

TEHNIČKI KATALOG / TECHNICAL CATALOGUE

sistemi podkonstrukcije za ventilisane fasade
substructure systems for ventilated facades

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pouzdan partner u svetu aluminijuma



TEHNOMARKET posluje više trideset godina u gradu Pančevu, kao kompanija specijalizovana za aluminijumske konstrukcije sa primenom u građevinarstvu. Dugogodišnje iskustvo, najpre u proizvodnji prozora i vrata, a zatim i ostakljenih fasada, pretočeno je tokom vremena u rad na dizajnu i proizvodnji sistema aluminijumskih profila različite namene. Pokretanjem prvog privatnog pogona za ekstrudiranje aluminijumskih profila 2002. godine u Srbiji, TEHNOMARKET započinje novo razdoblje u svom radu, povećavajući obim svog poslovanja i pozicionirajući se u regionu kao značajan industrijski proizvođač u aluminijumskoj branši.

Sistemi koje TEHNOMARKET razvija i nudi na tržištu, namenjeni su na prvom mestu izradi prozora i vrata, ostakljenih fasada, kliznih elemenata, neprobojnih konstrukcija, kao i podkonstrukcije različitih fasadnih obloga. Najnovije i trenutno aktuelne serije proizvoda nastale su primenom novih tehnologija i tehničkih rešenja sa ciljem da zadovolje sve zahtevnije prohteve tržišta u pogledu energetske efikasnosti i zaštite životne sredine.

Pored sistemskih i profila standardne geometrije u pogonu za ekstrudiranje proizvode se i profili posebnih namena, za poznate kupce, po porudžbini, koji dalje pronalaze primenu u velikom broju privrednih grana od auto-industrije, saobraćajne signalizacije, elektro-industrije, proizvodnje nameštaja, telekomunikacija, advetajzinga...

For more than 30 years, TEHNOMARKET has specialized in aluminium constructions that caters to the building and construction industry needs from our Pančevo-based facilities. Our experience, gained from many years of doors, windows and glazed curtain walls manufacturing successfully transferred to design and development of modern aluminium profile systems for different purposes. By starting a first privately owned aluminium extrusion factory in Serbia in 2002, TEHNOMARKET starts a new chapter, drastically increasing product range and volume and positioning itself as one of the major regional manufacturers of aluminium products.

Systems that TEHNOMARKET develops and offers are foremost meant for manufacturing of windows and doors, glazed curtain walls, sliding elements and bulletproof constructions, as well as substructures for various types of ventilated facades. Our latest lines of products were created with state of the art technologies and technical solutions in order to comply with increasingly demanding energy efficiency and environmental protection standards and regulations.

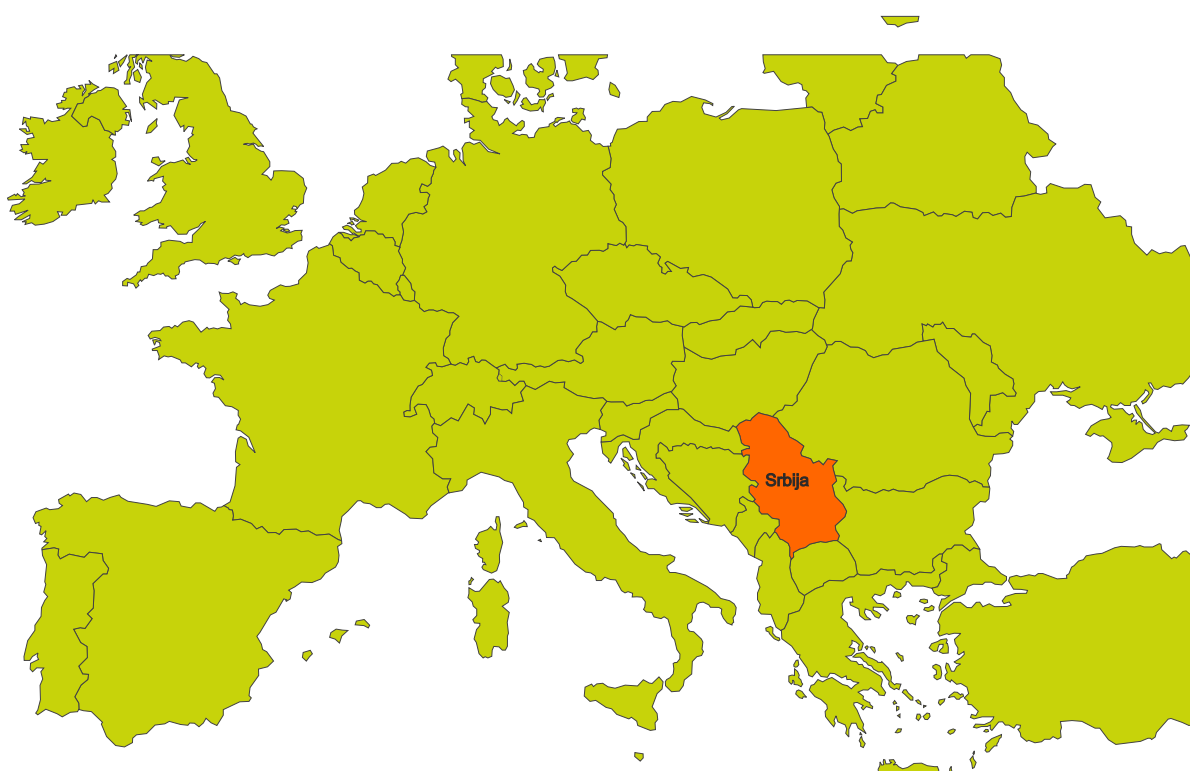
Beside system and standard dimensioned profiles, a variety of custom designed profiles is extruded for known client and according to their technical drawings. These special profiles are widely used in number of different industrial areas, such as automotive, signage, furniture, telecommunication, electronical and advertising industry...

Stalno praćenje trendova, saradnja sa kupcima i tehnička podrška klijentima tokom dogodišnjeg poslovanja izdvojili su se kao osnovni principi rada kompanije TEHNOMARKET. Ujedno, konstantna saradnja sa domaćim i evropskim sertifikacionim kućama doprinosi razvoju i uvođenju inovacija u sve aspekte organizacije i proizvodnje firme, a ISO 9001, ISO 14001 i ISO 45001 sertifikacija, koju kompanija poseduje, to i zvanično potvrđuje.

Pozicija sedišta firme i fabrike za ekstruziju nalazi se 17 kilometara od centra Beograda i svega nekoliko kilometara od železničkog kargo-terminala i velike rečne luke na Dunavu, kao i nepunih 30 kilometara od međunarodnog aerodroma „Nikola Tesla“ u Beogradu.

Ongoing trend monitoring, direct communication with clients and technical support have become defining principles of TEHNOMARKET's long term-business philosophy. At the same time, constant cooperation with domestic and European certification institutes further strengthens basic principles of research, development and ongoing innovation throughout all organisational and manufacturing segments of the company, which is confirmed by ISO 9001, ISO 14001 and ISO 45001 certificate.

Company's headquarters and extrusion factory are conveniently located only 17 km from centre of Belgrade, Serbia's capitol, and just a few kilometers from rail cargo terminal and a major river port on Danube. Belgrade International airport "Nikola Tesla" is also less than 30 km away.



Stalne promene na svetskom tržištu i sve kompleksniji zahtevi krajnjih korisnika, sa jasno izdvojenom potrebom za brzom proizvodnjom i izradom, ujedno i lakoćom i jednostavnošću u obradi, jasno su izdvojili aluminijum kao građevinski materijal budućnosti. Aluminijum kao najzastupljeniji od svih metala na Zemlji, našao je svoju primenu u skoro svim granama industrije i građevinarstva. Većina njegove mase na planeti se nalazi u obliku aluminosilikata. Sa svojom gustoćom od 2700kg/m^3 , oko tri puta je lakši od gvožđa i bakra, pa je iz tog razloga i dominantno prisutniji u lakim građevinskim konstrukcijama. Dobija se elektrolitičkim postupkom u specijalnim električnim pećima, u kojima temperature dostiže i 1000°C . Standardni procesi obrade aluminijuma kako bi se dobili krajnji proizvodi su ekstrudiranje, zavarivanje, toplo i hladno valjanje. U završnoj primeni najčešće se koristi sa površinskom zaštitom od koje su najviše zastupljene eloksaža (anodizacija) i plastifikacija (elektrostatska pulverzacija).

Kao neke od brojnih prednosti aluminijuma izdvajaju se:

- izuzetno lagan materijal, male gustine, stabilan je i ne opterećuje konstrukciju
- poseduje veliku mogućnost oblikovanja, pruža raznovrsnost oblika i široku mogućnost kombinovanja
- trajan je i postojan kao građevinska komponenta bez promena osobina tokom vremena
- reciklabilan, po isteku eksploatacije lako se topi i ponovo vraća u novi ciklus primene
- neotrovan je, ne šteti okolini, nema otrovna isparenja i nezapaljiv je
- ima mogućnost zavarivanja i ne varniči prilikom obrade
- dobar je provodnik toplote i električne energije
- otporan je na koroziju usled atmosferskih uticaja, u sirovom stanju oblaže se tankim slojem oksida
- dopadljivo je srebrnasto-sjajne nijanse, dekorativnog je izgleda i pruža velike mogućnosti kod odabira boje površinske zaštite
- lak je i jednostavan za održavanje i u eksterijeru i u enterijeru

Constant shifts in global market and more complex demands by clients, with distinctly outlined need for fast manufacturing and assembly, followed by simple machining, have clearly selected aluminium as building material of the future. Aluminium, the most common metal on Earth, has found its use in almost all segments of industry and construction. The most of its mass on planet is found in shape of aluminosilicate. With its density of 2700kg/m^3 , it is about three times lighter than iron and copper, and therefore far more present in light building constructions. Aluminium is acquired in special electrolytic process conducted in special electric ovens that generate temperatures up to 1000°C . Further aluminium processing into final products includes extrusion, welding, hot and cold rolling. For finished products, aluminium is usually used with anodized or powder coated surface.

Here are some of aluminium's numerous advantages:

- extreme lightweight, low density, stable and it does not present an unnecessary burden for structure
- easily machinable into number of different shapes, optimal for numerous applications
- long lasting and stable as a construction component without change in properties over time
- completely recyclable, easily re-inserted into manufacturing cycle
- it is not toxic, flammable, evaporable and it is safe for the environment
- aluminium can be welded and it does not produce sparks during machining
- good conductor of heat and electricity
- corrosion resistant, covered with thin oxide layer when raw
- it has appealing natural silver shade and offers great flexibility when choosing surface treatment colors
- simple and easy to maintain, both in interior and exterior



Sistemi podkonstrukcija VENT dizajnirani su sa ciljem da ponude savremeno, kompletno i efikasno rešenje za konstrukciju i projektovanje sve popularnijih ventilisanih fasada. Osnovna namena ove grupe sistema je izrada aluminijumskih podkonstrukcija za sve tipove fasadnih obloga primenljivih u ventilisanim fasadama.

VENT broji deset različitih sistema podeljenih u dve konstruktivne grupe:

A. Panelni sistemi

- **RIVET / TACK**
za kompozitne panele, lim, staklo, HPL
- **HIDE**
za HPL, granitnu keramiku i kamen
- **STONE**
za keramiku i granitnu keramiku
- **ROCK**
za prirodni kamen veće debljine
- **CONTINUAL**
za sve pločaste materijale bez ograničenja

B. Kasetni sistemi

- **BOX**
za kompozitne panele i limove
- **SLIDER**
za kompozitne panele i limove
- **BOLT**
za kompozitne panele i limove
- **GASKET**
za kompozitne panele i limove
- **FIT**
za kompozitne panele i limove

VENT series of substructure systems are designed to offer modern, complete and efficient solution for construction and production of increasingly popular ventilated facades. The basic purpose of these solutions is to offer complete substructure systems for all types of suitable cladding materials.

VENT consists of ten different systems divided into two main groups:

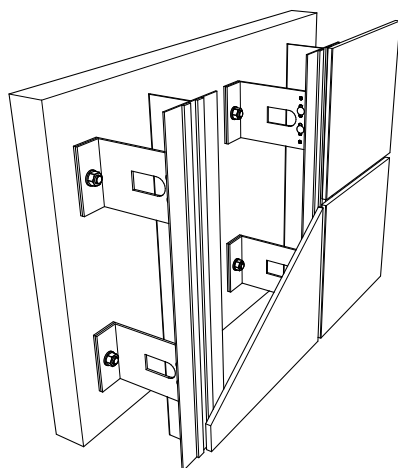
A. Panel systems

- **RIVET / TACK**
for composite panels, solid metal sheets, glass, HPL
- **HIDE**
for HPL, granite ceramics and stone
- **STONE**
for ceramic tiles and granite ceramics
- **ROCK**
for thick natural stone panels
- **CONTINUAL**
for all flat cladding materials without limitations

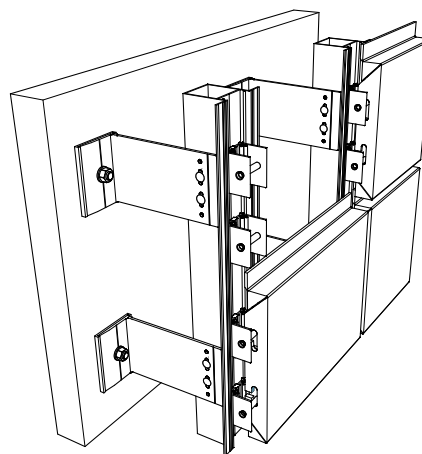
B. Cassette systems

- **BOX**
for composite panels and solid metal sheets
- **SLIDER**
for composite panels and solid metal sheets
- **BOLT**
for composite panels and solid metal sheets
- **GASKET**
for composite panels and solid metal sheets
- **FIT**
for composite panels and solid metal sheets

A



B





novo ime za savremene
ventilisane fasade

new name for
modern facades

Sistemi iz gupe A nude više opcija za postavljanje svih vrsta pločastih materijala kao spoljne obloge u sklopu ventilisane fasade, bez obzira na vrstu materijala, njegove mehaničke karakteristike, debljinu ili željeni izgled gotove fasade.

Sistemi iz grupe B, zbog specifičnosti sistema kačenja koji zahteva kasetiranje panela, namenjeni su isključivo za obloge od kompozitnih panela ili punih limova koji se mogu obrađivati na CNC obradnom centru. Svi sistemi iz ove grupe nude brzu finalnu montažu gotovih kaseti i njihovo sigurno zaključavanje u fasadnom sklopu.

Kao najbitnije karakteristike VENT sistema izdvajaju se:

- širok izbor sistema za sve tipove materijala namenjenih za korišćenje u sklopu ventilisanih fasada
- jednostavno integrisanje toplotne izolacije u fasadu
- visoka prilagodljivost sistema svim tipovima objekata
- visok stepen radioničke pripreme i prefabrikacije
- sloboda u dizajniranju finalnog izgleda fasade
- izuzetna trajnost fasade, bez održavanja i uz laku popravku pojedinačnih polja u slučaju oštećenja
- mogućnost jednostavne modernizacije postojećih objekata u minimalnom roku
- sistemski omogućena integracija sa ostakljenim fasadama, kao i kombinovanje više materijala u sklopu jednog projekta
- primena u eksterijeru i enterijeru, posebno na projektima gde se zahteva nevidljivo kačenje prirodnog kamena, granitne keramike ili HPL panela
- širok izbor kotvi različitih dužina, pratećeg materijala i pribora za montažu

Systems from group A offer numerous options for installation of all types of flat cladding panels as a final layer of the ventilated facade, regardless of material type, mechanical properties, thickness or desired visual appearance of finished facade.

Systems from group B, due to specific attachment points that require panels to be formed into cassettes, are suitable for aluminium composite panels and solid metal sheets that are suitable for CNC machining. All systems in this group offer fast final installation and secure locking of individual elements into place.

The most important VENT system features are:

- wide array of different systems for all types of cladding materials suitable for ventilated facade applications
- simple integration of thermal insulation layer within the facade
- high flexibility and adjustability of systems for all types of projects
- high percentage of workshop prefabrication
- freedom in designing of visual facade appearance
- exceptional facade durability, with almost no maintenance and easy repair in case of damage
- easy modernization of old buildings and renovation projects
- exterior and interior applications, specifically on projects that feature invisible anchoring of natural stone, granite ceramics or HPL panels
- wide array of system anchors in different lengths, accessories and installation bits available

Uvod
Introduction

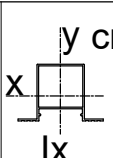
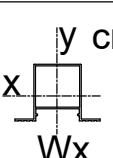
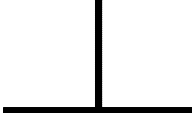
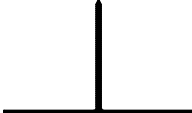
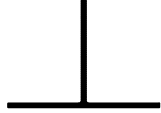
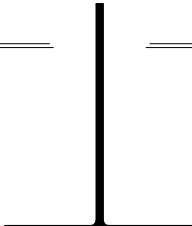
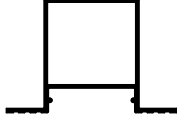
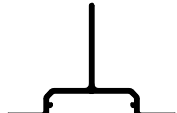
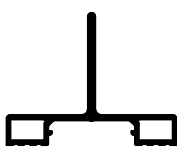
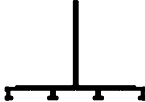


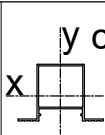
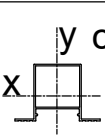
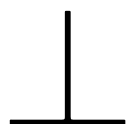
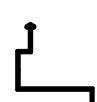
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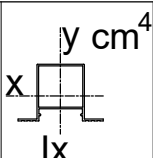
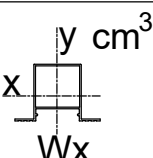
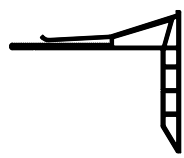


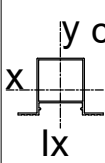
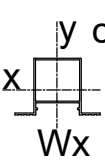
Sistem
System

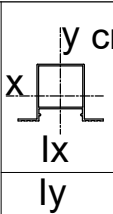
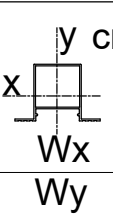
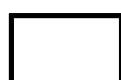
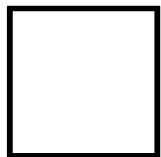


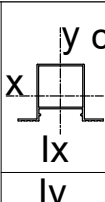
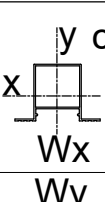
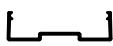
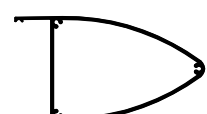
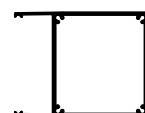
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	kg/m`		I_y	W_y
	V06	Stub / Prečka	12,79	2,732
	1,119	Mullion / Transom	20,84	4,168
	V07	Stub / Prečka	10,46	2,206
	0,908	Mullion / Transom	16,67	3,334
	V08	Stub / Prečka	10,97	2,247
	1,031	Mullion / Transom	28,81	4,801
	V95	Stub / Prečka	8,54	1,865
	0,798	Mullion / Transom	9,84	2,46
	V20	Stub / Prečka	103,78	12,718
	1,829	Mullion / Transom	20,877	4,175
	V01	Stub	23,90	7,134
	1,184	Mullion	20,51	4,558
	V101	Stub	8,05	1,825
	0,889	Mullion	14,91	3,313
	V88	Stub	22,055	7,954
	1,840	Mullion	39,291	4,901
	V09	Stub / Prečka	5,156	1,332
	0,720	Mullion / Transom	7,941	2,146

	Oznaka Mark	Opis Description		
	kg/m`		ly	Wy
	V124	Horizontalni nosač Horizontal bracket	99,98	13,331
	1,448		5,08	3,385
	V125	Stub / Prečka Mullion / Transom	8,39	1,907
	0,651		3,61	1,202
	V15	Profil za prihvrat obloge Cladding mounting profile		
	0,318			
	V05	Profil za prihvrat obloge Cladding mounting profile		
	0,385			
	V14	Prečka / Nosač Transom / Bracket	11,56	3,247
	0,730		1,50	1,111
	V19	Prečka / Nosač Transom / Bracket	14,531	4,199
	0,919		1,744	1,255
	V17	Prečka Transom	1,533	0,592
	0,748		6,116	2,926
	V18	Prečka Transom	4,964	1,993
	0,699		1,503	0,691
	V02	Prečka Transom	1,231	4,714
	0,464		4,477	1,189

	Oznaka Mark	Opis Description	 $y \text{ cm}^4$ I_x	 $y \text{ cm}^3$ W_x W_y
	kg/m`		I_y	
	V03	Profil nosača Bracket profile	0,537	0,365
	0,426		3,024	1,270
	V13	Profil za kotvu Anchor profile	15,09	3,118
	1,705		50,50	7,953
	V16	Stub / Profil za kotvu Mullion / Anchor profile	2,87	0,884
	1,028		33,83	5,812
	V10	Stub / Profil za kotvu Mullion / Anchor profile	3,254	0,965
	1,276		71,791	9,660
	V117	Stub / Profil za kotvu Mullion / Anchor profile	3,847	11,135
	1,585		116,68	13,38
	V11	Profil za kotvu Anchor profile	11,529	2,292
	2,115		214,90	21,642
	V12	Profil za kotvu Anchor profile	13,99	2,783
	2,860		377,43	30,911
	V126	Profil za kotvu Anchor profile	19,77	3,80
	3,152		523,13	38,47
	L1530	Dodatni profil Additional profile		
	0,230			

	Oznaka Mark	Opis Description	 $y \text{ cm}^4$ I_x	 $y \text{ cm}^3$ W_x
	kg/m`		I_y	W_y
	L2030	Dodatni profil Additional profile		
	0,264			
	L2020	Dodatni profil Additional profile		
	0,209			
	L4040(2)	Dodatni profil Additional profile		
	0,319			
	L4040(4)	Stub / Profil za kotvu / Dodatni profil Mullion / Anchor profile / Additional profile		
	0,428			
		Dodatni profil Additional profile		
	0,836			
	L2060	Dodatni profil Additional profile		
	0,429			
	L4060	Stub / Profil za kotvu / Dodatni profil Mullion / Anchor profile / Additional profile		
	0,538			
	K2020	Dodatni profil Additional profile		
	0,305			
	K2040	Dodatni profil Additional profile		
	0,470			

	Oznaka Mark	Opis Description		
	kg/m`			
	K3030	Dodatni profil		
	0,470	Additional profile		
	K4050	Dodatni profil		
	0,946	Additional profile		
	K4040	Dodatni profil		
	0,836	Additional profile		
	K4060	Dodatni profil		
	0,903	Additional profile		
	K8080	Dodatni profil		
	1,716	Additional profile		
	T3030	Stub / Dodatni profil		
	0,319	Mullion / Additional profile		
	TMF3	Potkapa		
	0,430	Pressure plate		
	TMF33	Potkapa		
	0,507	Pressure plate		
	TMF4	Kapa		
	0,264	Cover cap		

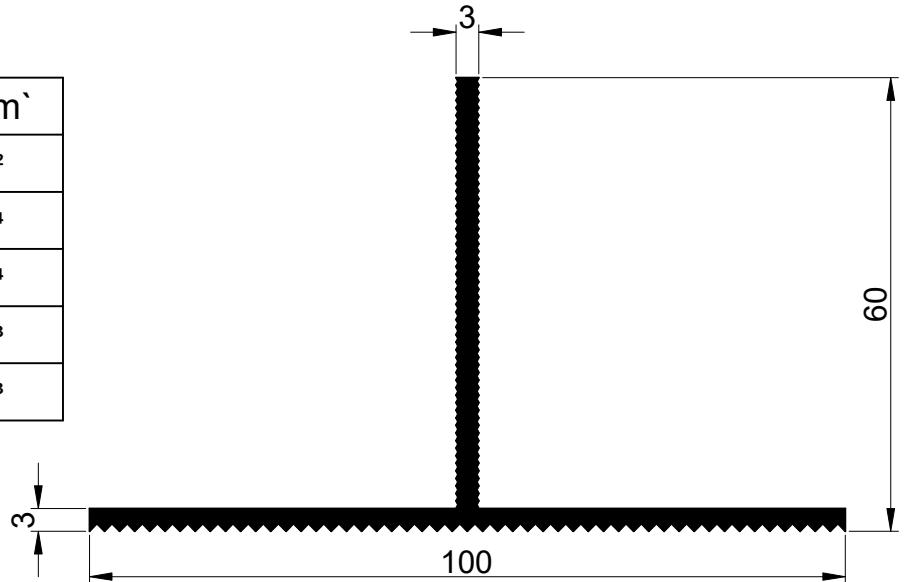
	Oznaka Mark	Opis Description		
	kg/m`		ly	Wy
	TMF5	Kapa Cover cap		
	0,238			
	TMF58	Kapa Cover cap		
	0,253			
	TMF27	Kapa Cover cap		
	0,209			
	TMF61	Potkapa / Kapa Pressure plate / Cover cap		
	0,841			
	TMF54	Kapa Cover cap		
	2,088			
	TMF15	Kapa Cover cap		
	0,931			
	TMF20	Kapa Cover cap		
	0,963			
	TMF17	Potkapa / Kapa Pressure plate / Cover cap		
	0,216			
	TMF41	Potkapa / Kapa Pressure plate / Cover cap		
	0,591			

[illegible]

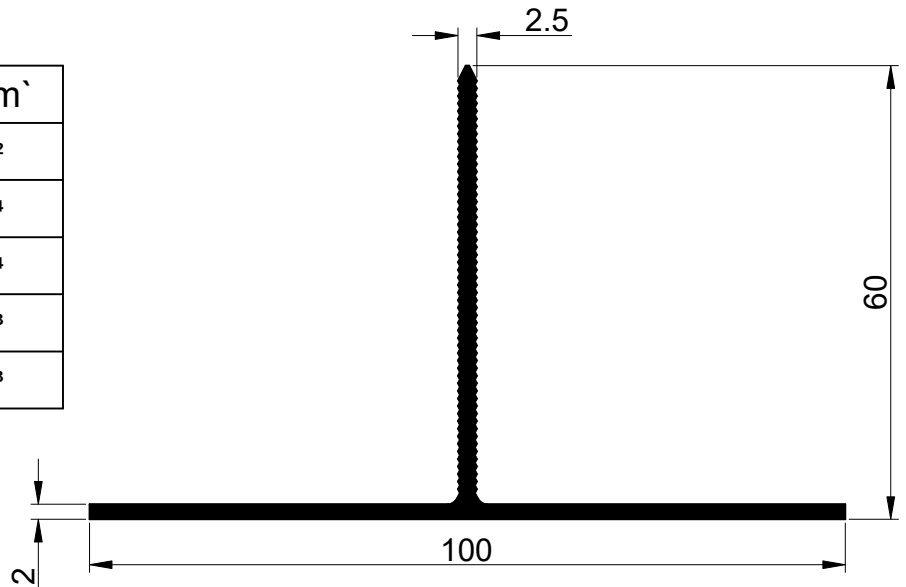
Aluminijumski profili
aluminium profiles



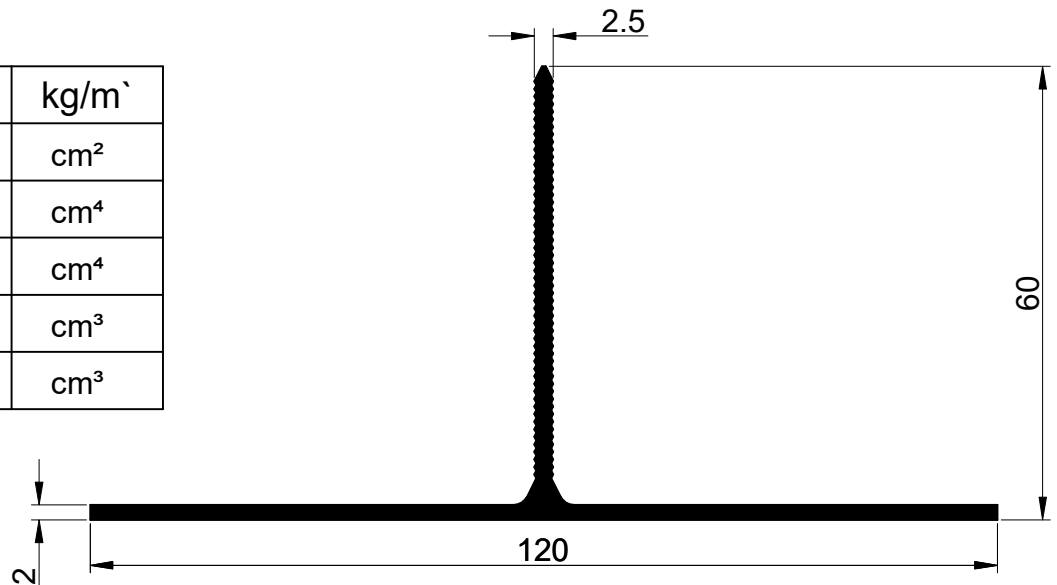
V06	1,119	kg/m`
S	4,067	cm ²
I _x	12,794	cm ⁴
I _y	20,844	cm ⁴
W _x	2,733	cm ³
W _y	4,168	cm ³



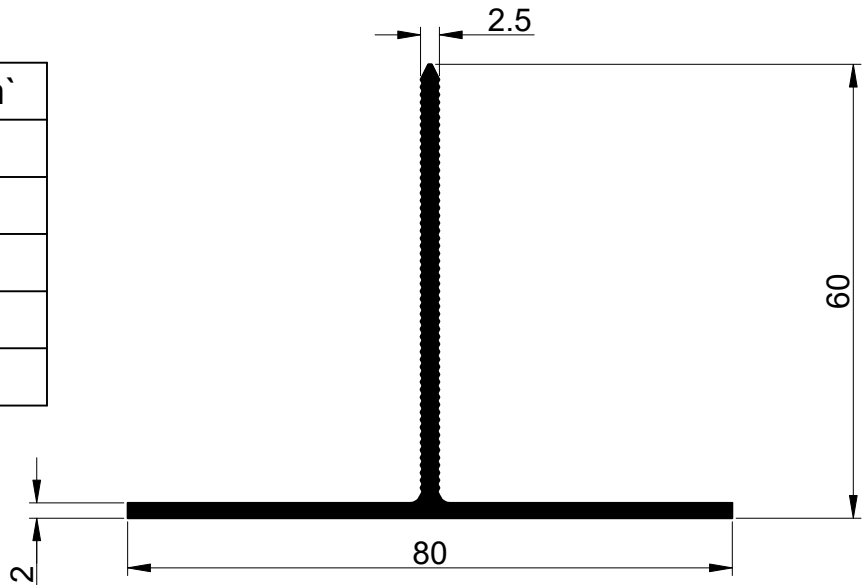
V07	0,908	kg/m`
S	3,300	cm ²
I _x	10,455	cm ⁴
I _y	16,672	cm ⁴
W _x	2,206	cm ³
W _y	3,334	cm ³



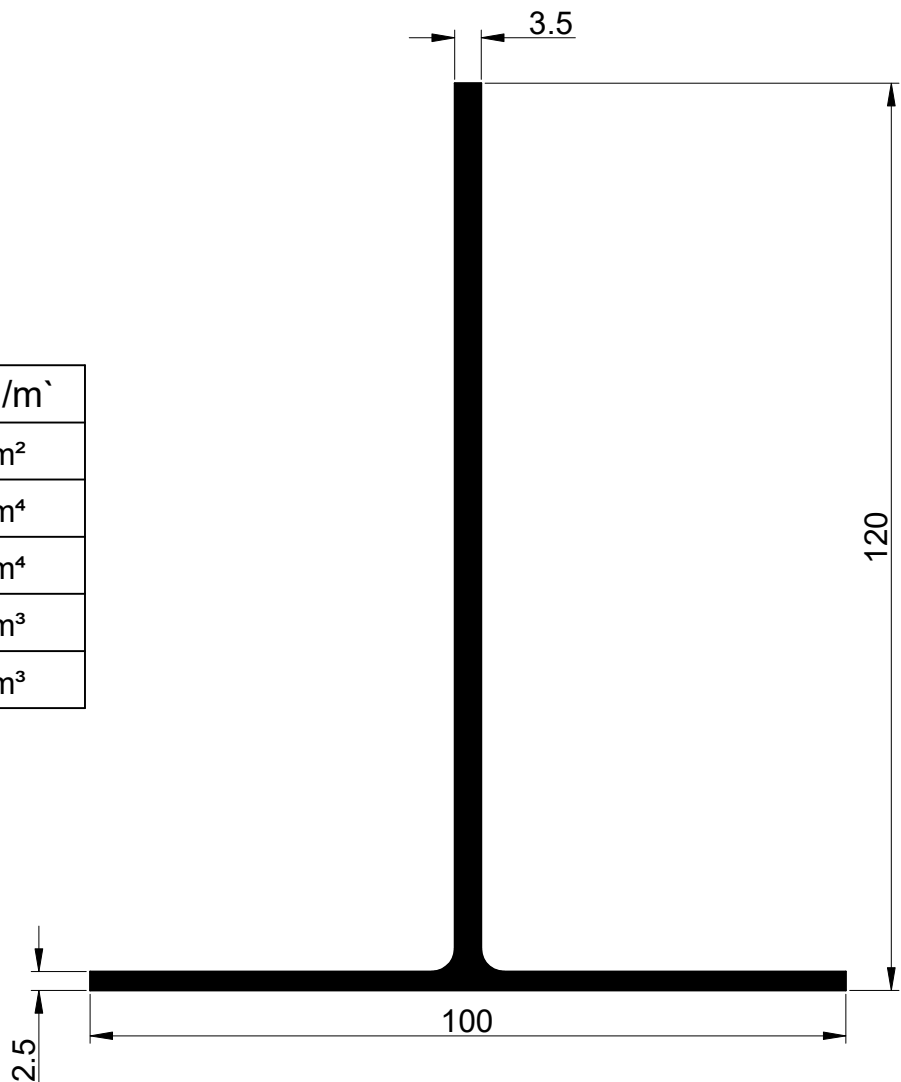
V08	1,031	kg/m`
S	3,748	cm ²
I _x	10,969	cm ⁴
I _y	28,807	cm ⁴
W _x	2,247	cm ³
W _y	4,801	cm ³



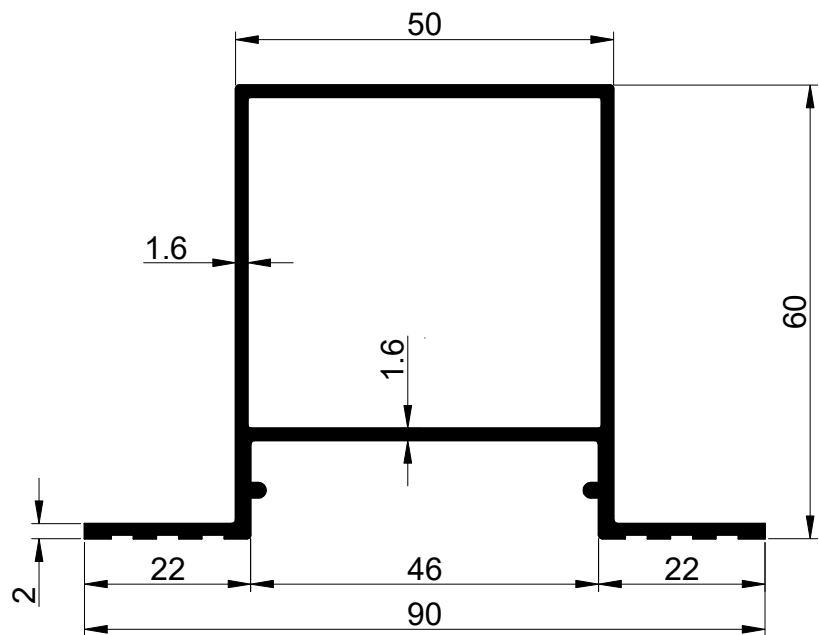
V95	0,798	kg/m`
S	2,9	cm ²
I _x	9,84	cm ⁴
I _y	8,54	cm ⁴
W _x	2,15	cm ³
W _y	2,14	cm ³



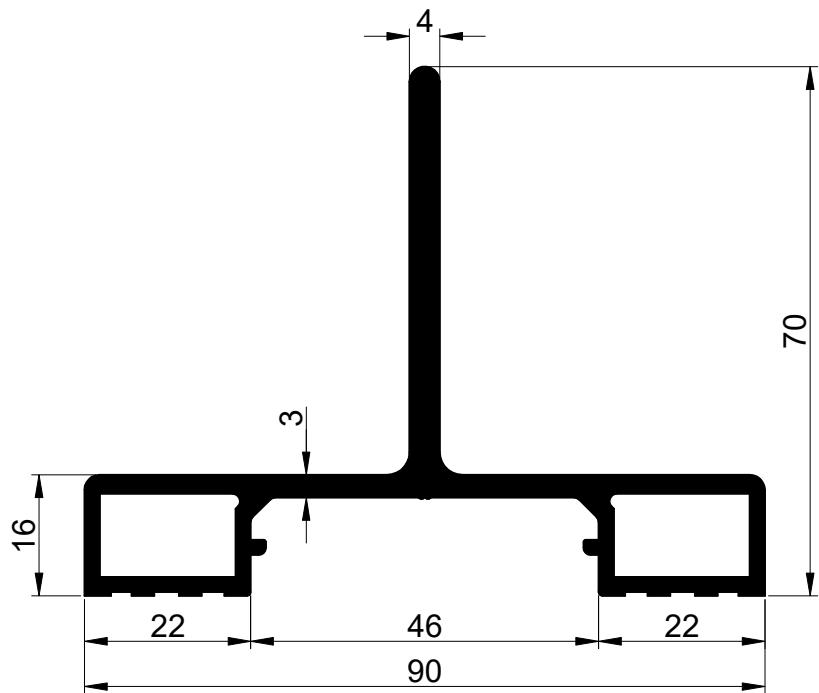
V20	1,829	kg/m`
S	6,651	cm ²
I _x	103,78	cm ⁴
I _y	20,877	cm ⁴
W _x	12,718	cm ³
W _y	4,175	cm ³



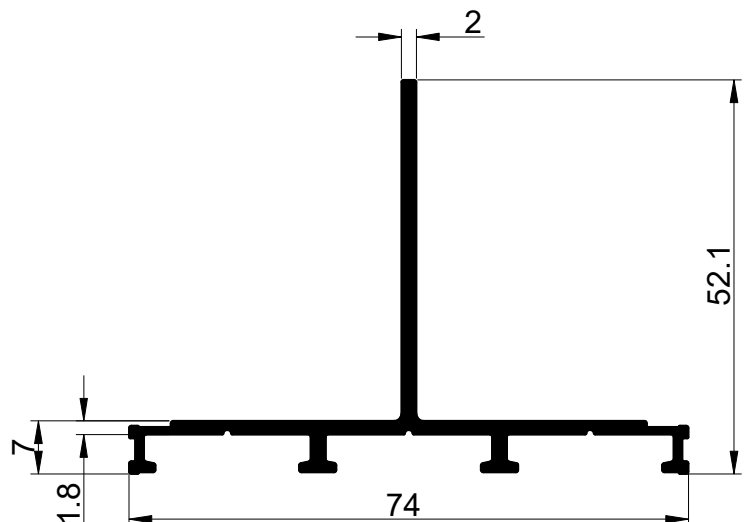
V01	1,184	kg/m`
S	4,304	cm ²
I _x	20,514	cm ⁴
I _y	23,902	cm ⁴
W _x	6,142	cm ³
W _y	5,312	cm ³



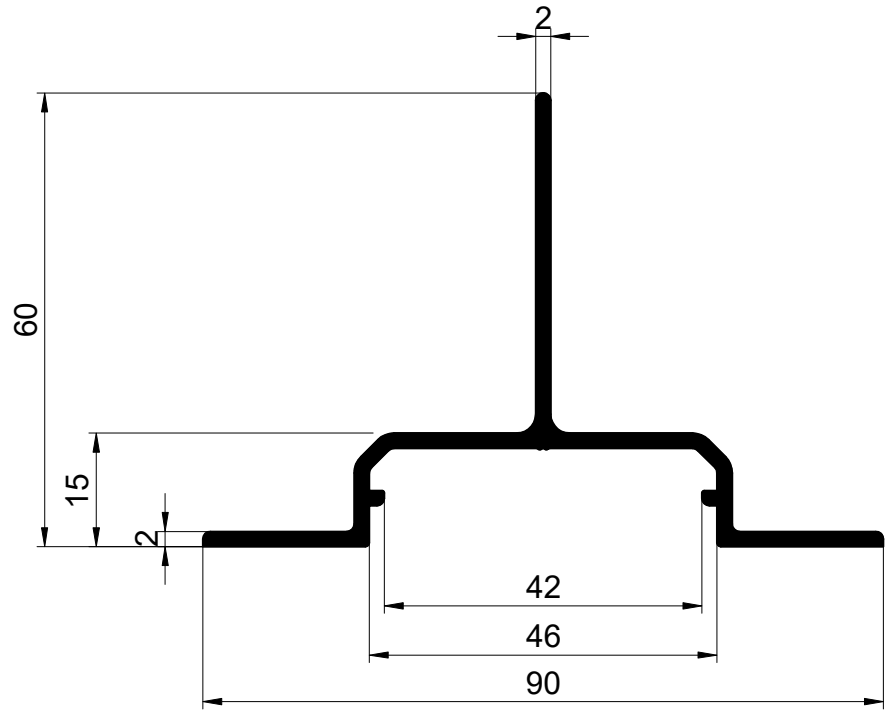
V88	1,840	kg/m`
S	6,691	cm ²
I _x	22,055	cm ⁴
I _y	39,291	cm ⁴
W _x	4,465	cm ³
W _y	8,731	cm ³



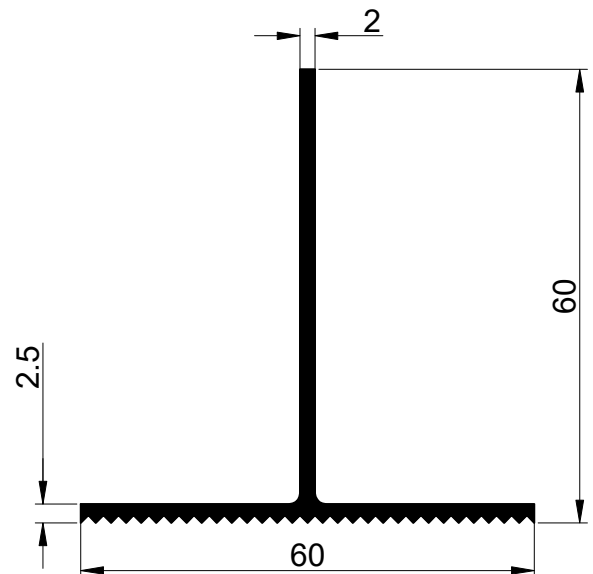
V09	0,720	kg/m`
S	2,617	cm ²
I _x	5,156	cm ⁴
I _y	7,941	cm ⁴
W _x	1,332	cm ³
W _y	2,146	cm ³

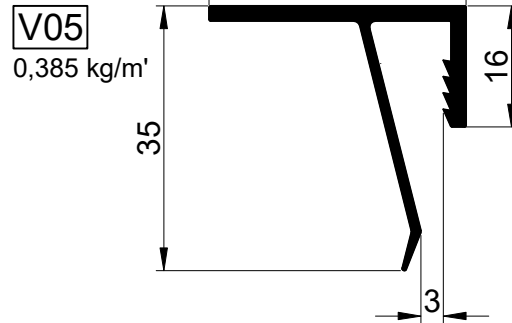
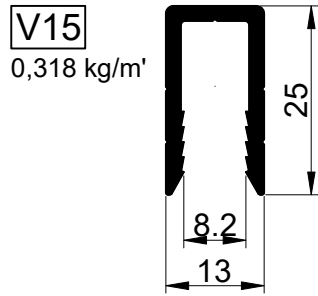


V101	0,889	kg/m`
S	3,23	cm ²
I _x	8,05	cm ⁴
I _y	14,91	cm ⁴
W _x	1,825	cm ³
W _y	3,313	cm ³

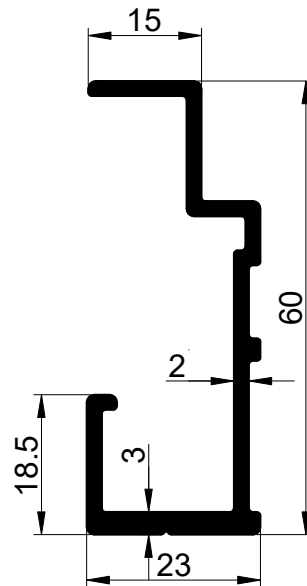


V125	0,651	kg/m`
S	2,358	cm ²
I _x	8,392	cm ⁴
I _y	3,605	cm ⁴
W _x	1,907	cm ³
W _y	1,202	cm ³

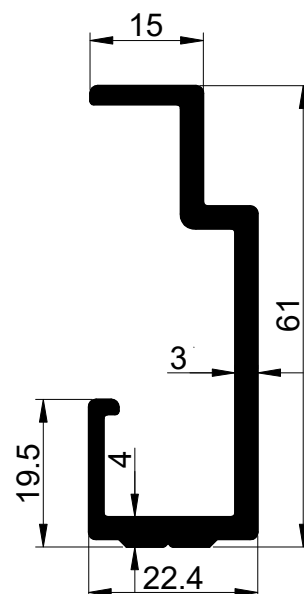




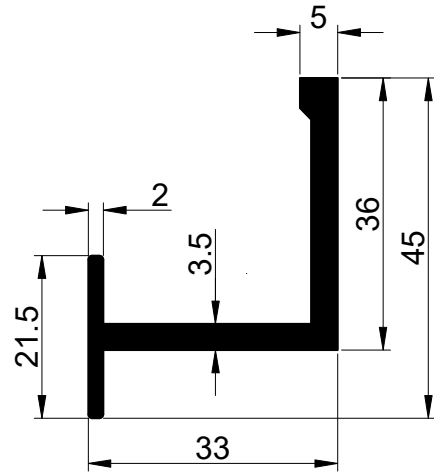
V14	0,730	kg/m'
S	2,654	cm ²
I _x	11,563	cm ⁴
I _y	1,500	cm ⁴
W _x	3,247	cm ³
W _y	1,111	cm ³



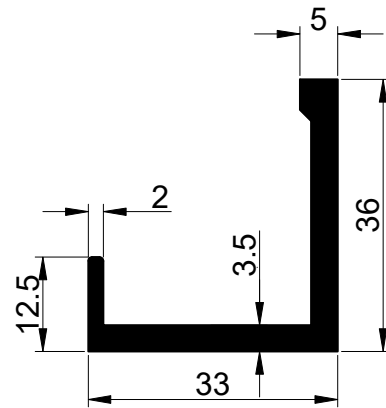
V19	0,919	kg/m'
S	3,345	cm ²
I _x	14,531	cm ⁴
I _y	1,744	cm ⁴
W _x	4,199	cm ³
W _y	1,255	cm ³



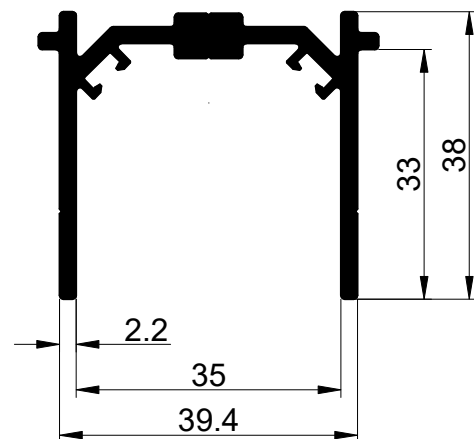
V17	0,748	kg/m`
S	2,722	cm ²
I _x	1,533	cm ⁴
I _y	6,116	cm ⁴
W _x	0,592	cm ³
W _y	2,926	cm ³



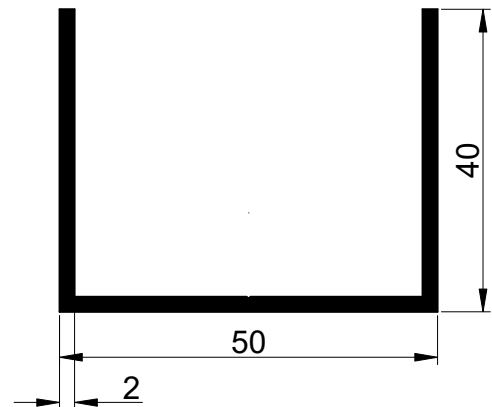
V18	0,699	kg/m`
S	2,543	cm ²
I _x	4,964	cm ⁴
I _y	1,503	cm ⁴
W _x	1,993	cm ³
W _y	0,671	cm ³



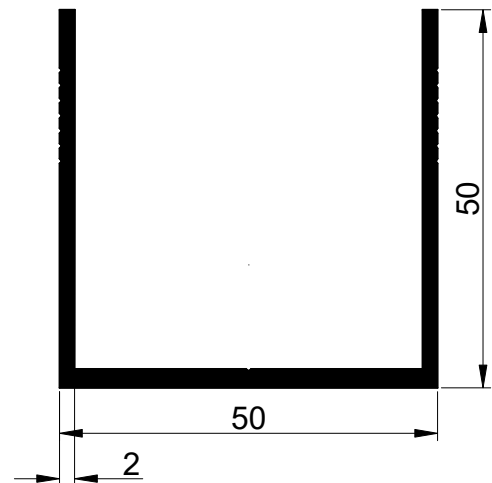
V04	0,867	kg/m`
S	3,153	cm ²
I _x	3,768	cm ⁴
I _y	7,652	cm ⁴
W _x	1,455	cm ³
W _y	3,401	cm ³



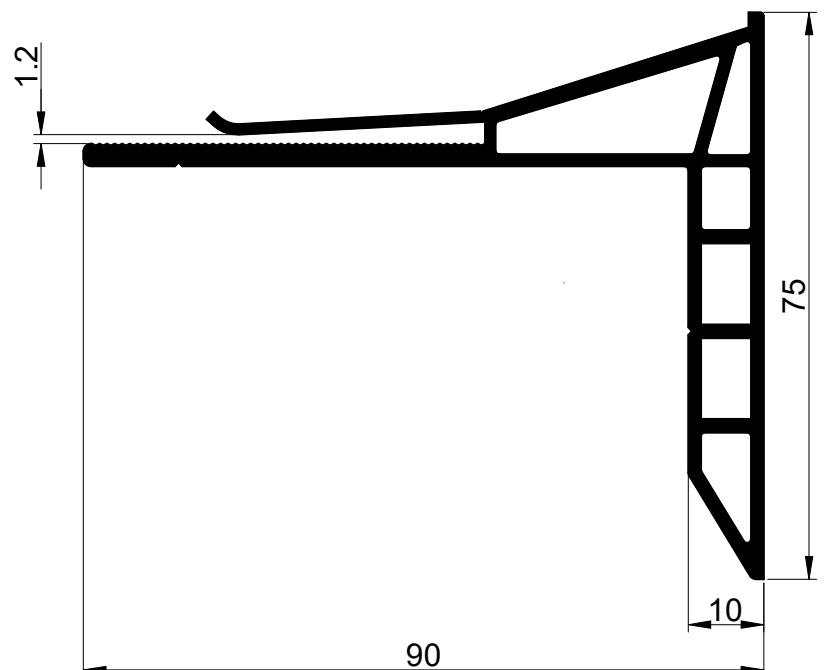
U4050	0,693	kg/m`
S	2,519	cm ²
I _x	4,244	cm ⁴
I _y	10,843	cm ⁴
W _x	1,578	cm ³
W _y	4,337	cm ³

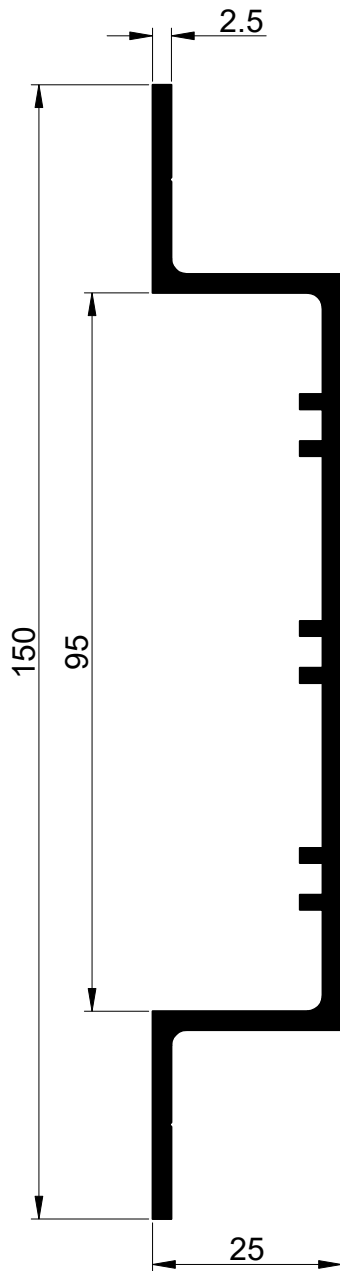


U5050	0,862	kg/m`
S	3,132	cm ²
I _x	8,233	cm ⁴
I _y	13,455	cm ⁴
W _x	2,443	cm ³
W _y	5,382	cm ³

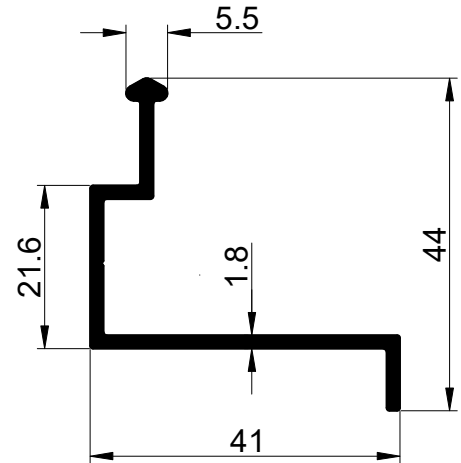


V13	1,705	kg/m`
S	6,201	cm ²
I _x	15,098	cm ⁴
I _y	50,502	cm ⁴
W _x	3,118	cm ³
W _y	7,953	cm ³

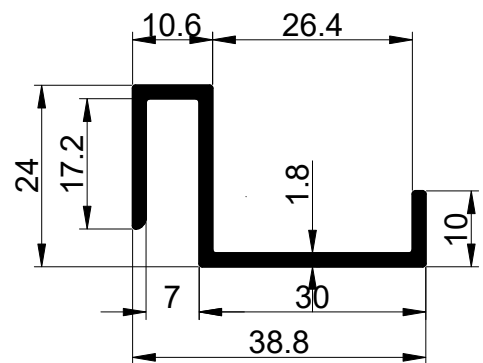




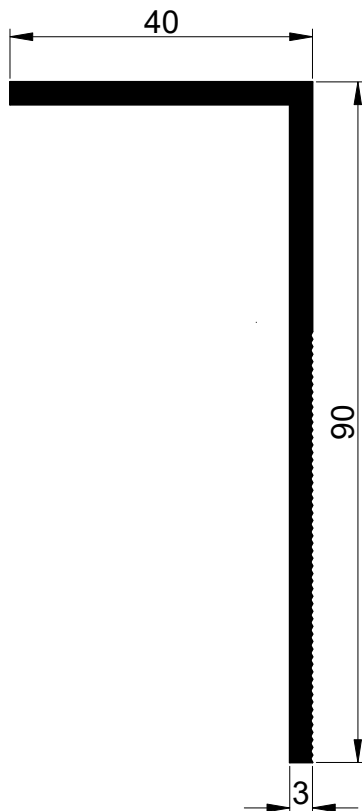
V124	1,448	kg/m`
S	5,265	cm ²
I _x	99,981	cm ⁴
I _y	5,078	cm ⁴
W _x	13,331	cm ³
W _y	3,385	cm ³



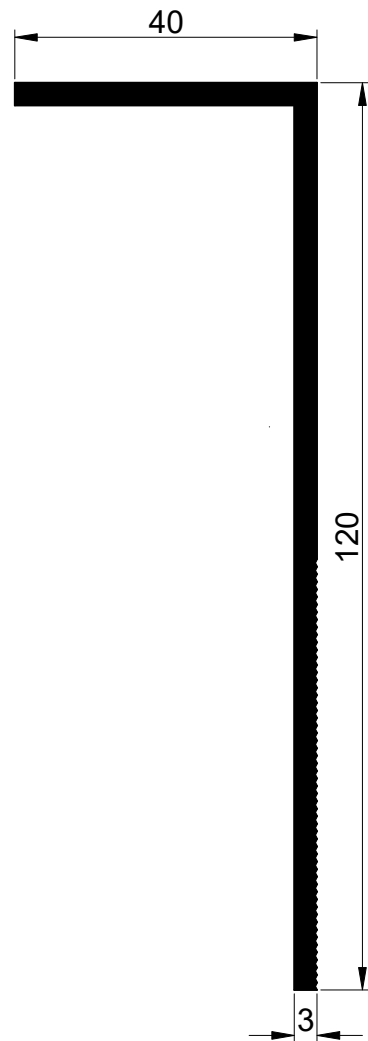
V02	0,464	kg/m`
S	1,686	cm ²
I _x	1,230	cm ⁴
I _y	4,477	cm ⁴
W _x	4,714	cm ³
W _y	1,689	cm ³



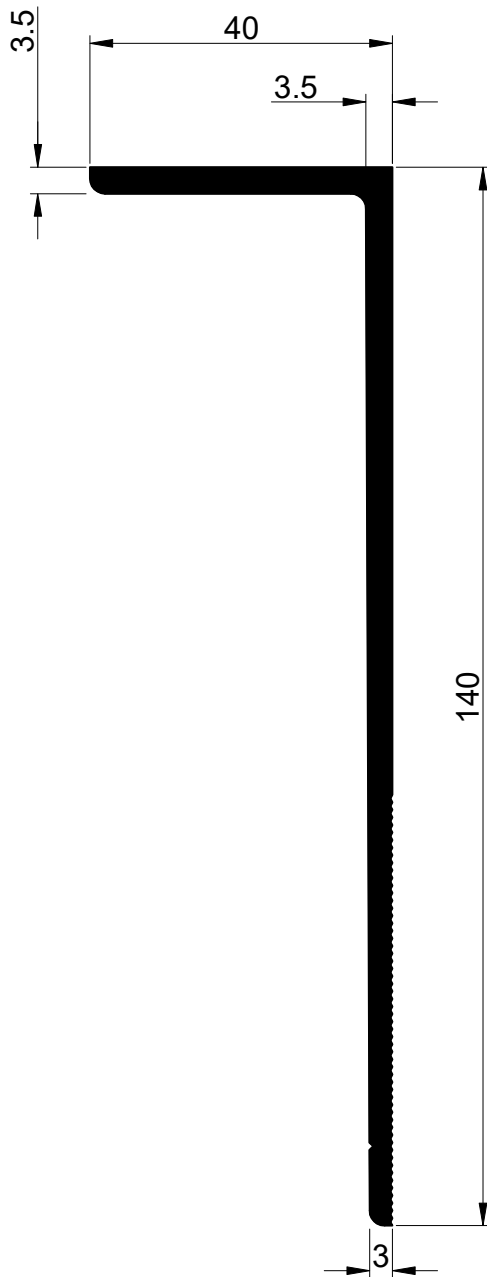
V03	0,426	kg/m`
S	3,153	cm ²
I _x	0,537	cm ⁴
I _y	3,024	cm ⁴
W _x	0,365	cm ³
W _y	1,270	cm ³



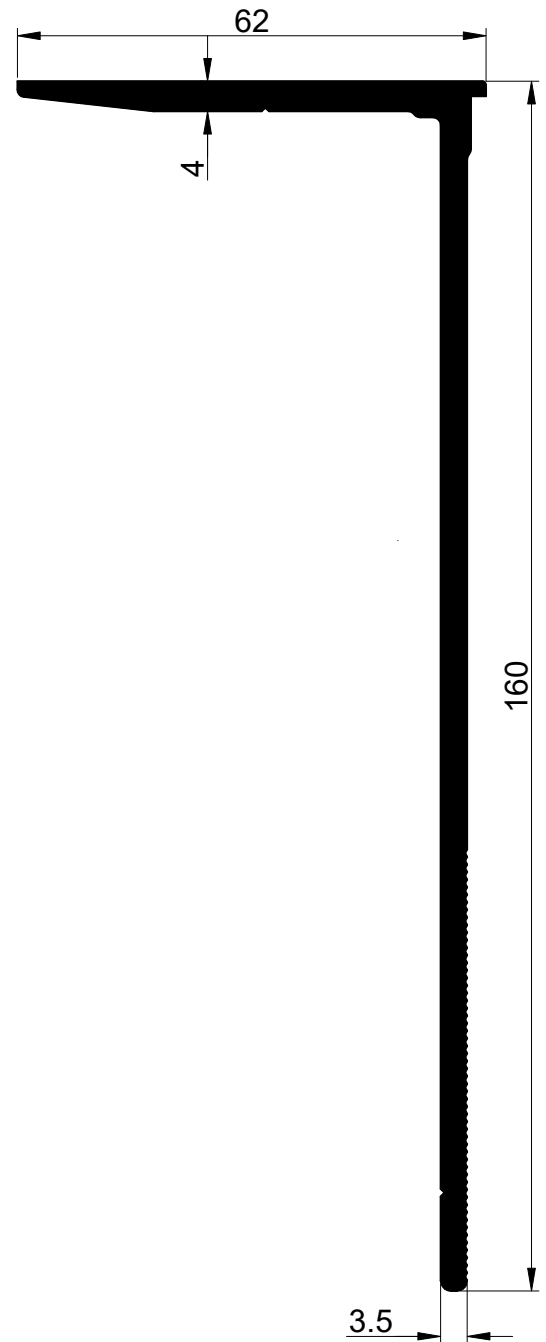
V16	1,028	kg/m`
S	3,739	cm ²
Ix	33,828	cm ⁴
Iy	2,874	cm ⁴
Wx	5,812	cm ³
Wy	0,884	cm ³



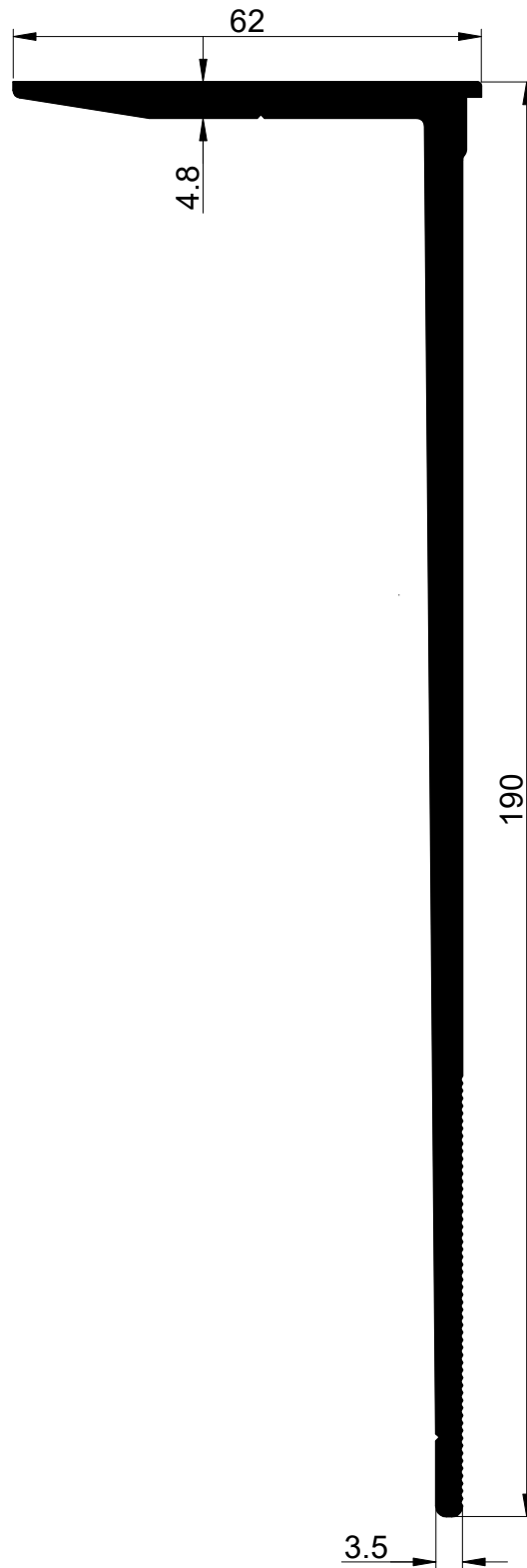
V10	1,276	kg/m`
S	4,639	cm ²
Ix	71,971	cm ⁴
Iy	3,254	cm ⁴
Wx	9,660	cm ³
Wy	0,965	cm ³



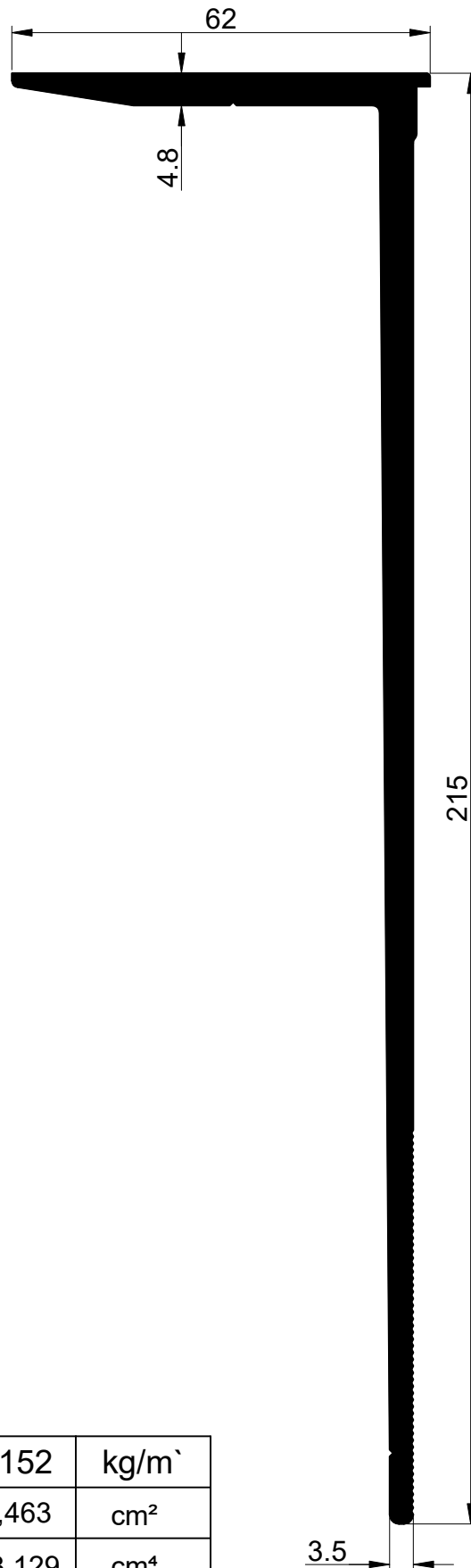
V117	1,585	kg/m`
S	5,762	cm ²
I _x	116,68	cm ⁴
I _y	3,847	cm ⁴
W _x	13,38	cm ³
W _y	1,135	cm ³



V11	2,115	kg/m`
S	7,691	cm ²
I _x	214,902	cm ⁴
I _y	11,529	cm ⁴
W _x	21,642	cm ³
W _y	2,292	cm ³



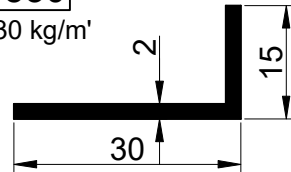
V12	2,860	kg/m`
S	1,040	cm ²
I _x	377,427	cm ⁴
I _y	13,993	cm ⁴
W _x	30,911	cm ³
W _y	2,738	cm ³



V126	3,152	kg/m`
S	11,463	cm ²
I _x	523,129	cm ⁴
I _y	19,767	cm ⁴
W _x	38,465	cm ³
W _y	3,801	cm ³

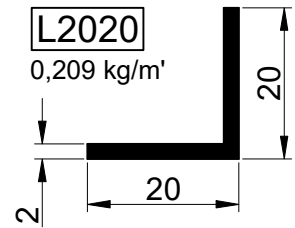
L1530

0,230 kg/m'



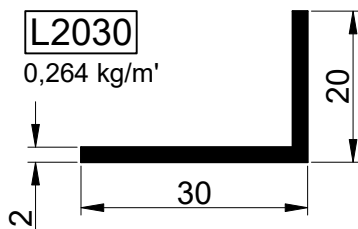
L2020

0,209 kg/m'



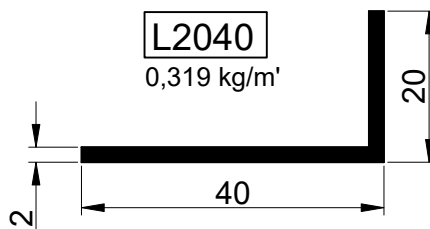
L2030

0,264 kg/m'



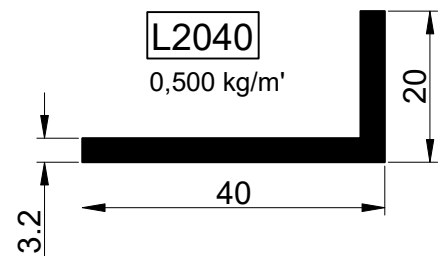
L2040

0,319 kg/m'



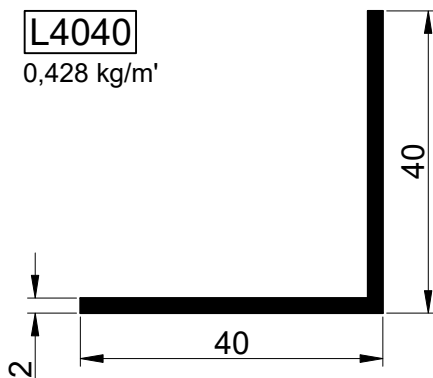
L2040

0,500 kg/m'



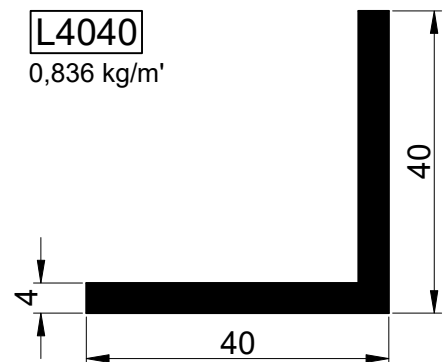
L4040

0,428 kg/m'



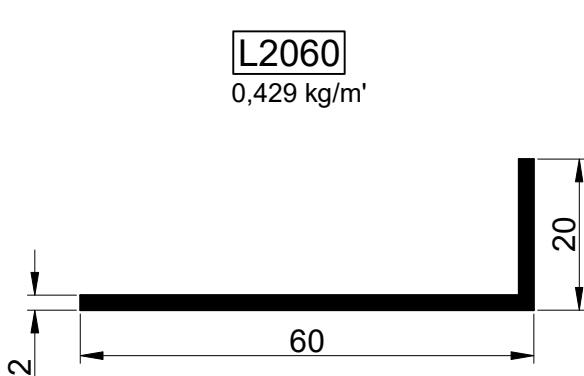
L4040

0,836 kg/m'



