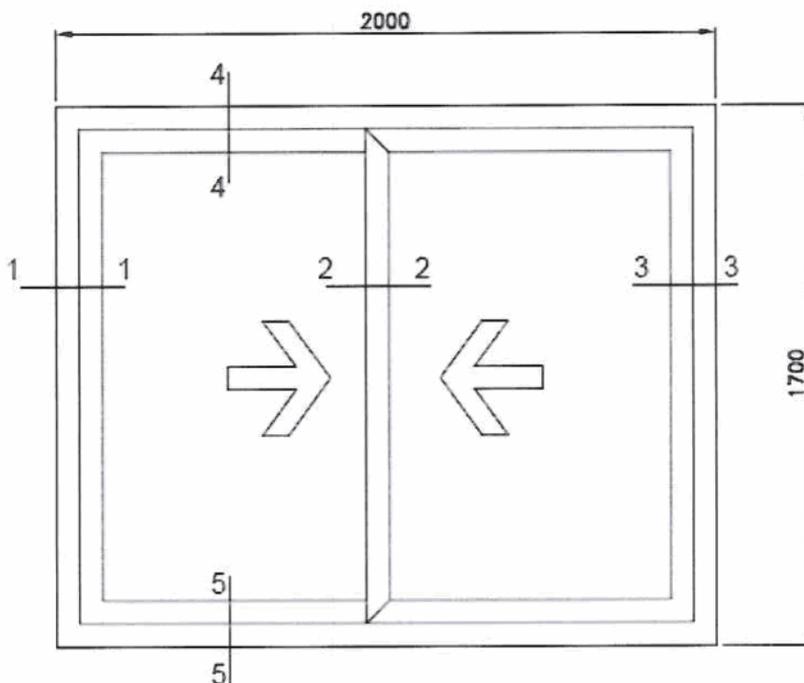
Korišteni okovi:

- kutnici od al. slitine AlMgSi0.5 – proizvođač FEAL-Široki Brijeg, BiH
- kutnici od al. slitine-zamak - proizvođač DITRX-Mostar, BiH
- kutnici od poliamida - proizvođač DITRX-Mostar, BiH
- okov za zatvaranje ručkom - proizvođač MEDAL /Italija/

Korištene brtve:

- brtve EPDM kvalitete - proizvođač COMPLASTEX, Italija
- poliamidi – proizvođač TECHNOFORM, Njemačka

Skica uzorka s presjecima:





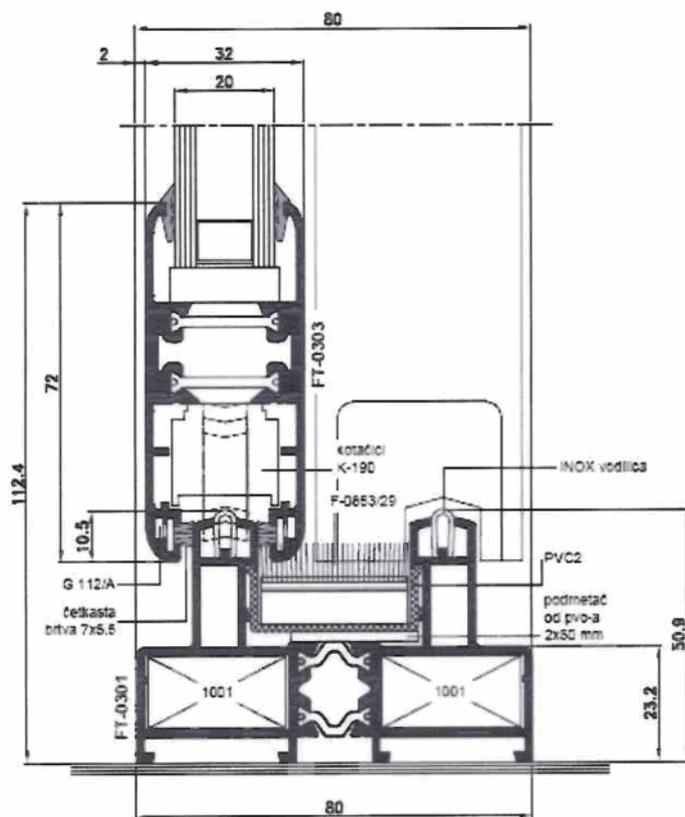
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Izveštaj broj: 2920-981/06



presjek 5-5

A DIO: ZRAKOPROPUSNOST

(metoda ispitivanja akreditirana od strane HAA)

Zadatak: Ispitati svojstvo zrakopropusnosti ispitnog uzorka LGF 352/06

Ispitano prema normi: HRN EN 1026:2001

Datum ispitivanja: 2006-08-16

Temperatura i relativna vlažnost zraka tijekom ispitivanja: 23 °C i 58 %.

Mjerna i ispitna oprema:

- uređaj za ispitivanje prozora proizvođača HOLTEN, tip "Type VAEPC", oznaka mjerila 1674,
- termohigrometar, ROTRONIC, tip Hygroclip S, oznaka mjerila 1679,
- metalni metar.

Ploština ispitnog uzorka: $A = 3,40 \text{ m}^2$.

Duljina sljubnica ispitnog uzorka: $l = 8,67 \text{ m}$.

Tablica i dijagrami izmjenjenih protoka zraka po jedinici duljine sljubnica uzorka i po jedinici ploštine uzorka, kao funkcija razlike tlakova:

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pismenog odobrenja Voditelja laboratorija.

Dokument: I2920_981_06.doc

Stranica 5 od 11

S obzirom na **zrakopropusnost**, ispitani **element klizne stijene TERMO 80**, ostakljen IZO-staklom debljine 20 mm, proizvođača Feal d.o.o. Široki Brijeg, BiH, može se svrstati u **razred 3**, u skladu s HRN EN 12207:2001.

B DIO: VODONEPROPUSNOST

(metoda ispitivanja akreditirana od strane HAA)

Zadatak: Ispitati svojstvo vodonepropusnosti ispitnog uzorka LGF 352/06

Ispitano prema normi: HRN EN 1027:2001, Metoda 1A

Datum ispitivanja: 2006-09-14

Temperatura i relativna vlažnost zraka tijekom ispitivanja: 24 °C i 55 %.

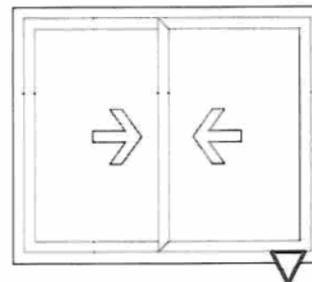
Mjerna i ispitna oprema:

- uređaj za ispitivanje prozora proizvođača HOLTEN, tip "Type VAEPK", oznaka mjerila 1674,
- termohigrometar, ROTRONIC, tip Hygroclip S, oznaka mjerila 1679,
- metalni metar.

Rezultati ispitivanja prikazani su tablicom:

TLAK Δp (Pa)	VRIJEME τ (min)	LGF 352/06	RAZRED (HRN EN 12208:2001)
0	15	+	1 A
50	5	+	2 A
100	5	∇	3 A
150	5		4 A
200	5		5 A
250	5		6 A
300	5		7 A
450	5		8 A
600	5		9 A

- + Znači da nije došlo do propuštanja vode.
- ∇ Znači da je došlo do propuštanja vode.



Tijekom ispitivanja u skladu s HRN EN 1027:2001, u rasponu natisnog tlaka od 0 Pa do 600 Pa, ispitani uzorak LGF 352/06 je propustio vodu pri natisnom tlaku od 100 Pa, u prvoj minuti ispitivanja. Mjesto procurivanja označeno je na skici znakom "∇".

S obzirom na **vodonepropusnost**, ispitani **element klizne stijene TERMO 80**, ostakljen IZO-staklom debljine 20 mm, proizvođača Feal d.o.o. Široki Brijeg, BiH, može se svrstati u **razred 2A**, u skladu s HRN EN 12208:2001.

C DIO: OTPORNOST NA OPTEREĆENJE VJETROM

(metoda ispitivanja akreditirana od strane HAA)

Zadatak: Ispitati svojstvo otpornosti na opterećenje vjetrom ispitnog uzorka LGF 352/06

Ispitano prema normi: HRN EN 12211:2002

Datum ispitivanja: 2006-09-14

Temperatura i relativna vlažnost zraka tijekom ispitivanja: 24 °C i 55 %.

Mjerna i ispitna oprema:

- uređaj za ispitivanje prozora proizvođača HOLTEN, tip "Type VAEPC", oznaka mjerila 1674,
- termohigrometar, ROTRONIC, tip Hygroclip S, oznaka mjerila 1679,
- metalni metar.

REZULTATI ISPITIVANJA ČEONOG SAVIJANJA

Ispitivanje je provedeno na profilu otvarajućeg dijela klizne stijene gdje postoji najveći razmak između dva susjedna učvršćenja otvarajućeg dijela klizne stijene za okvir.

B – mjerno mjesto na sredini između A i C mjesta (oznaka na crtežu),

A – mjerno mjesto na spoju gornjeg i bočnog lijevog profila unutarnjeg otvarajućeg dijela klizne stijene gdje ono naliježe na okvir (oznaka na crtežu),

C – mjerno mjesto na spoju donjeg i bočnog lijevog profila unutarnjeg otvarajućeg dijela klizne stijene gdje ono naliježe na okvir (oznaka na crtežu),

A₀, B₀, C₀ – početno stanje s obzirom na pomak koje je ugođeno tako da pokazuje 0 mm pri $\Delta p = 0$ (Pa),

A_p – čeoní pomak na mjernom mjestu A pri iskazanoj razlici tlakova P₁,

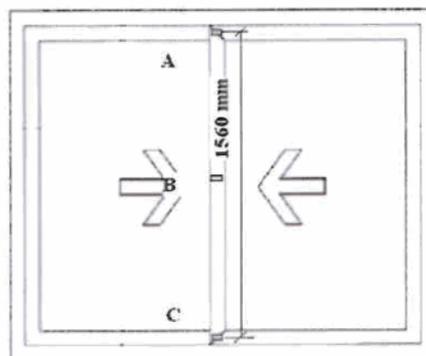
B_p – čeoní pomak na mjernom mjestu B pri iskazanoj razlici tlakova P₁,

C_p – čeoní pomak na mjernom mjestu C pri iskazanoj razlici tlakova P₁,

F_p = (B_p) - ((A_p) + (C_p))/2 - čeonó savijanje,

L = 1,56 m - razmak između točaka A i C,

F_{rp} = F_p / L - relativno čeonó savijanje.





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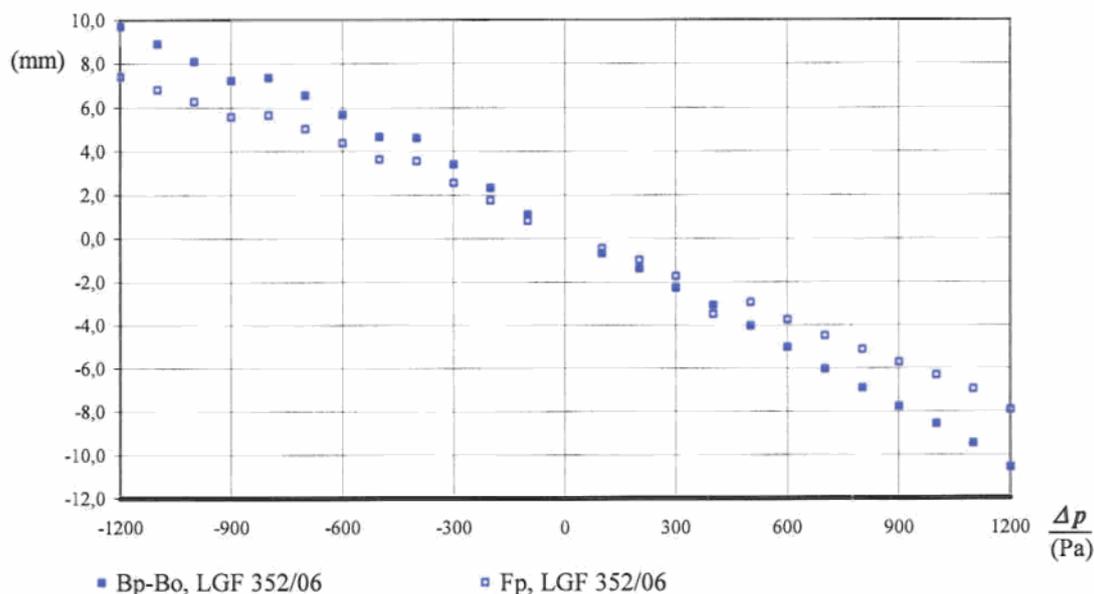
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Izveštaj broj: 2920-981/06

TLAK Δp (Pa)	LGF 352/06					TLAK Δp (Pa)	LGF 352/06				
	A_p-A_0 (mm)	B_p-B_0 (mm)	C_p-C_0 (mm)	F_p (mm)	F_{rp} ($\times 10^{-4}$)		A_p-A_0 (mm)	B_p-B_0 (mm)	C_p-C_0 (mm)	F_p (mm)	F_{rp} ($\times 10^{-4}$)
100	-0,4	-0,7	-0,1	-0,45	-2,88	-100	0,4	1,1	0,2	0,80	5,13
200	-0,6	-1,4	-0,2	-1,00	-6,41	-200	0,7	2,3	0,4	1,75	11,22
300	-0,8	-2,3	-0,3	-1,75	-11,22	-300	1,0	3,4	0,7	2,55	16,35
400	1,3	-3,1	-0,5	-3,50	-22,44	-400	1,3	4,6	0,8	3,55	22,76
500	-1,4	-4,1	-0,9	-2,95	-18,91	-500	1,3	4,7	0,8	3,63	23,24
600	-1,7	-5,1	-1,0	-3,75	-24,04	-600	1,6	5,7	1,0	4,38	28,04
700	-2,0	-6,1	-1,2	-4,50	-28,85	-700	1,8	6,6	1,3	5,03	32,21
800	-2,2	-7,0	-1,5	-5,15	-33,01	-800	2,0	7,4	1,5	5,63	36,06
900	-2,4	-7,8	-1,7	-5,75	-36,86	-900	1,9	7,2	1,4	5,55	35,58
1000	-2,6	-8,6	-1,9	-6,35	-40,71	-1000	2,1	8,1	1,6	6,25	40,06
1100	-2,9	-9,5	-2,1	-7,00	-44,87	-1100	2,4	8,9	1,8	6,80	43,59
1200	-3,1	-10,6	-2,2	-7,95	-50,96	-1200	2,6	9,7	2,0	7,40	47,44



S obzirom na relativno čeno savijanje F_{rp} , ispitani uzorak LGF 352/06, može se svrstati u razred B ($1/300 < F_{rp} < 1/150$), u skladu s HRN EN 12210:2001, budući da je maksimalno relativno čeno savijanje iznosilo 1/196.

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pismenog odobrenja Voditelja laboratorija.

Dokument: I2920_981_06.doc

Stranica 9 od 11



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Izvještaj broj: 2920-981/06

REZULTATI ISPITIVANJA OTPORNOSTI PROMJENJIVIM TLAKOM P2

Ispitivanje je provedeno s 50 impulsa promjenjivog tlaka P2 od ± 600 Pa, koji iznosi polovicu max. tlaka P1. Nakon provedenog opterećenja na uzorku LGF 352/06 nije bilo vidljivih oštećenja niti promjena u funkcionalnosti elementa klizne stijene.

REZULTATI SIGURNOSNOG ISPITIVANJA

Ispitivanje sigurnosti je provedeno s jednim impulsom od -1800 Pa i s jednim impulsom od $+1800$ Pa. Nakon provedenog opterećenja na uzorku LGF 352/06 nije bilo vidljivih napuknuća na bilo kojem dijelu uzorka (staklo, okvir i okovi), niti je došlo do otvaranja elementa klizne stijene.

S obzirom na ispitivanje **otpornosti na opterećenje vjetrom** i ponovljeno ispitivanje zrakopropusnosti nakon ispitivanja otpornosti na opterećenje vjetrom, koje pokazuje da nije došlo do povećanja vrijednosti od 20 % u odnosu na prvo ispitivanje zrakopropusnosti, **ispitani element klizne stijene TERMO 80**, ostakljen IZO-staklom debljine 20 mm, proizvođača Feal d.o.o. Široki Brijeg, BiH., može se svrstati u **razred B3**, u skladu s HRN EN 12210:2001.

D DIO: ZVUČNA IZOLACIJA

Zadatak: Ispitati izolaciju od zračnog zvuka ispitnog uzorka LGF 352/06

Ispitano prema normi: HRN EN ISO 140-3:1998.

Datum ispitivanja: 2006-08-24

Temperatura i relativna vlažnost zraka tijekom ispitivanja: 22 °C i 62 %.

Mjerna i ispitna oprema:

- modularni analizator zvuka, tip 2260-IOEC 651, B&K, oznaka mjerila 1974,
 - kalibrator razine zvučnog tlaka, tip 4220, B&K,
 - kondenzatorski mikrofoni, tip 4189, B&K,
 - predpojačala, tip ZC 0026, B&K,
- pojačalo snage, IGH, oznaka mjerila 725,
- zvučnik, tip 4241, B&K, oznaka mjerila 726,
- termohigrometar, ROTRONIC, tip Hygroclip S, oznaka mjerila 1679.

Indeks zvučne izolacije ispitnog uzorka prikazan je, kao funkcija frekvencije, dijagramom i tablicom.

Pri iskazivanju rezultata ispitivanja rabljene su ove oznake:

f središnja frekvencija terce (Hz),

R indeks zvučne izolacije (dB),

R_{w} vrednovani indeks zvučne izolacije (dB).

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pismenog odobrenja Voditelja laboratorija.

Dokument: I2920_981_06.doc

Stranica 10 od 11



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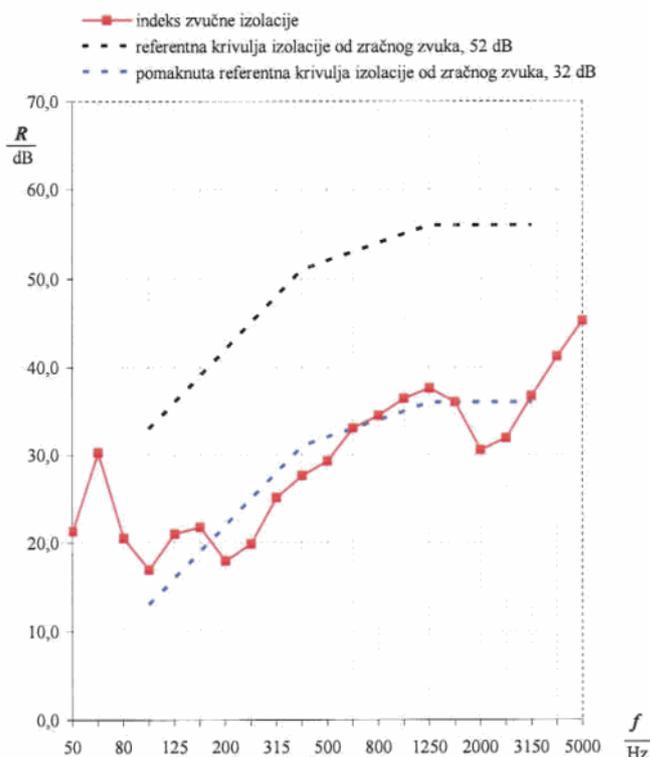
Prijemna prostorija: sjeverna prostorija akustičkog laboratorija, obujma 78 m³.
Predajna prostorija: južna prostorija akustičkog laboratorija, obujma 78 m³.
Ispitni uzorak: element klizne stijene TERMO 80, vanjskih izmjera: 2,00 m x 1,70 m, izrađen od aluminijskih profila proizvođača Feal d.o.o. i PVC profila AM 2000. Uzorak je ostakljen IZO-staklom debljine 20 mm.
Ploština ispitnog uzorka: 3,40 m².

REZULTATI ISPITIVANJA IZOLACIJE OD ZRAČNOG ZVUKA

Tablica:

frekvencija f (Hz)	terca R (dB)
50	21,4
63	30,3
80	20,6
100	17,0
125	21,1
160	21,8
200	18,0
250	19,9
315	25,2
400	27,7
500	29,3
630	33,1
800	34,5
1000	36,4
1250	37,6
1600	36,0
2000	30,6
2500	31,9
3150	36,7
4000	41,2
5000	45,2

Dijagram:

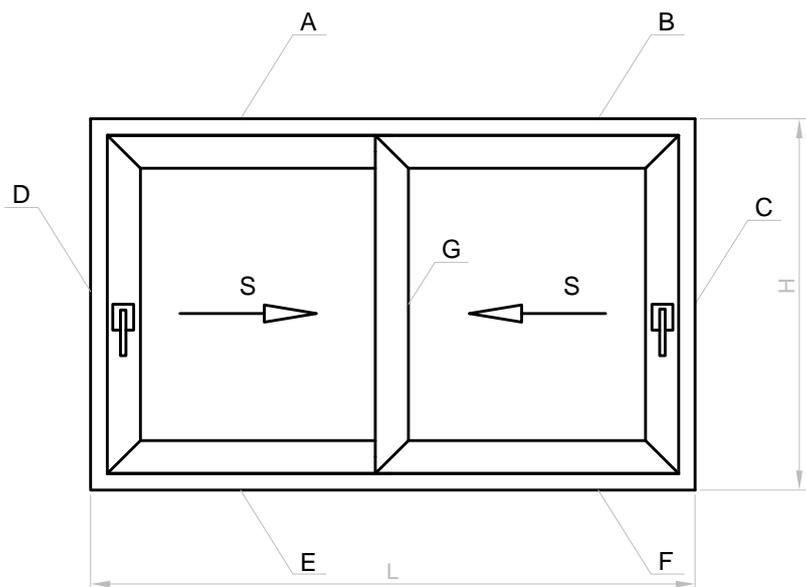


Temeljem rezultata ispitivanja, **vrednovani indeks zvučne izolacije** za ispitani **element klizne stijene TERMO 80**, ostakljen IZO-staklom debljine 20 mm, proizvođača Feal d.o.o. Široki Brijeg, BiH (laboratorijska oznaka uzorka LGF 352/06), u skladu s normom HRN EN ISO 717-1:1998., iznosi:

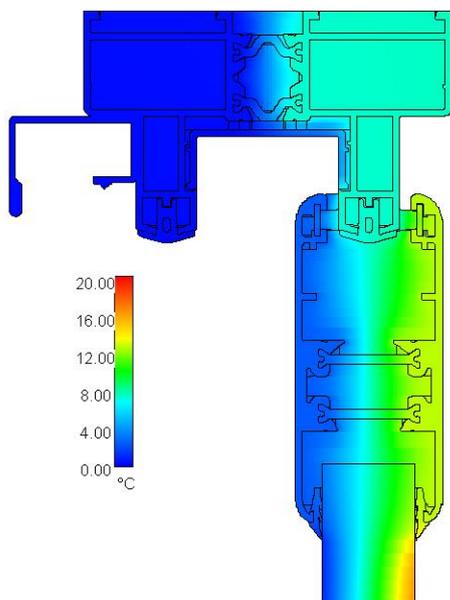
$$R_w (C; C_{tr}; C_{50-5000}; C_{tr,50-5000}) = 32 (-1; -4; 0; -4) \text{ dB.}$$

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pismenog odobrenja Voditelja laboratorija.
Dokument: I2920_981_06.doc

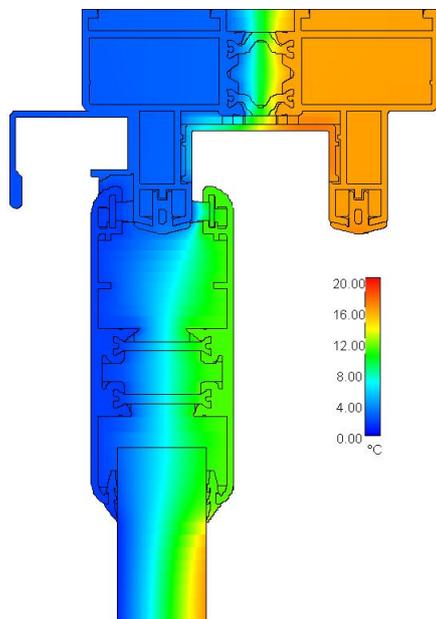
Stranica 11 od 11



Temperaturni dijagram za A
Temperature diagram for A



Temperaturni dijagram za B Temperaturni dijagram za B

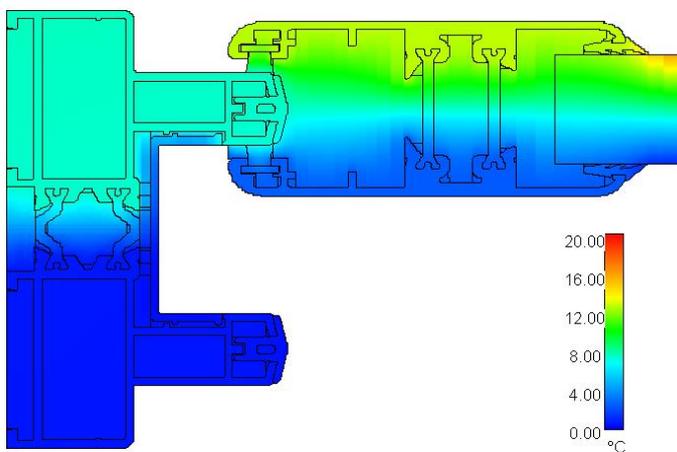


Proračun koeficijenta prolaska topline počiva na dvodimenzionalnoj numeričkoj metodi konačnih elemenata određene prema prEN ISO 10077-2.

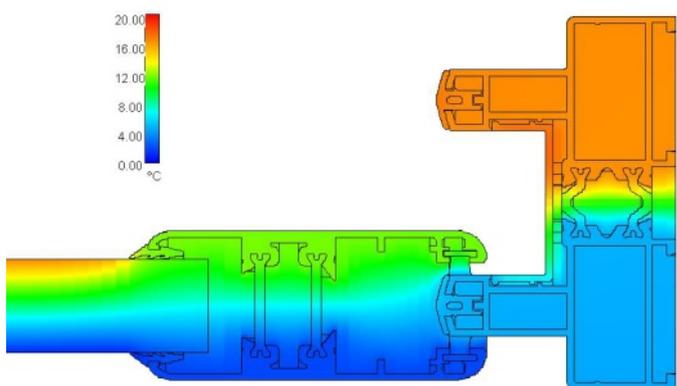
The calculation of the heat transfer coefficient is based on the two-dimensional numerical finite element method specified according to prEN ISO 10077-2.

DIMENZIJE Dimensions	L	(m)	2.6
	H	(m)	2.4
A-vodoravnica A-horizontal	U_A	(W/m ² K)	4.1
B-vodoravnica B-horizontal	U_B	(W/m ² K)	4.86
C-okomica C-vertical	U_C	(W/m ² K)	4.4
D-okomica D-vertical	U_D	(W/m ² K)	4
E-vodoravnica E-horizontal	U_E	(W/m ² K)	4
F-vodoravnica F-horizontal	U_F	(W/m ² K)	4.4
G-prečka G-mullion	U_G	(W/m ² K)	5.9
S-staklo S-glass	U_S	(W/m ² K)	1.1
Kombinacija stakla i profila Glass and profiles combination	U_w	(W/m ² K)	2

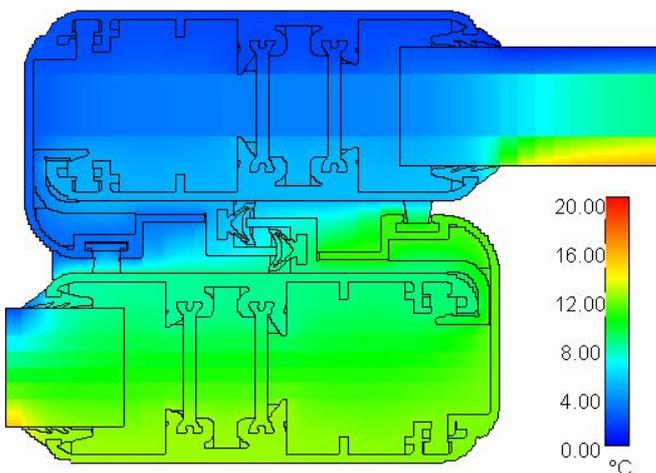
Temperaturni dijagram za D i E
Temperature diagram for D and E

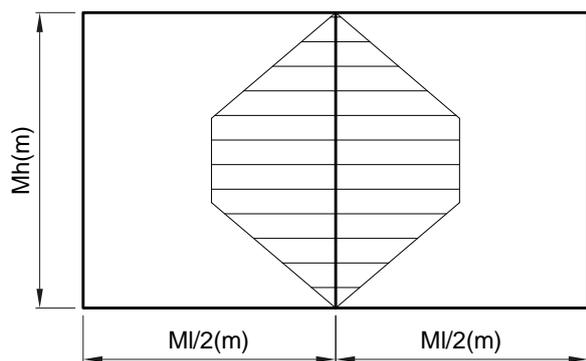


Temperaturni dijagram za C i F
Temperature diagram for C and F

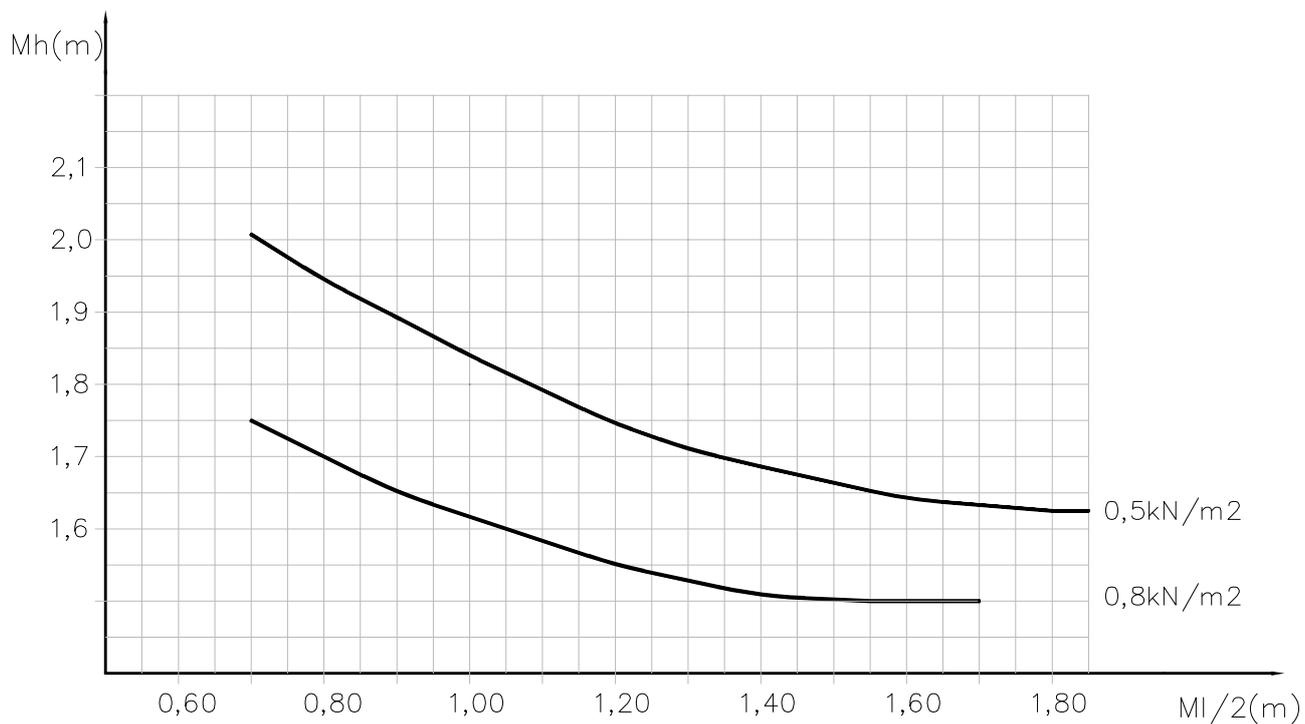
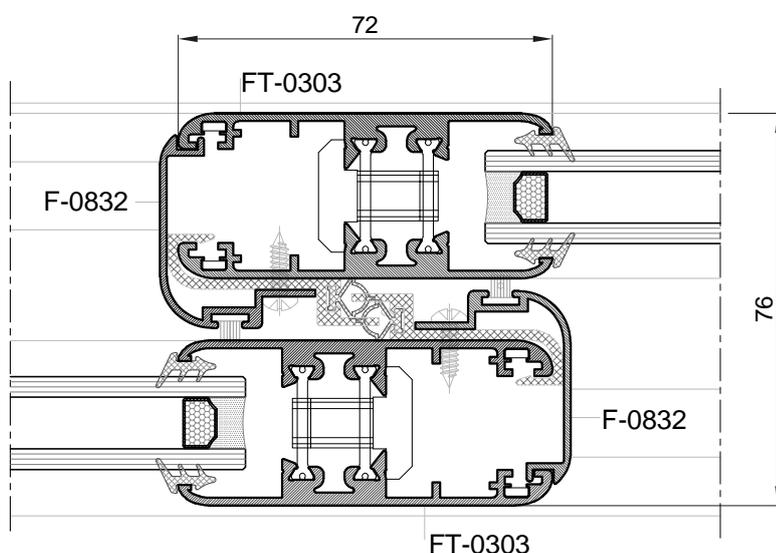


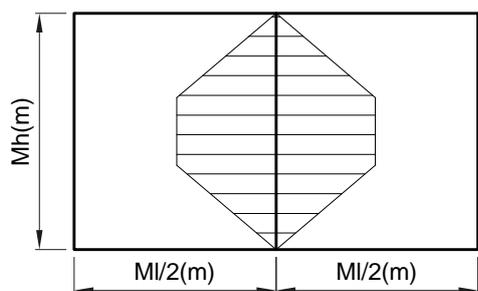
Temperaturni dijagram za G
Temperature diagram for G



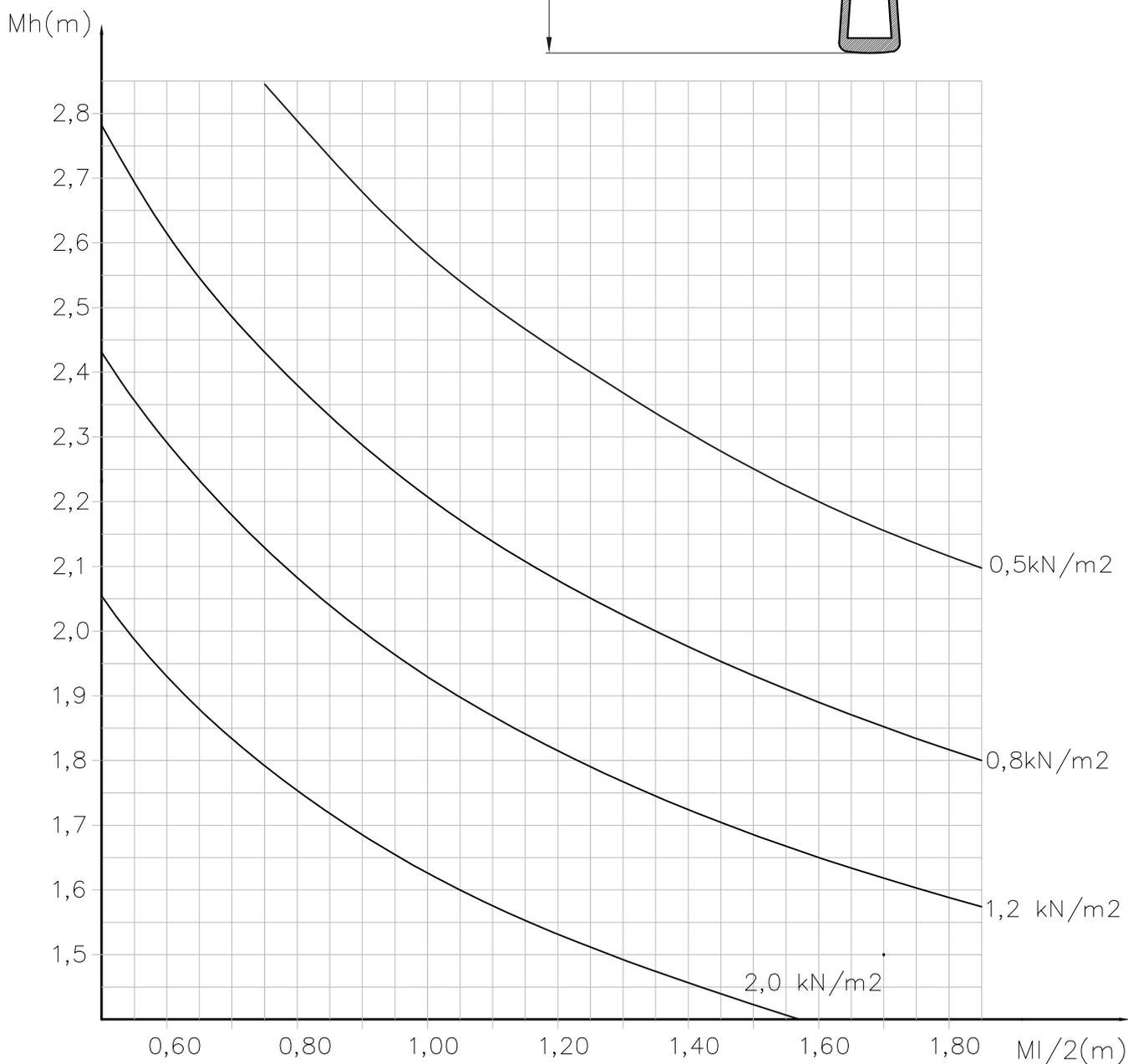
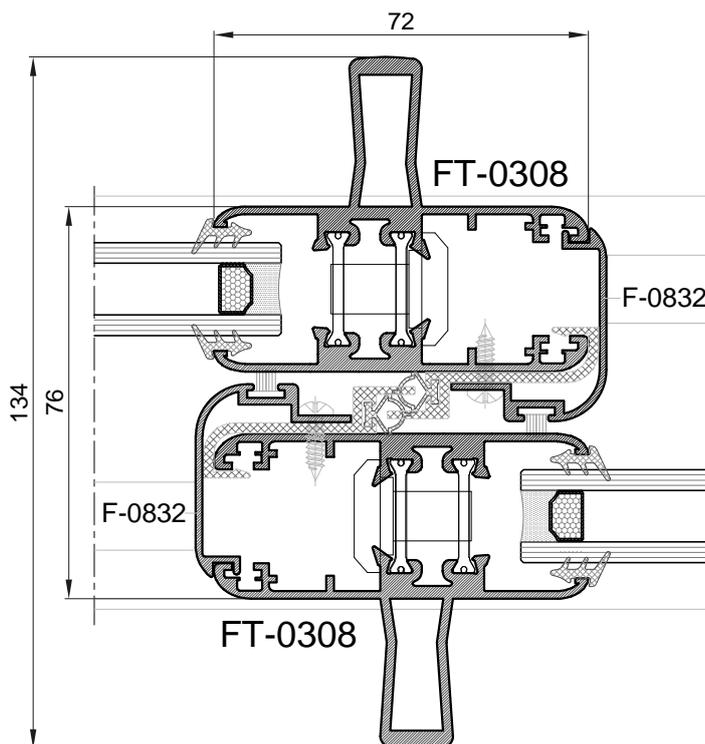


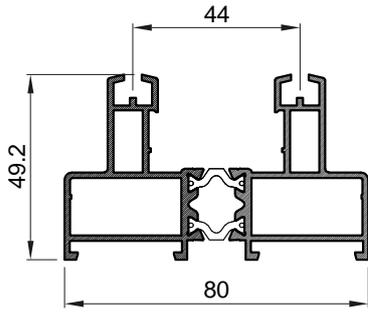
-max. TEŽINA KRILA <150kg
-max. WING WEIGHT <150kg