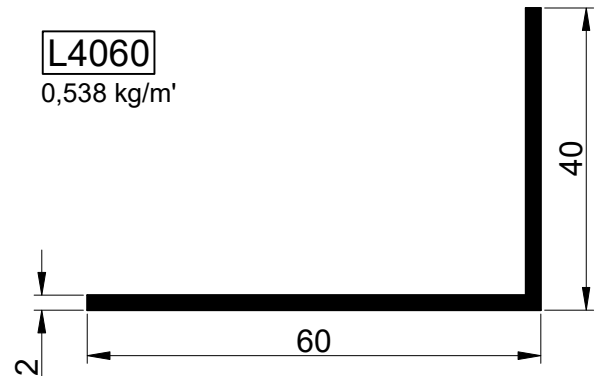
L2060

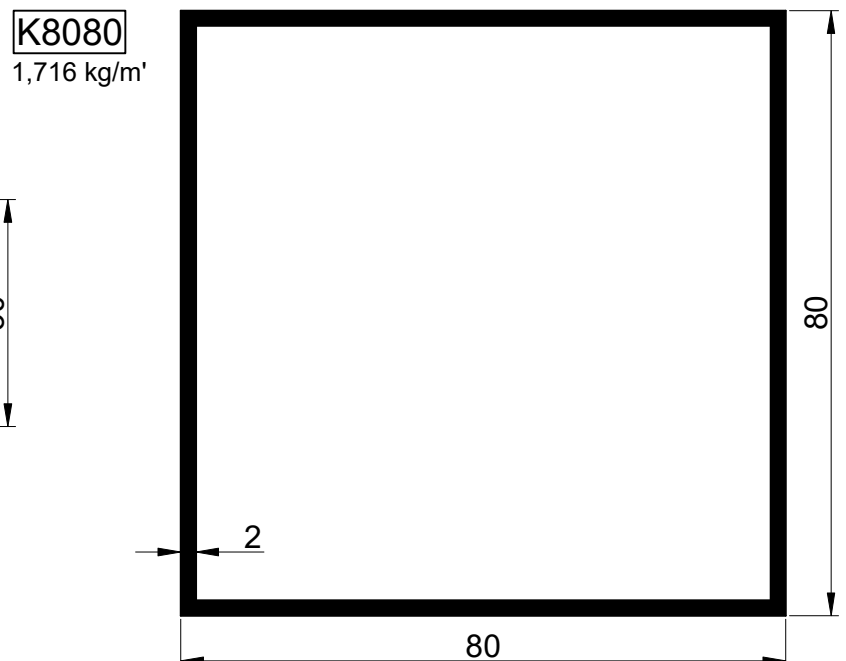
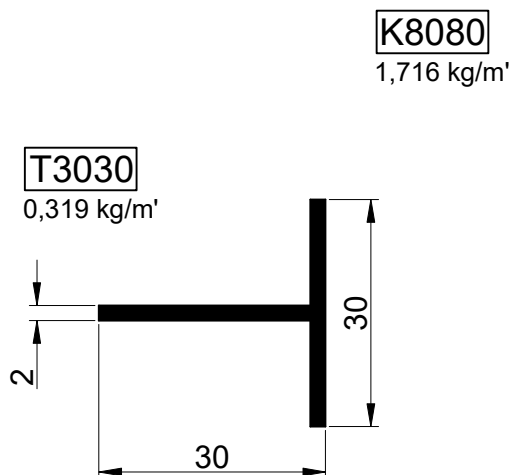
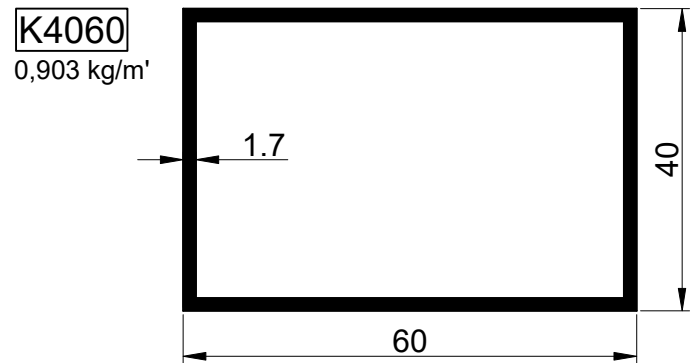
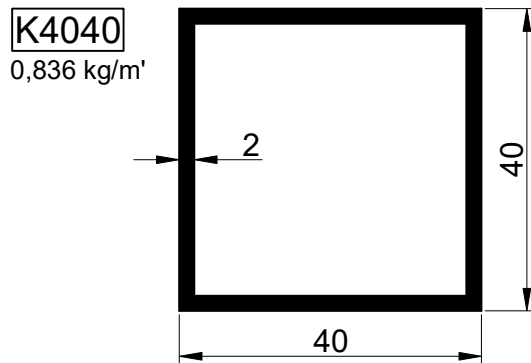
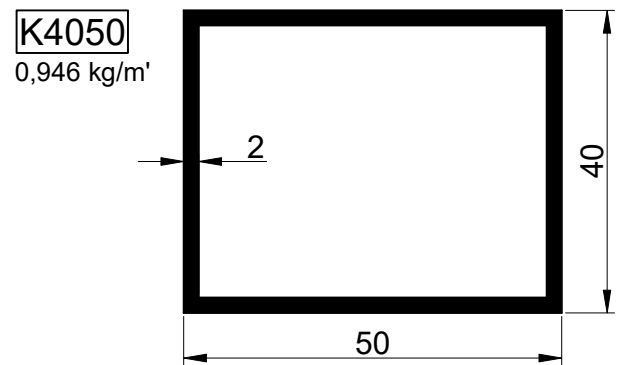
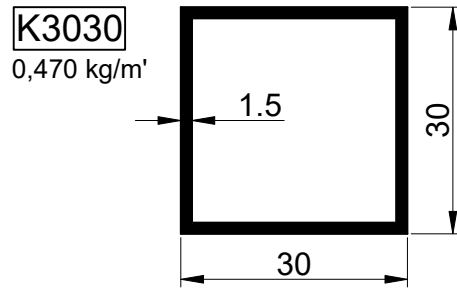
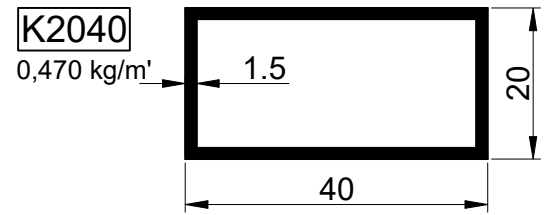
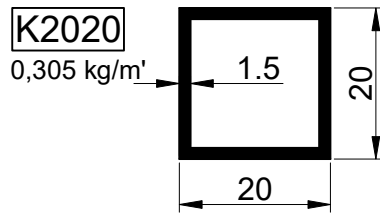
0,429 kg/m'



L4060

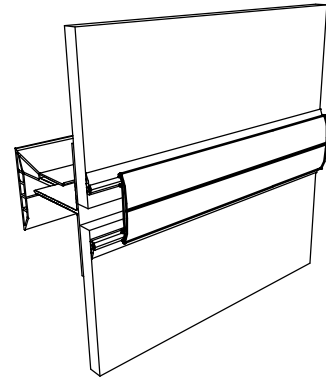
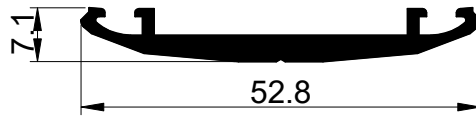
0,538 kg/m'





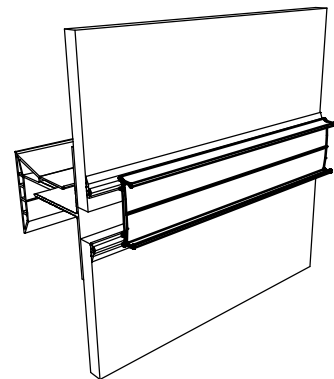
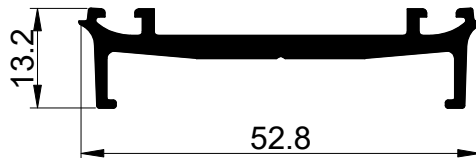
TMF3

0,430 kg/m'



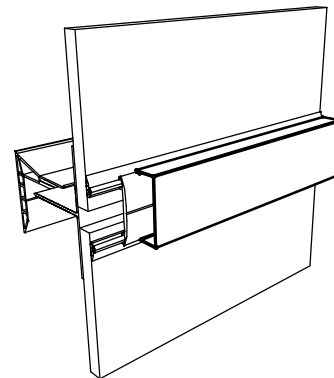
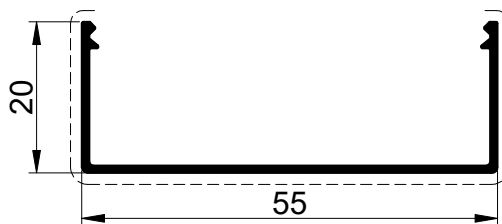
TMF33

0,507 kg/m'



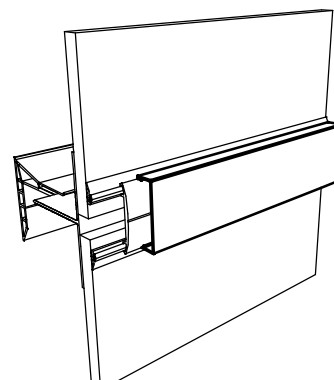
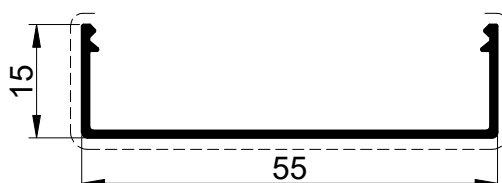
TMF4

0,264 kg/m'

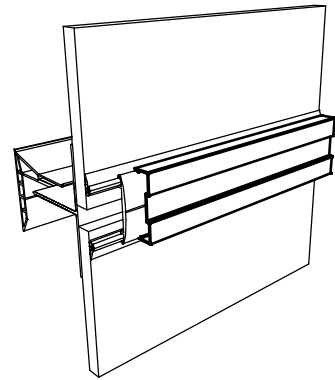
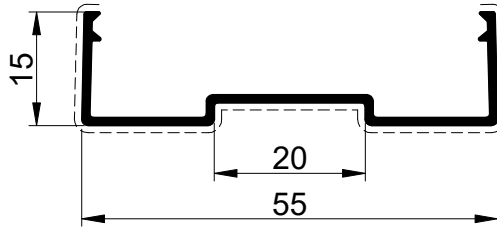


TMF5

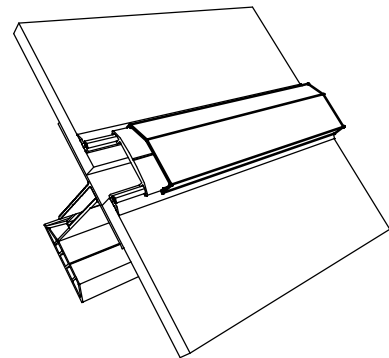
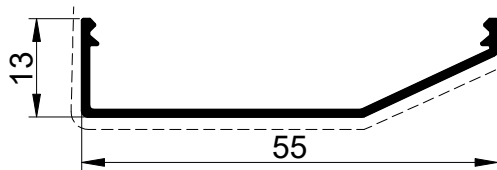
0,238 kg/m'



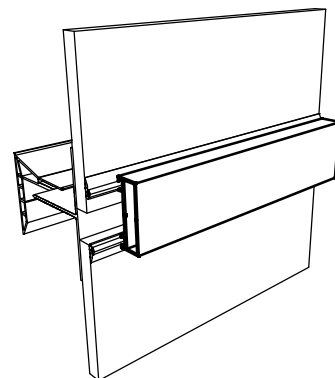
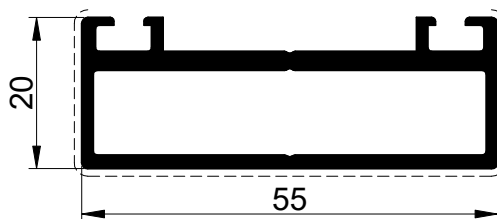
TMF58
0,253 kg/m'



TMF27
0,209 kg/m'

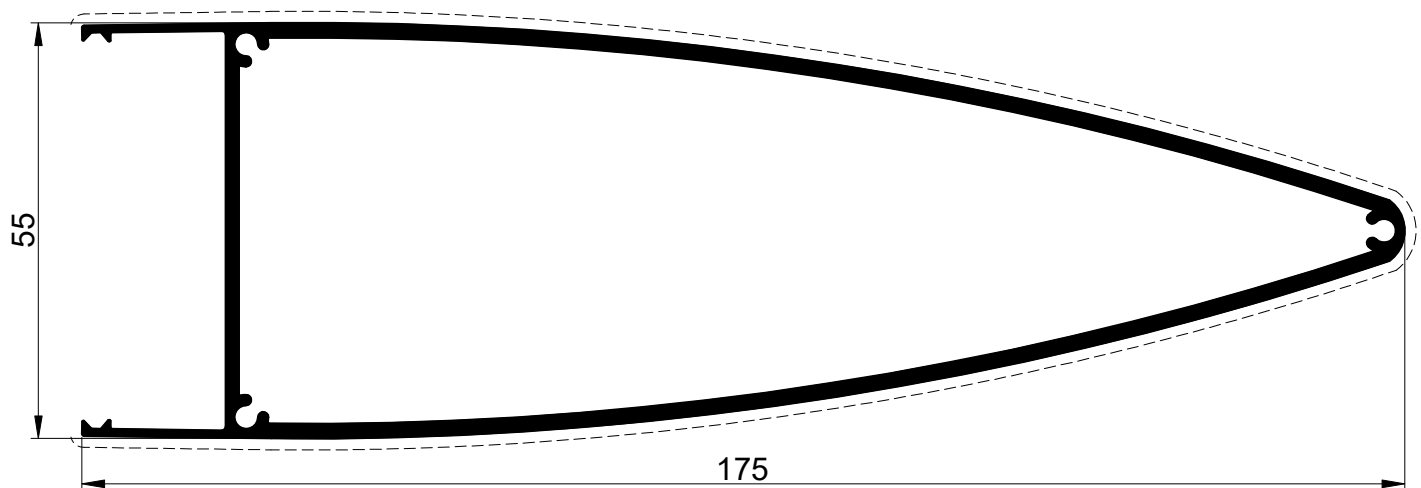


TMF61
0,841 kg/m'



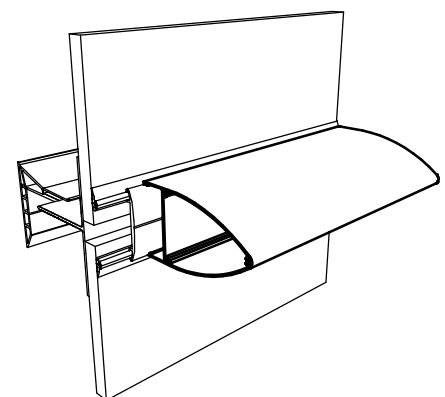
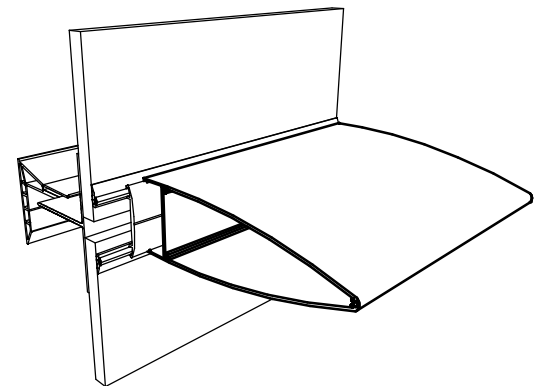
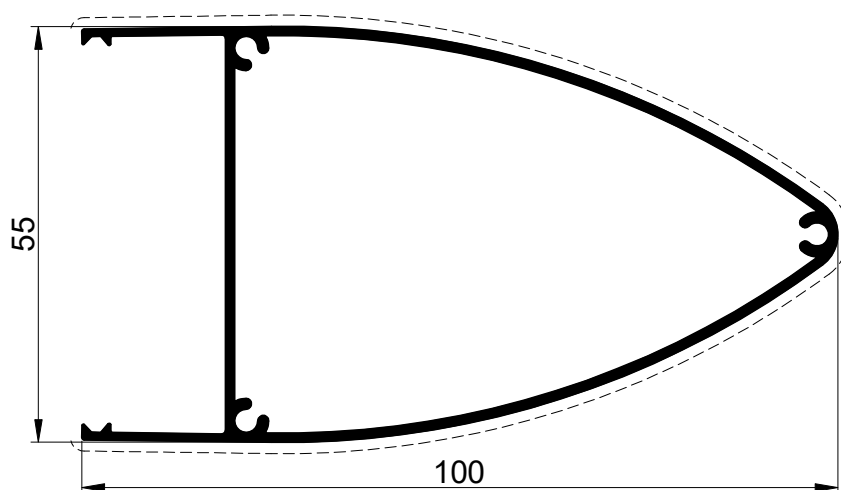
TMF54

2,088 kg/m'



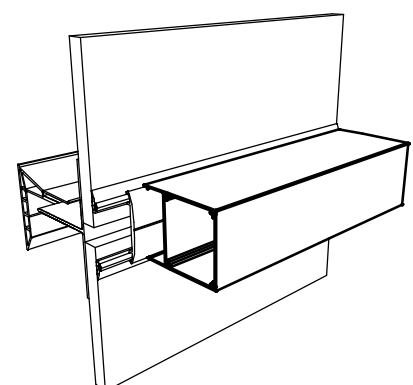
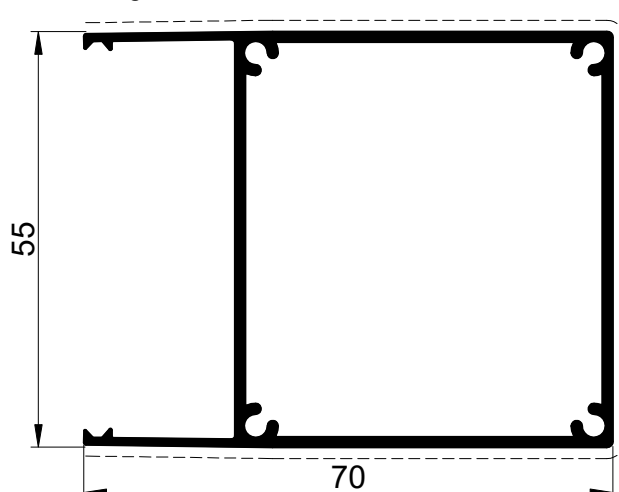
TMF15

0,931 kg/m'



TMF20

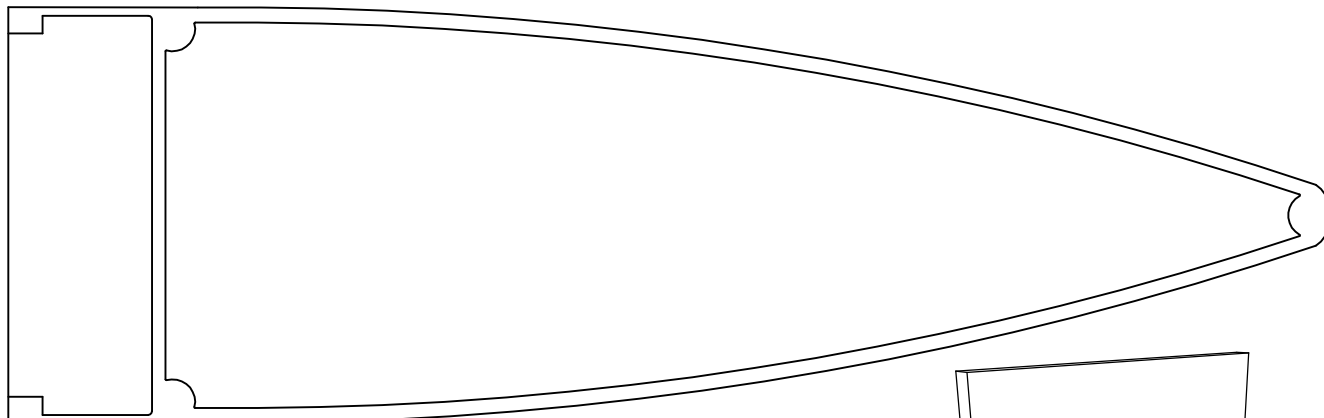
0,963 kg/m'



Mogućnost montiranja vertikalno i horizontalno.
Possibility of installation vertically and horizontally.

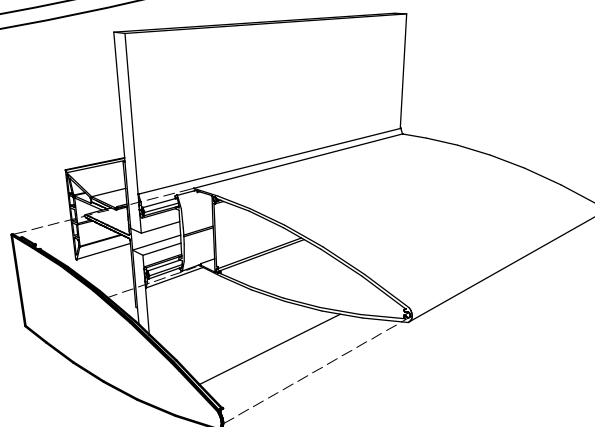
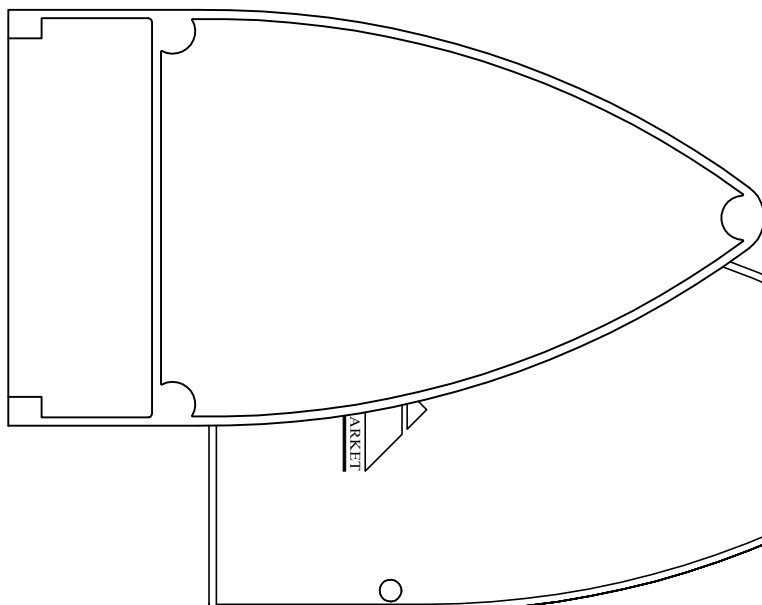
TMPB16

Čep za TMF54
Plug for TMF54



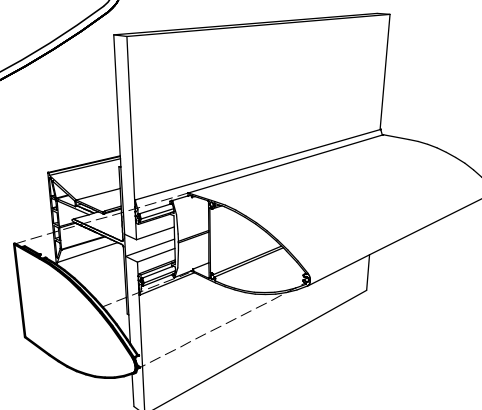
TMPB17

Čep za TMF15
Plug for TMF15



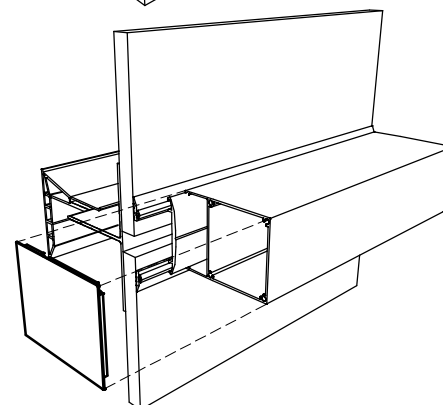
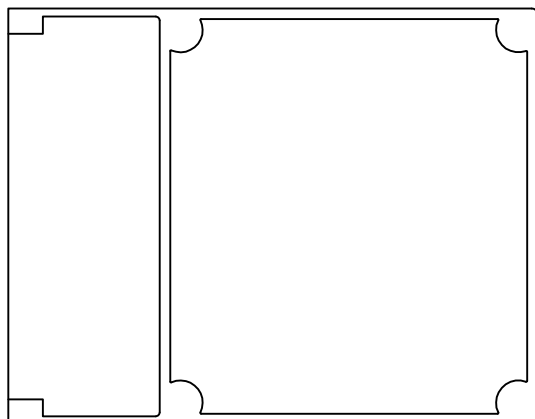
TMFP8

Plastični čep za TMF15 (crni)
Plastic plug for TMF15 (black)



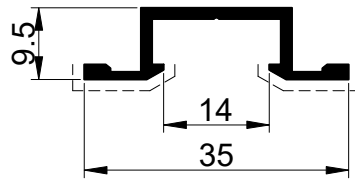
TMPB18

Čep za TMF20
Plug for TMF20

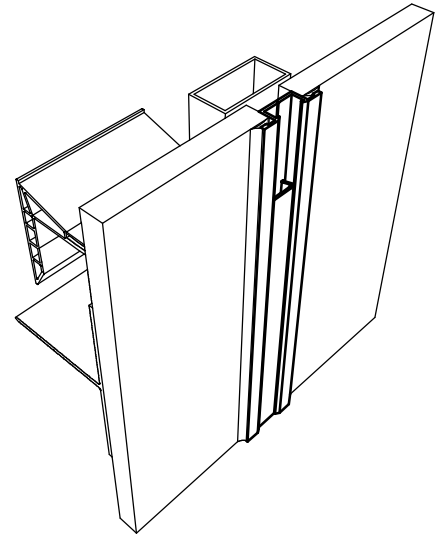
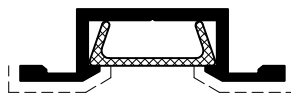
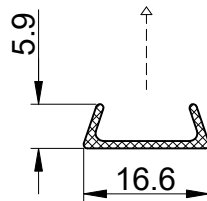


Čepovi se prave od aluminijumskih kompozitnih panela debljine 4mm u velikom izboru boja
Plugs are made of aluminium composite panels in thickness 4mm in variety of colors

TMF17
0,216 kg/m'



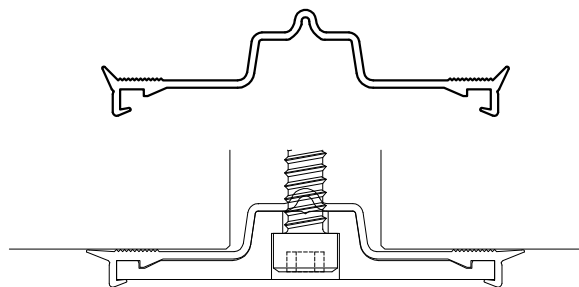
TMFP7
PVC pokrivna lajsna za TMF17 (crni)
U-PVC Cover cap for TMF17 (black)



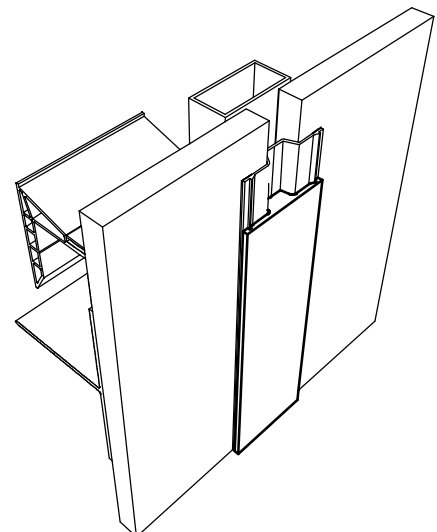
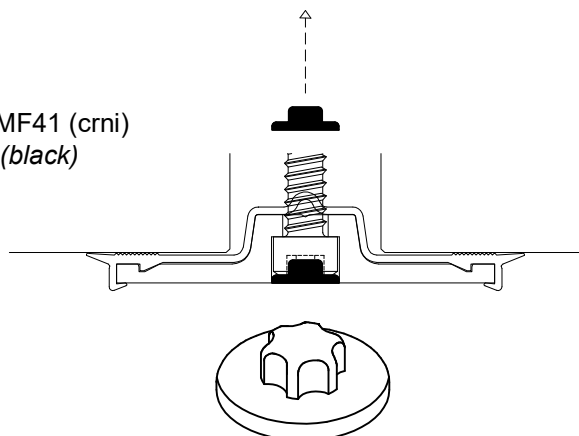
TMF41
0,591 kg/m'



TMFG20
EPDM zaptivka (crna)
EPDM gasket (black)



TMFG19
Plastični čep vijka za TMF41 (crni)
Plastic plug for TMF41 (black)

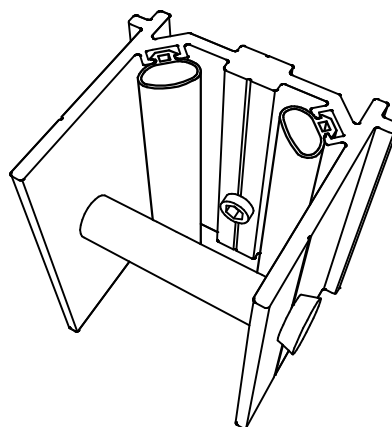
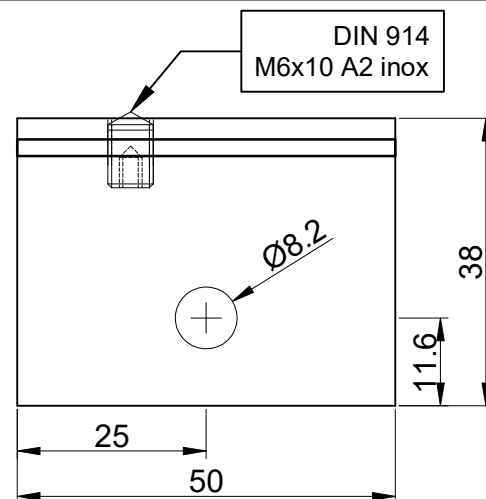
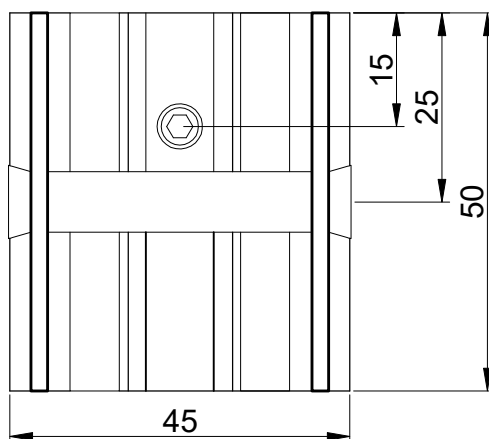
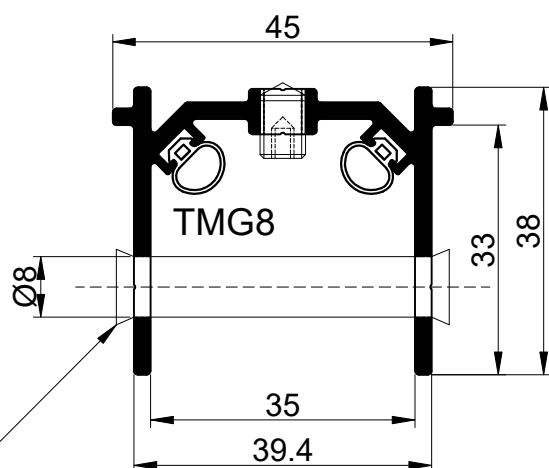


Lista artikala i pratećeg materijala
Articles and accessories list

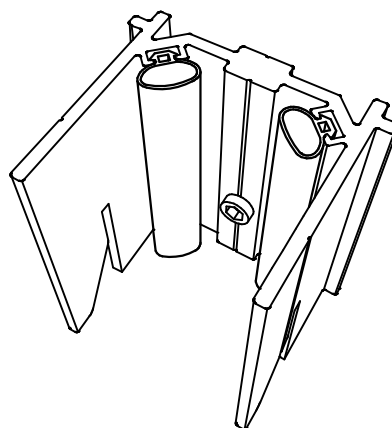
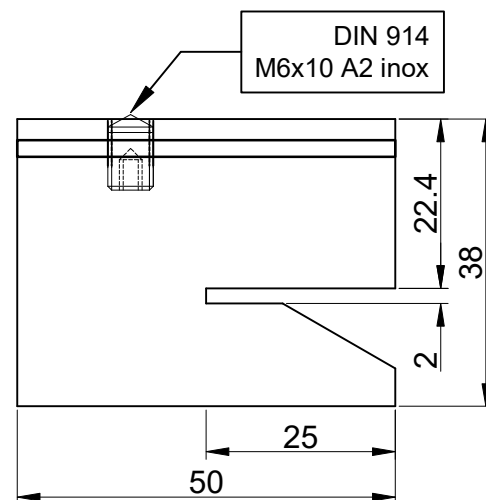
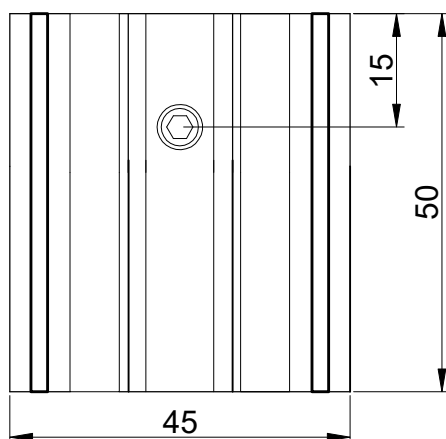
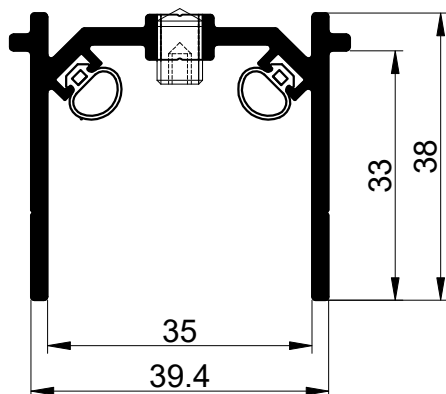


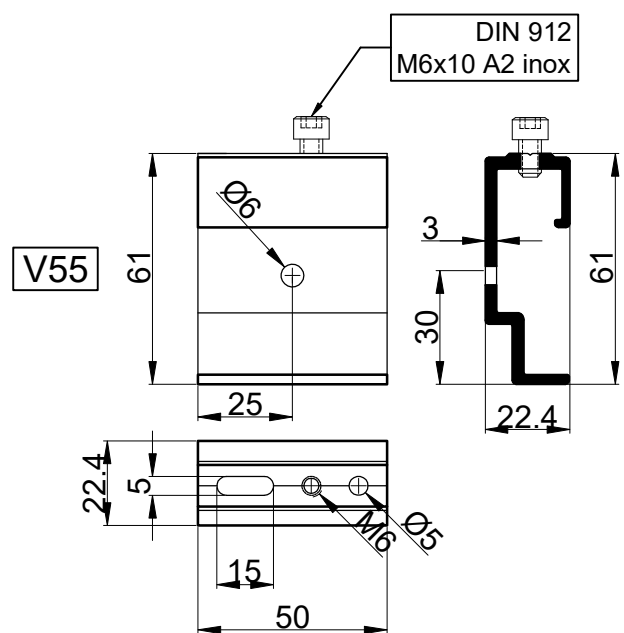
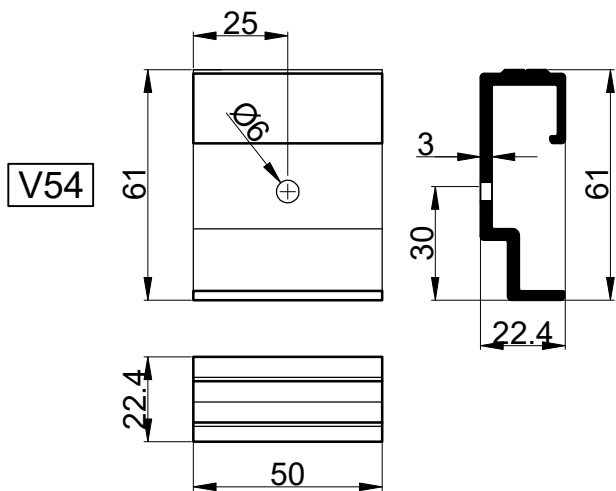
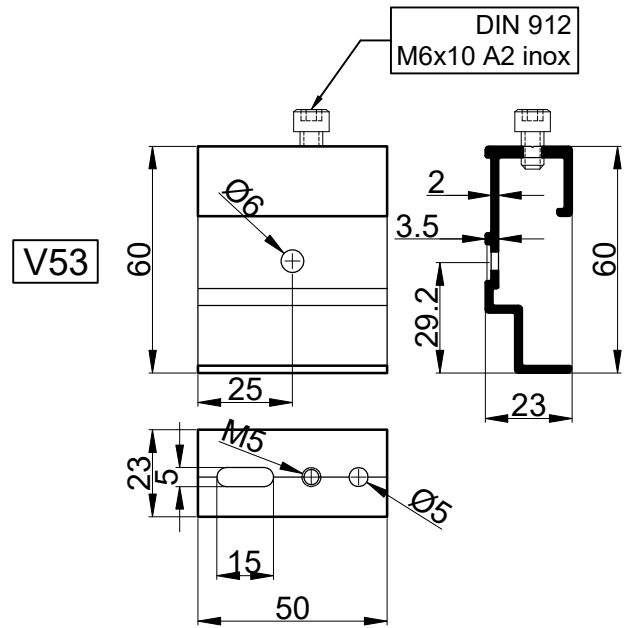
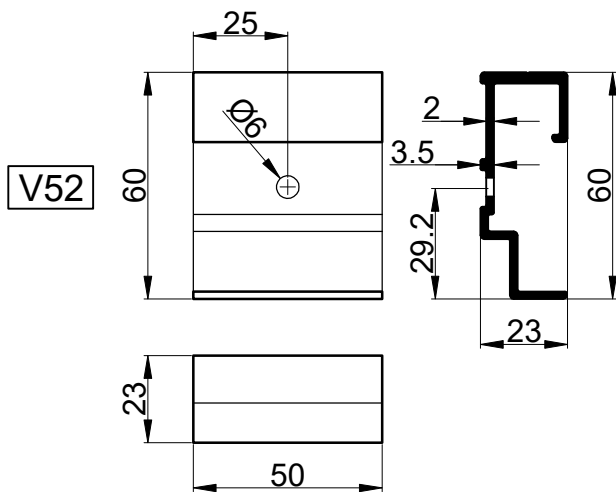
V50

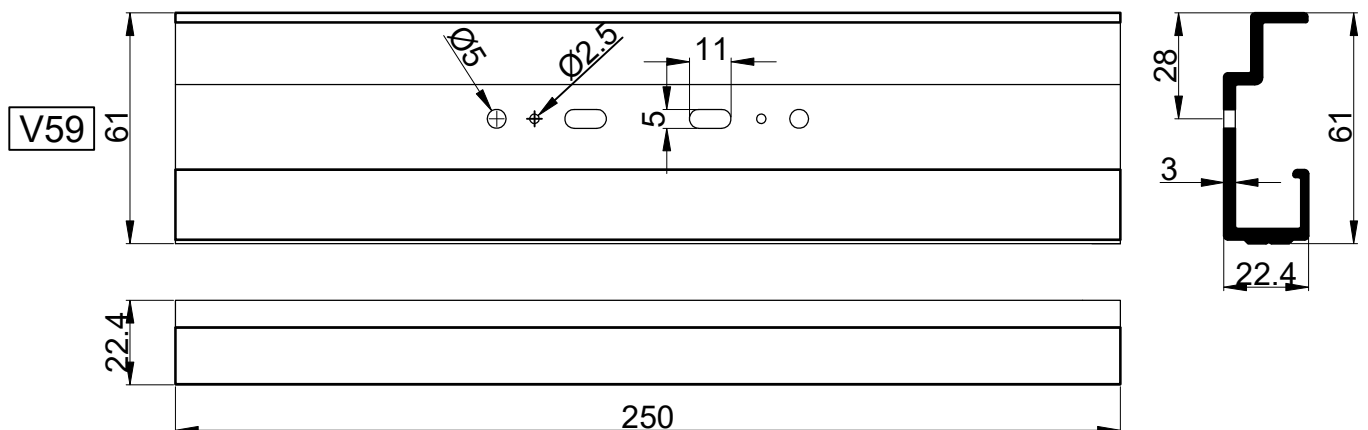
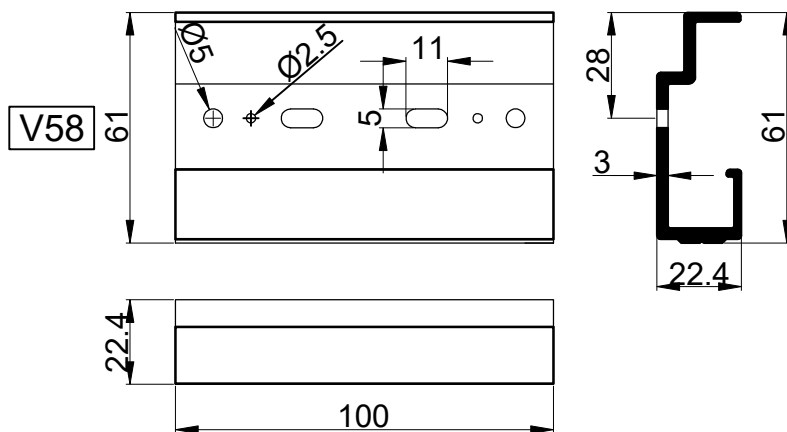
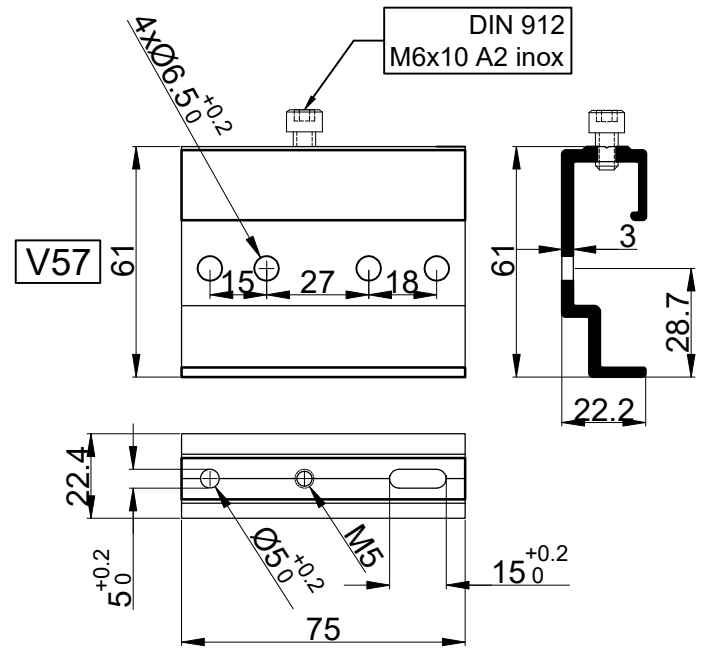
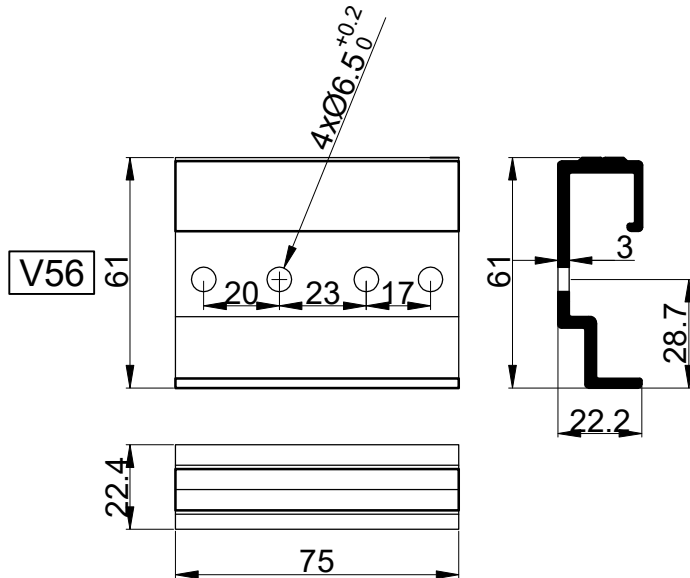
Aluminijumska cev Ø8mm/1mm
Aluminium tube Ø8mm/1mm



V51



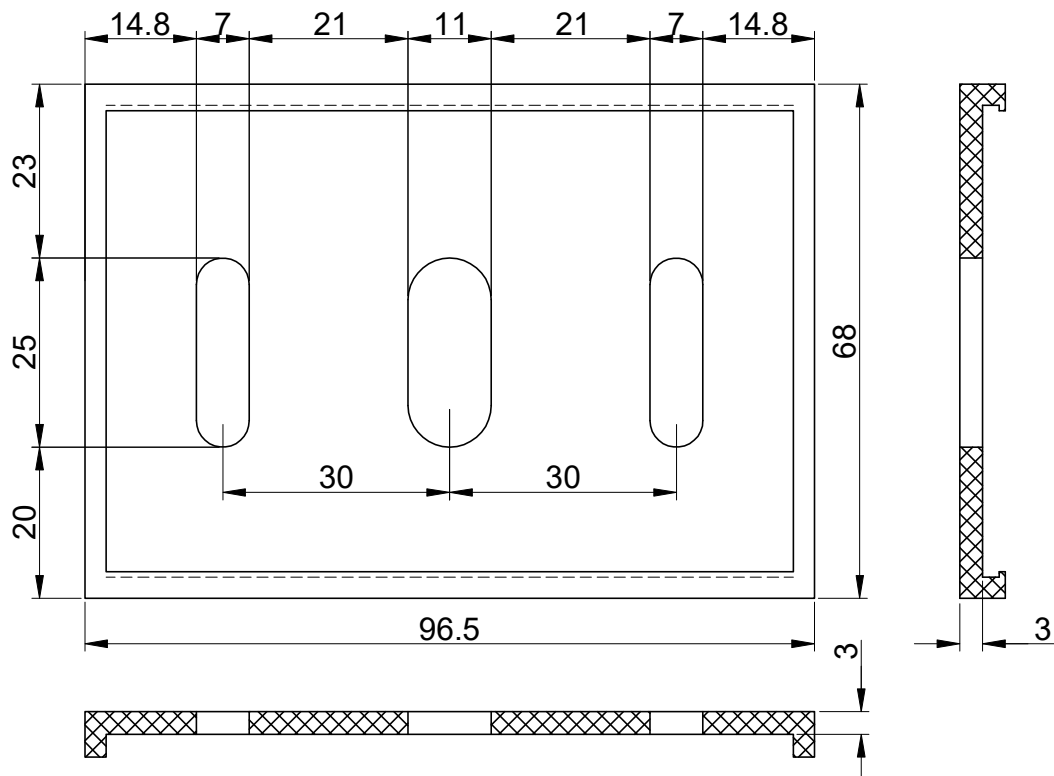




V70

Za kotve:
For brackets:

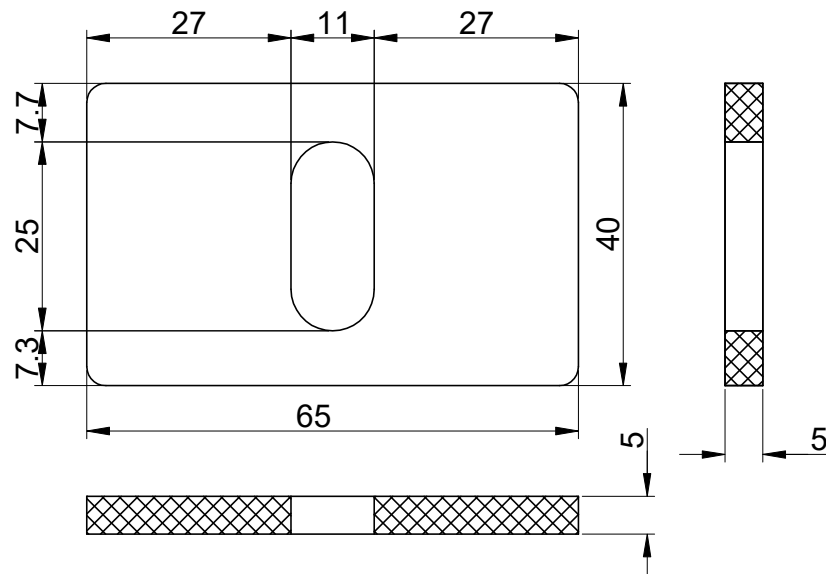
V34
V35
V36
V37
V43
V44
V45
V46
V127
V128
V129
V130



V71

Za kotve:
For brackets:

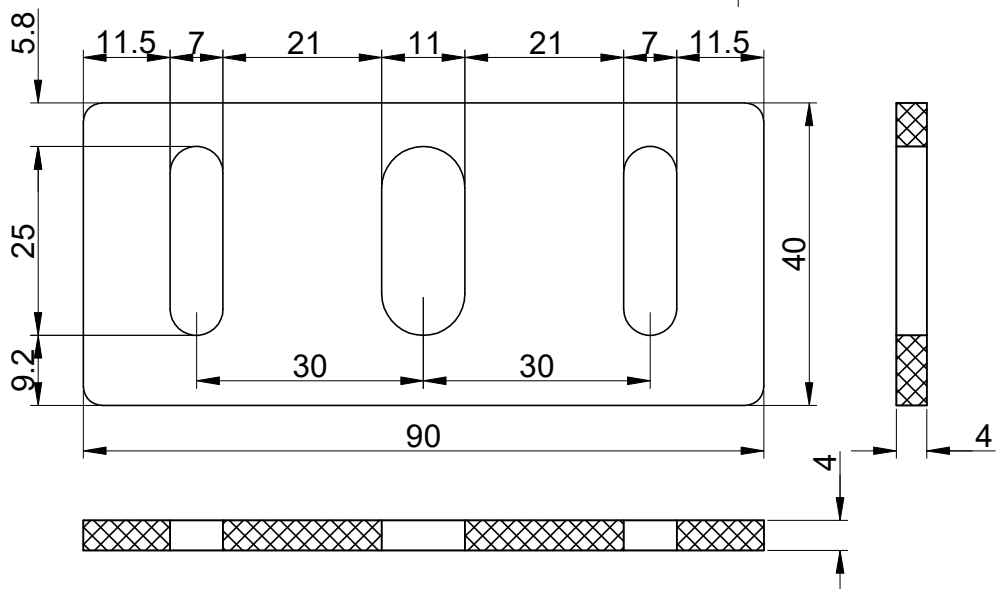
V24
V25
V28
V29
V39
V40
V41
V42
V47
V48
V120
V121



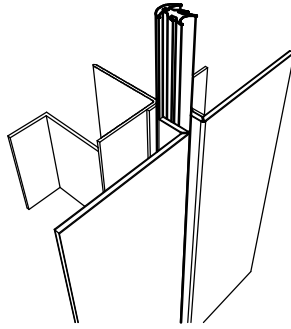
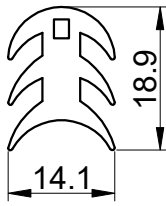
V72

Za kotve:
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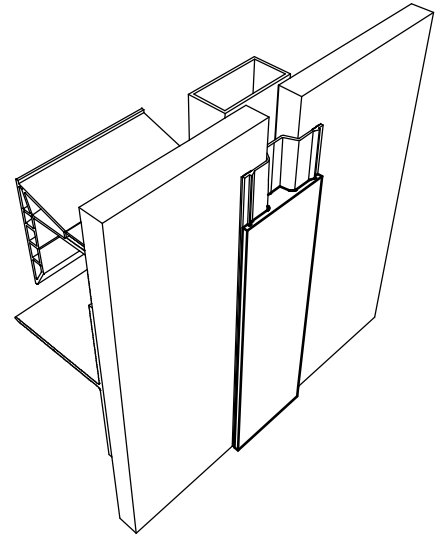
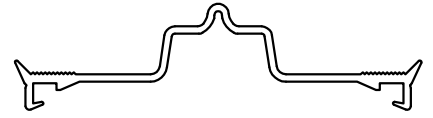
V26
V27
V30
V31
V32
V33
V122
V123



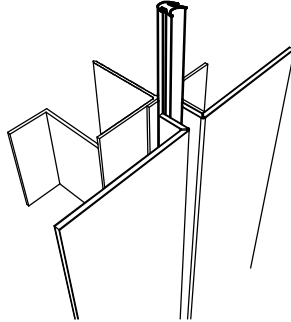
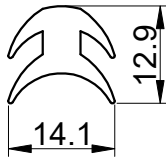
V60



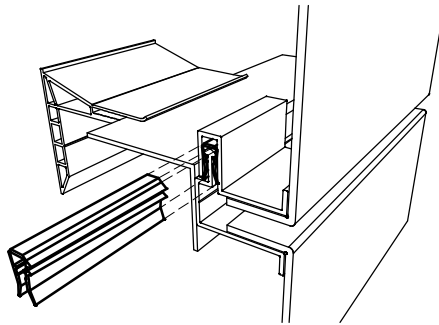
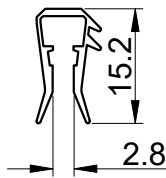
TMFG20



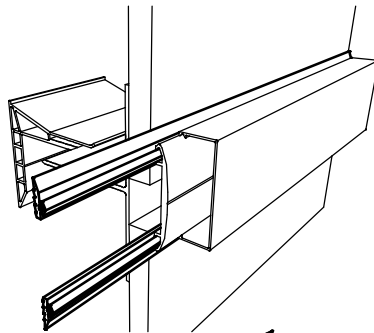
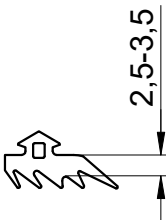
V61



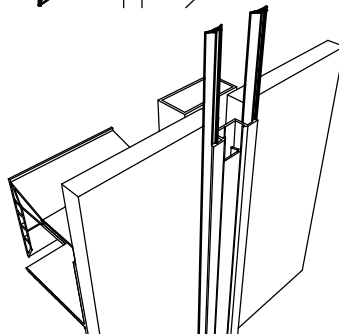
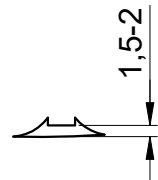
V62



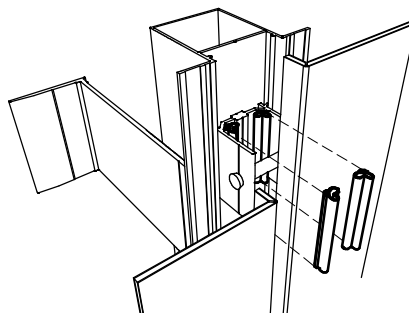
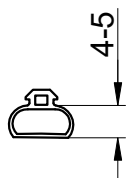
TMFG3

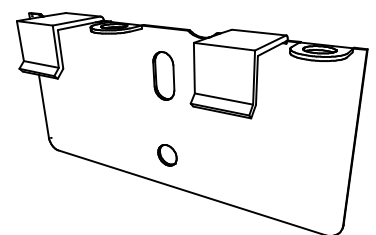
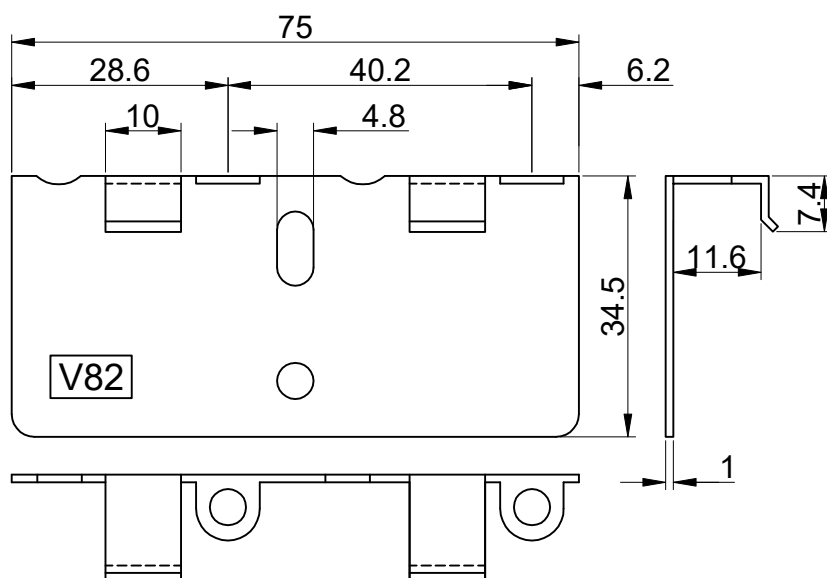
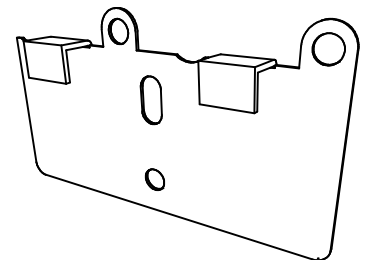
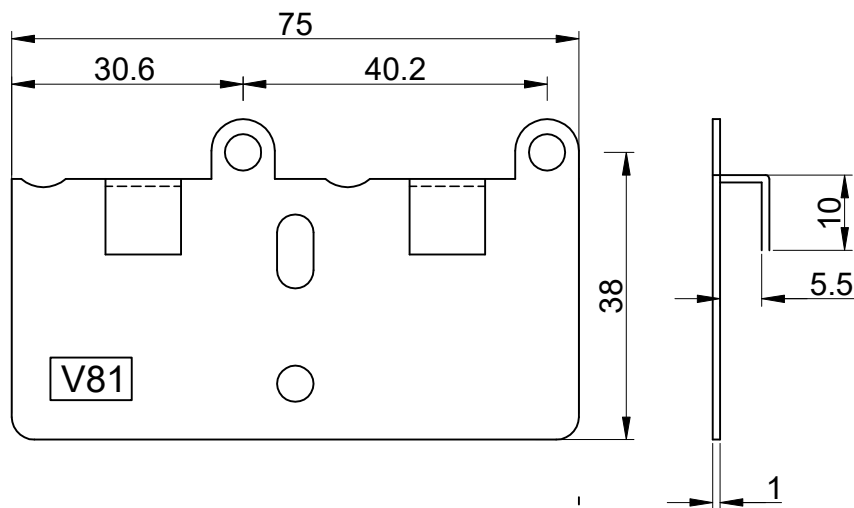
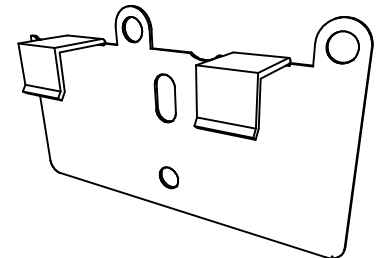
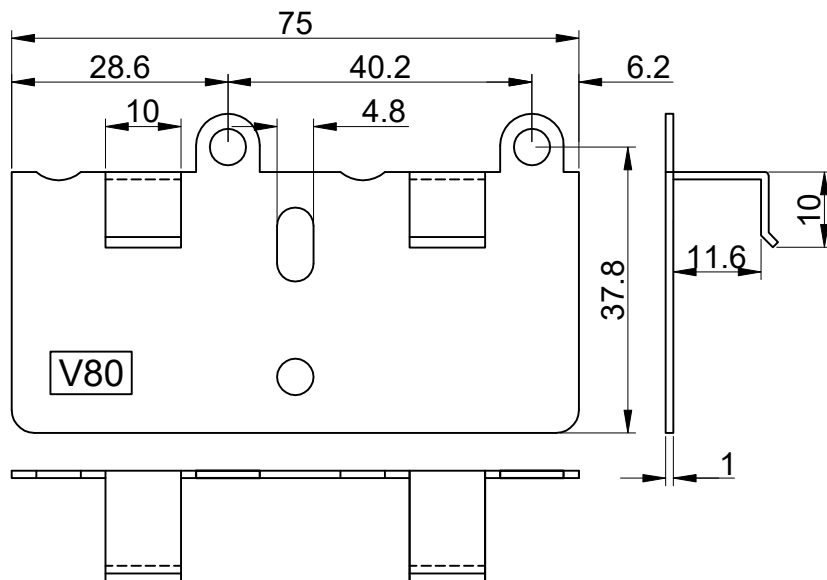


TMG4

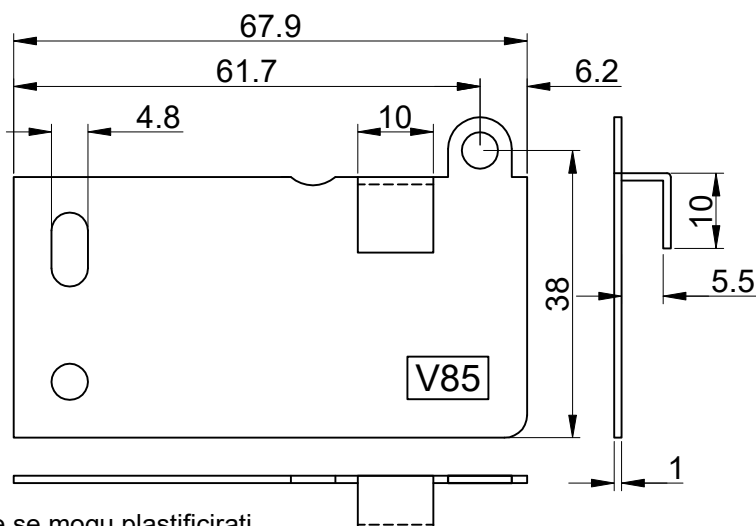
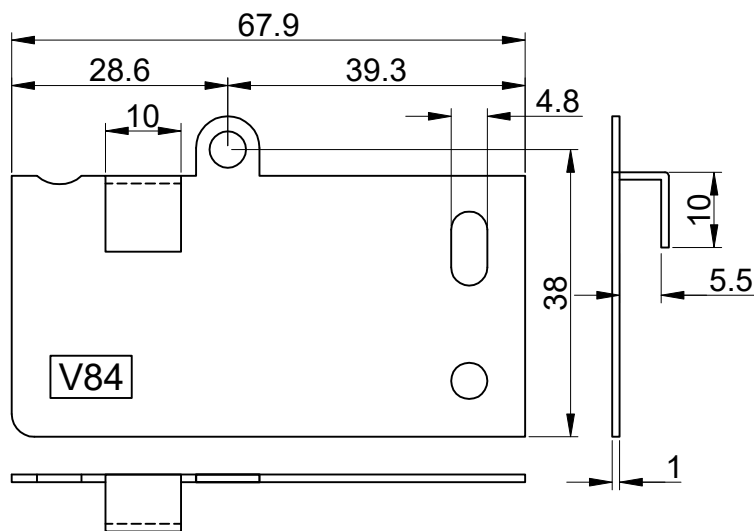
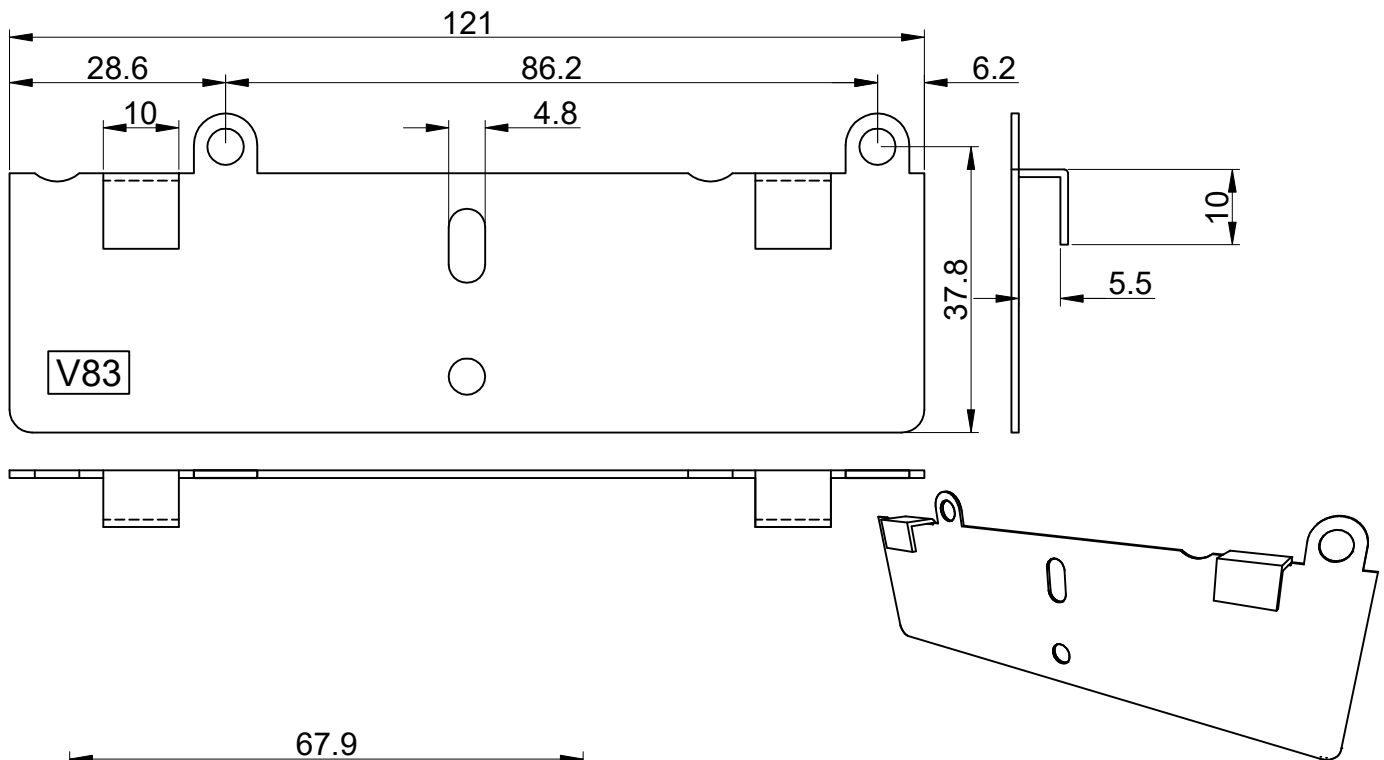


TMG8

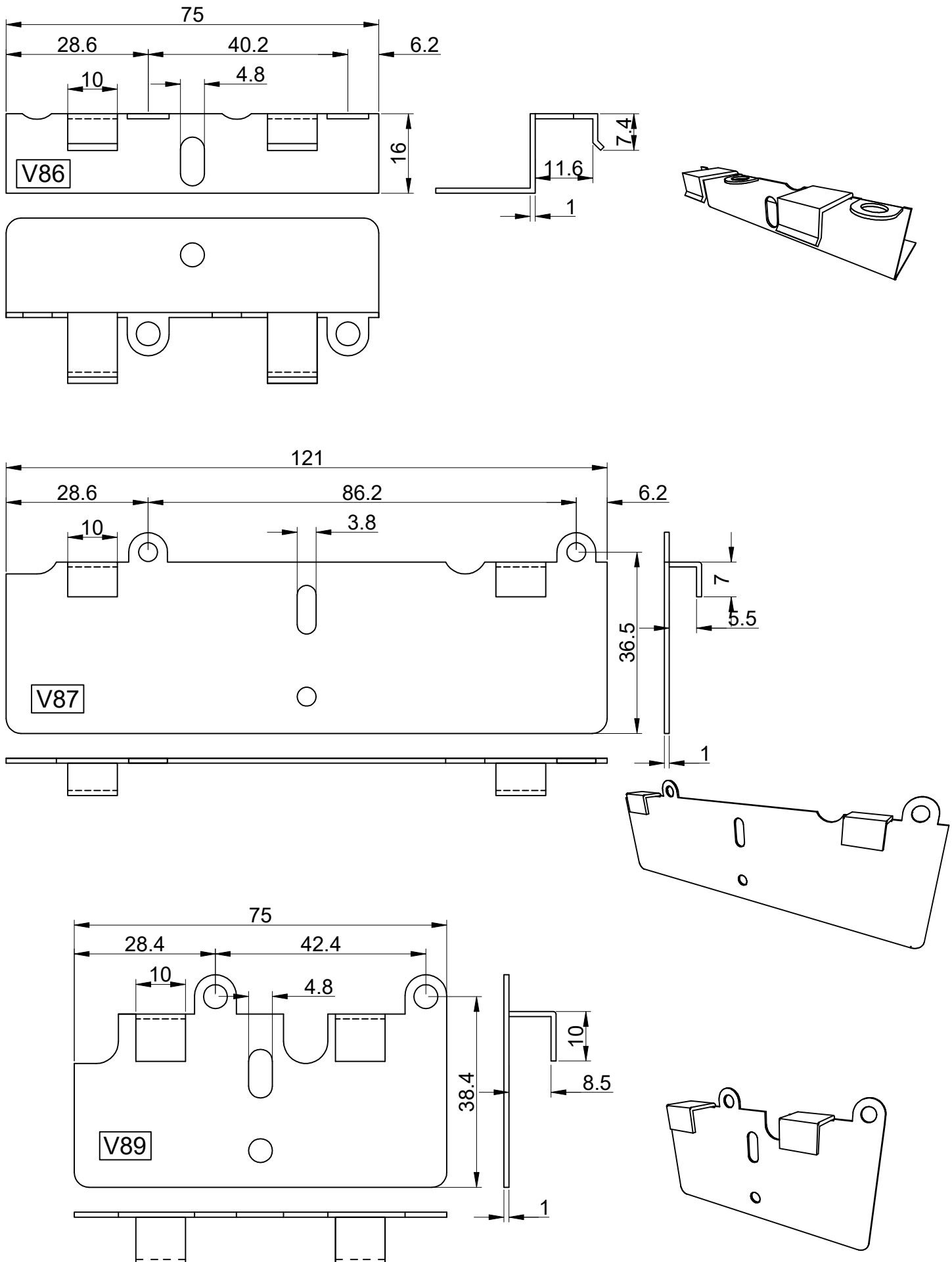




*Pločice se mogu plastificirati.
*Plates can be powder-coated.

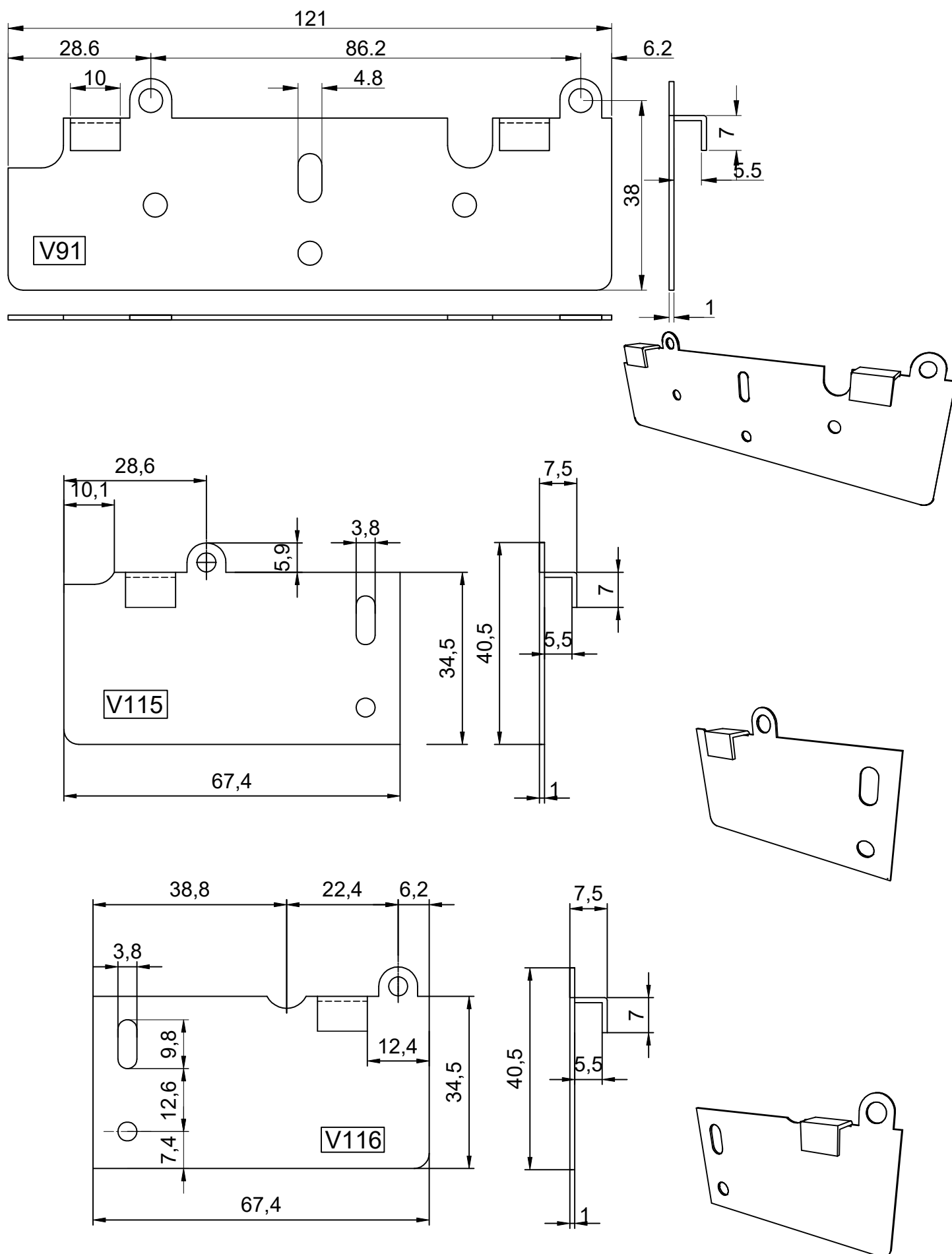


*Pločice se mogu plastificirati.
*Plates can be powder-coated.