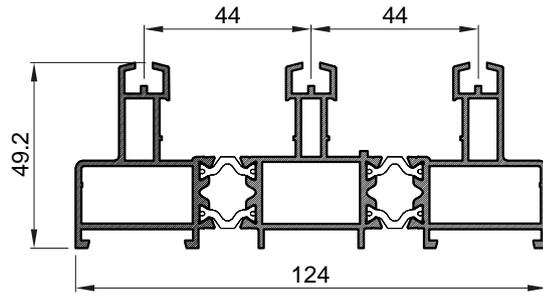


-max. TEŽINA KRILA < 150kg
-max. WING WEIGHT < 150kg

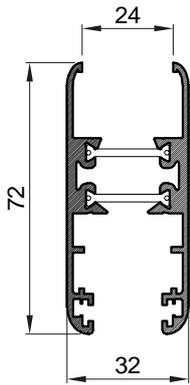




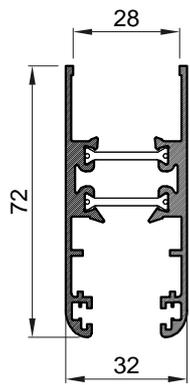
FT-0301
kg/m 1.710



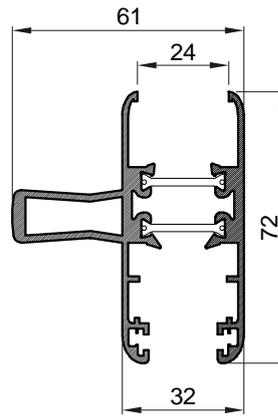
FT-0302
kg/m 2.632



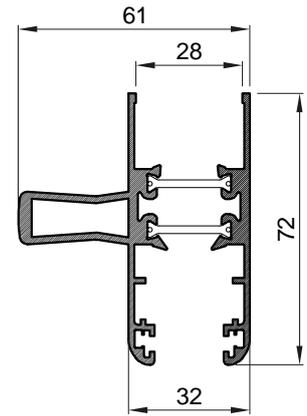
FT-0303
kg/m 1.315



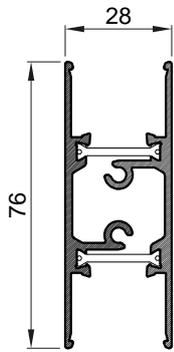
FT-0309
kg/m 1.313



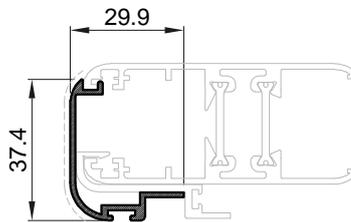
FT-0308
kg/m 1.689



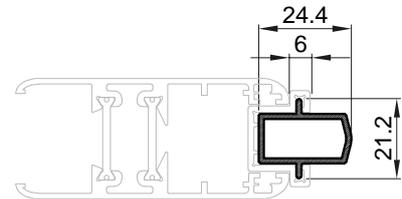
FT-0310
kg/m 1.684



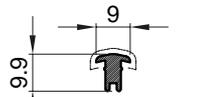
FT-0307
kg/m 1.262



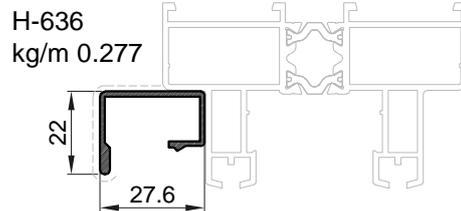
F-0832
kg/m 0.299



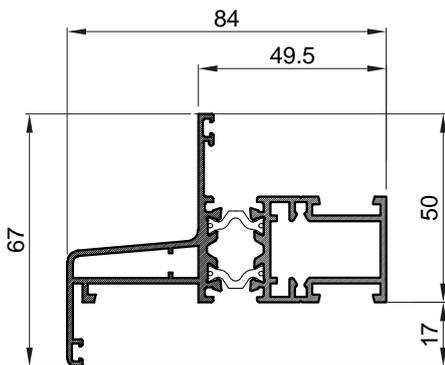
F-0833
kg/m 0.278



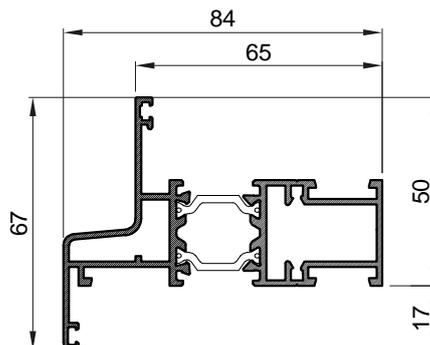
F-1492
kg/m 0.114



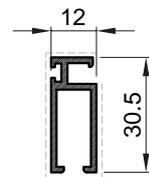
H-636
kg/m 0.277



FT-0304
kg/m 1.567

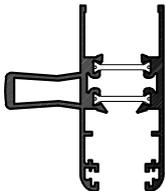
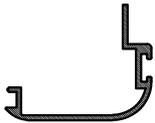
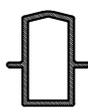
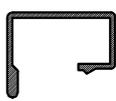
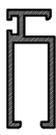


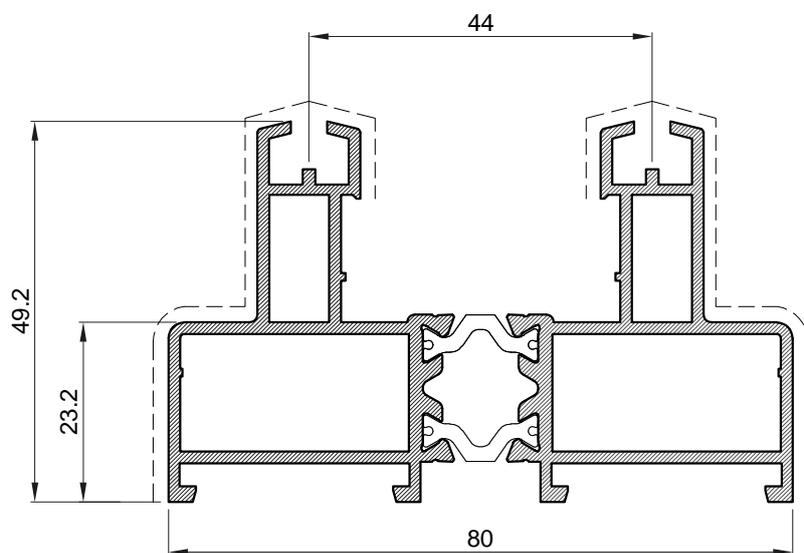
FT-0305
kg/m 1.558



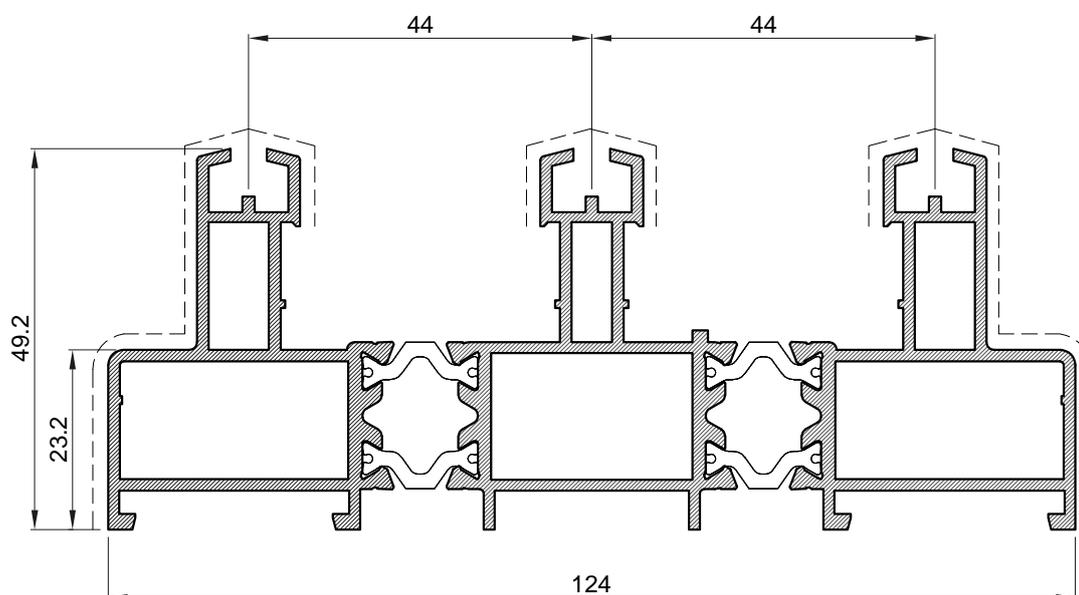
H-639
kg/m 0.323

Oznaka Code	y x	Izgled-presjek View-cross-section	Težina Weight /kg/ml/	Opseg Perimeter /mm/	I_x / cm^4	W_x / cm^3
					I_y / cm^4	W_y / cm^3
FT-0301			1.710	424	11.61	4.16
					34.39	8.6
FT-0302			2.632	627	17.2	6.19
					123.29	19.87
FT-0303			1.315	402	15.44	4.18
					8.05	5.03
FT-0304			1.567	548	8.23	2.25
					33.85	7.95
FT-0305			1.558	416	8.58	2.39
					37.1	8.46
FT-0307			1.262	298	13.84	3.65
					5.5	3.93
FT-0308			1.689	449	15.93	4.42
					20.86	5.63
FT-0309			1.313	388	15.25	4.11
					8.08	5.05

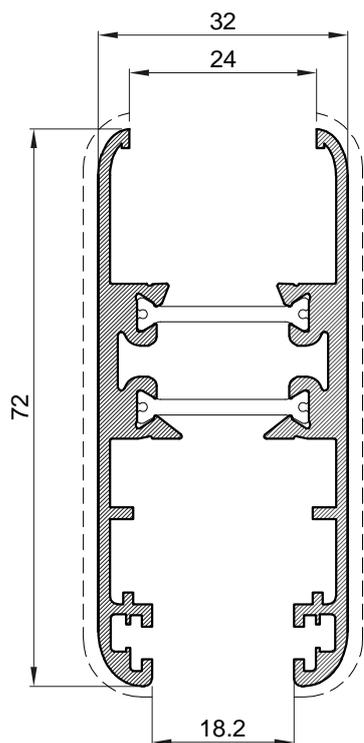
Oznaka Code		Izgled-presjek Appearance-cross-section	Težina Weight /kg/ml/	Opseg Perimeter /mm/	I_x / cm^4	W_x / cm^3
					I_y / cm^4	W_y / cm^3
FT-0310			1.684	448	15.77	4.37
					20.88	5.64
F-0832			0.299	164	1.72	0.72
					0.83	0.39
F-0833			0.278	86	0.33	0.31
					0.65	0.51
H-636			0.277	142		
H-639			0.323	80		
F-1492			0.114	41		



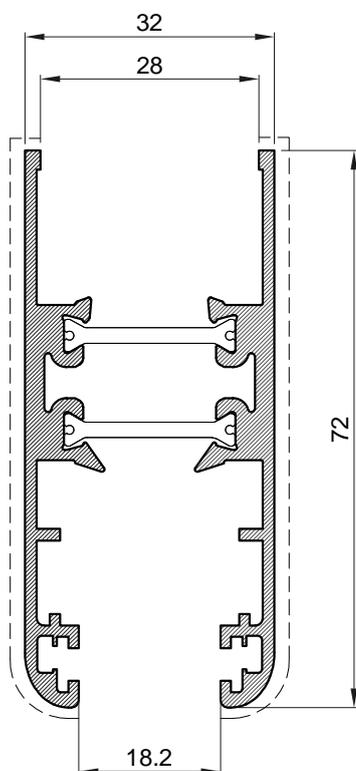
Dvostazni profil rama Two-way frame profile		
Art.-Br.	FT-0301	
Težina Weight	kg/m	1.710
Opseg Perimeter	mm	424
Moment inercije Moment of inertia	I _x (cm ⁴)	11.61
	I _y (cm ⁴)	34.39
	W _x (cm ³)	4.16
	W _y (cm ³)	8.6
Dužina isporuke Delivery length	mm	6500



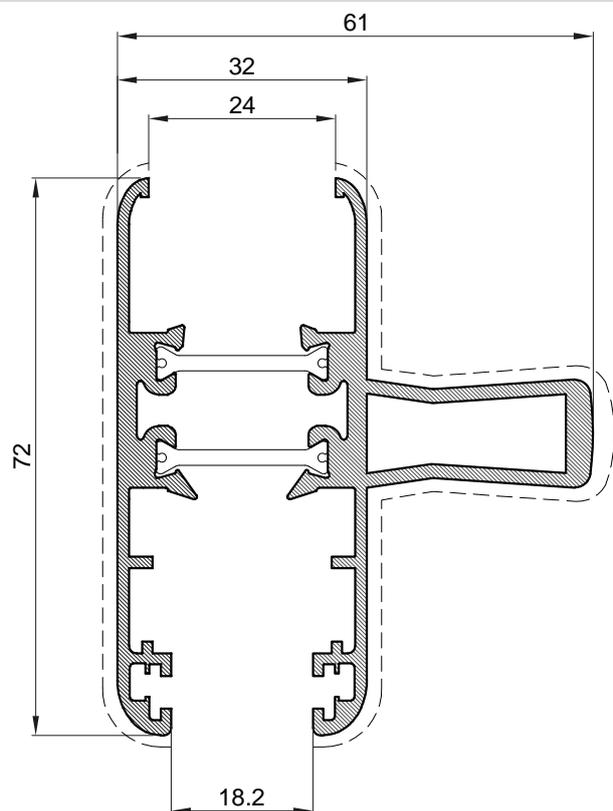
Trostazni profil rama Three-way frame profile		
Art.-Br.	FT-0302	
Težina Weight	kg/m	2.632
Opseg Perimeter	mm	627
Moment inercije Moment of inertia	I _x (cm ⁴)	17.2
	I _y (cm ⁴)	123.29
	W _x (cm ³)	6.19
	W _y (cm ³)	19.87
Dužina isporuke Delivery length	mm	6500



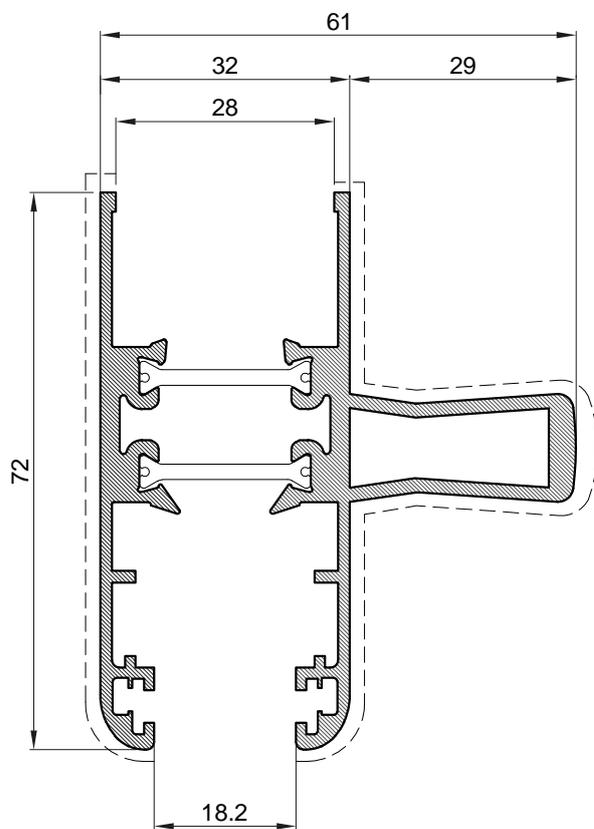
Profil krila Sash profile		
Art.-Br.	FT-0303	
Težina Weight	kg/m	1.315
Opseg Perimeter	mm	402
Moment inercije Moment of inertia	Ix (cm ⁴)	15.44
	Iy (cm ⁴)	8.05
	Wx (cm ³)	4.18
	Wy (cm ³)	5.03
Dužina isporuke Delivery length	mm	6500



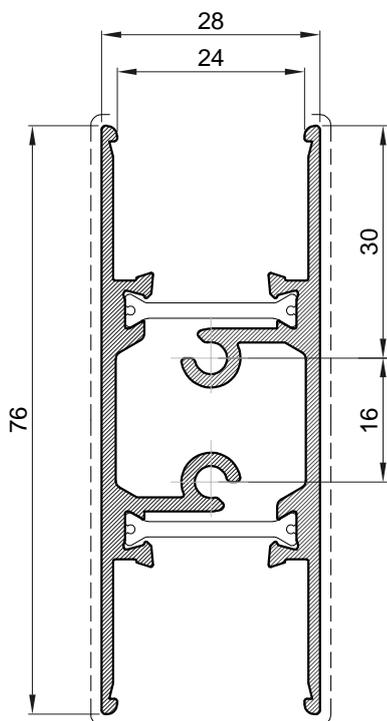
Profil krila Sash profile		
Art.-Br.	FT-0309	
Težina Weight	kg/m	1.313
Opseg Perimeter	mm	388
Moment inercije Moment of inertia	Ix (cm ⁴)	15.25
	Iy (cm ⁴)	8.08
	Wx (cm ³)	4.11
	Wy (cm ³)	5.05
Dužina isporuke Delivery length	mm	6500



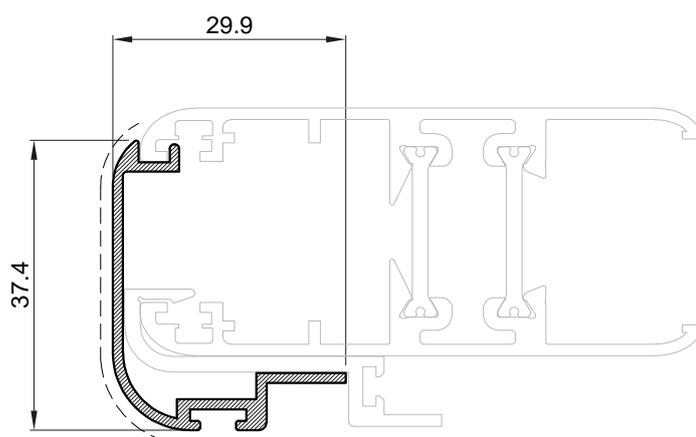
Profil krila-ojačan Sash profile - reinforced		
Art.-Br.	FT-0308	
Težina Weight	kg/m	1.689
Opseg Perimeter	mm	449
Moment inercije Moment of inertia	I _x (cm ⁴)	15.93
	I _y (cm ⁴)	20.86
	W _x (cm ³)	4.42
	W _y (cm ³)	5.63
Dužina isporuke Delivery length	mm	6500



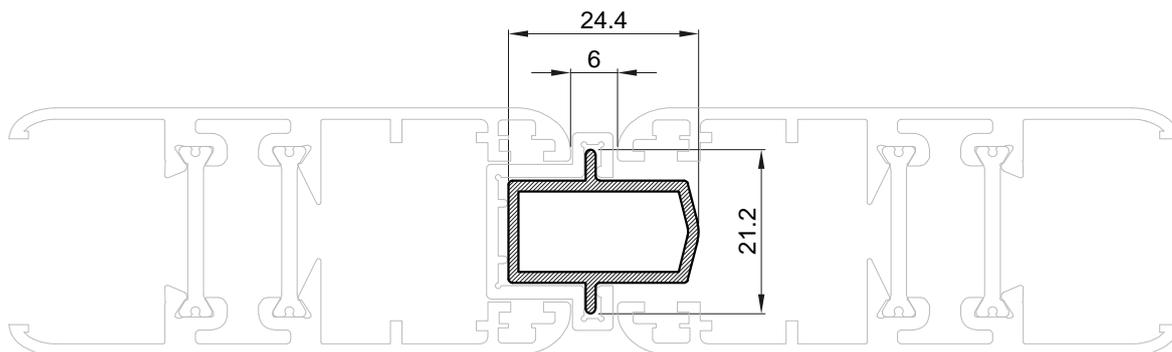
Profil krila-ojačan Sash profile - reinforced		
Art.-Br.	FT-0310	
Težina Weight	kg/m	1.684
Opseg Perimeter	mm	448
Moment inercije Moment of inertia	I _x (cm ⁴)	15.77
	I _y (cm ⁴)	20.88
	W _x (cm ³)	4.37
	W _y (cm ³)	5.64
Dužina isporuke Delivery length	mm	6500



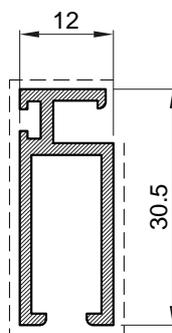
Profil prečke Mullion profile		
Art.-Br.	FT-0307	
Težina Weight	kg/m	1.262
Opseg Perimeter	mm	298
Moment inercije Moment of inertia	I _x (cm ⁴)	13.84
	I _y (cm ⁴)	5.5
	W _x (cm ³)	3.65
	W _y (cm ³)	3.93
Dužina isporuke Delivery length	mm	6500



Profil na spoju krila Profile at the sash joint		
Art.-Br.	FT-0832	
Težina Weight	kg/m	0.299
Opseg Perimeter	mm	164
Moment inercije Moment of inertia	I _x (cm ⁴)	1.72
	I _y (cm ⁴)	0.83
	W _x (cm ³)	0.72
	W _y (cm ³)	0.39
Dužina isporuke Delivery length	mm	6500

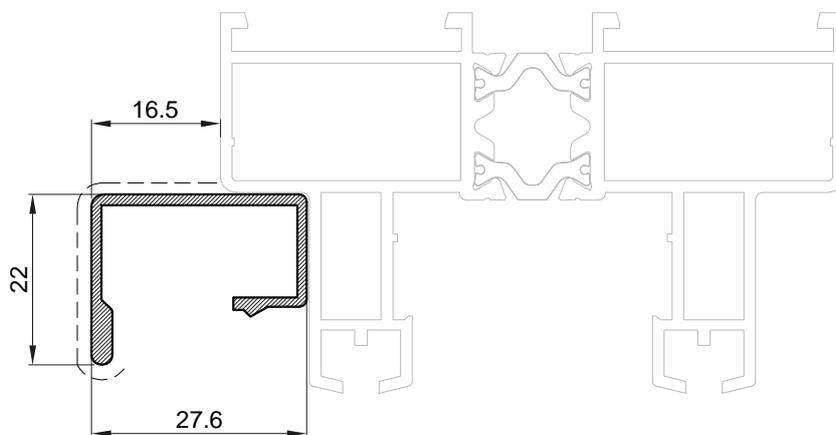


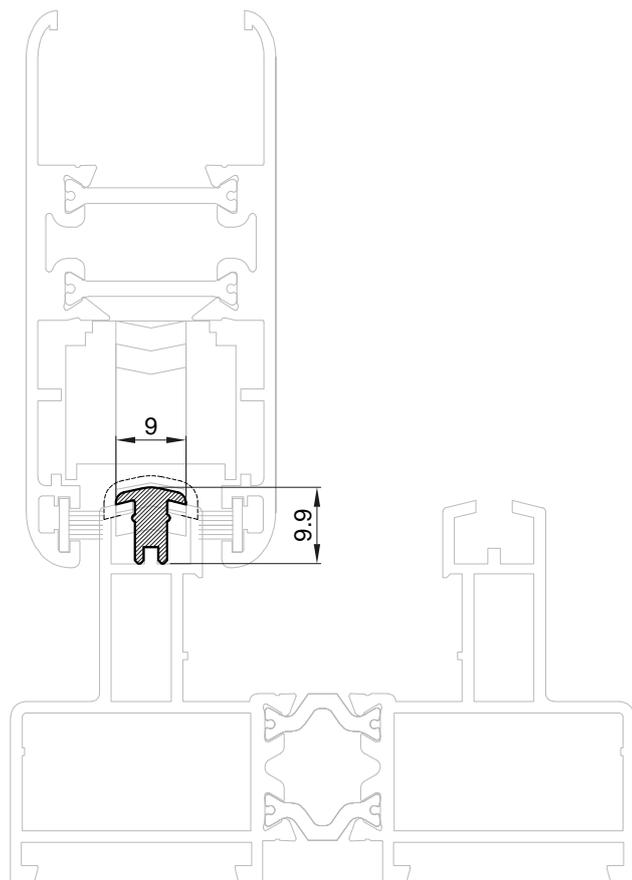
Profil prečke Mullion profile		
Art.-Br.	FT-0833	
Težina Weight	kg/m	0.278
Opseg Perimeter	mm	86
Moment inercije Moment of inertia	I _x (cm ⁴)	0.33
	I _y (cm ⁴)	0.65
	W _x (cm ³)	0.31
	W _y (cm ³)	0.51
Dužina isporuke Delivery length	mm	6500



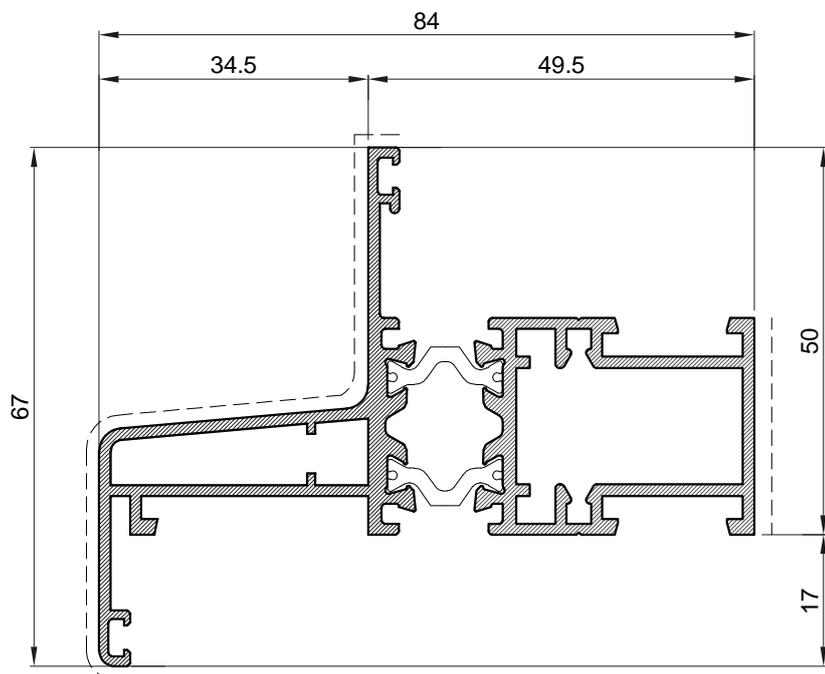
Profil prečke Mullion profile		
Art.-Br.	H-639	
Težina Weight	kg/m	0.323
Opseg Perimeter	mm	161
Dužina isporuke Delivery length	mm	6500

Okapnica-vodilica komarica Drip-mosquito net guide		
Art.-Br.	H-636	
Težina Weight	kg/m	0.277
Opseg Perimeter	mm	142
Dužina isporuke Delivery length	mm	6500

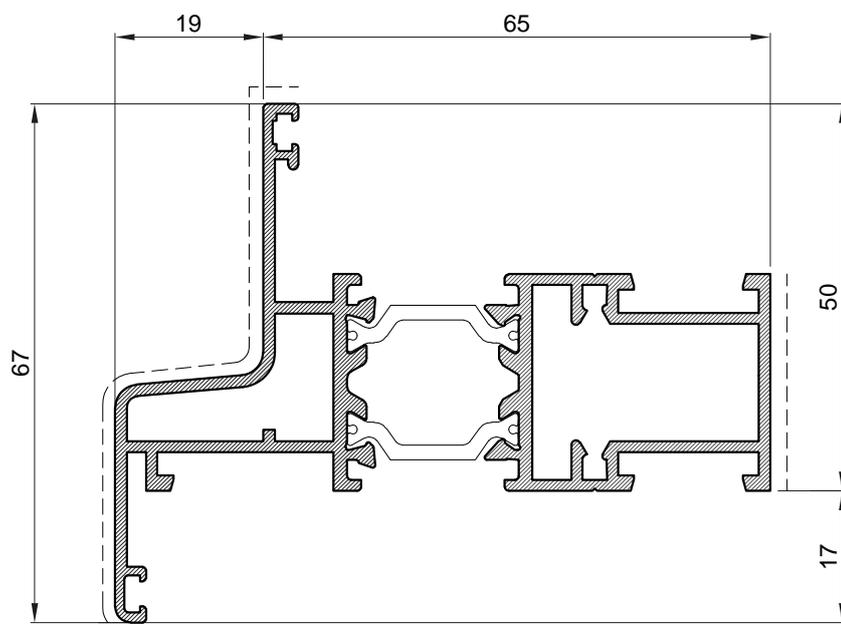




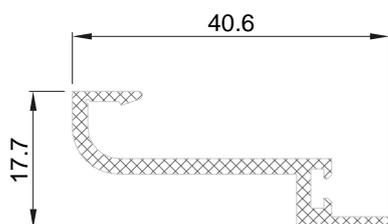
Vodilica kotačica Wheel guide		
Art.-Br.	F-1492	
Težina Weight	kg/m	0.114
Opseg Perimeter	mm	41
Dužina isporuke Delivery length	mm	6500



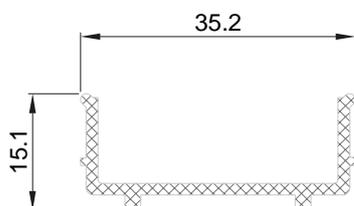
Profil prečke Mullion profile		
Art.-Br.	FT-0304	
Težina Weight	kg/m	1.567
Opseg Perimeter	mm	548
Moment inercije Moment of inertia	I _x (cm ⁴)	8.23
	I _y (cm ⁴)	33.85
	W _x (cm ³)	2.25
	W _y (cm ³)	7.95
Dužina isporuke Delivery length	mm	6500



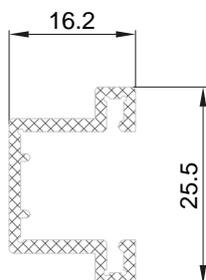
Profil prečke Mullion profile		
Art.-Br.	FT-0305	
Težina Weight	kg/m	1.558
Opseg Perimeter	mm	416
Moment inercije Moment of inertia	I _x (cm ⁴)	8.58
	I _y (cm ⁴)	37.1
	W _x (cm ³)	2.39
	W _y (cm ³)	8.46
Dužina isporuke Delivery length	mm	6500



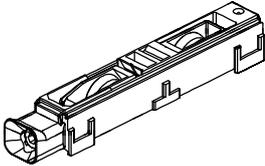
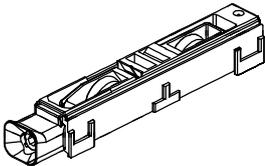
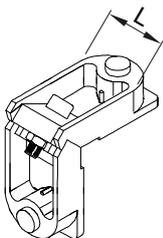
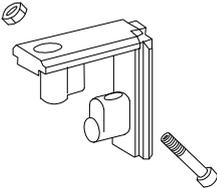
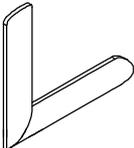
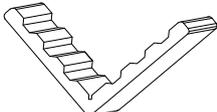
PVC profil PVC profile		
Art.-Br.	374.031 /PVC1/	
Težina Weight	kg/m	-
Opseg Perimeter	mm	137
Dužina isporuke Delivery length	mm	-

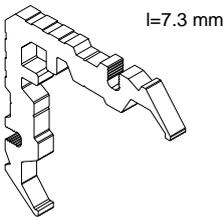
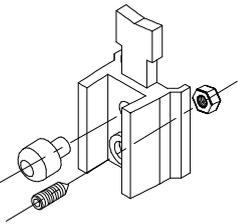
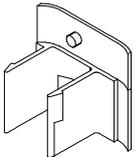
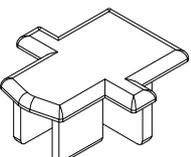
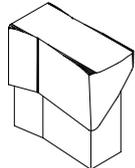
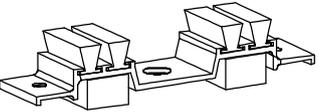


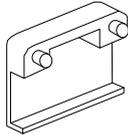
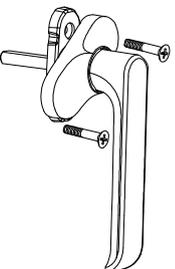
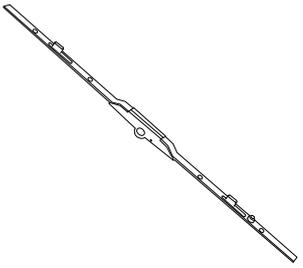
PVC profil PVC profile		
Art.-Br.	374.032 /PVC2/	
Težina Weight	kg/m	-
Opseg Perimeter	mm	119
Dužina isporuke Delivery length	mm	-

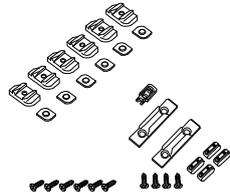
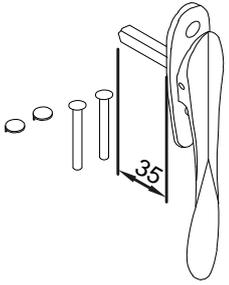
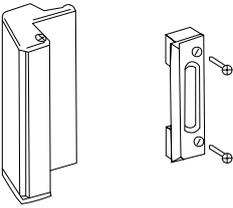
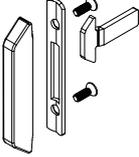


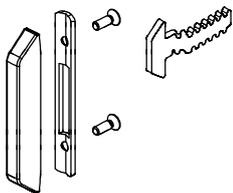
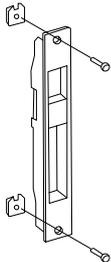
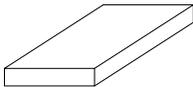
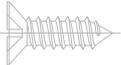
PVC profil PVC profile		
Art.-Br.	374.033 /PVC3/	
Težina Weight	kg/m	-
Opseg Perimeter	mm	140
Dužina isporuke Delivery length	mm	-

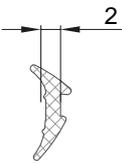
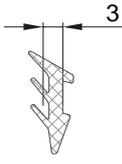
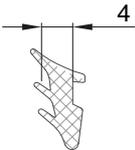
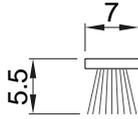
Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
140.001		<ul style="list-style-type: none"> - Kotači (nosivost 100 kg/par) - 0595 RC (oznaka dobavljača) - Casal srl - Rollers (load capacity 100 kg/pair) - 0595 RC (supplier's code) - Casal srl 		
143.008		<ul style="list-style-type: none"> - Kotači - 03120 (oznaka dobavljača) - Giesse - Rollers (load capacity 100 kg/pair) - 0595 RC (supplier's code) - Casal srl 		
730.008		<ul style="list-style-type: none"> - Kutna spojnica 14.5, L=28.5 (Stara oznaka: 0409,1001) - Corner bracket 14.5, L=28.5 (Former code: 0409, 1001) 		
730.012		<ul style="list-style-type: none"> - Kutna spojnica (Stara oznaka: KK 80) - Corner bracket (Former code: KK 80) 	PVC	
730.002		<ul style="list-style-type: none"> - Kutna spojnica za komoru 4.8x2 (Stara oznaka: G112/A) - Corner bracket for chamber 4.8x2 (Former code: G112/A) 	Inox	
710.004		<ul style="list-style-type: none"> - Kutna spojnica 7.5, L=6.5 - Corner bracket 7.5, L=6.5 	Al.	

Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
725.028		<ul style="list-style-type: none"> - Kutna spojnica za komoru 16, L=7,3 - Corner bracket for chamber 16, L=7.3 	Al.	
375.011		<ul style="list-style-type: none"> - Odstojnik i osigurač od vađenja krila (Stara oznaka: OD-01) - Spacer and wing removal lock (Former code: OD-01) 	PVC	
375.014.01 02 03		<ul style="list-style-type: none"> - Umetak za profil F-0832 (Stara oznaka: UM-01) - Insert for profile F-0832 (Former code: UM-01) 	PVC	Par Pair
373.032		<ul style="list-style-type: none"> - Umetak za profil F-0833 - Insert for profile F-0833 	PVC	
370.008		<ul style="list-style-type: none"> - Umetak za profil H-633 (Stara oznaka: 560GI03) - Insert for profile H-633 (Former code: 560GI03) 	PVC	
340.008		<ul style="list-style-type: none"> - Brtvilo na spoju dva krila (Stara oznaka: F-0853/29) - Seal at the junction of two wings (Former code: F-0853/29) 		

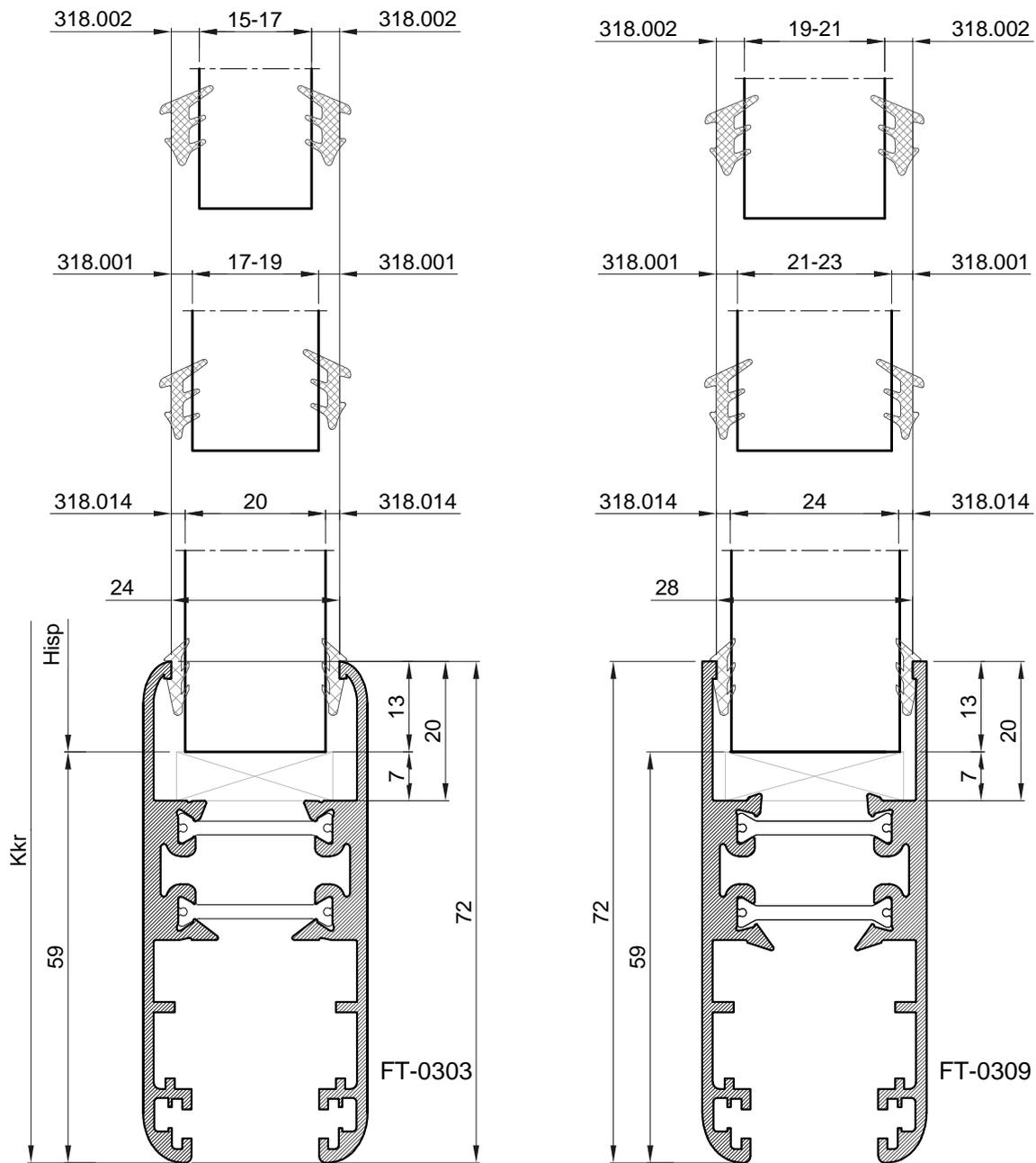
Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
373.003.01 02 03		<ul style="list-style-type: none"> - Maska za drenažni otvor (Stara oznaka: 2328) - Drainage hole mask (Former code: 2328) 	PVC	
104.016.01 02 03		<ul style="list-style-type: none"> - Ručka za vrata - Oznaka proizvođača Stublina: 1110.00.310 - bijela; 1110.00.315 - siva; 1110.00.313 - crna - Boje: 01- bijela; 02 - siva; 03 - crna - Door handle - Manufacturer's code Stublina: 1110.00.310 - white; 1110.00.315 - gray; 1110.00.313 - black - Colors: 01- white; 02 - gray; 03 - black 		
130.003		<ul style="list-style-type: none"> - Brava (ključanje u dvije točke) - Dužina 1000 mm, 7.5 mm - A6392A (oznaka dobavljača) - Master Italy - Lock (two-point locking) - Length 1000 mm, 7.5 mm - A6392A (manufacturer's code) - Master Italy 		
130.006		<ul style="list-style-type: none"> - Brava (ključanje u tri točke) - Dužina 1800 mm, 7.5 mm - A6394A (oznaka dobavljača) - Master Italy - Lock (three-point locking) - Length 1800 mm, 7.5 mm - A6394A (manufacturer's code) - Master Italy 		

Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
130.004		<ul style="list-style-type: none"> - Set za ključanje u više točaka (za bravu L=1800mm) - A6394A.2 (oznaka dobavljača) - Master Italy - Multi-point locking set (for lock L=1800mm) - A6394A.2 (manufacturer's code) - Master Italy 		
105.009.01 02 03		<ul style="list-style-type: none"> - Ručica za bravu-firkant L=35mm - Oznaka proizvođača Giesse: 0249241001 - bijela 0249237601 - siva 0249250001 - crna - Boje: 01 - bijela; 02 - siva; 03 - crna - Lock handle-square L=35mm - Manufacturer's code Giesse: 0249241001 - white 0249237601 - gray 0249250001 - black - Colors: 01 - white; 02 - gray; 03 - black 		
105.001		<ul style="list-style-type: none"> - Rukohvat za pogon krila - Oznaka proizvođača Giesse: 03172410 - bijela 03172376 - siva 03172500 - crna - Boje: 01 - bijela; 02 - siva; 03 - crna - Handle for operating the sash - Manufacturer's code Giesse: 03172410 - white 03172376 - gray 03172500 - black - Colors: 01 - white; 02 - gray; 03 - black 		
105.010		<ul style="list-style-type: none"> - Bravica-jezičak s prihvatnikom 0490200001(oznaka dobavljača) - Giesse - Latch lock with catch 0490200001(manufacturer's code) - Giesse 		
105.006.01 02 03		<ul style="list-style-type: none"> - Ručka za klizna vrata - Oznaka proizvođača Giesse: 0298841002 - bijela 0298837602 - siva 0298850002 - crna - Boje: 01 - bijela; 02 - siva; 03 - crna - Sliding door handle - Manufacturer's code Giesse: 0298841002 - white 0298837602 - gray 0298850002 - black - Colors: 01 - white; 02 - gray; 03 - black 		

Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
140.003		<ul style="list-style-type: none"> - Bravica-jezičak s prihvatnikom (Stara oznaka: 0995 RC) - Latch lock with catch (Former code: 0995 RC) 		
		<ul style="list-style-type: none"> - Bravica - pogonski dio (Former code: 0995 RC) - Lock - drive part 		
370.000 370.001 370.002		<ul style="list-style-type: none"> - Podmetači za staklo (Former code: 210001319) - Glazing packers 	3 mm 370.000 5 mm 370.001 7 mm 370.002 PVC	
433.003		- 3.5x13 DIN 7981		
433.116		- 4.2X13DIN 7982		

Oznaka Code	Izgled-presjek View-cross section	Opis Description	Materijal Material	Napomena Remark
318.014		-Brtva prema staklu, unutarnja -Gasket to the glass, interior	EPDM	70 ShA
318.001		-Brtva prema staklu, unutarnja -Gasket to the glass, interior	EPDM	70 ShA
318.002		-Brtva prema staklu, unutarnja -Gasket to the glass, interior	EPDM	70 ShA
347.004		- Četkasta brtva 7x5.5, (crna) - Oznaka proizvođača Schlegel: 2A703288008CJ - Brush seal 7x5.5, (black) - Manufacturer code Schlegel: 2A703288008CJ	PP	
344.014		- Brtva vertikalnog pojasa krila - Stara oznaka ART-3866 - Seal of the vertical part of the sash - Old designation ART-3866	TPE	65 ShA
348.052		- Brtva za ram - Oznaka proizvođača 020605 (Complastex) - Frame gasket - Manufacturer's code 020605 (Complastex)	EPDM	70 ShA

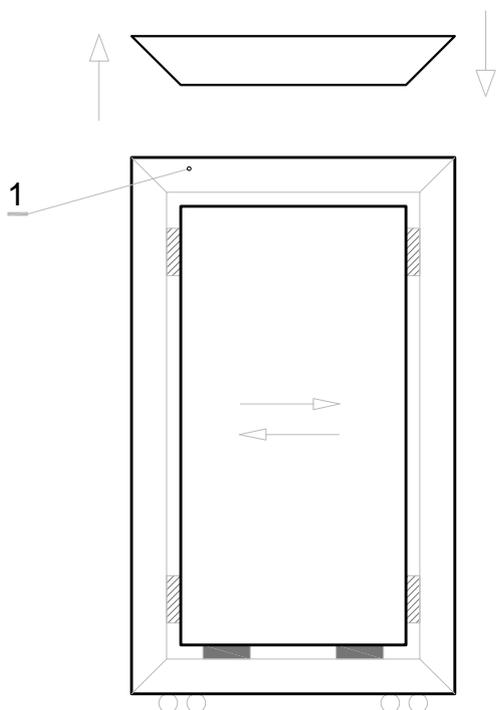
MJERE ISPUNE I BRTVLJENJE PREMA ISPUNI FILLING MEASURES AND SEALING ACCORDING TO THE FILLING



MJERA ISPUNE PREMA PROFILIMA KRILA FILLING MEASURE ACCORDING TO SASH PROFILES

- Hisp=Hkr-118
- LISP=Lkr-118

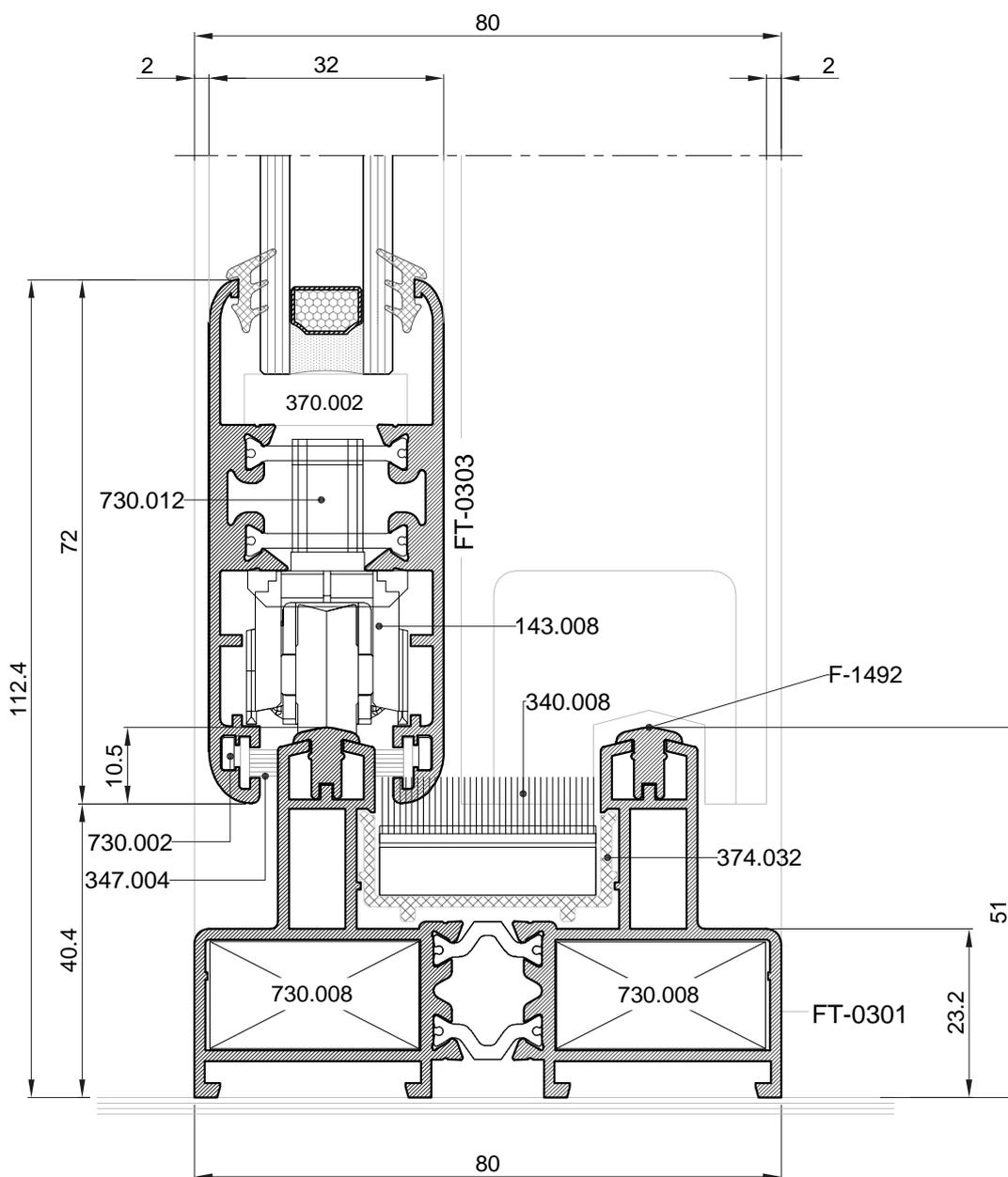
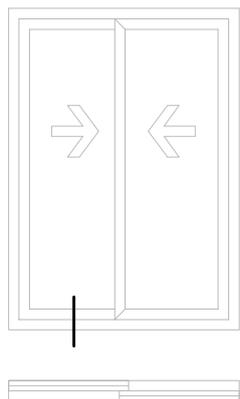
Za profile krila: FT-0303, FT-0308, FT-0309 i FT-0310
For sash profiles: FT-0303, FT-0308, FT-0309 and FT-0310

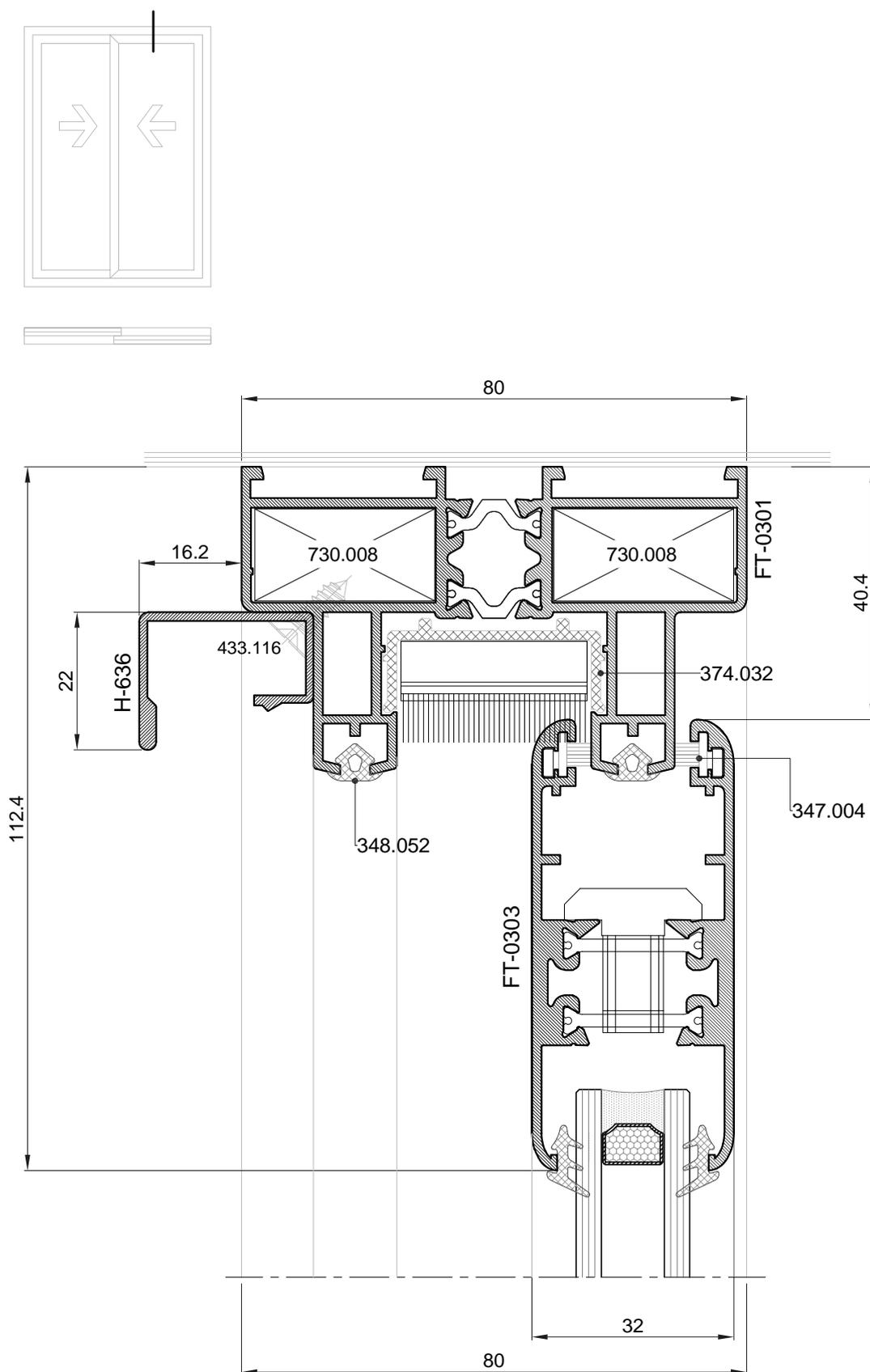


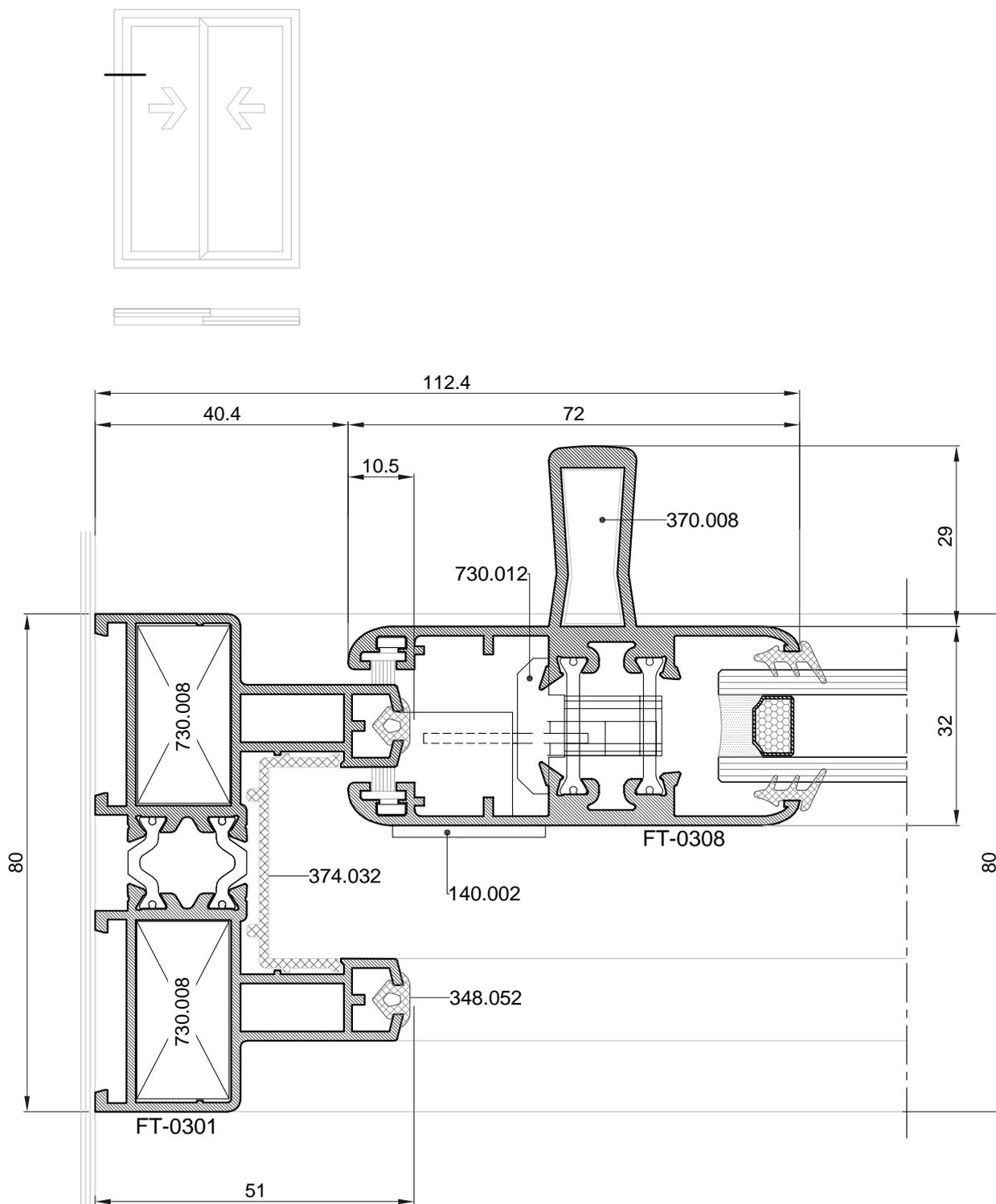
■ nosivi podmetač
load-bearing shim
▨ odstojni podmetač
spacer

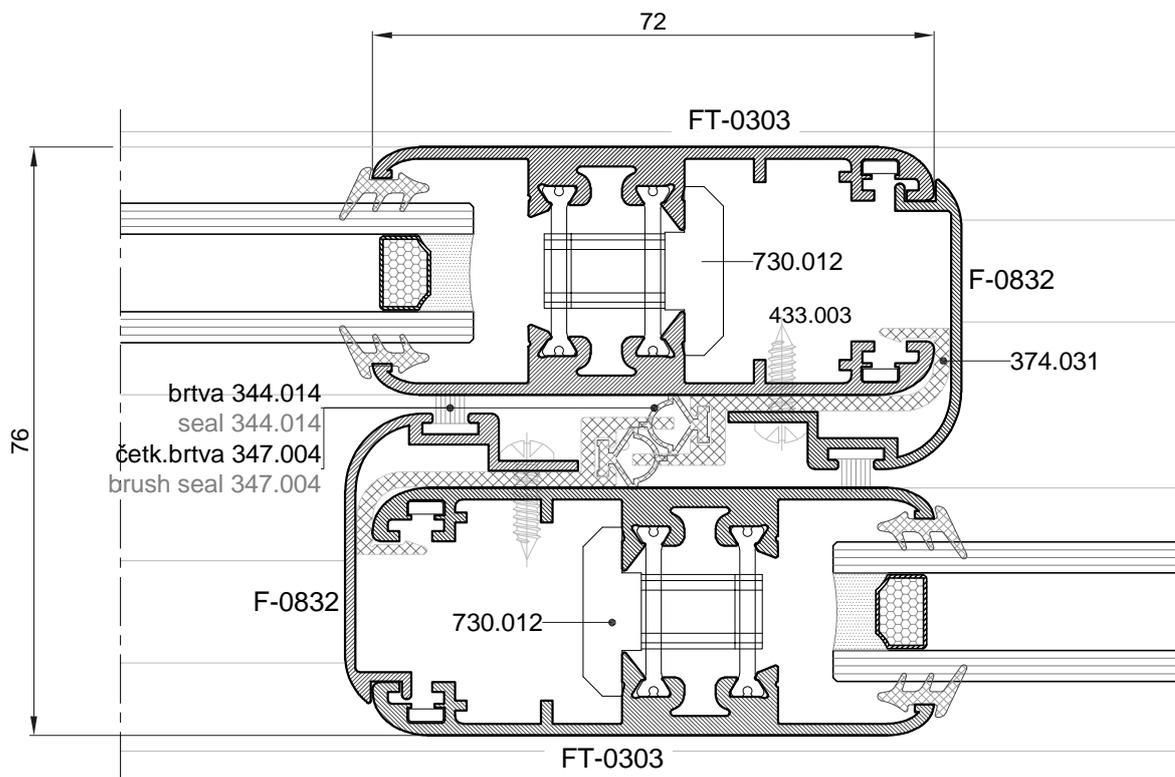
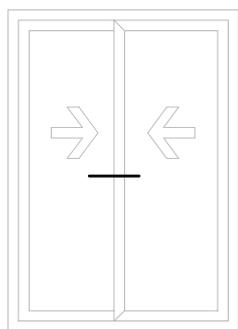
UGRADNJA ISPUNE U KRILO INSTALLATION OF FILLING IN THE SASH

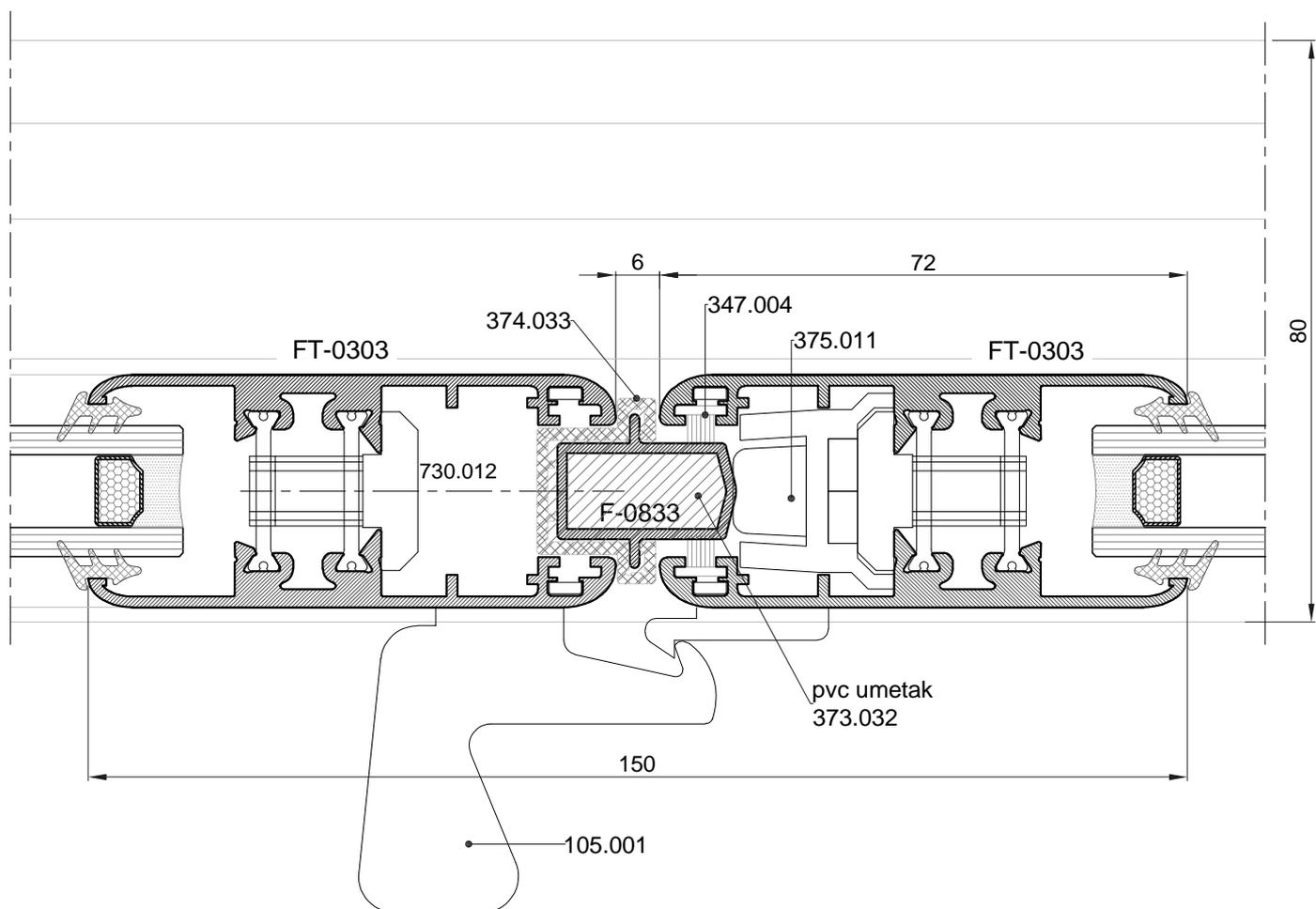
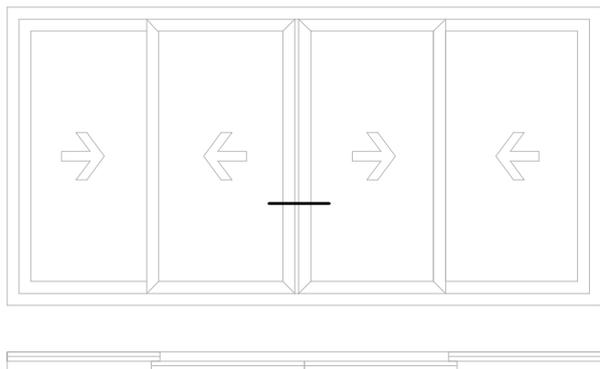
1. gornji vodoravni pojas krila 1 odvojiti od okvira krila
1. separate the upper horizontal part of the sash 1 from the sash frame
2. umetnuti ispunu u okvir krila s rasporedom podmetača - prema skici
2. insert the filling into the sash frame with the arrangement of the shims - according to the sketch
3. vratiti vodoravni pojas krila 1 u prvobitno stanje
3. return the horizontal part of sash 1 to its original state
4. zabrtviti prostor između ispune i profila EPDM brtvama
4. seal the space between the filling and the profile with EPDM seals

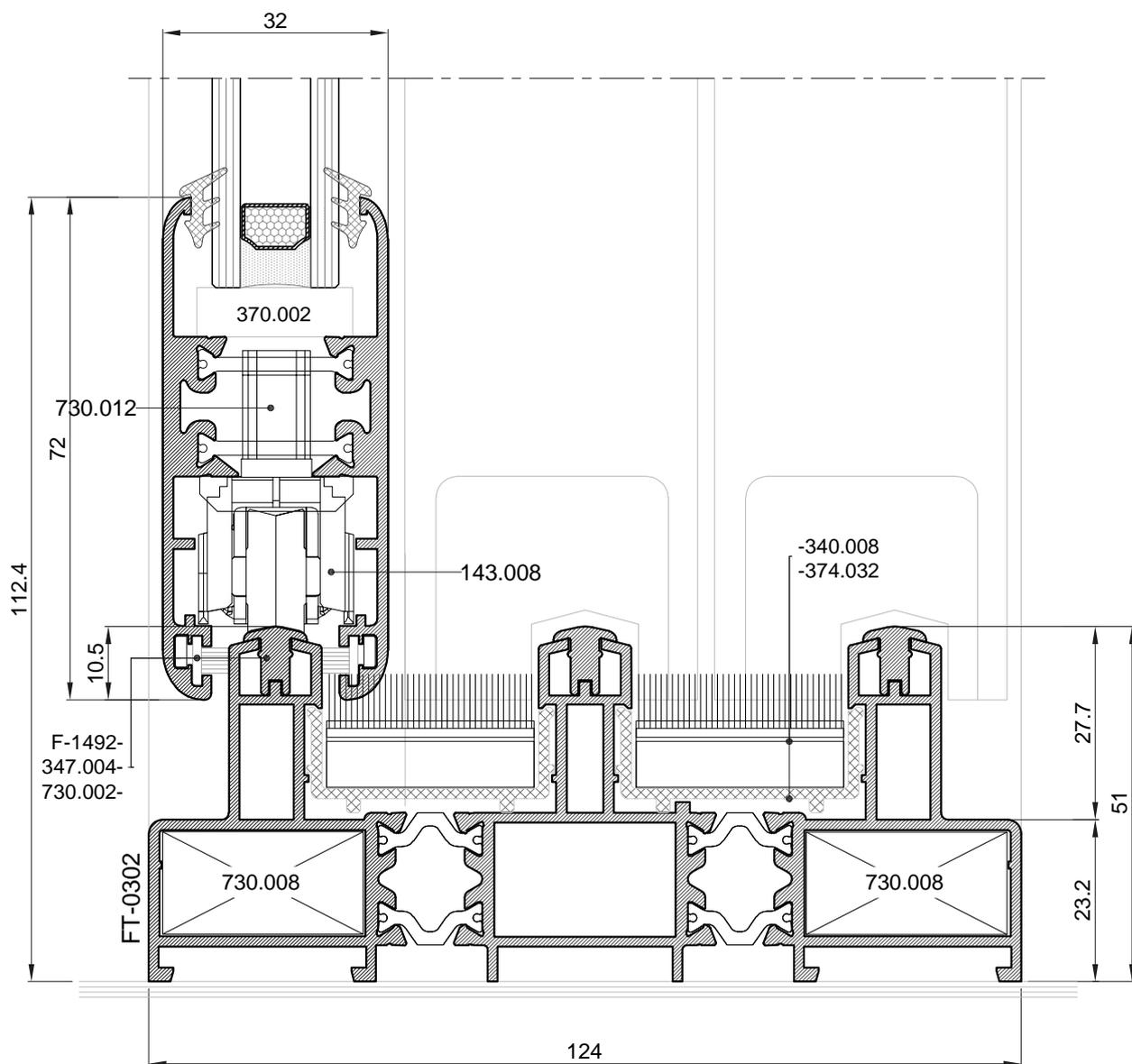
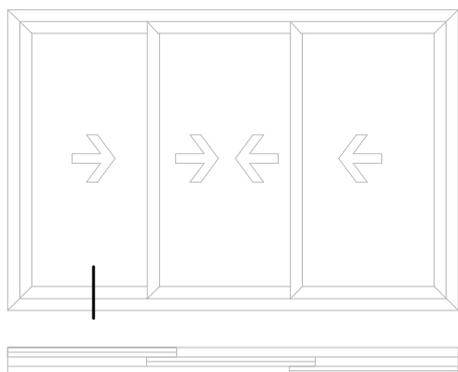


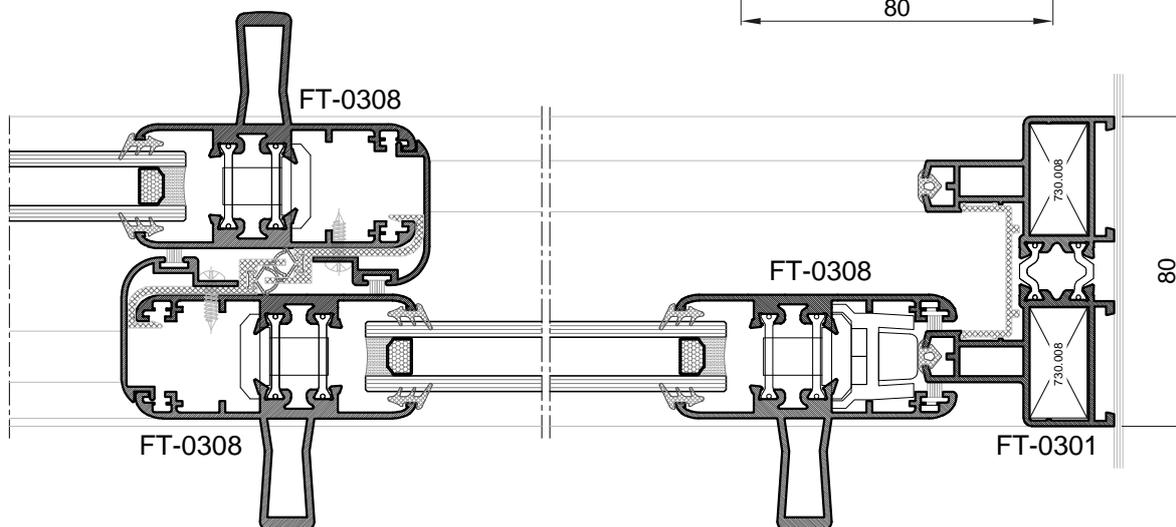
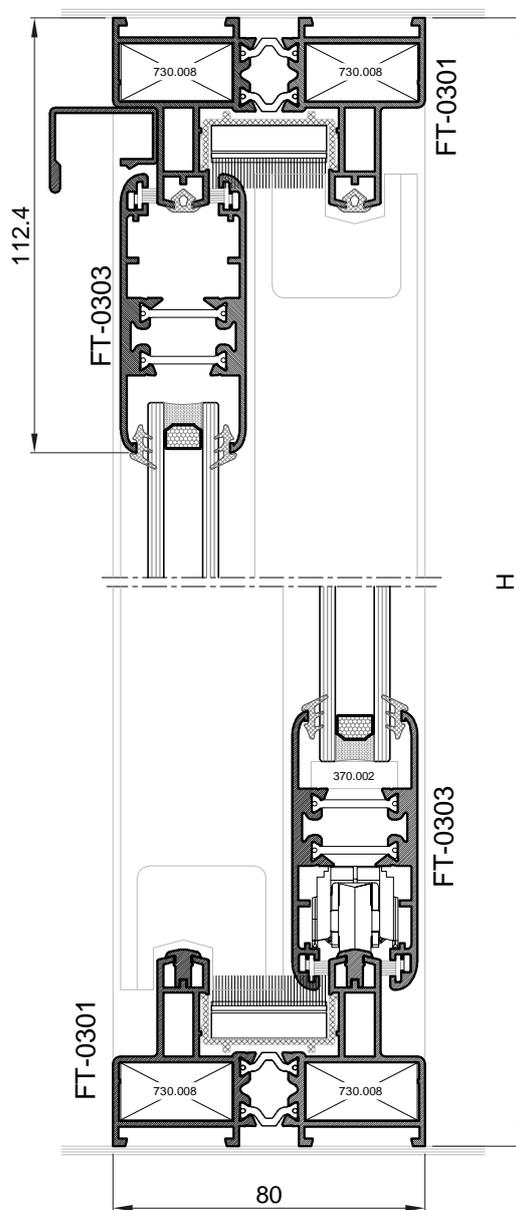
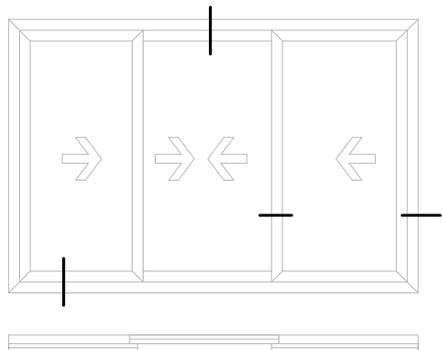