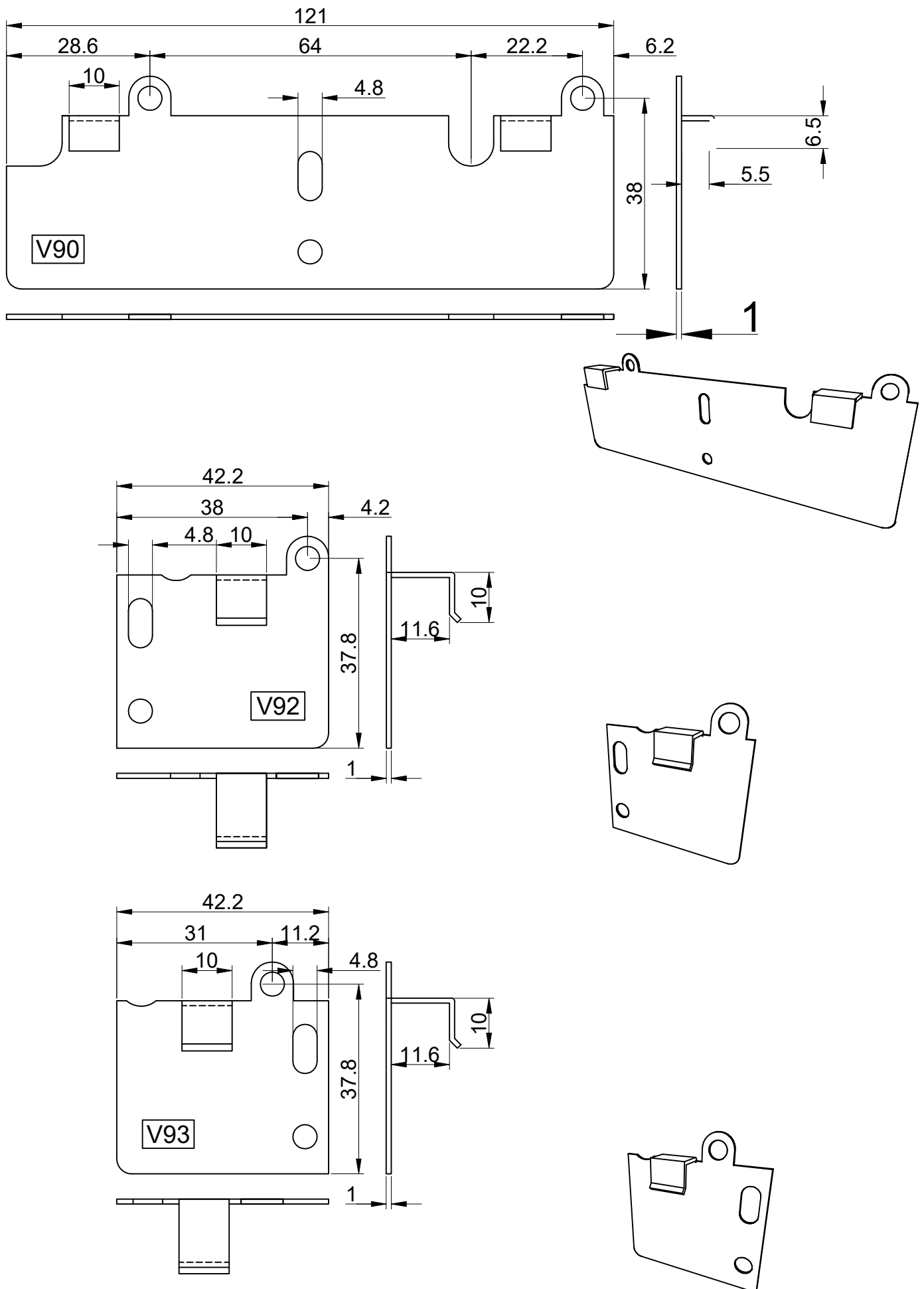


*Pločice se mogu plastificirati.

*Plates can be powder-coated.



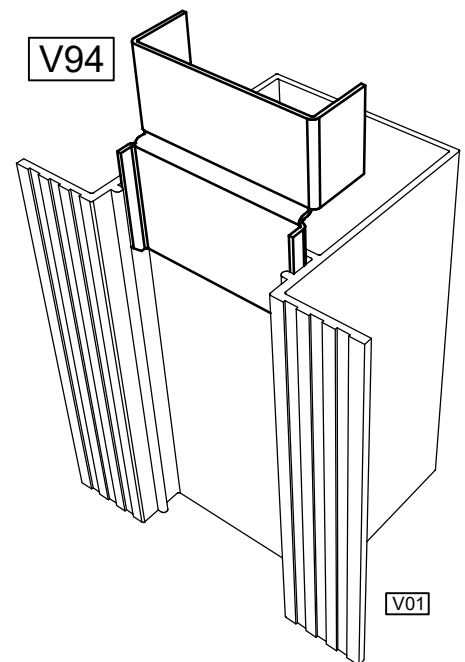
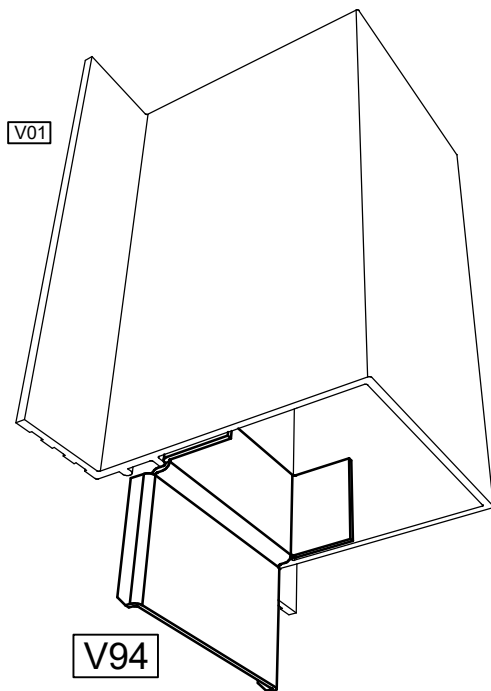
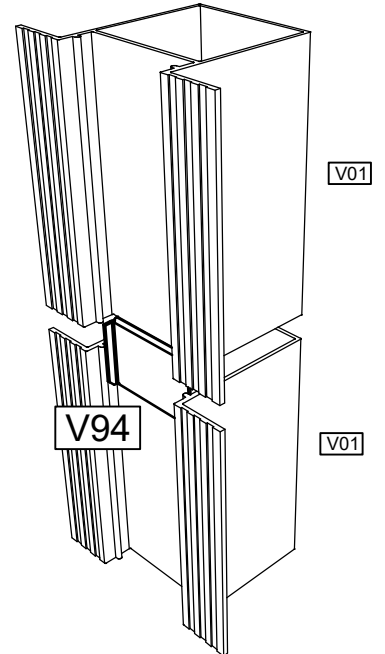
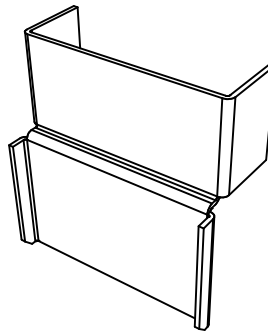
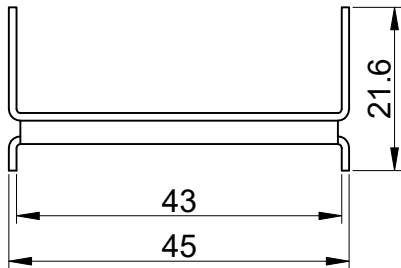
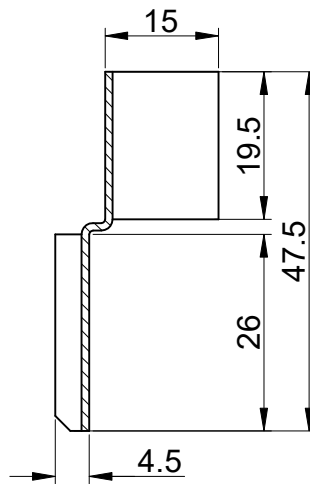
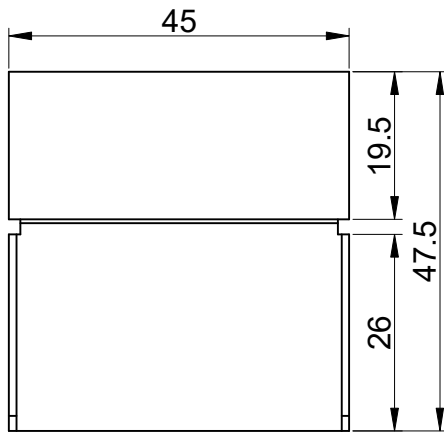
*Pločice se mogu plastificirati.
*Plates can be powder-coated.



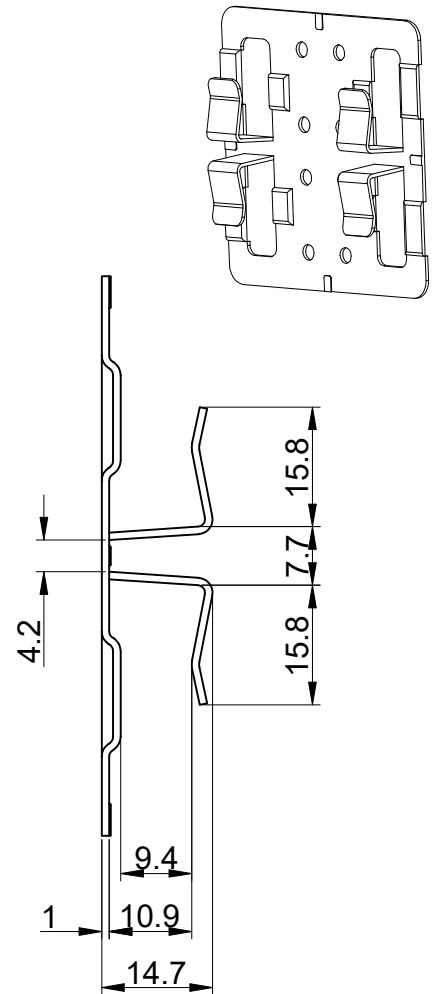
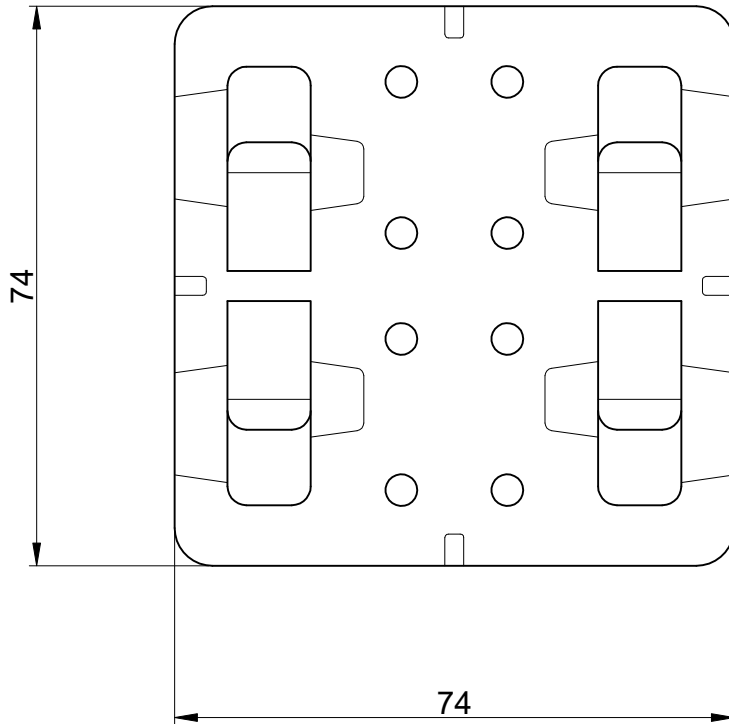
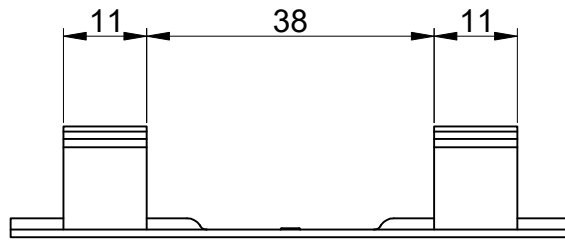
*Pločice se mogu plastificirati.

*Plates can be powder-coated.

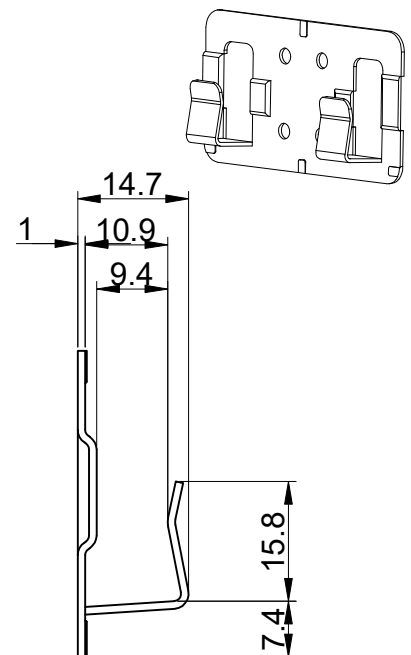
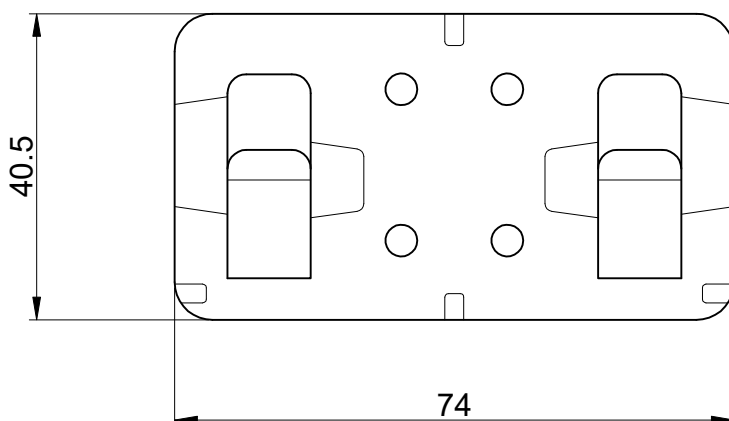
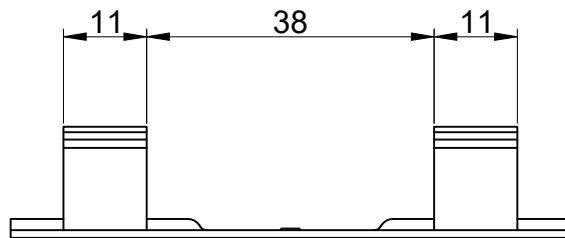
V94



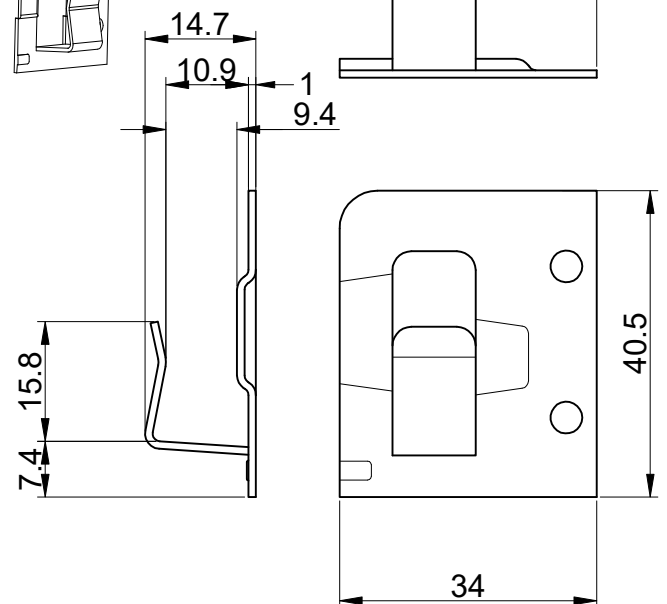
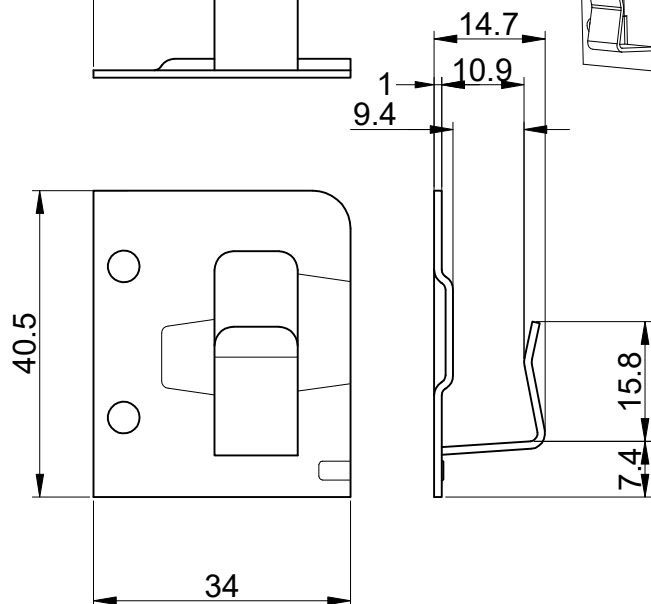
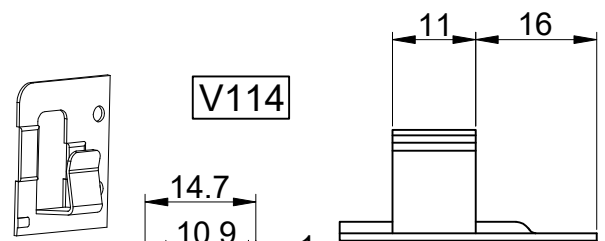
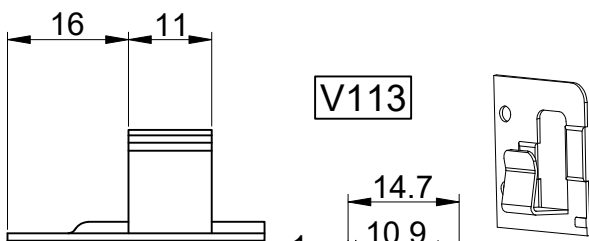
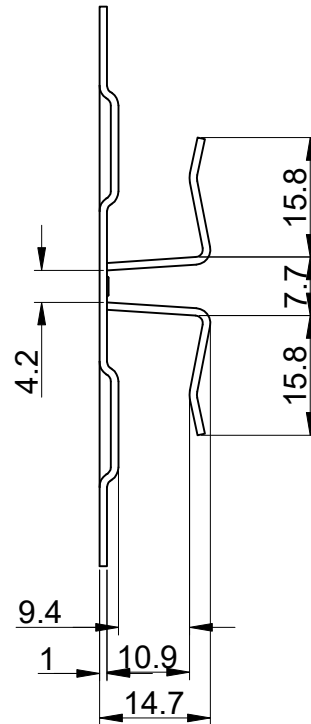
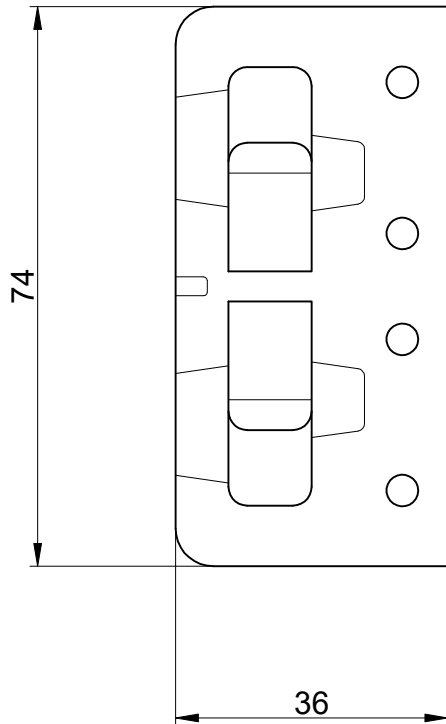
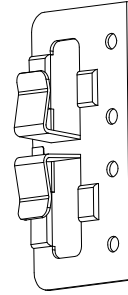
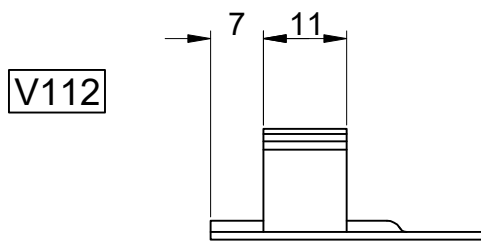
V110



V111



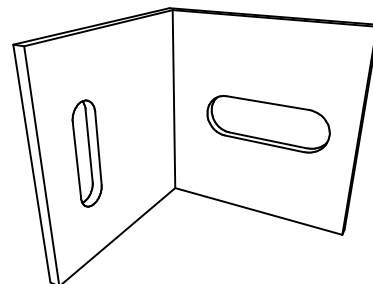
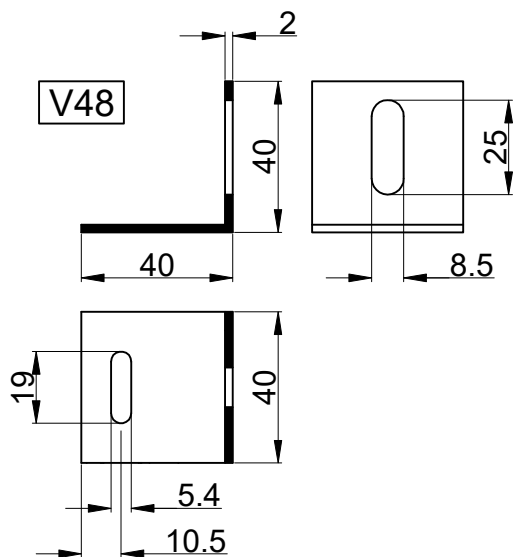
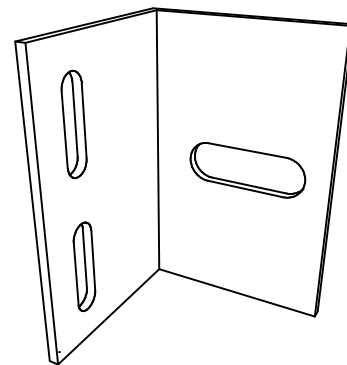
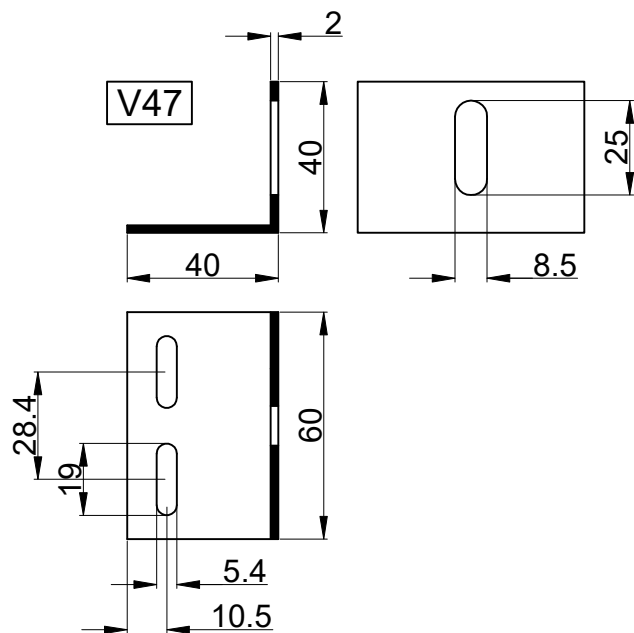
*Pločice se mogu plastificirati.
*Plates can be powder-coated.

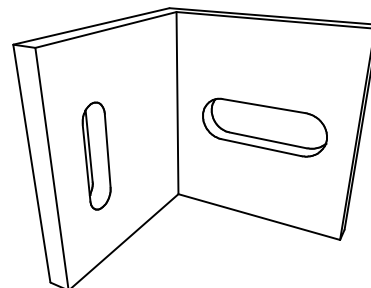
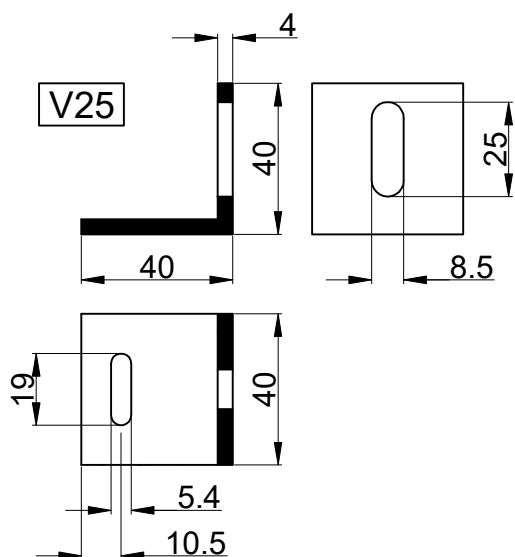
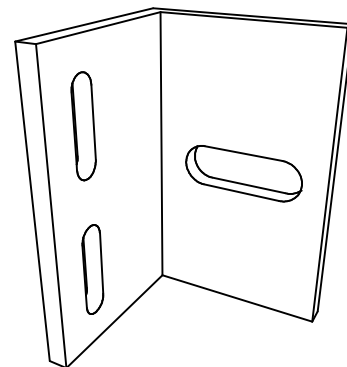
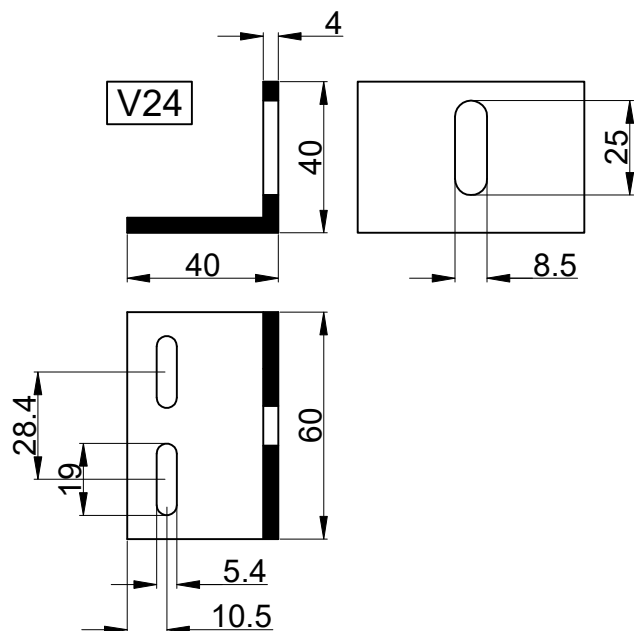


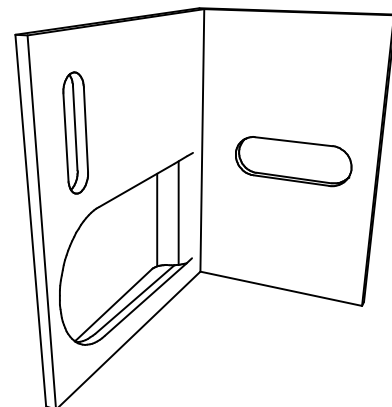
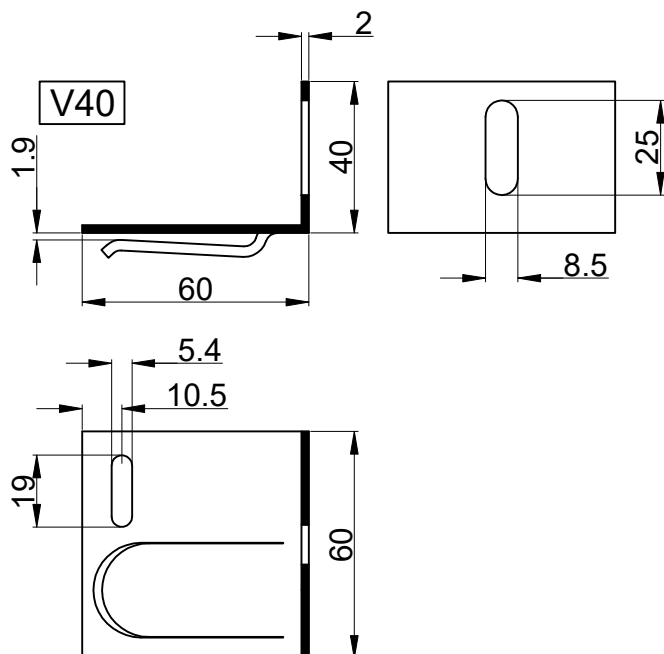
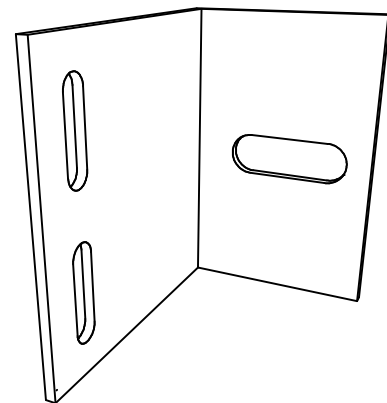
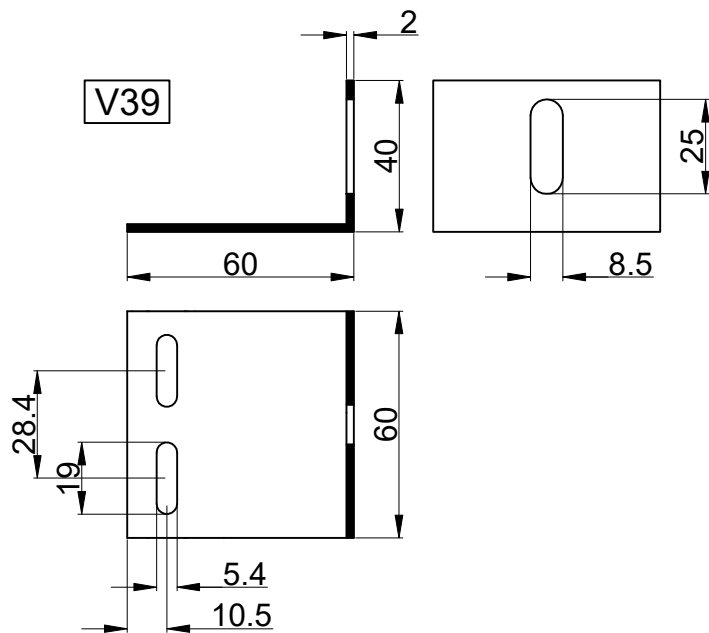
*Pločice se mogu plastificirati.
*Plates can be powder-coated.

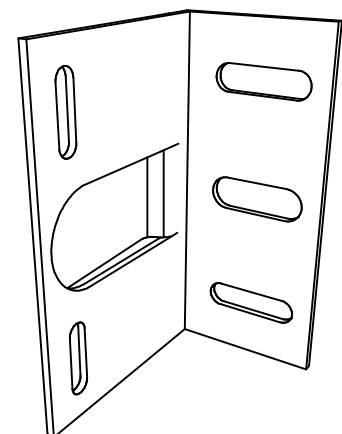
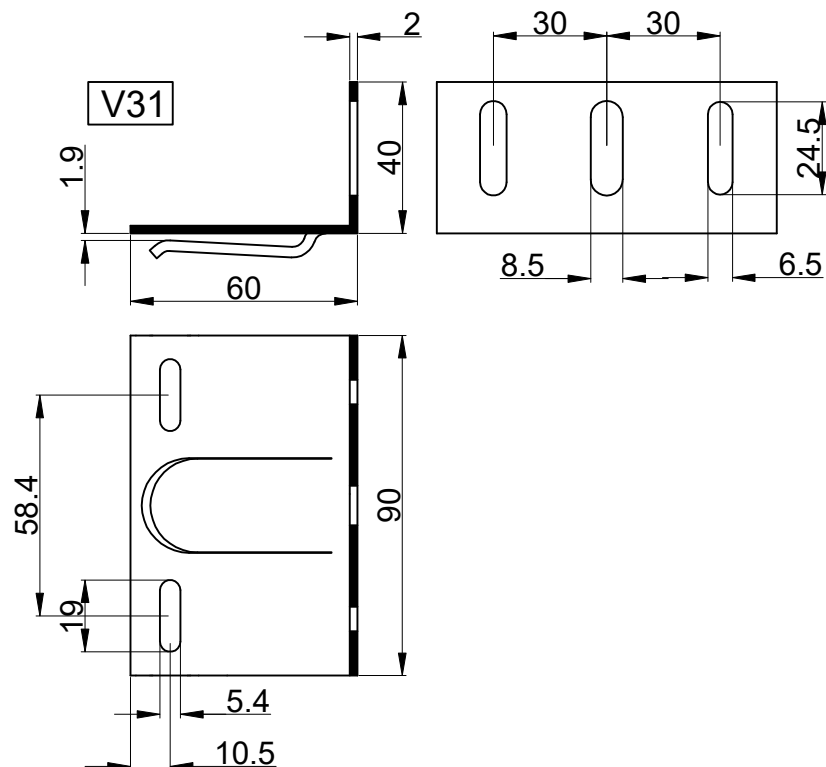
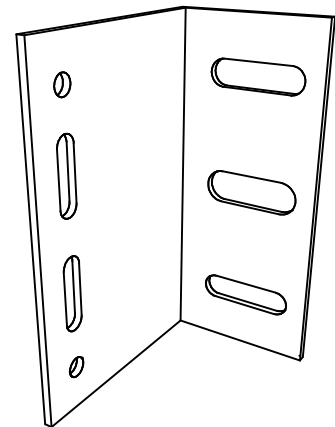
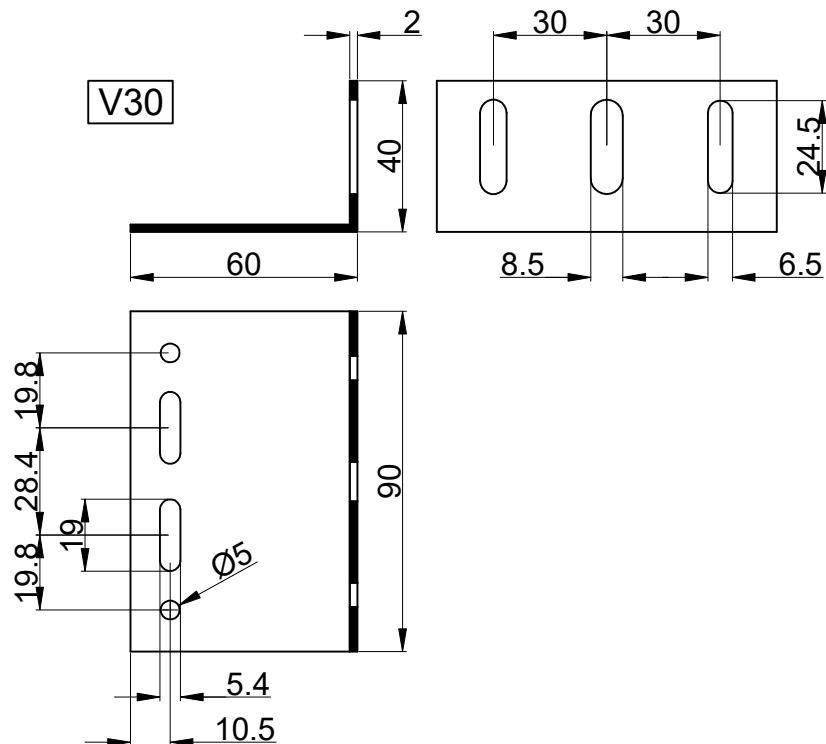
*Kotve
Brackets*

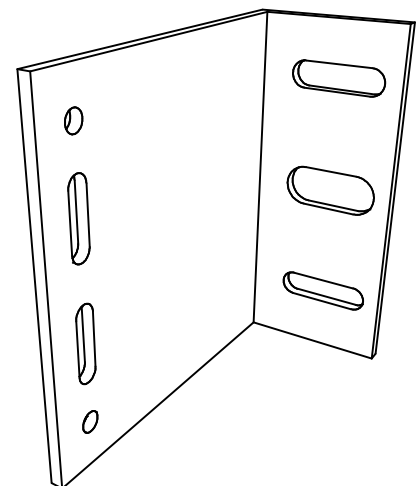
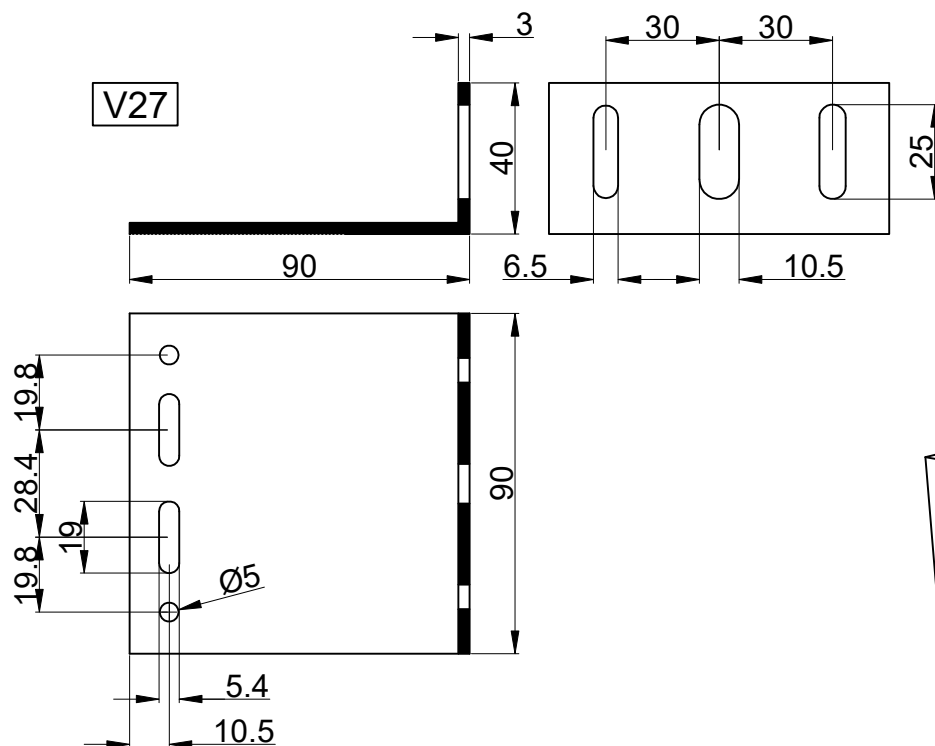
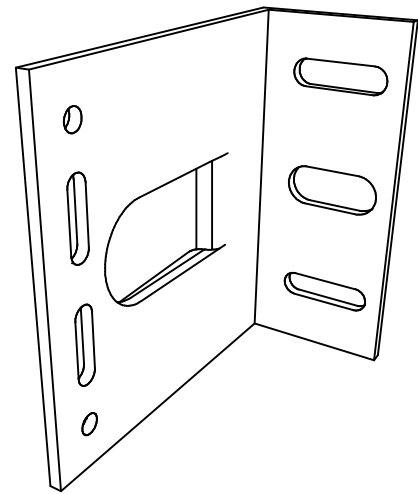
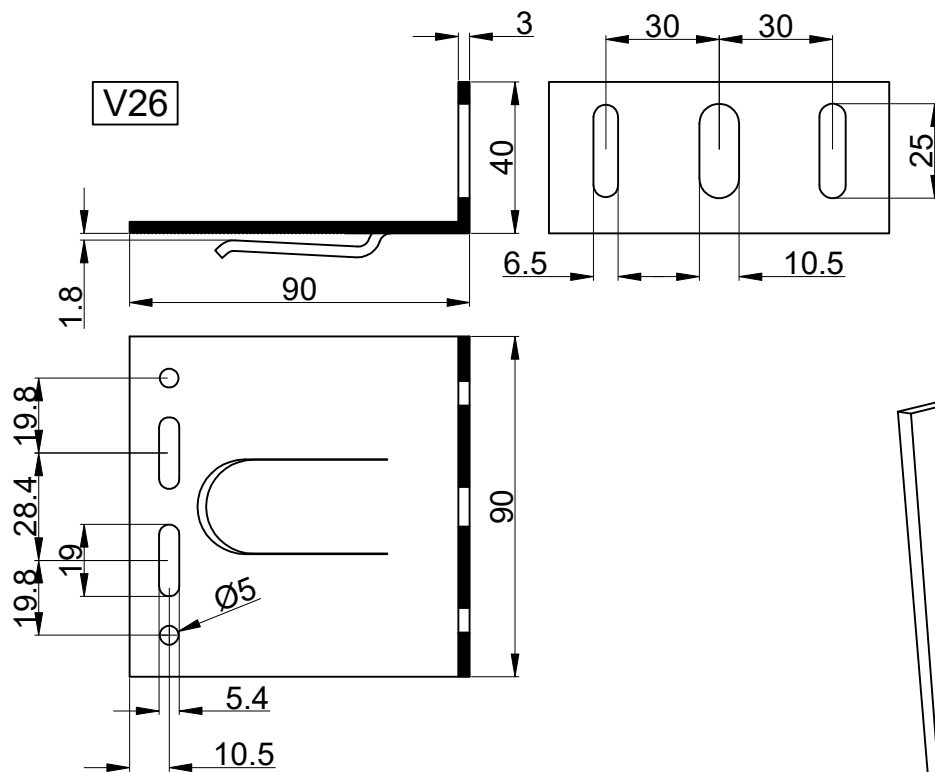


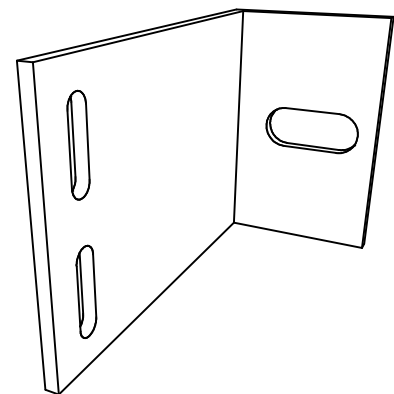
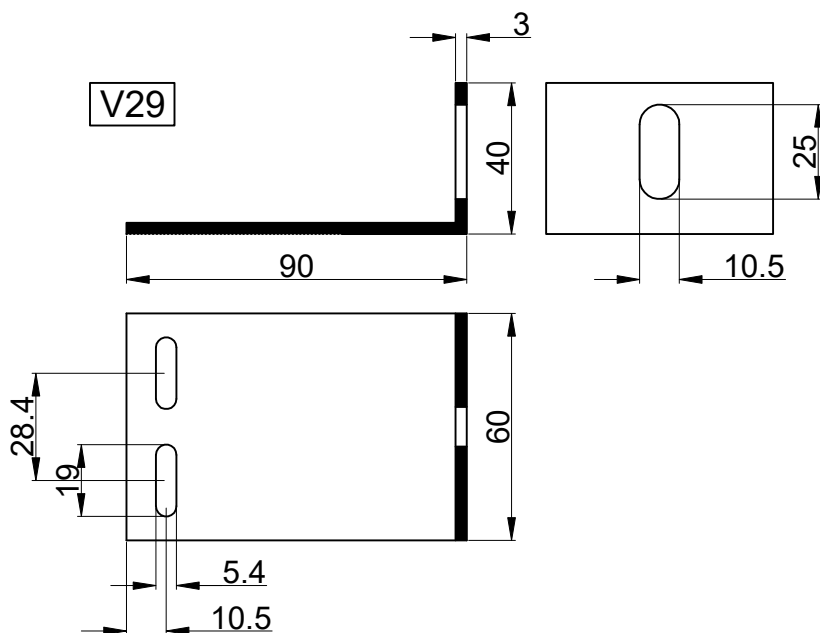
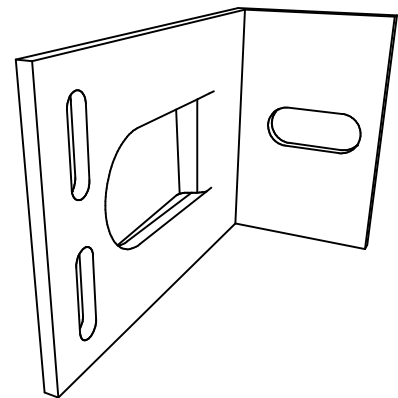
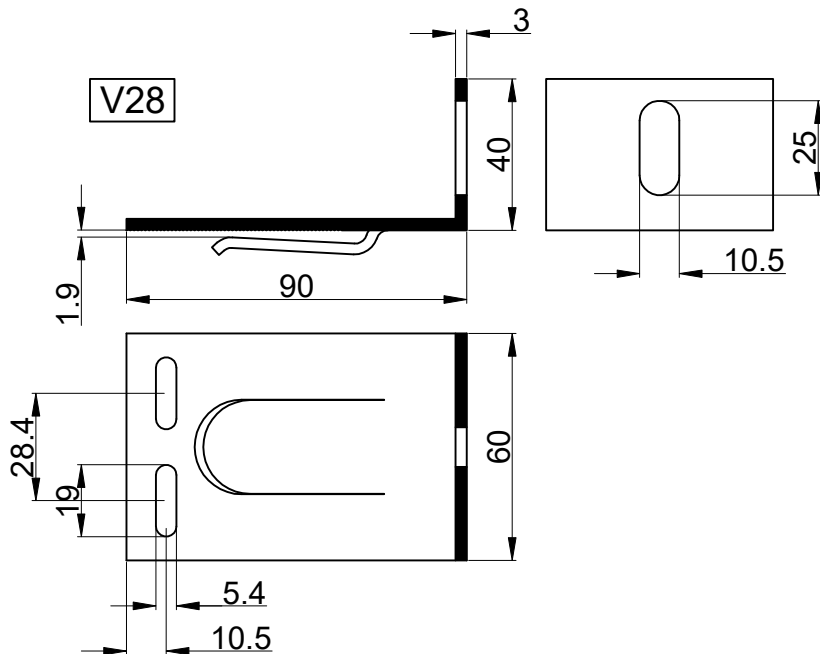


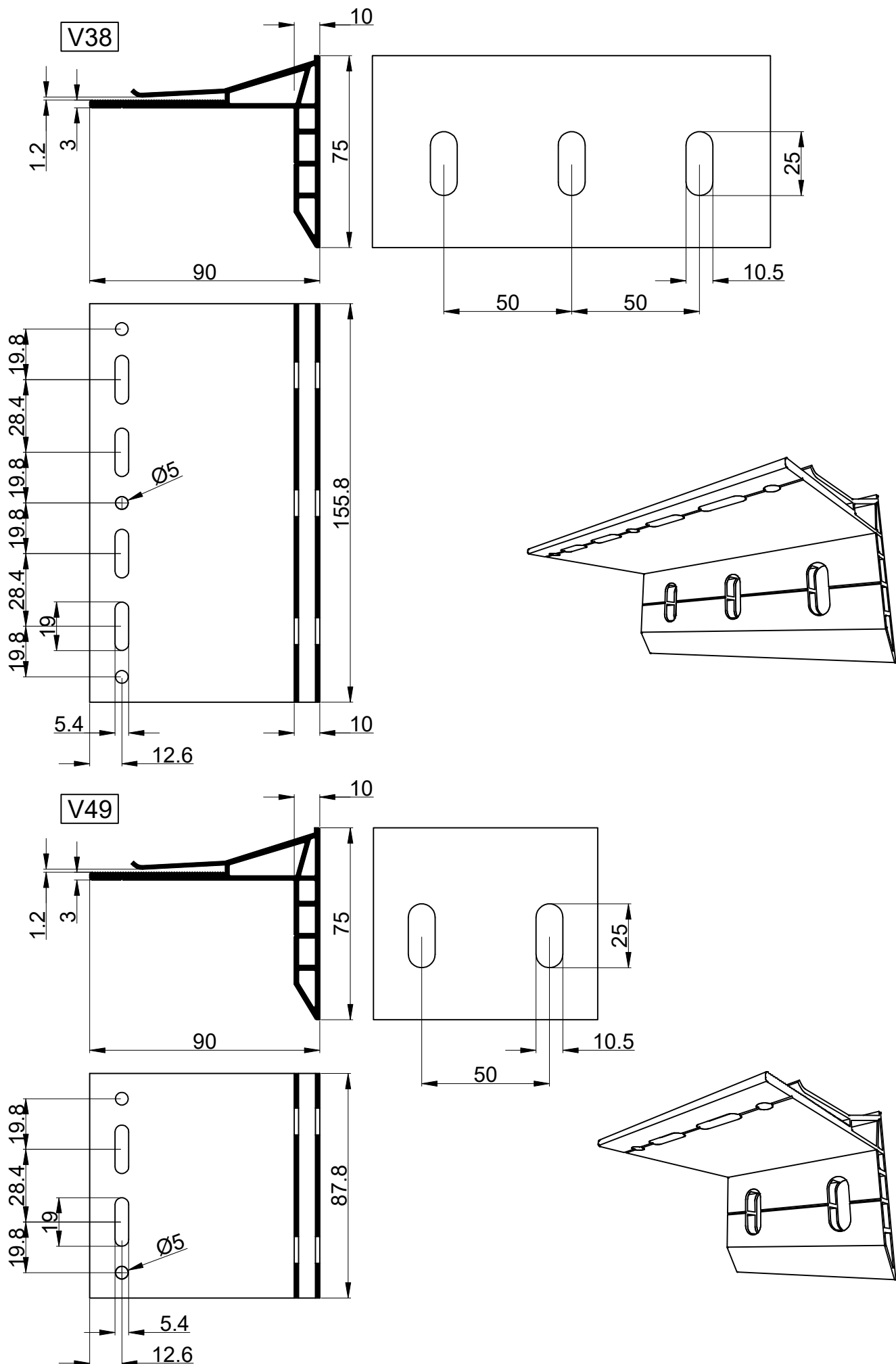


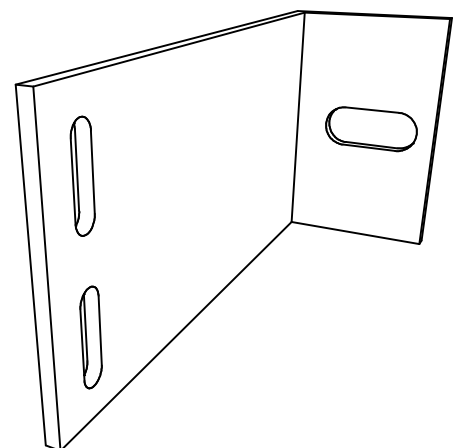
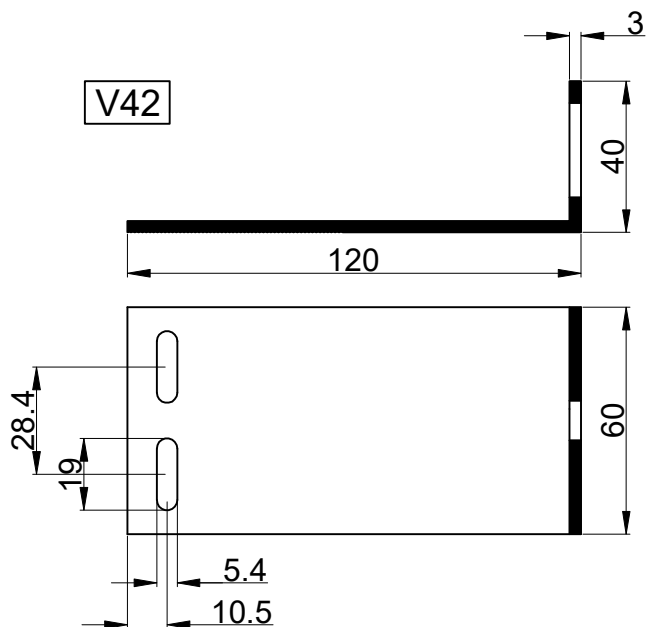
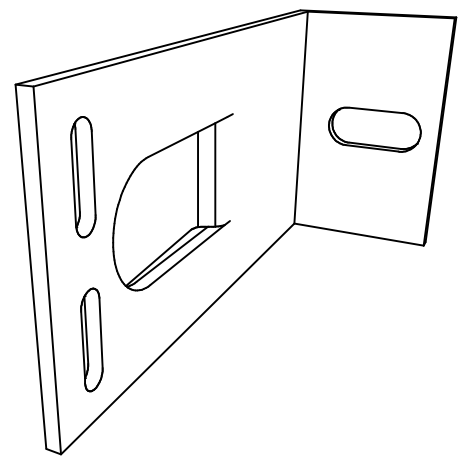
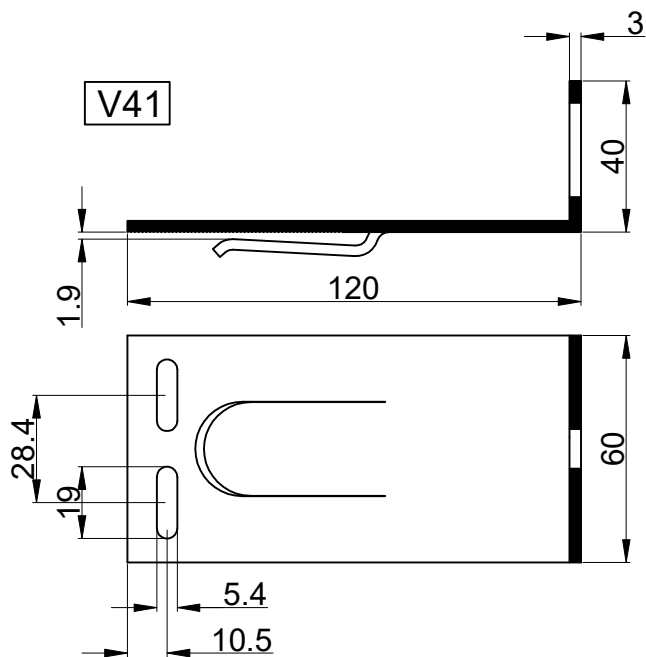


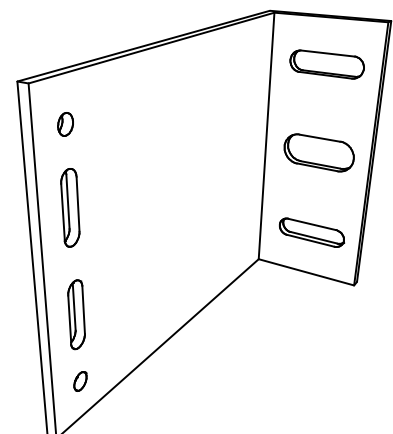
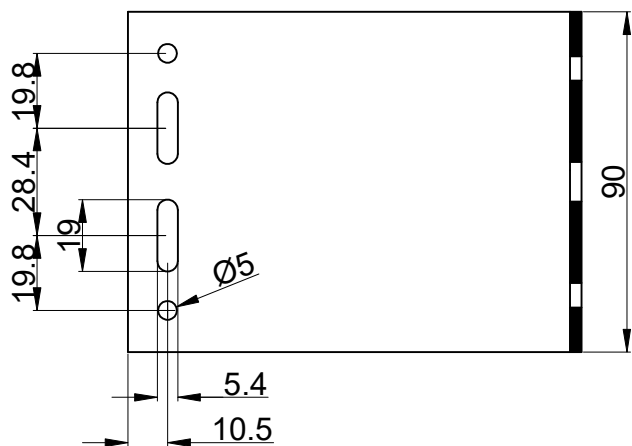
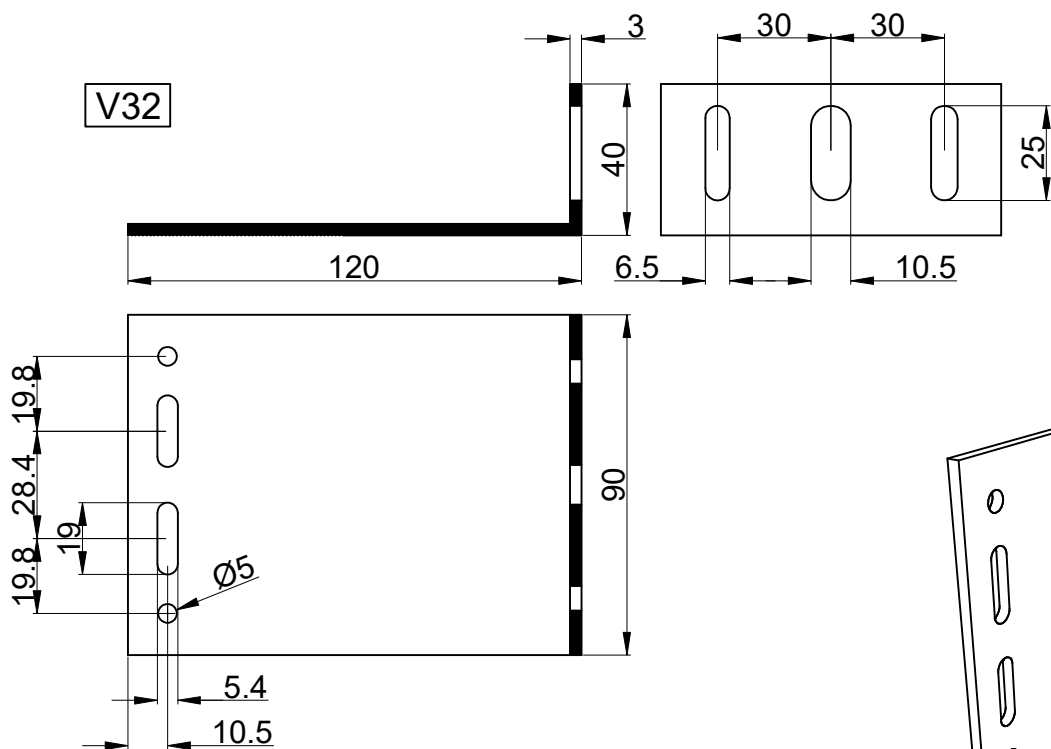
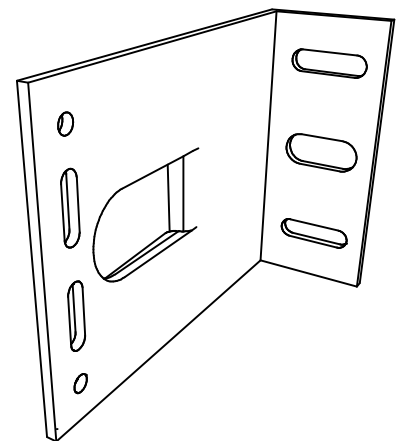
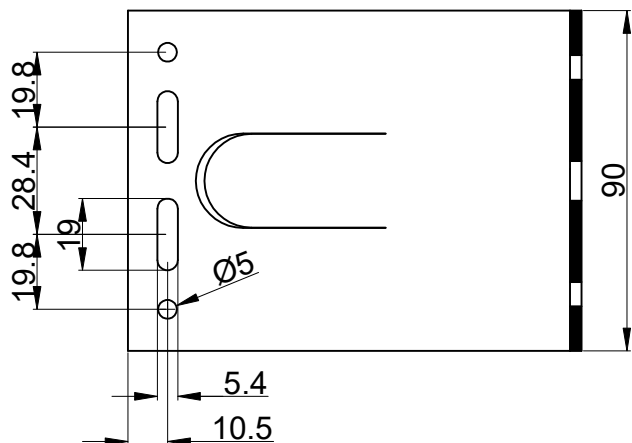
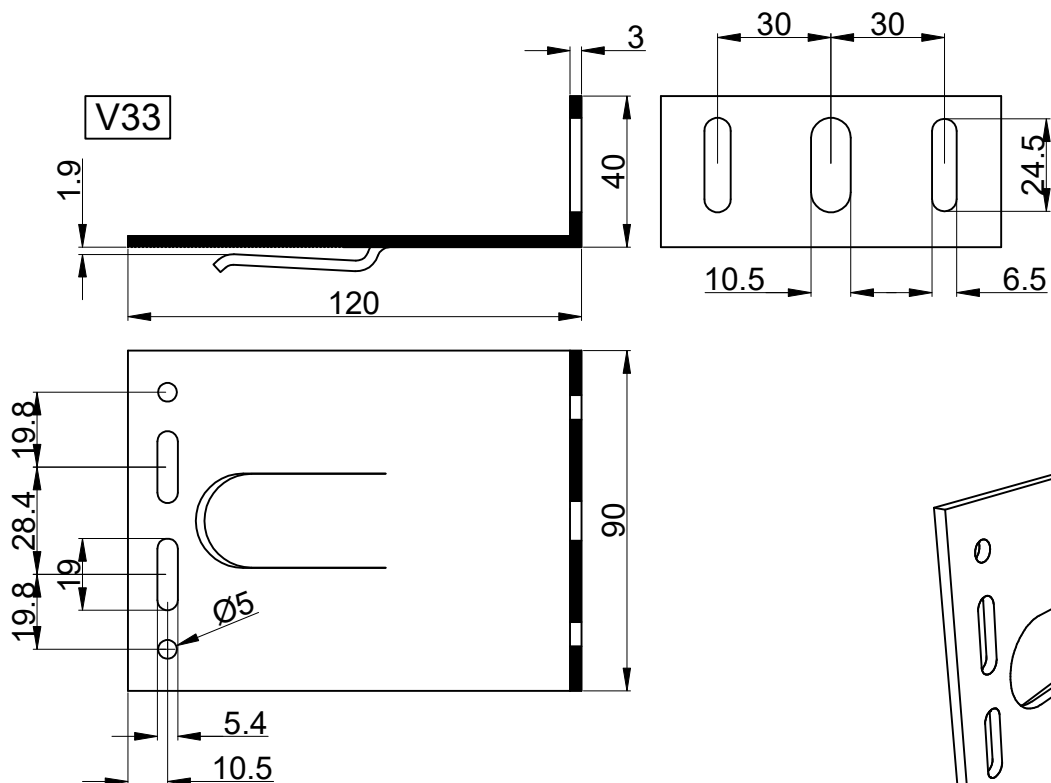


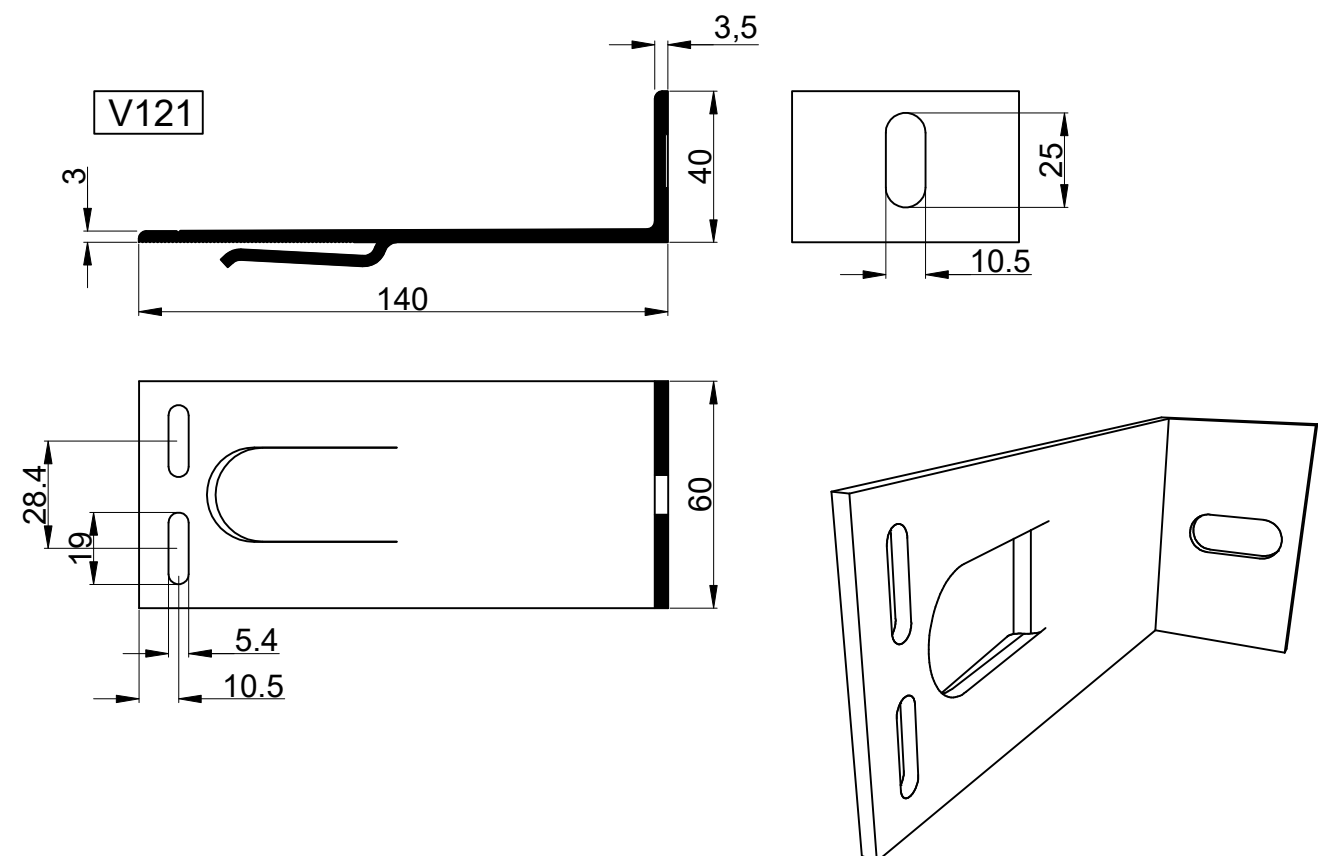
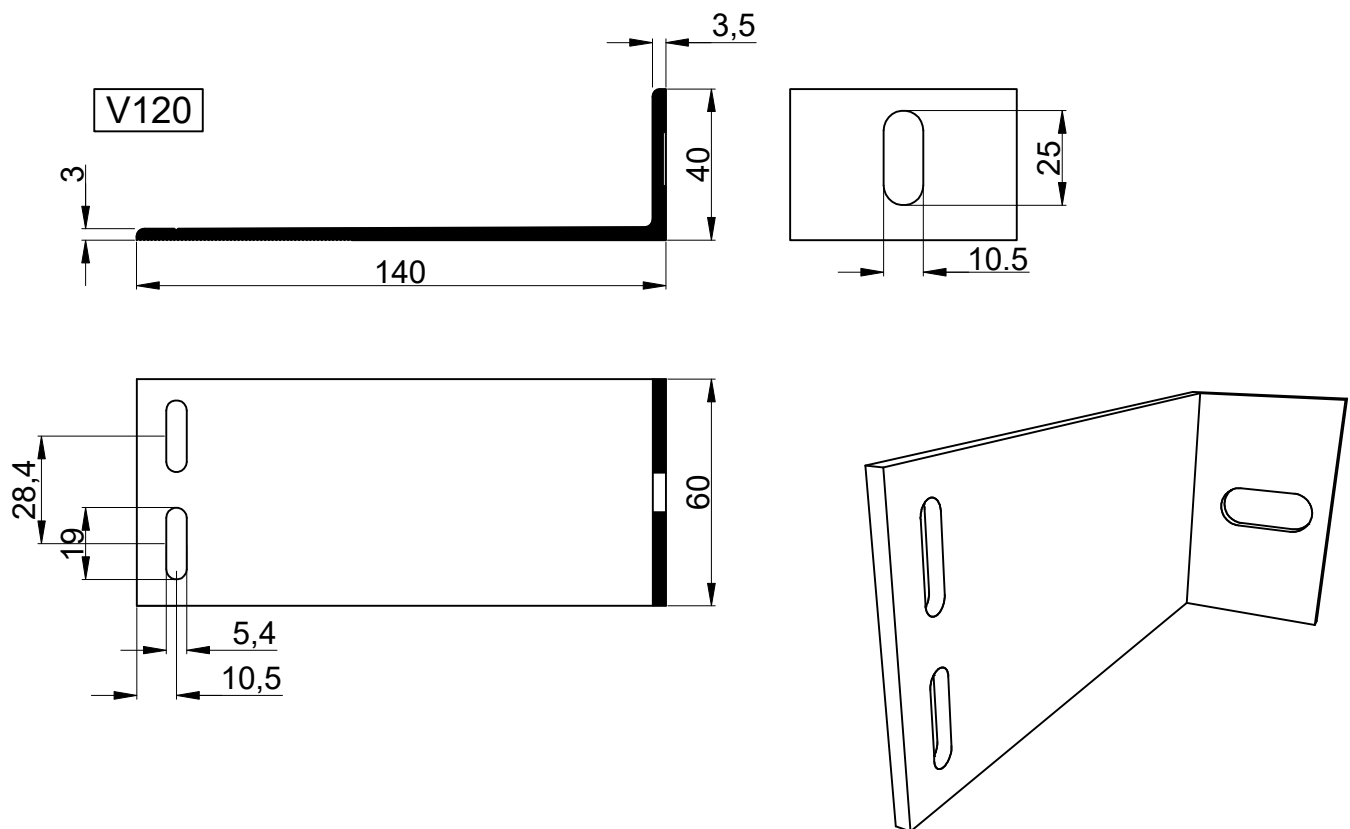