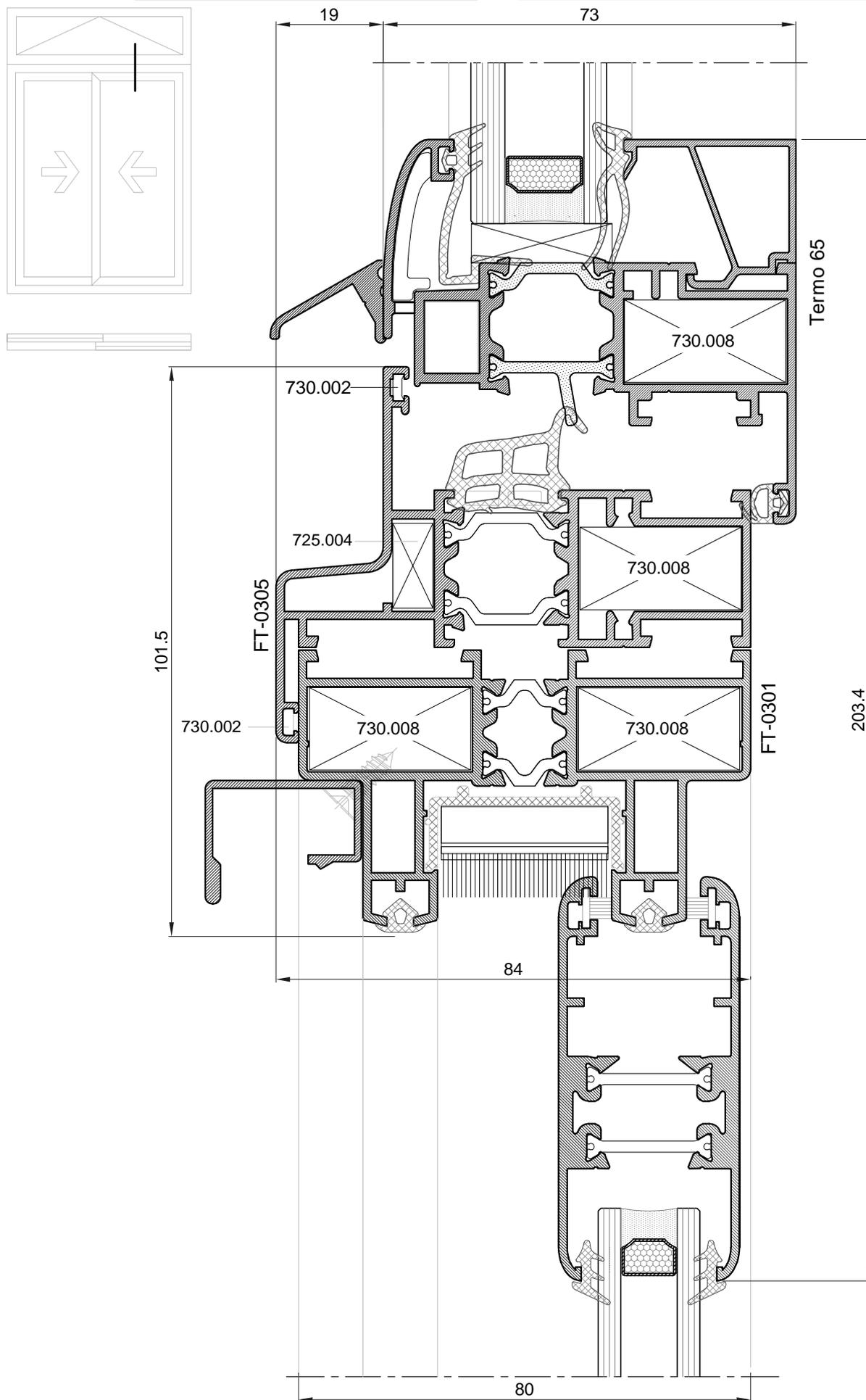


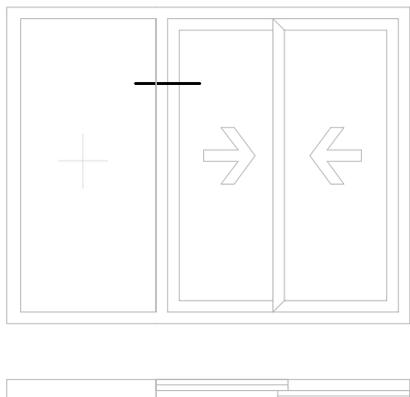




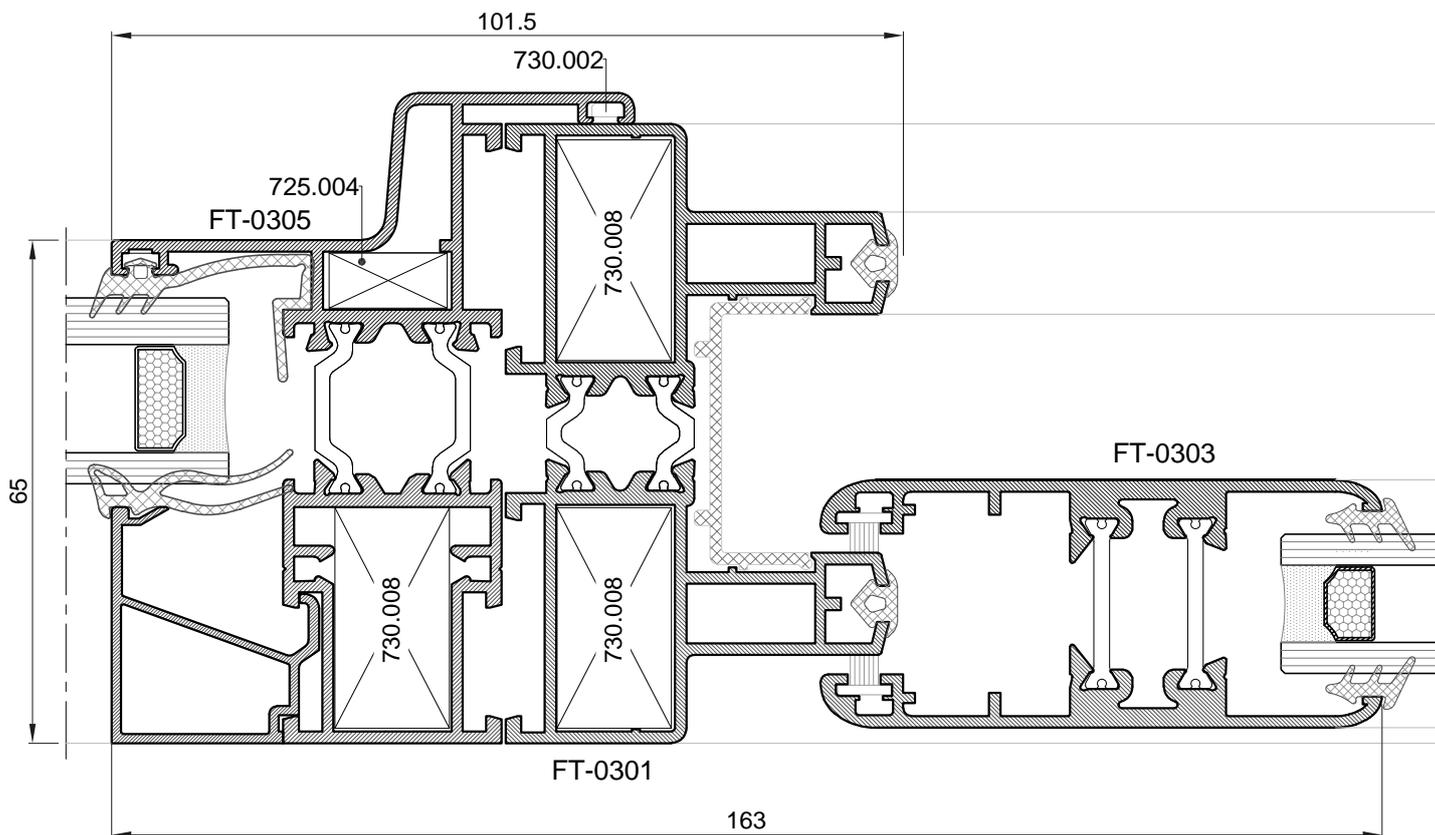
DETALJ SPOJA SA SERIJOM TERMO 65

CONNECTION DETAIL WITH TERMO 65 SERIES

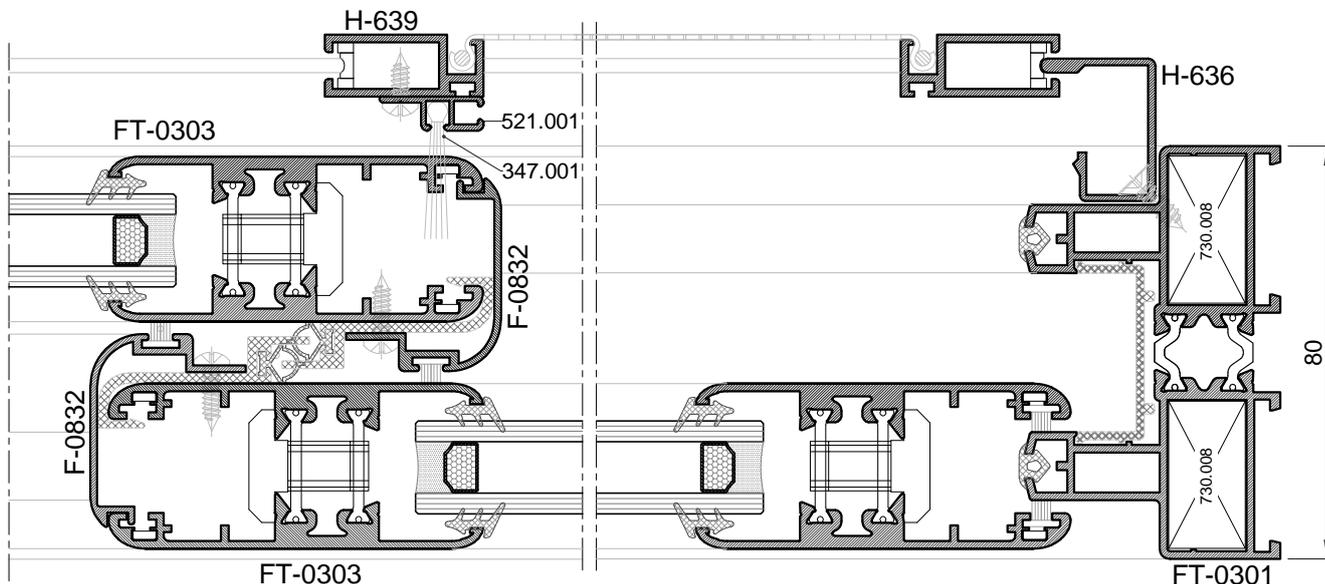
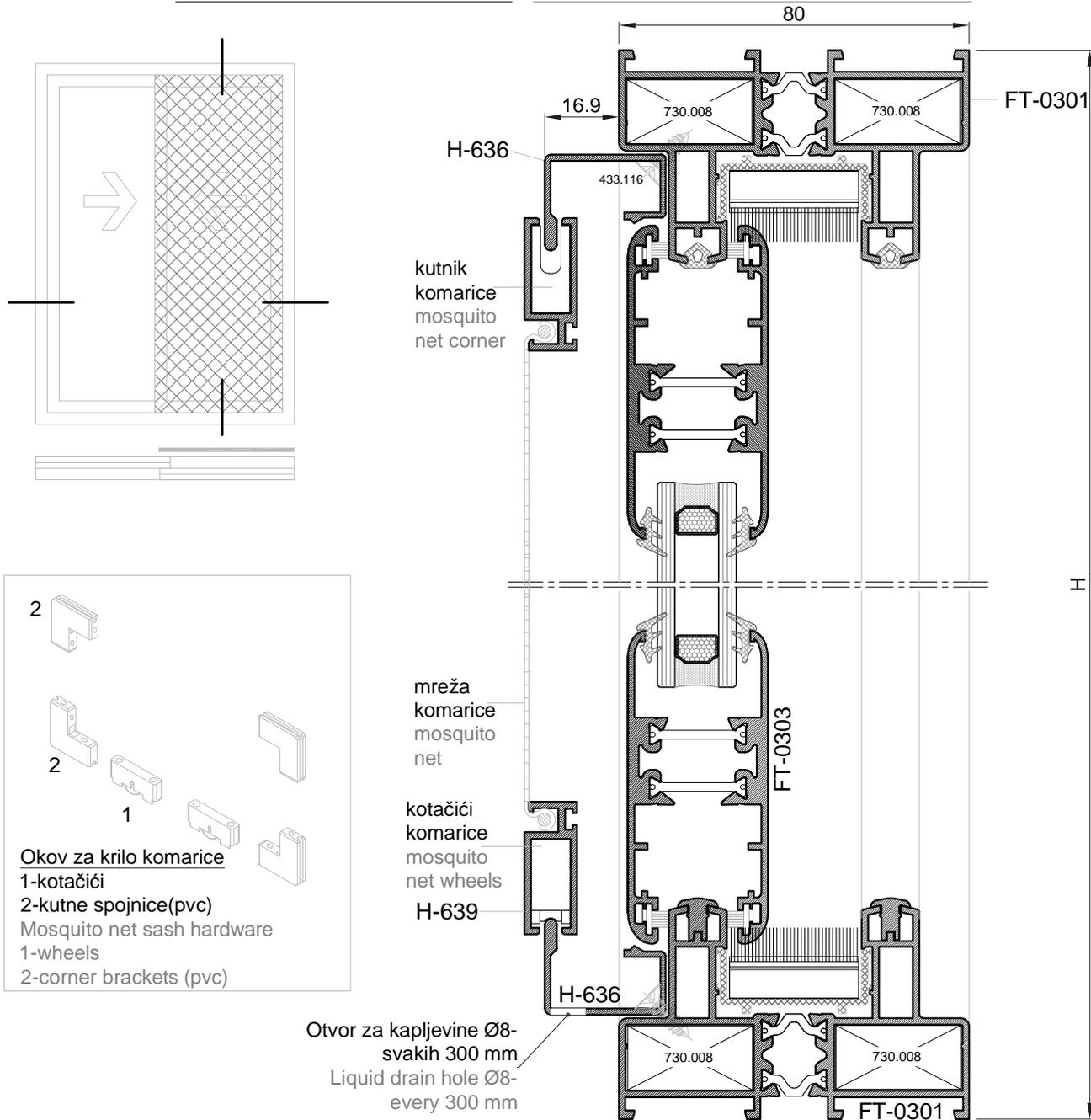




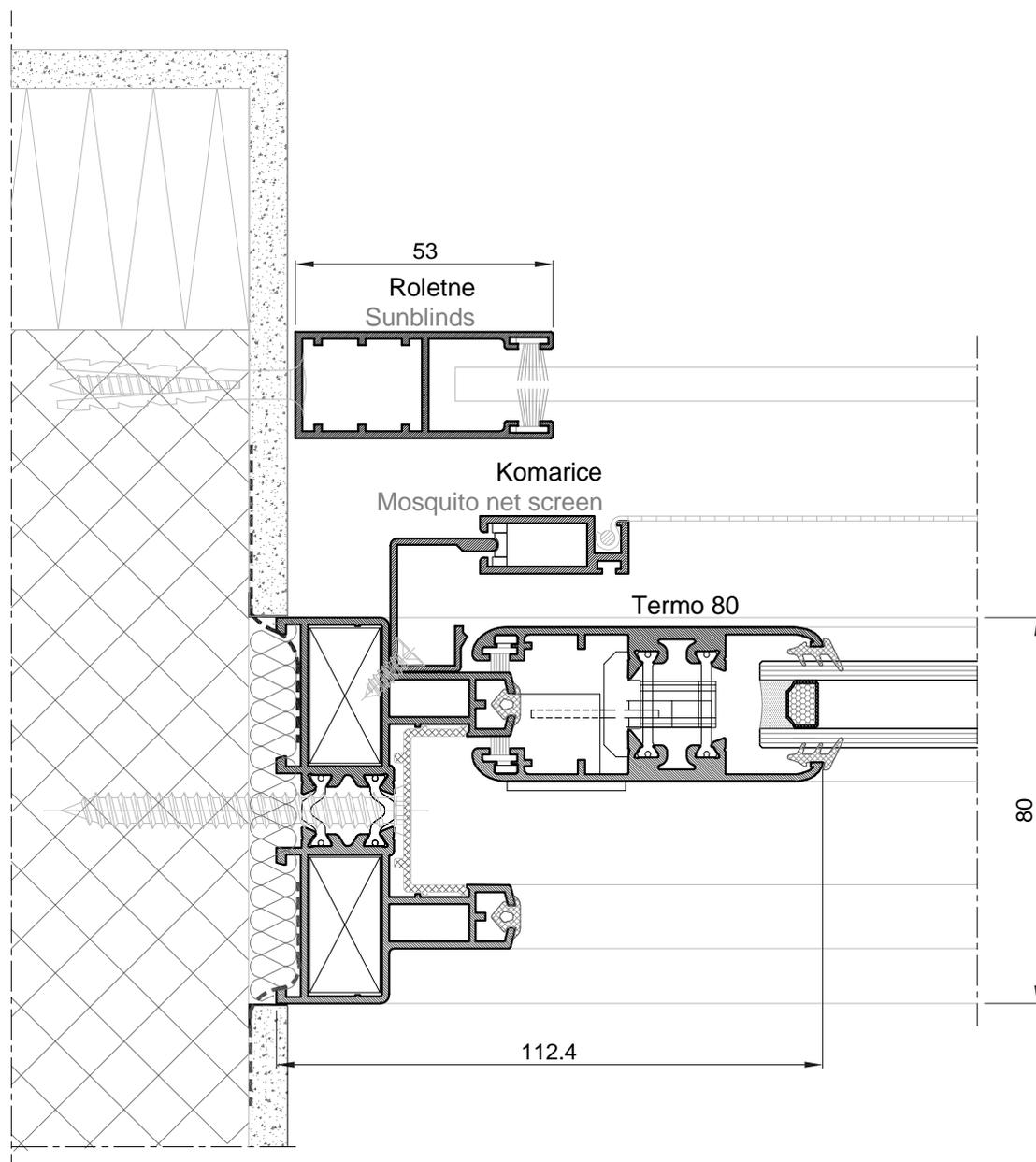
DETALJ SPOJA SA SERIJOM TERMO 65
DETAIL OF CONNECTION WITH THE TERMO 65 SERIES



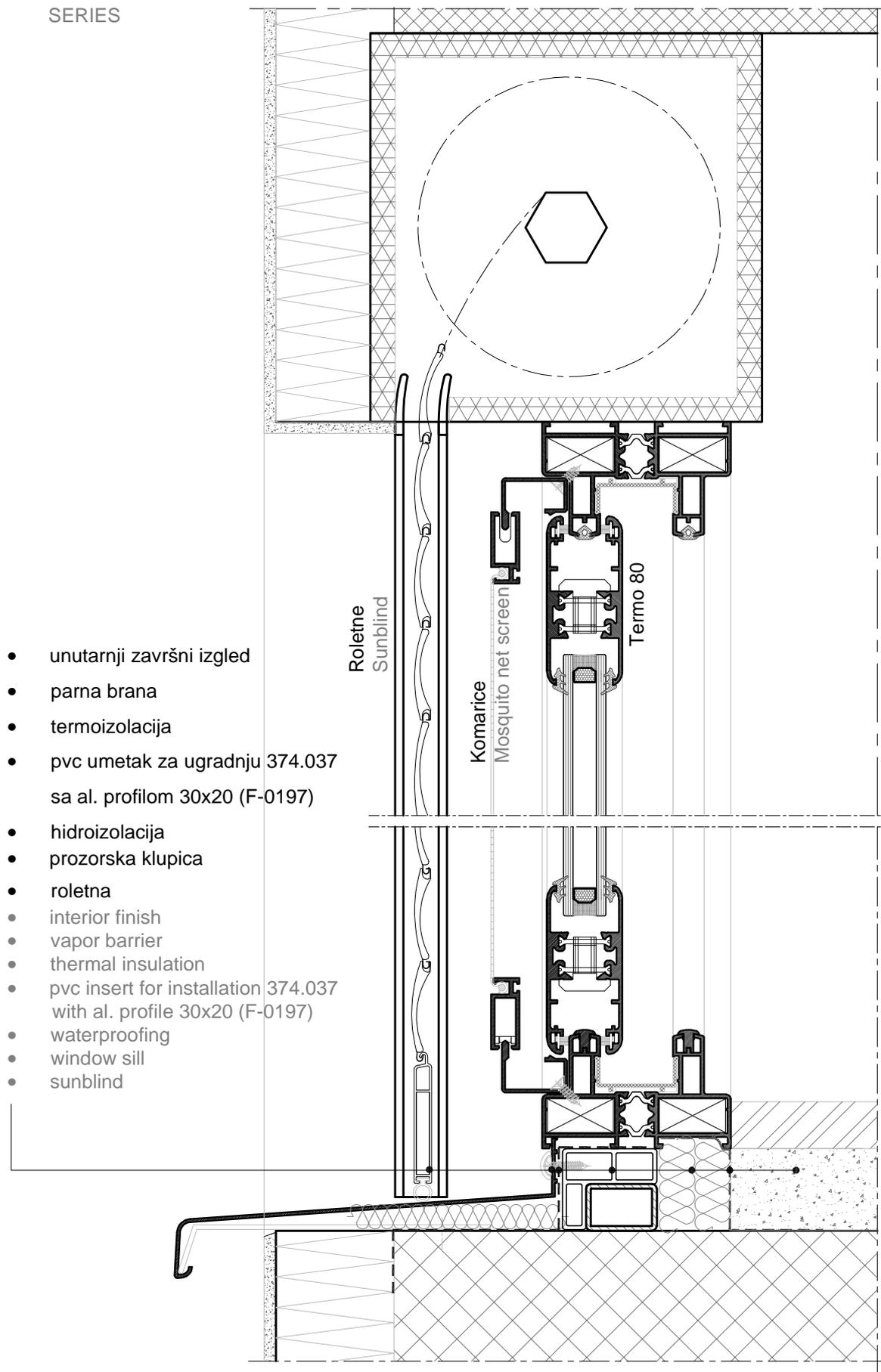
DETALJ S KLIZNOM KOMARICOM / DETAIL WITH SLIDING MOSQUITO SCREEN

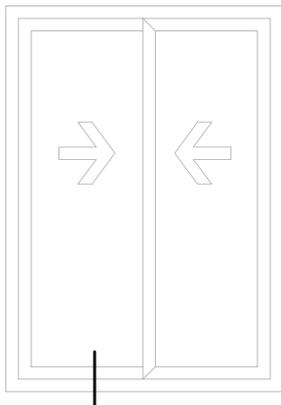


DETALJ UGRADNJE KOMARICA I ROLETNI U SERIJI TERMO 80
DETAIL OF INSTALLATION OF MOSQUITO NET SCREEN AND
SUNBLINDS IN THE TERMO 80 SERIES

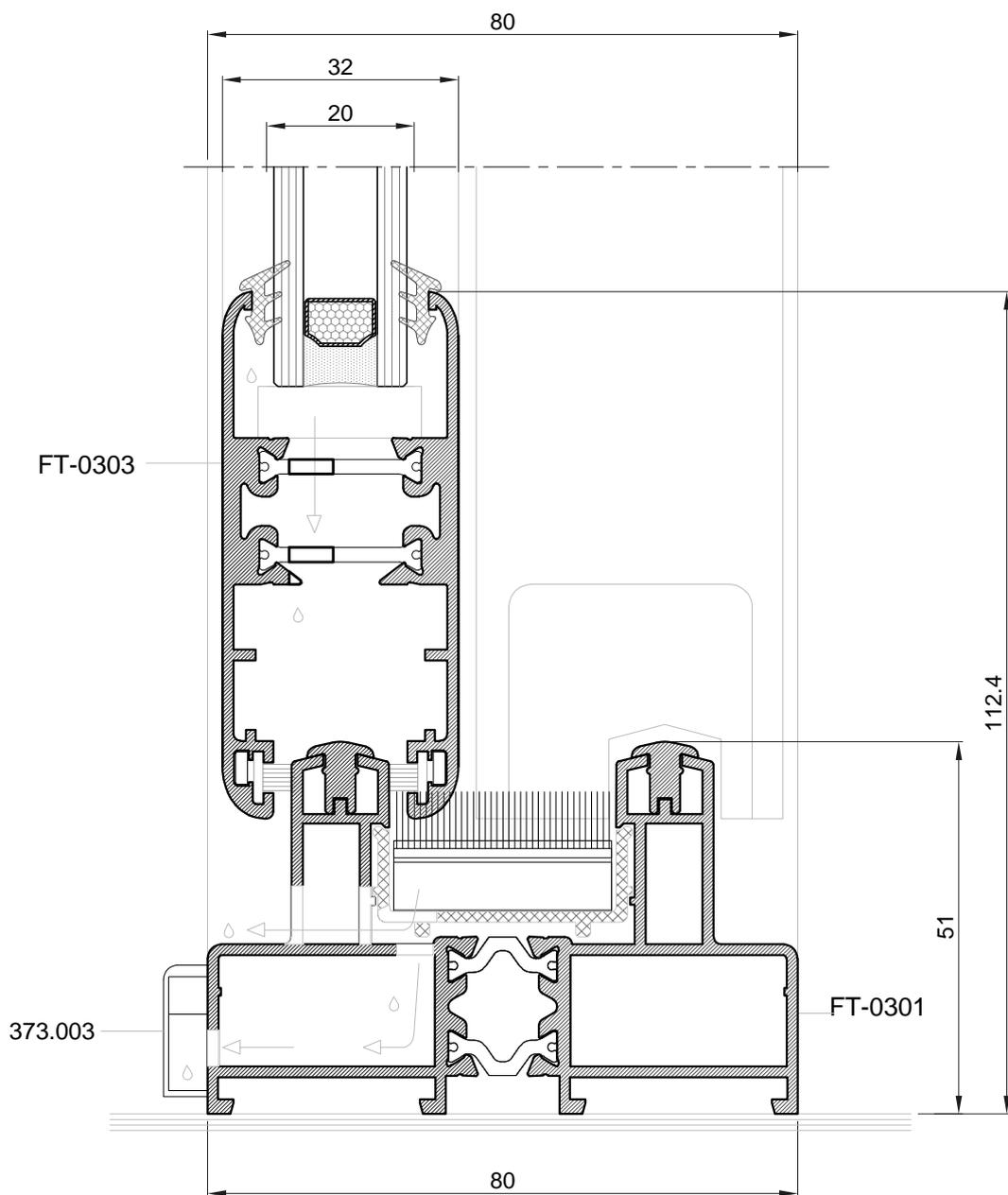


DETALJ UGRADNJE KOMARICA I ROLETNI U SERIJI TERMO 80
 DETAIL OF INSTALLATION OF MOSQUITO NET SCREEN AND SUNBLINDS IN THE TERMO 80
 SERIES

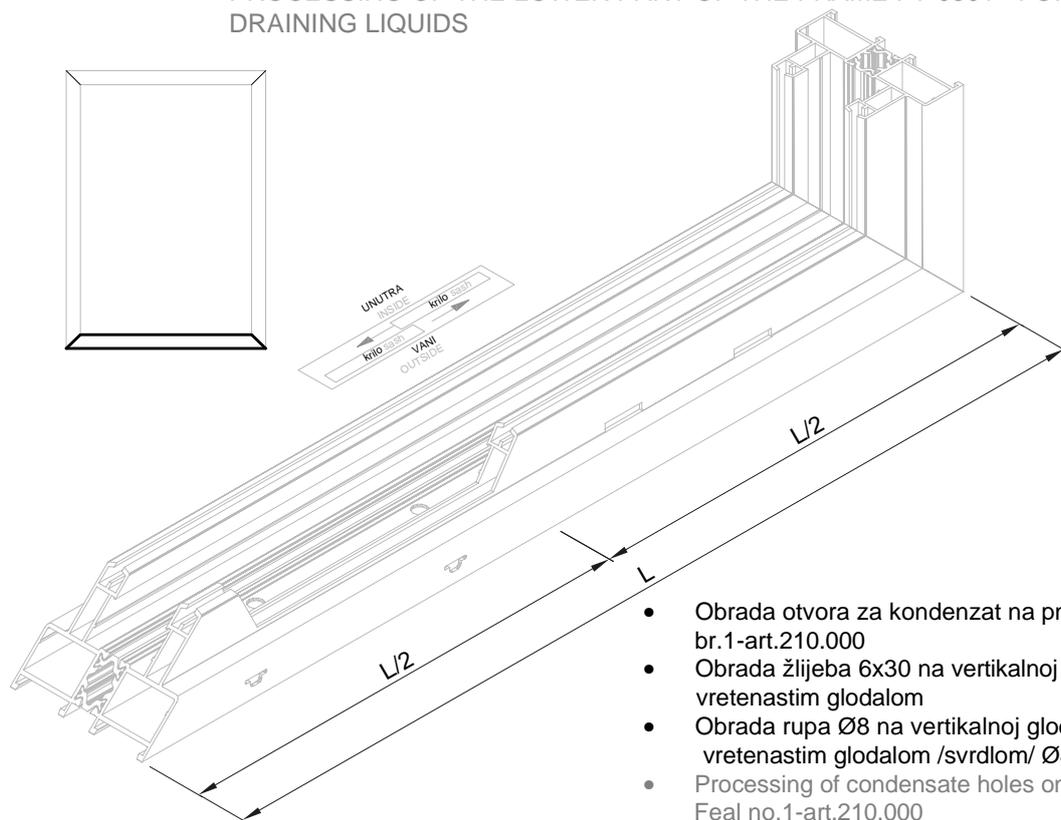




IZVOD VODE IZ KRILA FT-0303 I
DVOSTAZNOG PROFILA RAMA-FT-0301
WATER DRAINAGE FROM THE SASH FT-0303 AND
TWO-WAY FRAME PROFILE-FT-0301

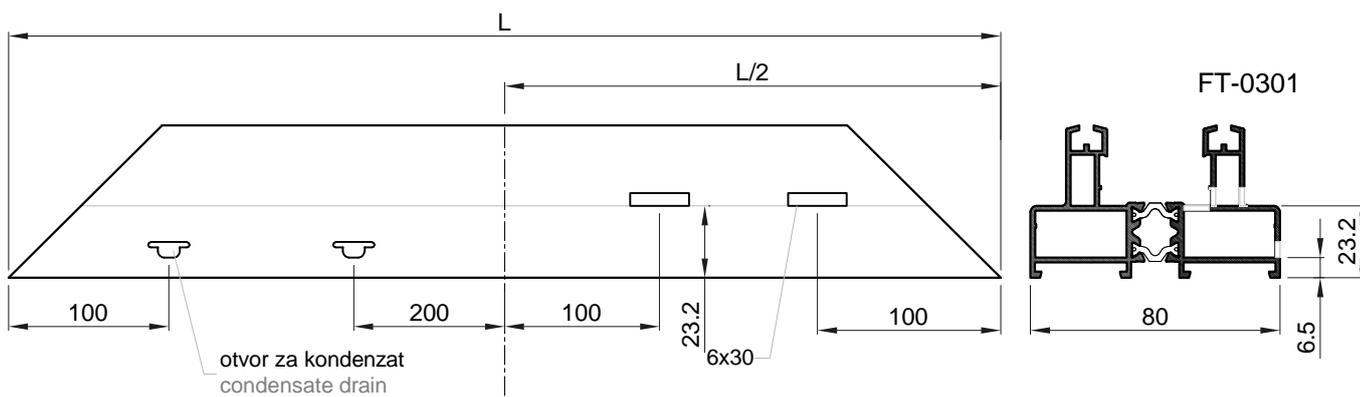


OBRADA DONJEG POJASA RAMA FT-0301 - ZA ODVOD KAPLJEVINA PROCESSING OF THE LOWER PART OF THE FRAME FT-0301 - FOR DRAINING LIQUIDS

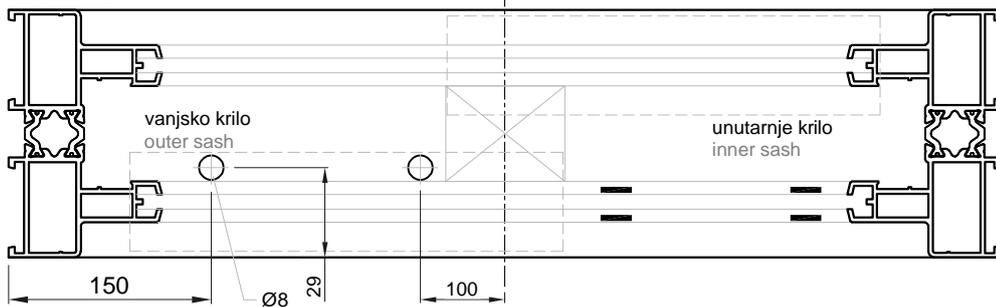


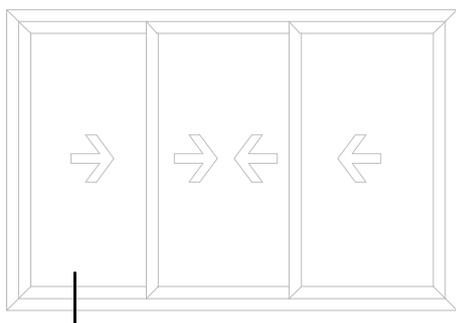
- Obrada otvora za kondenzat na pneumatskoj štanci tipa Feal br.1-art.210.000
- Obrada žlijeba 6x30 na vertikalnoj glodalici vretenastim glodalom
- Obrada rupa Ø8 na vertikalnoj glodalici /stubnoj bušilici/ vretenastim glodalom /svrdlom/ Ø8 mm
- Processing of condensate holes on a pneumatic punch type Feal no.1-art.210.000
- Processing of a 6x30 groove on a vertical milling machine with a spindle cutter
- Processing of holes Ø8 on a vertical milling machine /column drill/with a spindle cutter /drill/ Ø8 mm

FT-0302

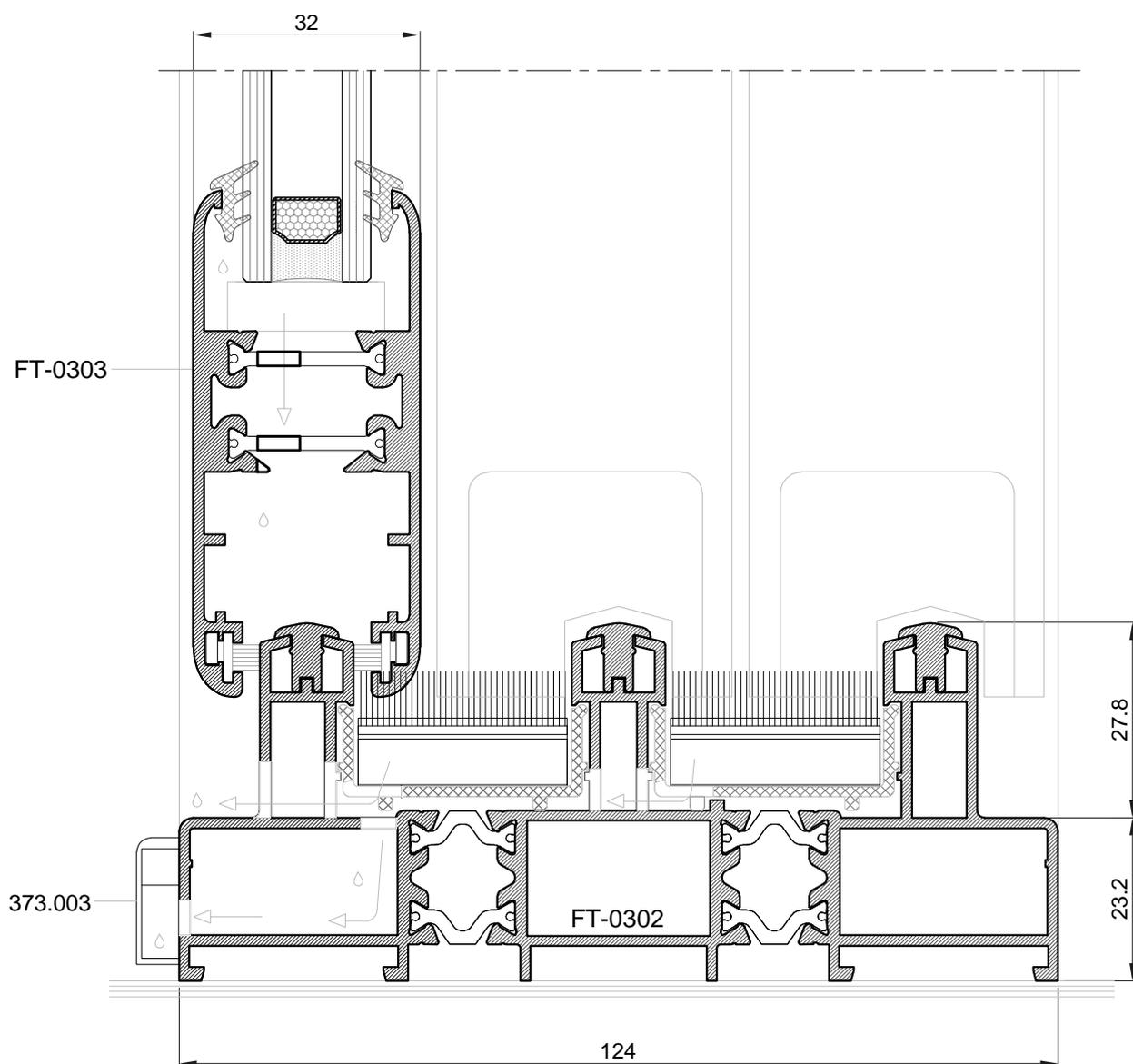


FT-0301

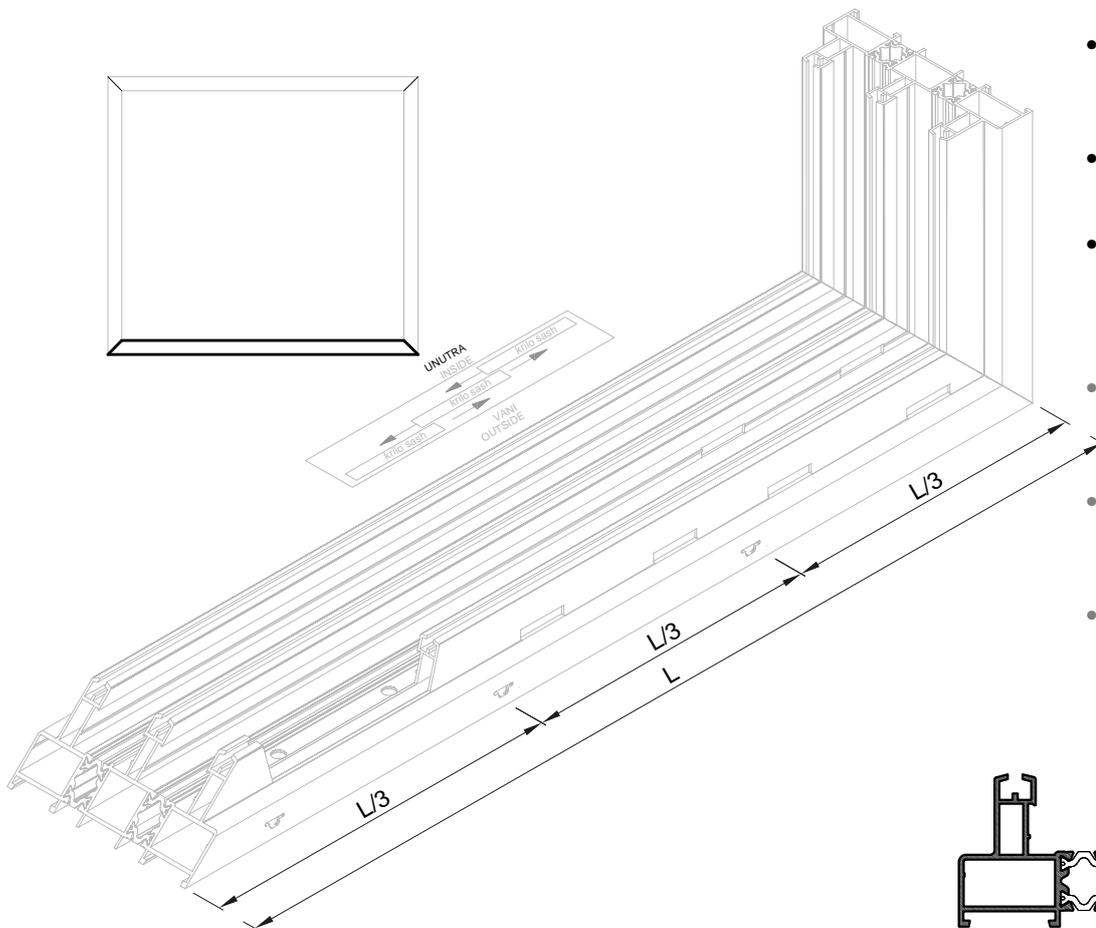




IZVOD VODE IZ KRILA FT-0303 I
TROSTAZNOG PROFILA RAMA -FT-0301
WATER DRAINAGE FROM THE SASH FT-0303 AND
THREE-WAY FRAME PROFILE-FT-0301

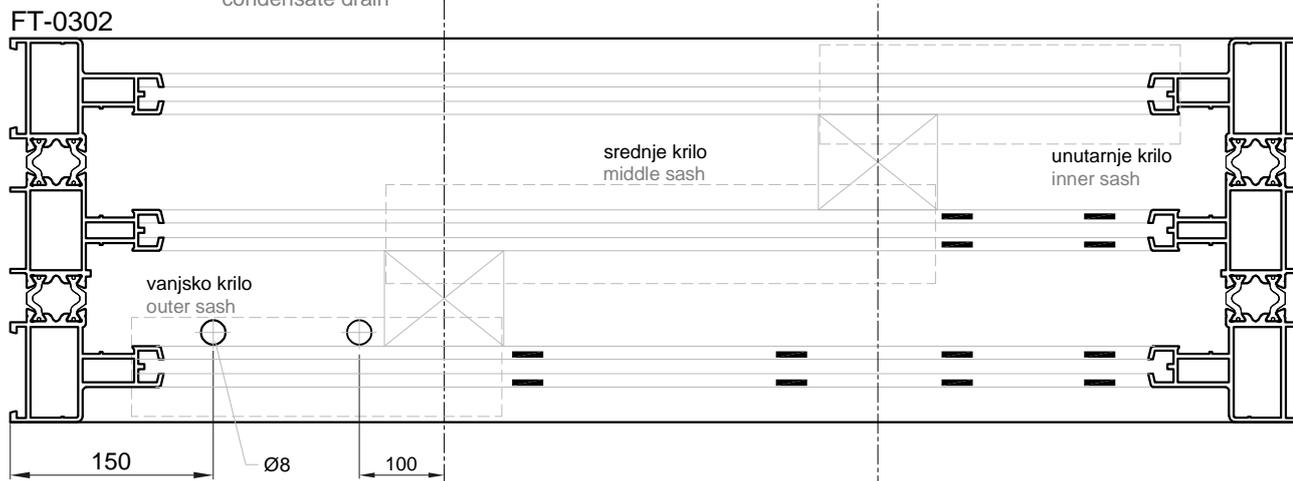
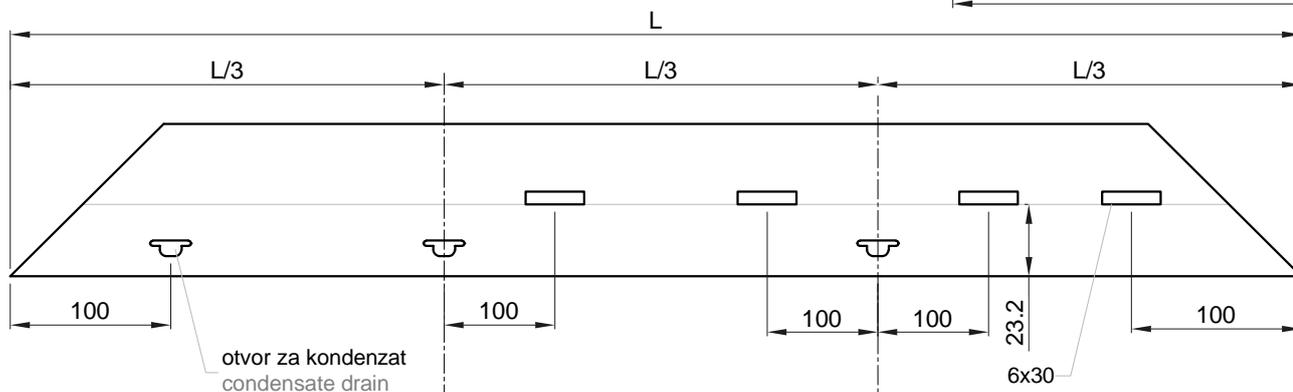
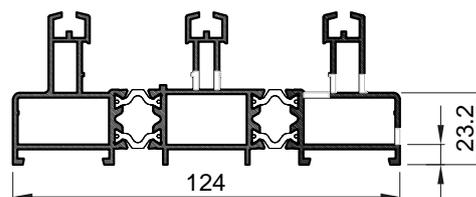


OBRADA DONJEG POJASA RAMA FT-0302 - ZA ODVOD KAPLJEVINA PROCESSING OF THE LOWER PART OF THE FRAME FT-0302 - FOR DRAINING LIQUIDS

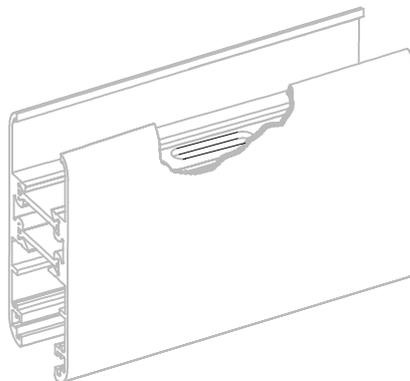
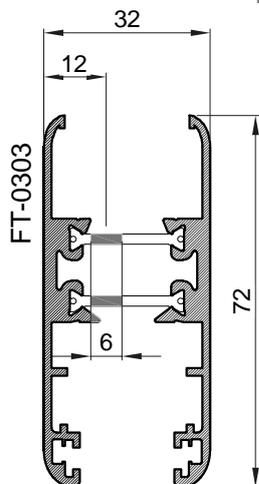


- Obrada otvora za kondenzat na pneumatskoj štanci tipa Feal br.1-art.210.000
- Obrada žlijeba 6x30 na vertikalnoj glodalici vretenastim glodalom
- Obrada rupa Ø8 na vertikalnoj glodalici /stubnoj bušilici/ vretenastim glodalom /svrdlom/ Ø8 mm
- Processing of condensate holes on a pneumatic punch type Feal no.1-art.210.000
- Processing of a 6x30 groove on a vertical milling machine with a spindle cutter
- Processing of holes Ø8 on a vertical milling machine /column drill/with a spindle cutter /drill/ Ø8 mm

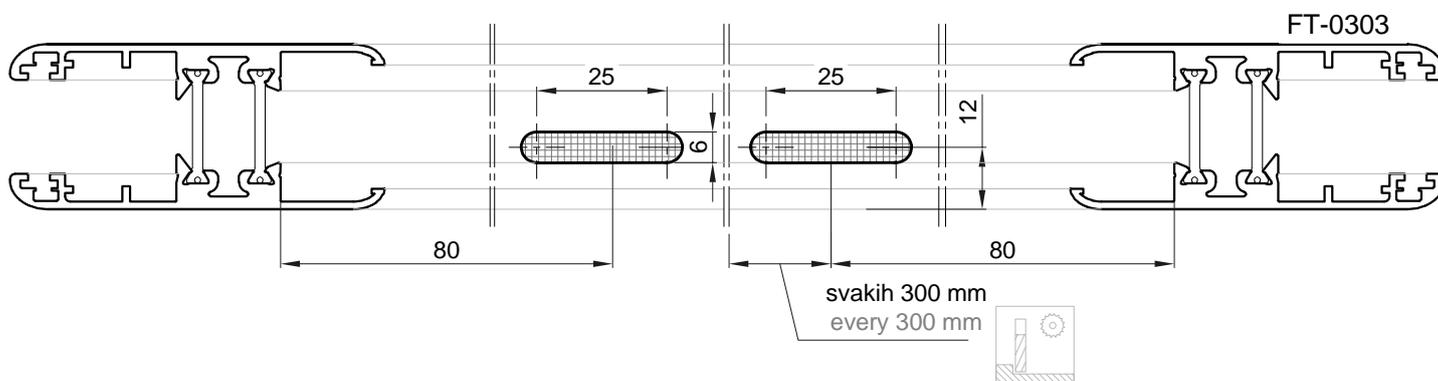
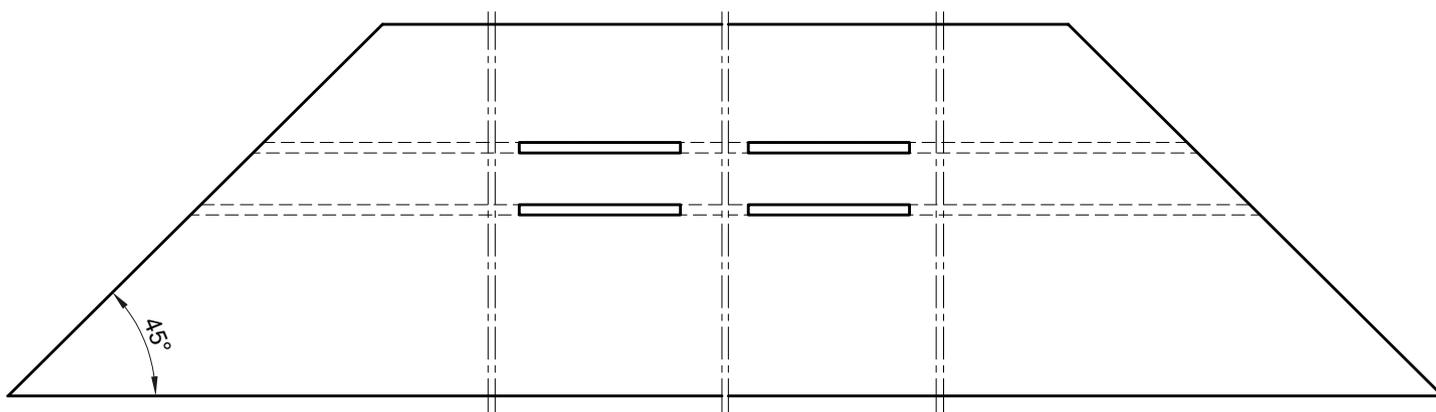
FT-0302



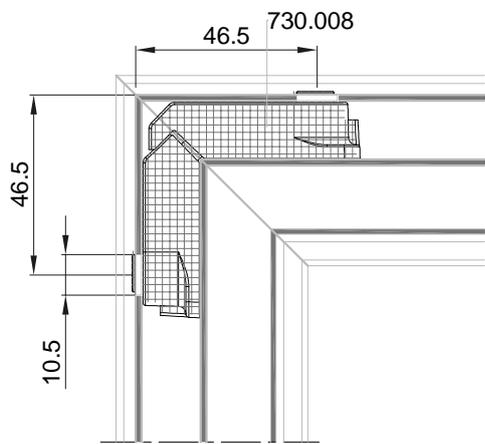
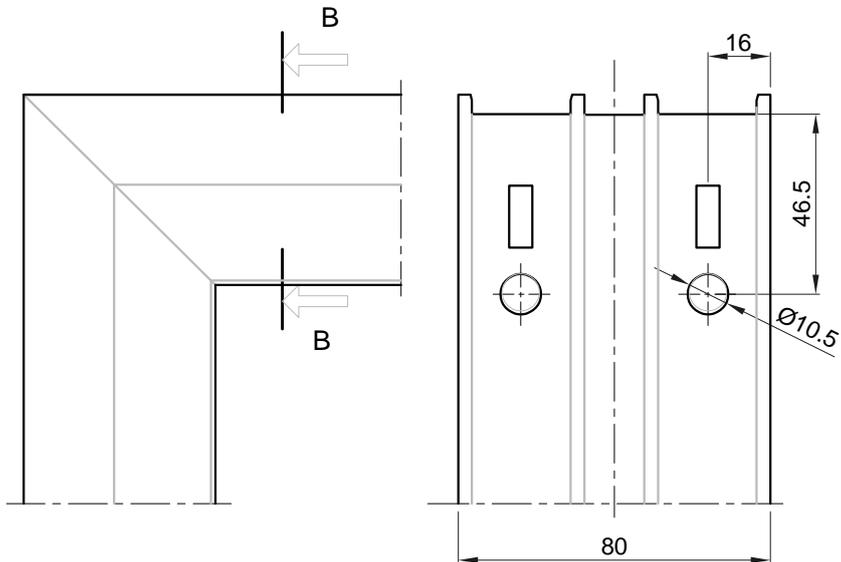
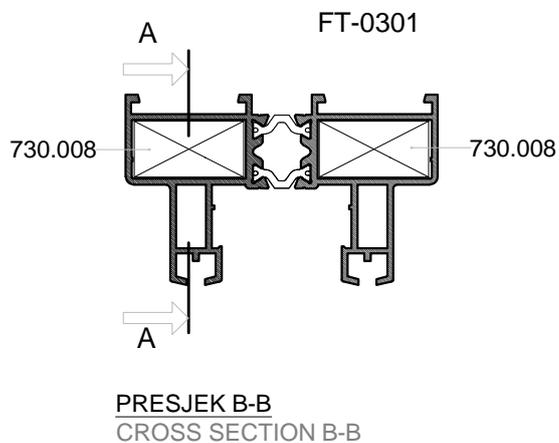
OBRADA DONJEG POJASA KRILA FT-0303-ZA ODVOD KAPLJEVINA PROCESSING OF THE LOWER PART OF THE SASH FOR DRAINING LIQUIDS



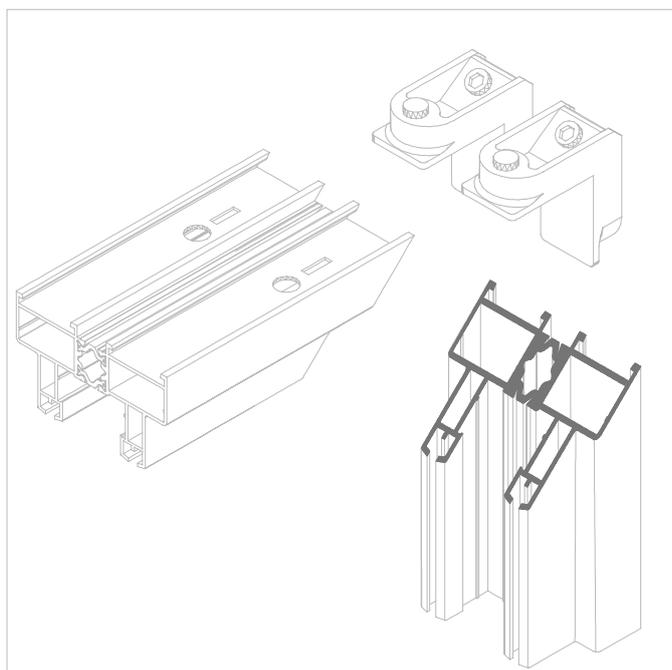
- Obrada žlijeba 6x25 na vertikalnoj glodalici vretenastim glodalom
- Processing of a 6x25 groove on a vertical milling machine



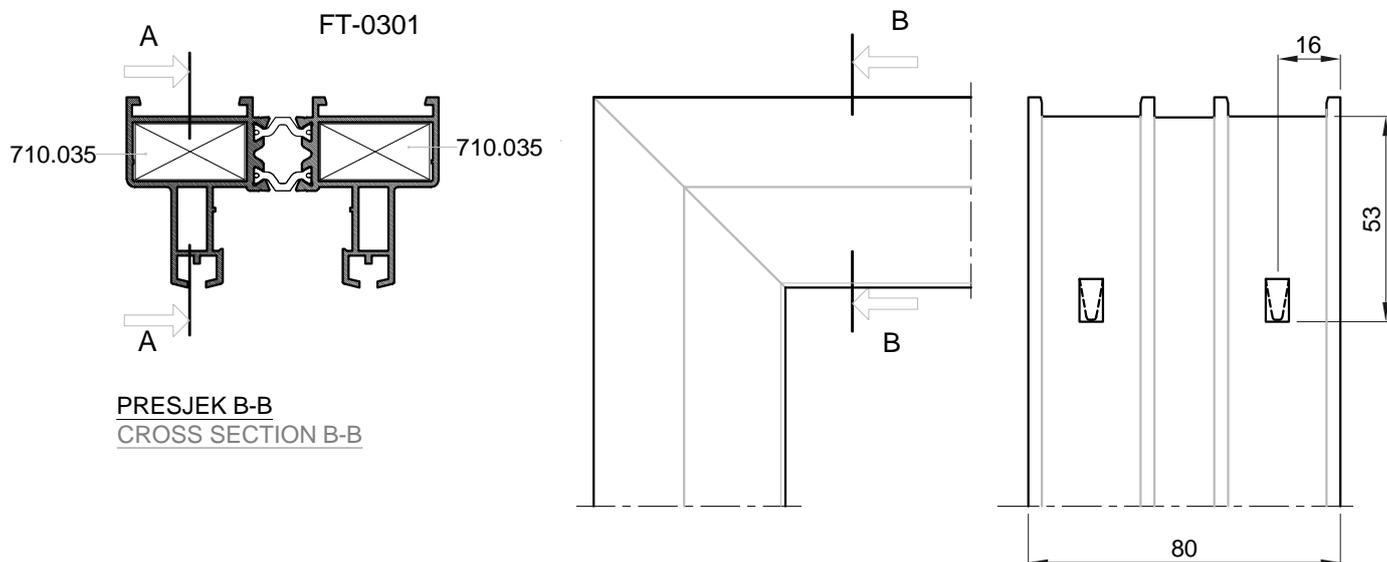
SPAJANJE PROFILA FT-0301 KUTNICIMA 730.008 CONNECTING PROFILE FT-0301 WITH CORNER BRACKET 730.008



- Spajanje kutnikom 730.008 s predobradom štancanja
- Corner bracket connection 730.008 with pre-processing of stamping
- Obrada na pneumatskoj štanci tipa Feal br.2-art.210.003
- Processing on a pneumatic punch type Feal no. 2-art. 210.003

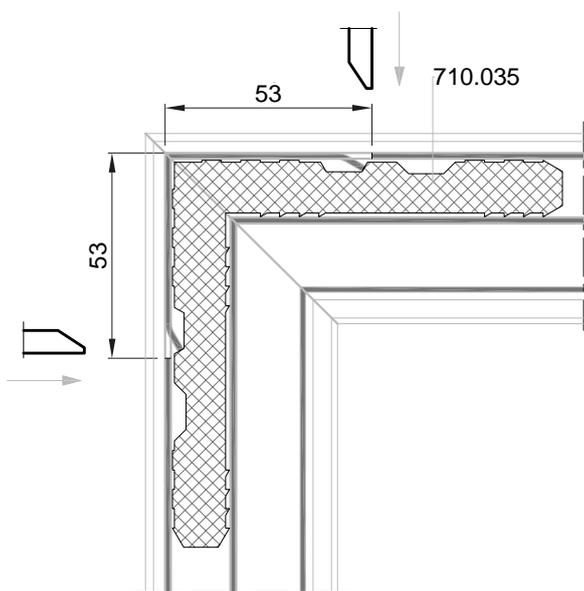


SPAJANJE PROFILA FT-0301 KUTNICIMA 710.035 CONNECTING PROFILE FT-0301 WITH CORNER BRACKET 710.035

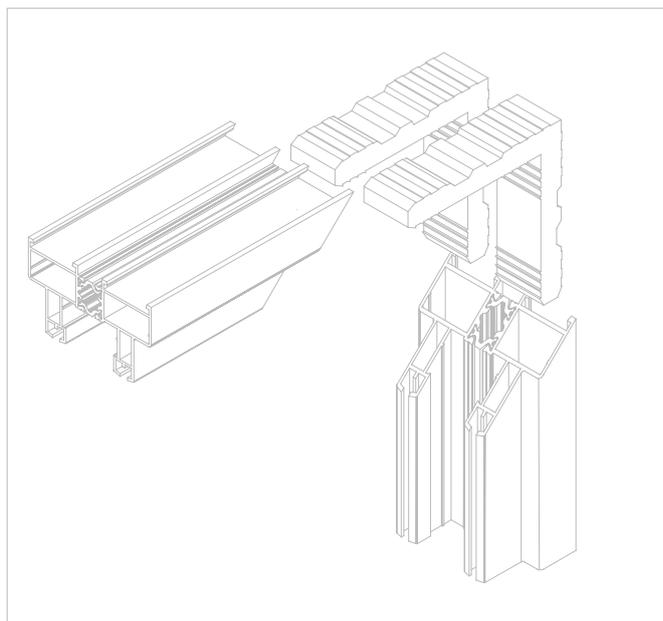


PRESJEK B-B
CROSS SECTION B-B

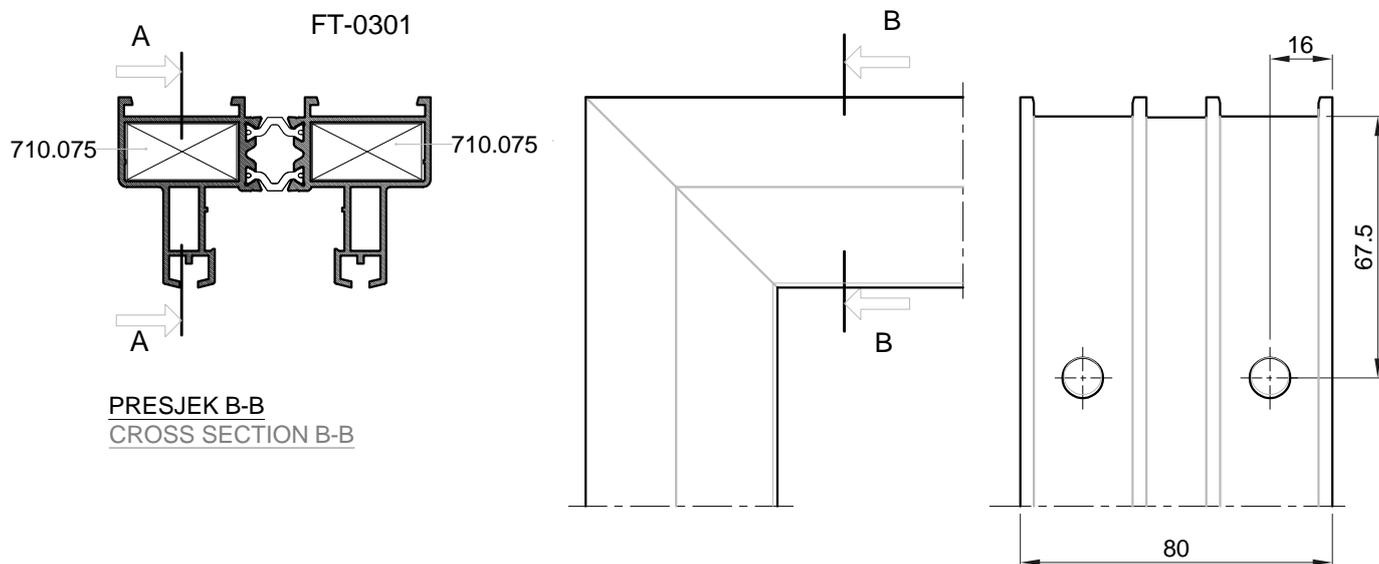
- Spajanje kutnikom 710.035 uprešavanjem stijenke profila u kutnik
- Uprešavanje kliještima za kutne spojnice art. 210.001 ili strojno uprešavanje
- Connection with corner bracket 710.035 by pressing the profile wall into the corner bracket
- Fastening with pliers for corner brackets art. 210.001 or mechanical adjustment



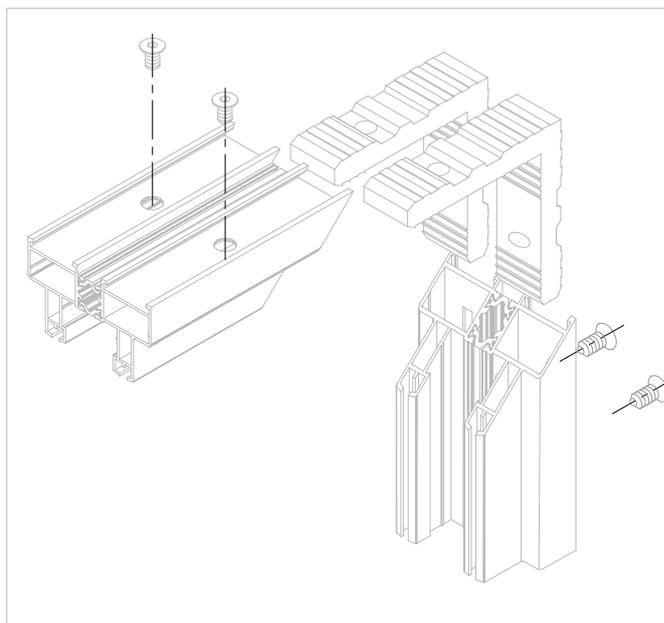
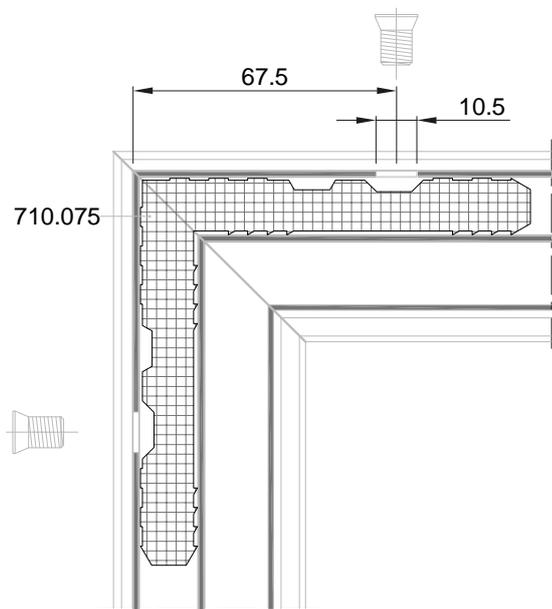
PRESJEK A-A
CROSS SECTION A-A



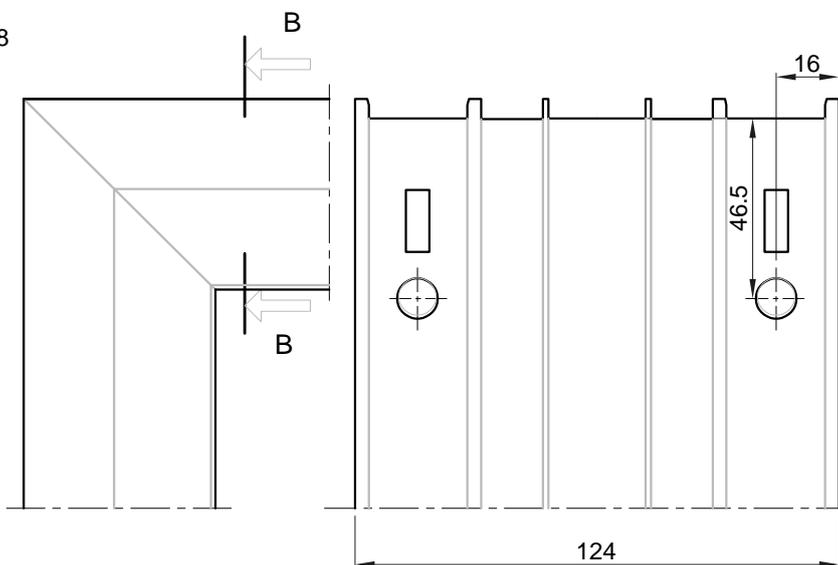
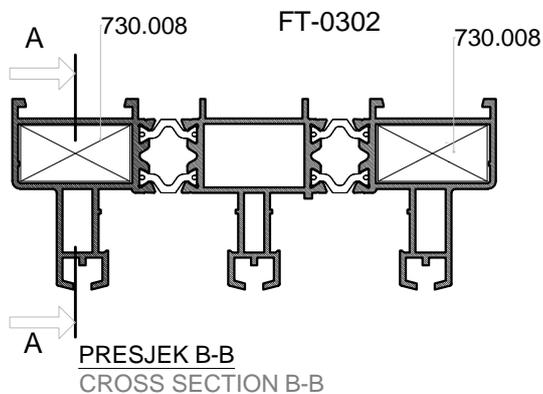
SPAJANJE PROFILA FT-0301 KUTNICIMA 710.075 CONNECTING PROFILE FT-0301 WITH CORNER BRACKET 710.035



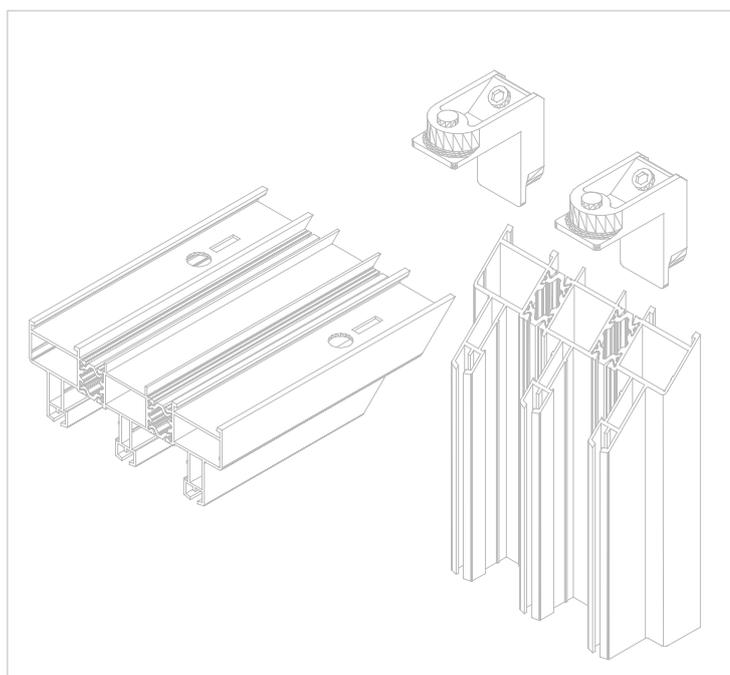
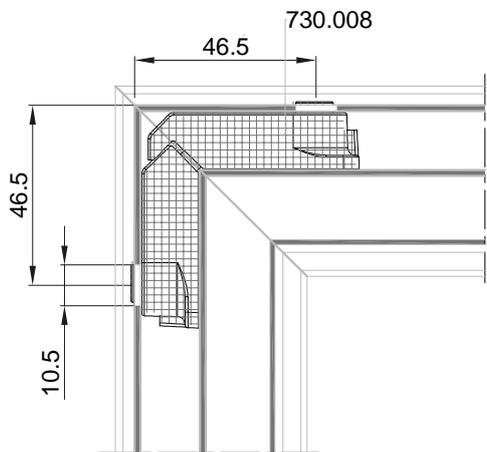
- Spajanje kutnikom 710.075 vijcima M5x3-tip Feal
- Obrada rupa na vertikalnoj glodalici /stubnoj bušilici/ vretenastim glodalom /svrdlom/ Ø10.5
- Connection with corner brackets 710.075 screws M5x3-type Feal
- Processing of holes on a vertical milling machine / pillar drill / with a spindle milling machine / drill bit / Ø10.5



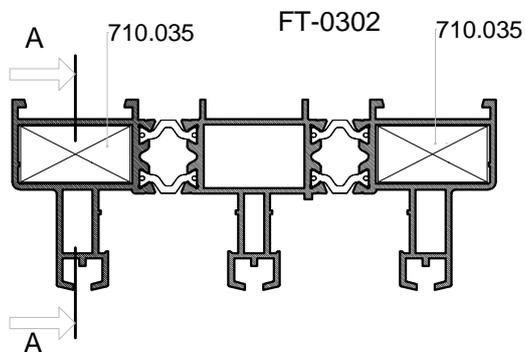
SPAJANJE PROFILA FT-0302 KUTNICIMA 730.008 CONNECTING PROFILE FT-0302 WITH CORNER BRACKET 730.008



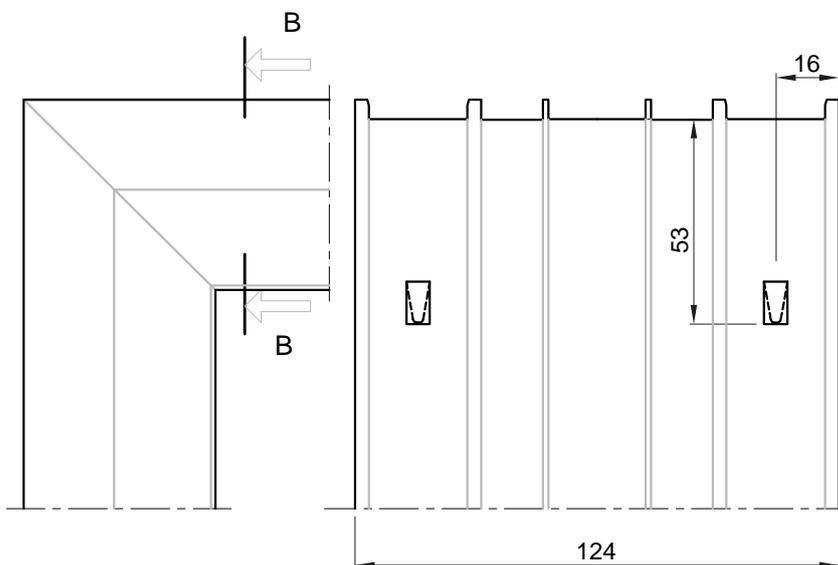
- Spajanje kutnikom 730.008 s predobradom štancanja
- Corner bracket connection 730.008 with pre-processing of stamping
- Obrada na pneumatskoj štanci tipa Feal br.2-art.210.003
- Processing on a pneumatic punch type Feal no. 2-art. 210.003



SPAJANJE PROFILA FT-0302 KUTNICIMA 710.035 CONNECTING PROFILE FT-0302 WITH CORNER BRACKET 710.035

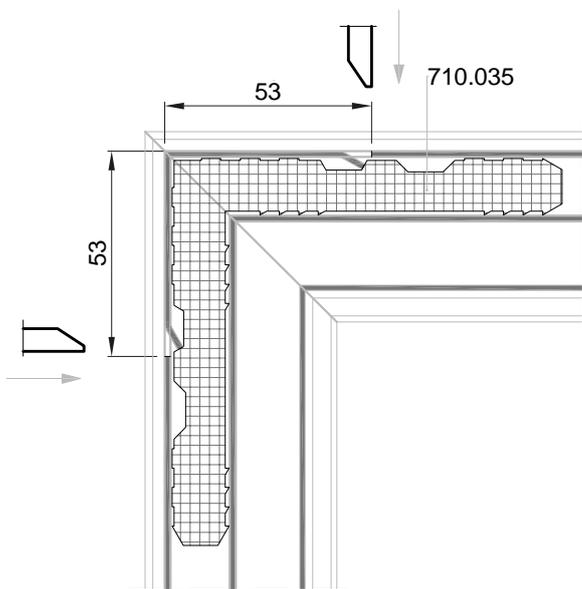


PRESJEK B-B
CROSS SECTION B-B

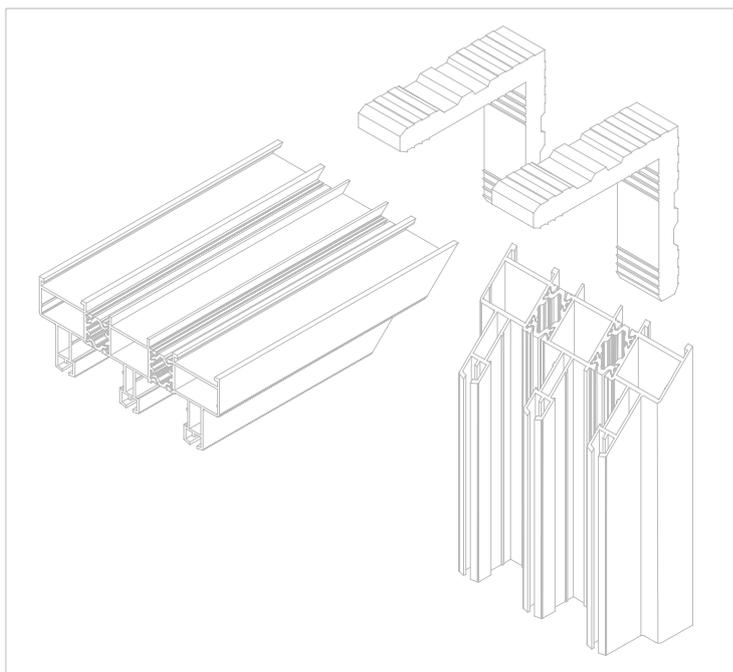


- Spajanje kutnikom 710.035 uprešavanjem stijenke profila u kutnik
- Uprešavanje kliještima za kutne spojnice art. 210.001 ili strojno uprešavanje

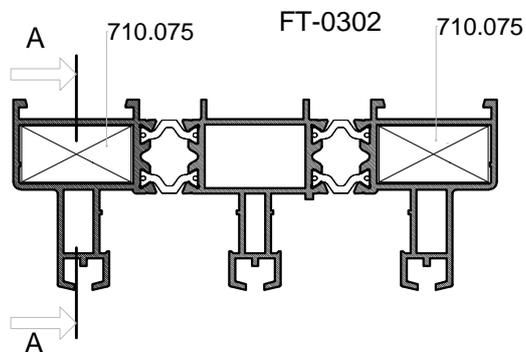
- Connection with corner bracket 710.035 by pressing the profile wall into the corner bracket
- Fastening with pliers for corner brackets art. 210.001 or mechanical adjustment



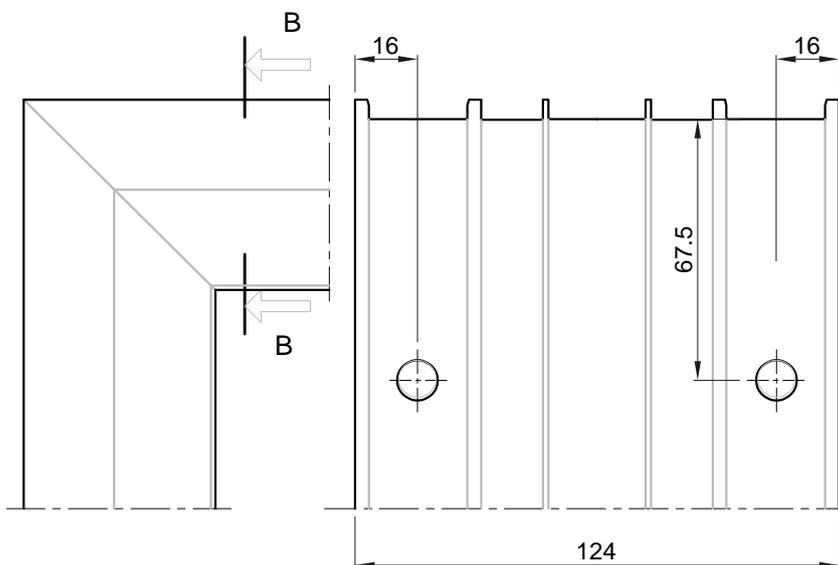
PRESJEK A-A
CROSS SECTION A-A



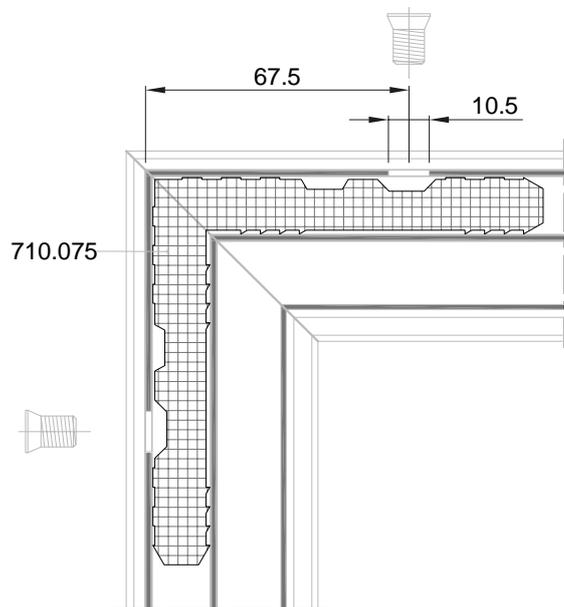
SPAJANJE PROFILA FT-0302 KUTNICIMA 710.075 CONNECTING PROFILE FT-0302 WITH CORNER BRACKET 710.035



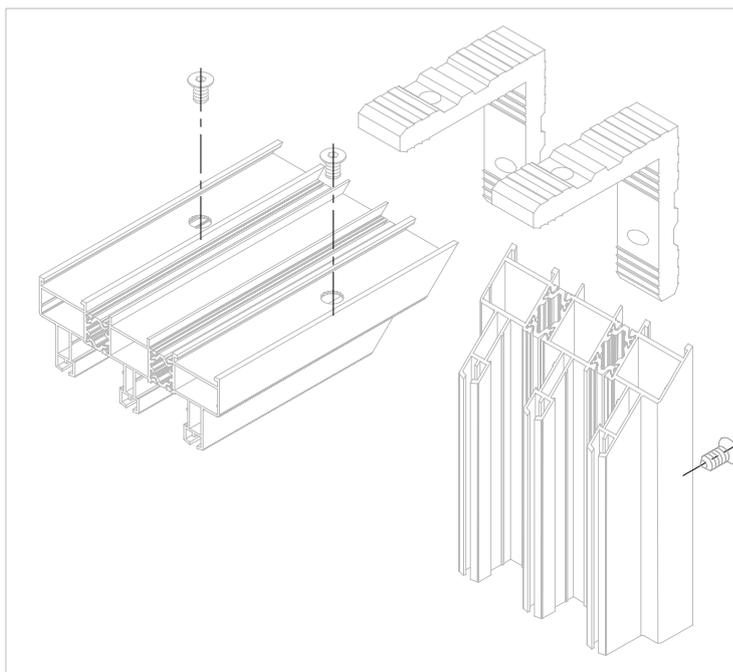
PRESJEK B-B
CROSS SECTION B-B



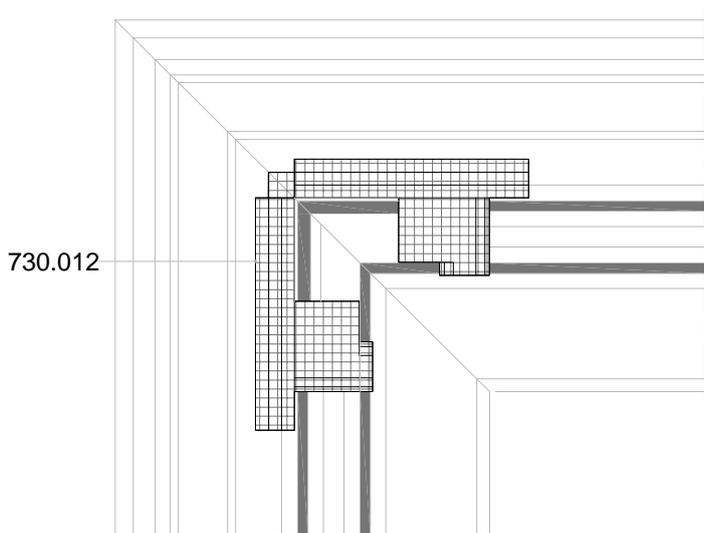
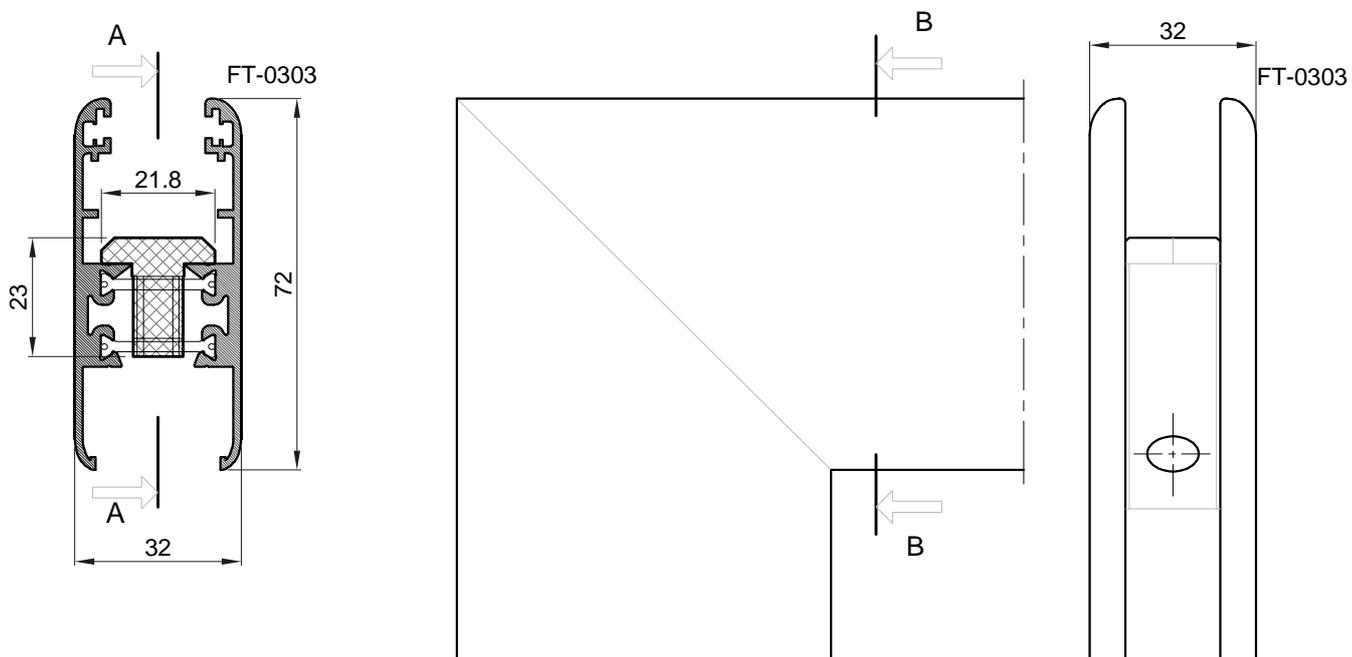
- Spajanje kutnikom 710.075 vijcima M5x3-tip Feal
- Obrada rupa na vertikalnoj glodalici / stubnoj bušilici / vretenastim glodalom / svrdlom / Ø10.5
- Connection with corner brackets 710.075 screws M5x3-type Feal
- Processing of holes on a vertical milling machine / pillar drill / with a spindle milling machine / drill bit / Ø10.5



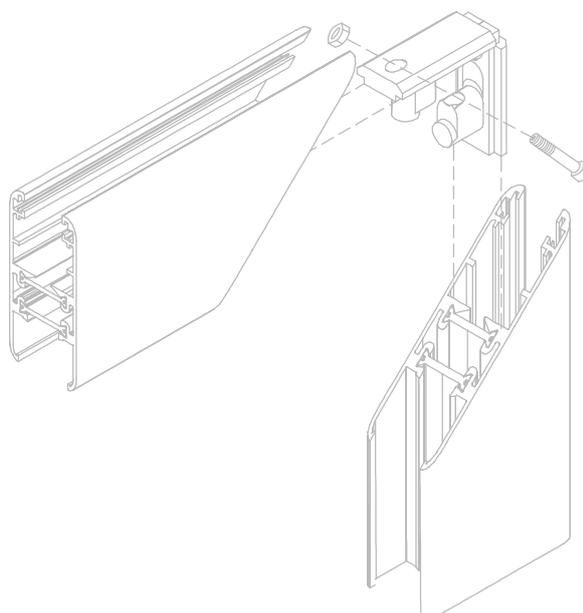
PRESJEK A-A
CROSS SECTION A-A

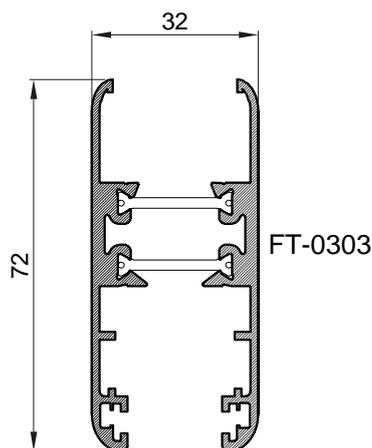


SPAJANJE PROFILA FT-0303 KUTNICIMA 730.012 CONNECTING PROFILE FT-0303 WITH CORNER BRACKET 730.012

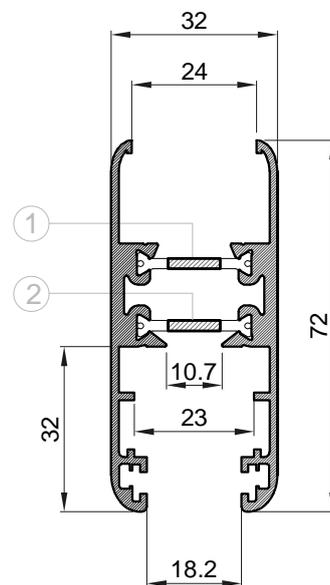
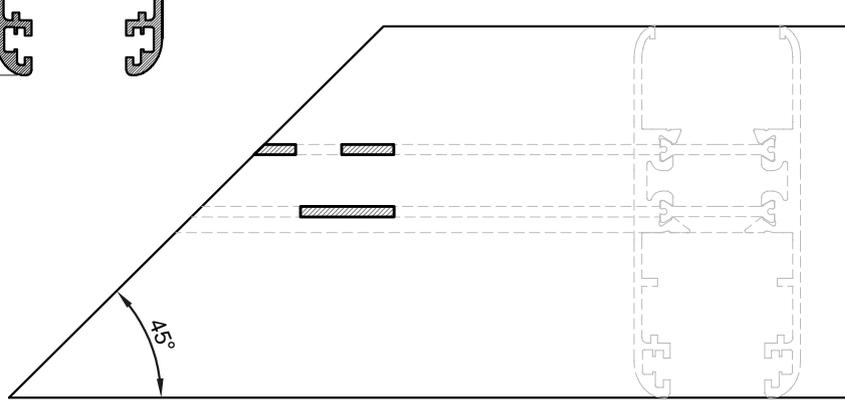