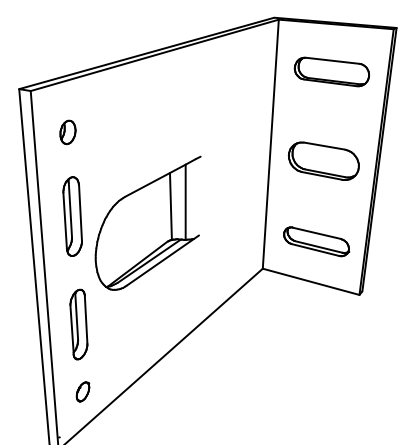
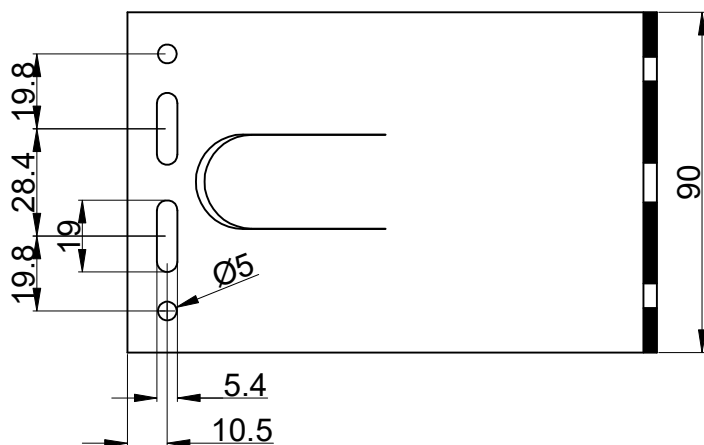
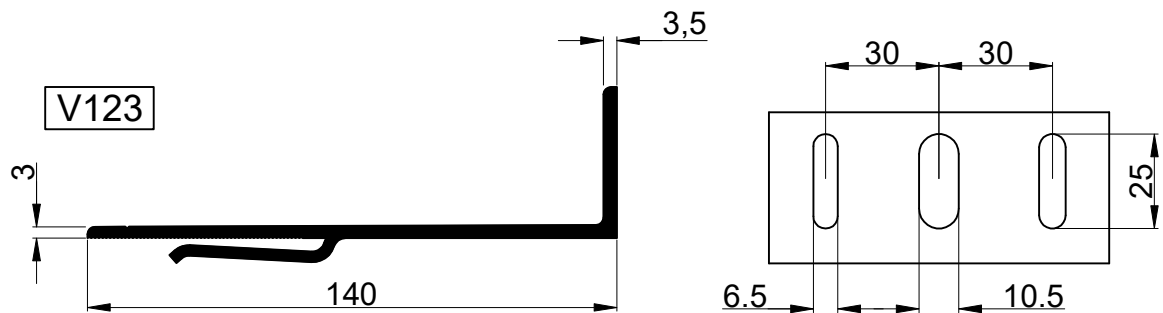
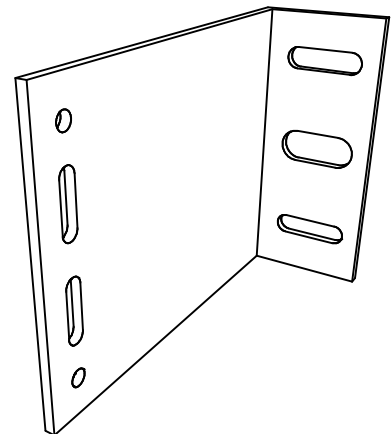
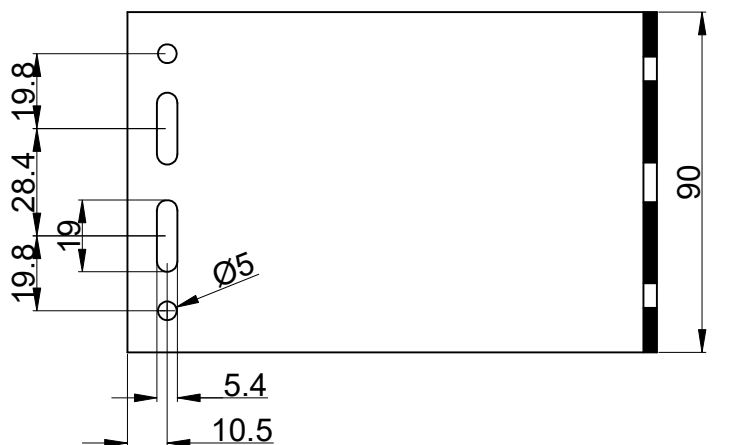
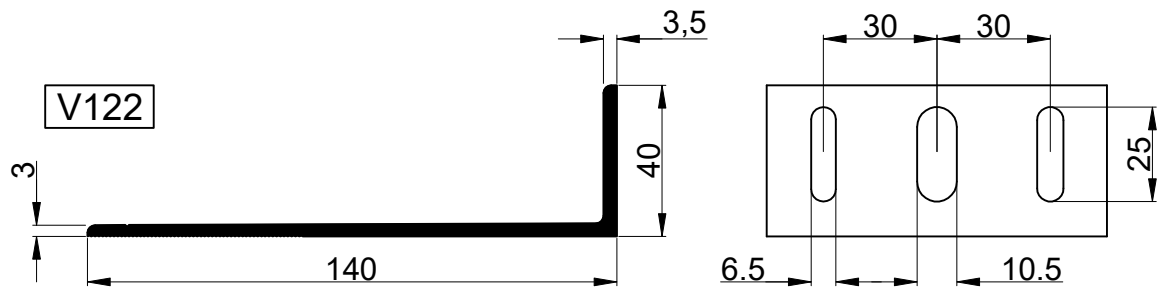


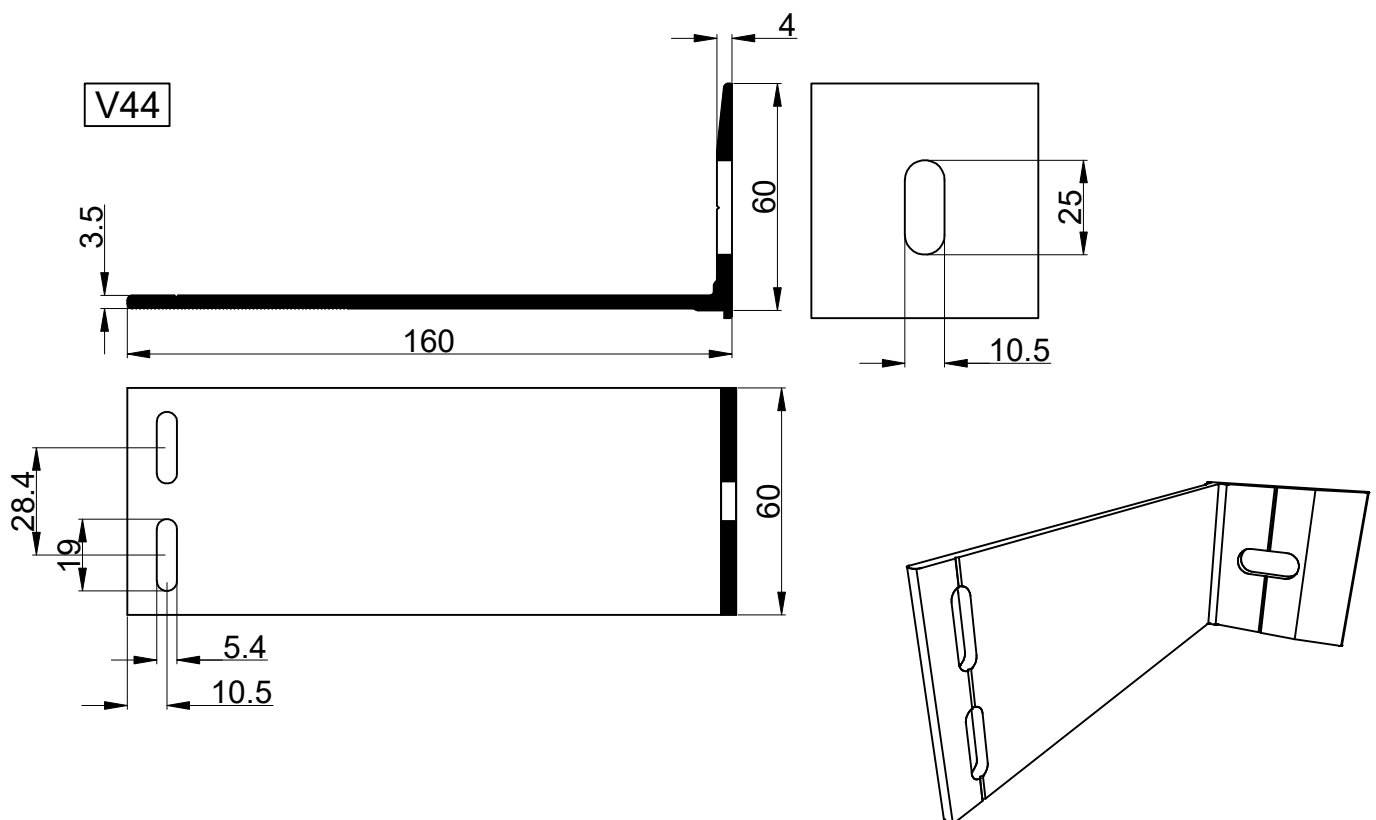
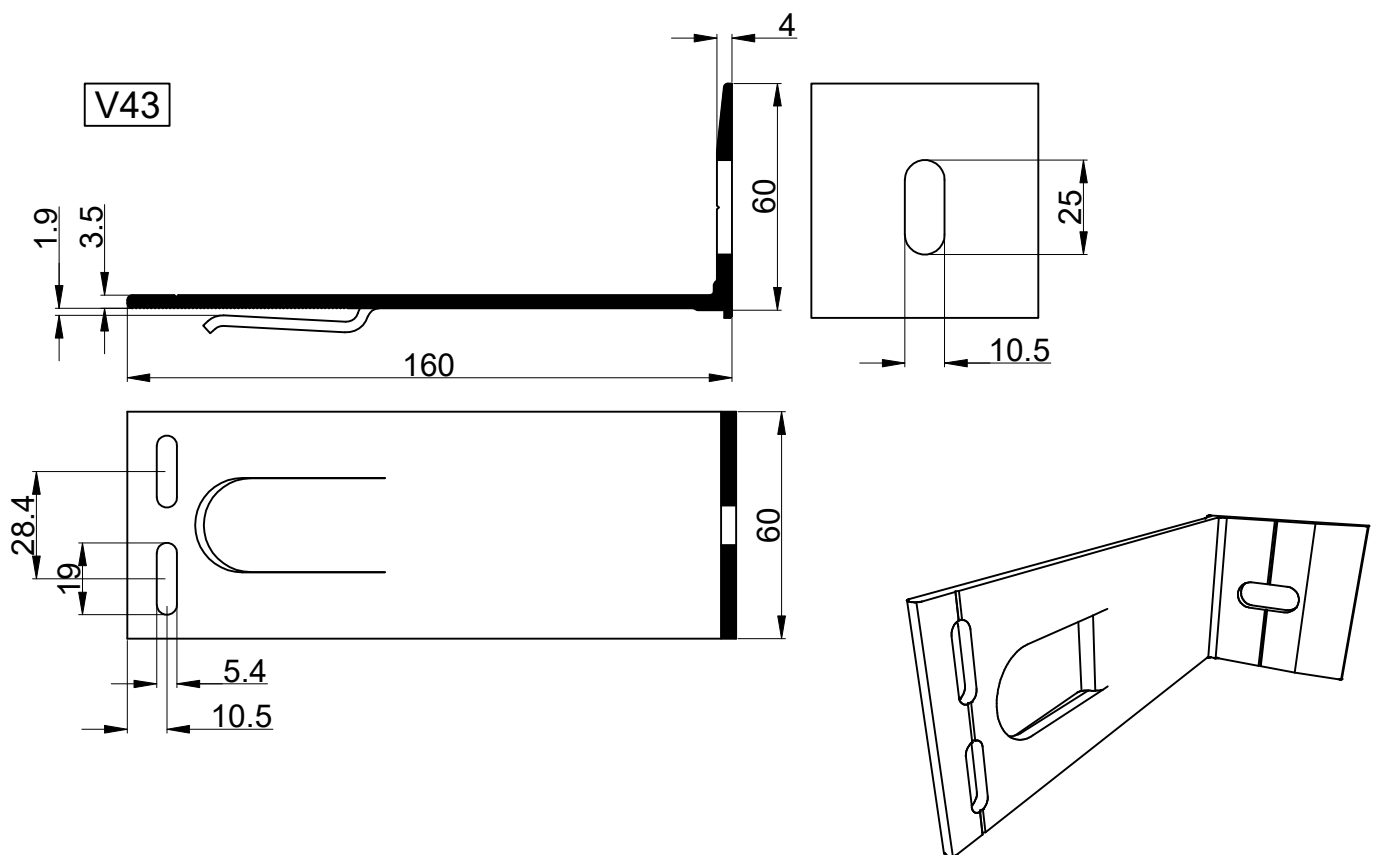




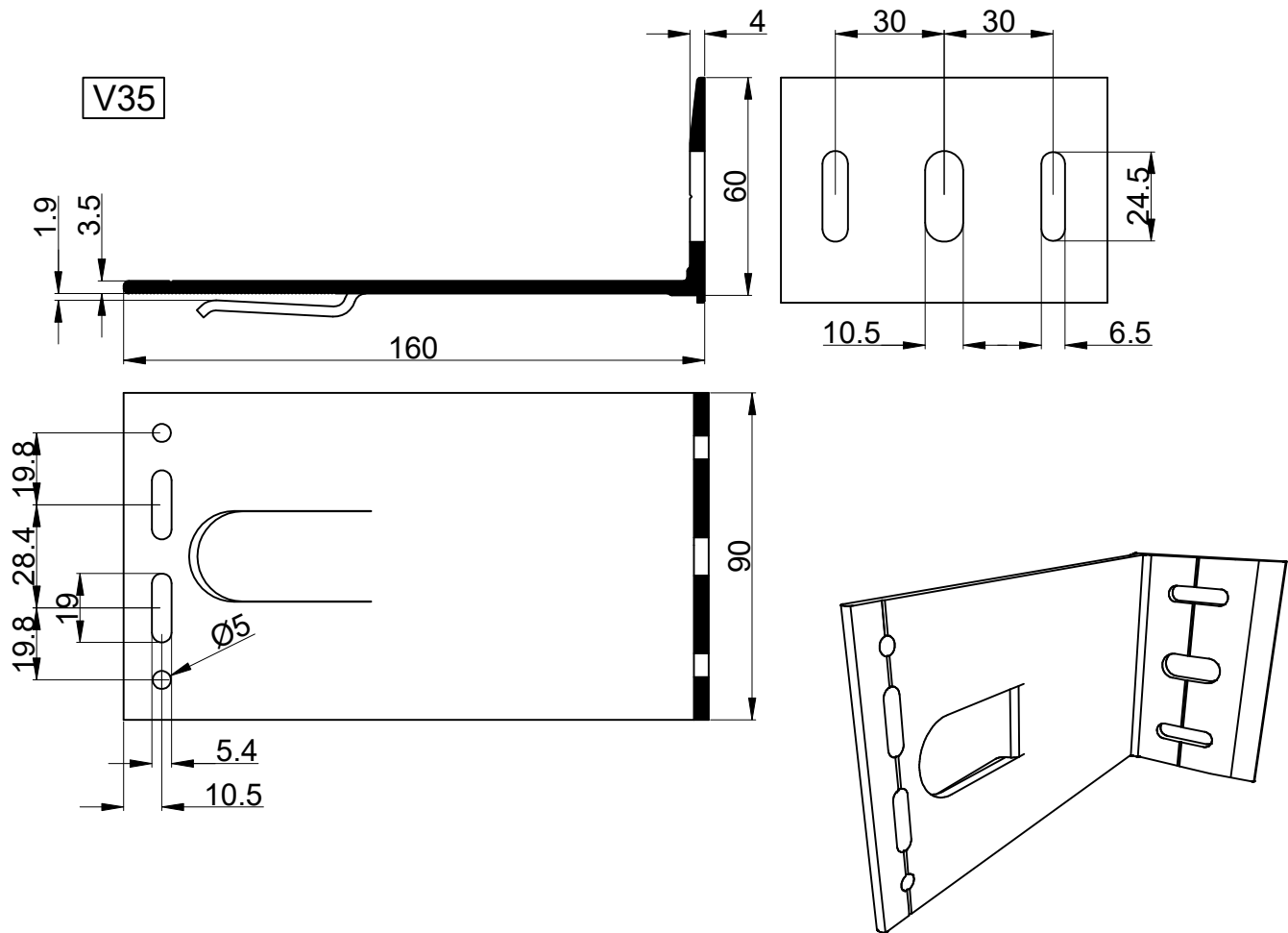




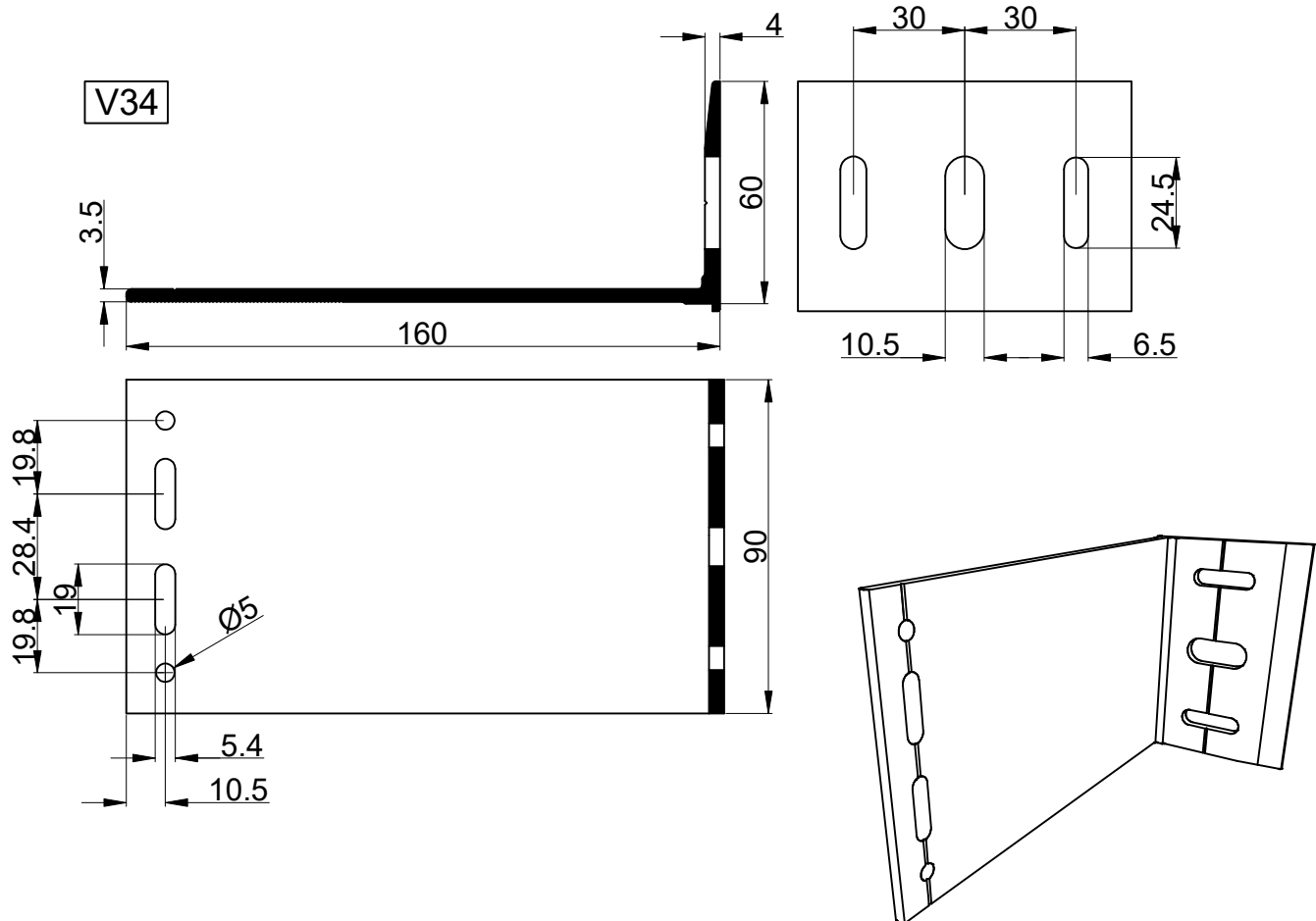


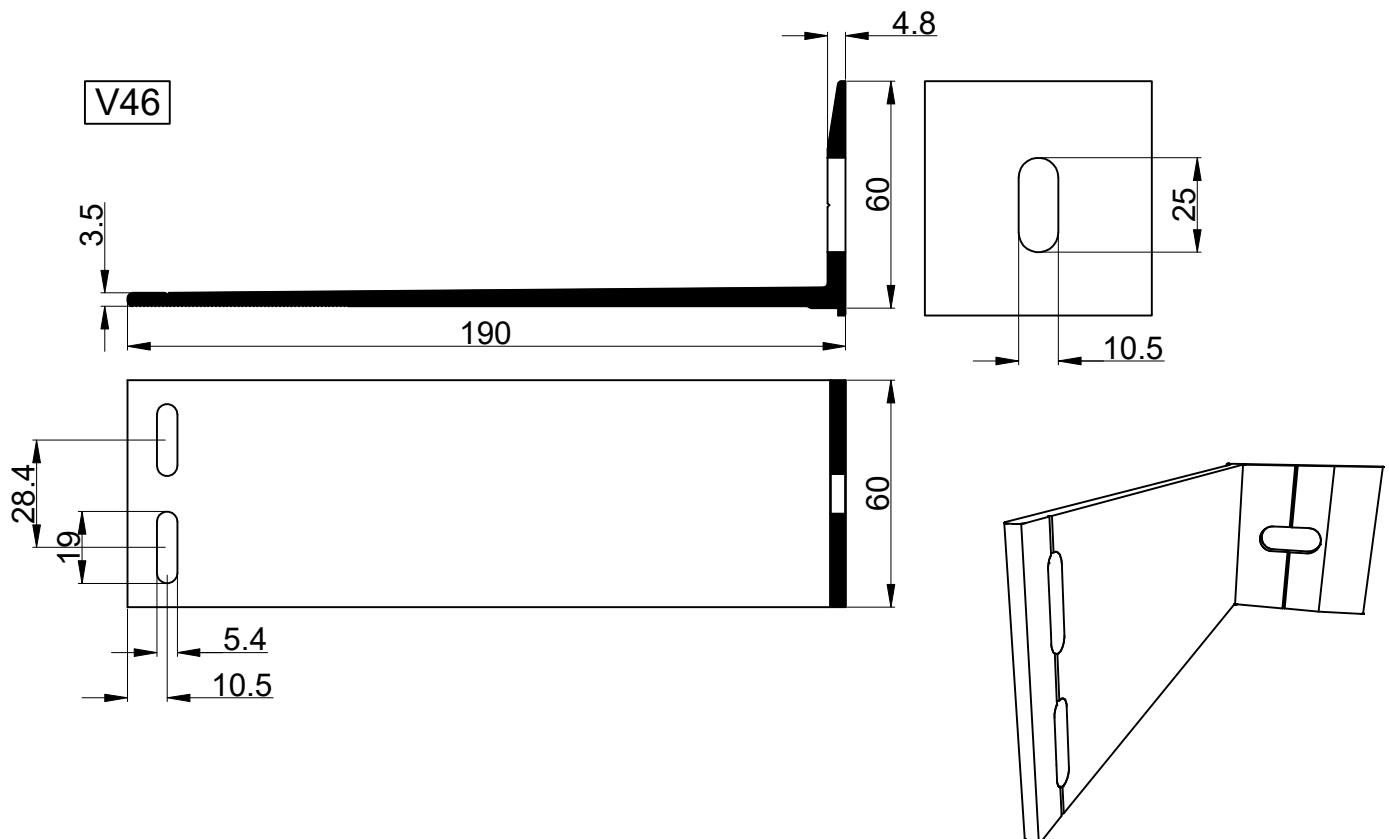
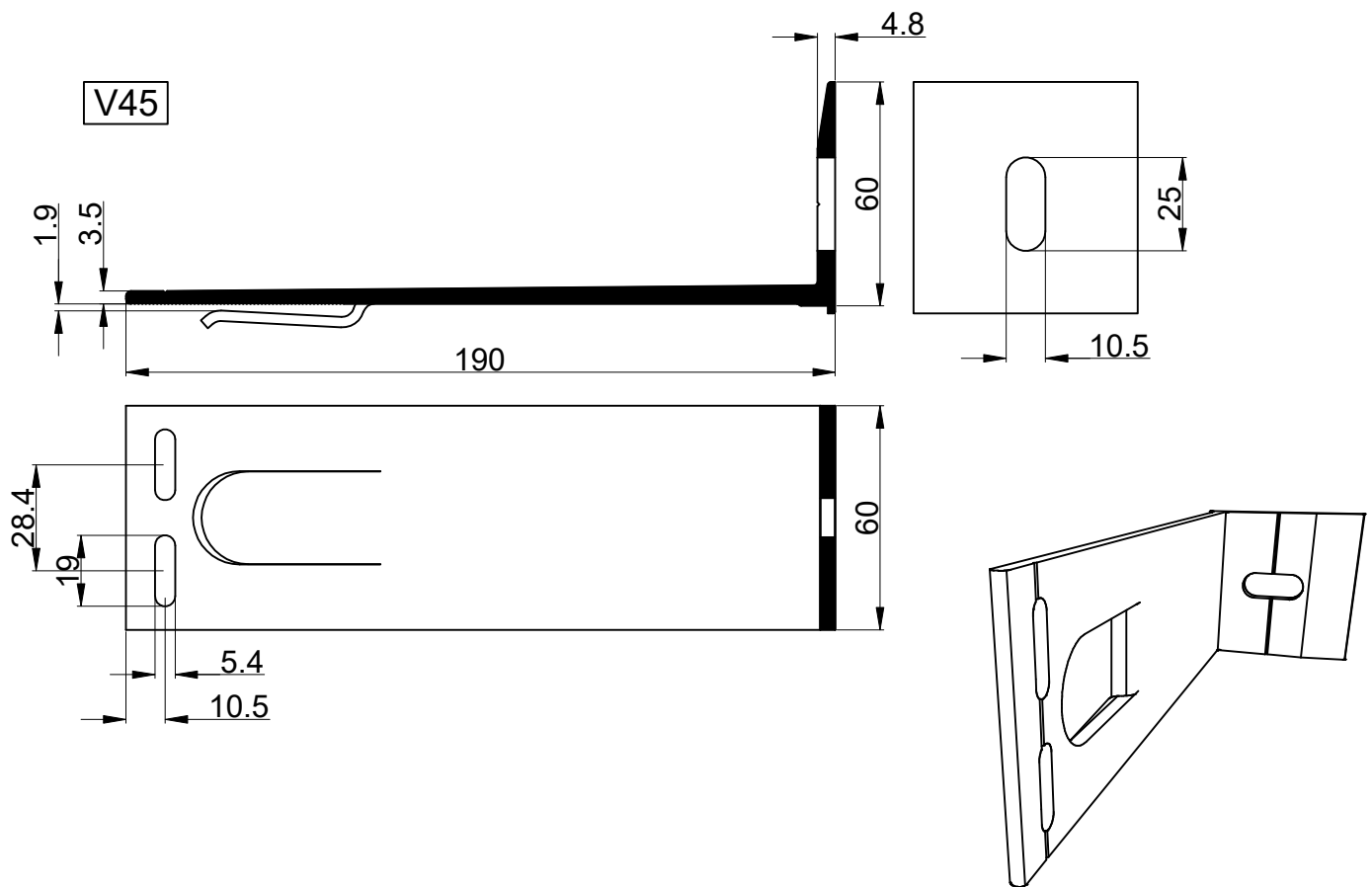


V35

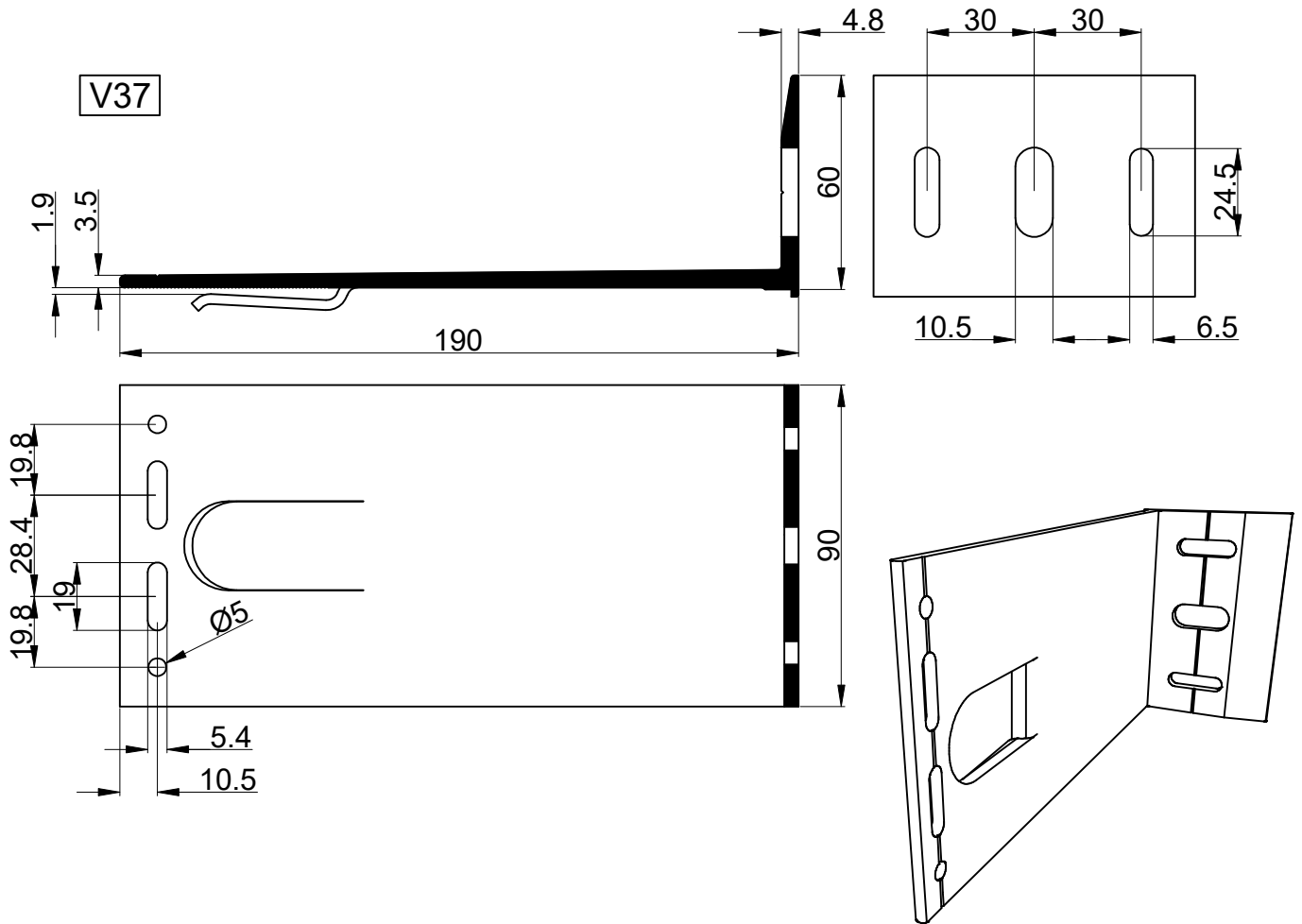


V34

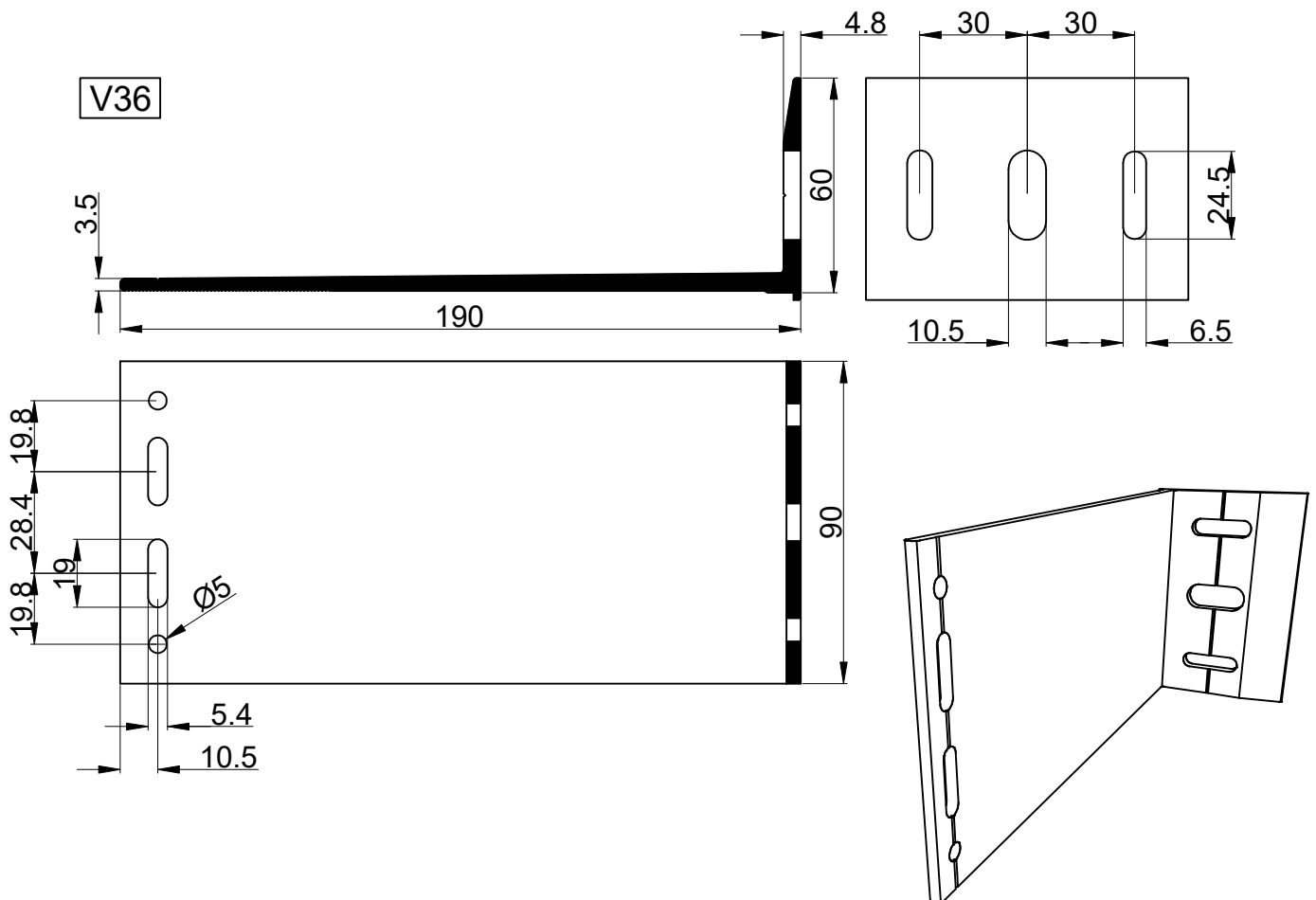


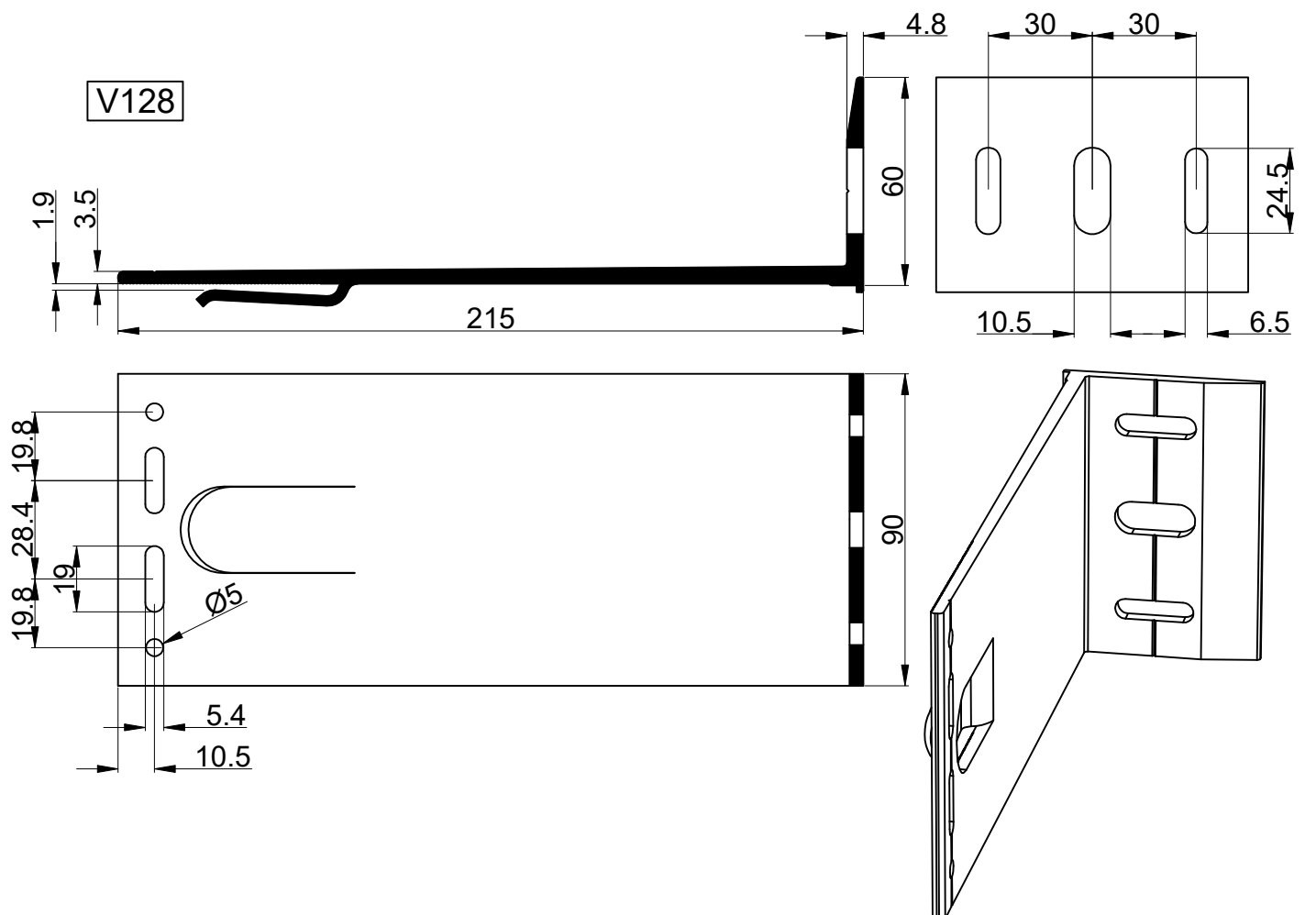
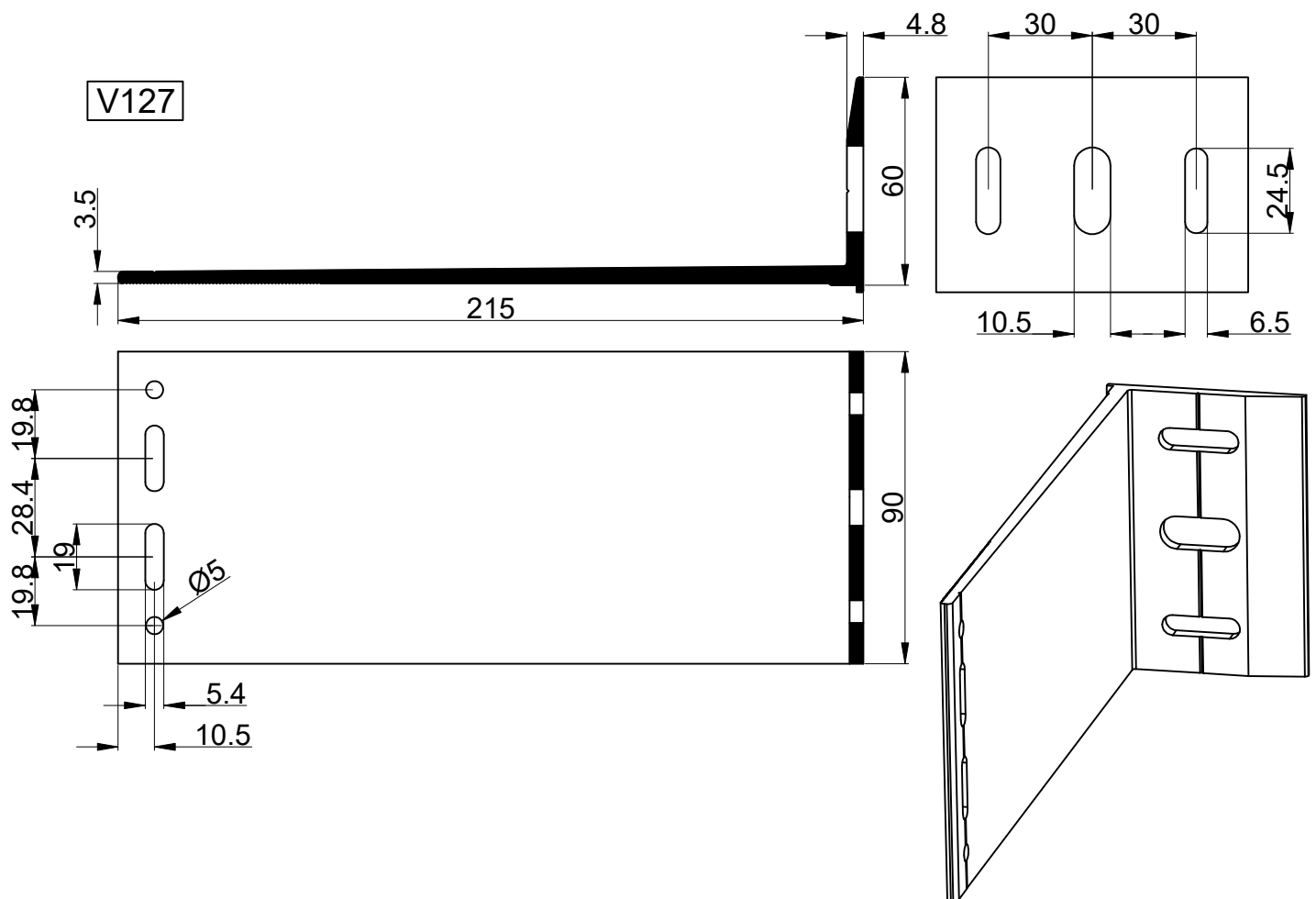


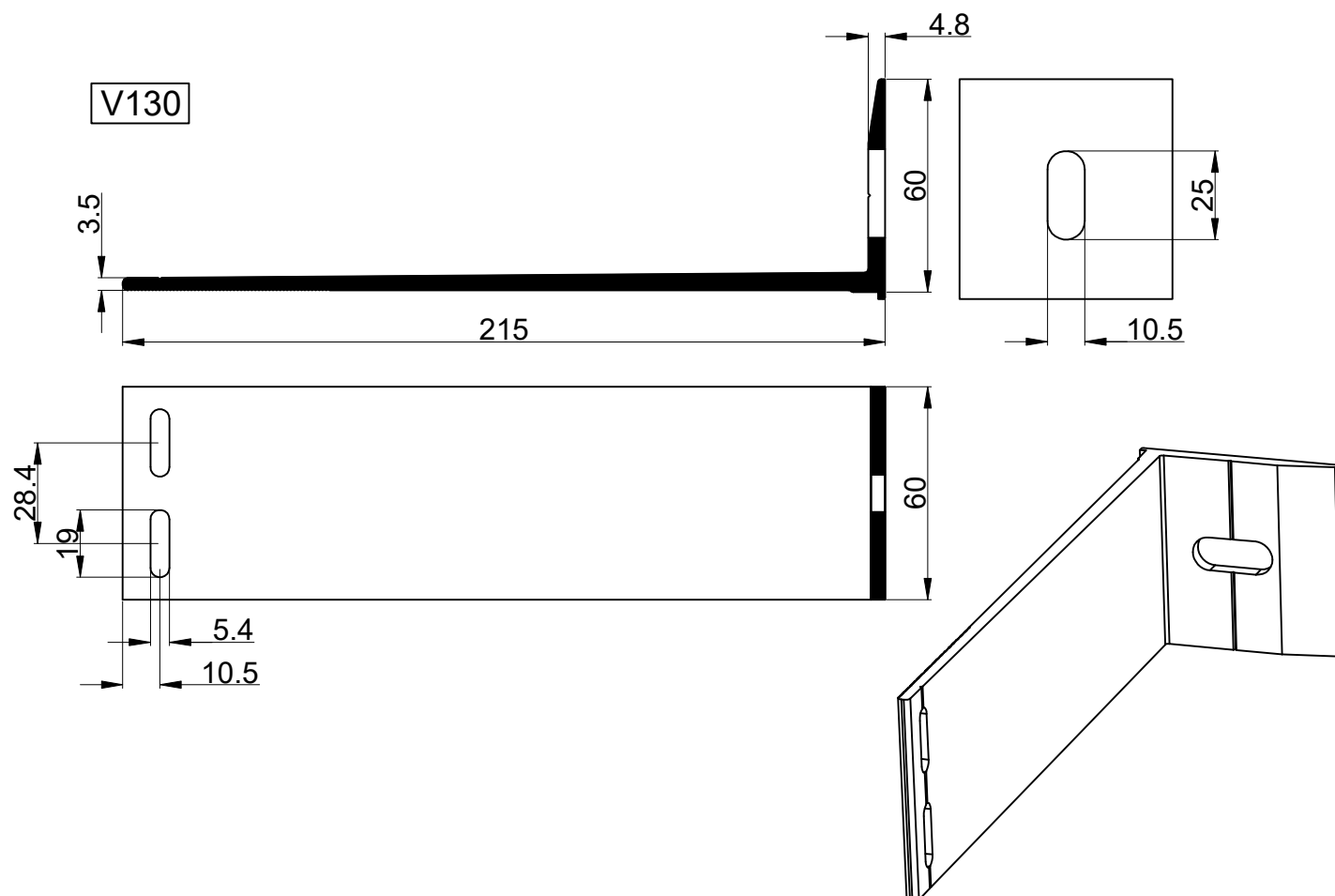
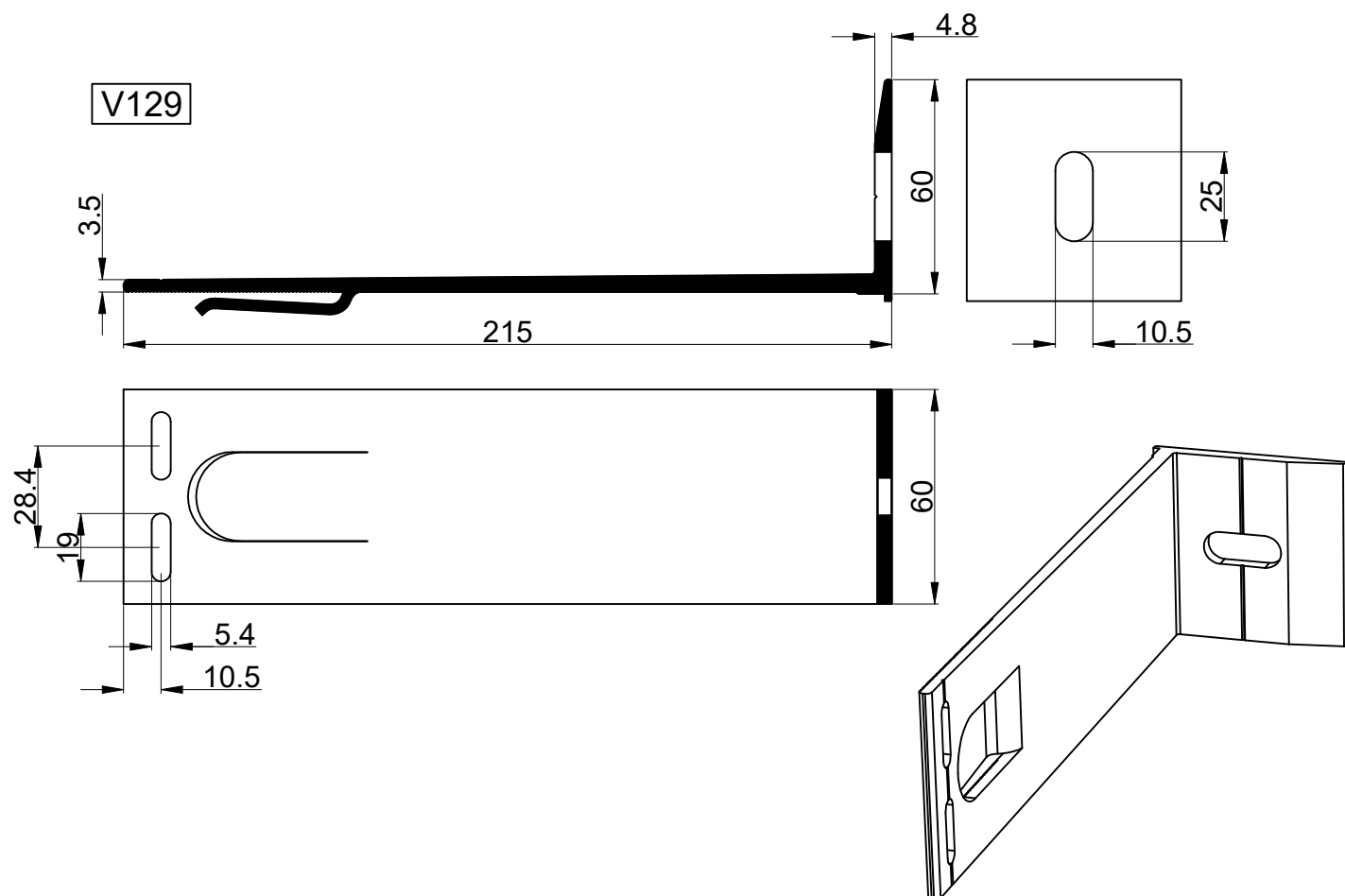
V37



V36





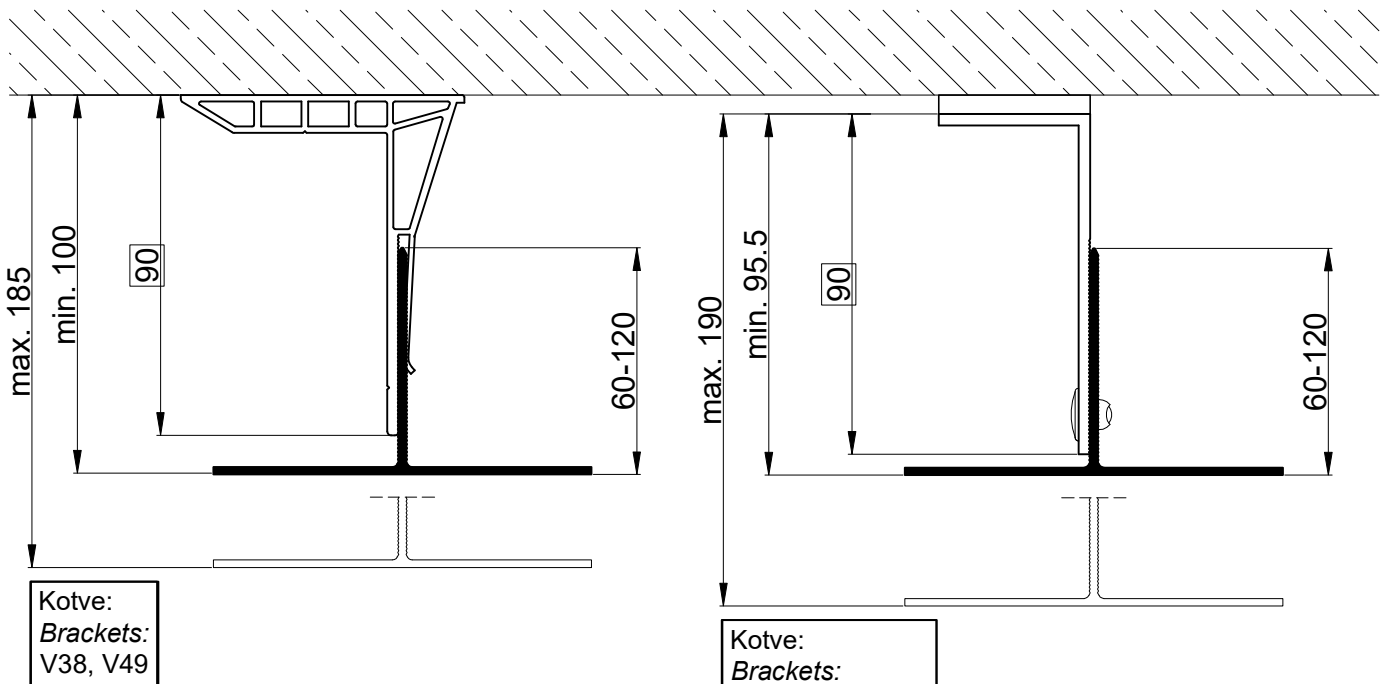
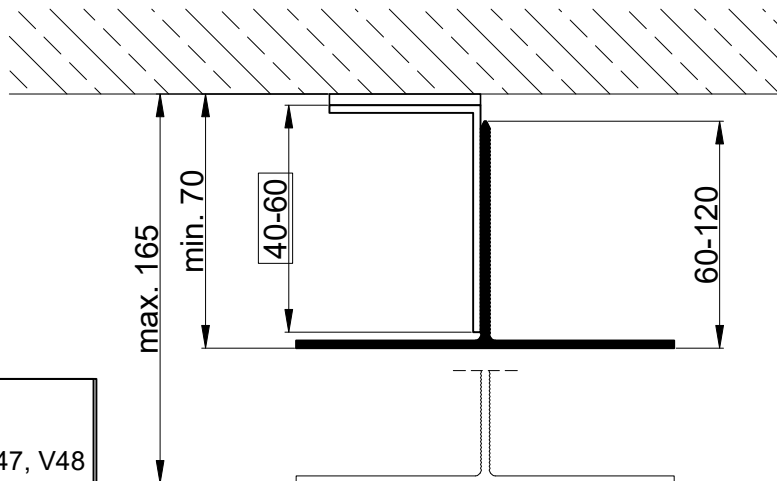


Principi
Principles

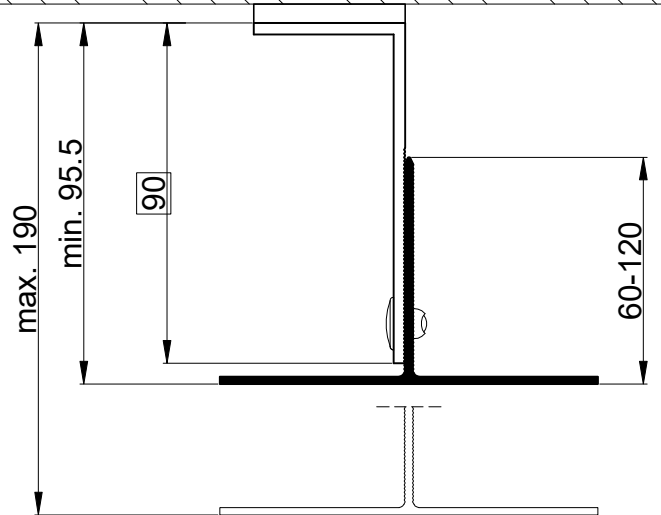


Horizontalni presek
Horizontal section

Kotve:
Brackets:
V24, V25, V30, V31, V39, V40, V47, V48

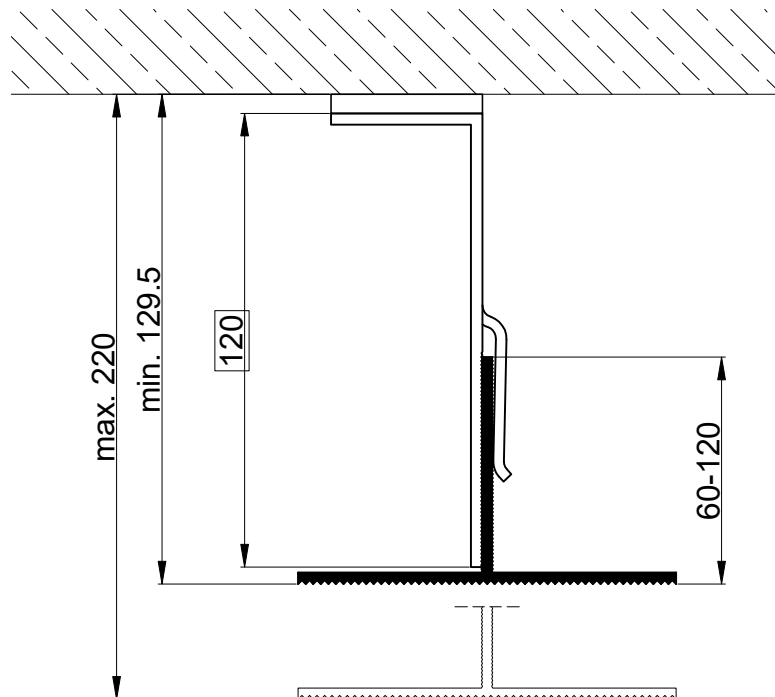


Kotve:
Brackets:
V38, V49

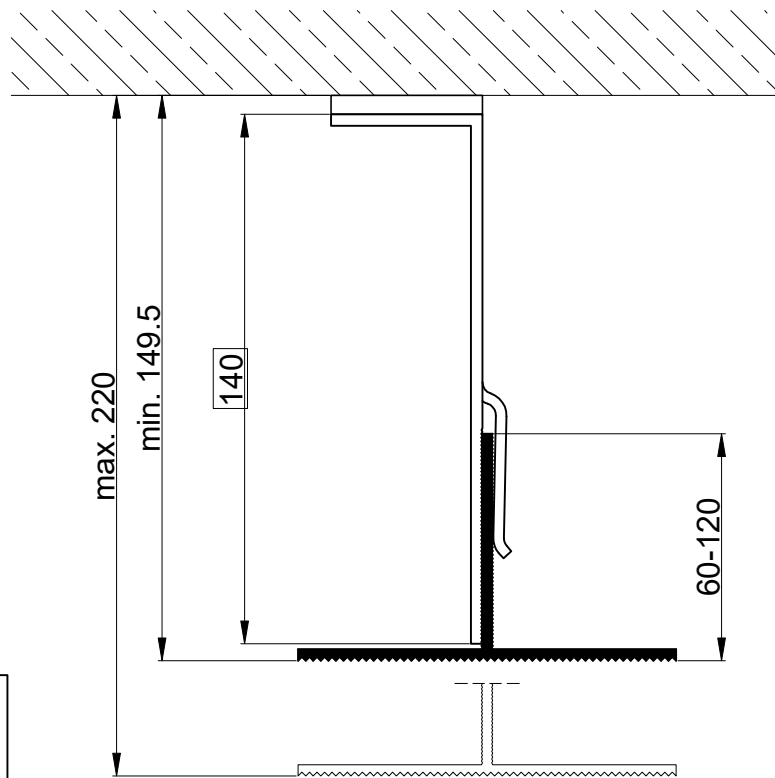


Kotve:
Brackets:
V26, V27, 28, 29

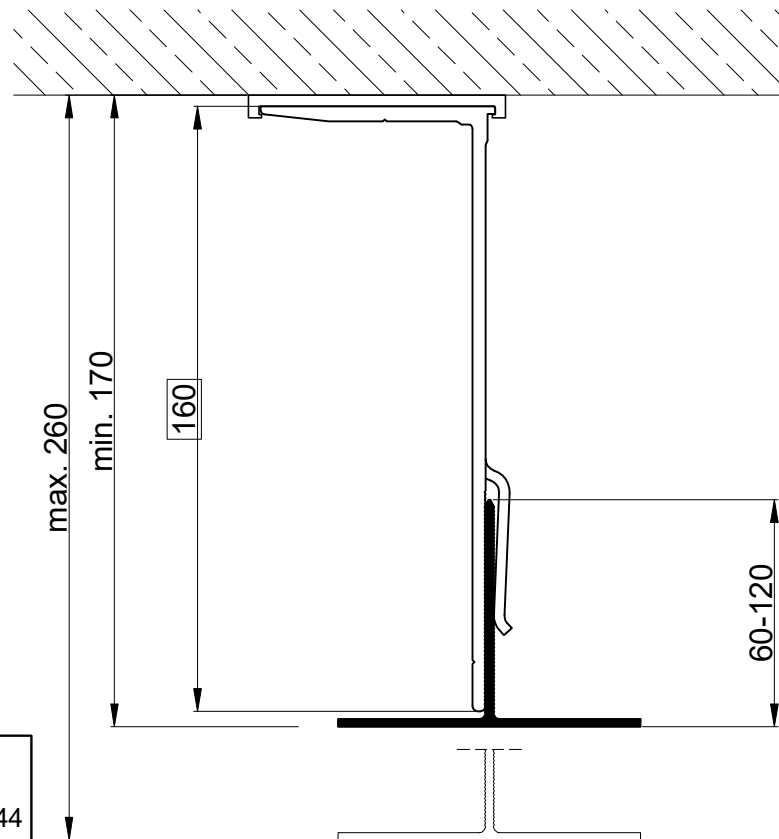
Kotve:
Brackets:
V32, V33, V41, V42



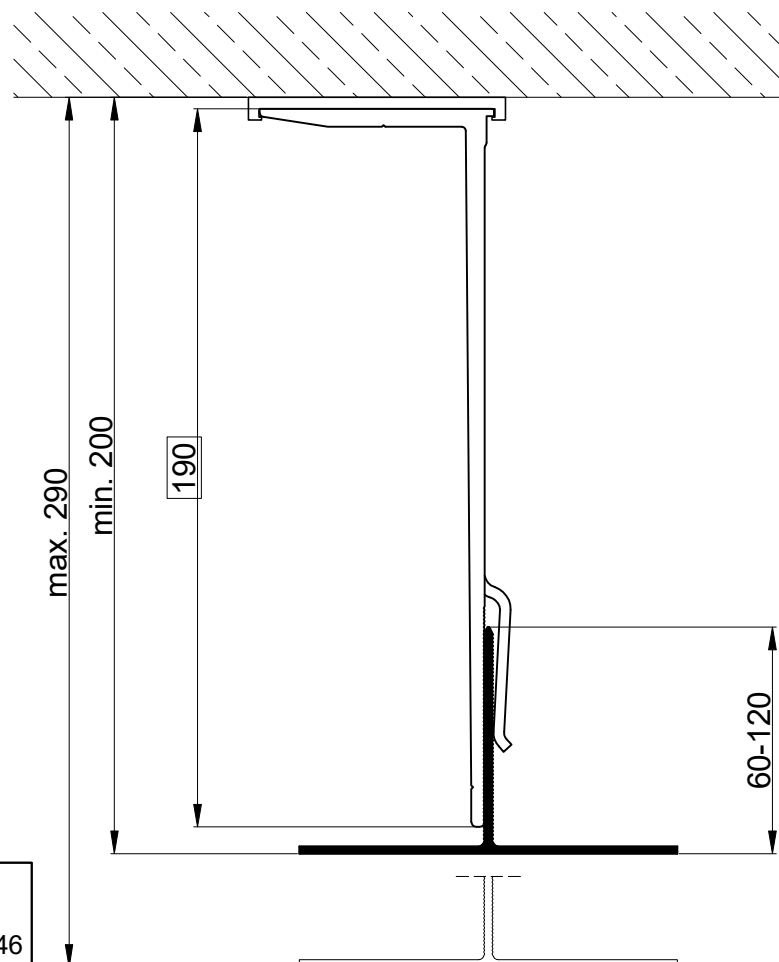
Kotve:
Brackets:
V120, V121, V122, V123



Horizontalni presek
Horizontal section

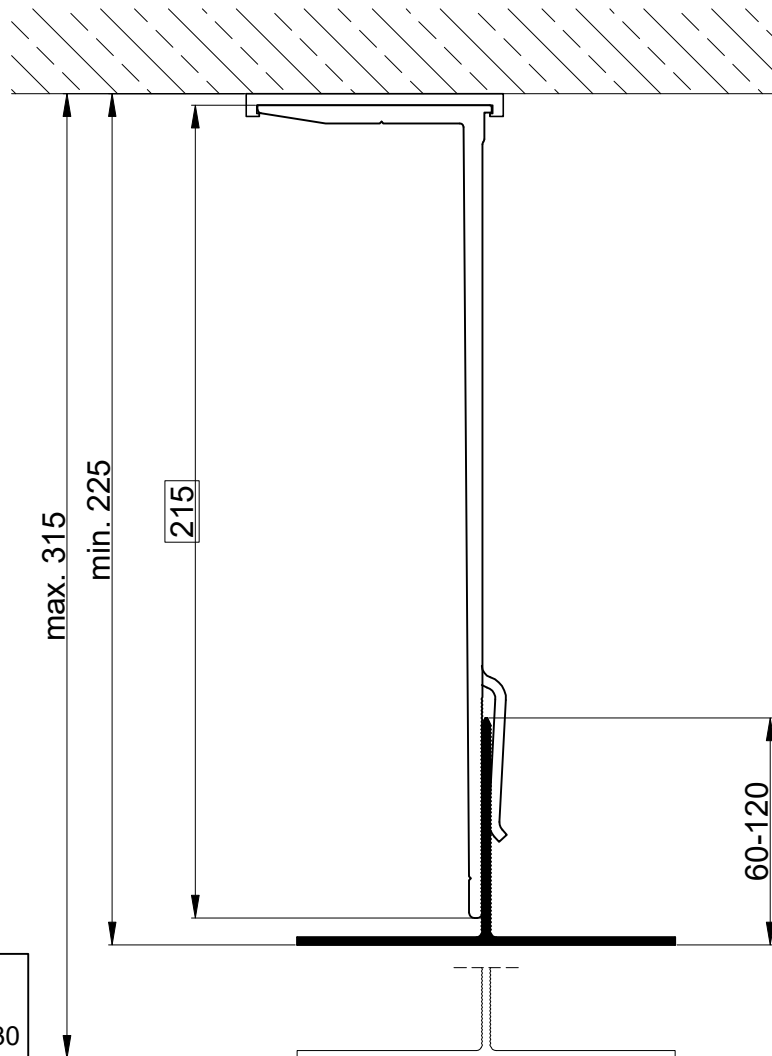


Kotve:
Brackets:
V34, V35, V43, V44



Kotve:
Brackets:
V36, V37, V45, V46

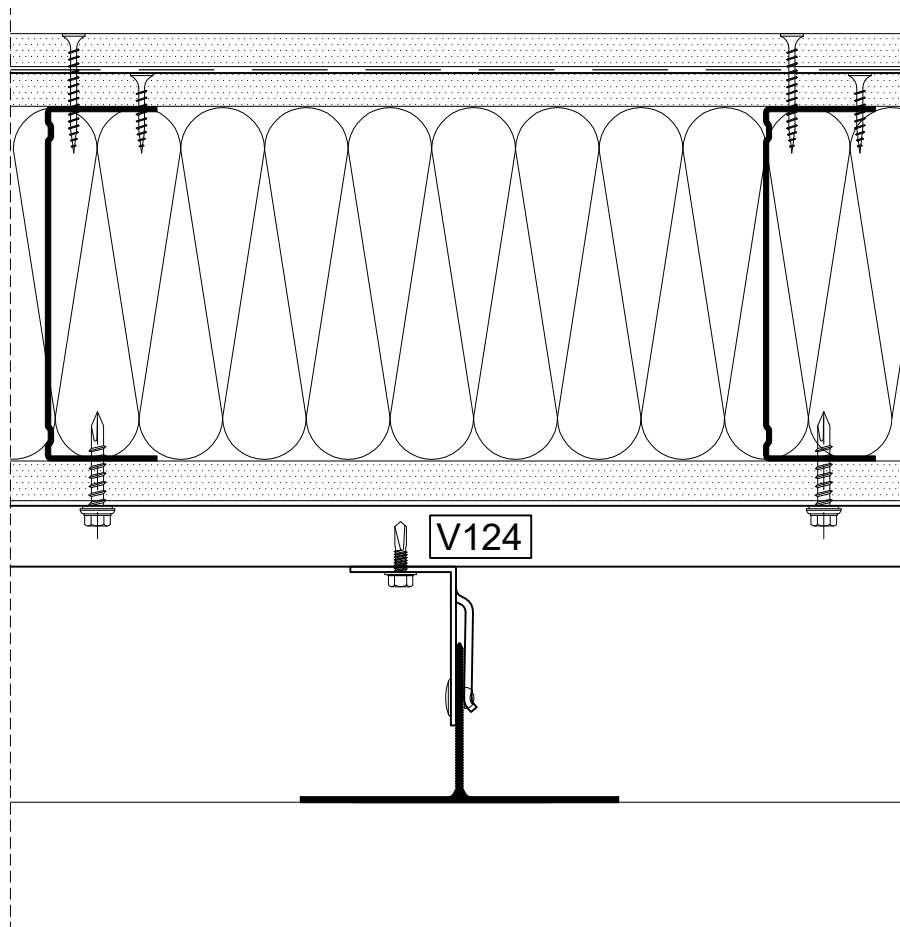
Horizontalni presek
Horizontal section



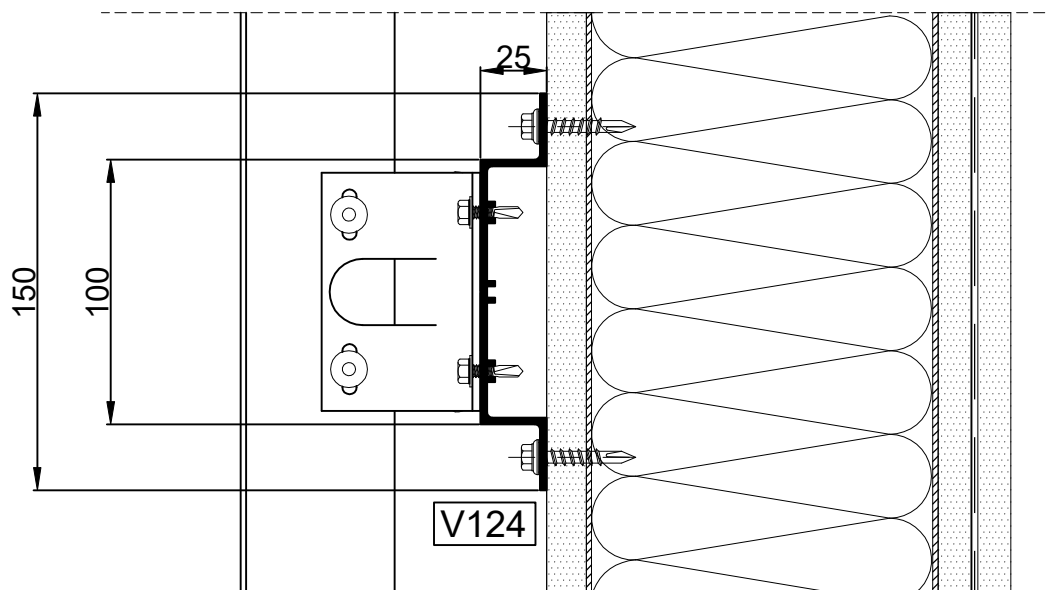
Kotve:
Brackets:
V127,V128,V129,V130

Horizontalni presek
Horizontal section

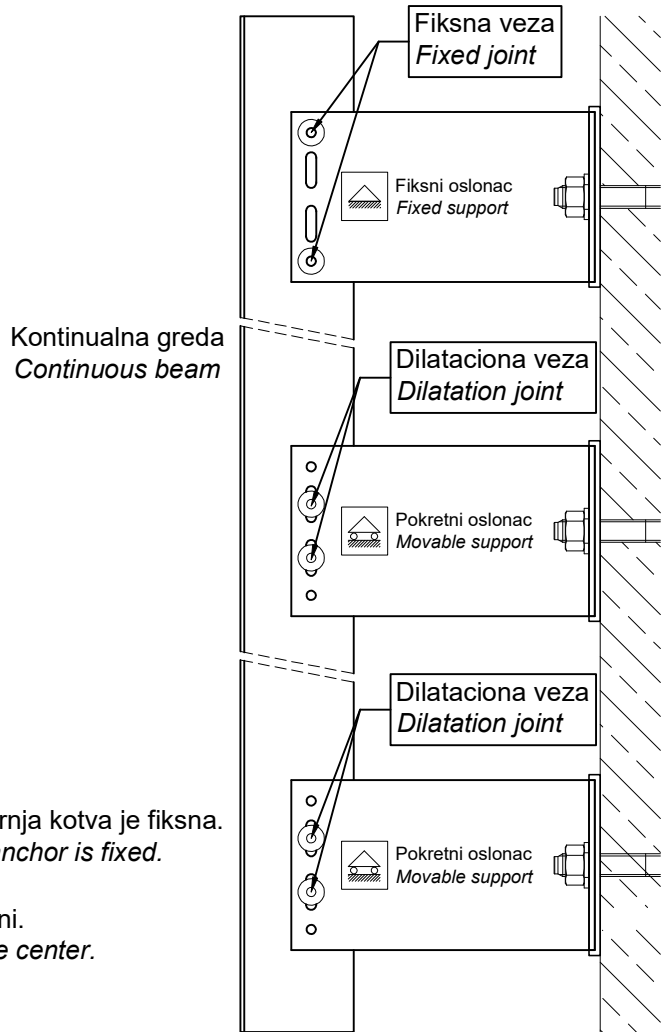
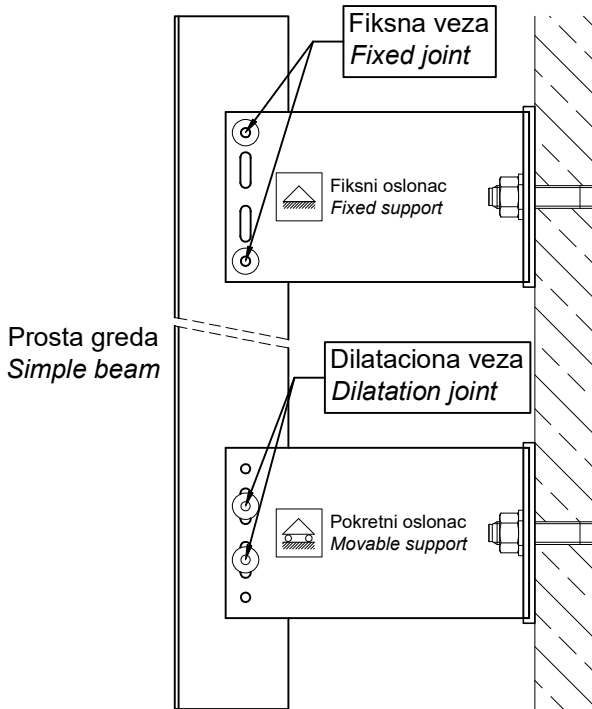
Ugradnja na suvomontažni zid
Mounting on drywall construction



Vertikalni presek
Vertical section



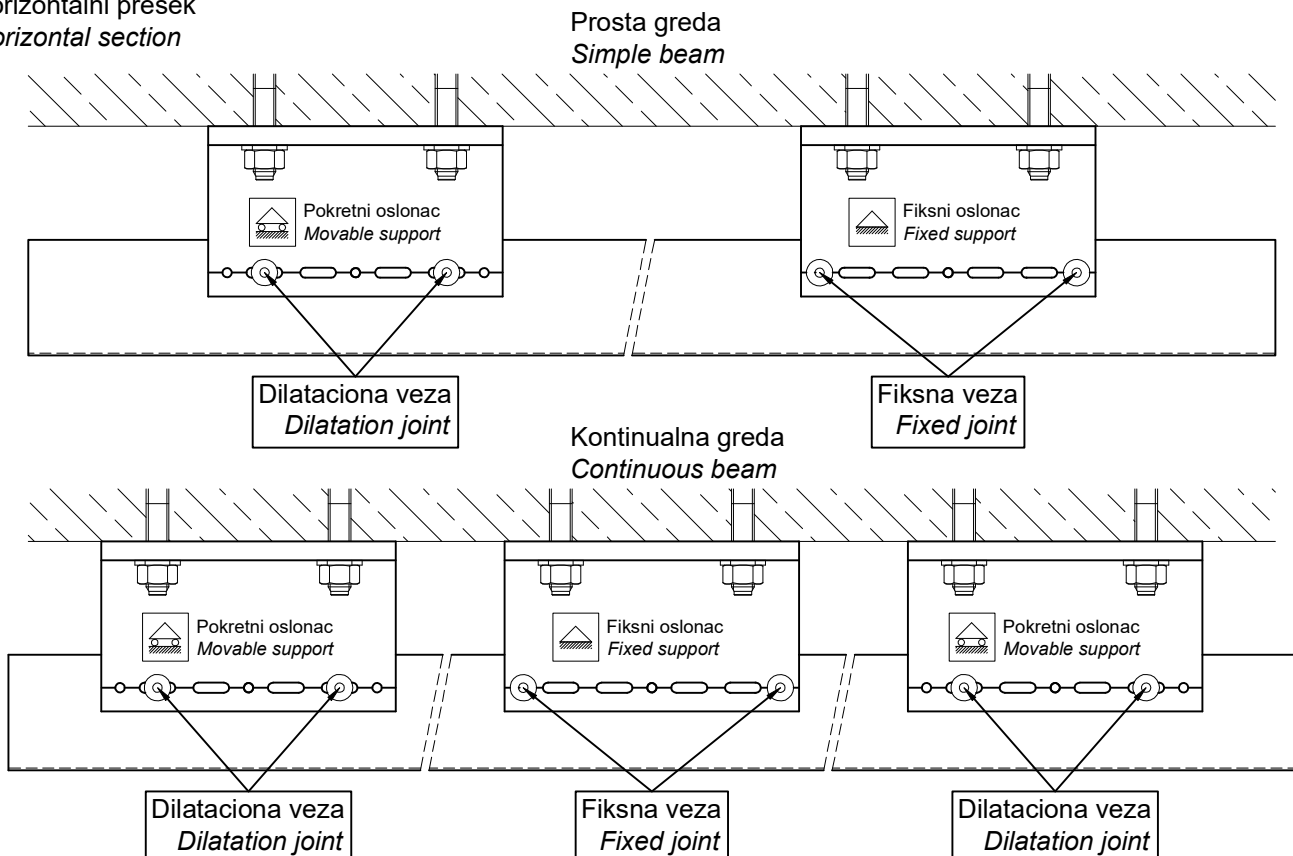
Vertikalni presek Vertical section



*Za dužine šipke <4,5m, šipka je "ovešana" i krajnja gornja kotva je fiksna.
*For bar lengths <4,5m, bar is suspended and the top anchor is fixed.