- Spajanje kutnikom 730.012 s predobradom štancanja
- Kutnik 730.012 je iz dva dijela
-dio za vijak
- Corner connection 730.012 s pre-processing of stamping
- Angle 730.012 is made of two parts
- part for the screw
- - part for hex nut

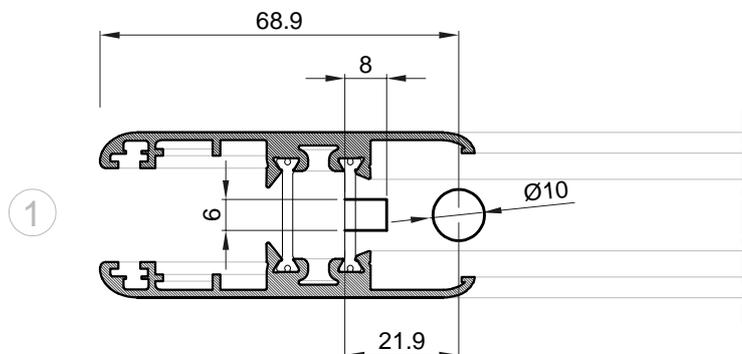




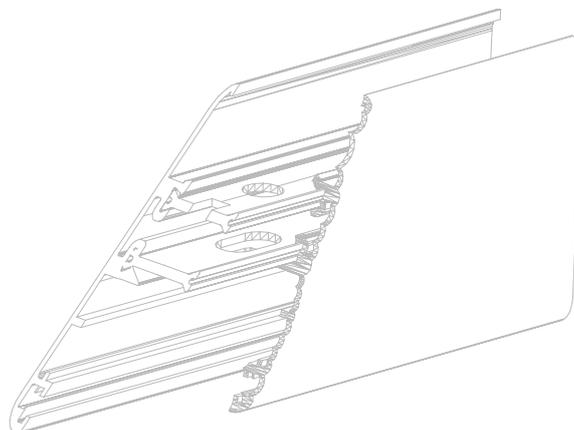
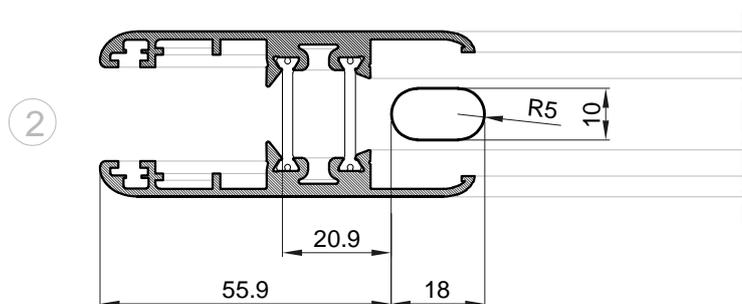
OBRADA PROFILA KRILA FT-0303 ZA SMJEŠTAJ KUTNIKA 730.012
SASH PROFILE PROCESSING FT-0303 FOR POSITIONING OF
CORNER BRACKET 730.012



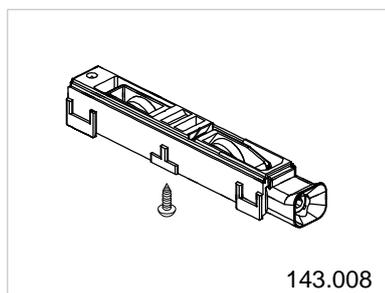
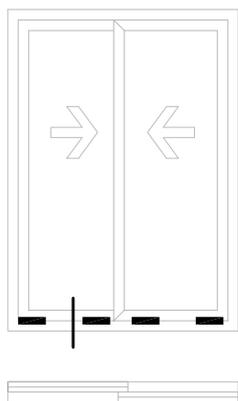
OBRADA NA GORNJEM POLIAMIDU
PROCESSING ON THE UPPER POLYAMIDE



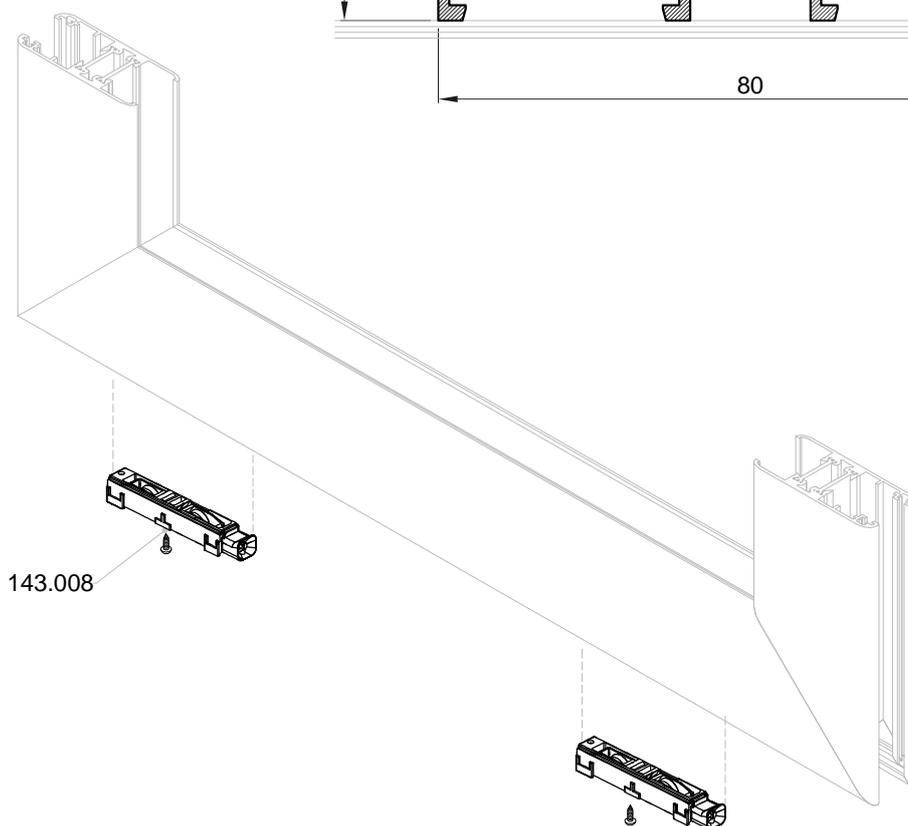
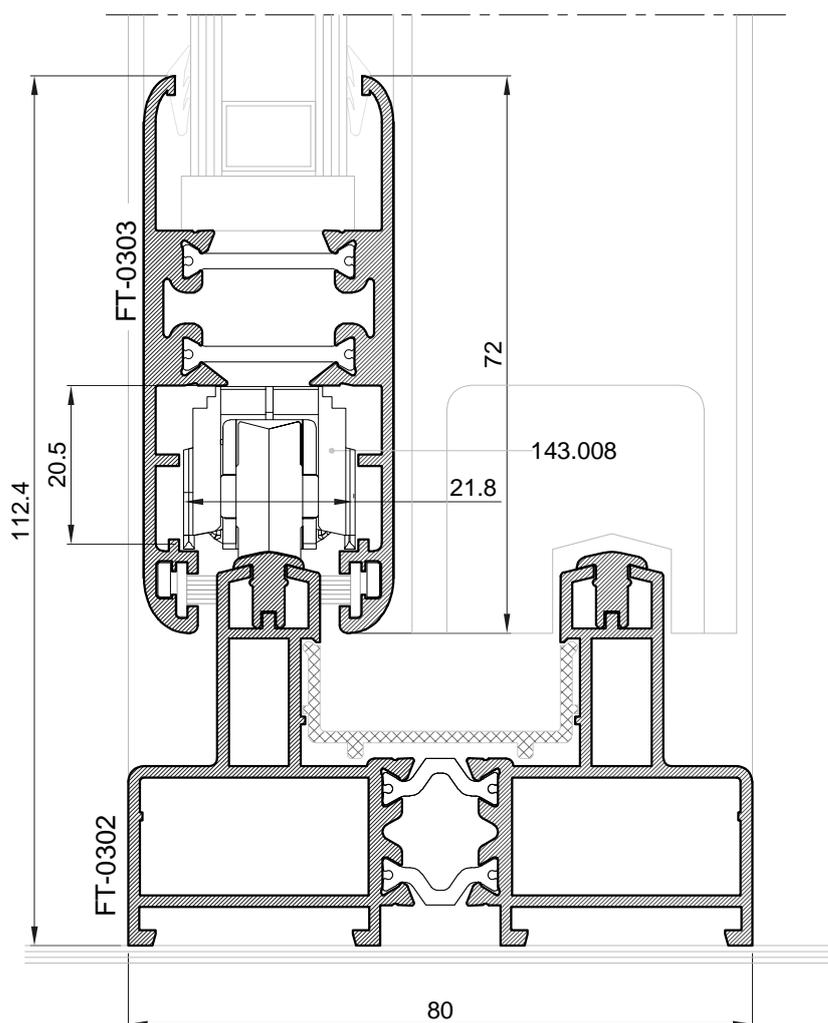
OBRADA NA DONJEM POLIAMIDU
PROCESSING ON THE LOWER POLYAMIDE

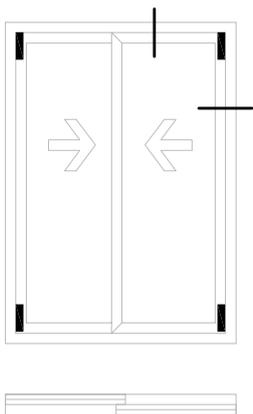


- Spajanje kutnikom 730.012 s predobradom štancanja
- Corner bracket connection 730.012 with pre-processing of stamping
- Obrada na pneumatskoj štanci tipa Feal br.2-art.210.003
- Processing on a pneumatic punch type Feal no. 2-art. 210.003



- dva kotačića po krilu
- two wheels per sash
- regulacija položaja krila po visini - namještanjem kotačića imbus vijkom
- sash height adjustment - by adjusting the wheels with an Allen screw



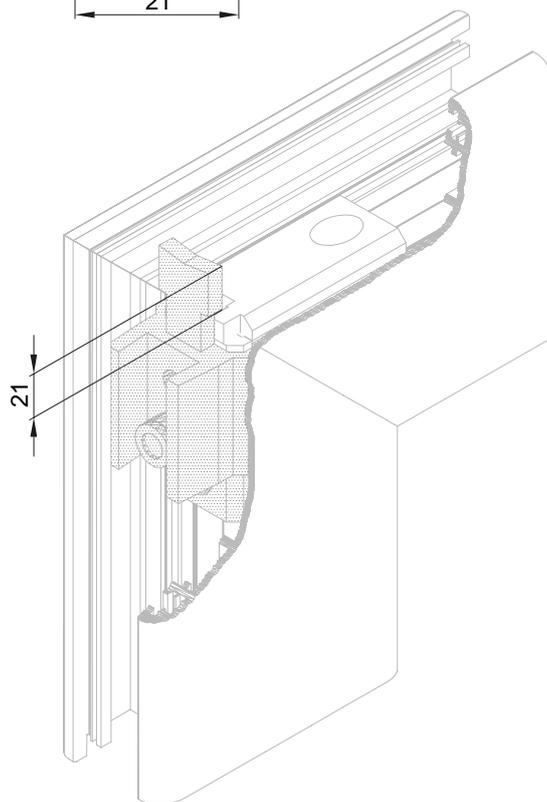
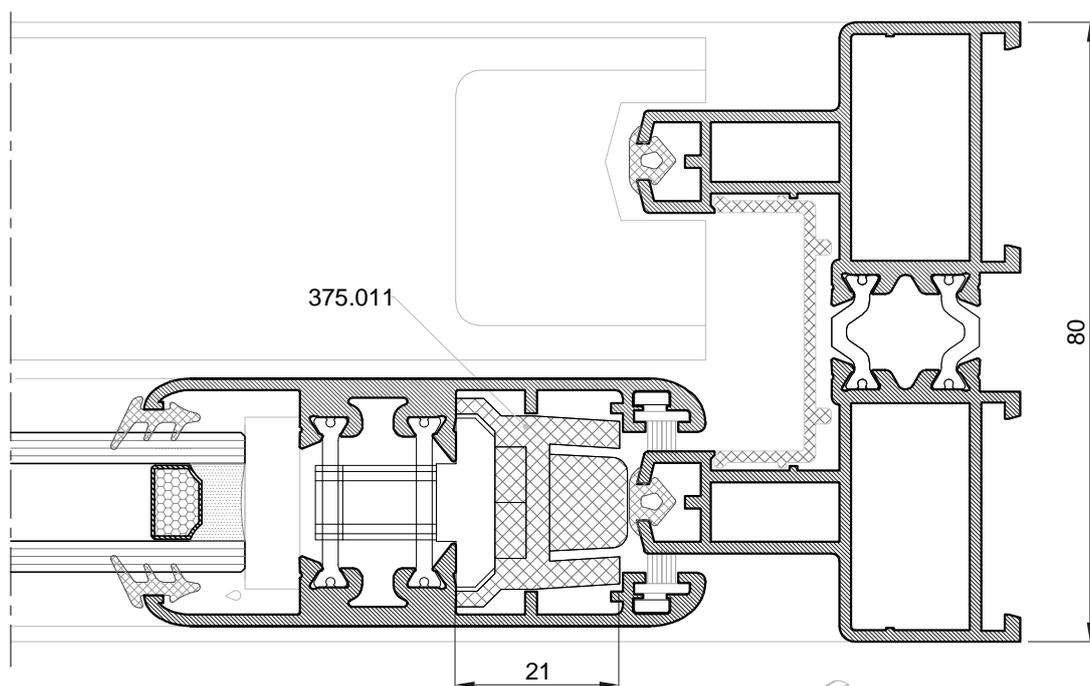


UPORABA ODSTOJNIKA 375.011

USE OF SPACERS 375.011

Koristi se kao:
It is used as:

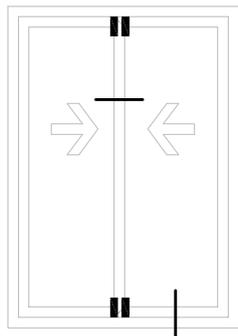
- ublaživač udarca krila u ram
• shock absorber of the sash in the frame
- osigurač od vađenja krila
• security against sash removal



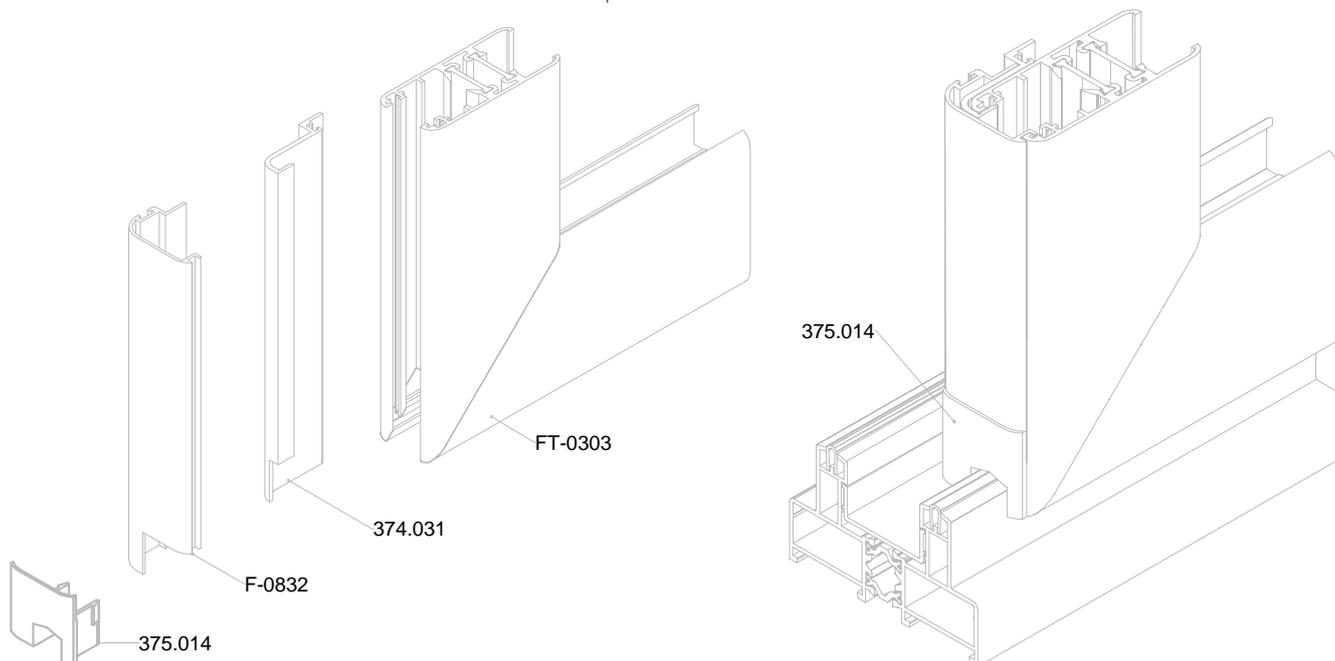
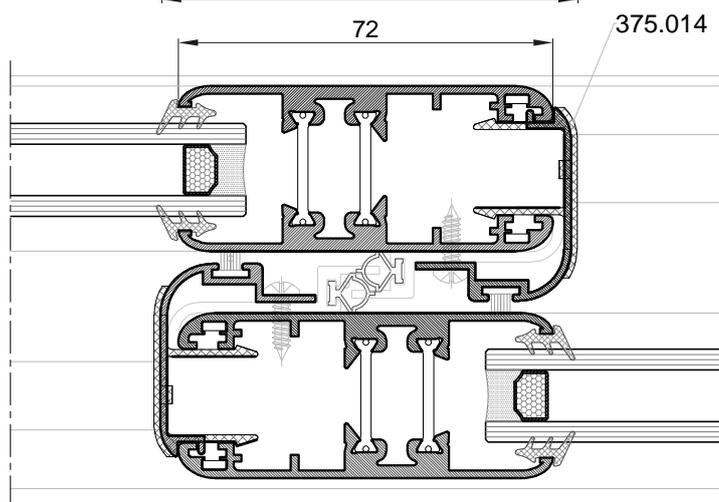
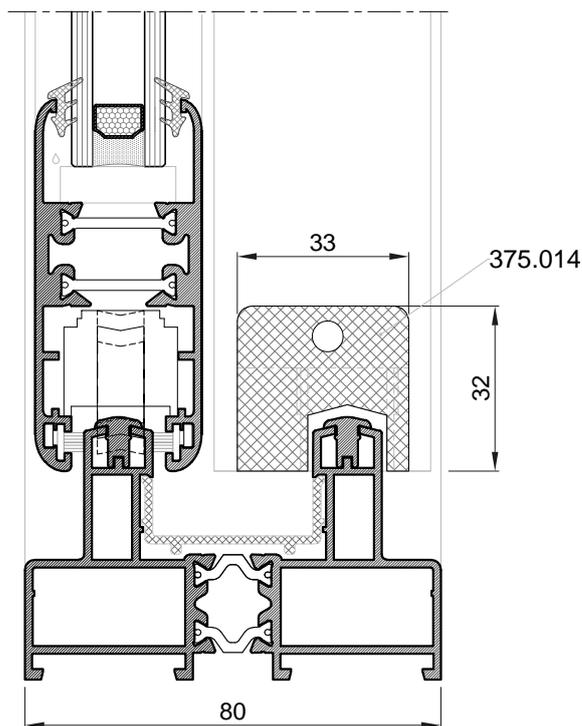
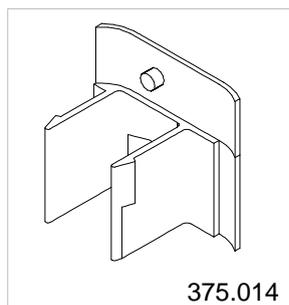
375.011

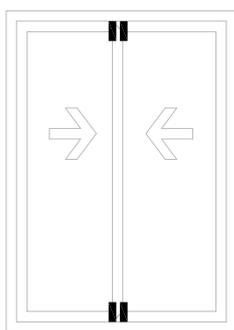
UMETAK 375.014

INSERT 375.014

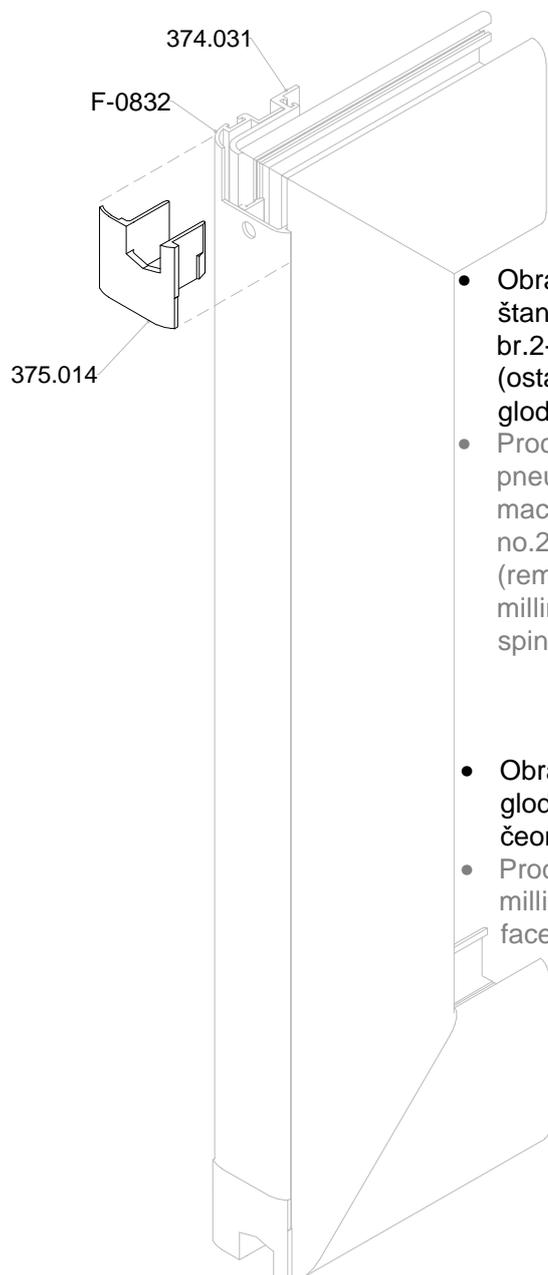
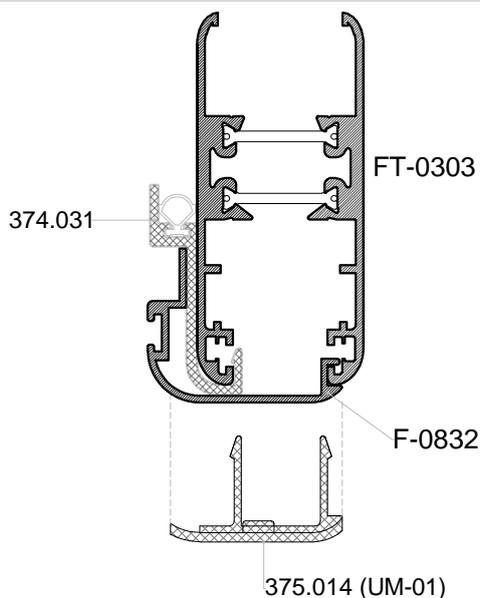


- maskira prostor nalijeganja krila na kliznu stazu
- masks the area where the sash rests on the sliding track
- donji i gornji umetak
- lower and upper insert
- obrada profila F-0832 i 374.031
- processing of profiles F-0832 and 374.031

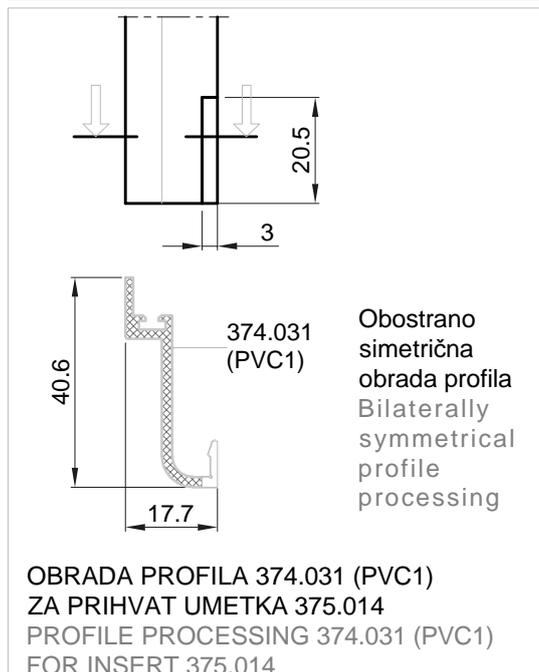
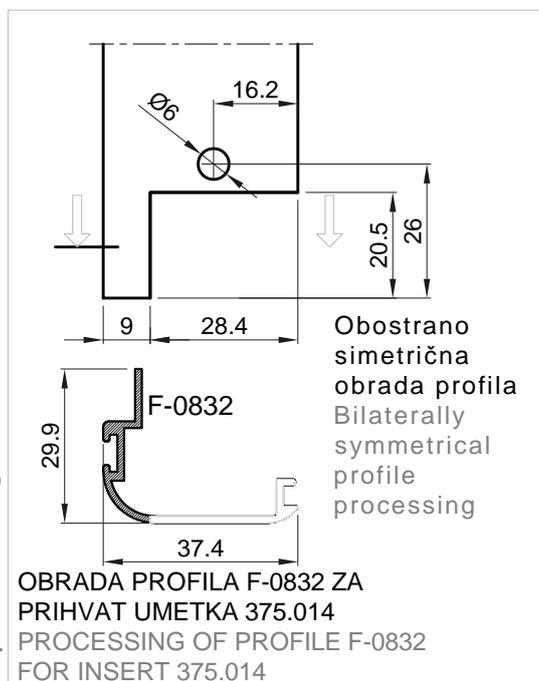


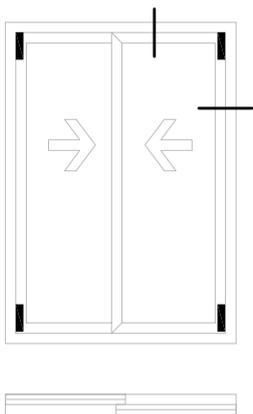


OBRADA AL.PROFILA I PVC KOMADA
ZA PRIHVAT UMETKA 375.014
PROCESSING OF AL.PROFILES AND PVC PIECES
FOR ACCEPTING INSERTS 375.014



- Obrada na pneumatskoj štanci tipa Feal br.2-art.210.003 (ostatak skinuti na vert. glodalici vreten. glodalom)
- Processing on a pneumatic stamping machine type Feal no.2-art.210.003 (remove the rest on a vert. milling machine with a spindle moulder)
- Obrada na vertikalnoj glodalici čeonim glodalom
- Processing on a vertical milling machine with a face milling cutter



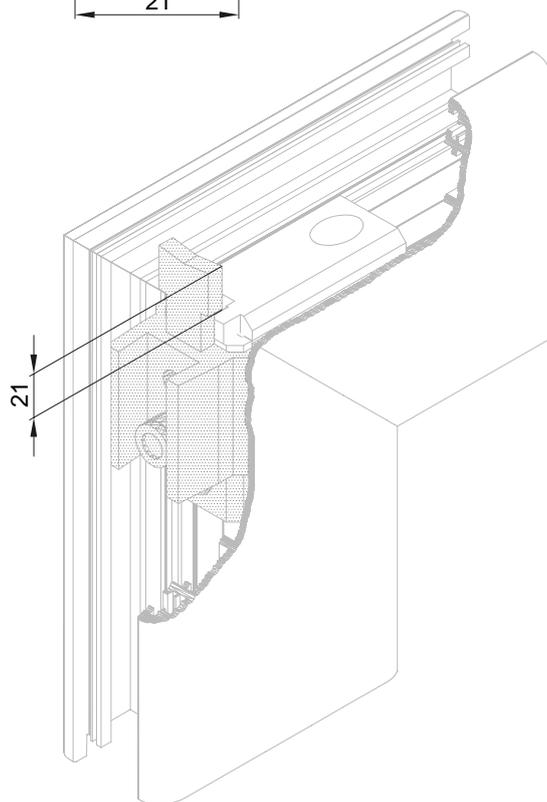
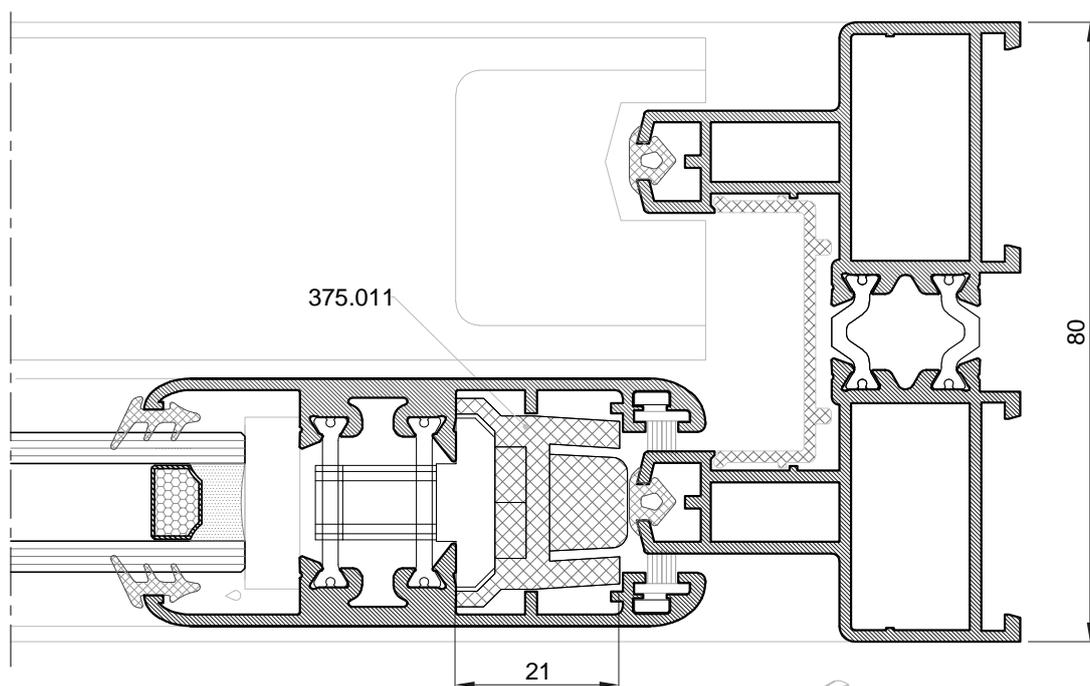


UPORABA ODSTOJNIKA 375.011

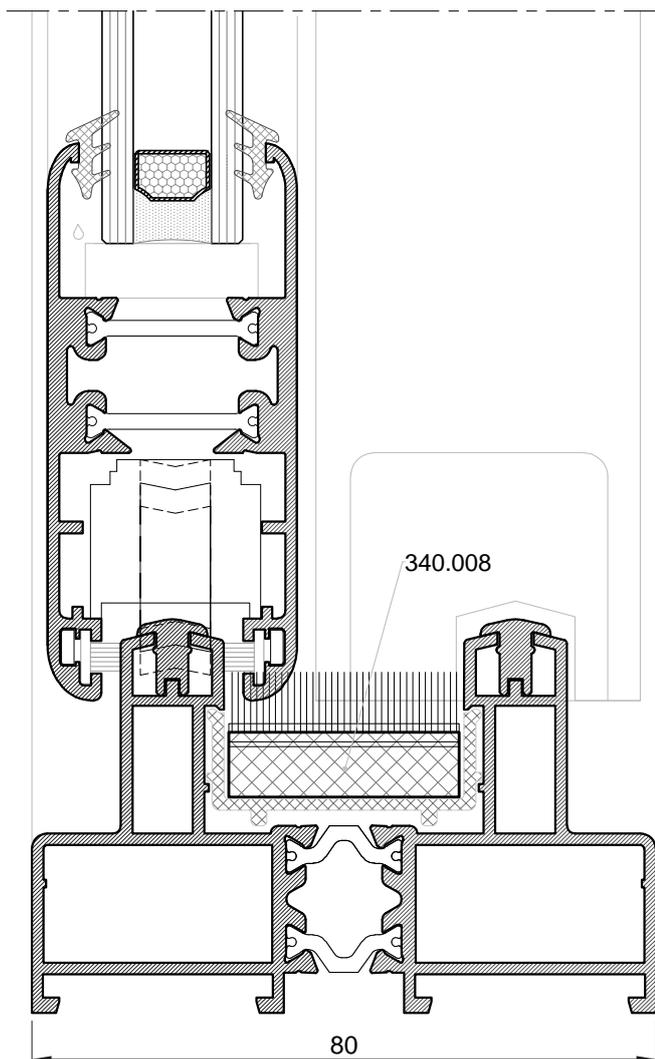
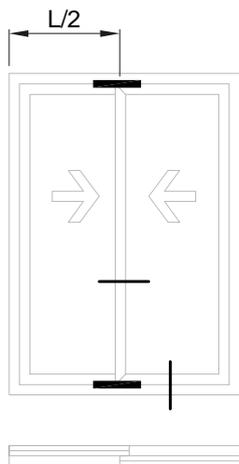
USE OF SPACERS 375.011

Koristi se kao:
It is used as:

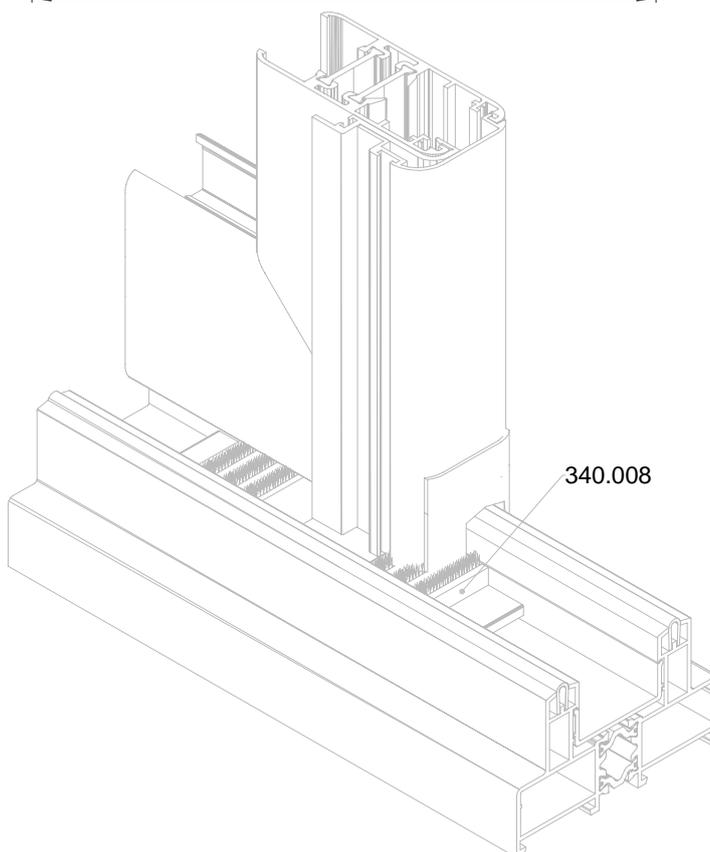
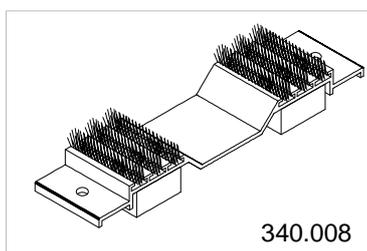
- ublaživač udarca krila u ram
• shock absorber of the sash in the frame
- osigurač od vađenja krila
• security against sash removal

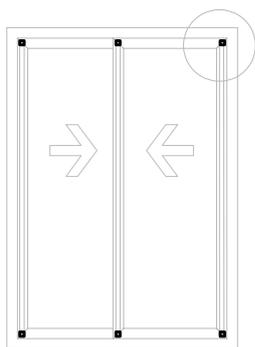


BRTVILO NA SPOJU KRILA 340.008 GASKET ON THE WING JOINT 340.008



- zaptiva prostor između krila i rama u zatvorenom položaju
- sprječava prodor vode iz vanjskog u unutarnji prostor klizne staze
- ugradnja na sredini spoja dvaju krila - gore i dolje
- seals the space between the sash and the frame in the closed position
- prevents entering water from the outer into the inner space of the sliding track
- installation in the middle of the joint of the two sashes - top and bottom



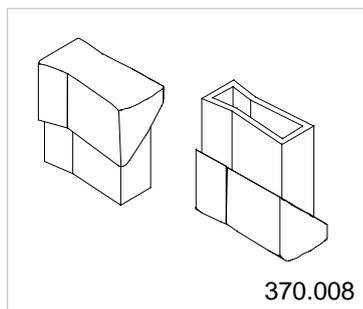
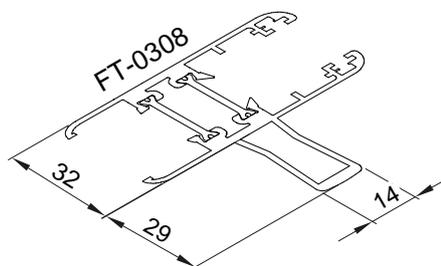
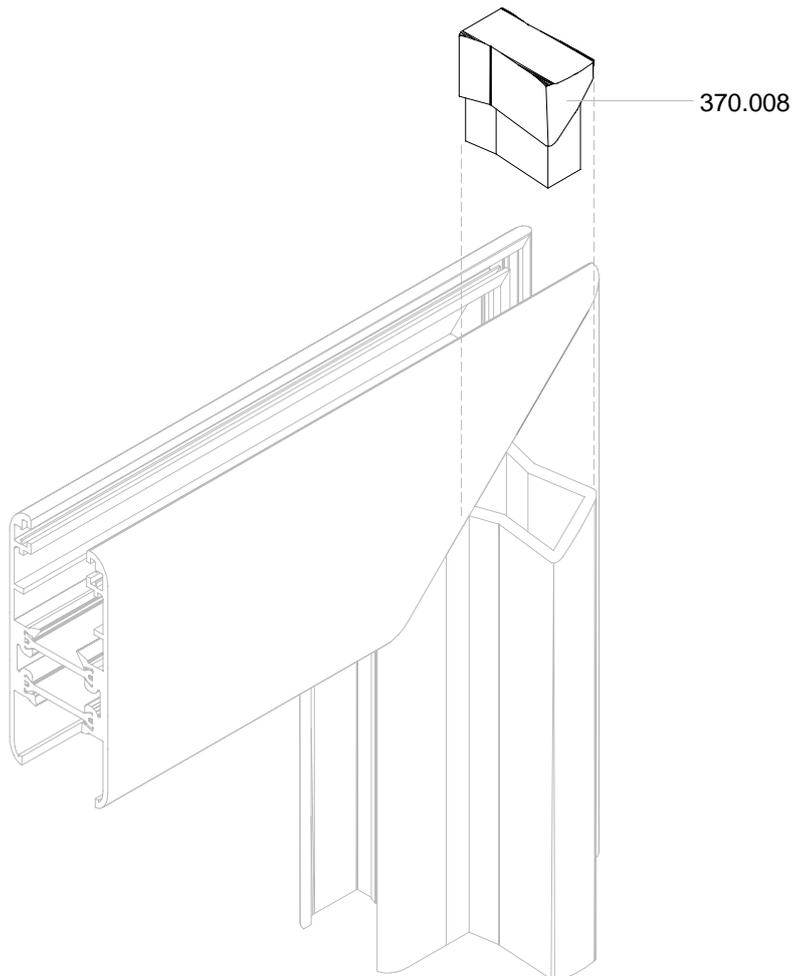
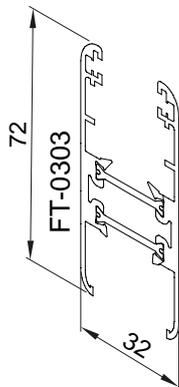


UGRADNJA ČEPA 370.008 U PROFIL OJAČANOG KRILA FT-0308

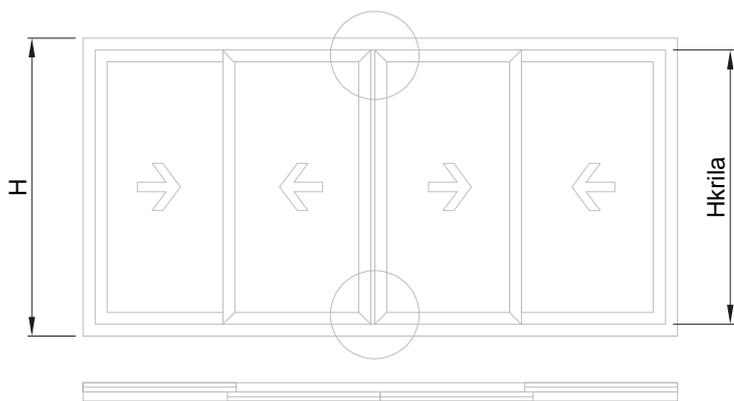
- simetrični čepovi, gornji i donji

INSTALLATION OF THE 370.008 INSERT INTO THE FT-0308
REINFORCED SASH PROFILE

-symmetrical inserts, upper and lower

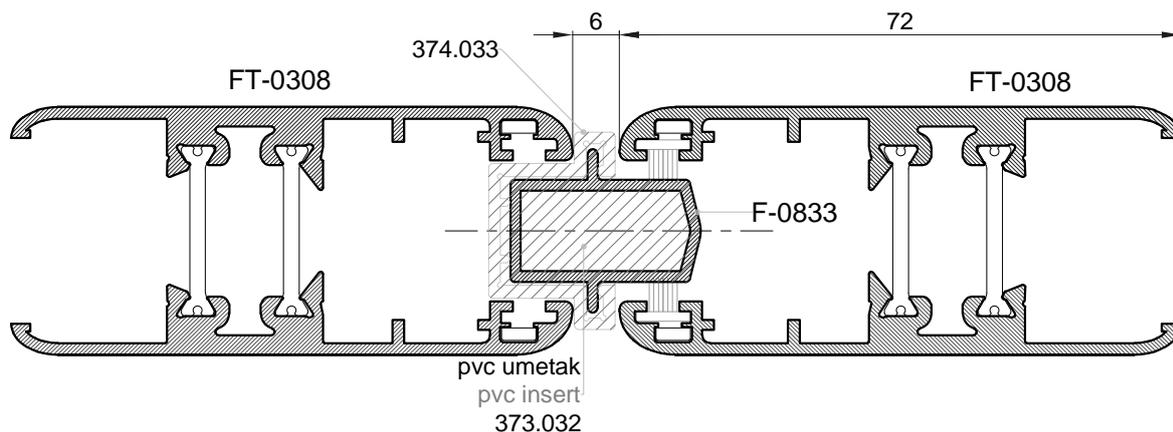
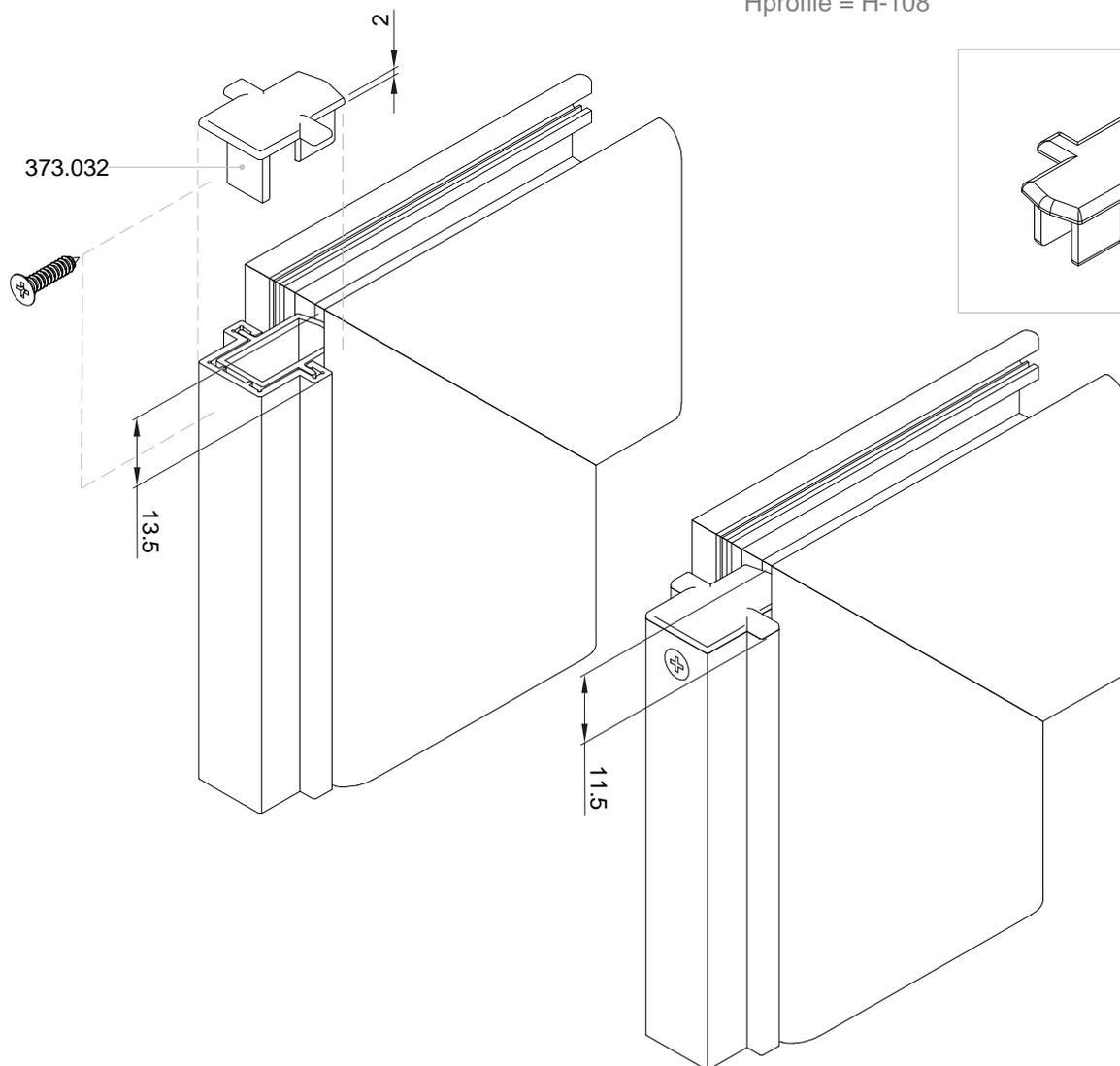


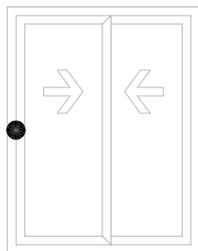
370.008



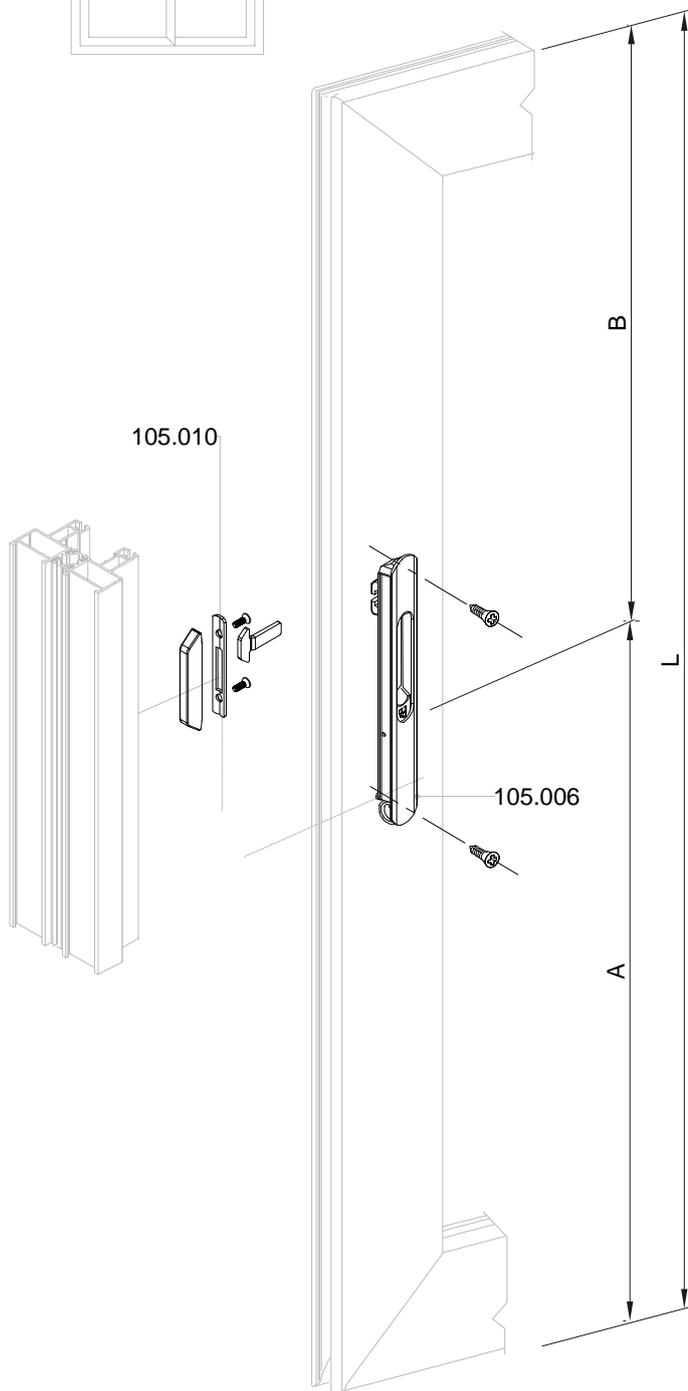
Ugradnja umetka u profil F-0833 Installing the insert into the F-0833 profile

- mjera pilanja profila F-0833 i pvc profila 374.033 je
Hprofila = Hkrila - 27 ili
Hprofila = H-108
- the sawing dimension of the F-0833 profile and the PVC profile 374.033 is
Hprofile = Hsash - 27 or
Hprofile = H-108

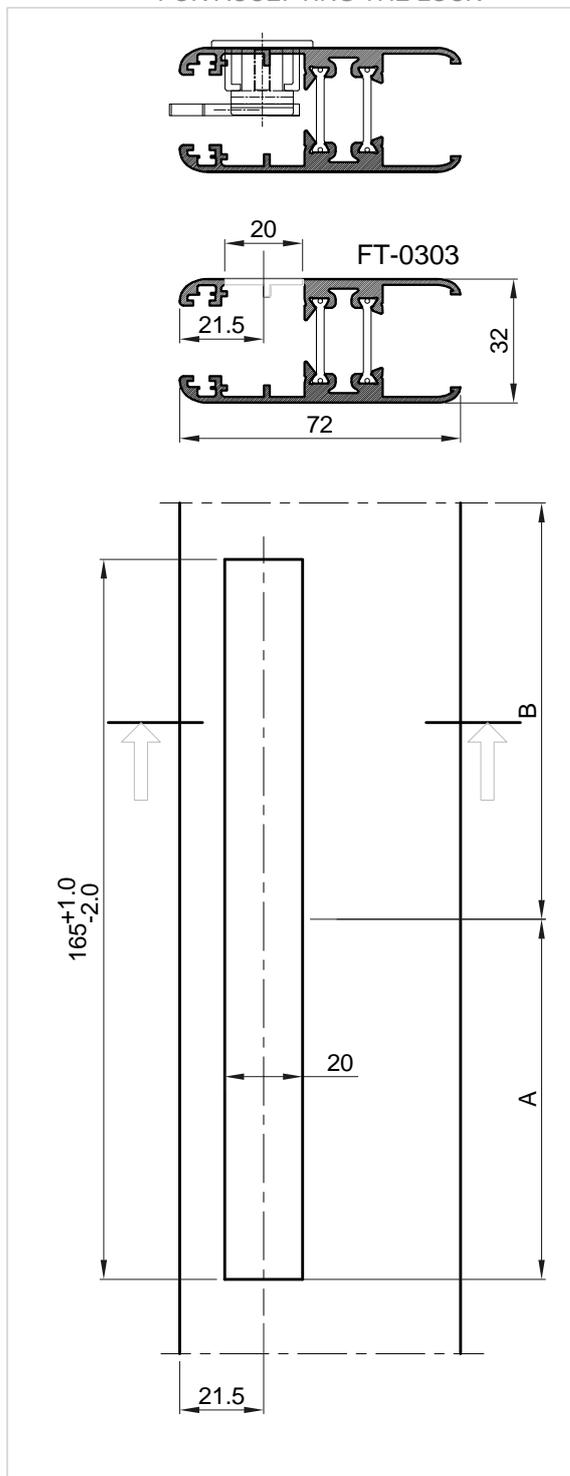




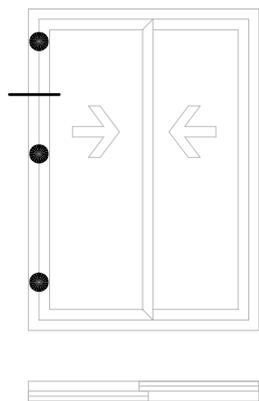
OKOV ZA KLJUČANJE U JEDNOJ TOČKI - 105.006 Giesse
SINGLE POINT LOCKING FIXTURE - 105.006 Giesse



OBRADA PROFILA KRILA FT-0303
-ZA PRIHVAT BRAVICE
PROCESSING OF THE DOOR SASH FT-0303
-FOR ACCEPTING THE LOCK



- Obrada na vertikalnoj glodalici vretenastim glodalom Ø10
- Processing on a vertical milling machine with a Ø10 spindle cutter

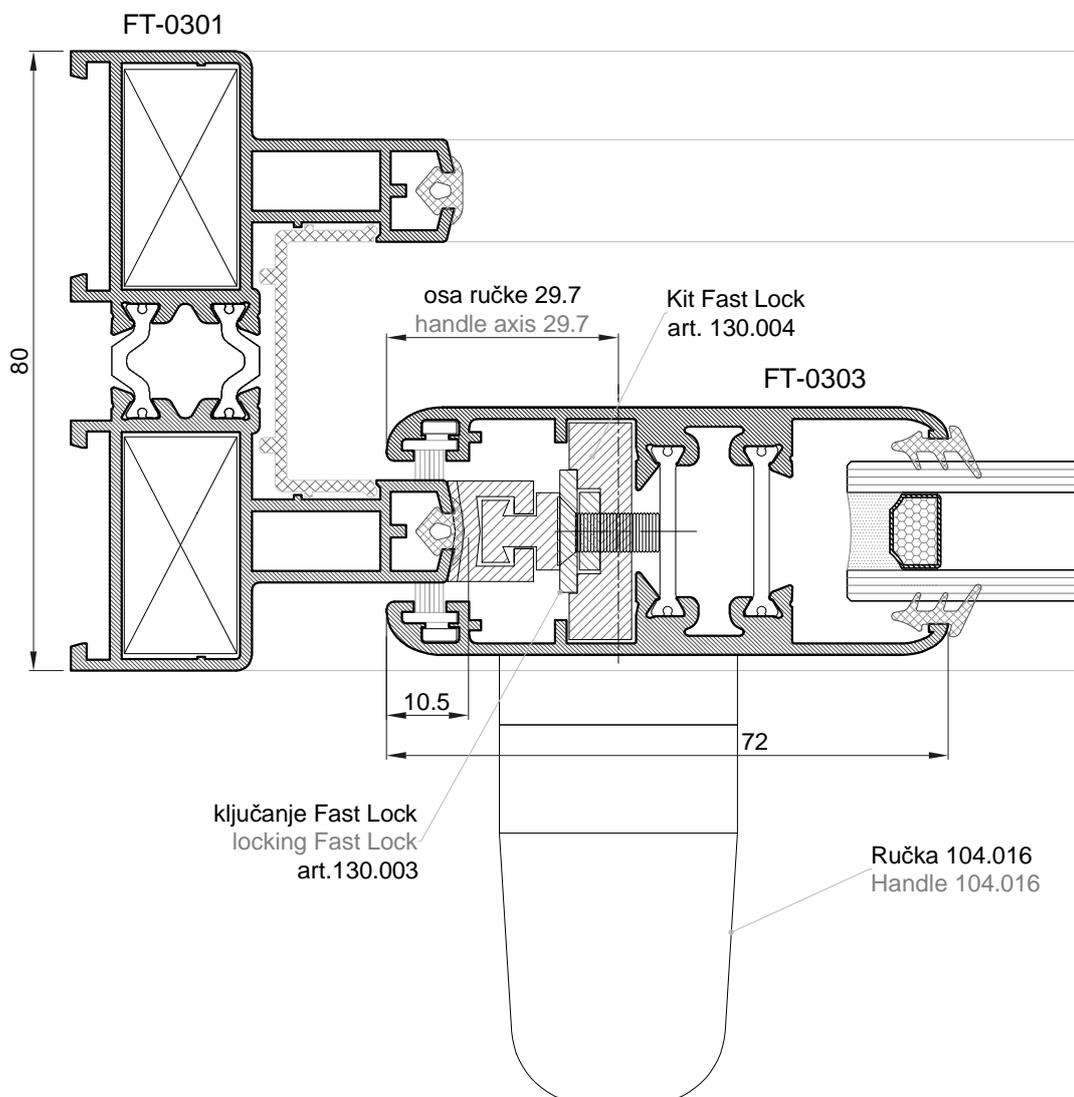


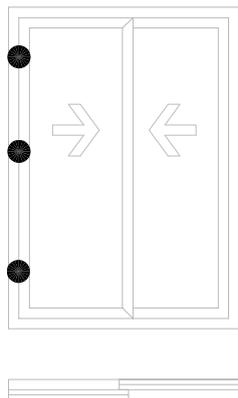
Okov za ključanje u više točaka (Fast Lock-Master)

1. Okov za ključanje u dvije točke - art.130.003 i art.130.004
2. Okov za ključanje u tri točke - art.130.006 i art.130.004
3. Ručka 104.016

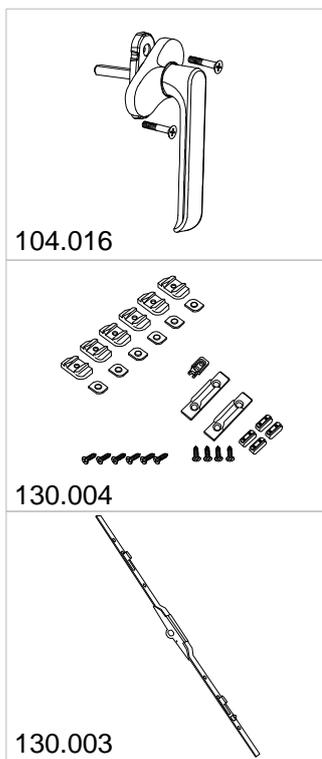
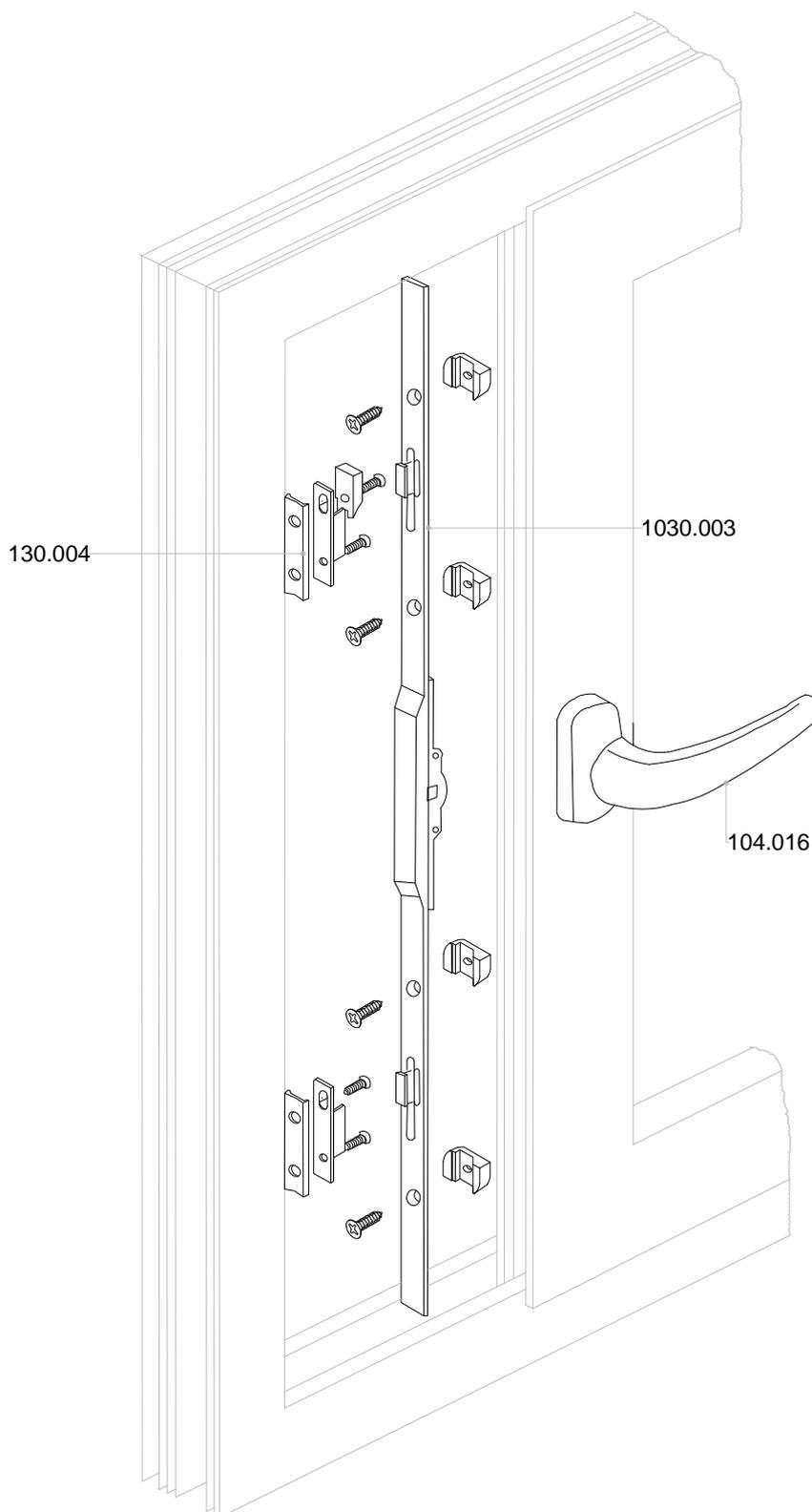
Multi-point locking hardware (Fast Lock-Master)

1. Two-point locking hardware - art.130.003 and art.130.004
2. Three-point locking hardware - art.130.006 and art.130.004
3. Handle 104.016

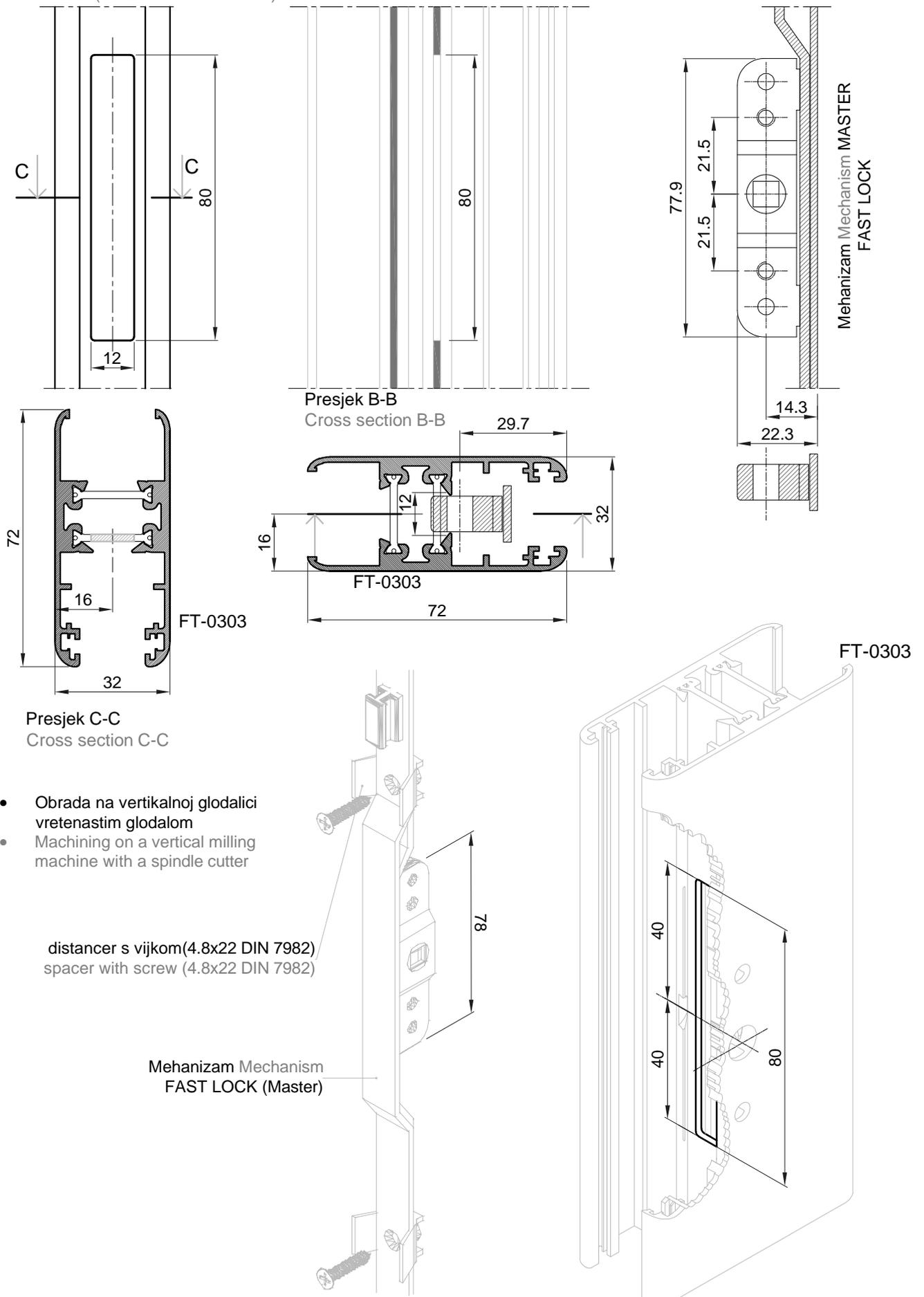




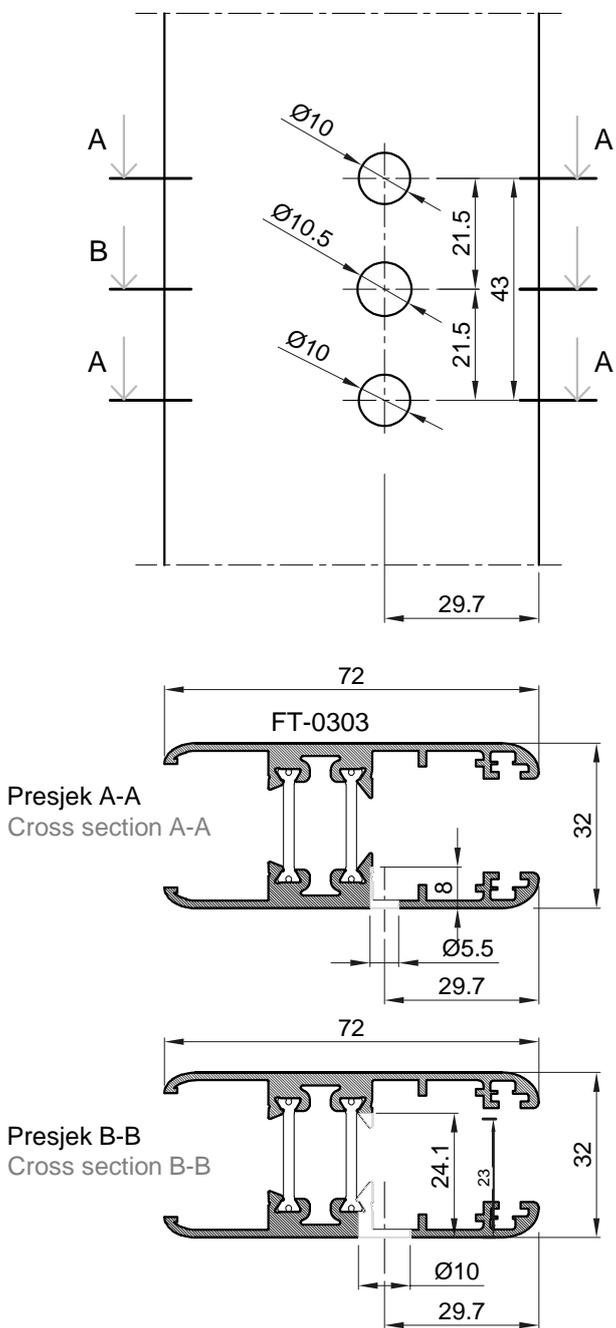
Okov za ključanje u više točaka- Fast Lock(Master)
Multi-point locking hardware - Fast Lock (Master)



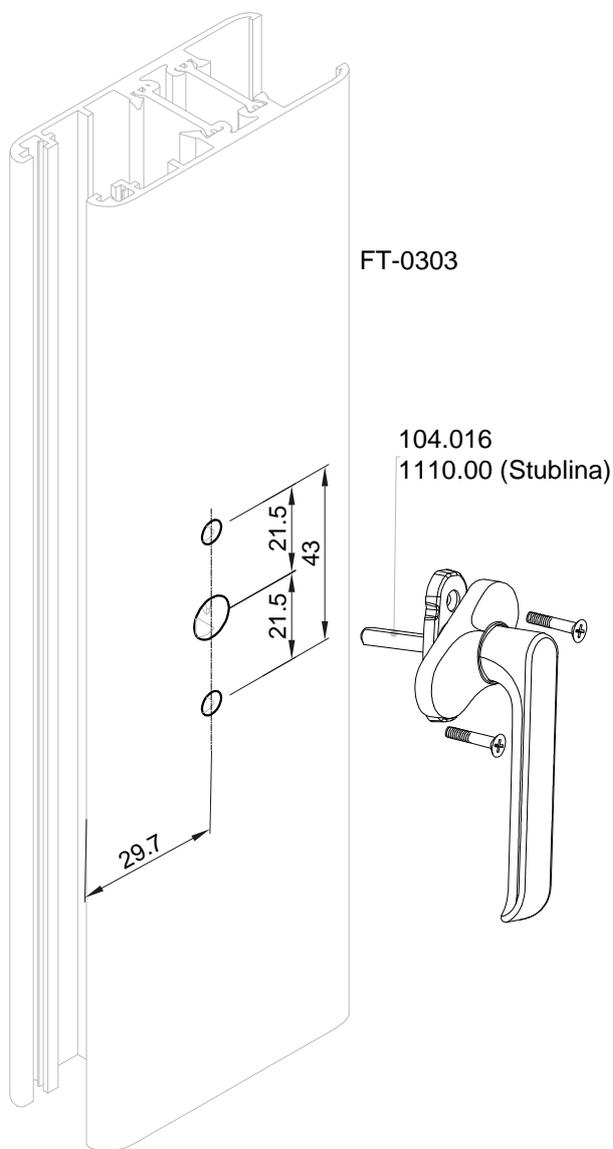
-Obrada profila FT-0303 za ugradnju mehanizma Fast Lock (130.003 i 130.006)
-Processing of the FT-0303 profile for installation of the Fast Lock mechanism (130.003 and 130.006)



- Obrada krila FT-0303 za ugradnja ručke 104.016 (art.1110.00-Stublina)
- Processing of the FT-0303 sash for installation of the handle 104.016 (art.1110.00-Stublina)

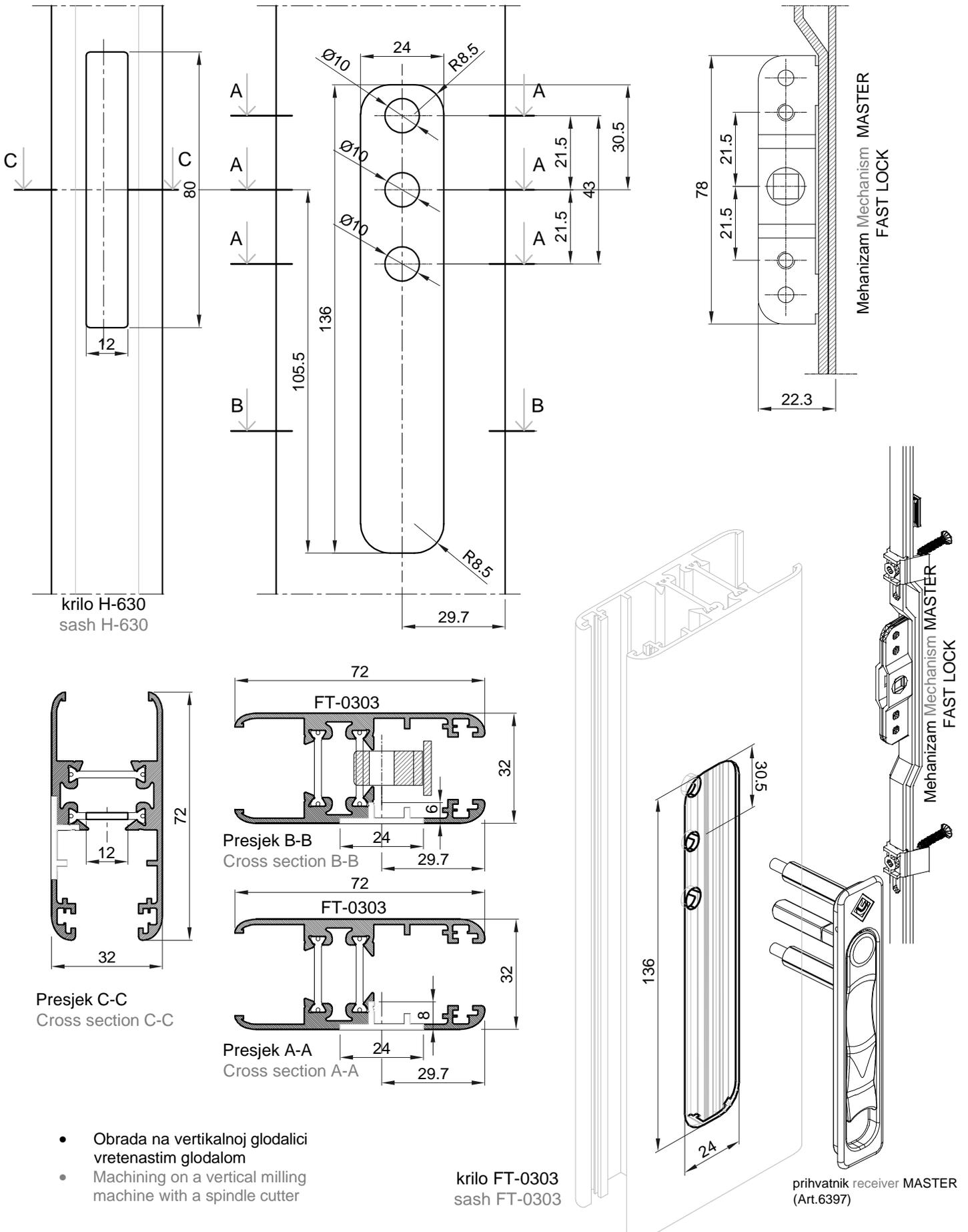


- Obrada rupa na vertikalnoj glodalici /stubnoj bušilici/ vretenastim glodalom /svrdlom/
- Processing holes on a vertical milling machine /column drill/with a spindle milling machine /drill/



- Obrada na vertikalnoj glodalici vretenastim glodalom
- Machining on a vertical milling machine with a spindle cutter

- Obrada krila FT-0303 za ugradnja mehanizma art.130.003(130.006) i pogonske ručice 107.004 (art. 6397-Master)
- Processing of sash FT-0303 for installation of the mechanism art. 130.003 (130.006) and operating lever 107.004 (art. 6397-Master)



- Obrada na vertikalnoj glodalici vretenastim glodalom
- Machining on a vertical milling machine with a spindle cutter

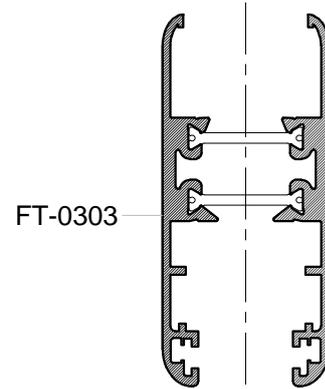
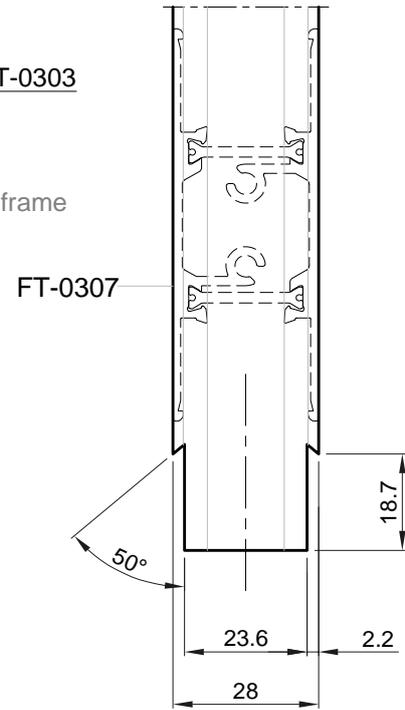
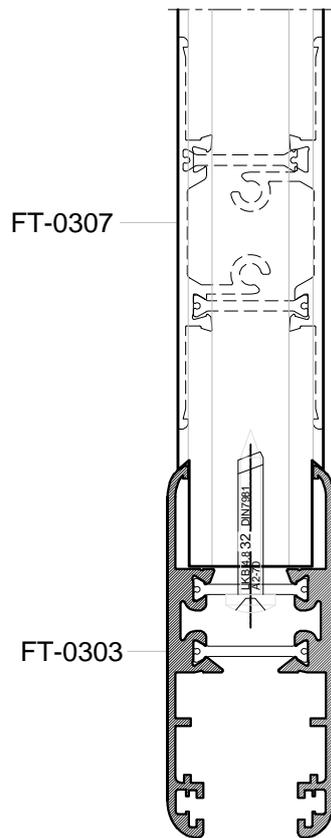
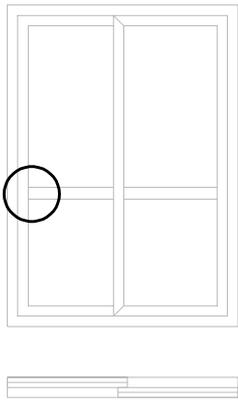
krilo FT-0303
sash FT-0303

prihvatnik receiver MASTER
(Art.6397)

Spajanje profila prečke

- Spoj profila prečke FT-0307 i profila rama FT-0303
 - Obrada prečke FT-0307
- Joining of crossbar profiles

- Connection of crossbar profile FT-0307 and frame profile FT-0303
- Processing of crossbar FT-0307

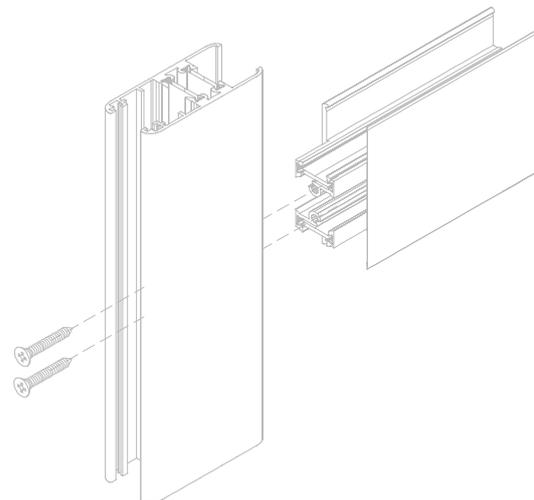
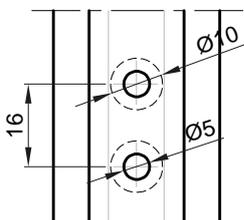
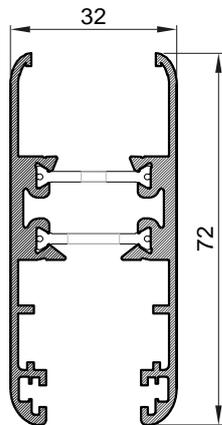


vijak screw 4.8x32
/DIN 7981/

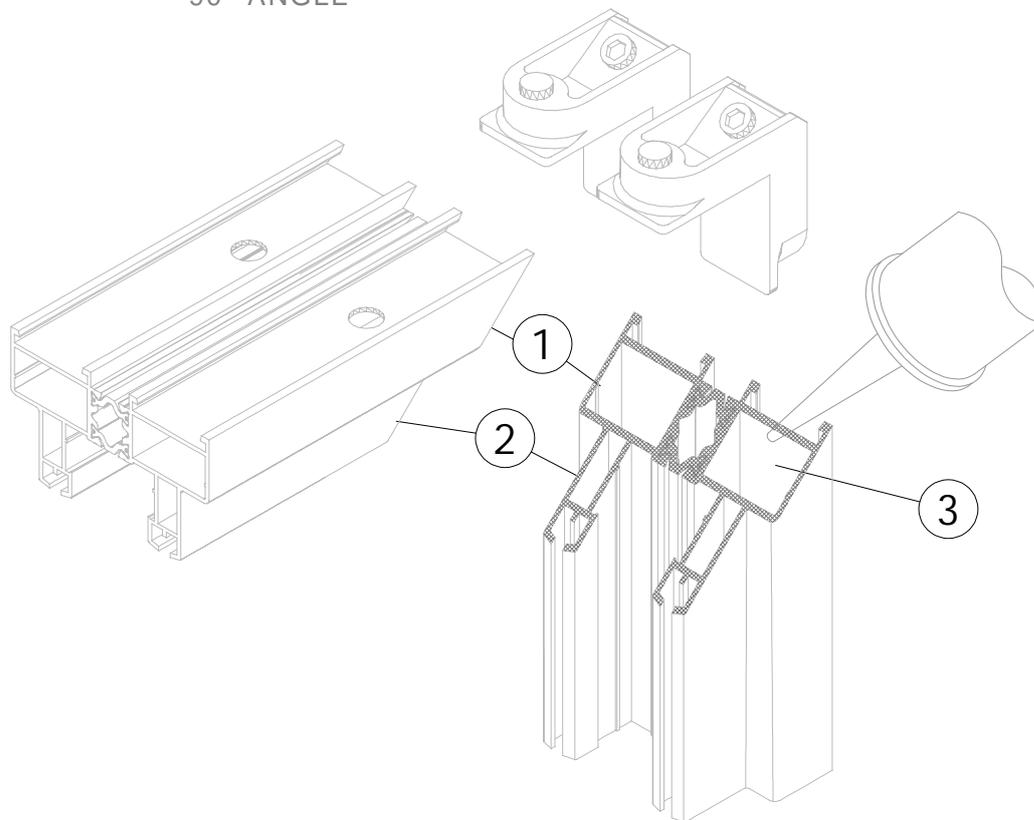
čep maska za Ø10 mm 370.023
cap mask for Ø10 mm 370.023



Obrada FT-0303-za vezu vijcima
Processing FT-0303-for screw connection



SPAJANJE PROFILA KUTNICIMA POD KUTEM OD 90°
CONNECTING PROFILES WITH CORNER BRACKETS AT
90° ANGLE



POSTUPAK SPAJANJA PROFILA:

1. Površine koje se spajaju-rezove očistiti i odmastiti prikladnim sredstvom /npr.Sika Remover 208; Wurth-kat.br.:892 130 30/.
2. Premazati površine koje se spajaju ljepilom za metal /npr. Sika Force 7851; Wurth-kat.br.:892 130 010/.
3. Ljepilo za metal ušpricati u komoru za kutnik - po opsegu komore
4. Profile s kutnikom izravnati i spojiti
5. Dio ljepila koji iscuri između rezova očistiti sredstvom za čišćenje i odmašćivanje /npr.Sika Remover 208; Wurth-kat.br.:892 130 30/.