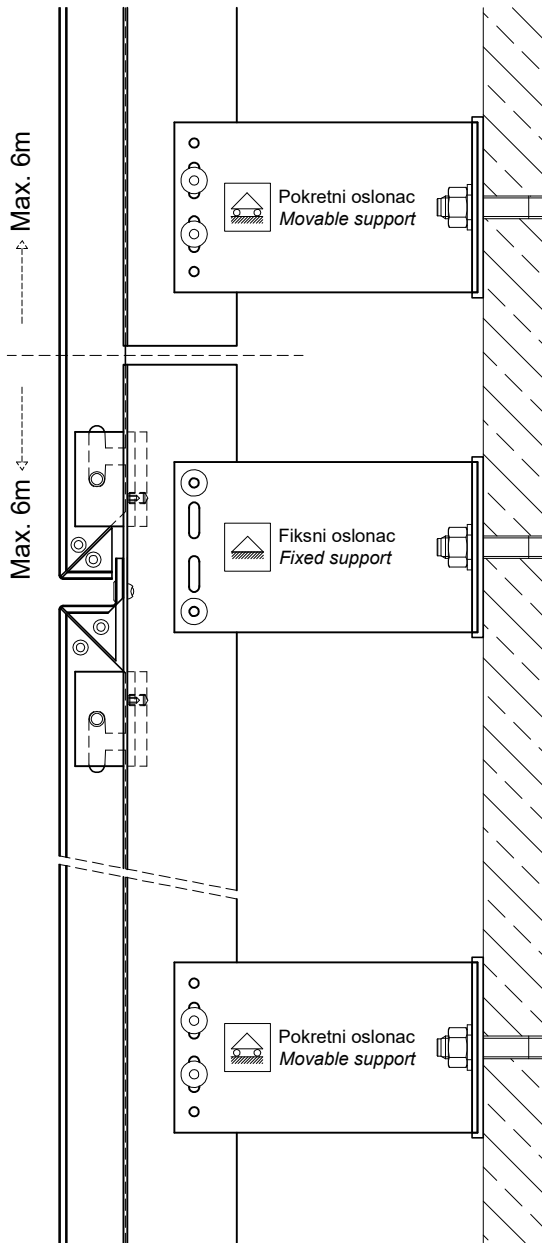
*Za dužine šipke >4,5m, pozicija fiksne kotve je u sredini.
*For bar lengths >4,5m, fixed anchor is positioned in the center.

Horizontalni presek Horizontal section

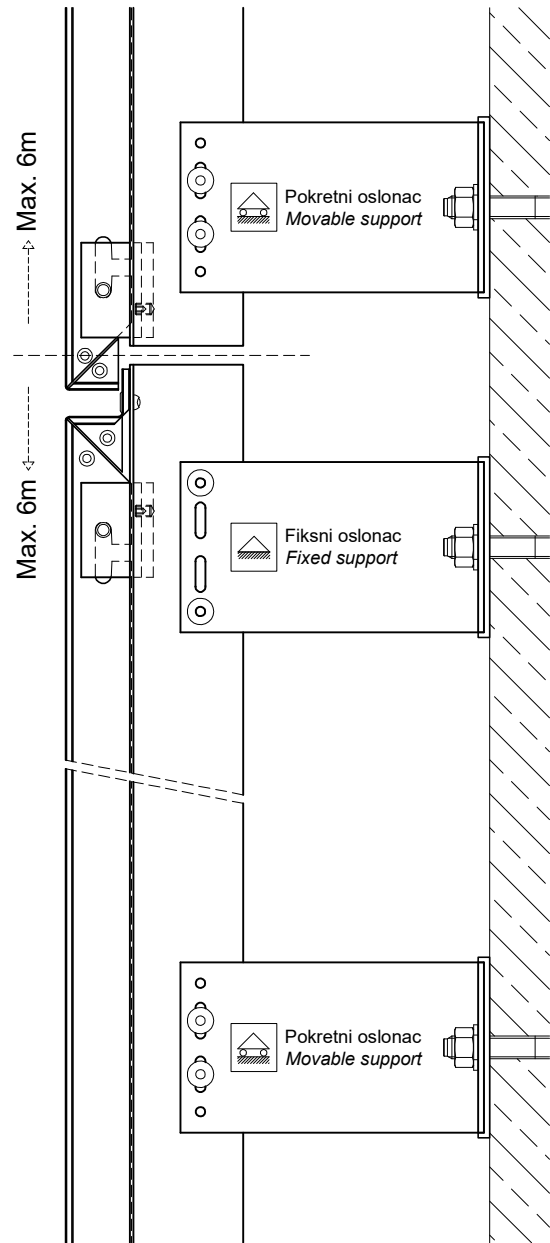


Nastavljanje vertikalnih nosećih profila
Vertical load-bearing profiles resumption

Vertikalni presek
Vertical section



Panel / kaseta se ne sme postaviti preko
dva noseća profila.
*A panel / cassette must not be spread
across two load-bearing profiles.*

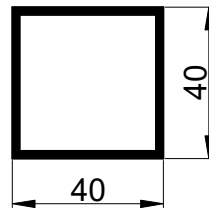


Pozicija zone dilatacije mora da odgovara
poziciji fiksiranja fasadne obloge za vertikalni
noseći profil.
*The position of dilatation must correspond to
the cladding fixing point.*

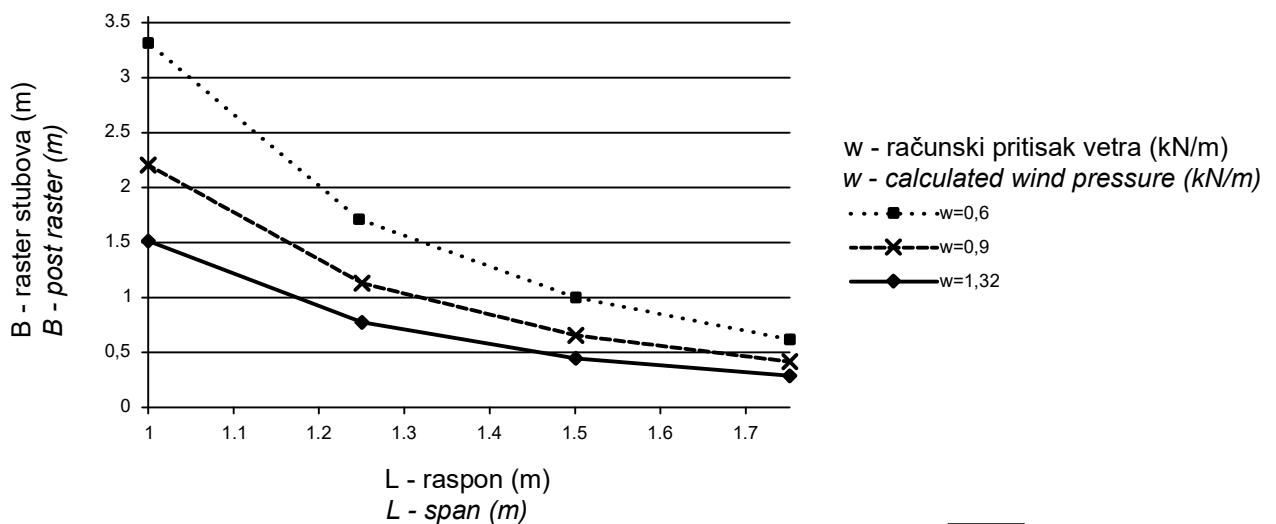
Statički proračun
Structural analysis



K4040

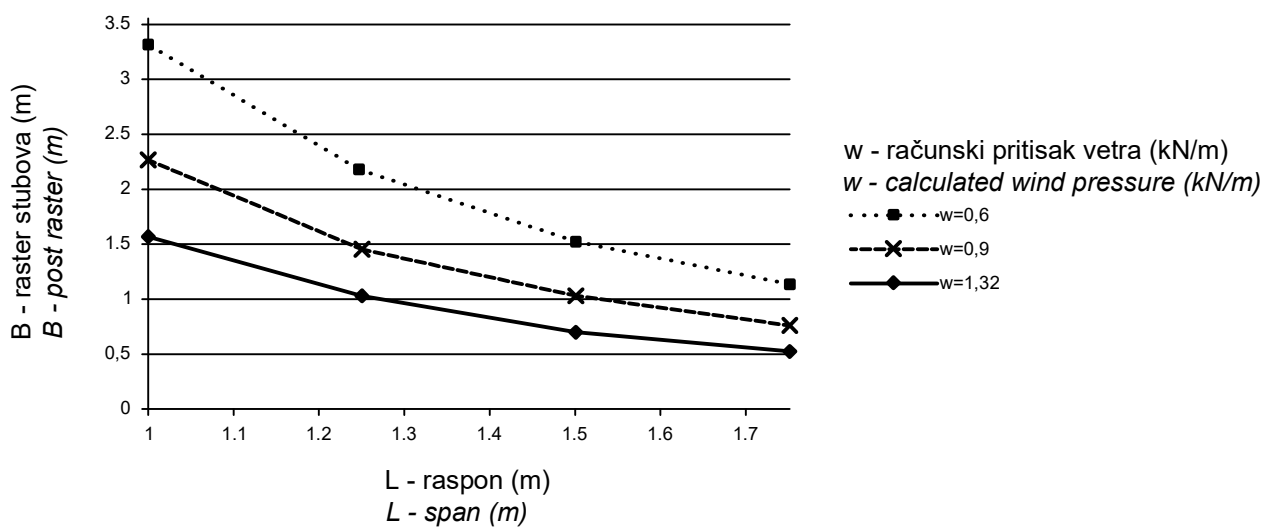


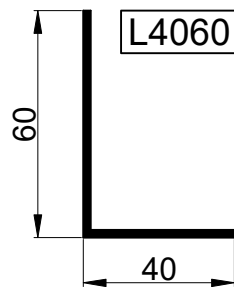
Proračun proste grede
Simple beam calculation



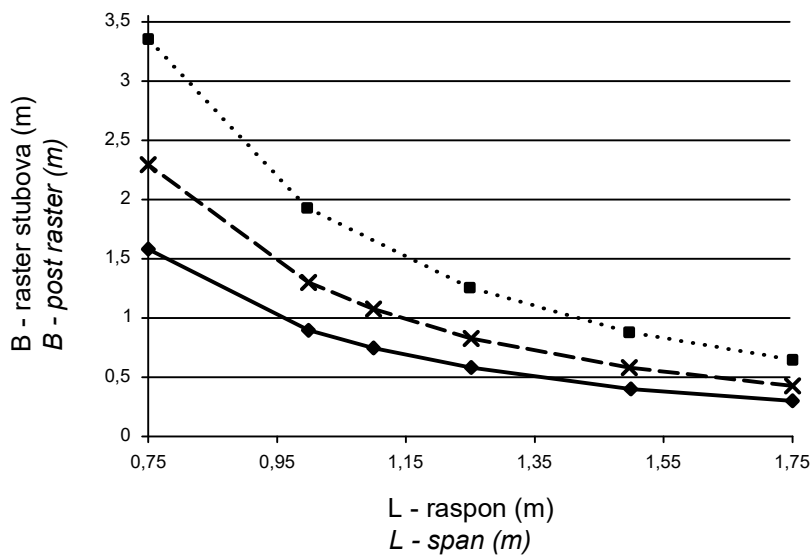
pravac delovanja sile
force impact direction

Proračun kontinualne grede
Continuous beam calculation



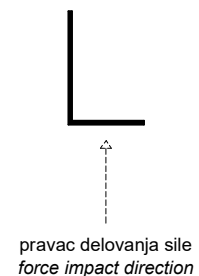


Proračun proste grede
Simple beam calculation

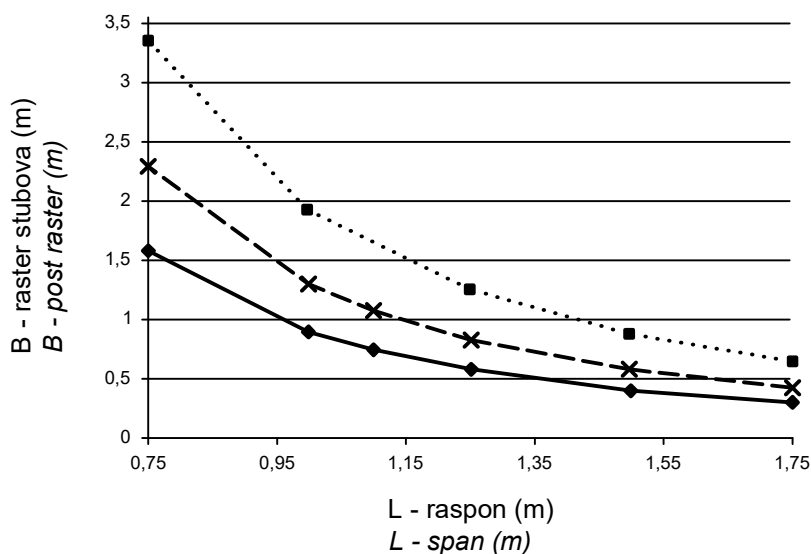


w - računski pritisak vetra (kN/m)
w - calculated wind pressure (kN/m)

.....■..... w=0,6
-----x----- w=0,9
-----♦----- w=1,32



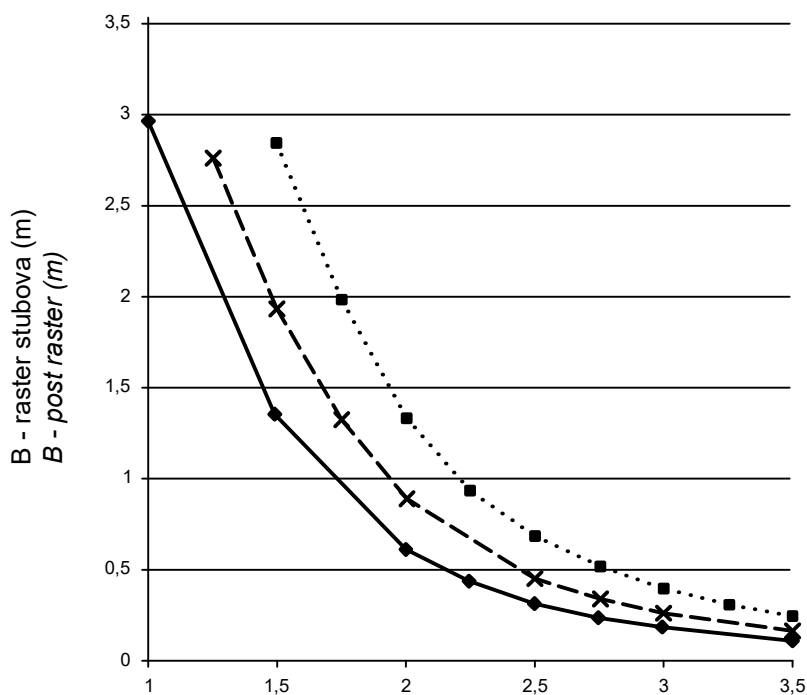
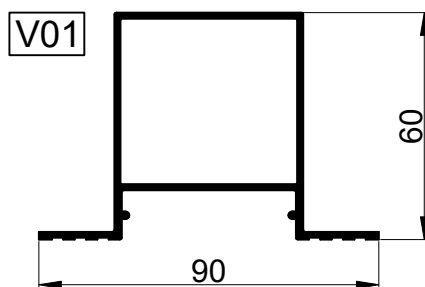
Proračun kontinualne grede
Continuous beam calculation



w - računski pritisak vetra (kN/m)
w - calculated wind pressure (kN/m)

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-----x----- w=0,9
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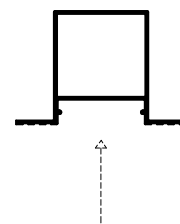
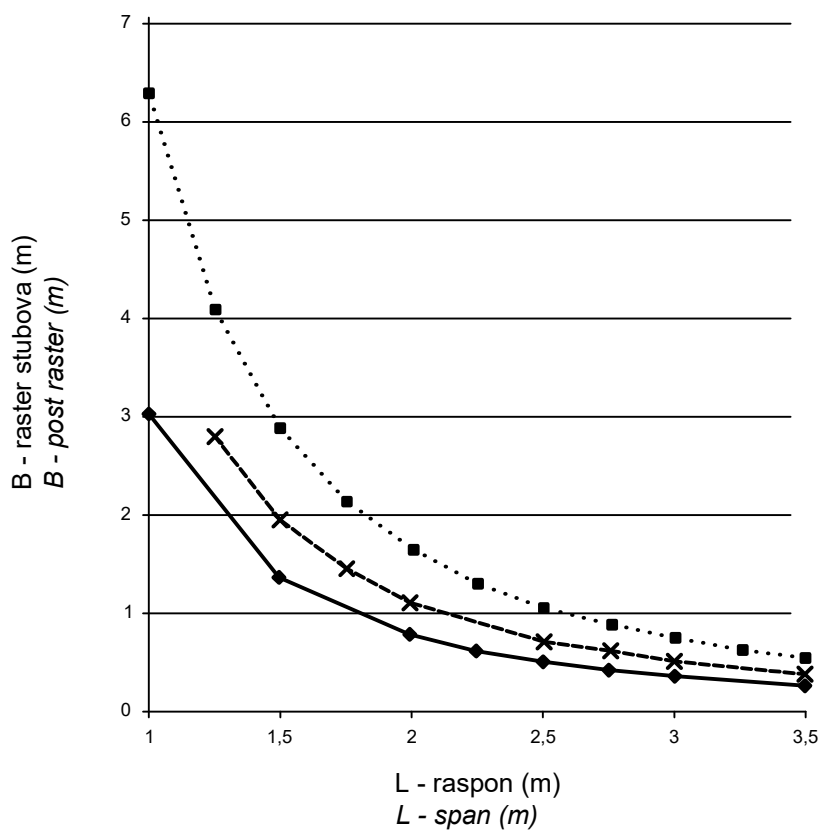
Proračun proste grede
Simple beam calculation



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w - calculated wind pressure (kN/m)

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—————◆ w=1,32

Proračun kontinualne grede
Continuous beam calculation

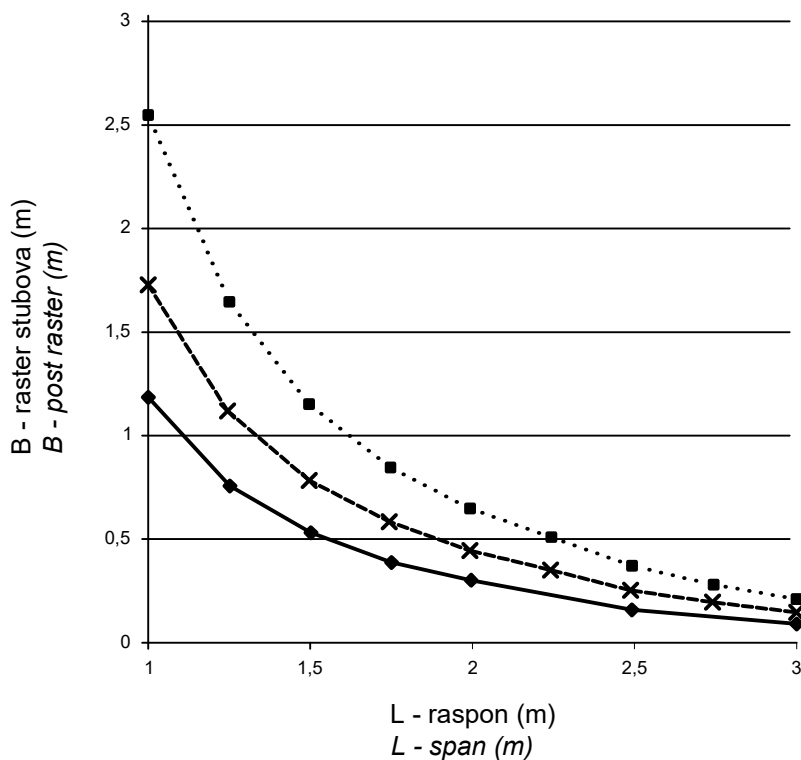
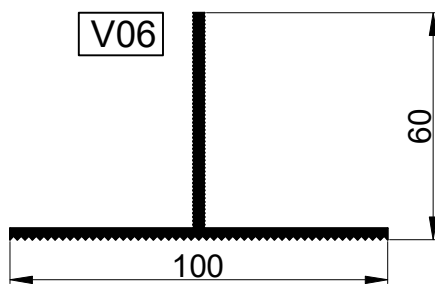


pravac delovanja sile
force impact direction

w - računski pritisak vetra (kN/m)
w - calculated wind pressure (kN/m)

.....■ w=0,6
-----× w=0,9
—————◆ w=1,32

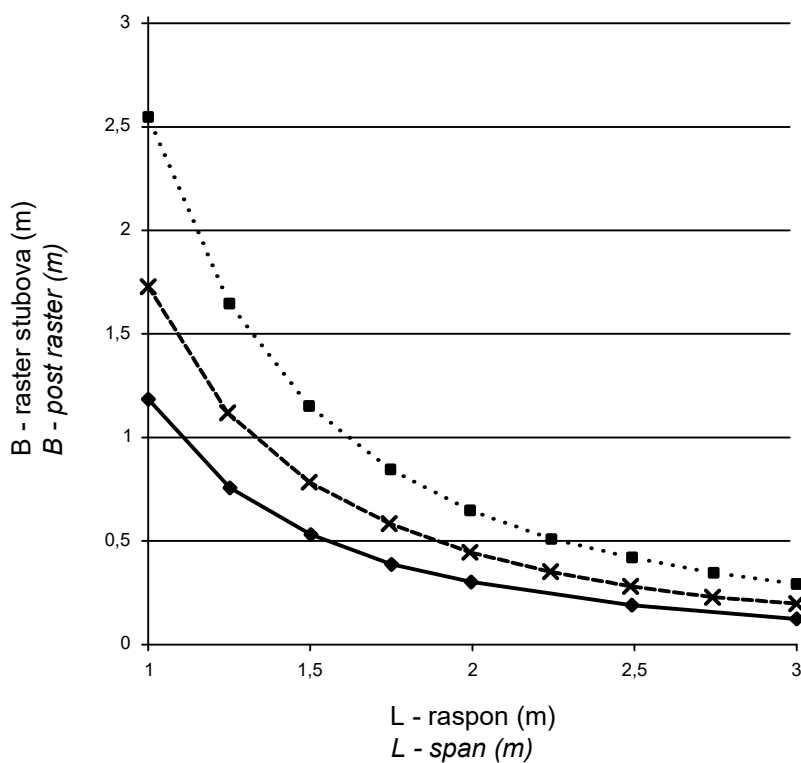
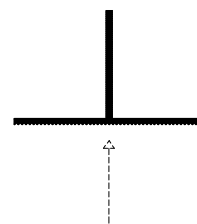
Proračun proste grede
Simple beam calculation



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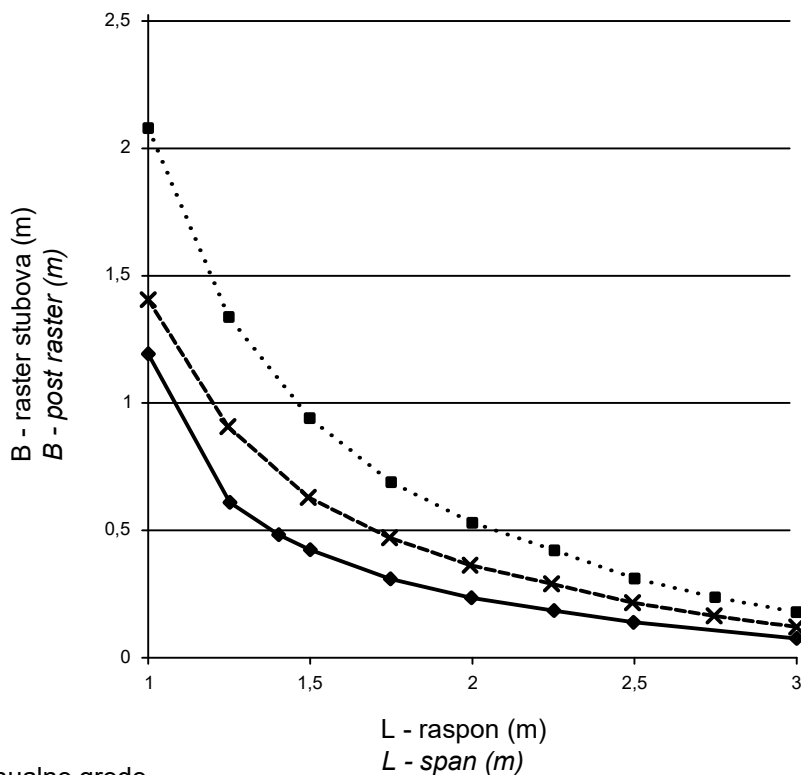
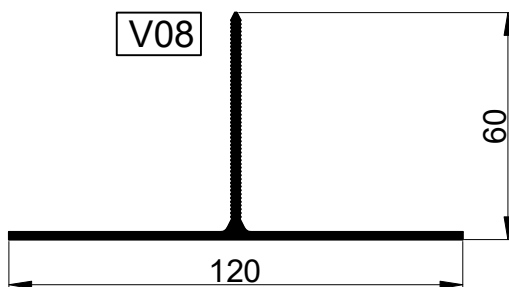
Proračun kontinualne grede
Continuous beam calculation



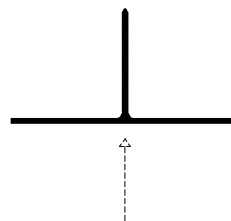
w - računski pritisak vetra (kN/m)
w - calculated wind pressure (kN/m)

.....■..... w=0,6
-----x----- w=0,9
—————♦———— w=1,32

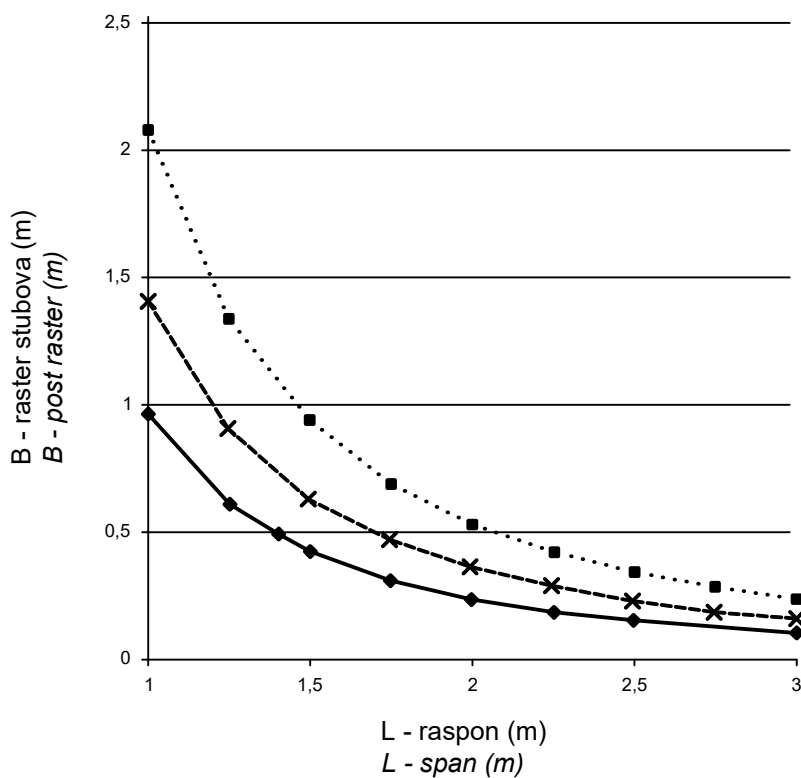
Proračun proste grede
Simple beam calculation

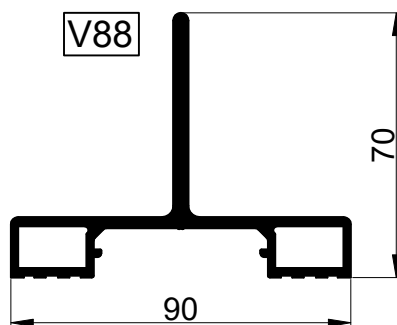


Proračun kontinualne grede
Continuous beam calculation

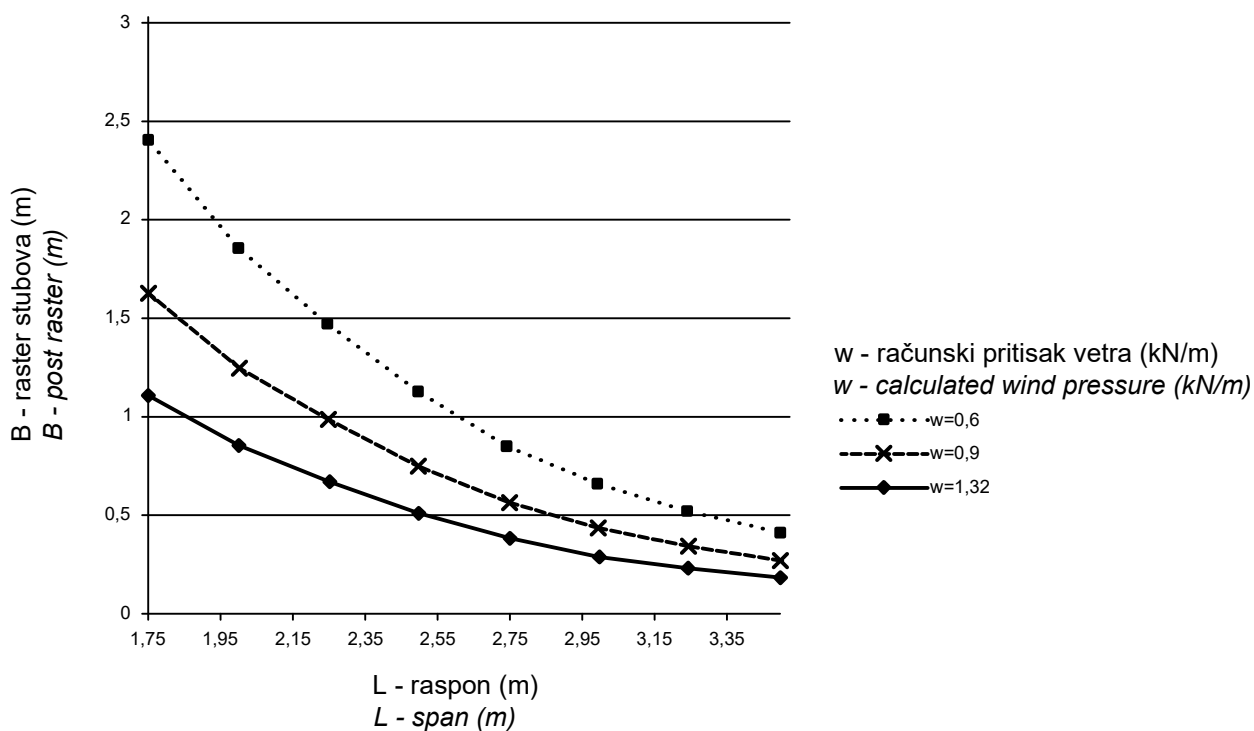


pravac delovanja sile
force impact direction

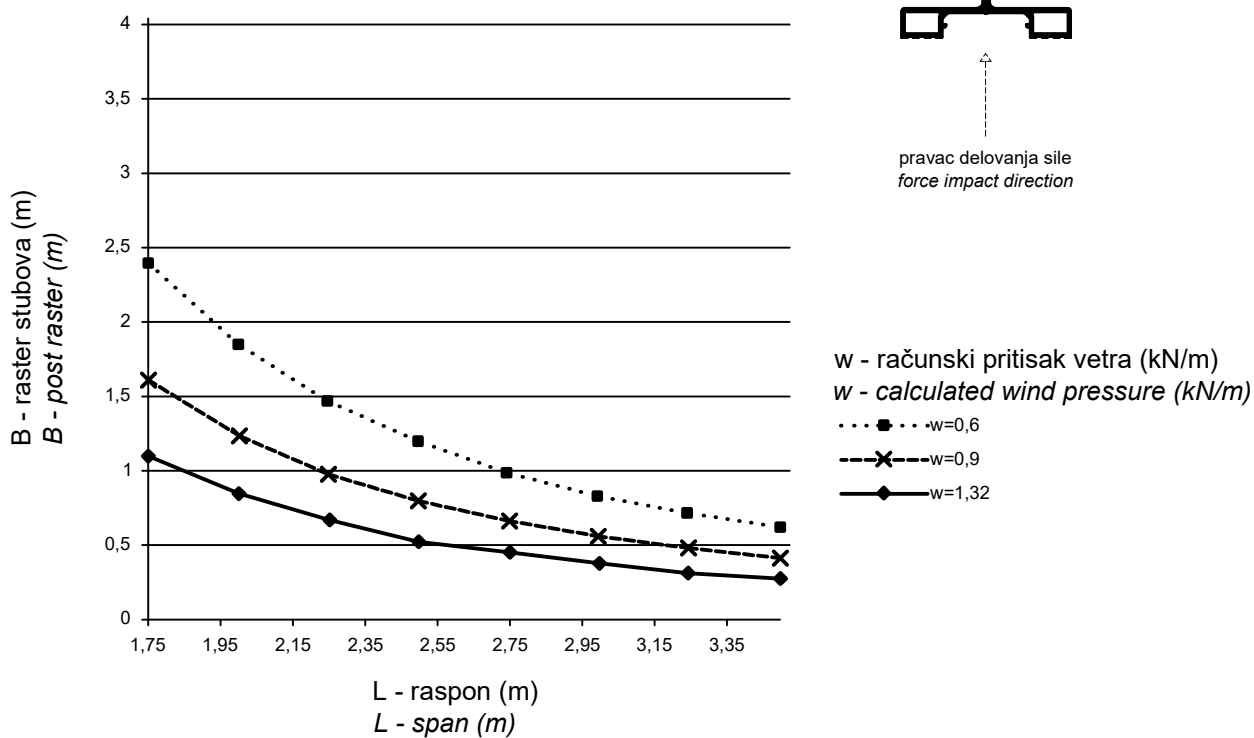




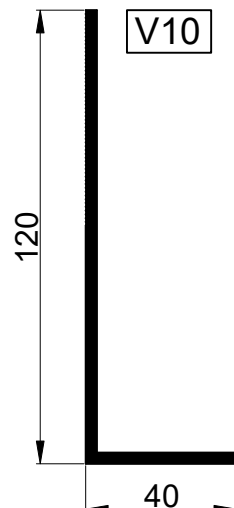
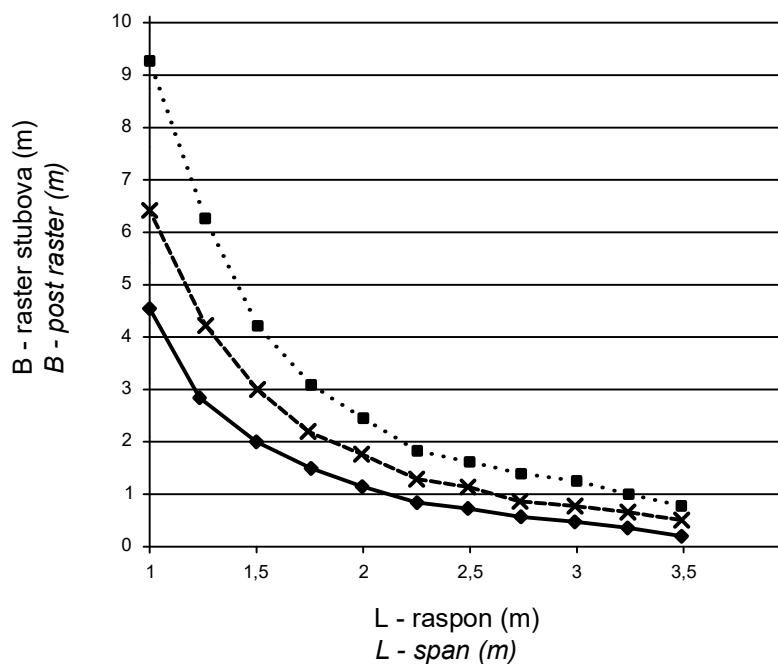
Proračun proste grede
Simple beam calculation



Proračun kontinualne grede
Continuous beam calculation



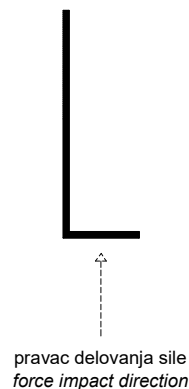
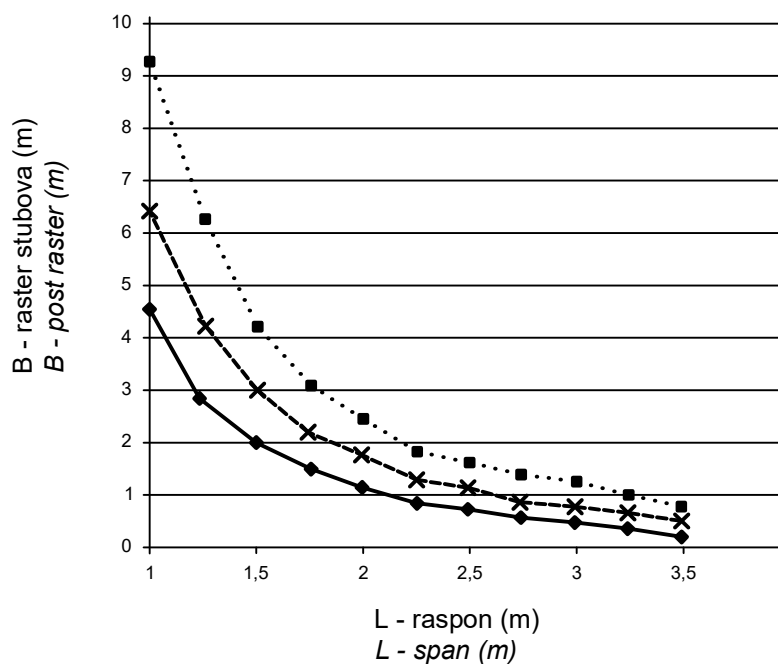
Proračun proste grede
Simple beam calculation



w - računski pritisak vetra (kN/m)
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- ...■... $w=0,6$
- - - x - - - $w=0,9$
- ◆— $w=1,32$

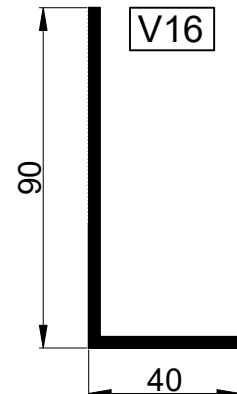
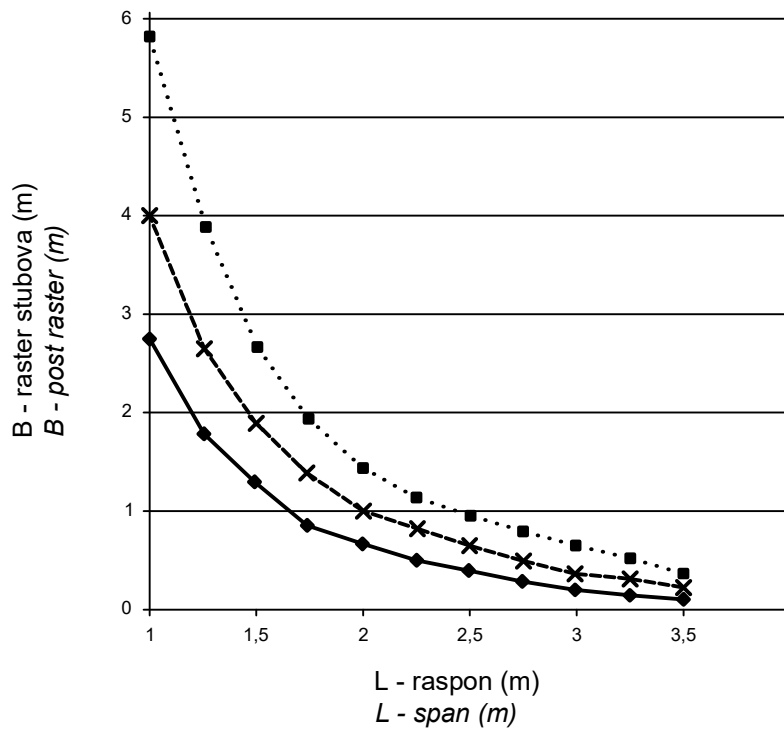
Proračun kontinualne grede
Continuous beam calculation



w - računski pritisak vetra (kN/m)
 w - calculated wind pressure (kN/m)

- ...■... $w=0,6$
- - - x - - - $w=0,9$
- ◆— $w=1,32$

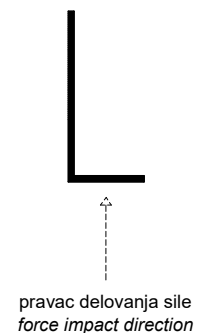
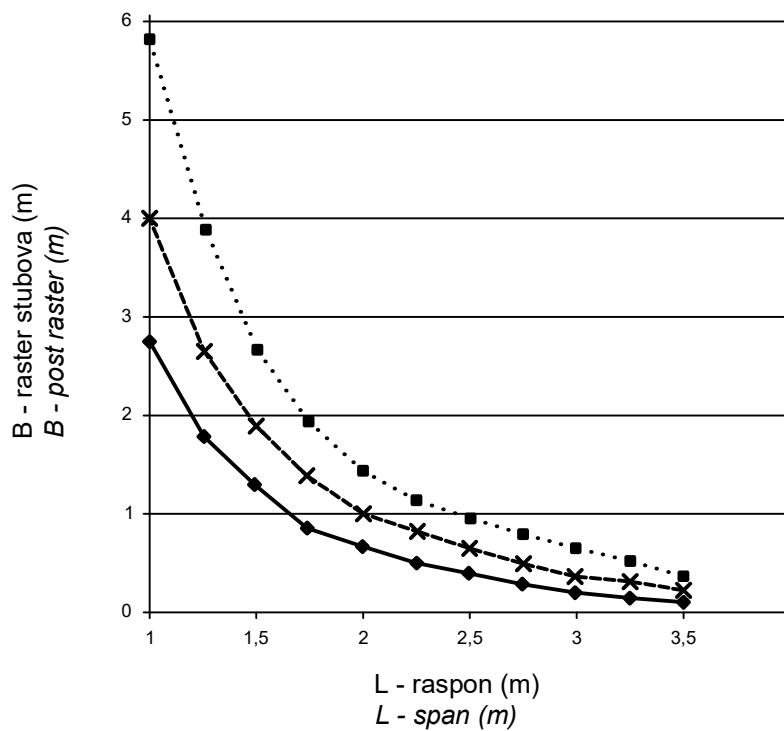
Proračun proste grede
Simple beam calculation



w - računski pritisak vetra (kN/m)
 w - calculated wind pressure (kN/m)

- ...■... $w=0,6$
- - - x - - - $w=0,9$
- ◆— $w=1,32$

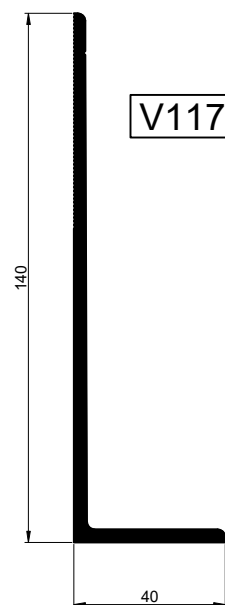
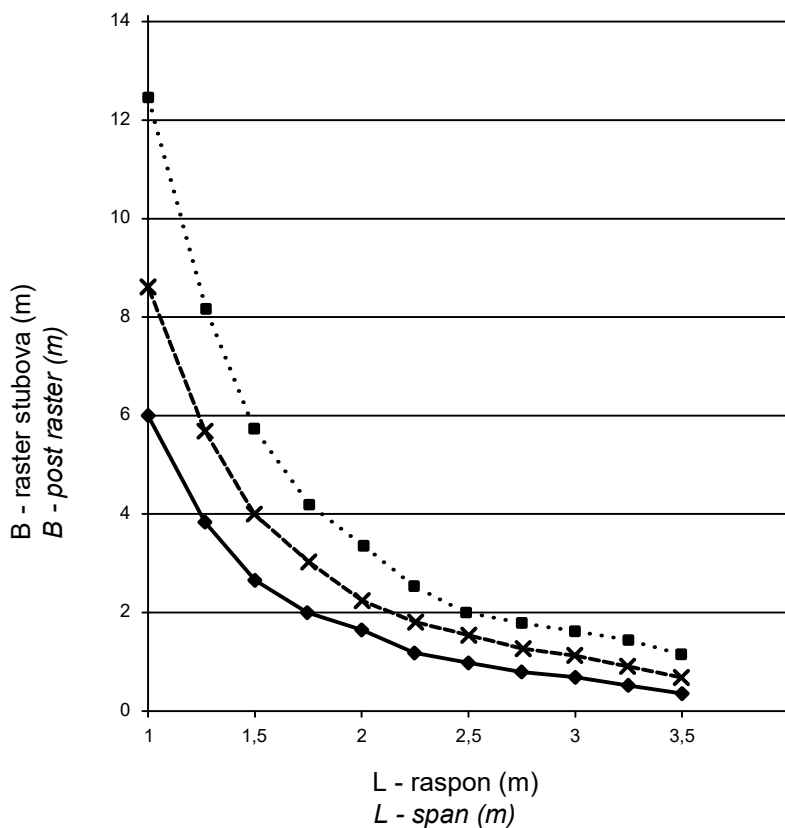
Proračun kontinualne grede
Continuous beam calculation



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- ...■... $w=0,6$
- - - x - - - $w=0,9$
- ◆— $w=1,32$

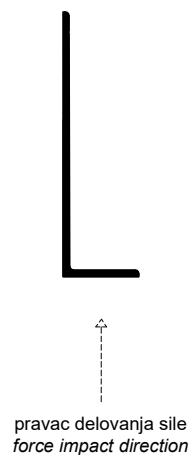
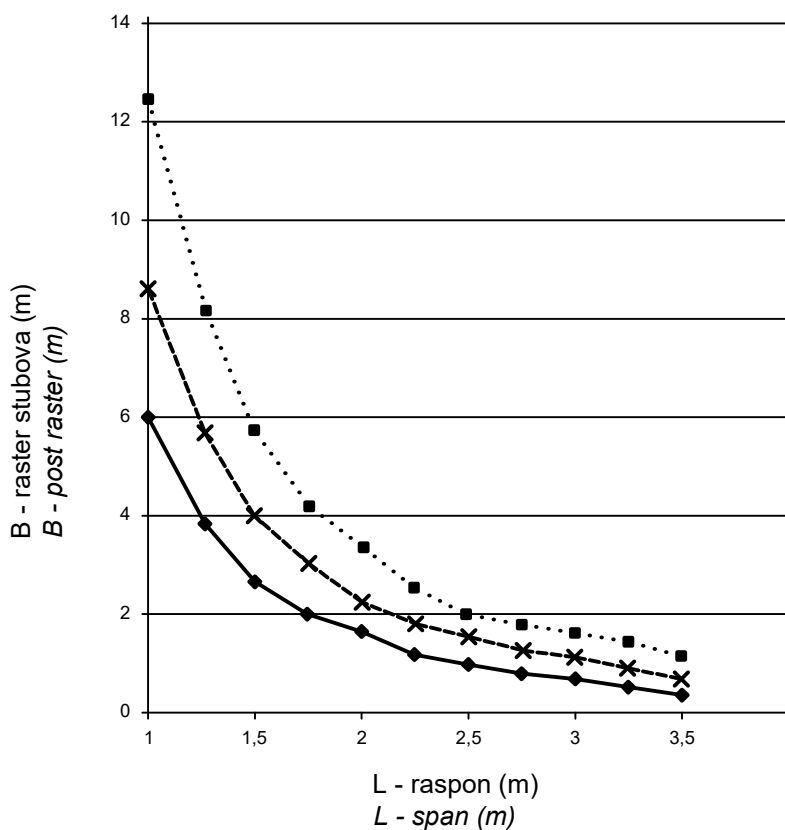
Proračun proste grede
Simple beam calculation



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...■... w=0,6
---x--- w=0,9
—◆— w=1,32

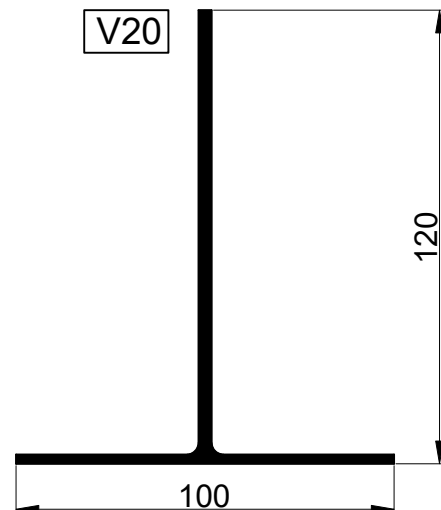
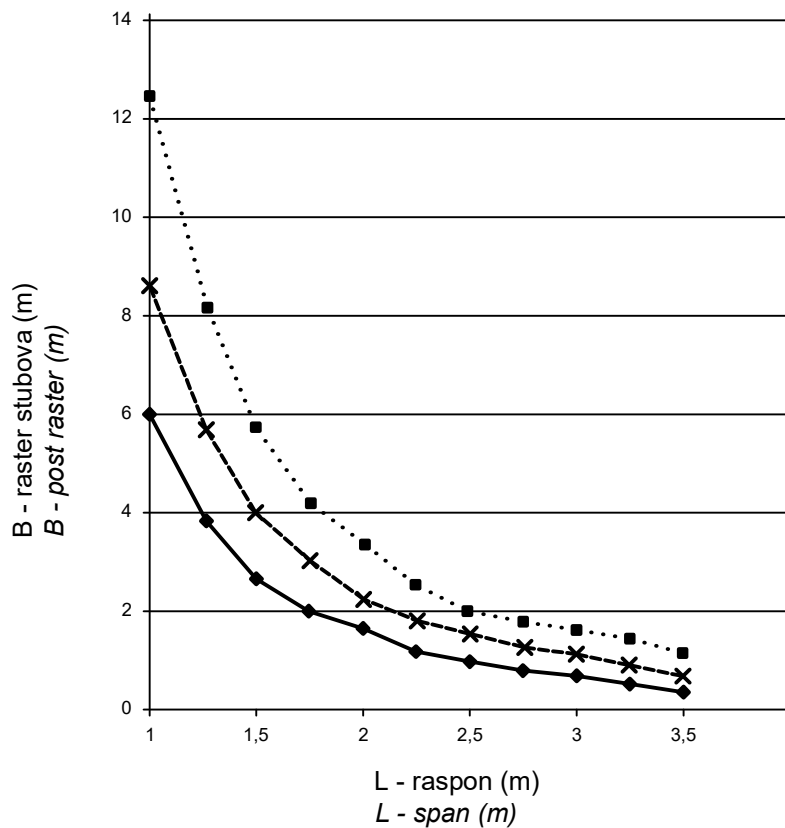
Proračun kontinualne grede
Continuous beam calculation



w - računski pritisak vetra (kN/m)
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...■... w=0,6
---x--- w=0,9
—◆— w=1,32

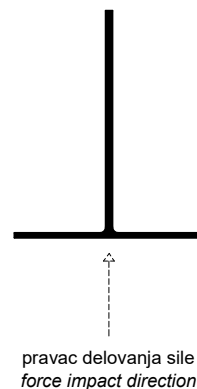
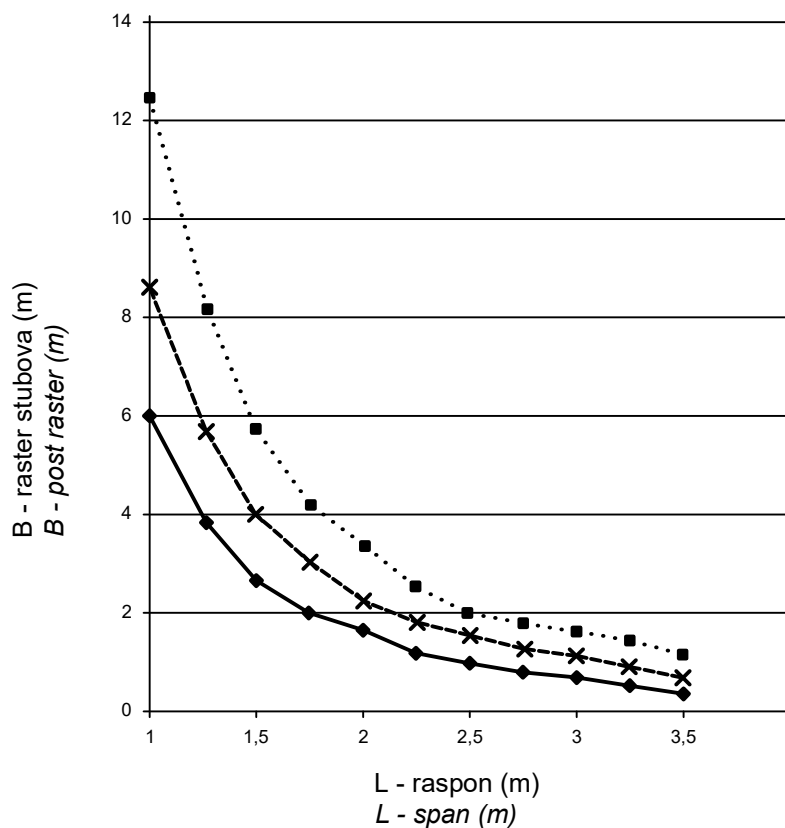
Proračun proste grede
Simple beam calculation



w - računski pritisak vetra (kN/m)
 w - calculated wind pressure (kN/m)

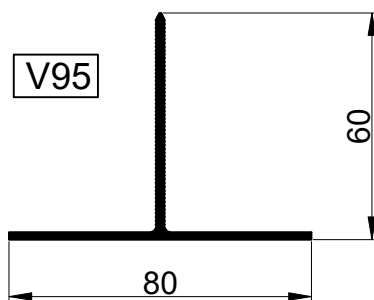
- $\blacksquare$ $w=0,6$
- $\times$ ----- $w=0,9$
- $\blacklozenge$ ----- $w=1,32$

Proračun kontinualne grede
Continuous beam calculation

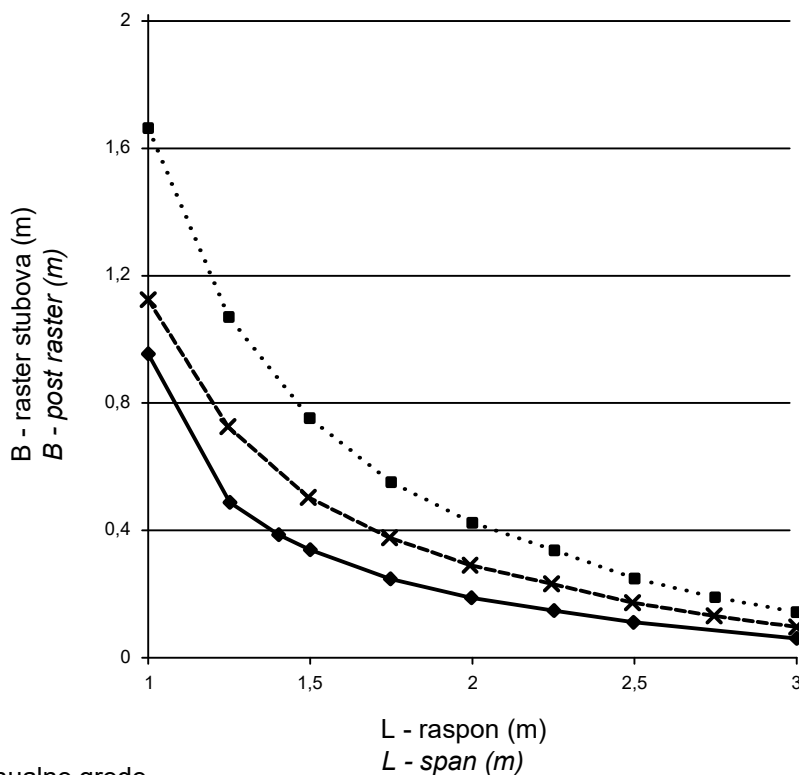


w - računski pritisak vetra (kN/m)
 w - calculated wind pressure (kN/m)

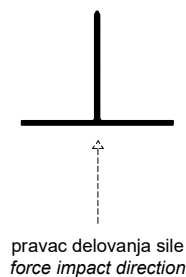
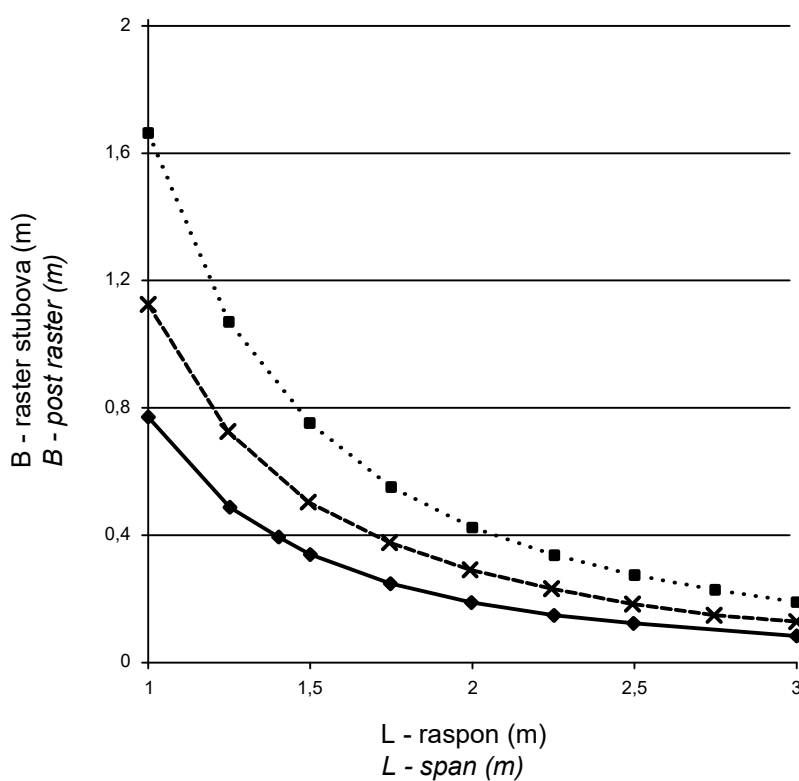
- $\blacksquare$ $w=0,6$
- $\times$ ----- $w=0,9$
- $\blacklozenge$ ----- $w=1,32$

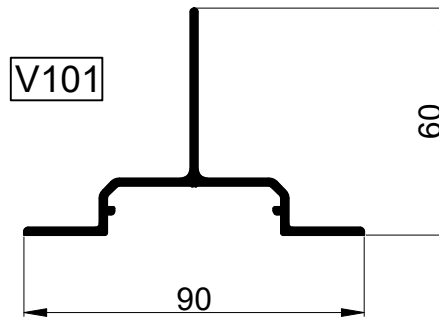


Proračun proste grede
Simple beam calculation

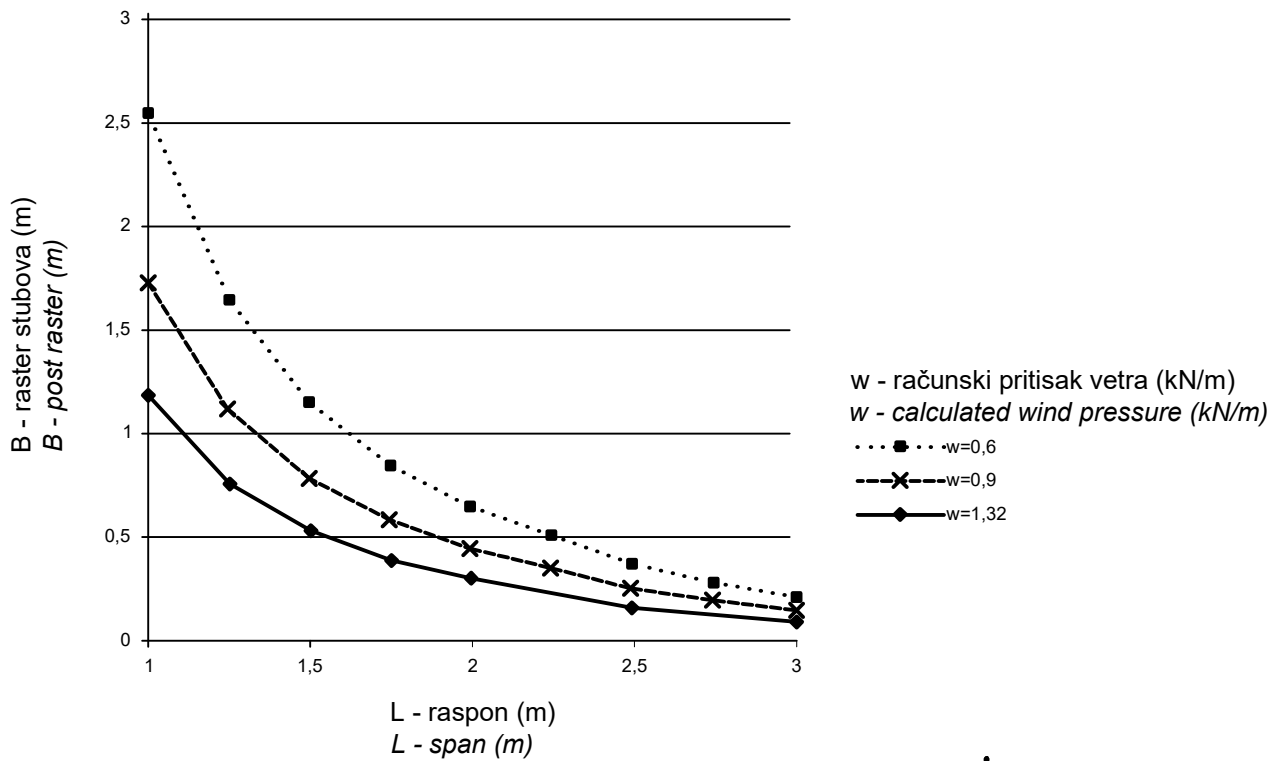


Proračun kontinualne grede
Continuous beam calculation

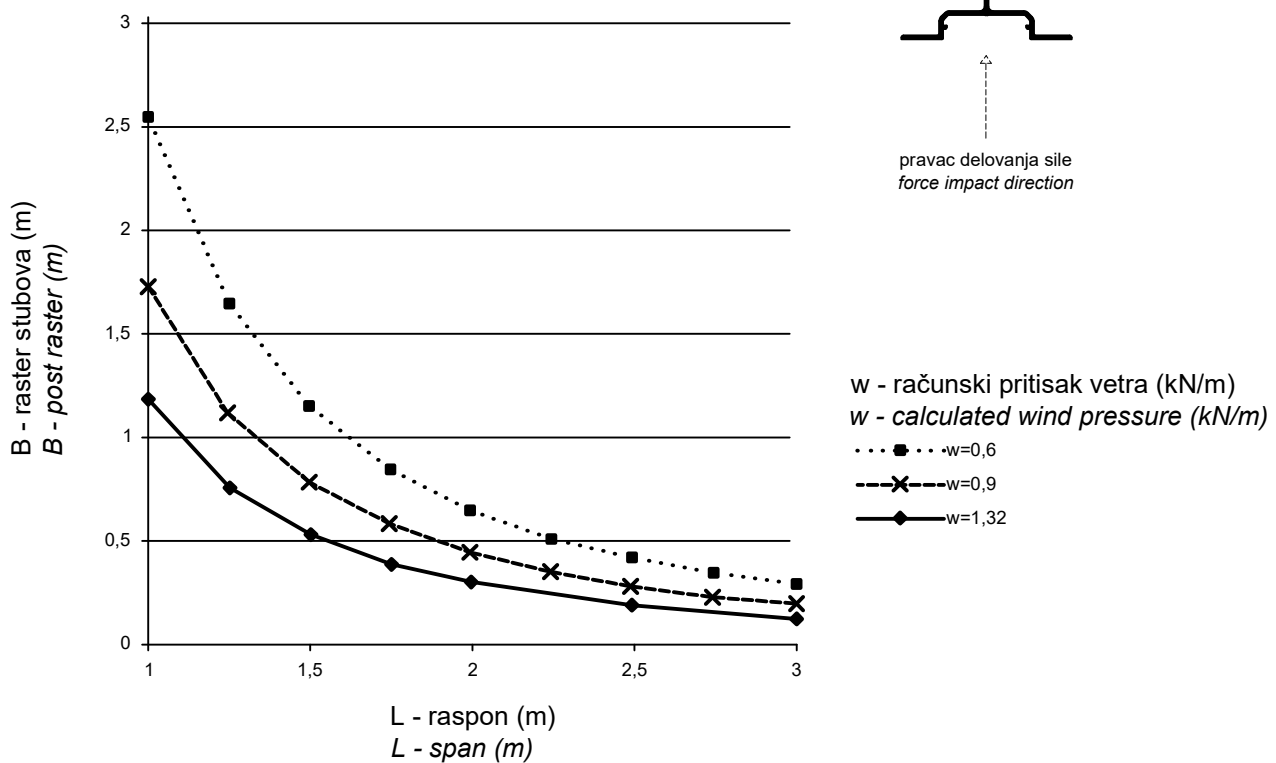


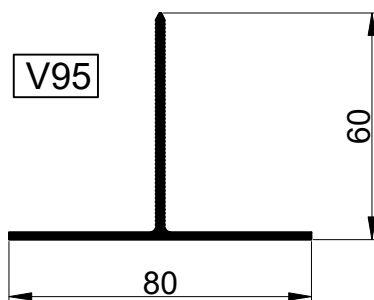


Proračun proste grede
Simple beam calculation

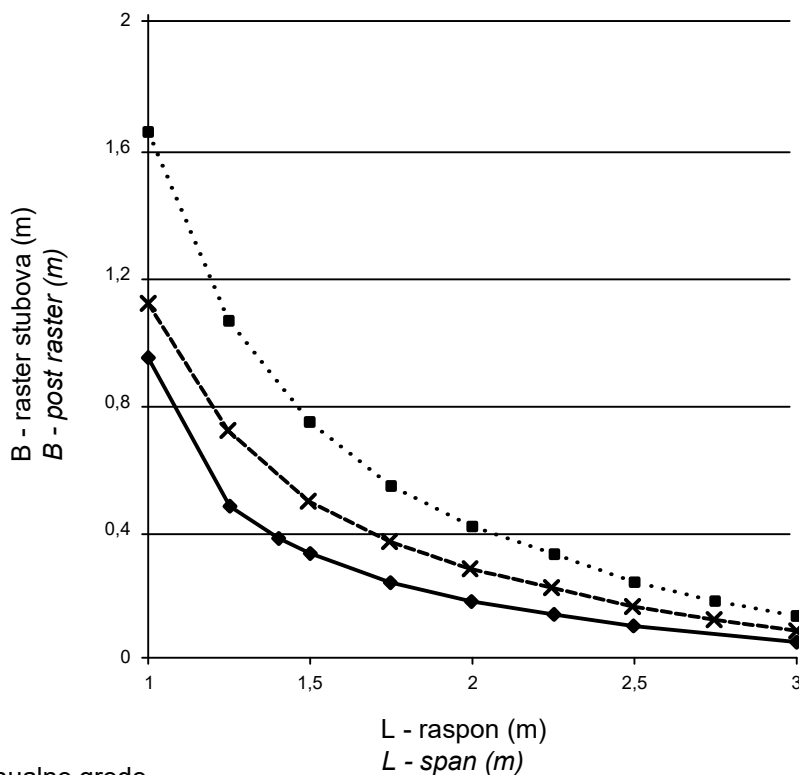


Proračun kontinualne grede
Continuous beam calculation

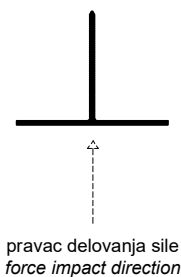
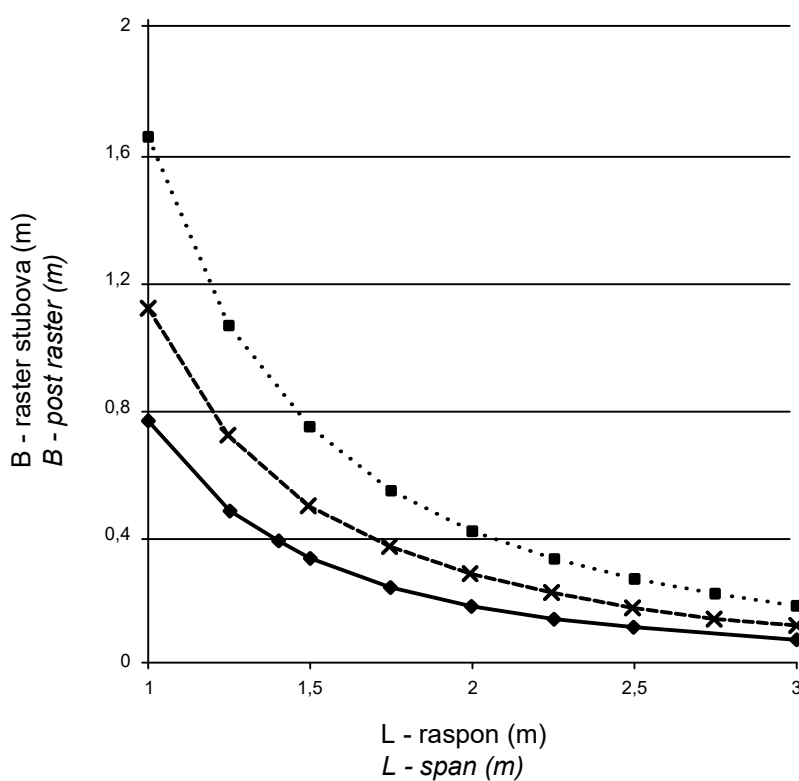




Proračun proste grede
Simple beam calculation



Proračun kontinualne grede
Continuous beam calculation





*Sistemi
Systems*





Sistem
System
VENT RIVET



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije namenjen prihvatanju ravnih ploča fiksniranih vidljivom vezom sa lica fasade, u vidu pop-zakivaka ili vijaka. Ova pričvrсна sredstva mogu imati posebne, dekorativne glave za poseban efekat na fasadi, ili biti plastificirane u boju obloge kako bi bili što manje primetni. Pruža fleksibilnost u izboru obloge, njenom dizajnu i estetskom oblikovanju sa mogućnošću kombinovanja nepravilnih oblika i forme na fasadi.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila.

a) Ekstrudirani noseći T ili L profili se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m.

b) Noseći T ili L profili (kat. br. V06, V07, V08 i L4060) su pričvršćeni za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

c) Fasadni paneli se seku na odgovarajuće dimenzije, uz opciono bušenje precizno pozicioniranih otvora za montažu na noseću podkonstrukciju. Tako pripremljeni paneli se montiraju na fasadu pomoću pop-zakivaka ili vijaka koji mogu biti obojeni u bilo koju boju predviđenu projektom. U ovom sistemu predviđena je fuga od 10mm do 40mm.



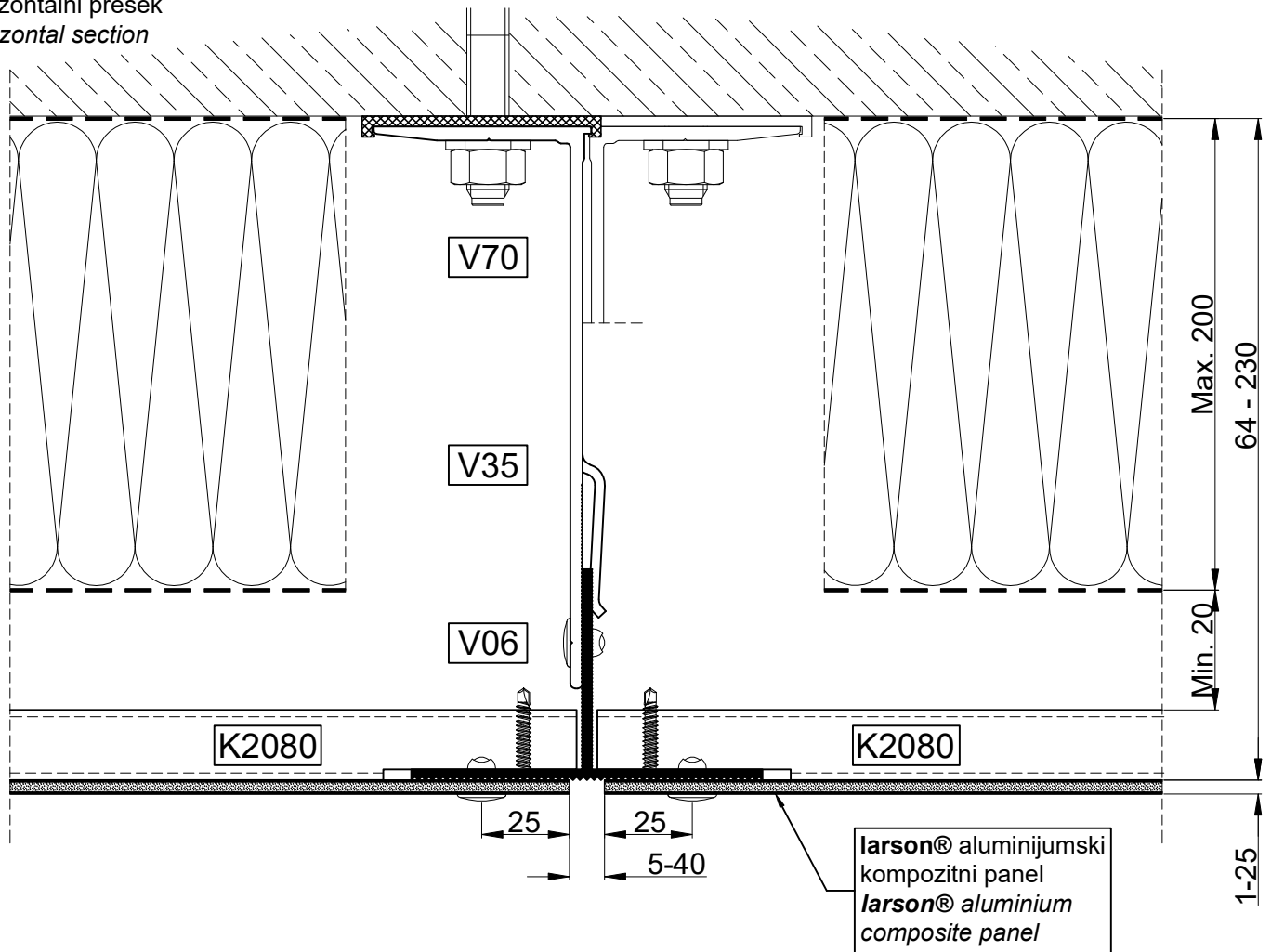
Technical description

Aluminium substructure system for flat panel cladding featuring visible mounting, usually pop-rivets or other fasteners. They can be visually accented with special, decorative heads or powder coated in panel color if least possible visibility is required.

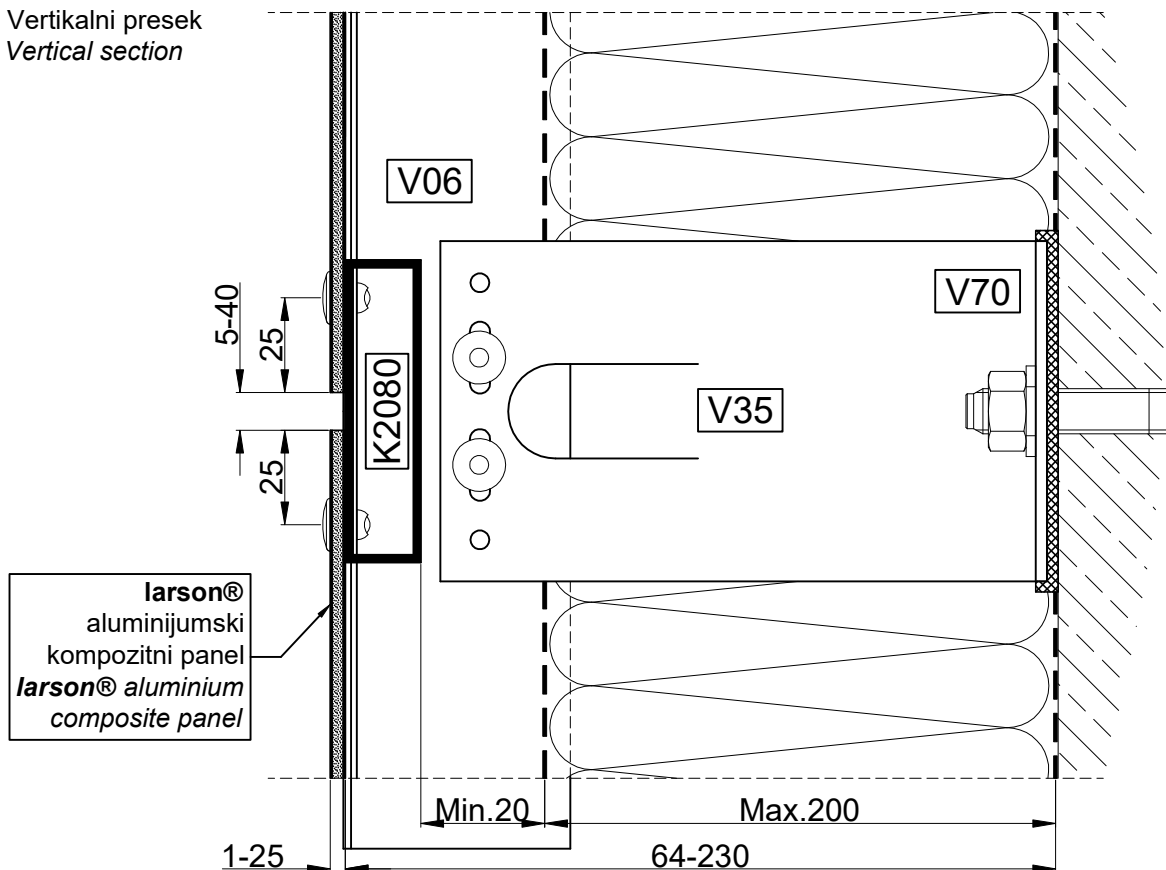
Assembly procedure:

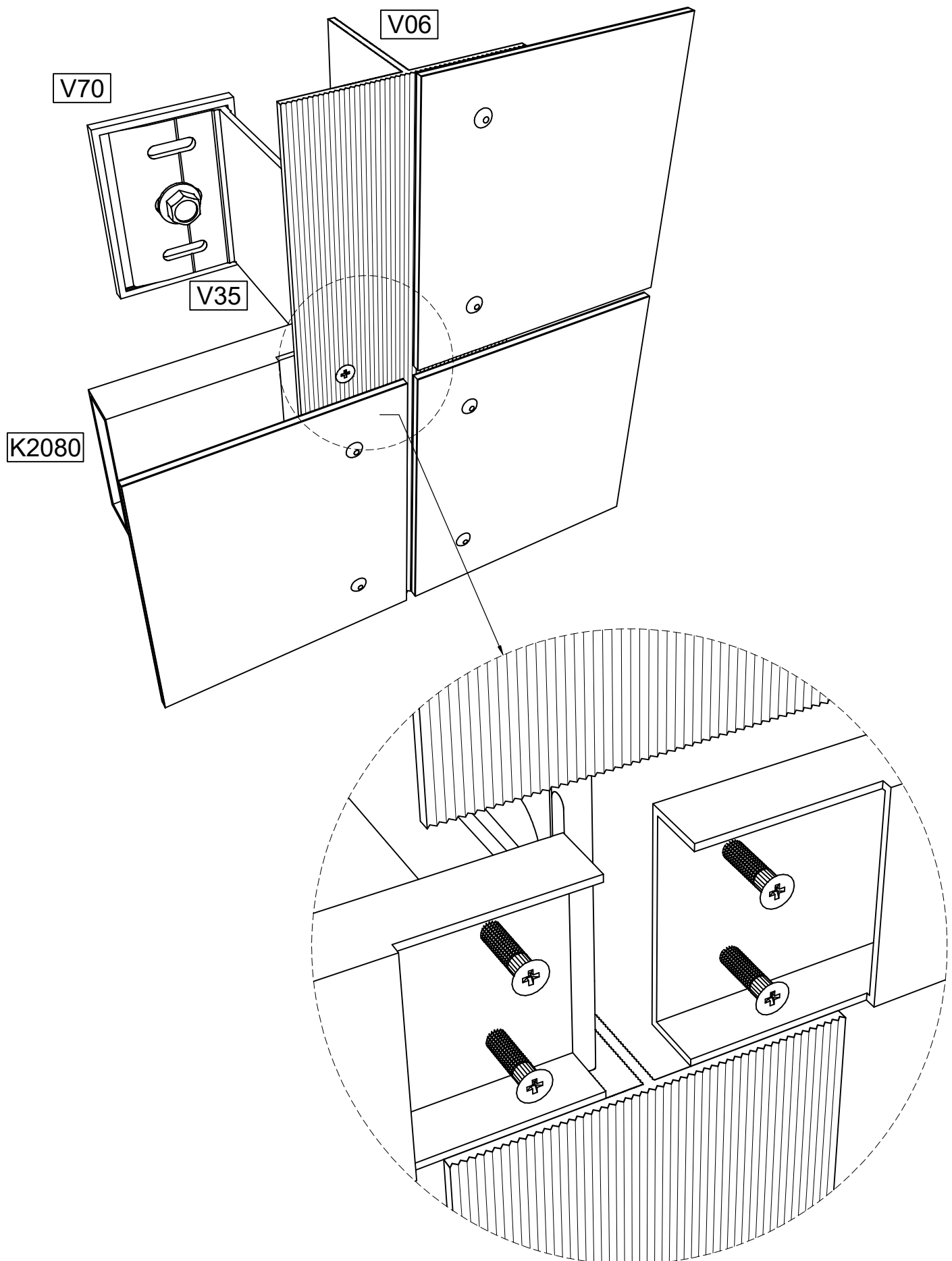
- a) The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.
- b) Extruded load-bearing T or L profiles are installed in any direction required by project (from horizontal to vertical) and spaced according to previously formed facade raster. The maximal recommended length of load-barring profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main substructure profiles (items nr. V06, V07, V08, L4060) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade surface. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to main profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) Cladding panels are just cut to the required dimensions, with optional drilling of precisely positioned mounting holes for attachment accessories. These prepared cladding panels are installed on site with pop rivets or screws, that can be painted in any color if required. This system features gaps from 10mm to 40mm.

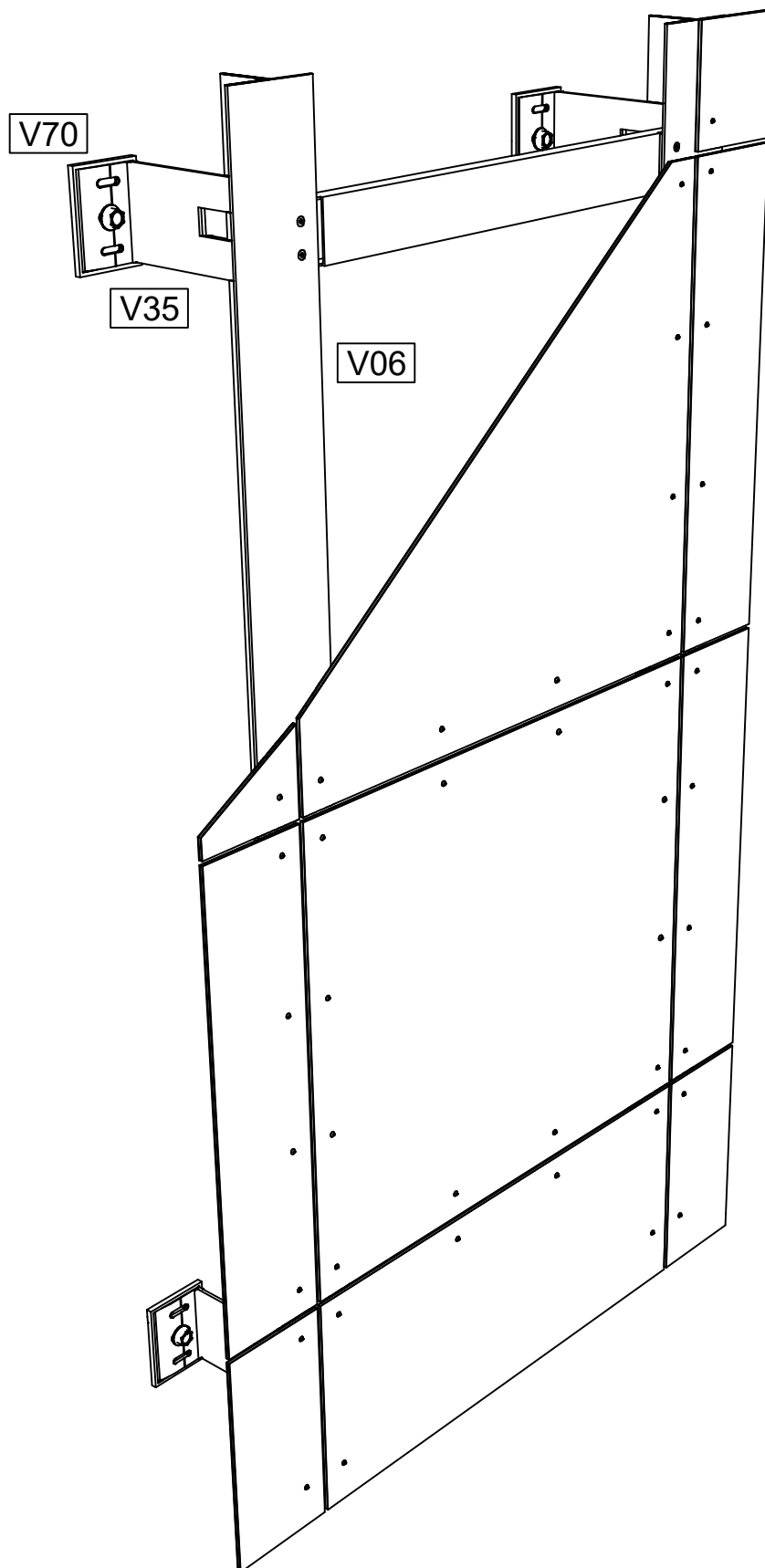
Horizontalni presek
Horizontal section

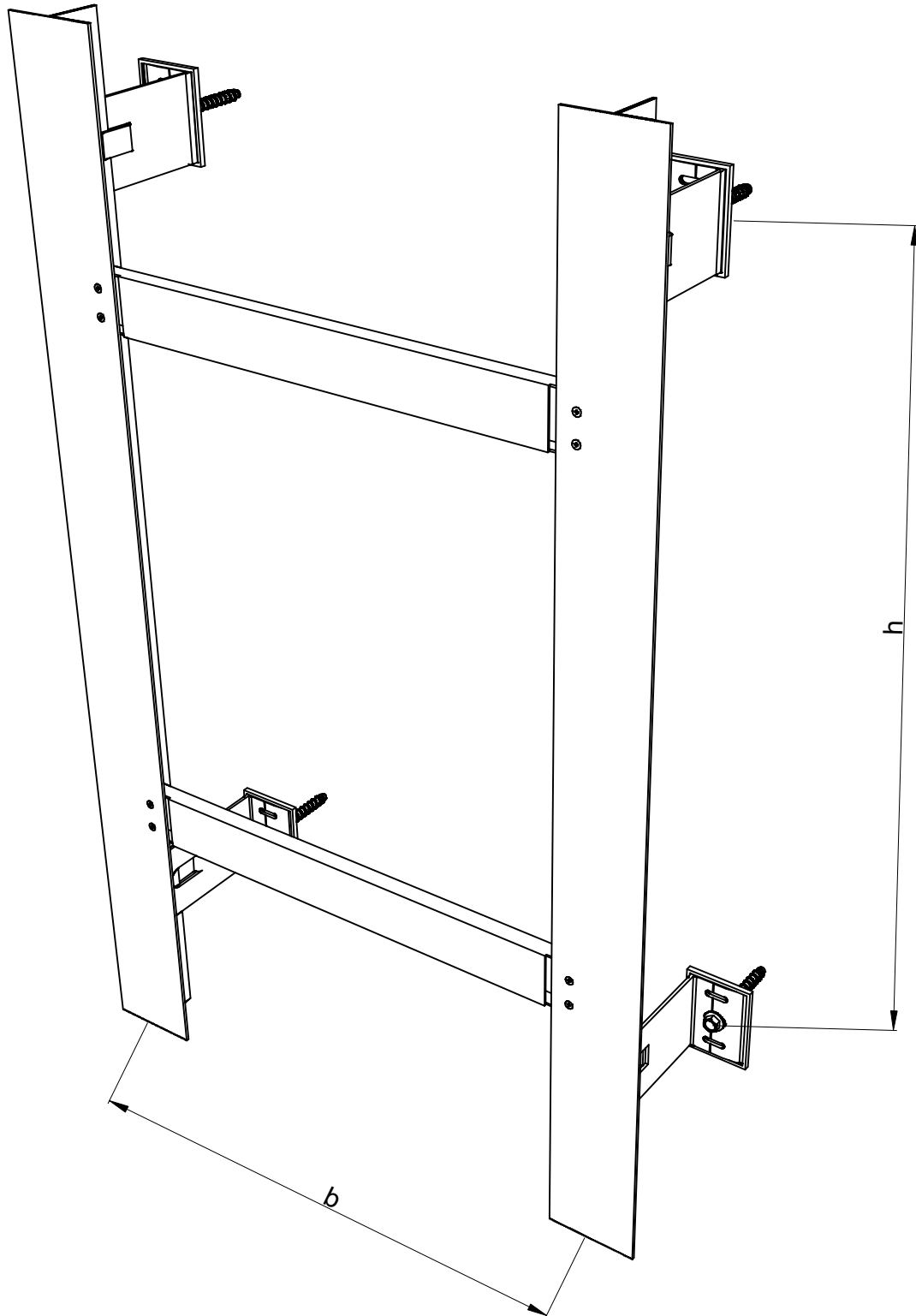


Vertikalni presek
Vertical section

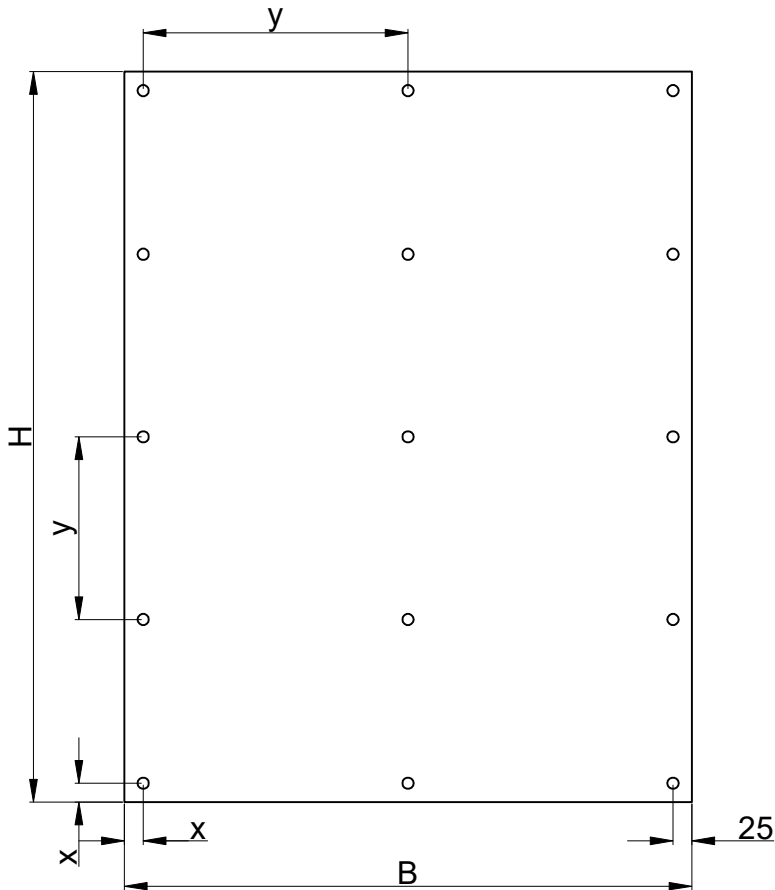








b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm



Debljina panela - maks. 25mm

Panel thickness - max. 25mm

Vrste panela - aluminijumski kompozitni paneli (npr. larson®, larc®A2), HPL, fiber cementne ploče, aluminijumski lim itd.

Panel types - aluminium composite panels (e.g. larson®, larc®A2), HPL, fiber cement panels, aluminium sheet etc.

B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

B - designed panel width - within limitations according to specification by manufacturer

H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

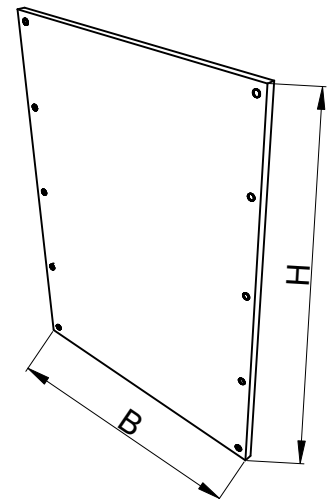
H - designed panel height - within limitations according to specification by manufacturer

x - u zavisnosti od odabira materijala obloge - ne manje od 25mm

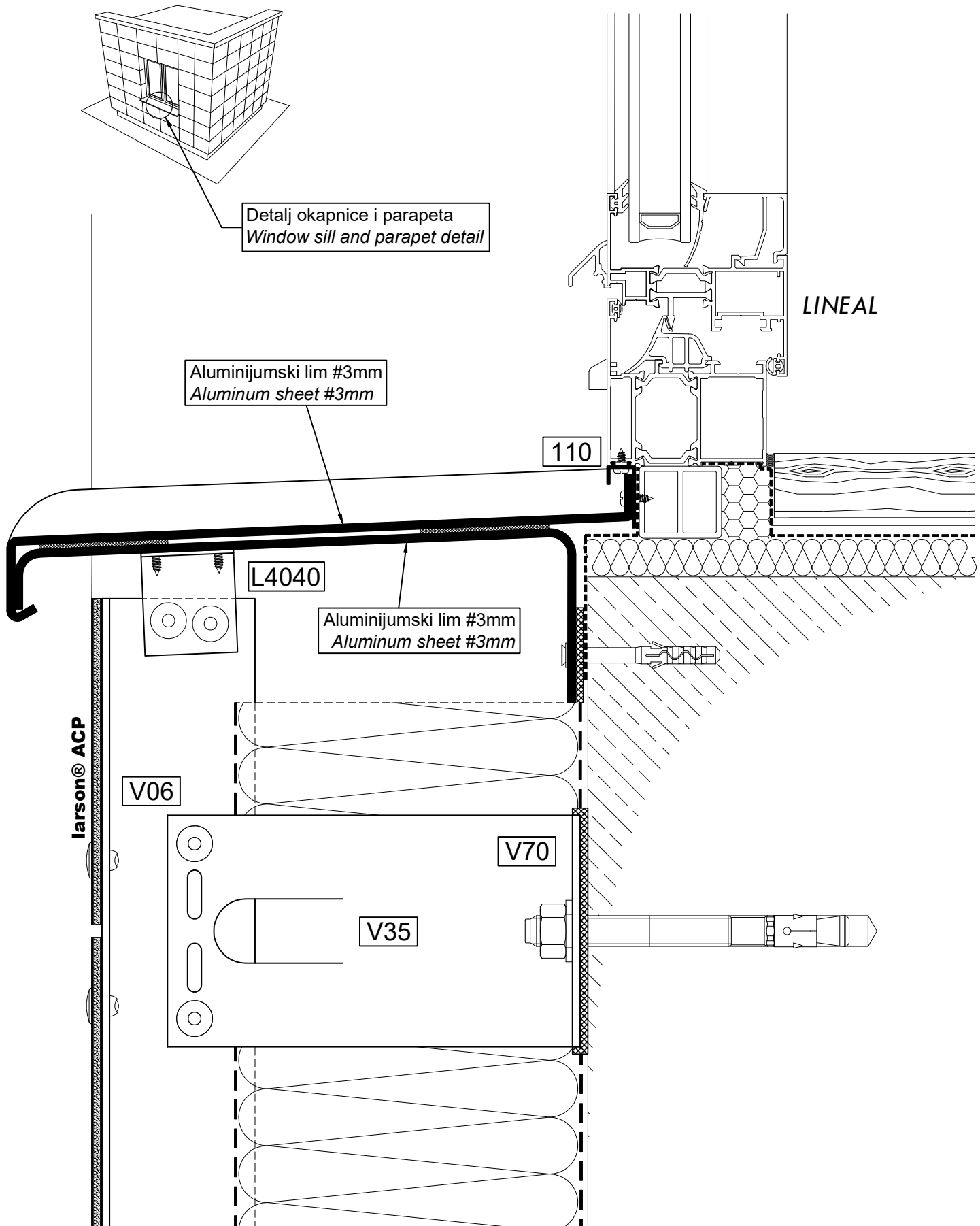
x - depending on the selection of cladding material - not less than 25mm

y - u zavisnosti od odabira materijala obloge i statičkog proračuna - ne više od 300mm

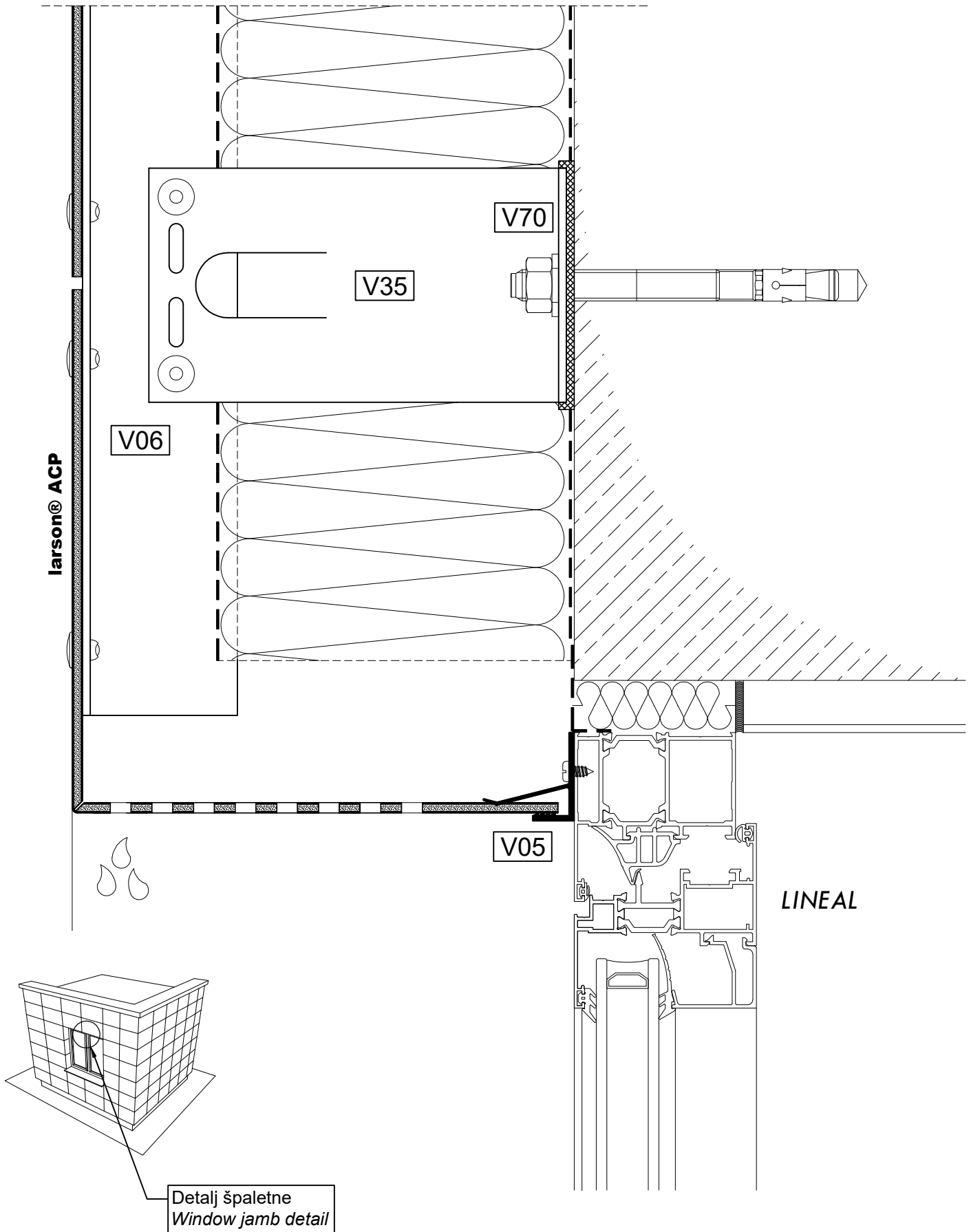
y - depending on the selection of cladding material and structural analysis - not more than 300mm



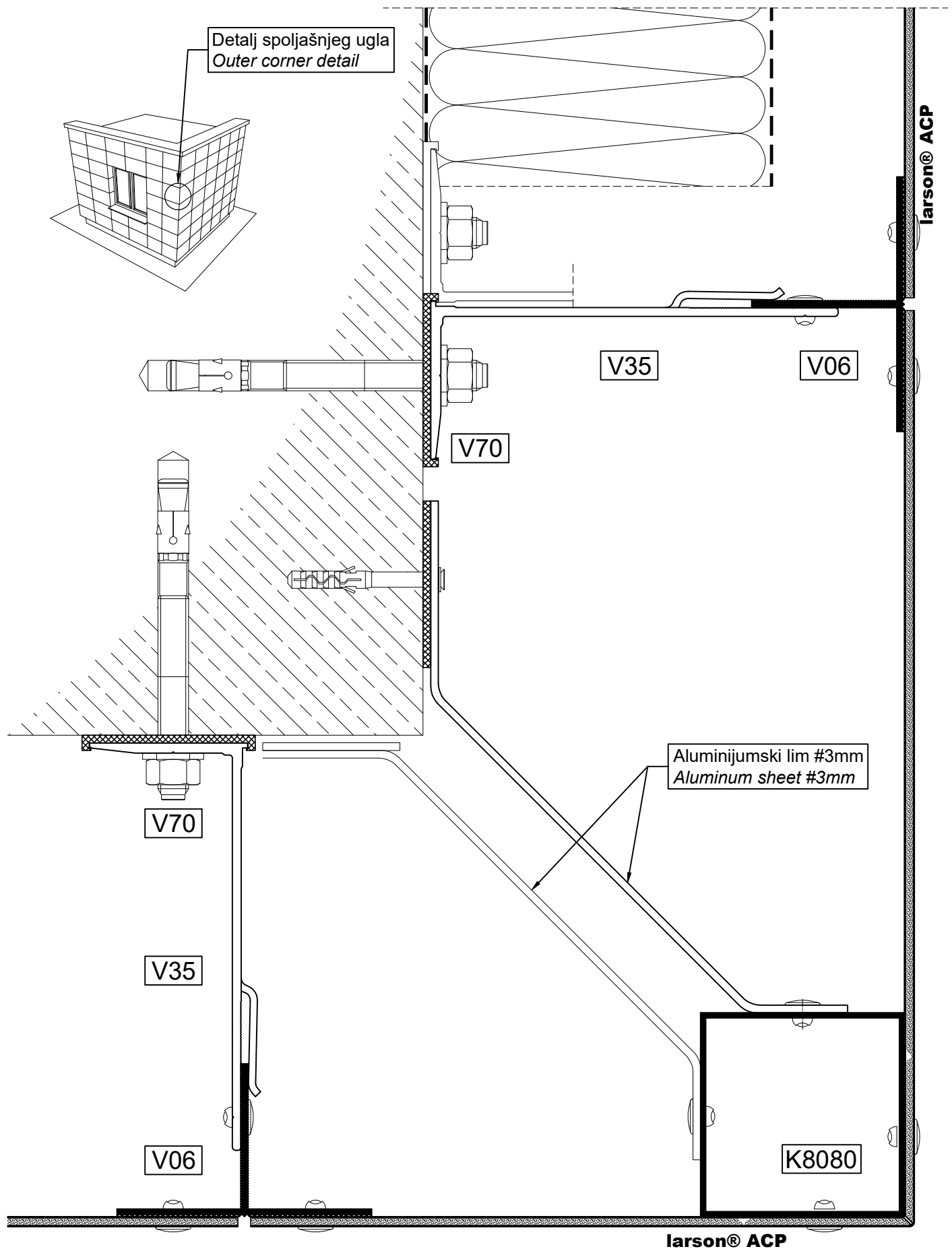
Vertikalni presek
Vertical section



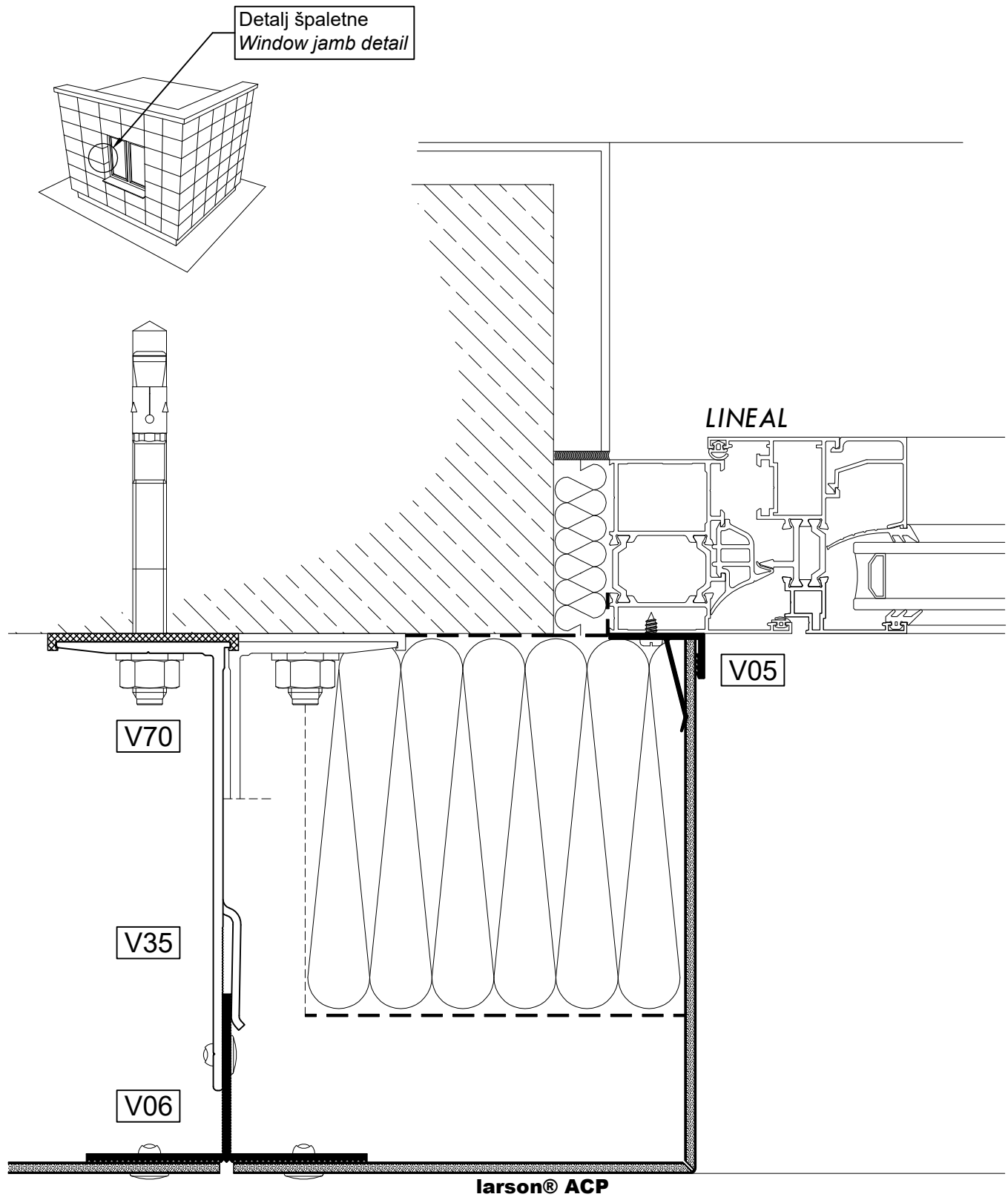
Vertikalni presek
Vertical section



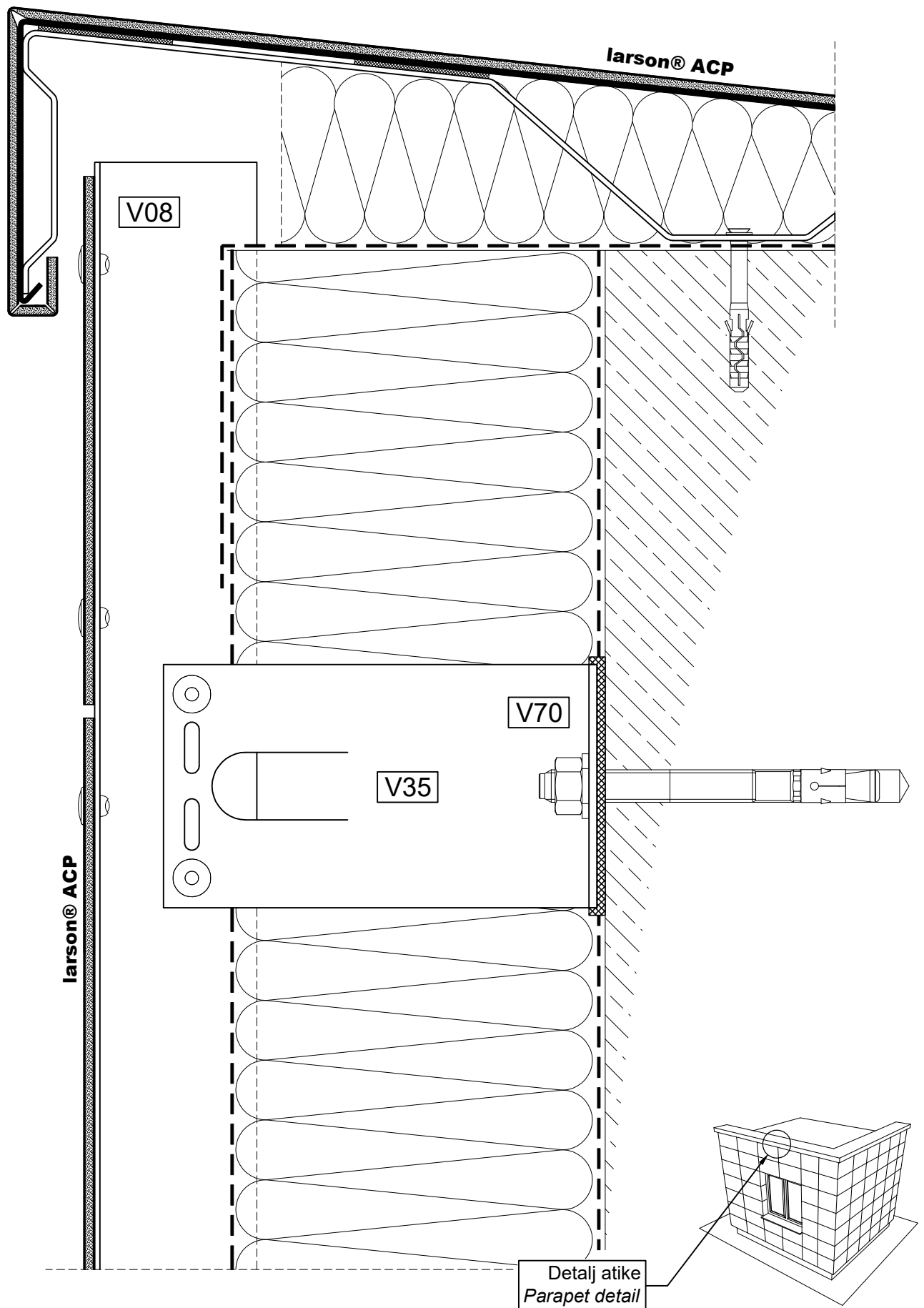
Horizontalni presek
Horizontal section



Horizontalni presek
Horizontal section

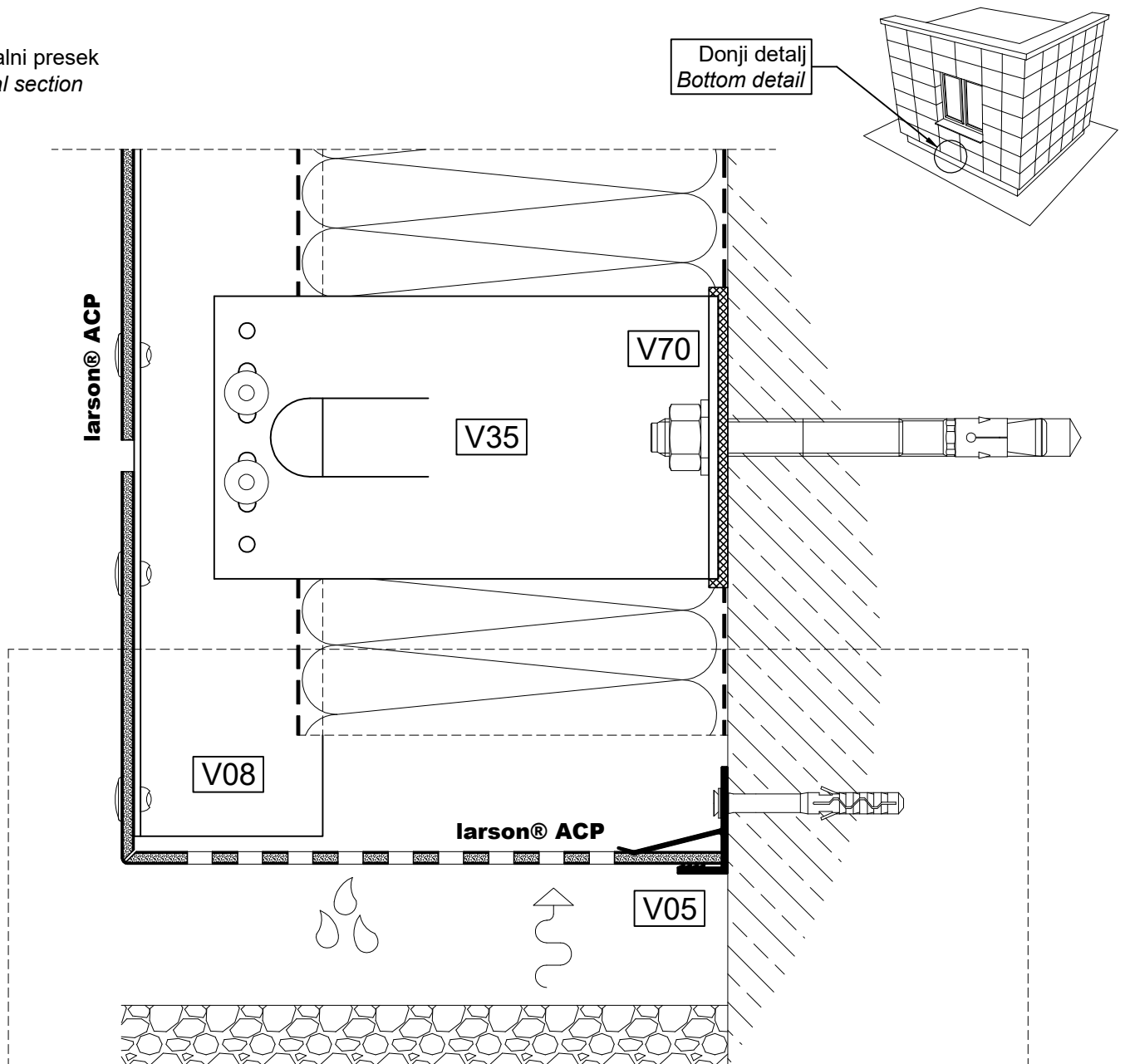


Vertikalni presek
Vertical section

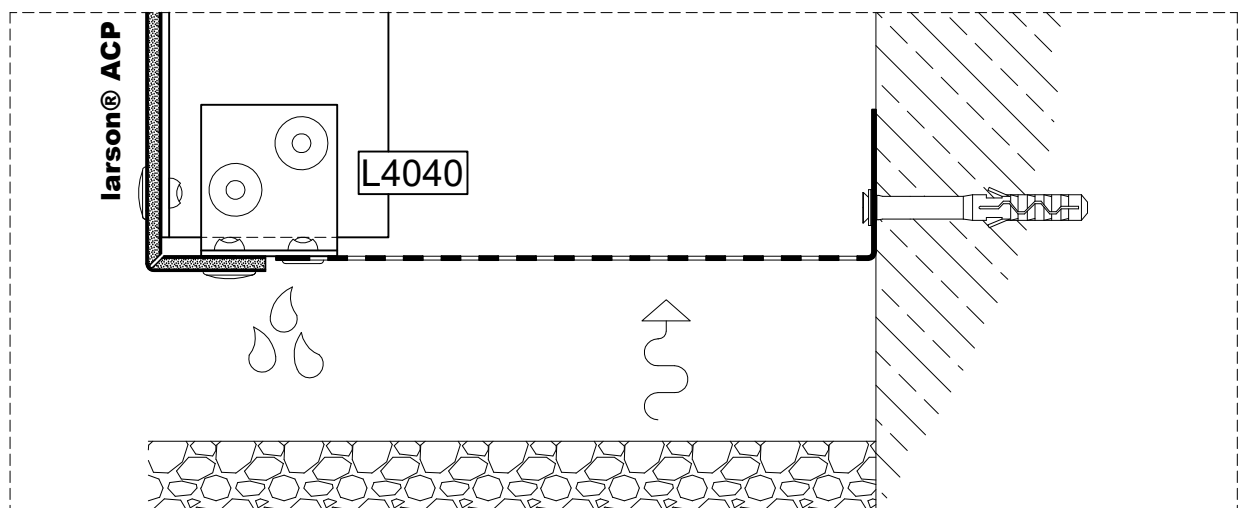


Vertikalni presek
Vertical section

Donji detalj
Bottom detail

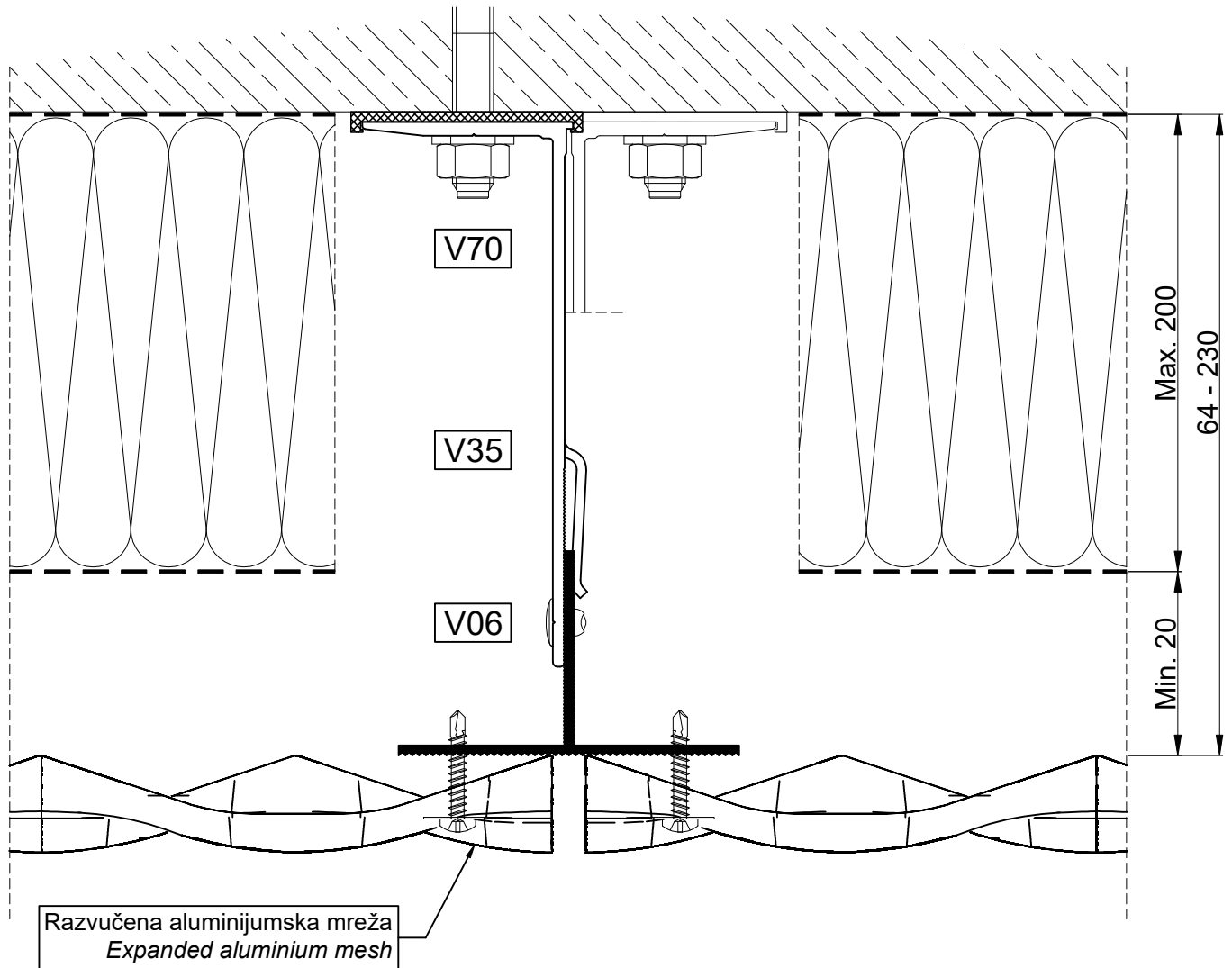


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

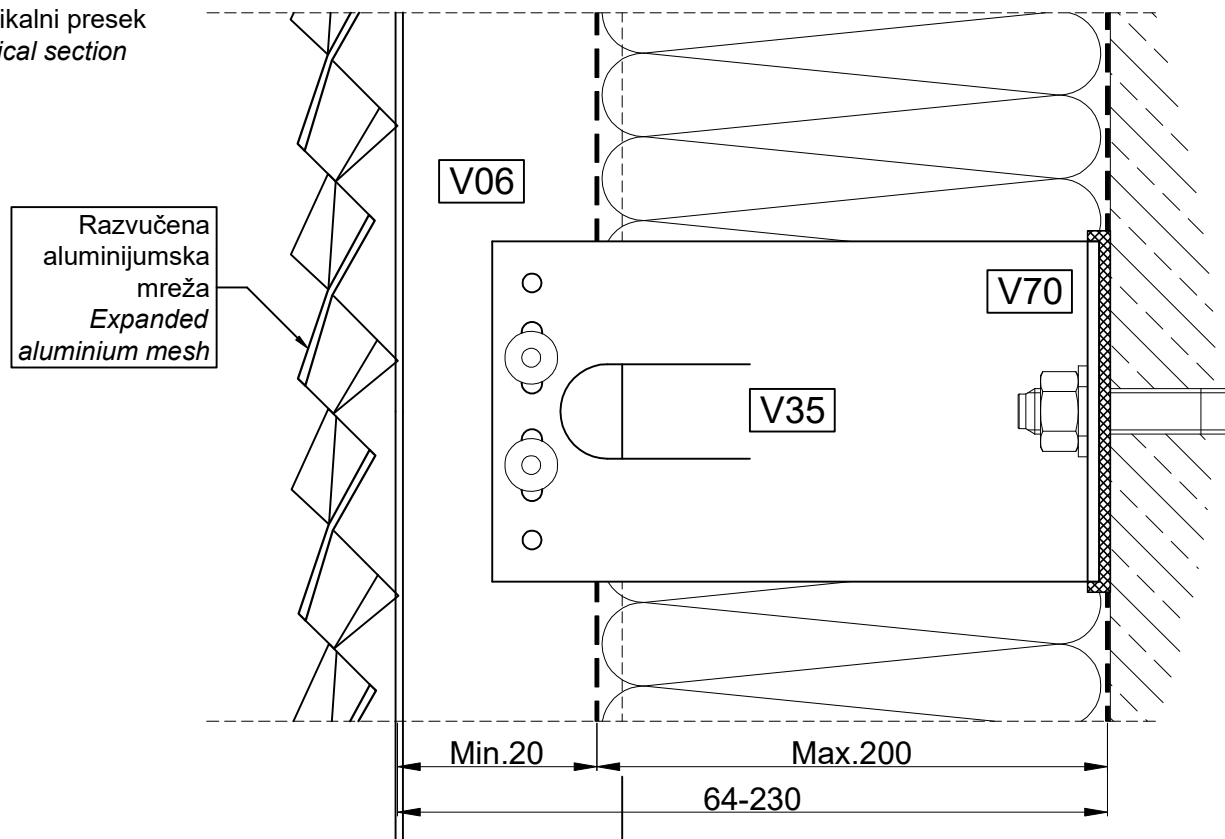


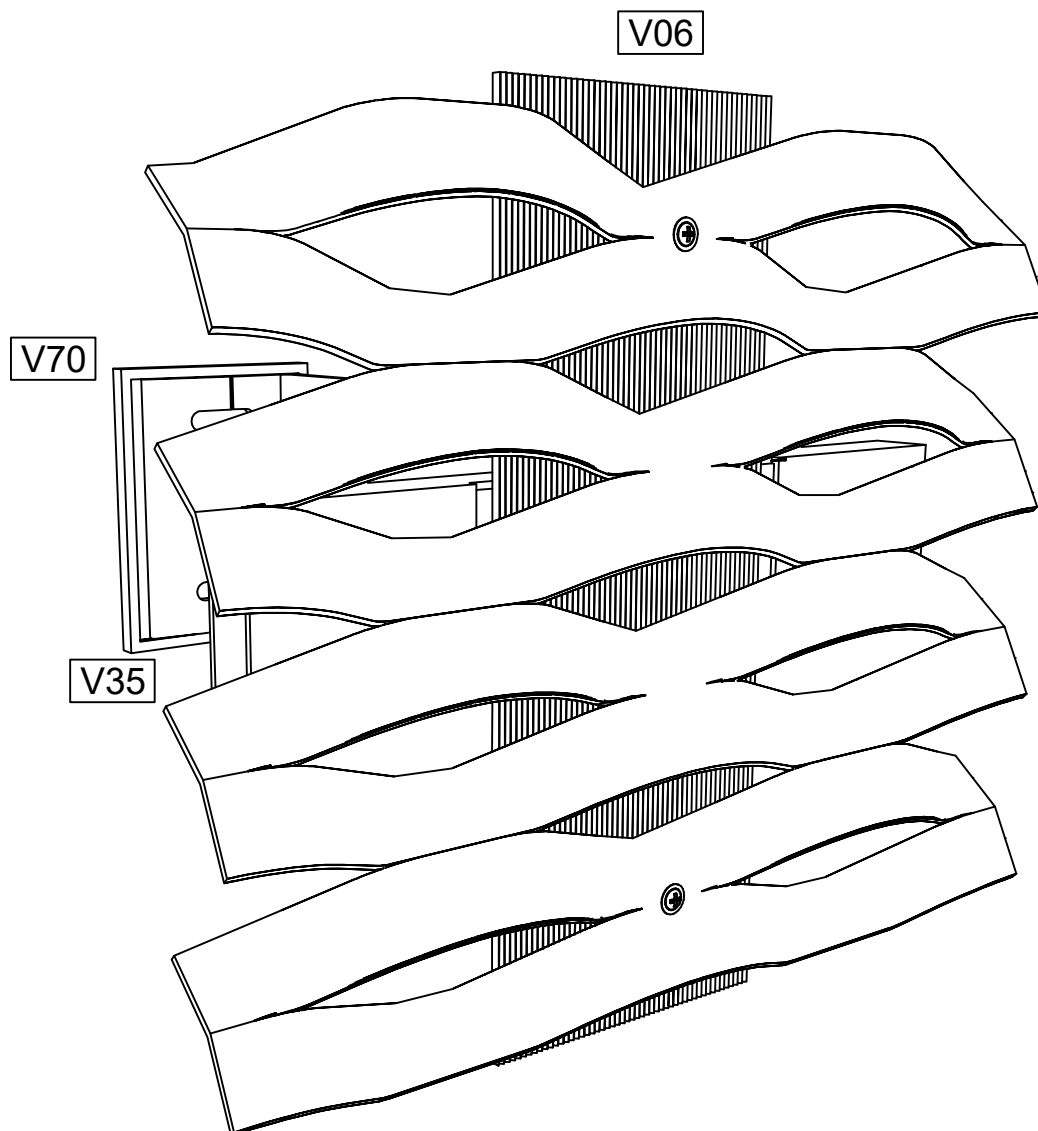
Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

Horizontalni presek
Horizontal section



Vertikalni presek
Vertical section





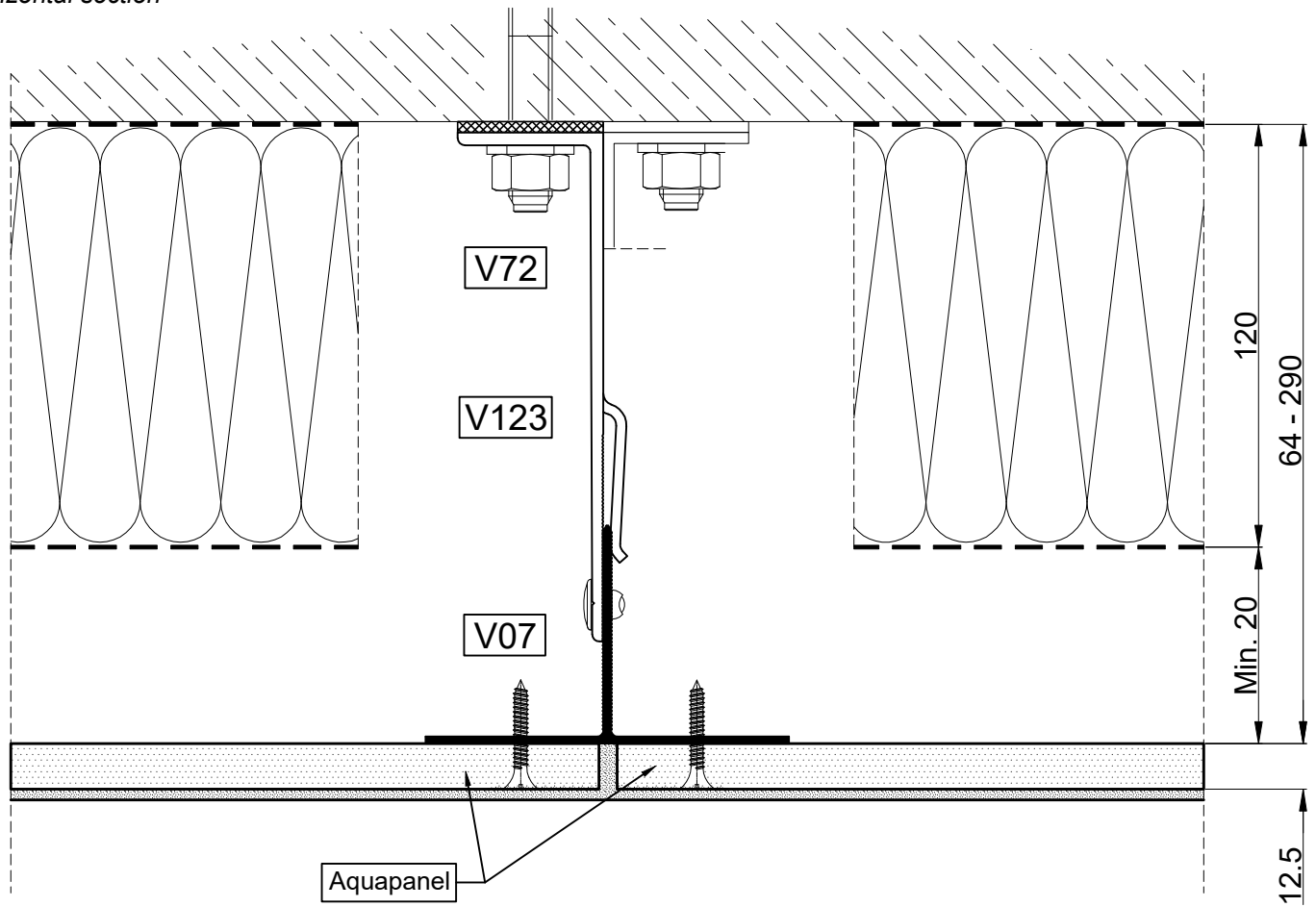
*Prezentovani detalj predstavlja samo predlog rešenja u sistemu VENT Rivet. Svaki tip mreže, njena dispozicija na/u objektu i njena funkcija će usloviti rešenje koje mora biti statički provereno za svaki konkretan slučaj.

**The presented detail is merely a preliminary technical solution in system VENT Rivet. Every individual mesh type, its disposition on/in the building and its function would condition a technical solution that must be structurally analysed for every particular situation.*

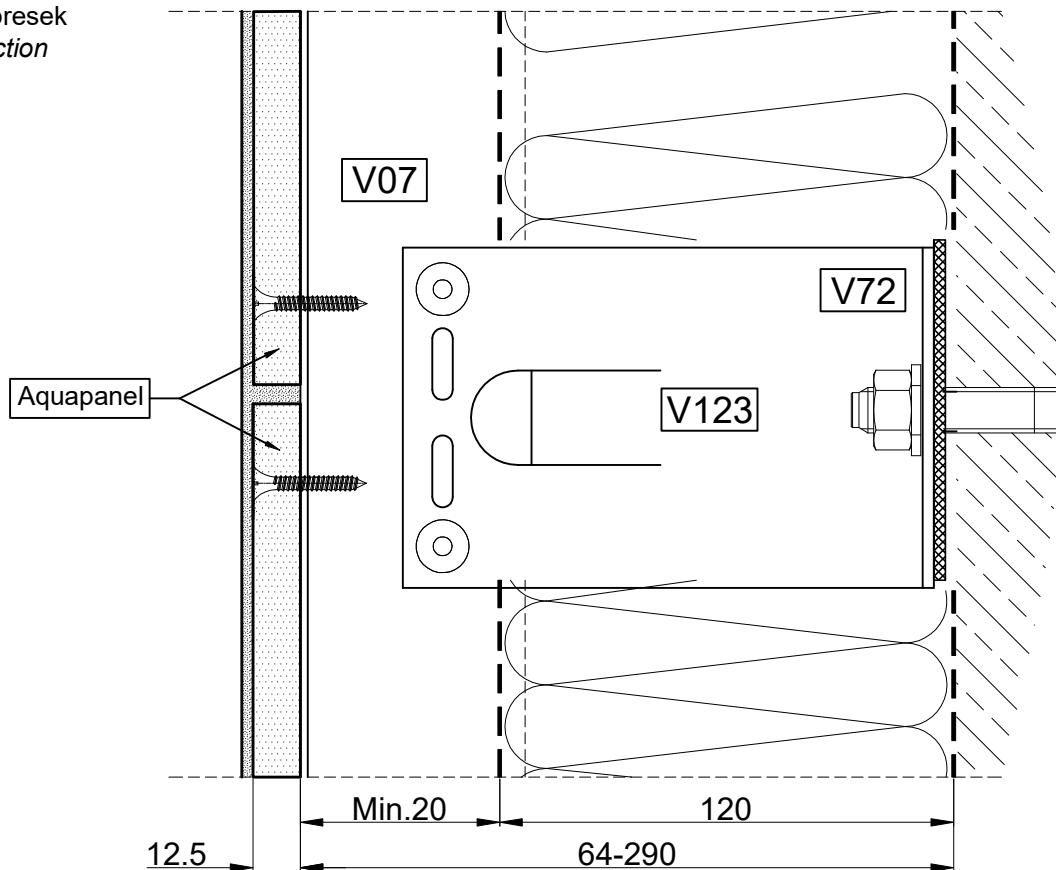
*Tehničko rešenje je validno za određene tipove mreže. U toku izbora mustre, konsultovati se sa prodajno-tehničkom službom.