NAPOMENA:

Ovaj postupak spajanja profila primjenjiv je za sve Feal-ove kutnike i njima odgovarajuće komore:

Lijepljenjem rezova i kutnika ljepilima za metal osigurava se potrebna zrako- i vodonepropusnosti spoja kao i dodatna mehanička čvrstoća spoja.

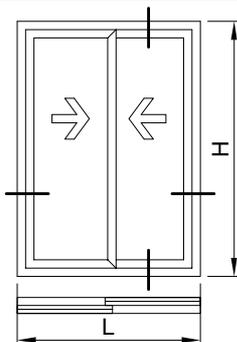
PROCEDURE FOR JOINING PROFILES:

1. Clean and degrease the surfaces to be joined - the cuts with a suitable agent /e.g. Sika Remover 208; Wurth-cat.no.: 892 130 30/.
2. Coat the surfaces to be joined with metal glue /e.g. Sika Force 7851; Wurth-cat.no.: 892 130 010/.
3. Inject the glue for metal into the corner bracket chamber - around the circumference of the chamber
4. Align and connect the profiles with the corner bracket
5. Clean the part of the glue that leaks between the cuts with a cleaning and degreasing agent /e.g. Sika Remover 208; Wurth-cat.no.: 892 130 30/.

NOTE:

This profile joining procedure is applicable to all Feal corner brackets and their corresponding chambers:

Gluing the cuts and corner brackets with metal adhesives ensures the necessary air and water tightness of the joint as well as additional mechanical strength of the joint.

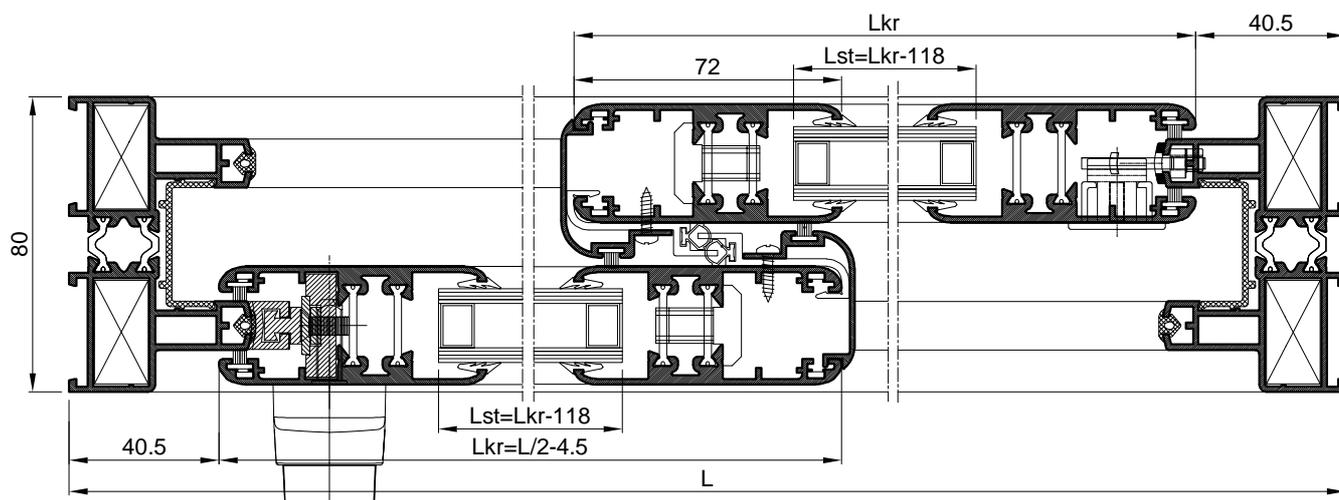
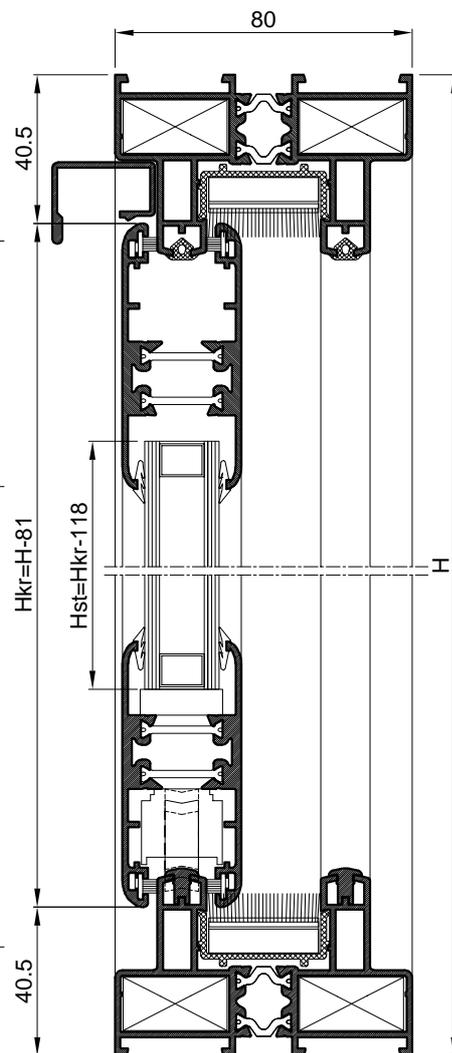


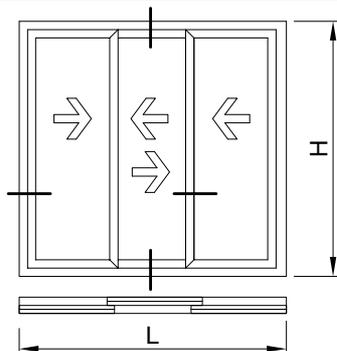
PROFILI PROFILES			kom pcs.	mjera measure	pilanje cutting
FT-0301	vodoravnica okvira	frame horizontal	2	L	45-45
FT-0301	okomica okvira	frame vertical	2	H	45-45
FT-0303	vodoravnica krila	sash horizontal	4	Lkr=L/2-4.5	45-45
FT-0303	okomica krila	sash vertical	4	Hkr=H-81	45-45
F-0832	završni profil	end profile	2	H-81	90-90
H-636	okapnica	drip profile	1	L-47	90-90

OKOVI HARDWARE			kom pcs.
730.008	kutnik okvira	frame corner brackets	8
730.012	kutnik krila	sash corner brackets	8
730.002	pomoćni kutnik krila	auxiliary sash corner bracket	16
140.001	kotačići-komplet	wheels-set	2
375.011	odstojnik i osigurač	spacer and sash removal lock	4
340.008	brtвило komplet	gasket set	1
375.014	umetak za profil F-0832	profile insert F-0832	4
130.003	ključanje u više točaka (brava FAST LOCK Master)	multi-point locking (FAST LOCK Master lock)	1
130.004	ključanje u više točaka (prihvatnici FAST LOCK /Master)	multi-point locking (FAST LOCK /Master holders)	1
104.016	ručka za vrata	door handle	1
105.006	bravica-pogonski dio	lock-drive part	1
105.010	bravica-jezičak s prihvatnikom	latch lock with catch	1

BRTVE GASKETS			kom pcs.	mjera measure
318.014	brtva prema staklu	gasket to the glass		4L+8H
347.014	četkasta brtva	brush seal		4L+6H
344.014	brtva na spoju krila	seal at the sash joint		2H
374.034	poliamid profil	polyamide profile		4L+4H
374.031	pvc profil	pvc profile	2	H-81
374.032	pvc profil	pvc profile		pila se skupa s al.profilom sawn together with the aluminum profile

STAKLO GLASS		kom pcs.	mjera measure
20 mm		2	Lkr-118 x Hkr-118





PROFILI PROFILES

PROFILI PROFILES			kom pcs.	mjera measure	pilanje cutting
FT-0301	vodoravnica okvira	frame horizontal	2	L	45-45
FT-0301	okomica okvira	frame vertical	2	H	45-45
FT-0303	vodoravnica krila	sash horizontal	6	Lkr=L/3+21	45-45
FT-0303	okomica krila	sash vertical	6	Hkr=H-81	45-45
F-0832	završni profil	end profile	4	H-81	90-90
H-636	okapnica	drip profile	1	L-47	90-90

OKOVI HARDWARE

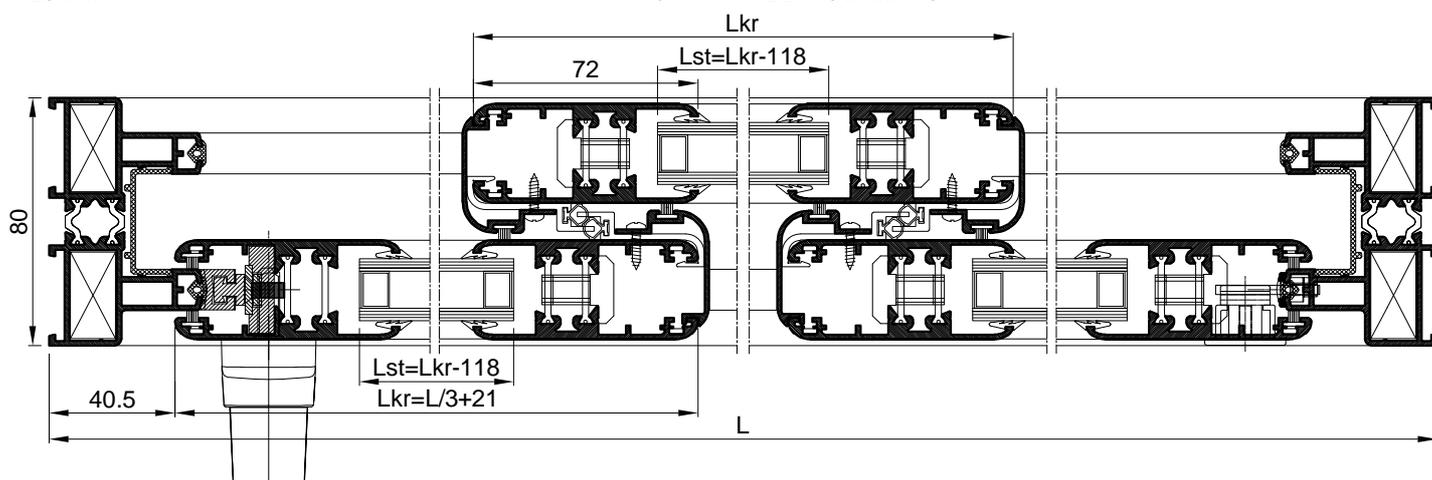
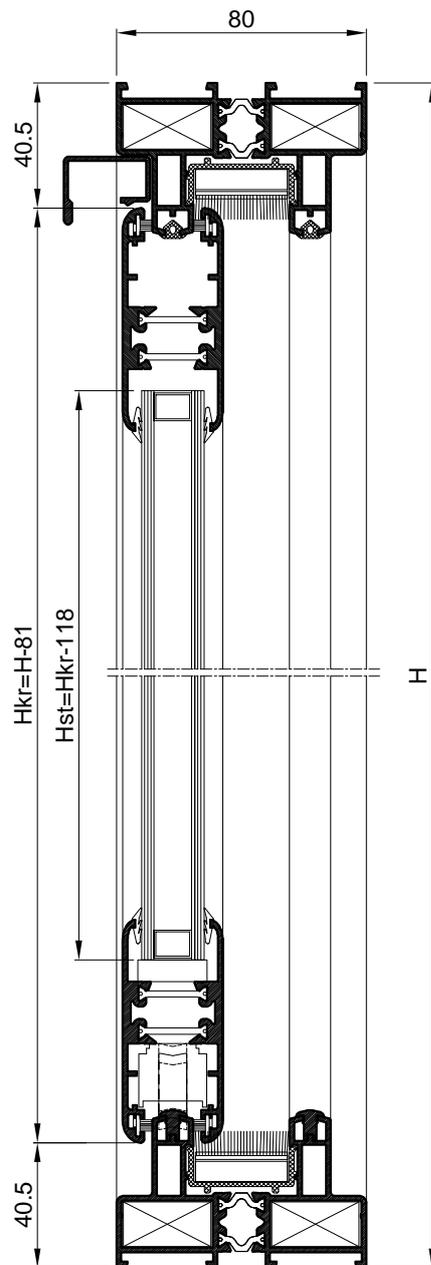
OKOVI HARDWARE			kom pcs.		
730.008	kutnik okvira	frame corner brackets	8		
730.012	kutnik krila	sash corner brackets	12		
730.002	pomoćni kutnik krila	auxiliary sash corner bracket	24		
140.001	kotačići-komplet	wheels-set	3		
375.011	odstojnici i osigurač	spacer and sash removal lock	4		
340.008	brtvilo komplet	gasket set	2		
375.014	umetak za profil F-0832	profile insert F-0832	8		
130.003	ključanje u više točaka (brava FAST LOCK /Master)	multi-point locking (FAST LOCK Master lock)	1		
130.004	ključanje u više točaka (prihvatalnici FAST LOCK /Master)	multi-point locking (FAST LOCK /Master holders)	1		
104.016	ručka za vrata	door handle	1		
105.006	bravica-pogonski dio	lock-drive part	1		
105.010	bravica-prihvatalnik s jezičkom	latch lock with catch	1		

BRTVE GASKETS

BRTVE GASKETS			kom pcs.	mjera measure
318.014	brtva prema staklu	gasket to the glass		4L+12H
347.004	četkasta brtva	brush seal		4L+8H
344.014	brtva na spoju krila	seal at the sash joint		4H
374.034	poliamid profil	polyamide profile		4L+4H
374.031	pvc profil	pvc profile	2	H-81
374.032	pvc profil	pvc profile		pila se skupa s al.profilom sawn together with the aluminum profile

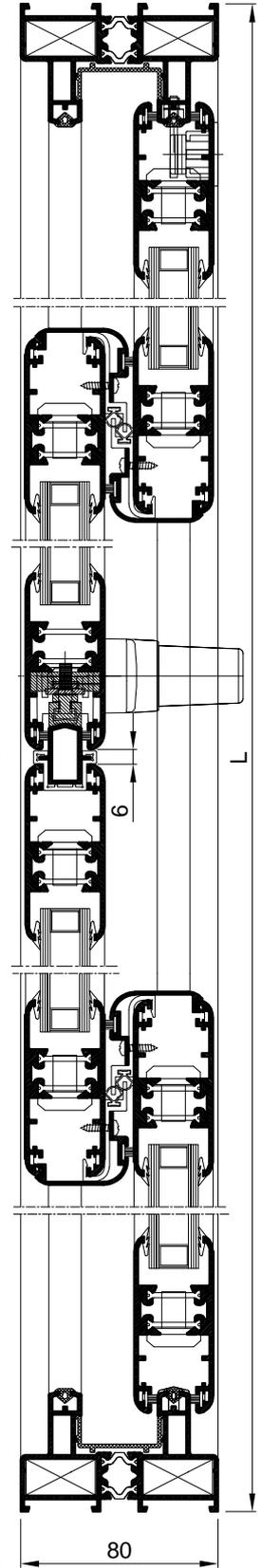
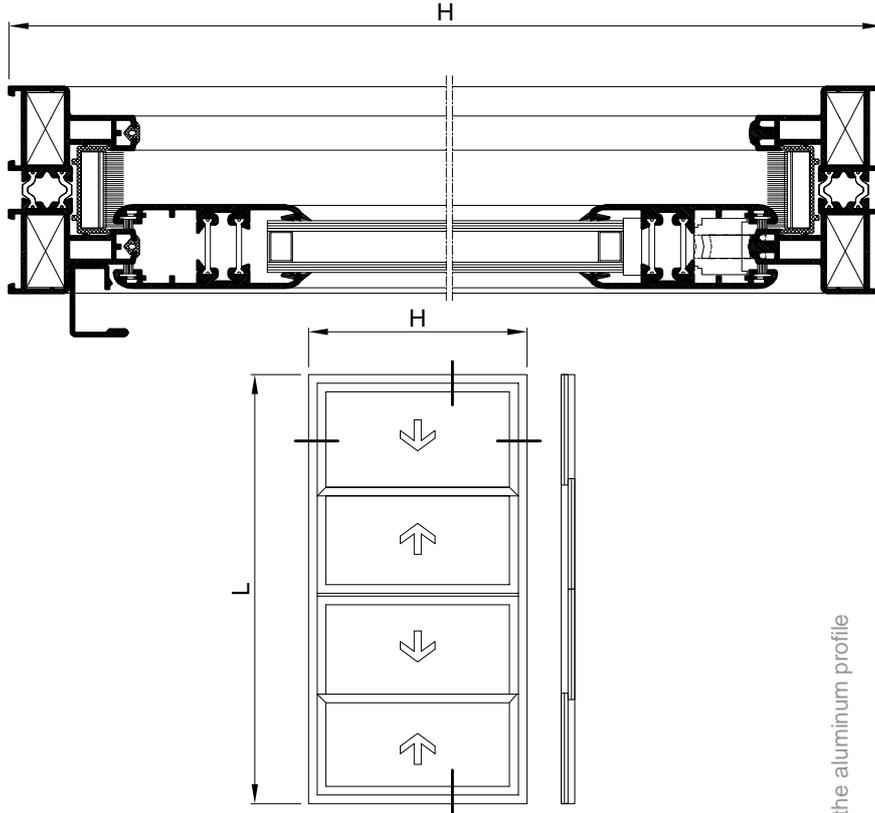
STAKLO GLASS

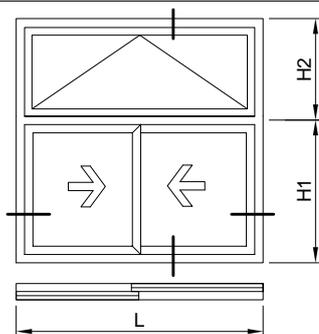
STAKLO GLASS		kom pcs.	mjera measure
20 mm		3	Lkr-118 x Hkr-118



PROFILI PROFILES

		kom pcs.	mjera measure	pilanje cutting
FT-0301	vodoravnica okvira	2	L	45-45
FT-0301	okomica okvira	2	H	45-45
FT-0303	vodoravnica krila Lkr	8	L/4+14.3	45-45
FT-0303	okomica krila Hkr	8	H-81	45-45
F-0832	završni profil	4	H-81	90-90
F-0833	profil na spoju krila	1	H-104	90-90
H-636	okapnica	1	L-47	90-90
OKOVI		kom	kom	
HARDWARE				
730.008	kutnik okvira	8	pcs.	
730.012	kutnik krila	16		
730.002	pomoćni kutnik krila	32		
140.001	kotačići-komplet	4		
375.011	odstojniki i osigurač	8		
340.008	brtvilo komplet	2		
375.014	umetak za profil F-0832	8		
130.003	ključanje u više točaka (brava FAST LOCK Master)	1		
130.004	ključanje u više točaka (prihvatnici FAST LOCK /Master)	1		
104.016	ručka za vrata	1		
105.006	bravica-pogonski dio	2		
105.010	bravica-prihvatnik s jezickom	2		
BRTVE GASKETS				
318.014	brtva prema staklu	kom	mjera	
347.004	četkasta brtva	4L+16H		
344.014	brtva na spoju krila	4L+10H		
374.034	poliamid profil	4H		
374.031	pvc profil	4L+4H		
374.032	pvc profil	H-81		
374.033	pvc profil	pila se skupa s al.profilom	sawn together with the aluminum profile	
STAKLO		1	H-103	
20 mm		kom	mjera	





**PROFILI
FILES**

PROFILI FILES			kom pcs.	mjera measure	pilanje cutting
FT-0301	vodoravnica okvira	frame horizontal	2	L	45-45
FT-0301	okomica okvira	frame vertical	2	H1	45-45
FT-0303	vodoravnica krila	sash horizontal	4	Lkr=L/2-4.5	45-45
FT-0303	okomica krila	sash vertical	4	Hkr=H1-81	45-45
F-0832	završni profil	end profile	2	H-81	90-90
H-636	okapnica	drip profile	1	L-47	90-90
FT-0305	vodoravnica okvira	frame horizontal	2	L+34	45-45
FT-0305	okomica okvira	frame vertical	2	H2+34	45-45
FT-0203	vodoravnica krila	sash horizontal	2	LV=L-44	45-45
FT-0203	okomica krila	sash vertical	2	HV=H2-44	45-45
Vodoravna staklolajsna		horizontal glass strip	2	LV-53	90-90
Okomita staklolajsna		vertical glass molding	2	HV-137	90-90

OKOVI HARDWARE

kom pcs.

730.008	kutnik okvira	frame corner brackets	8	
730.012	kutnik krila	sash corner brackets	8	
730.002	pomoćni kutnik krila	auxiliary sash corner bracket	16	
140.001	kotačići-komplet	wheels-set	2	
375.011	odstojnik i osigurač	spacer and sash removal lock	4	
340.008	brtvalo komplet	gasket set	1	
375.014	umetak za profil F-0832	profile insert F-0832	4	
730.008	kutnik središnji	center corner bracket	8	
730.005	pomoćni kutnik	auxiliary corner bracket	4	
710.026	pomoćni kutnik krila	auxiliary sash corner bracket	4	
710.037	pomoćni kutnik rama	auxiliary frame corner bracket	4	
730.001	pomoćni kutnik krila	auxiliary sash corner bracket	4	
730.002	pomoćni kutnik rama	auxiliary frame corner bracket	4	
111.004	šarka ventusa	vent hinge	2	
131.002	škare ventusa	ventus scissors	2	
130.003	ključanje u više točaka (brava FAST LOCK /Master)	multi-point locking (FAST LOCK Master lock)	1	
130.004	ključanje u više točaka (prihvatalnici FAST LOCK /Master)	multi-point locking (FAST LOCK /Master holders)	1	
104.016	ručka za vrata	door handle	1	
105.006	bravica-pogonski dio	lock-drive part	1	
105.010	bravica-jezičak s prihvatnikom	latch lock with catch	1	

BRTVE GASKETS

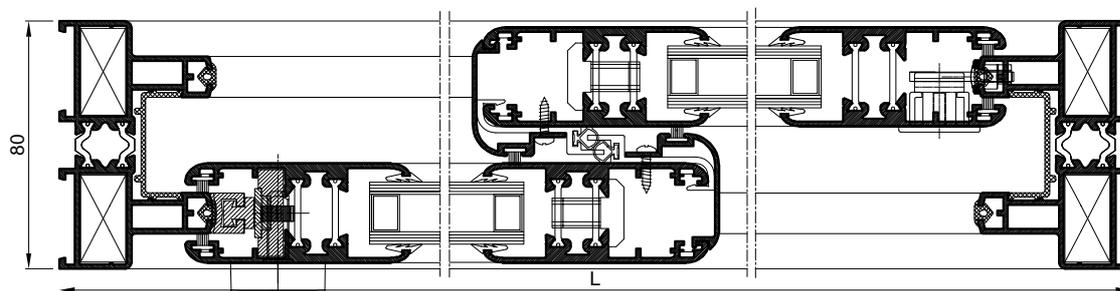
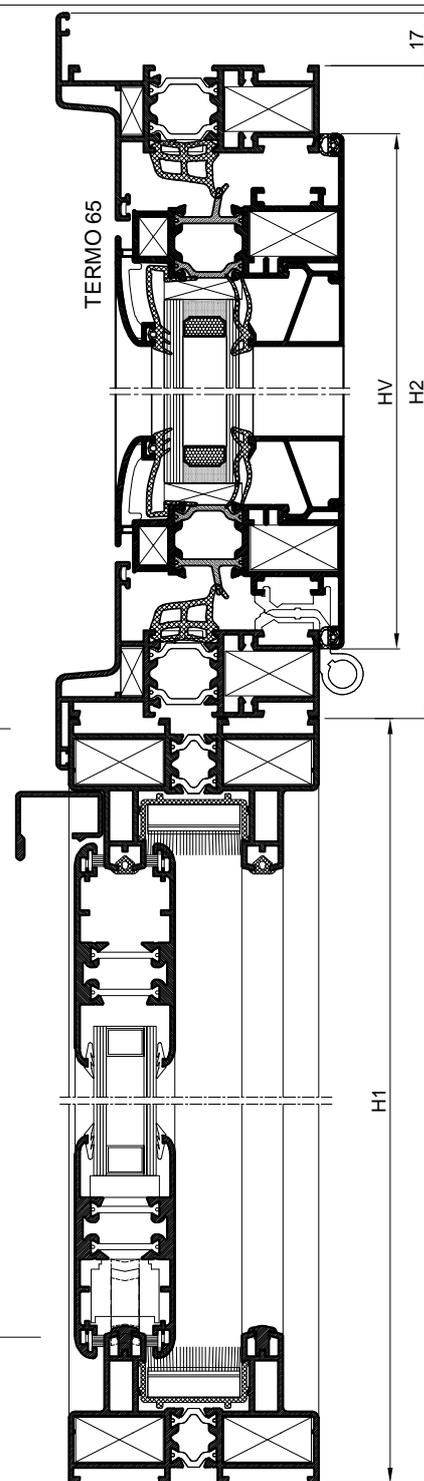
kom pcs. mjera measure

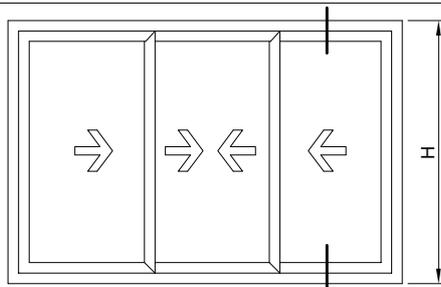
318.014	brtva prema staklu	gasket to the glass		4L+8H
347.014	četkasta brtva	brush seal		4L+6H
344.014	brtva na spoju krila	seal at the sash joint		2H
374.034	poliamid profil	polyamide profile		4L+4H
374.031	pvc profil	pvc profile	2	H-81
374.032	pvc profil	pvc profile	pila se skupa s al.profilom sawn together with the aluminum profile	
331.001	središnja brtva	center gasket		2L+2H
328.001	brtva u krilu	sash gasket		2L+2H
345.001	kutni umetak brtve	gaskets corner insert	4	

STAKLO GLASS

kom pcs. mjera measure

20 mm			2	Lkr-118 x Hkr-118
ispuna ventusa	ventus filling		1	LV-107 x HV-107



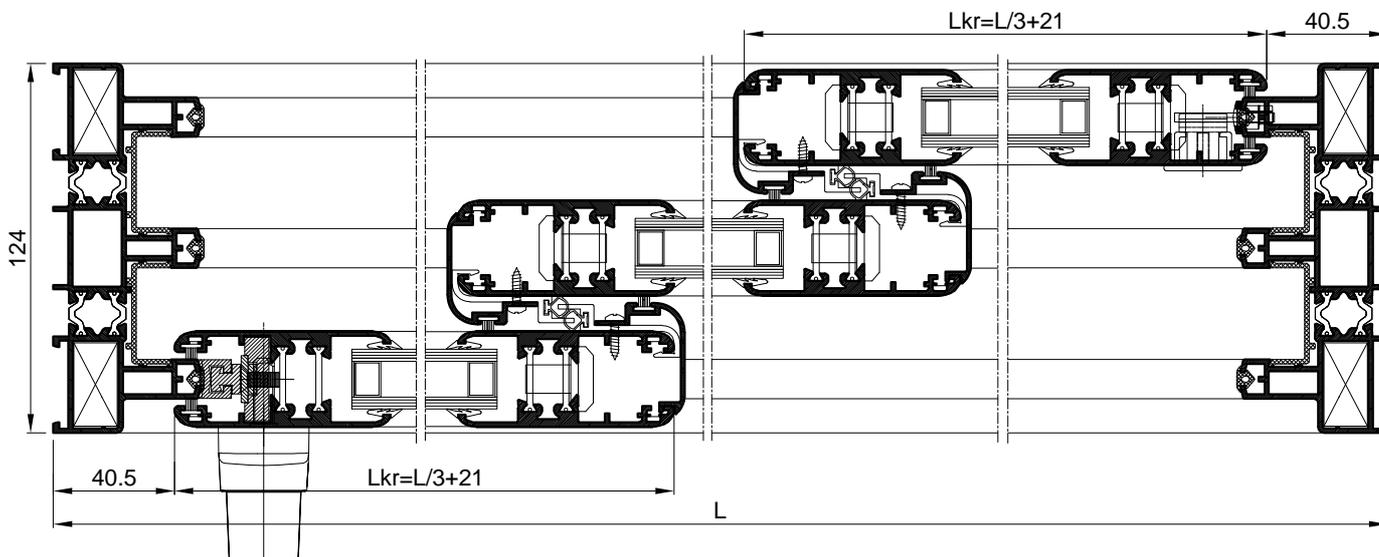
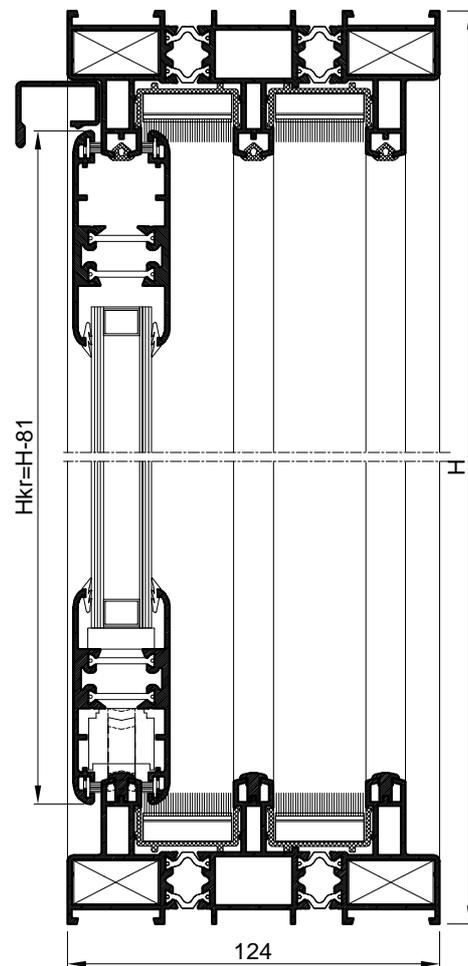


PROFILI FILES			kom pcs.	mjera measure	pilanje cutting
FT-0302	vodoravnica okvira	frame horizontal	2	L	45-45
FT-0302	okomica okvira	frame vertical	2	H	45-45
FT-0303	vodoravnica krila	sash horizontal	6	$Lkr=L/3+21$	45-45
FT-0303	okomica krila	sash vertical	6	$Hkr=H-81$	45-45
F-0832	završni profil	end profile	4	H-81	90-90
H-636	okapnica	drip profile	1	L-47	90-90

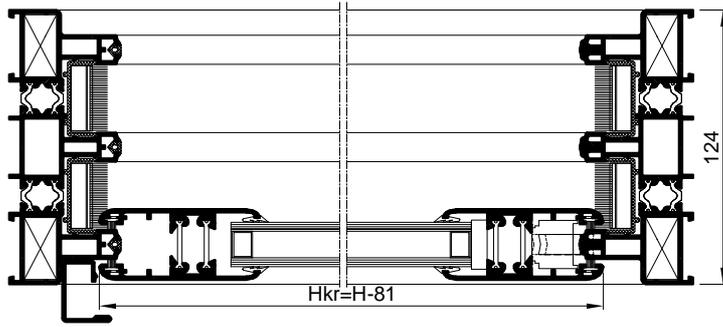
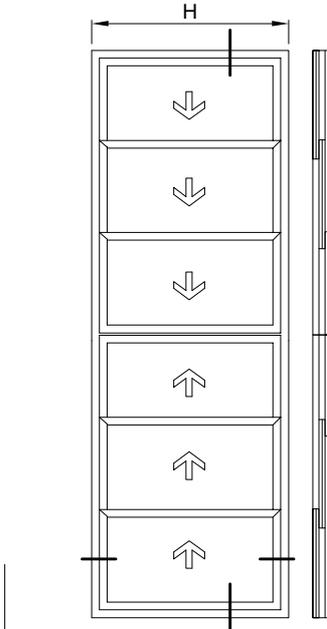
OKOVI HARDWARE			kom pcs.
730.008	kutnik okvira	frame corner brackets	8
730.012	kutnik krila	sash corner brackets	12
730.002	pomoćni kutnik krila	auxiliary sash corner bracket	24
140.001	kotačići-komplet	wheels-set	3
375.011	odstojnik i osigurač	spacer and sash removal lock	4
340.008	brtvilo komplet	gasket set	2
375.014	umetak za profil F-0832	profile insert F-0832	8
130.003	ključanje u više točaka (brava FAST LOCK /Master)	multi-point locking (FAST LOCK Master lock)	1
130.004	ključanje u više točaka (prihvatalnici FAST LOCK /Master)	multi-point locking (FAST LOCK /Master holders)	1
104.016	ručka za vrata	door handle	1
105.006	bravica-pogonski dio	lock-drive part	1
105.010	bravica-jezičak s prihvatnikom	latch lock with catch	1

BRTVE GASKETS			kom pcs.	mjera measure
318.001	brtva prema staklu	gasket to the glass		$4L+12H$
347.004	četkasta brtva	brush seal		$4L+8H$
344.014	brtva na spoju krila	seal at the sash joint		4H
374.034	poliamid profil	polyamide profile		$6L+6H$
374.031	pvc profil	pvc profile	4	H-81
374.032	pvc profil	pvc profile		pila se skupa s al.profilom sawn together with the aluminum profile

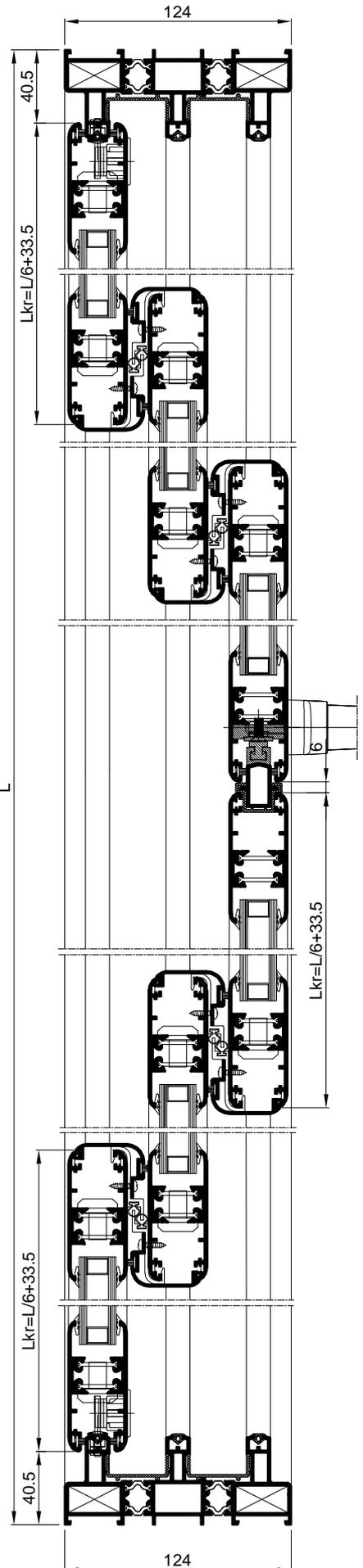
STAKLO GLASS		kom pcs.	mjera measure
20 mm		3	$Lkr-118 \times Hkr-118$



PROFIL PROFILES	kom pcs.	mjera measure	pilanje cutting
FT-0302	2	L	45-45
FT-0302	2	H	45-45
FT-0303	12	Lkr=L/6+33.5	45-45
FT-0303	12	Hkr=H-81	45-45
F-0832	8	H-81	90-90
F-0833	1	H-104	90-90
H-636	1	L-47	90-90
OKOVI	kom		
HARDWARE	pcs.		



BRTVE	kom pcs.	mjera measure
730.008	8	4L+24H
730.012	24	4L+14H
730.002	48	8H
140.001	6	6L+6H
375.011	6	H-81
340.008	4	pila se skupa s al-profilom sawn together with the aluminum profile
375.014	16	H-81
130.003	1	H-81
130.004	1	L
104.016	1	mjera
105.006	2	measure
105.010	2	
GASKETS	kom	
318.001	pcs.	
347.004	8	Lkr=L/6+33.5
344.014	6	Lkr=L/6+33.5
374.034	8	Lkr=L/6+33.5
374.031	8	Lkr=L/6+33.5
374.032	8	Lkr=L/6+33.5
374.033	8	Lkr=L/6+33.5
STAKLO	kom	
GLASS	pcs.	
20 mm	6	Lkr=118 x Hkr-118



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