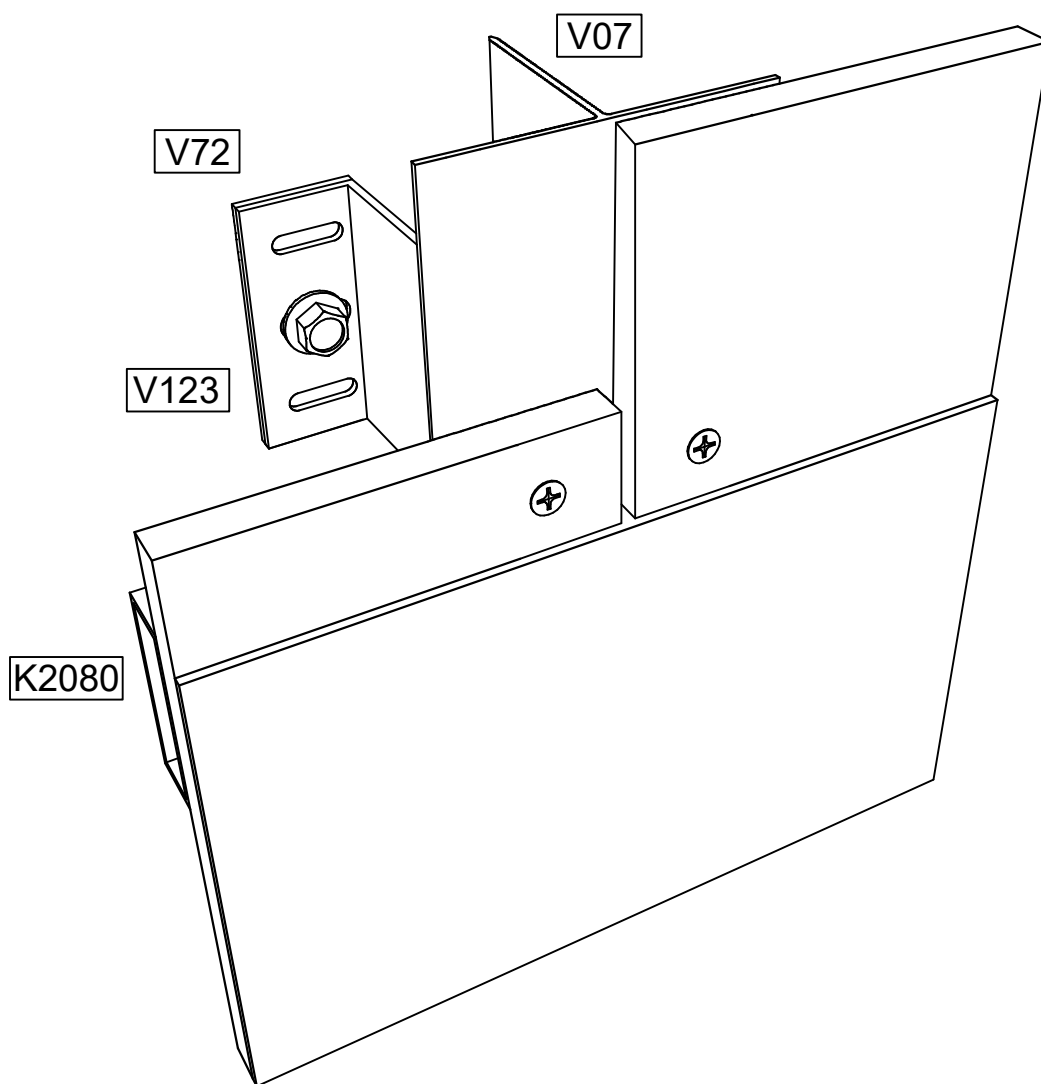
**Technical solution is valid for certain mesh types. When deciding on a mesh type, consult the commercial and technical department.*

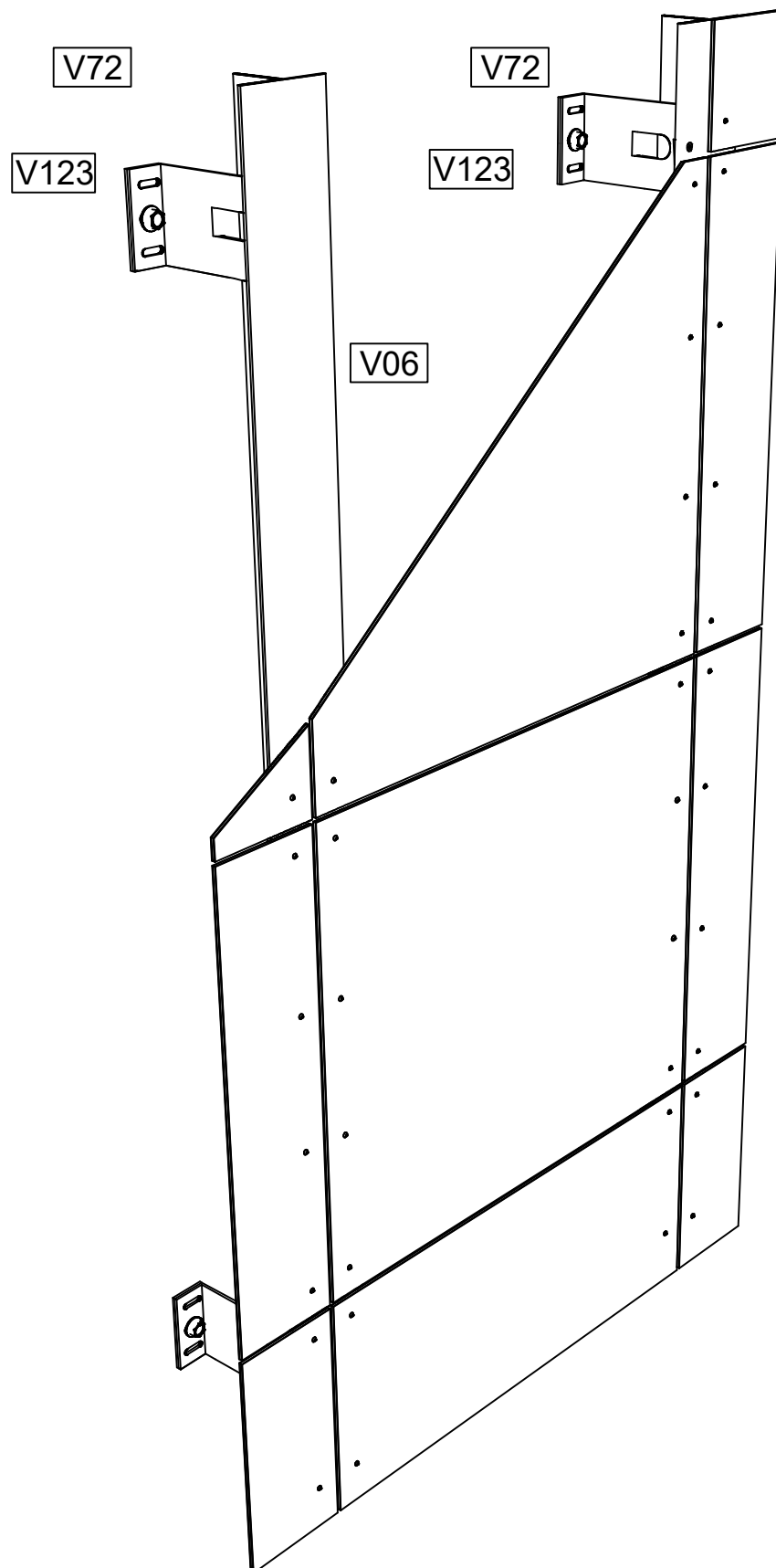
Horizontalni presek
Horizontal section

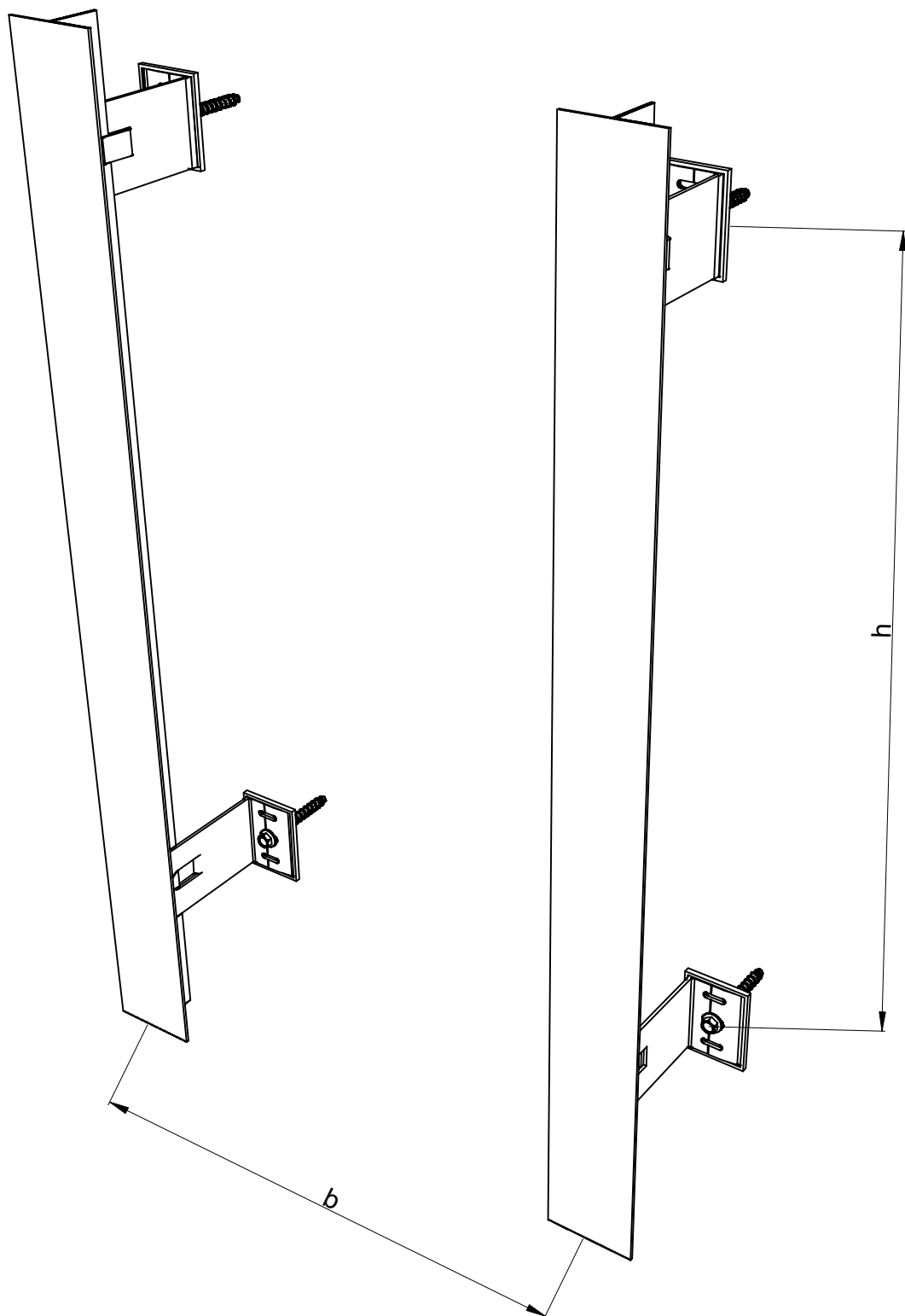


Vertikalni presek
Vertical section

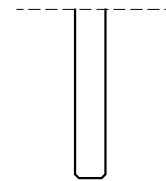
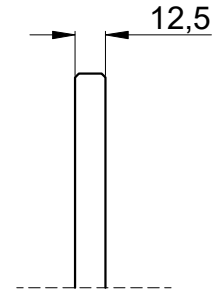
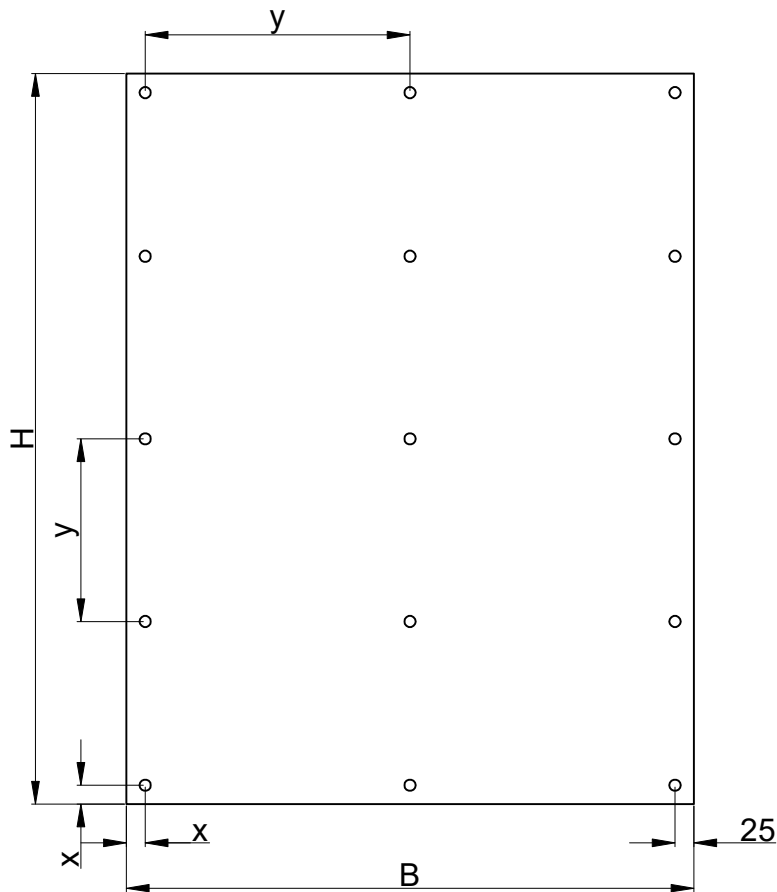








b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm



B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

B - designed panel width - within limitations according to specification by manufacturer

H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

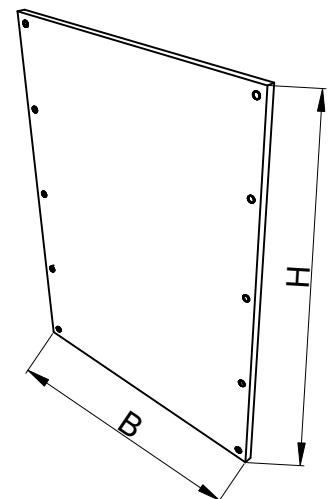
H - designed panel height - within limitations according to specification by manufacturer

x - u zavisnosti od odabira materijala obloge - prema uputstvu proizvođača panela

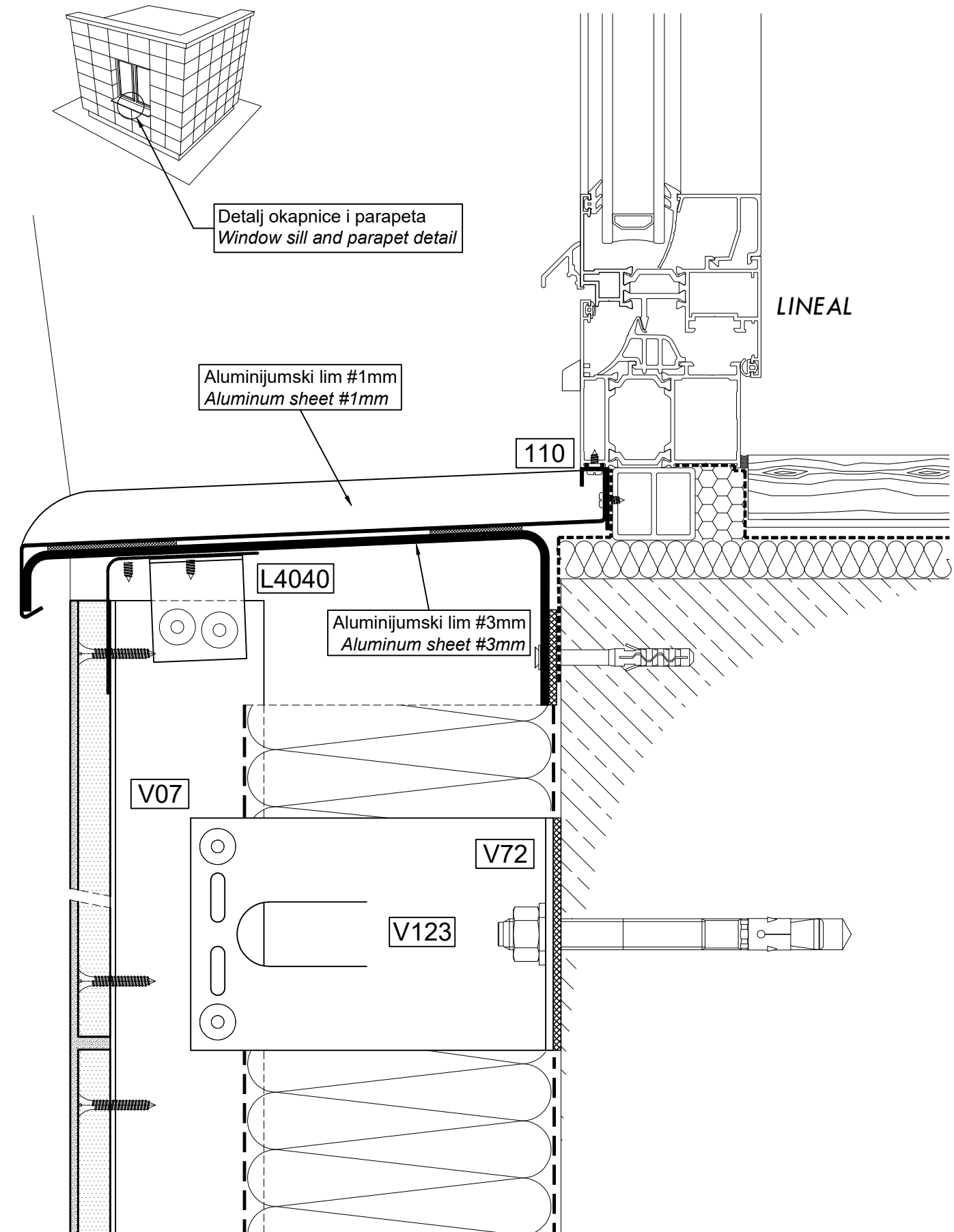
x - depending on the selection of cladding material - in accordance with instructions by panel producer

y - u zavisnosti od odabira materijala obloge i statičkog proračuna - prema uputstvu proizvođača panela

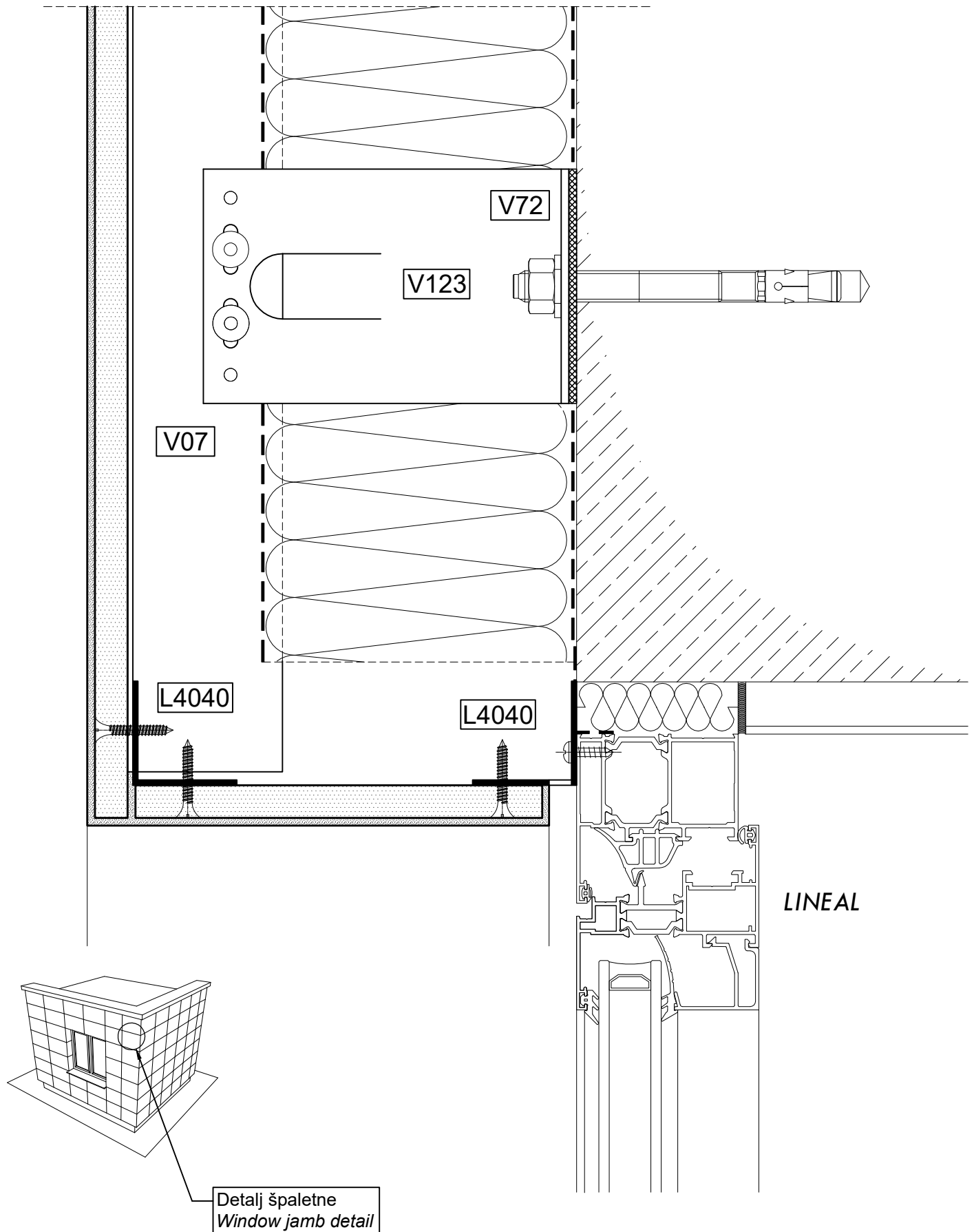
y - depending on the selection of cladding material and structural analysis - in accordance with instructions by panel producer



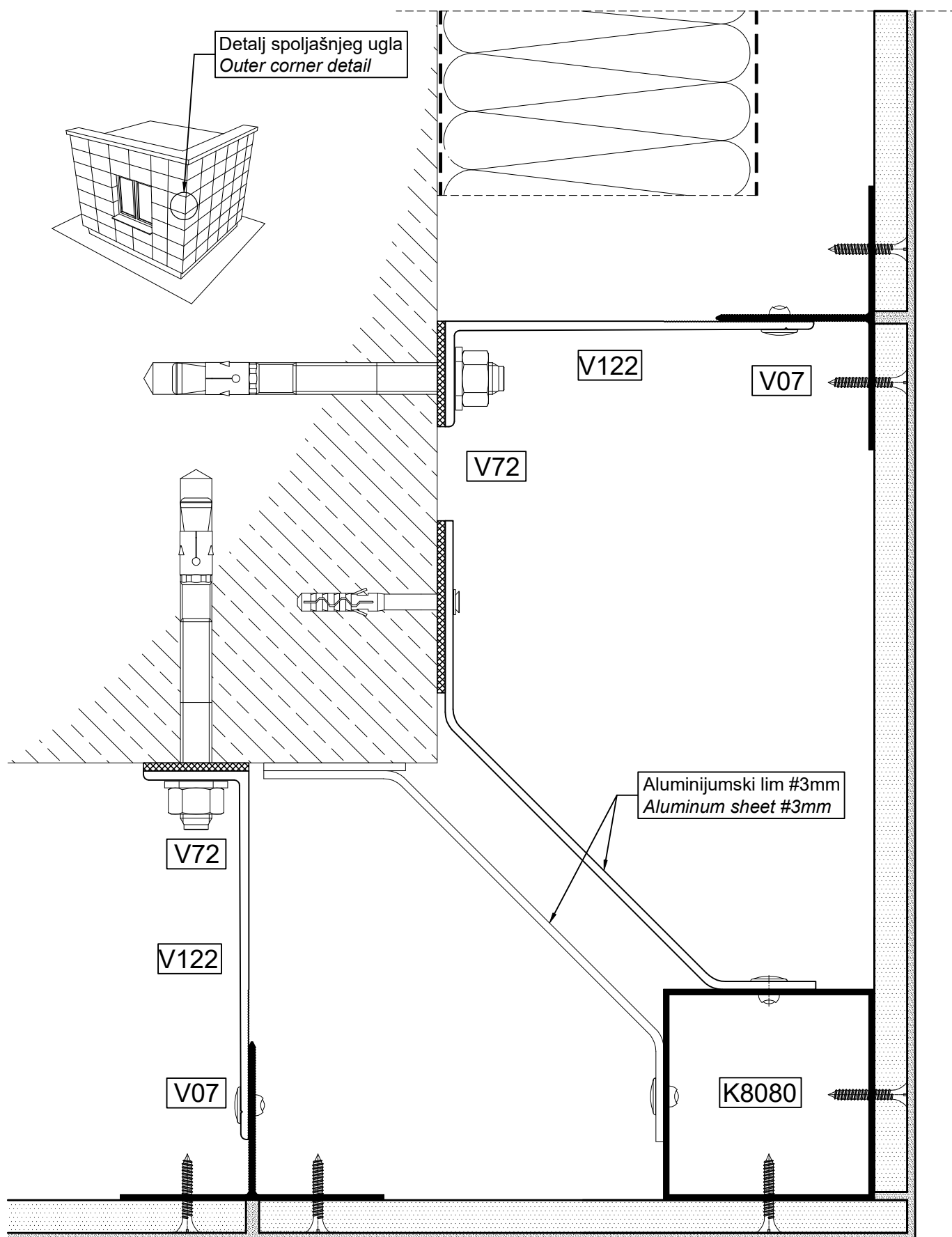
Vertikalni presek
Vertical section



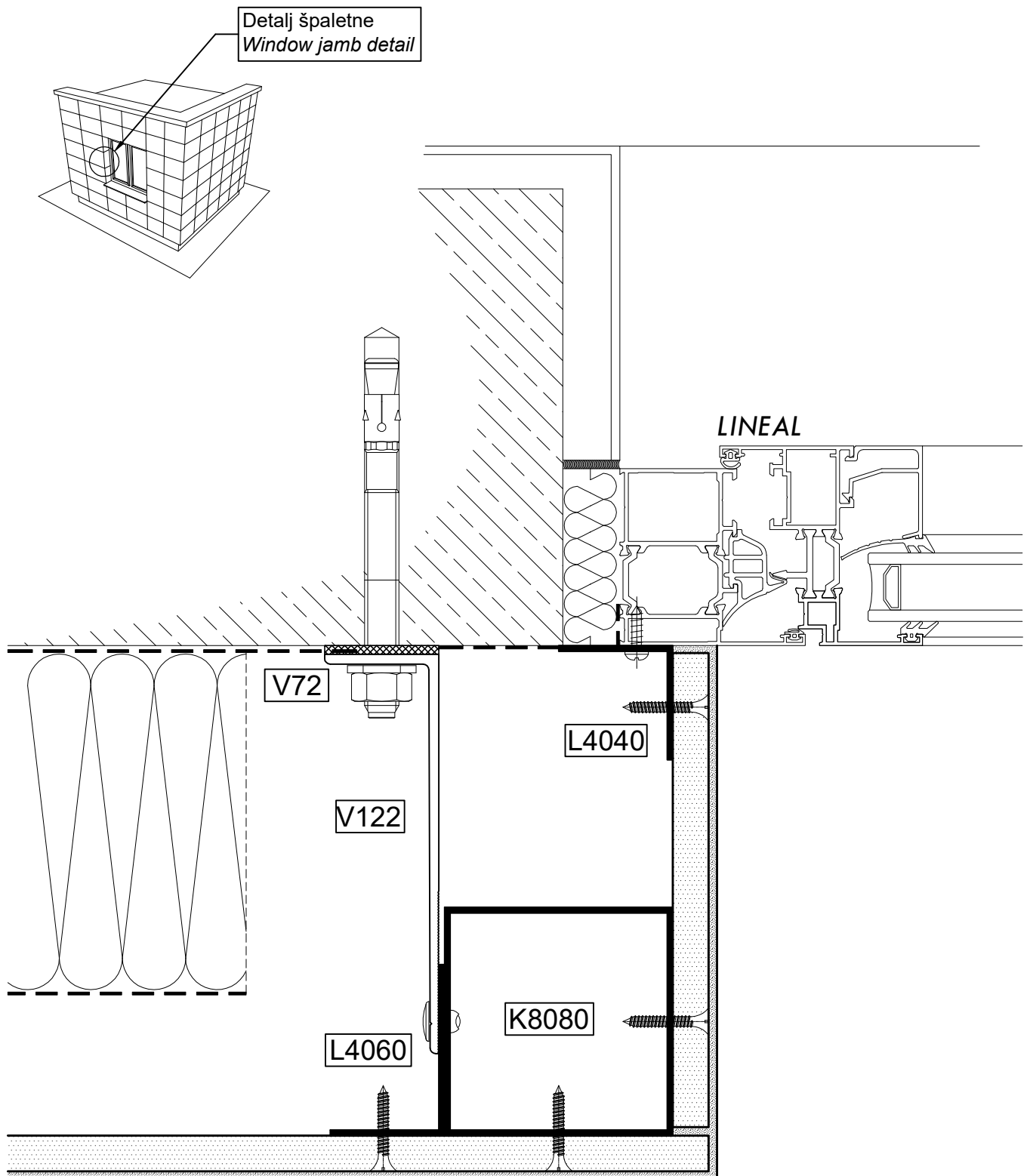
Vertikalni presek
Vertical section



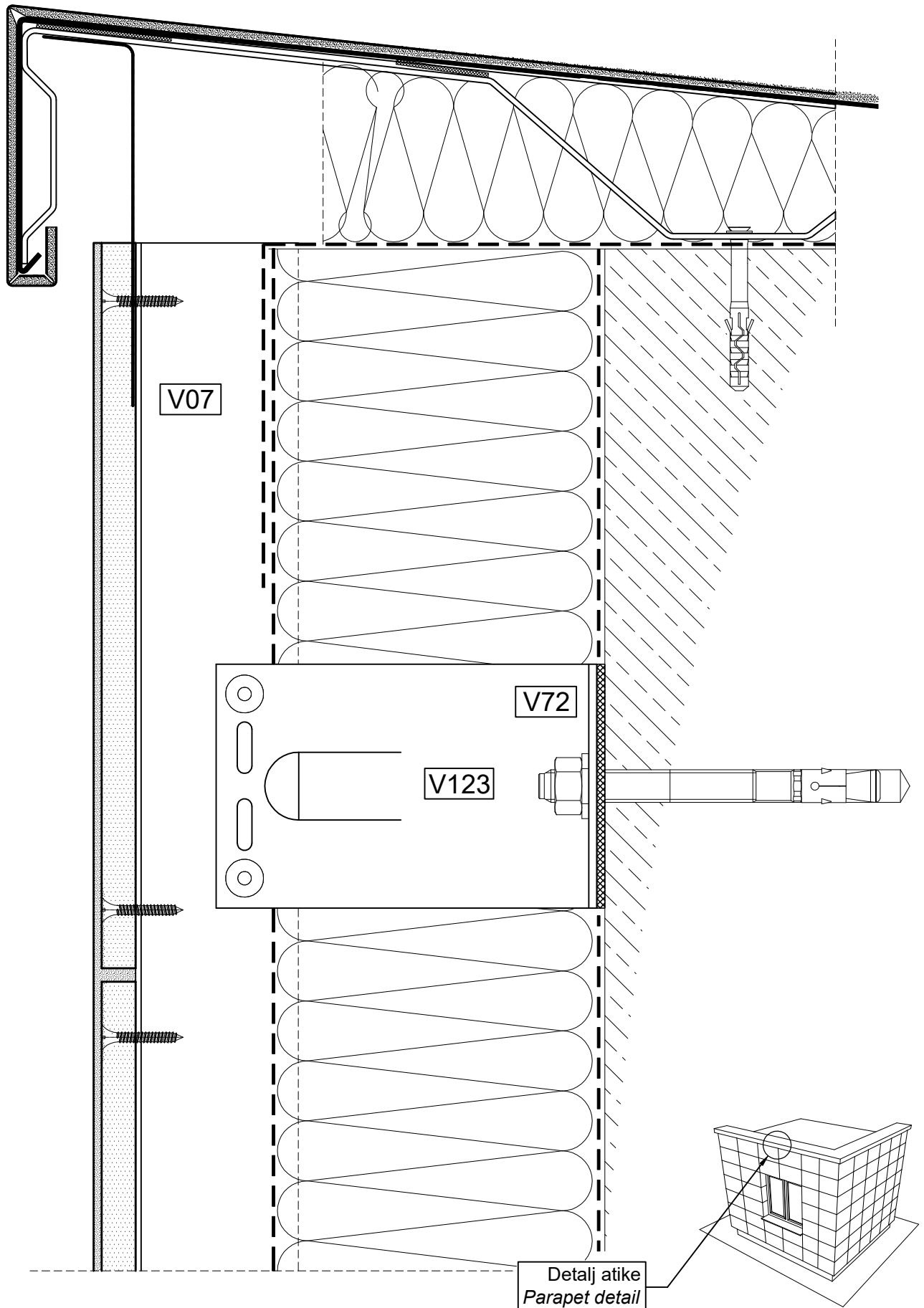
Horizontalni presek
Horizontal section



Horizontalni presek
Horizontal section

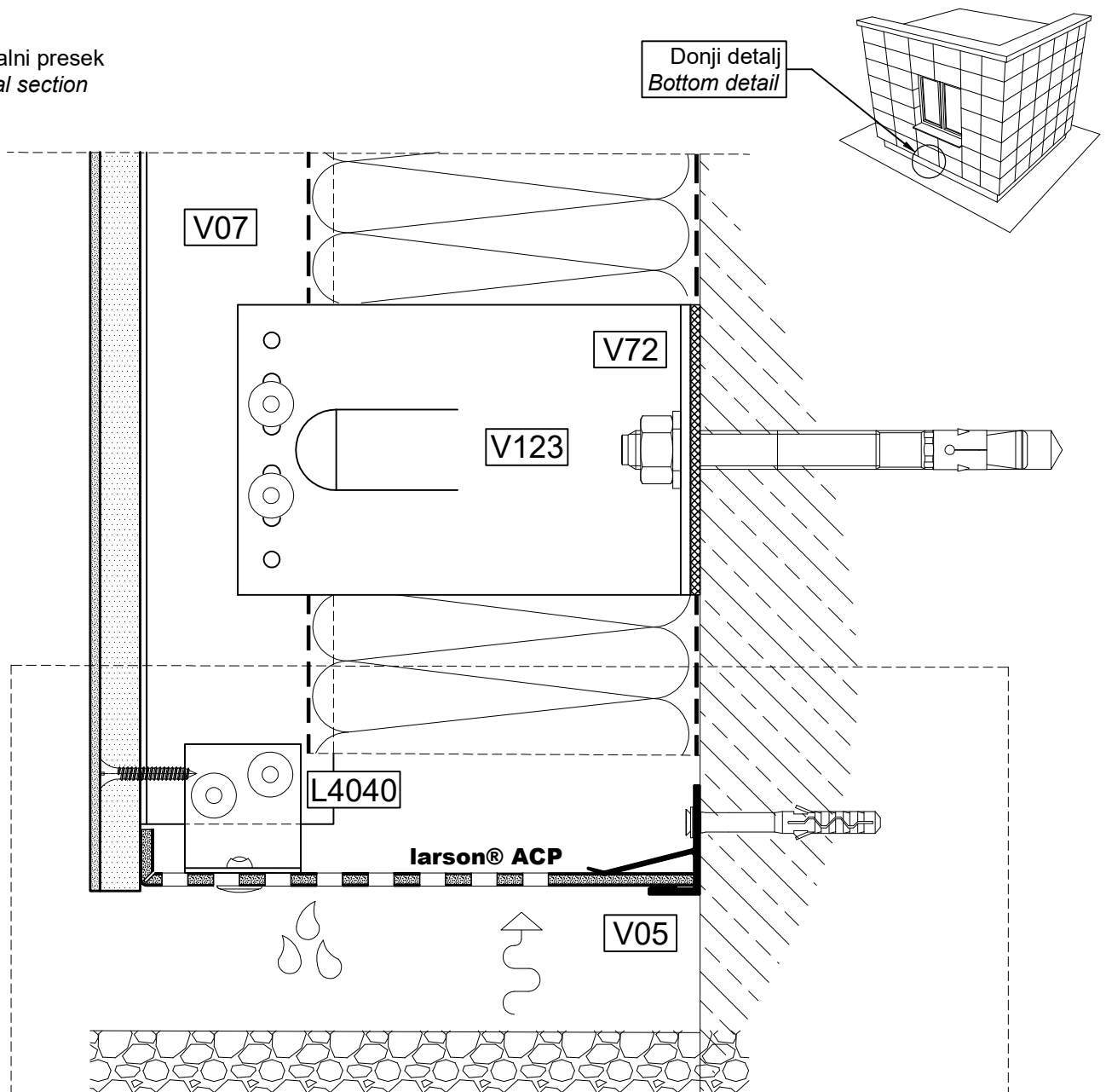


Vertikalni presek
Vertical section

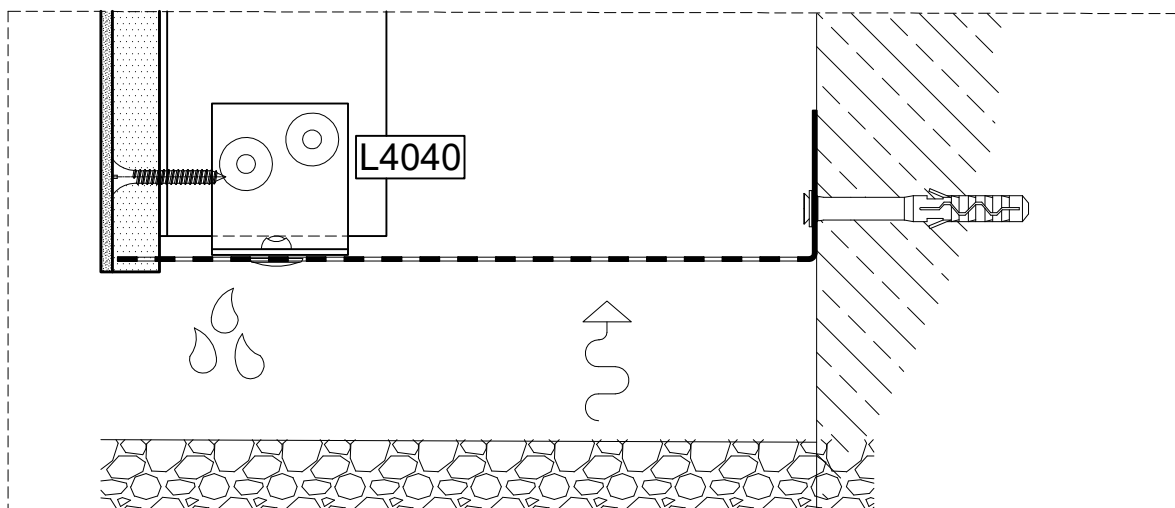


Vertikalni presek
Vertical section

Donji detalj
Bottom detail



Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT TACK



Tehnički opis sistema

Sistem aluminijske podkonstrukcije namenjen prihvatanju ravnih ploča fiksnih nevidljivim vezama sa lica fasade u vidu specijalne dvostrano lepljive trake i silikonskog lepka

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

b) Noseći profil se u projektovanom rasteru postavlja na mestima vertikalnih/horizontalnih spojeva/fuga fasadnih ploča ili između istih (u slučajevima velikih dimenzija polja). Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između nosećih profila je 1,5m.

c) Fiksiranje nosećih profila se vrši kotvama, koje omogućavaju fino podešavanje/pozicioniranje nosećih aluminijskih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Maksimalna preporučena udaljenost kotvi je 1,5m (definisano statičkim računom). Njihov spoj sa vertikalama se ostvaruje u vidu brezona ili pop-zakivaka (5) kroz otvore u ankerima koje omogućuju kako fiksnu vezu, tako i dilatirajuću vezu. Ukoliko postoji zahtev za termoprekidom, neophodno je kao tampon sloj, između punog dela zida i aluminijskih kotvi, postaviti plastične podloške.

d) Obrada izabranog tipa panela se vrši samo isecanjem ploča na ugradnu meru i eventualno bušenjem precizno pozicioniranih otvora za postavku spojnih sredstava. Tako isporučene ploče se na licu mesta ili u radioničkim uslovima blizu gradilišta pripremaju istovremeno sa nosećim profilima na način koji sam proizvođač lepka propisuje, najčešće sledećim redosledom:

- Ručnom vibro-šlajfericom se vrši čišćenje nosećih profila celom dodirnom površinom, kao i fasadnih ploča na mestima dodira sa nosećim profilima
- Čistom krpom natopljenom sredstvom za čišćenje tj. preporučenim cleanerom od strane proizvođača lepka se obrišu noseći profili i ploče na tretiranim površinama
- Na istim površinama se nanose preporučeni prajmeri - sredstva koja omogućavaju bolje prijanjanje lepka
- Na nosećim profilima se postavljaju obostrano lepljive montažne trake, koje imaju zaštitnu foliju, i to paralelno uz predviđeni pravac nanošenja lepka, pozicionirane bliže spoju fasadnih obloga tj. fugi. One imaju ulogu privremenog fiksiranja dok osnovno sredstvo za spajanje (lepak) ne dobije svoju punu adhezivnu moć. Takođe osigurava ravnomerno nanošenje lepka, najčešće debljine oko 3mm.
- paralelno uz postavljenu traku se nanosi silikonski lepak koji ima ulogu glavnog vezivnog/spojnog sredstva obloge i podkonstrukcije
- Skida se zaštitna folija sa obostrano lepljivih montažnih traka
- Pripremljene fasadne ploče se prihvataju i pozicioniraju na predviđeno mesto na sfasadi sa predviđenom fugom između ploča od 8-20mm. Kada su ploče većih dimenzija u pitanju, preporuka je da se to radi uz pomoć ručnih vakum prihvatnika.



Technical description

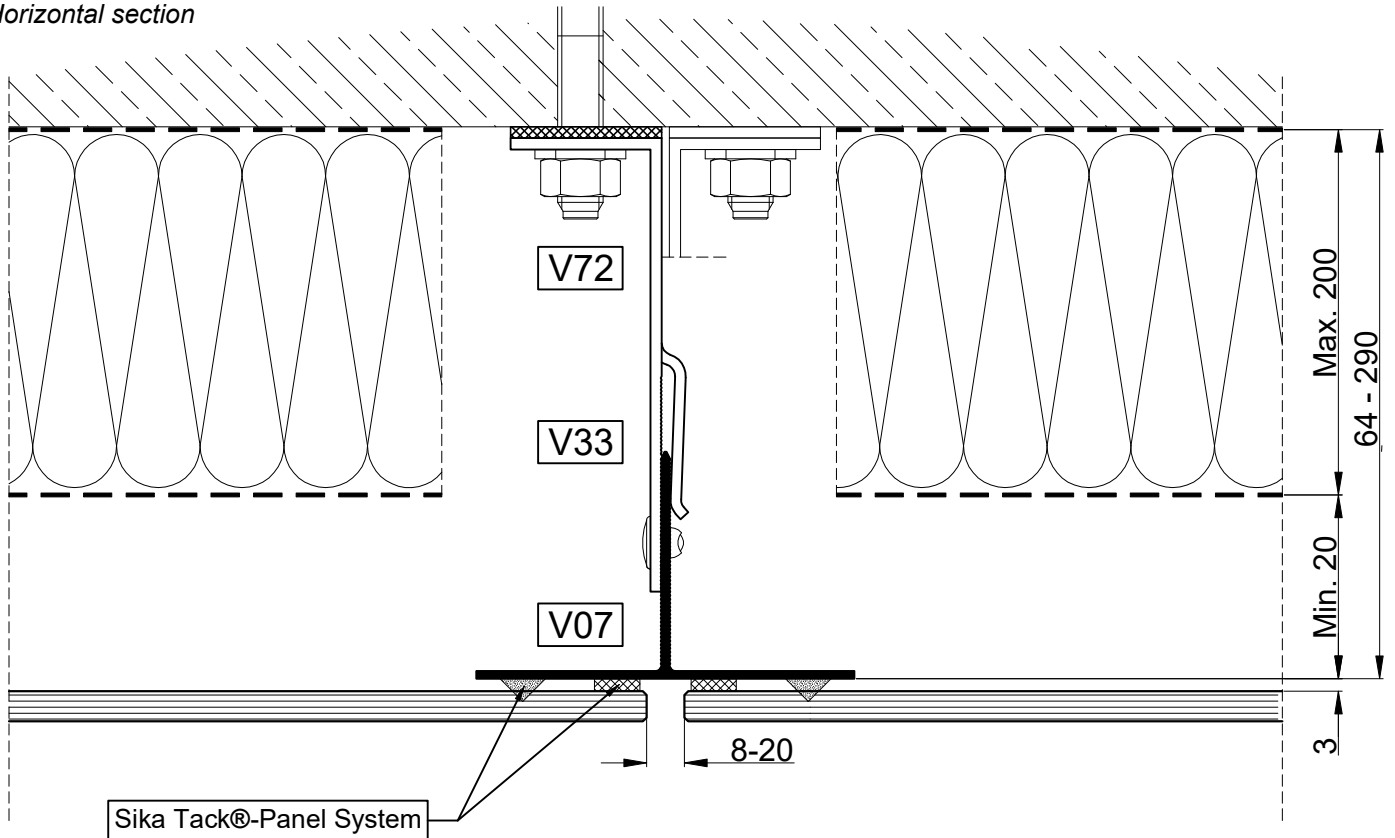
Aluminium substructure system for flat panel cladding featuring invisible mounting with adhesives. This wet installation method requires preparation both in workshop and on construction site. It offers great flexibility with cladding material options, facade design and unusual aesthetics with numerous possibilities for combining of irregular shapes and forms on the facade.

Assembly procedure:

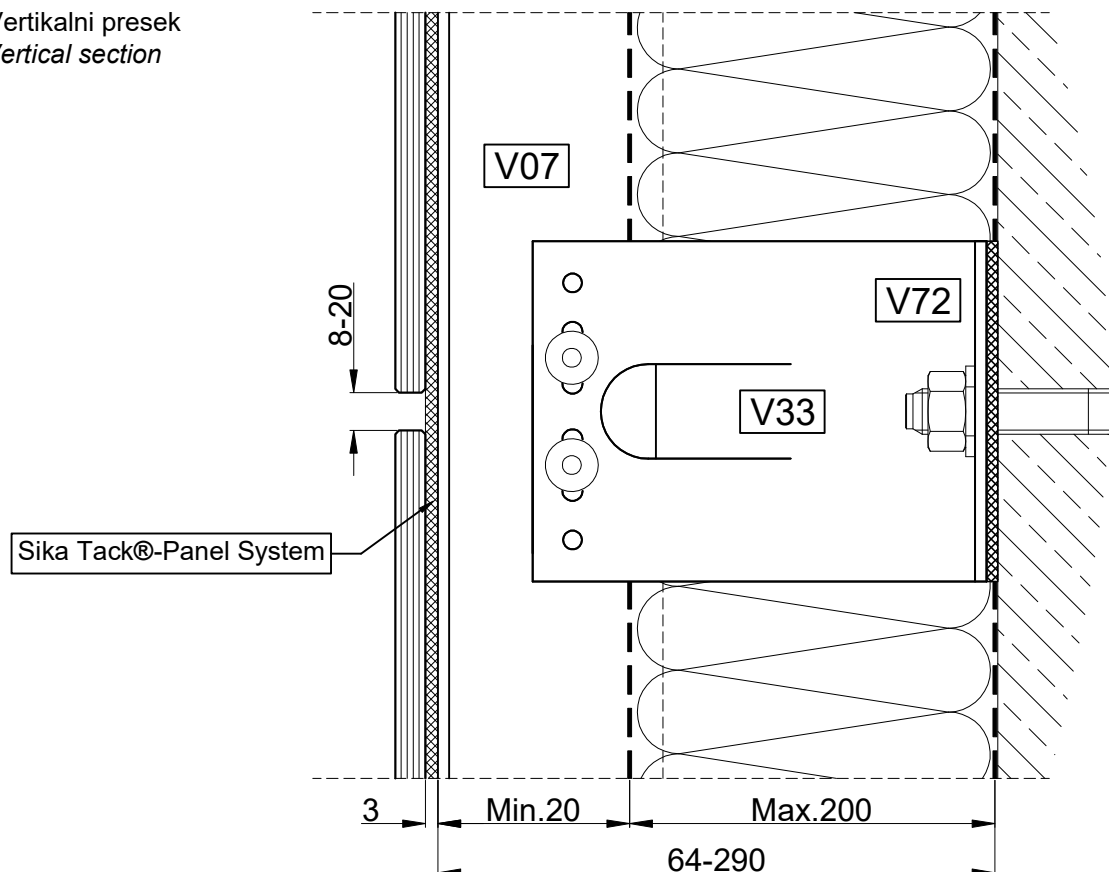
- a) The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.
- b) Extruded load-bearing T or L profiles are installed in any direction required by project (from horizontal to vertical) and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main substructure profiles (items nr. V06, V07, V08, L4060) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade surface. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to main profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) Cladding panels are just cut to the required dimensions. These panels are then prepared on site, together with load-bearing profiles according to adhesive manufacturer's instructions, usually in this order:
 - Entire contact surface of main profiles and contact areas on cladding panels are sanded and cleaned with recommended cleaner
 - Special double sided adhesive tape is installed on prepared main profiles, parallel with the adhesive application direction, closer to the panel edge. The 3mm thick tape is used as temporary joining agent until the glue achieves full adhesion, and the cladding panels are positioned on the facade by hand, with gaps from 8mm to 20mm. In case of bigger or heavier panels, usage of vacuum handles is recommended for positioning.

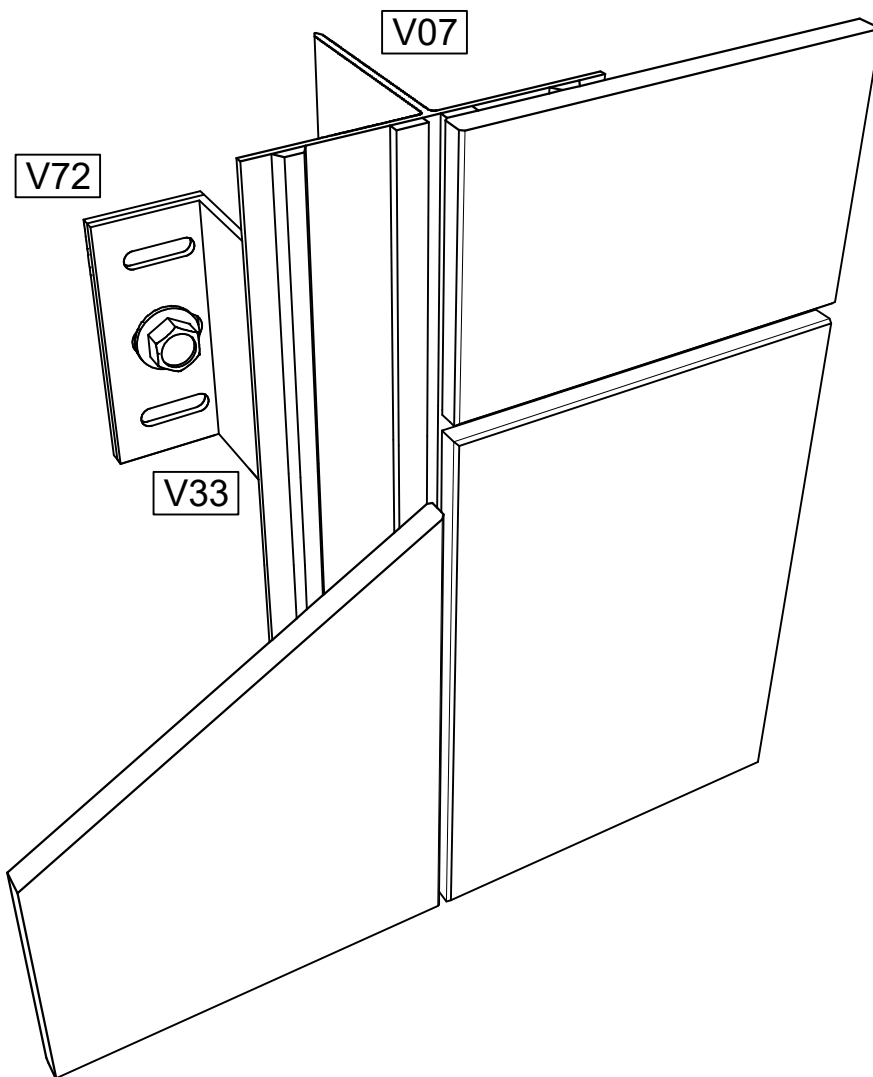
SPECIAL NOTE: Before installation start, it is mandatory to fully comply with adhesive material manufacturer's instructions in order to validate a warranty for adhesive compounds used: recommended cladding type and segment size, weather conditions (temperature and humidity), proper preparation of substructure and cladding material, together with appropriate application of adhesive.

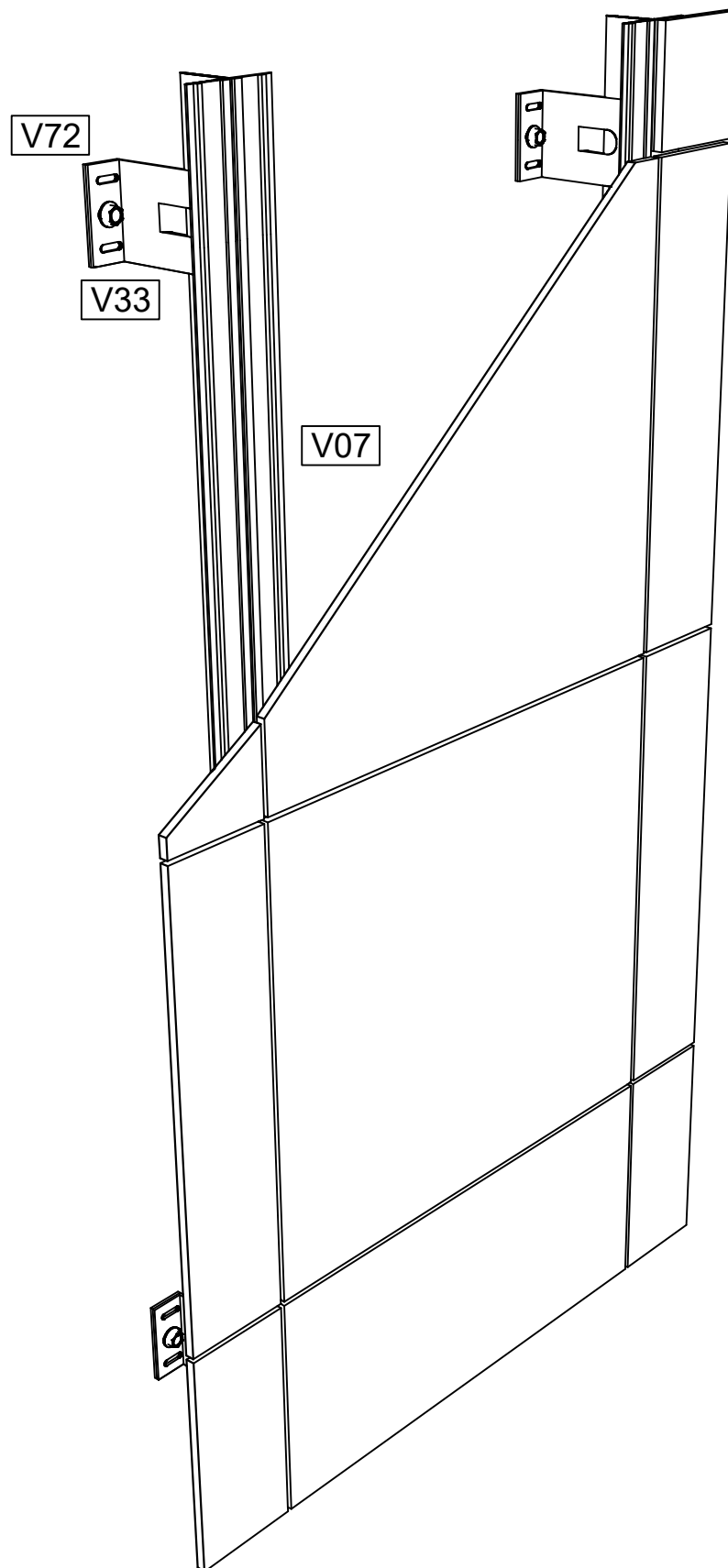
Horizontalni presek
Horizontal section

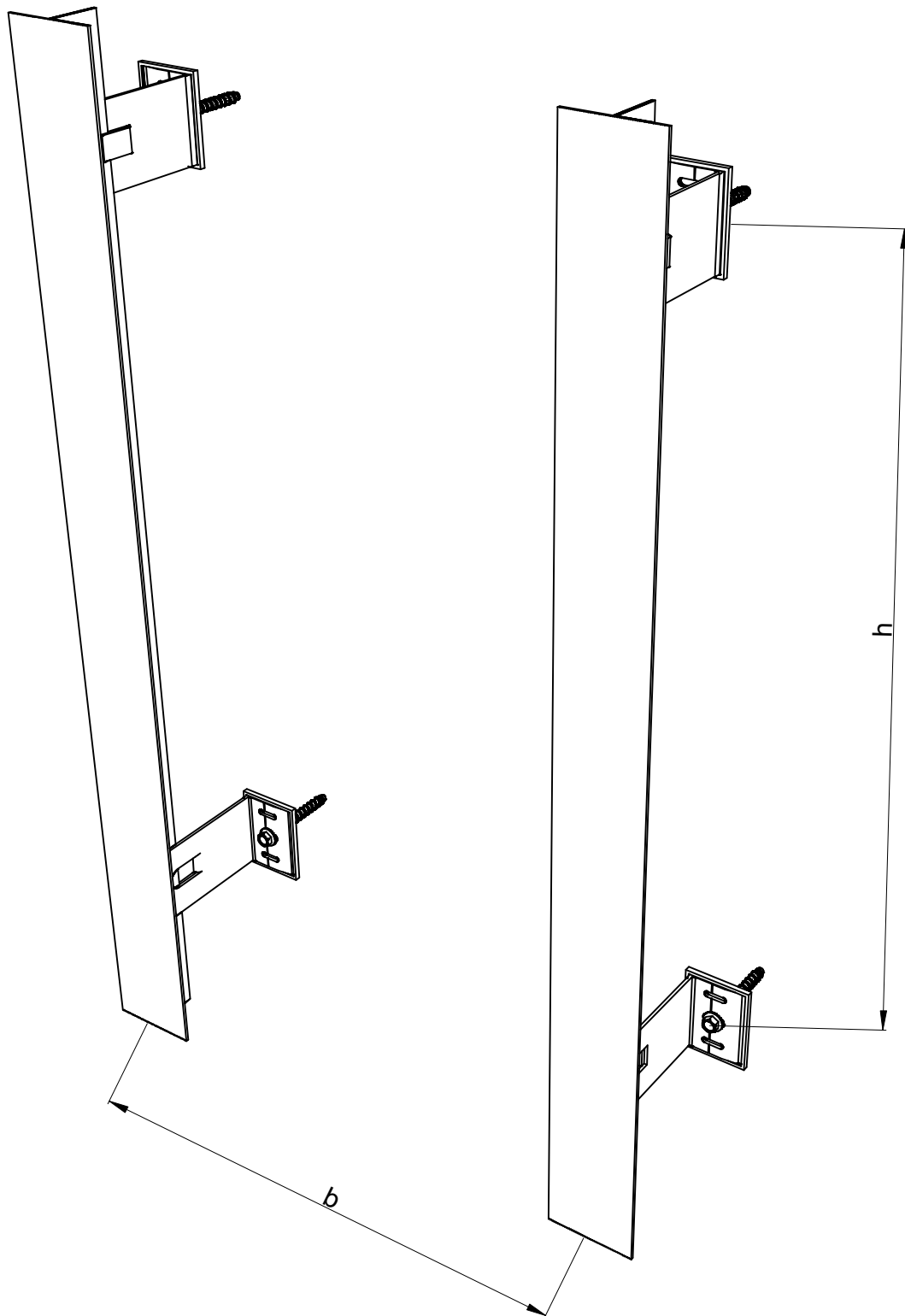


Vertikalni presek
Vertical section

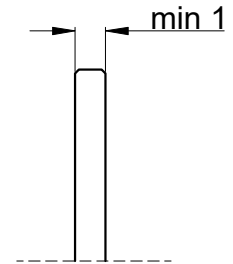
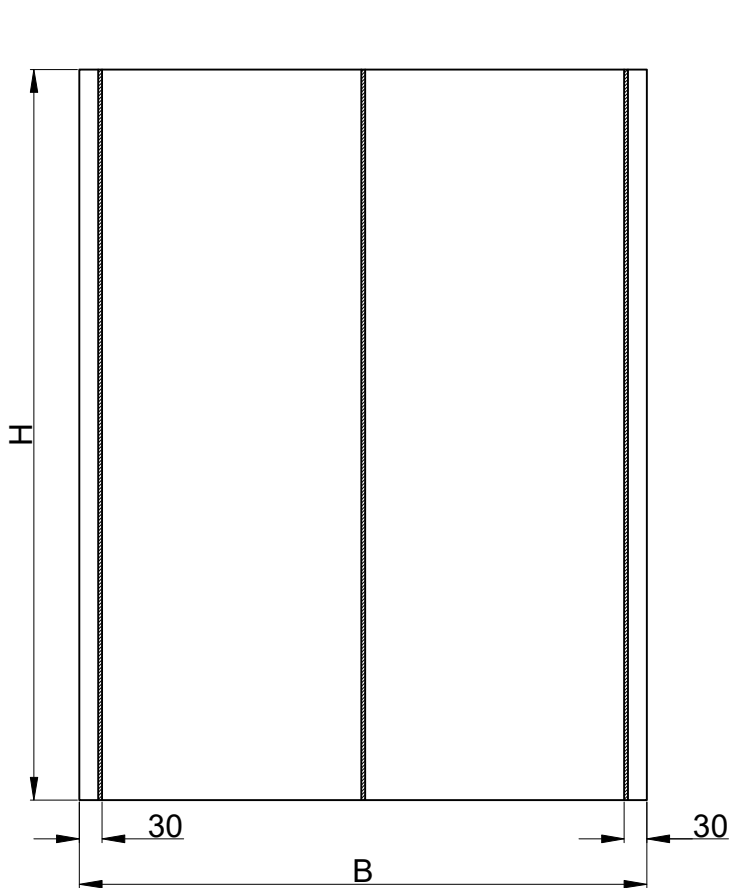








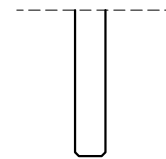
b , h - prema statičkom proračunu, ali ne više od 1200mm
 b , h - according to structural analysis, but no more than 1200mm



Debljina panela - prema preporuci proizvođača lepka
Panel thickness - according to adhesive
manufacturer instruction

Vrste panela - aluminijumski kompozitni paneli
(npr. larson®, larcove®A2), HPL,
fiber cementne ploče, aluminijumski lim,
granitna keramika itd.

Panel types - aluminium composite panels
(e.g. larson®, larcove®A2), HPL, fiber cement panels,
aluminium sheet, granite ceramics etc.

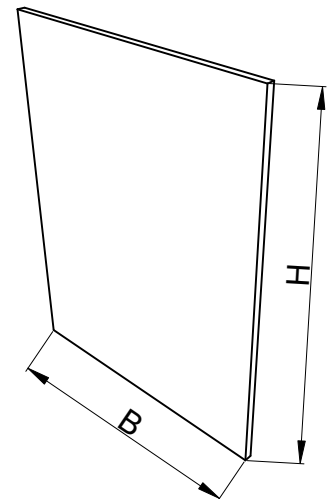


B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

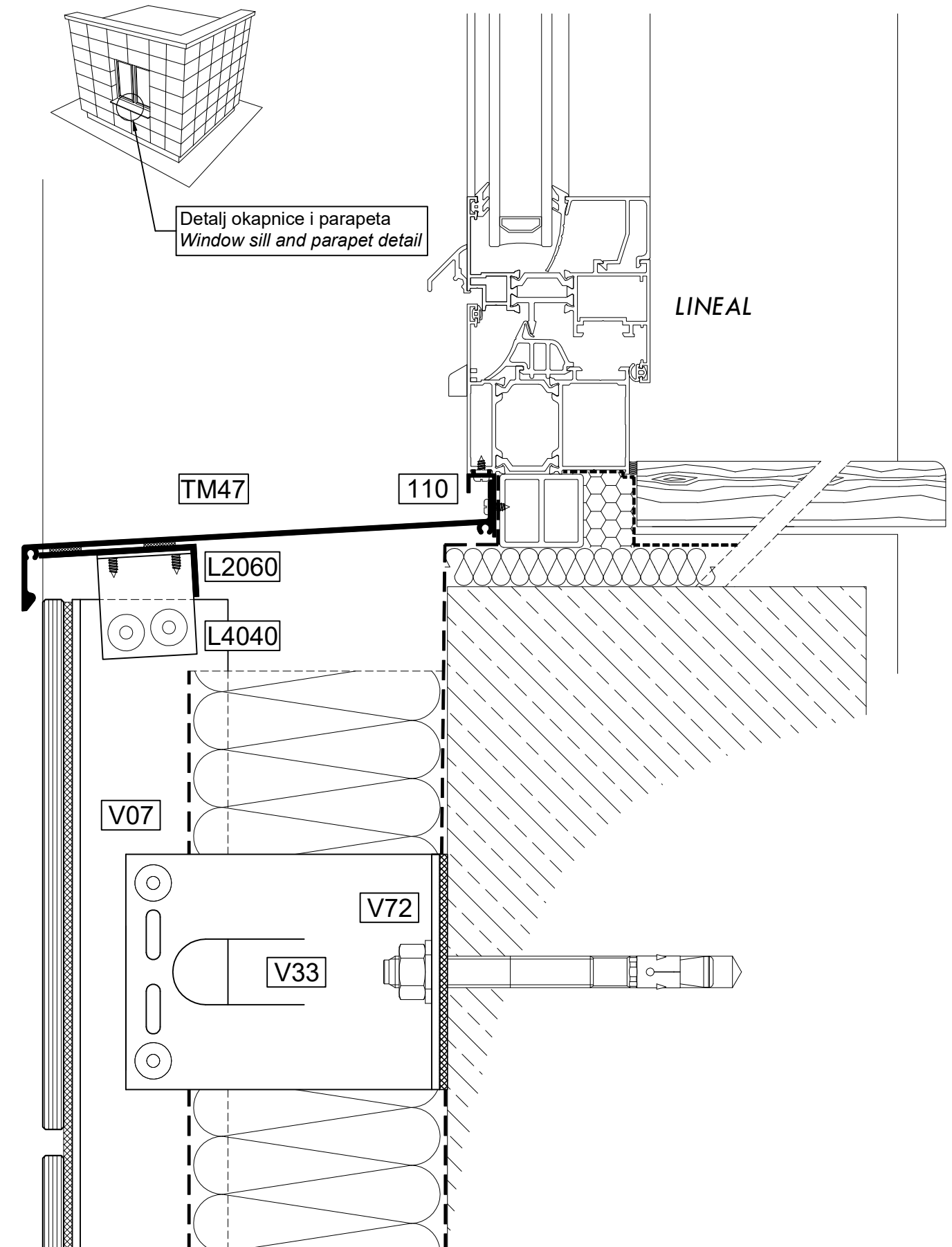
B - designed panel width - within limitations according to specification by manufacturer

H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

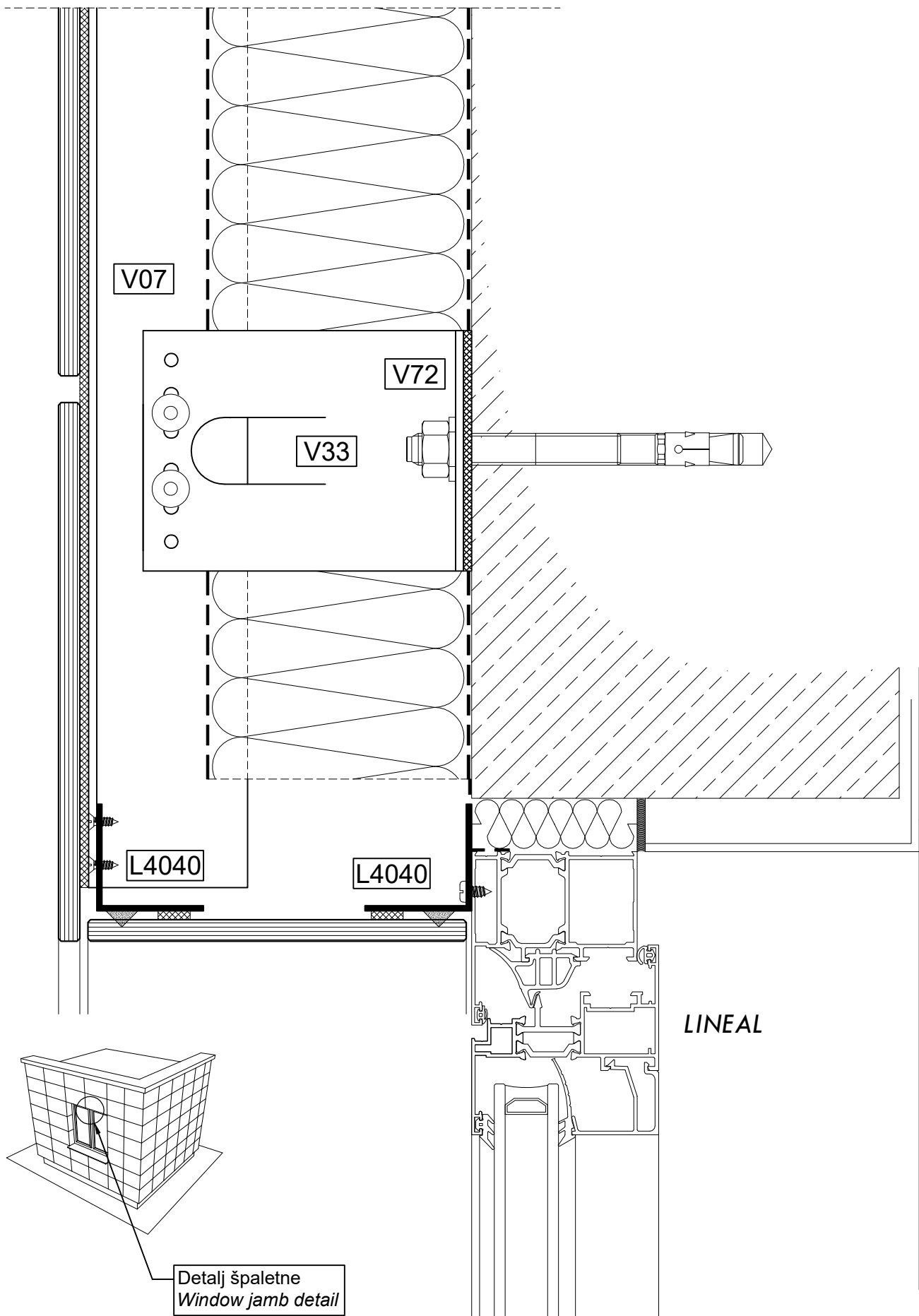
H - designed panel height - within limitations according to specification by manufacturer



Vertikalni presek
Vertical section

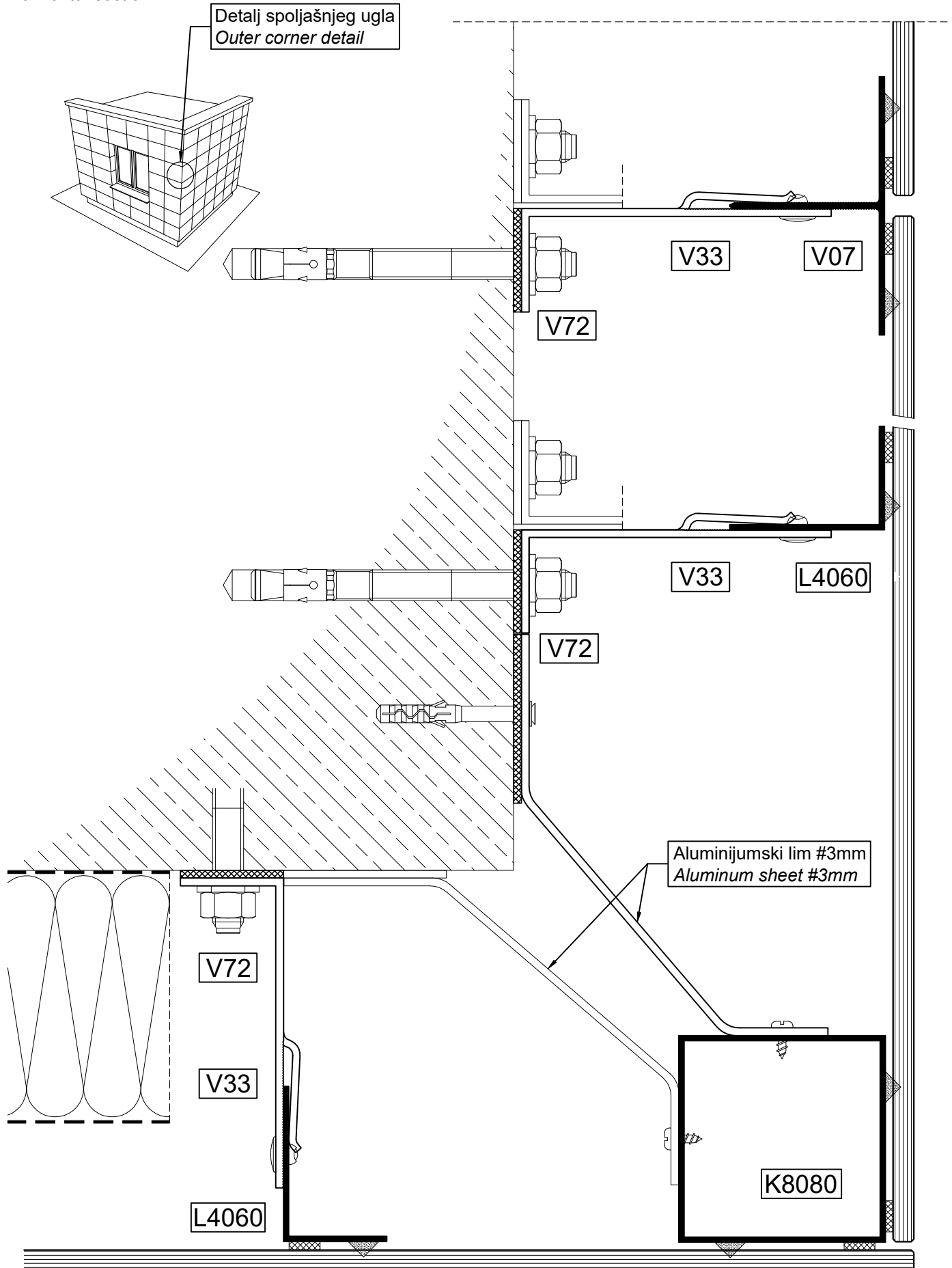


Vertikalni presek
Vertical section

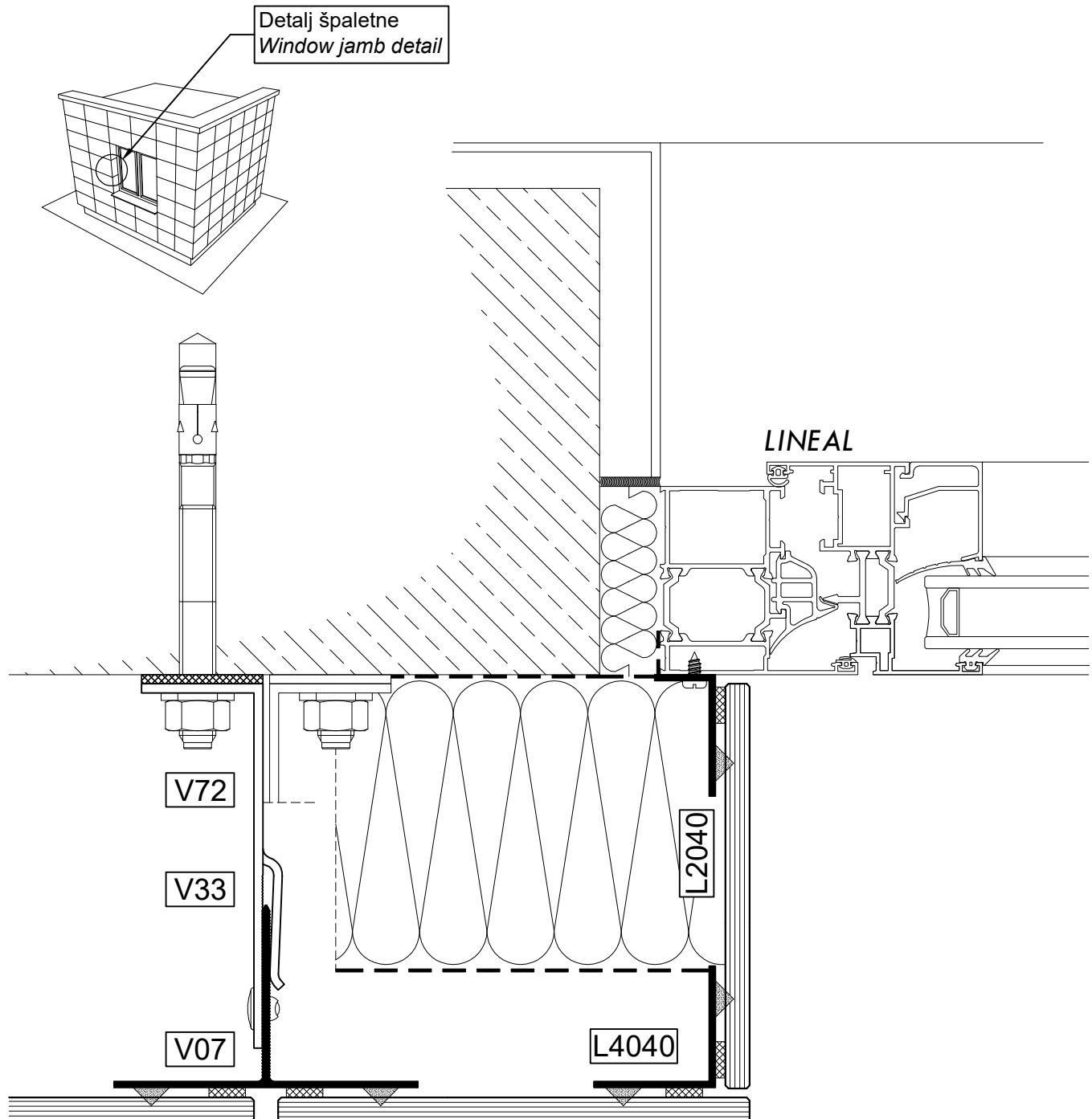


Horizontalni presek
Horizontal section

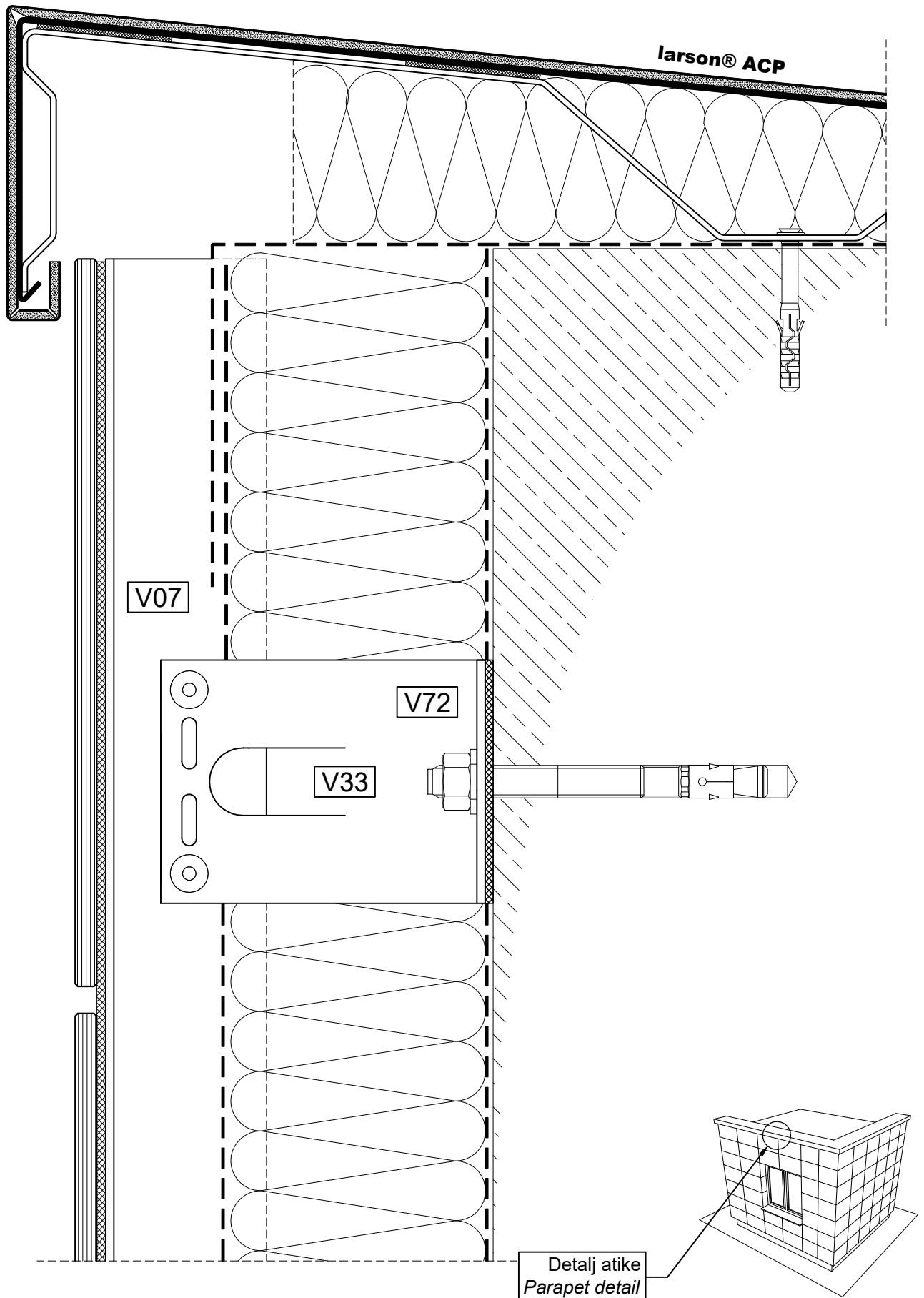
Detalj spoljašnjeg ugla
Outer corner detail



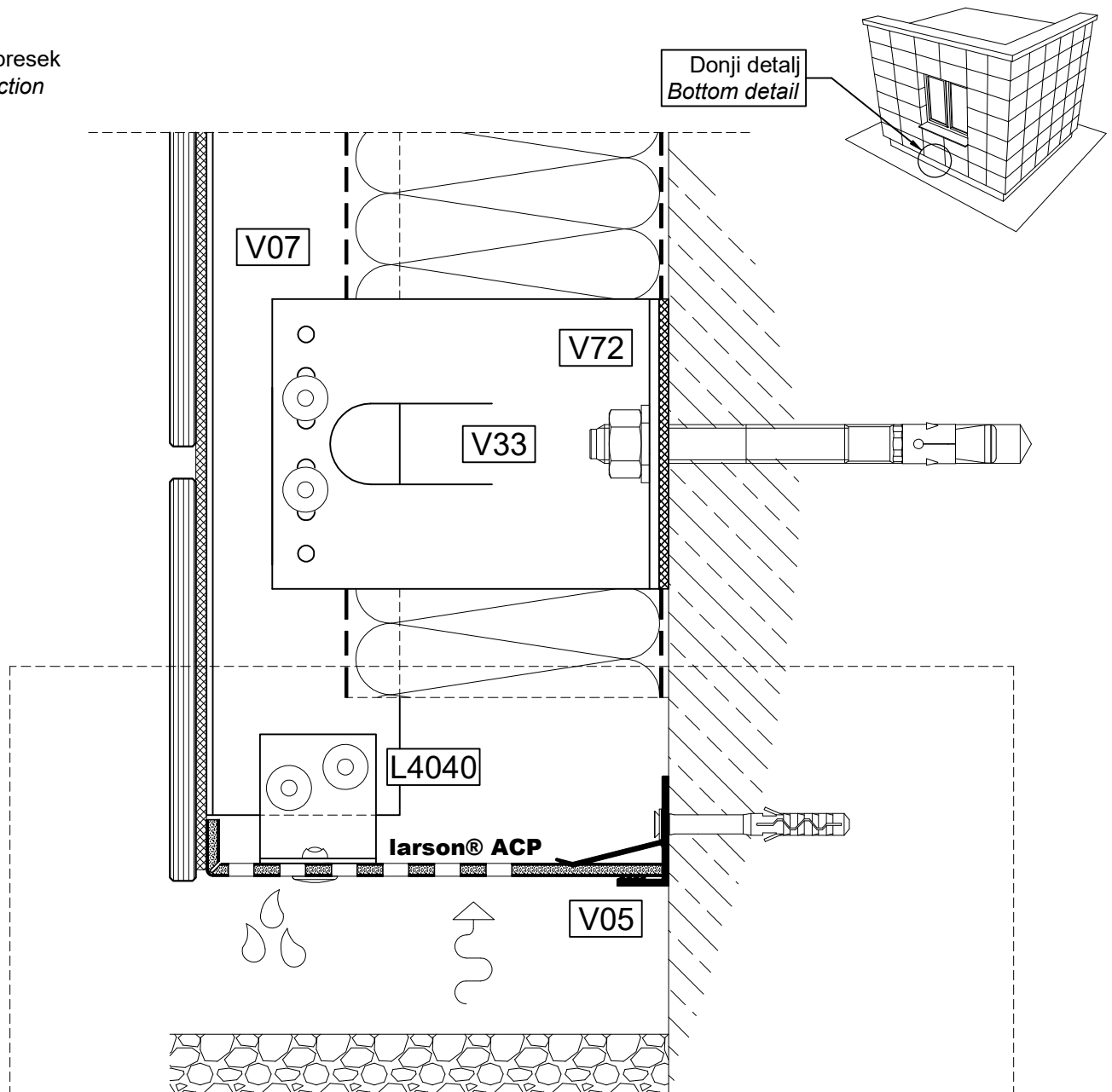
Horizontalni presek
Horizontal section



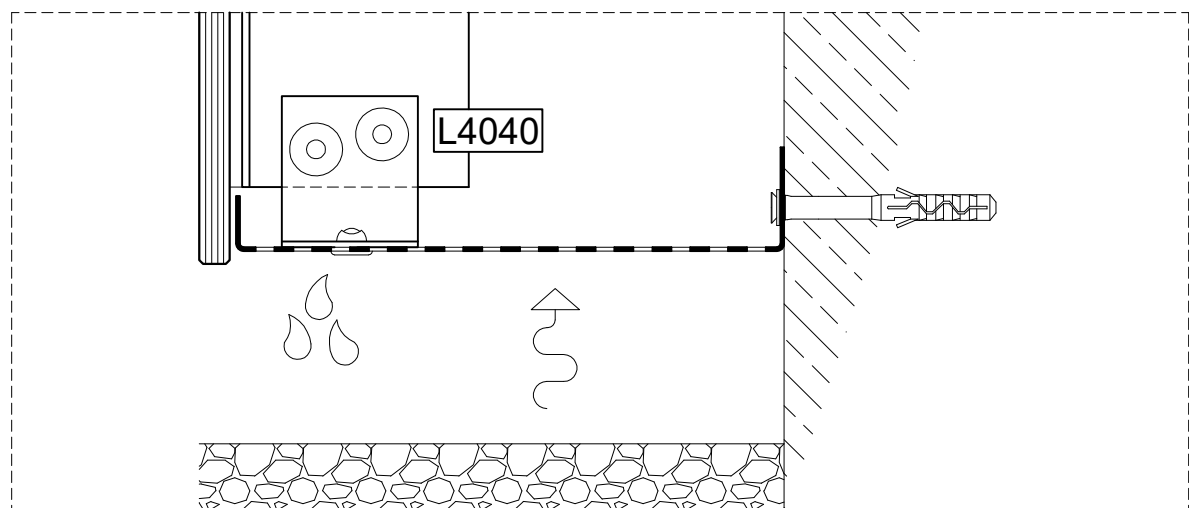
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section



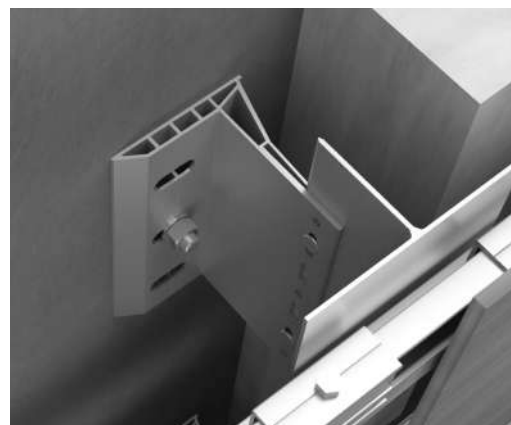
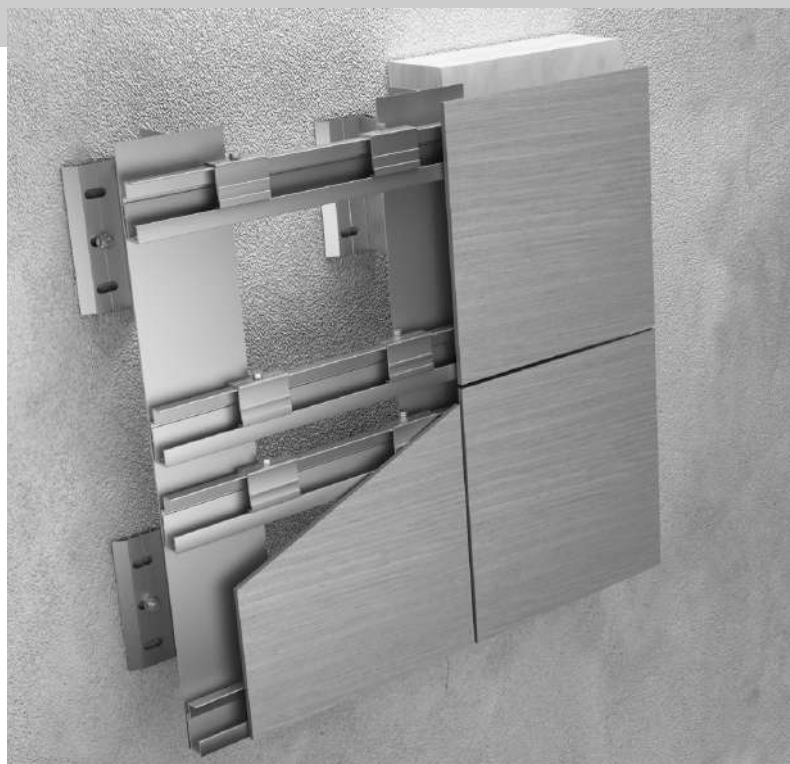
Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT HIDE



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije namenjen prihvatanju ravnih ploča fiksnih nevidljivom mehaničkom vezom sa lica fasade. Koriste se posebna spojnasredstava - ankeri koji su namenski konstruisani u ove svrhe od strane dva pouzdana proizvođača Kiel i Fischer.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

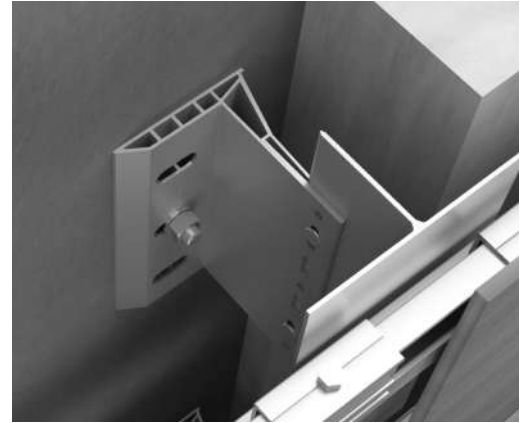
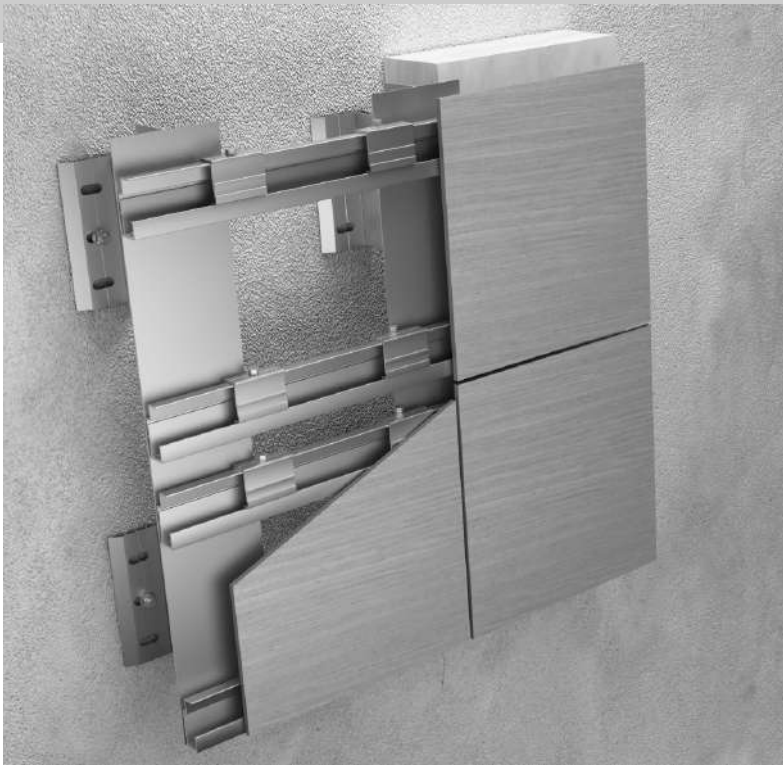
b) Noseći profil se u projektovanom rasteru postavlja na mestima vertikalnih spojeva/fuga fasadnih ploča ili između istih (u slučajevima velikih dimenzija polja). Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između nosećih profila je 1,5m.

c) Fiksiranje nosećih profila se vrši kotvama, koje omogućavaju fino podešavanje/pozicioniranje nosećih aluminijumskih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Maksimalna preporučena udaljenost kotvi je 1,5m (definisano statičkim računom). Njihov spoj sa vertikalama se ostvaruje u vidu pop-zakivaka kroz otvore u ankerima koje omogućuju kako fiksnu vezu, tako i dilatirajuću vezu.

d) Nakon montaže vertikalna, montiraju se horizontale, a njihov spoj sa vertikalama ostvaruje se samorezujućim nerđajućim vijcima.

e) Obrada izabranog tipa panela se vrši isecanjem ploča na ugradnu meru i razbušivanjem rupa sa naličja specijalnim glodalima na tačno projektovanim pozicijama za specijalne ankere. U radionici se ploče dodatno pripremaju za slaganje na fasadi. Ta priprema se sastoji u tome da se profilisani nosači fiksiraju za ploče ankerima koji će u specijalno razbušenim rupama formirati neraskidiv spoj i to minimum 50mm od ivice ploče. Preporuka je da se u pomenute rupe pre ubacivanja ankera stavi i malo neutralnog lepka kao dodatno učvršćivanje. Tako pripremljene ploče se isporučuju na gradilište.

f) Na gradilištu se ploče sa montiranim nosačima „nasađuju“ na šine i lako pozicioniraju na projektovano mesto, zatim precizno podešavaju putem štelujućih vijaka i na kraju fiksiraju vijcima za šinu u gornjoj zoni kasete. Predviđena fuga u ovom sistemu je 10mm.



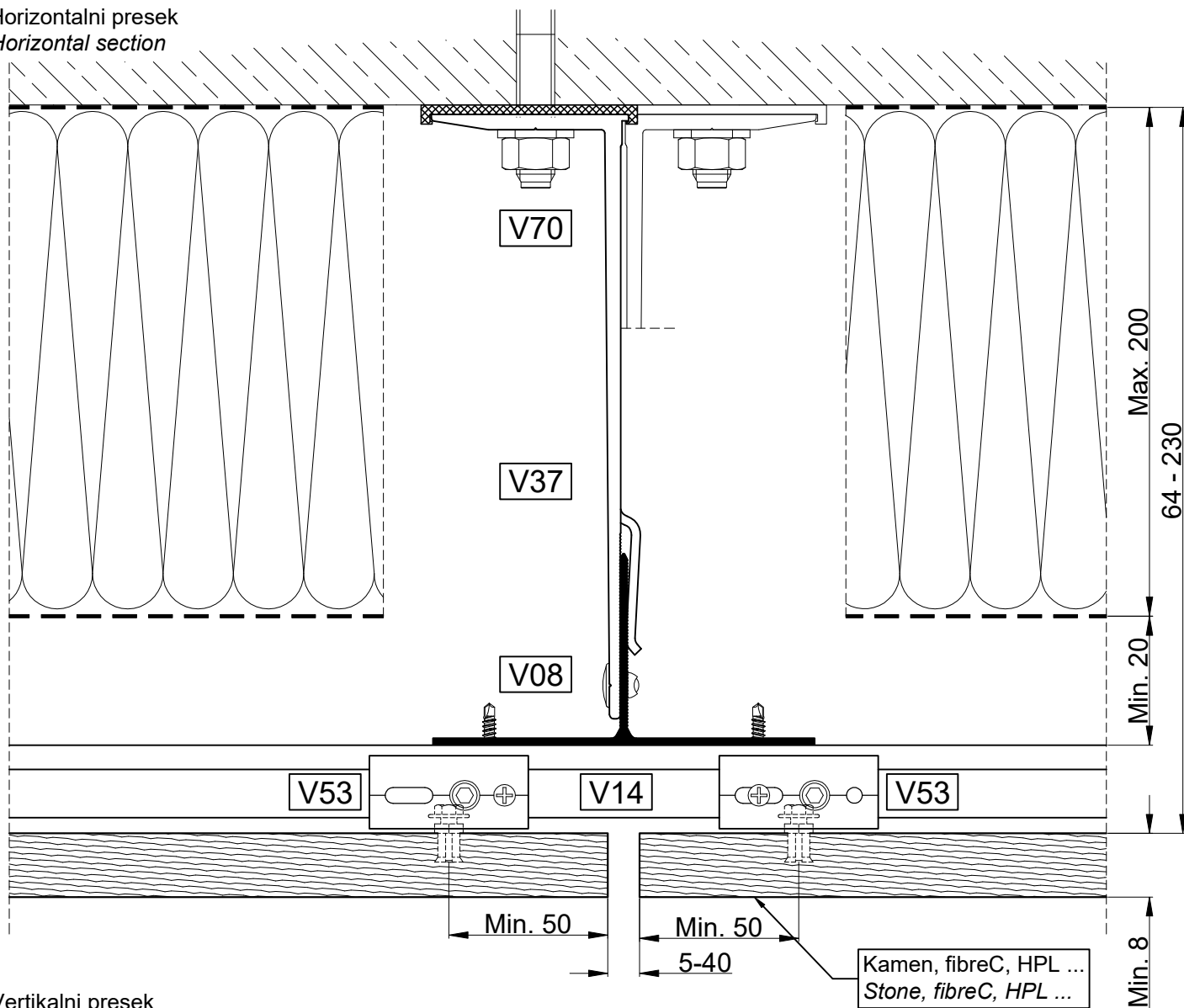
Technical description

Aluminium substructure system for flat panel cladding with invisible mounting. Specialty designed anchors, constructed and manufactured by Keil and Fischer, are used in this system. It is one of preferred ventilated facade systems in modern architecture due to dry installation process, high percent of workshop prefabrication and clean look of a finished building. The only requirement this system imposes is minimal cladding plate thickness of 6mm.

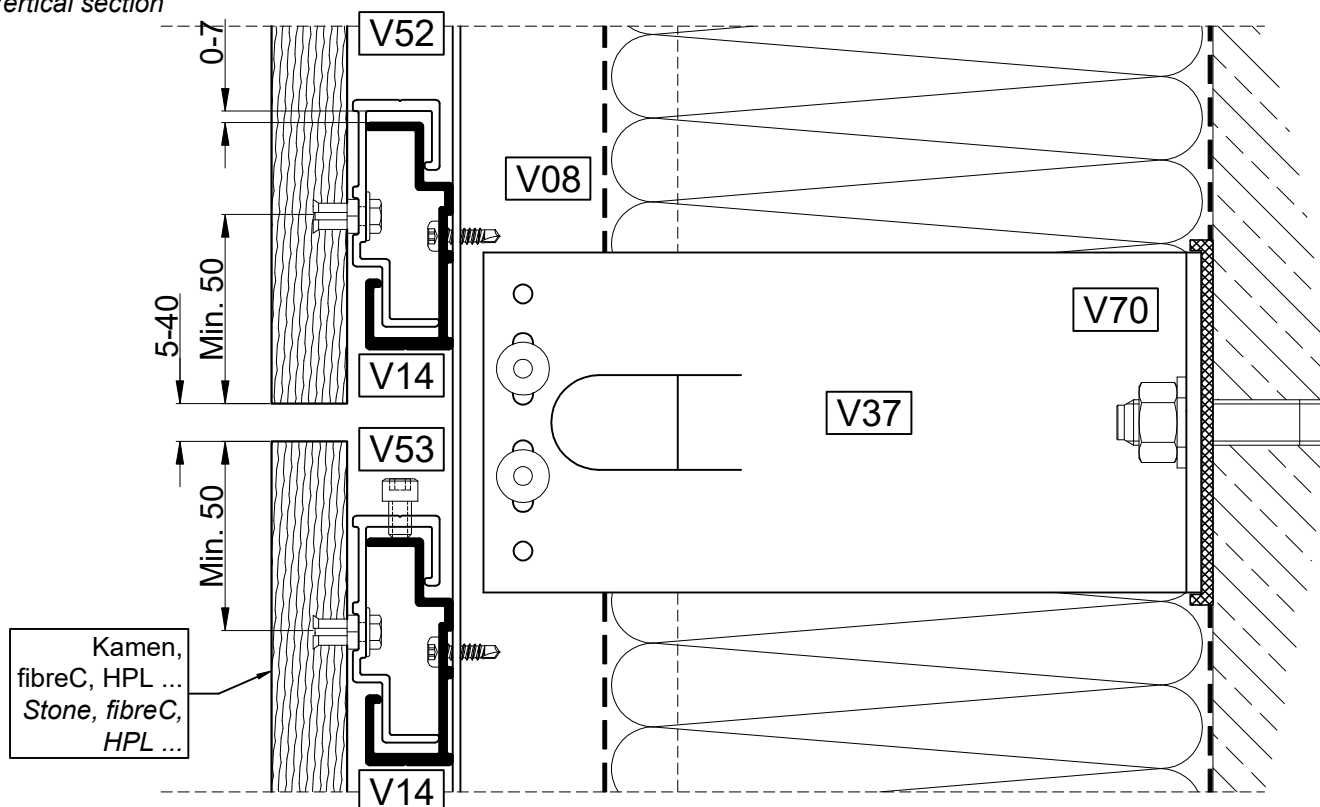
Assembly procedure:

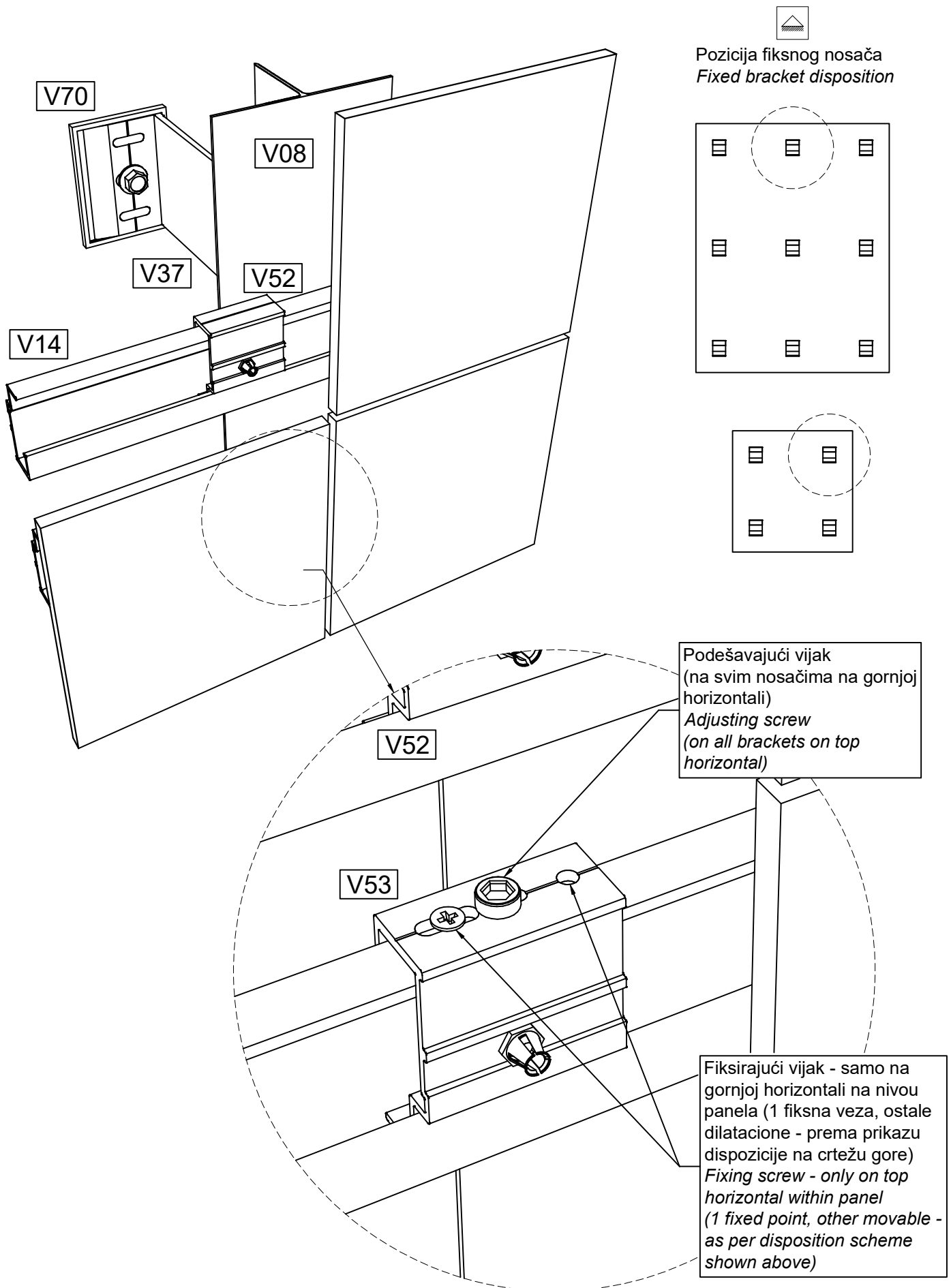
- a) The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.
- b) Extruded load-bearing profiles are installed vertically or horizontally and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main T or L profiles (item nr. V06, V07, V08, L4060) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to vertical profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) Specially designed horizontal profiles (item nr. V14) are installed on the vertical profiles and connected with stainless steel screws.
- e) Cladding panels are cut to the required dimensions and blind mounting holes are precisely machined on the back of the panels (according to panel manufacturer's recommendation regarding the number and spacing of holes), at least 50mm from the panel edge. Special Keil or Fischer anchors are installed into these holes and secured with a small amount of neutral glue. These anchors are used for installation of profiled brackets (item nr. V52) that attach cladding panels to the secondary load-bearing substructure. When installed, finished facade has a clean look without any visible hardware.
- f) The prepared panels are easily mounted on horizontal profiles, then finely adjusted with adjusting screws and finally fastened into place with stainless steel screws in the upper zone of the cassette. Hide system features a 10mm panel gap.

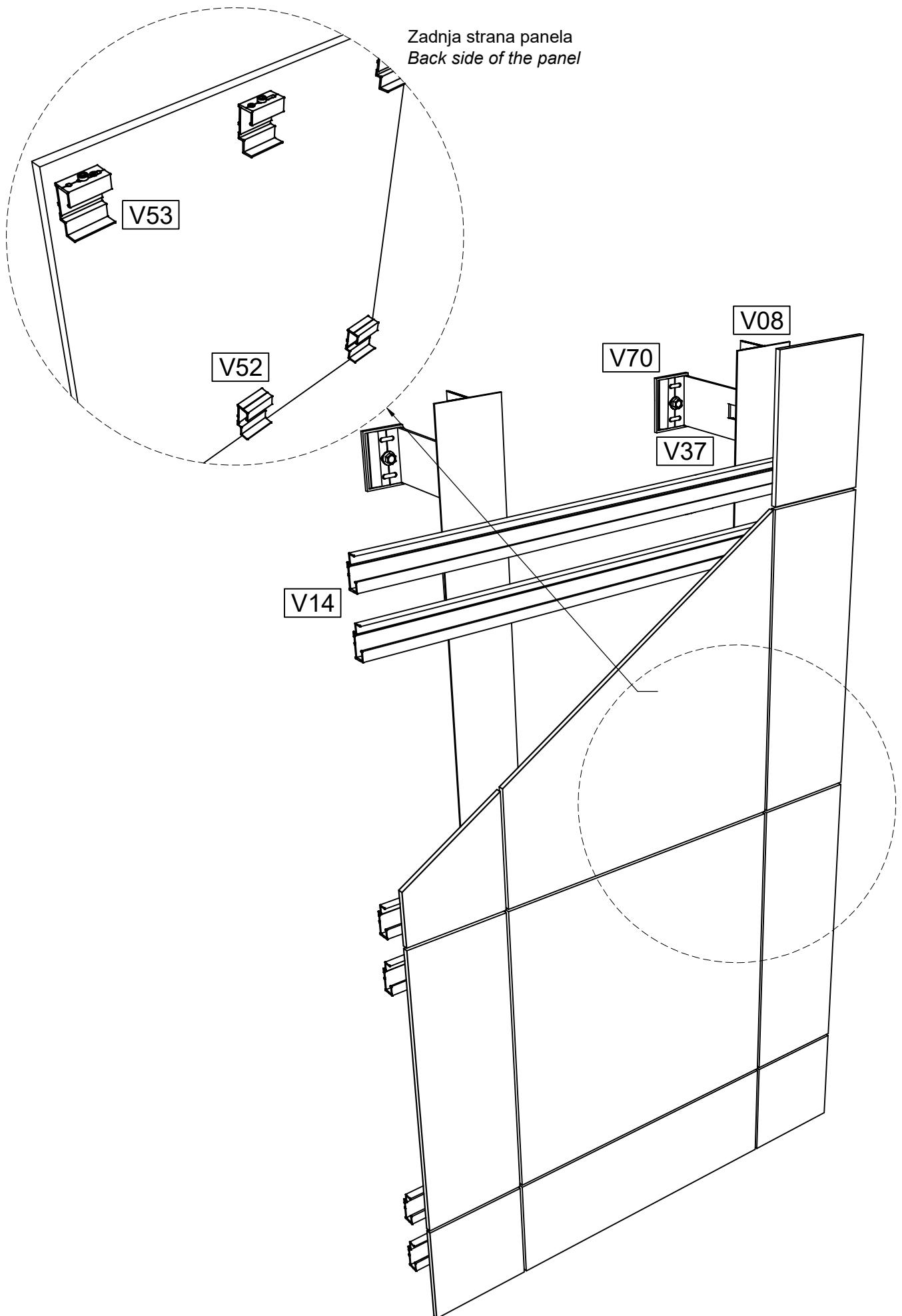
Horizontalni preseki
Horizontal section

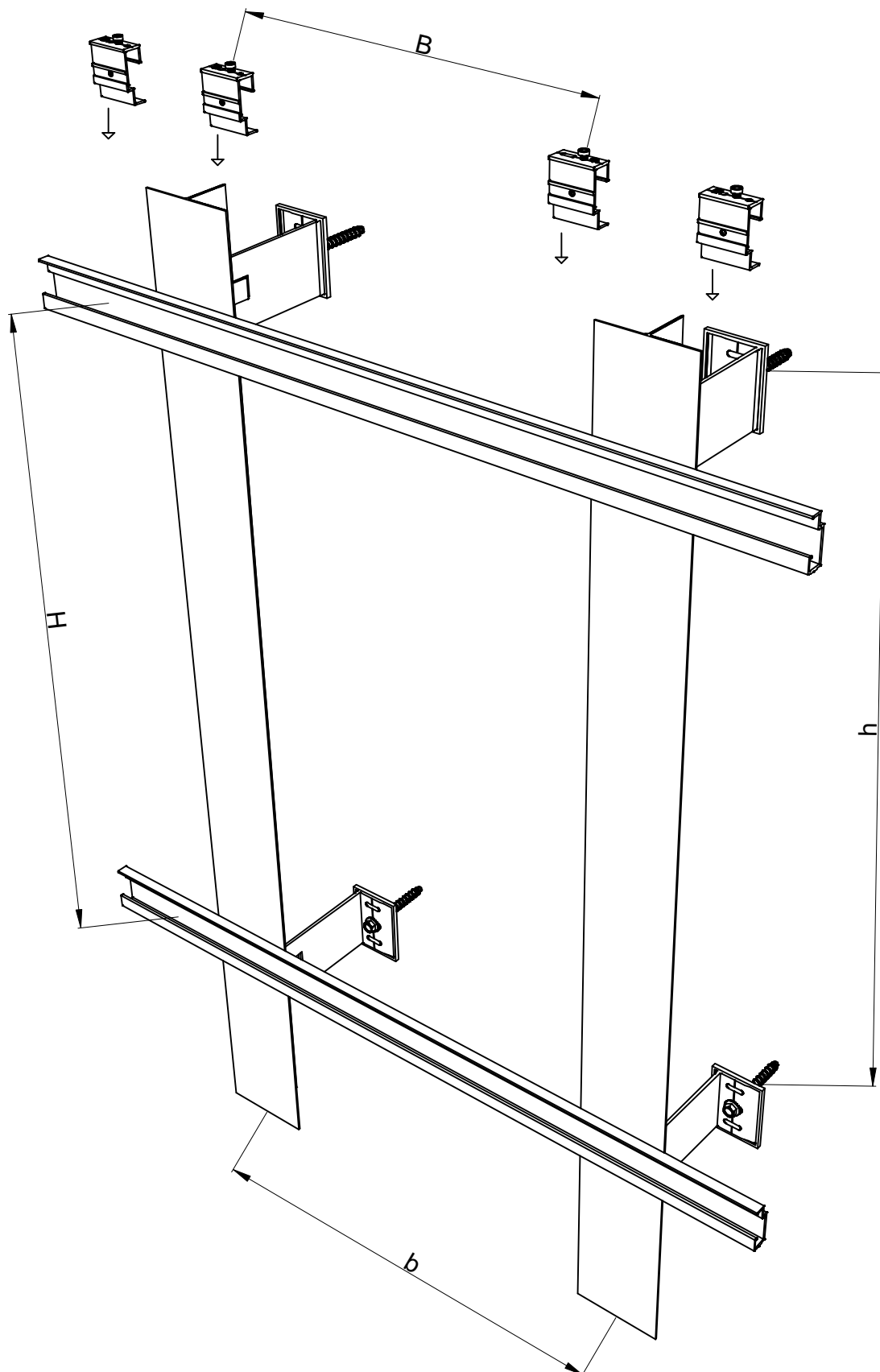


Vertikalni presek
Vertical section









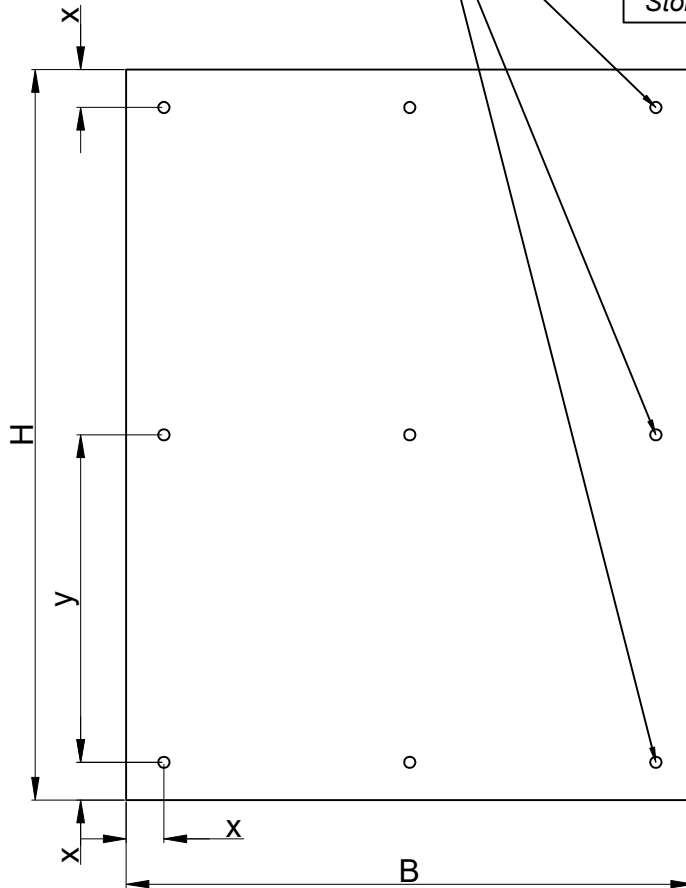
b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

B, H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
B, H - according to structural analysis and depending on applied cladding material, but no more than 900mm

Odabir alata za izbušivanje rupa
prema preporuci proizvođača panela
*Drilling tool selection as per
suggestion by panel manufacturer*

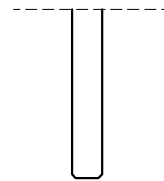
Kamen, fibreC, HPL...
Stone, fibreC, HPL...

Min. 8



Vrste panela - kamen, HPL, Iarcore®A2,
fiber cementne ploče itd.

Panel types - stone, HPL, Iarcore®A2,
fiber cement panels etc.



B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

B - designed panel width - within limitations according to specification by manufacturer

H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

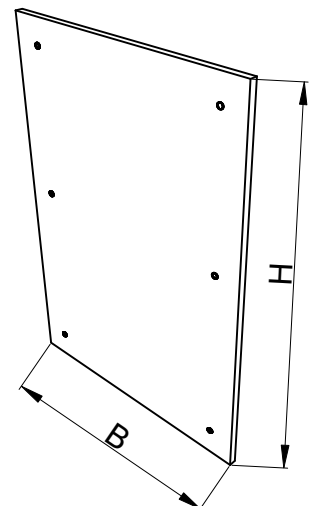
H - designed panel height - within limitations according to specification by manufacturer

x - u zavisnosti od odabira materijala obloge, ali ne manje od 50mm

x - depending on the selection of cladding material, but no less than 50mm

y - u zavisnosti od odabira materijala obloge i prema specifikaciji proizvođača panela i statičkom proračunu

y - depending on the selection of cladding material and according to specification by panel manufacturer and structural analysis



Vertikalni presek
Vertical section

Detalj okapnice i parapeta
Window sill and parapet detail

Aluminijumski lim #3mm
Aluminum sheet #3mm

110

LINEAL

L4040

Aluminijumski lim #3mm
Aluminum sheet #3mm

V53

V14

V52

V70

V37

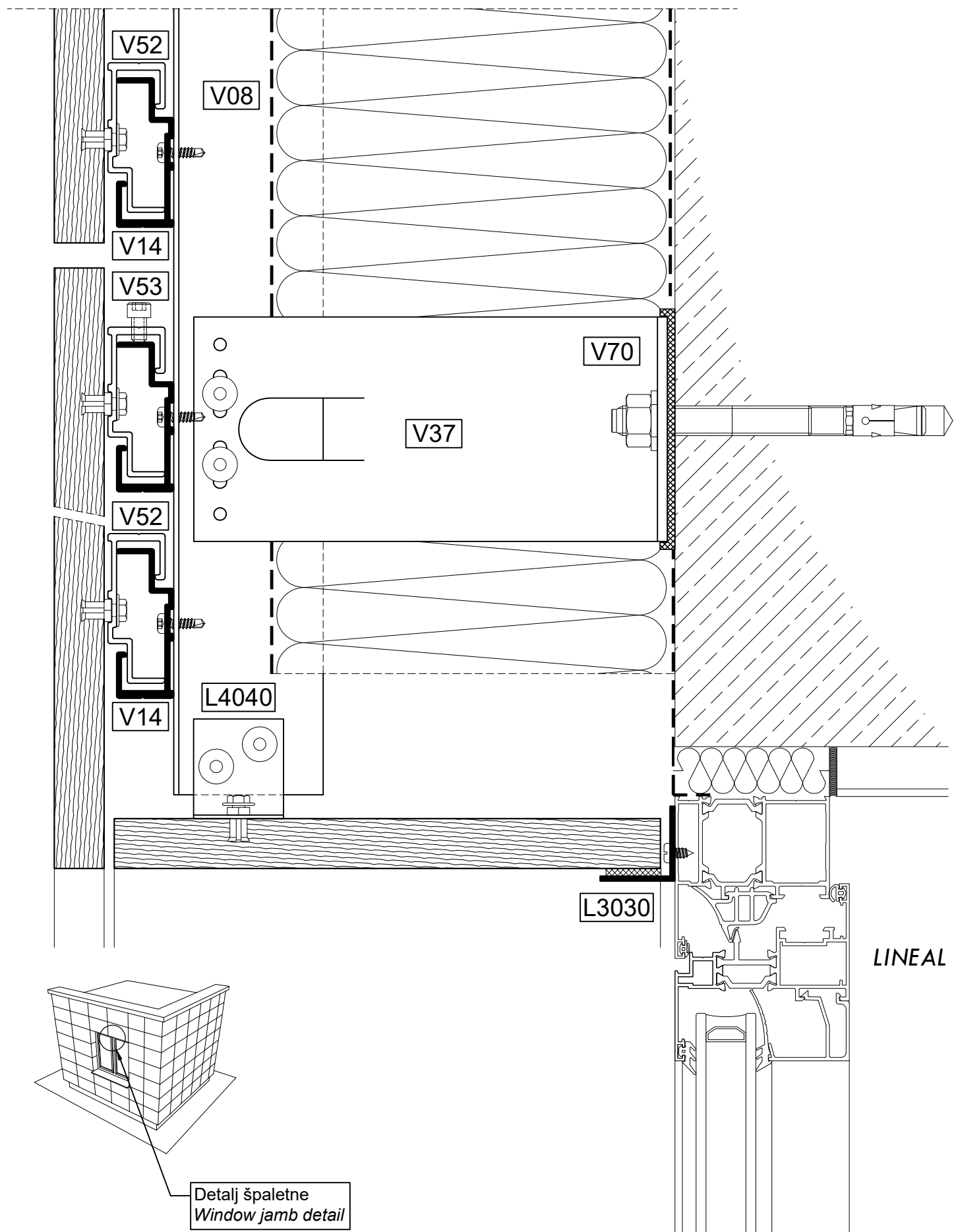
V14

V53

V08

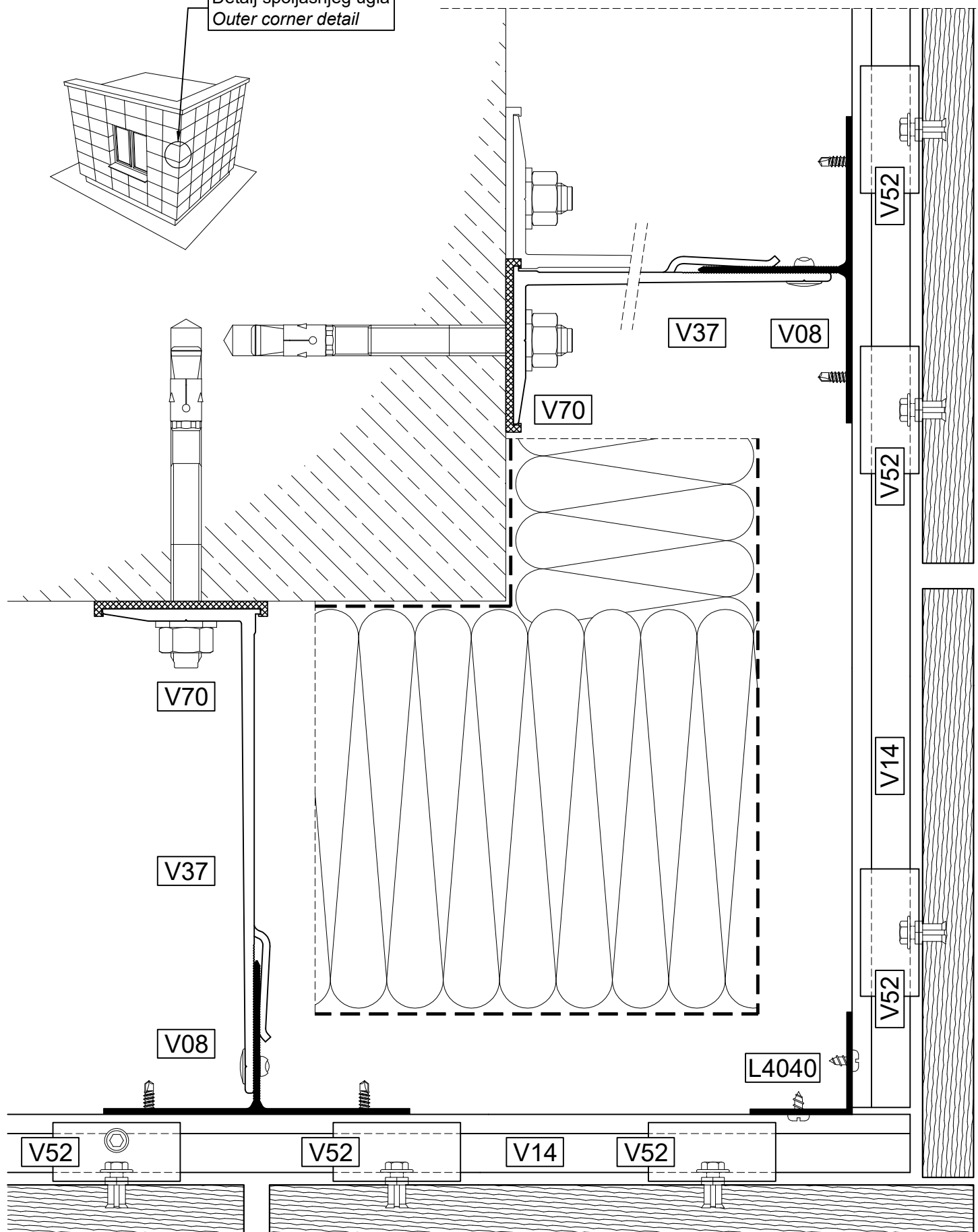
V14

Vertikalni presek
Vertical section



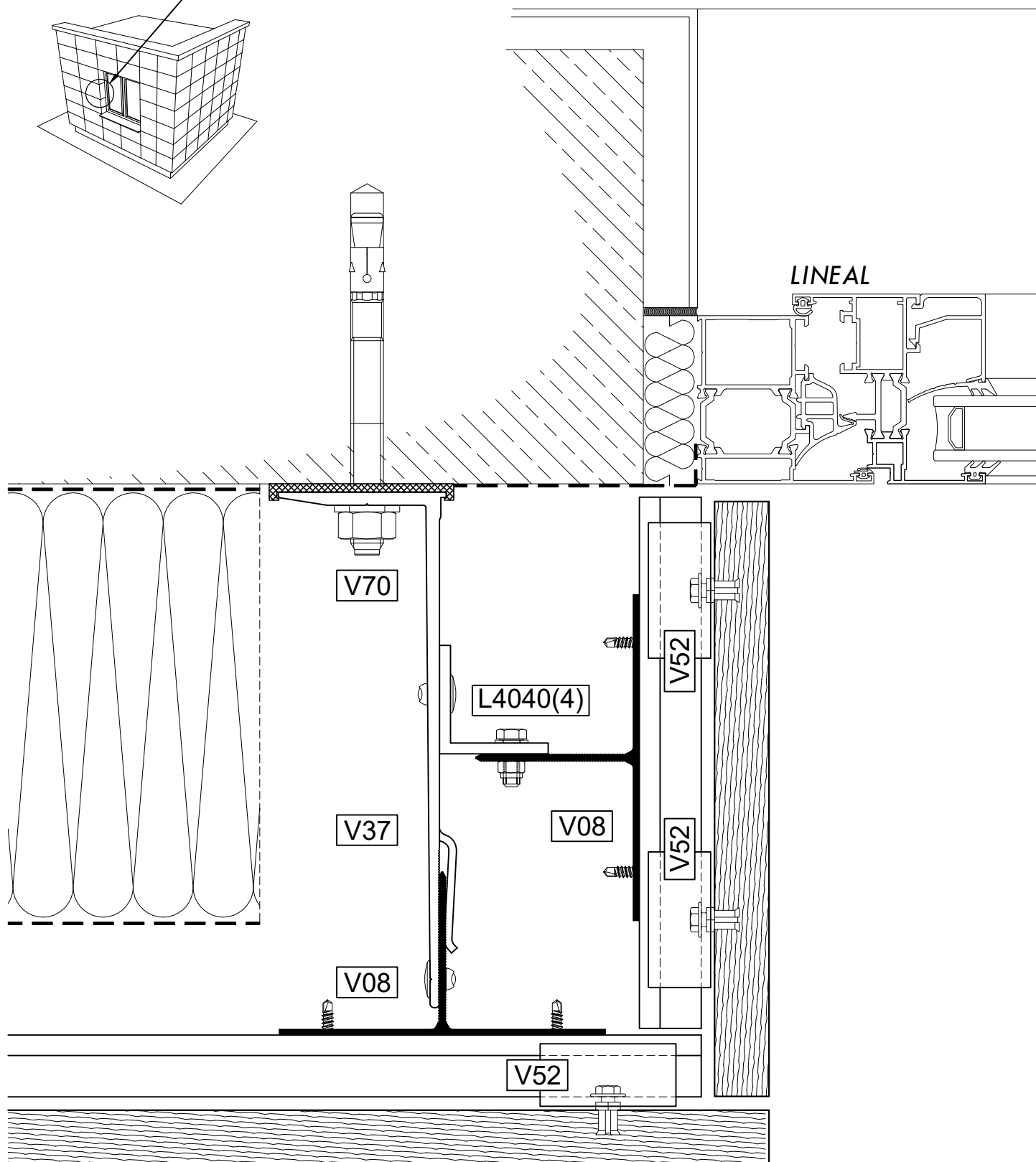
Horizontalni presek
Horizontal section

Detalj spoljašnjeg ugla
Outer corner detail

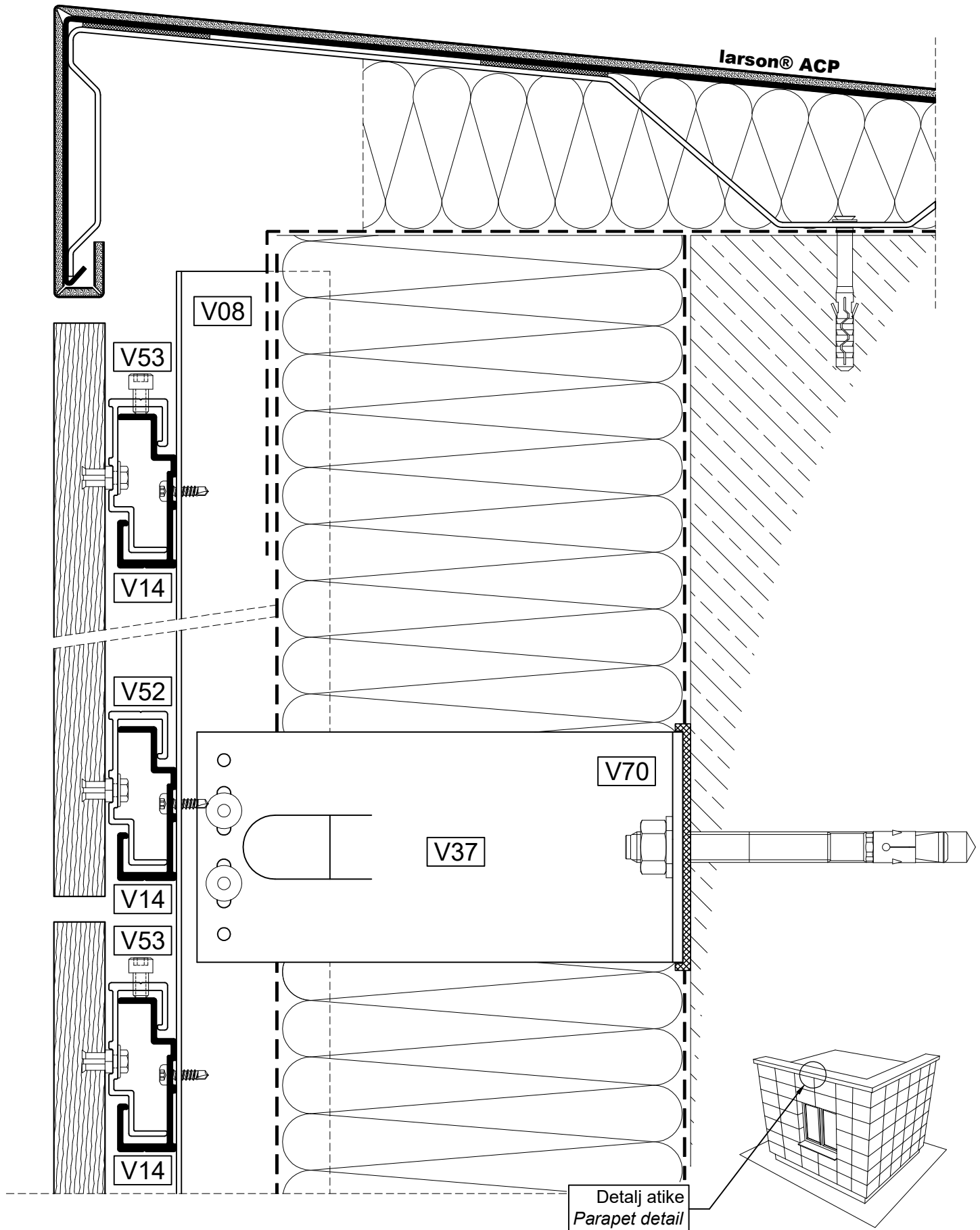


Horizontalni presek
Horizontal section

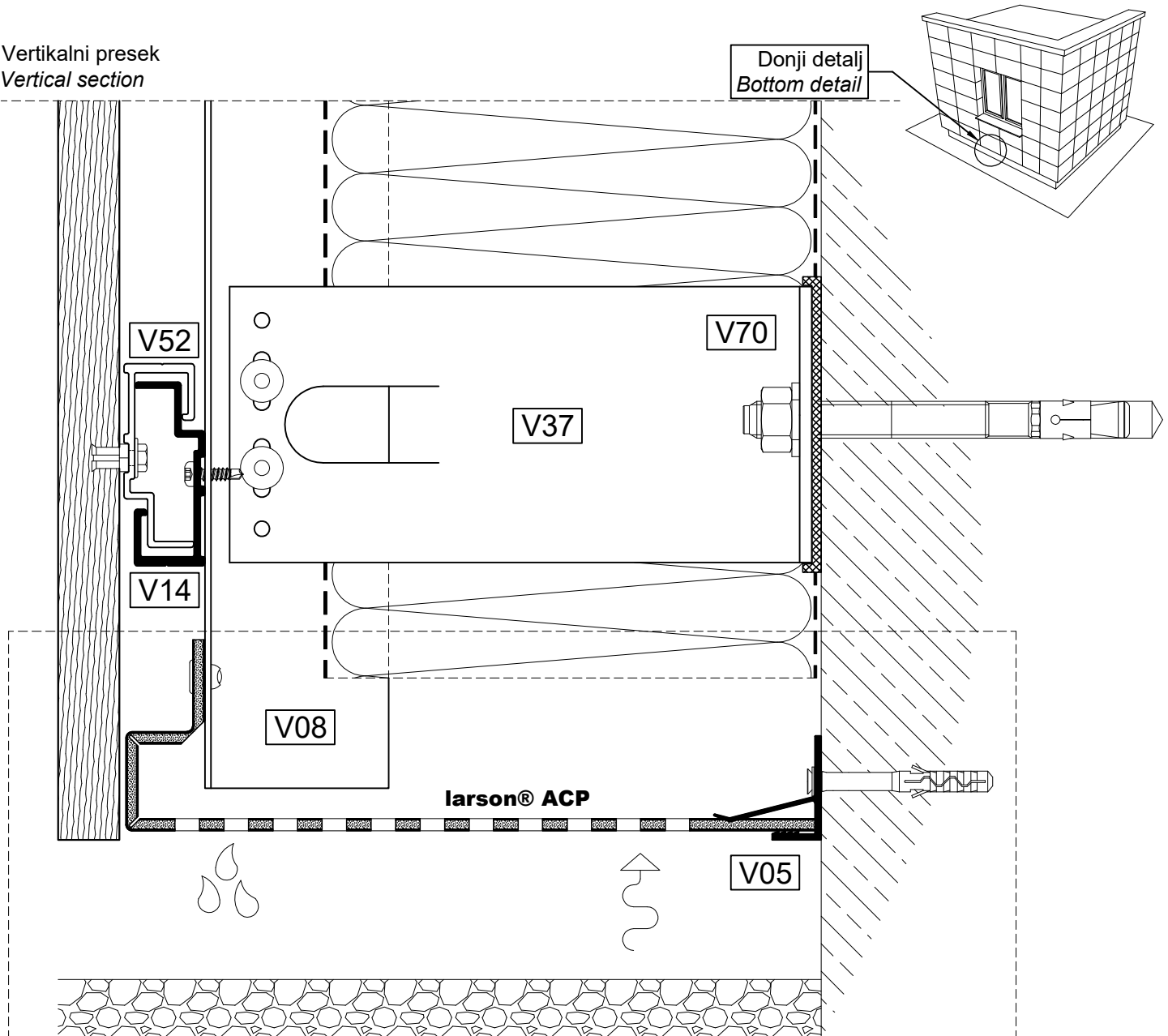
Detalj špaletne
Window jamb detail



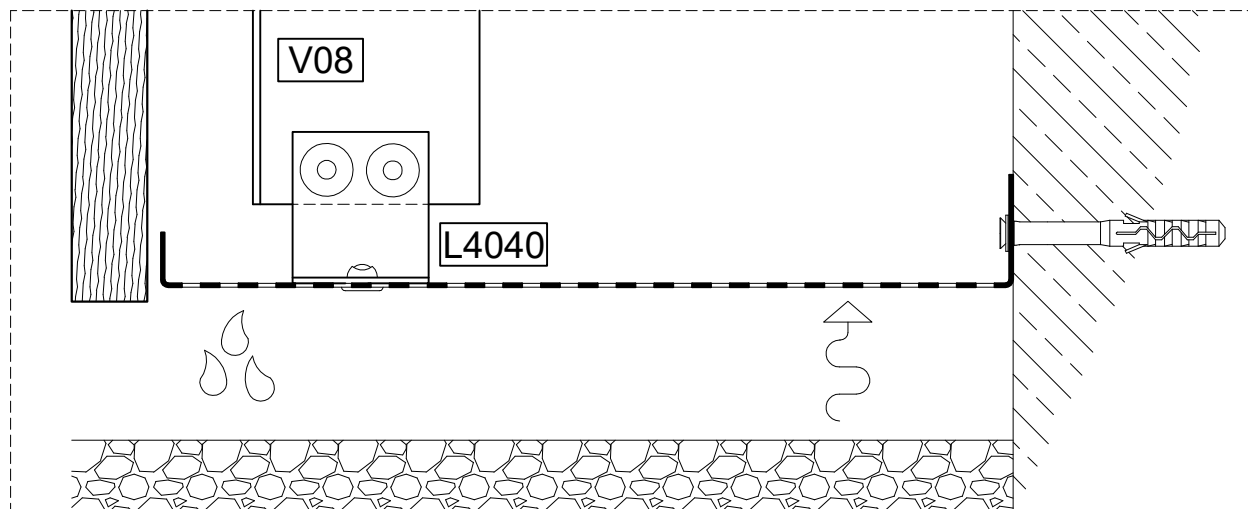
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

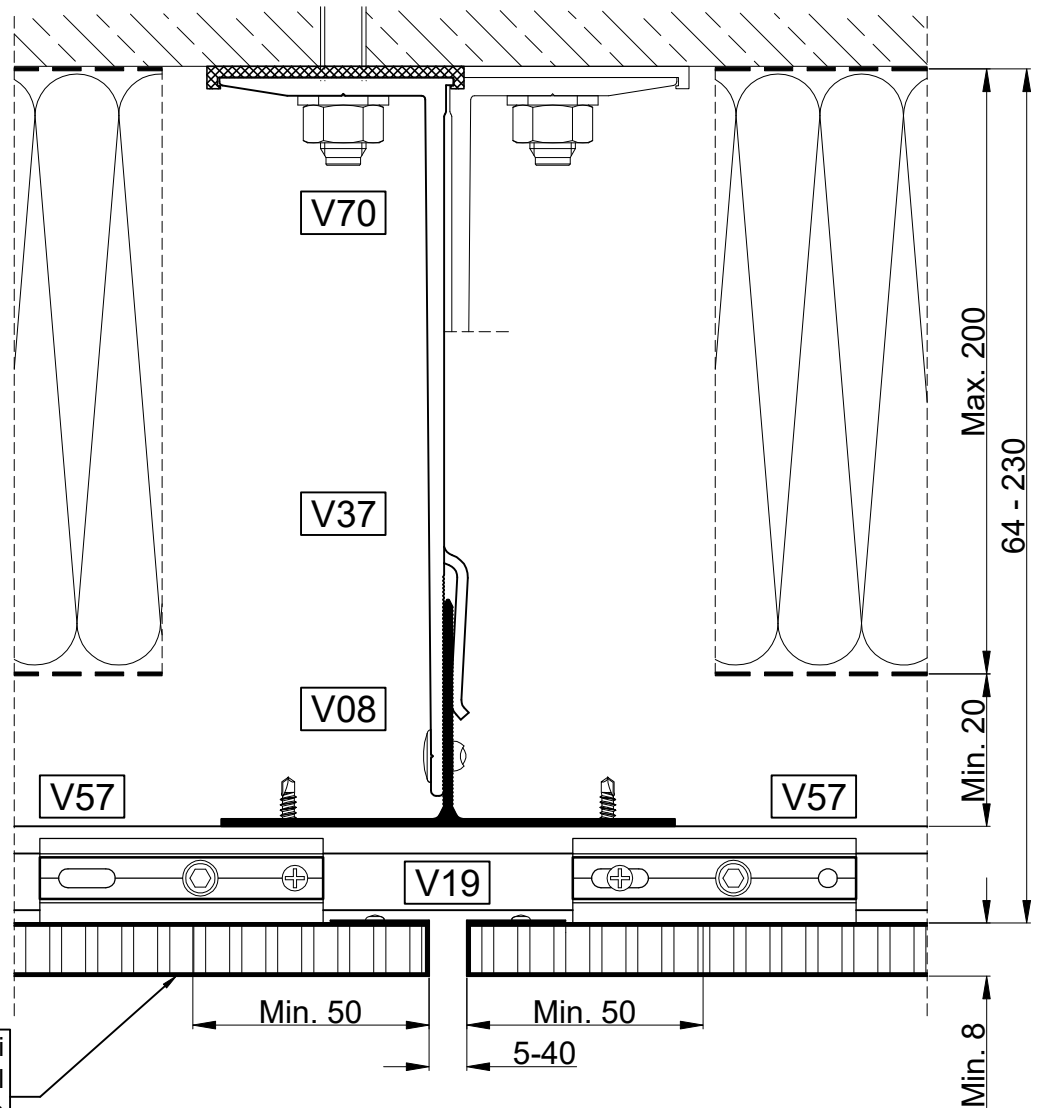


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



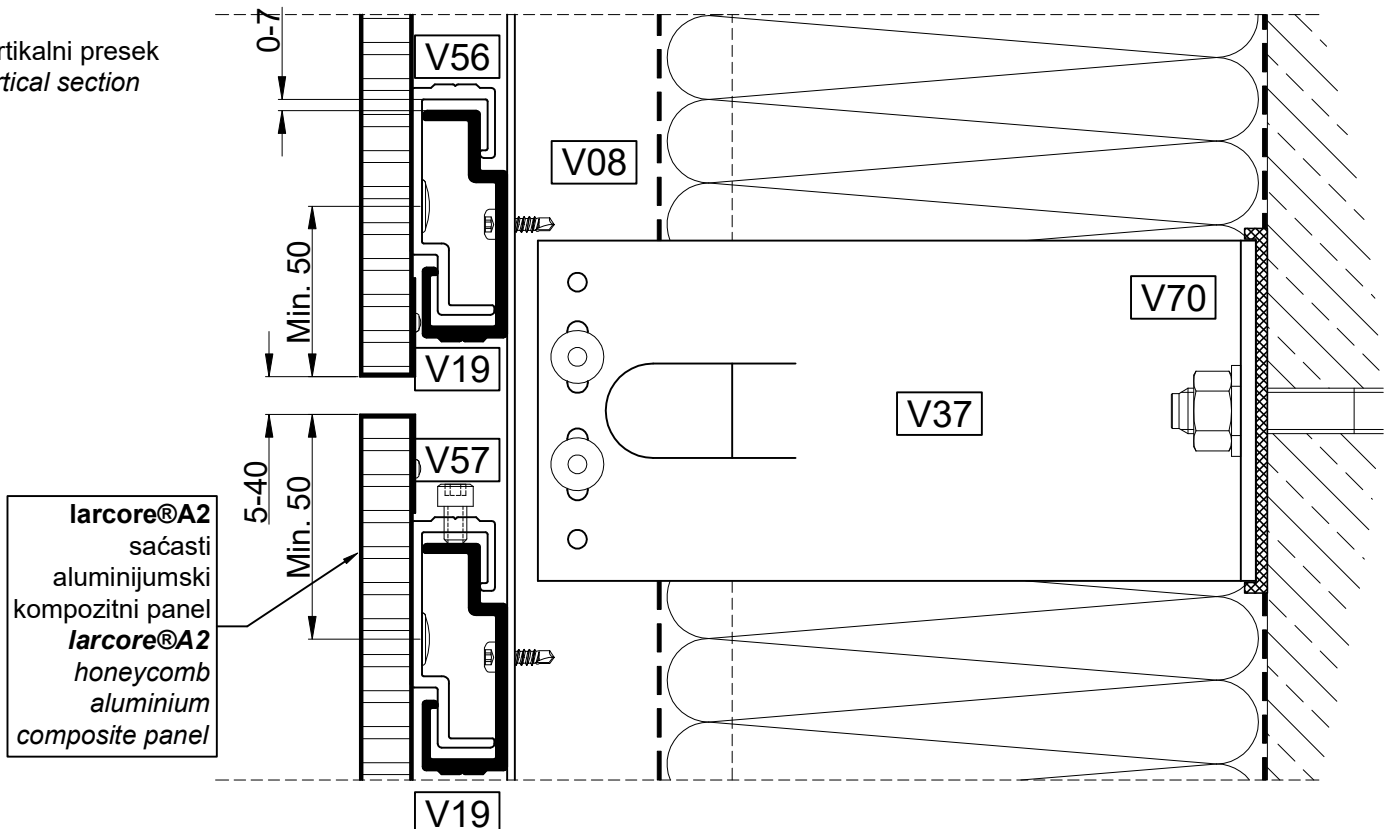
Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

Horizontalni presek
Horizontal section

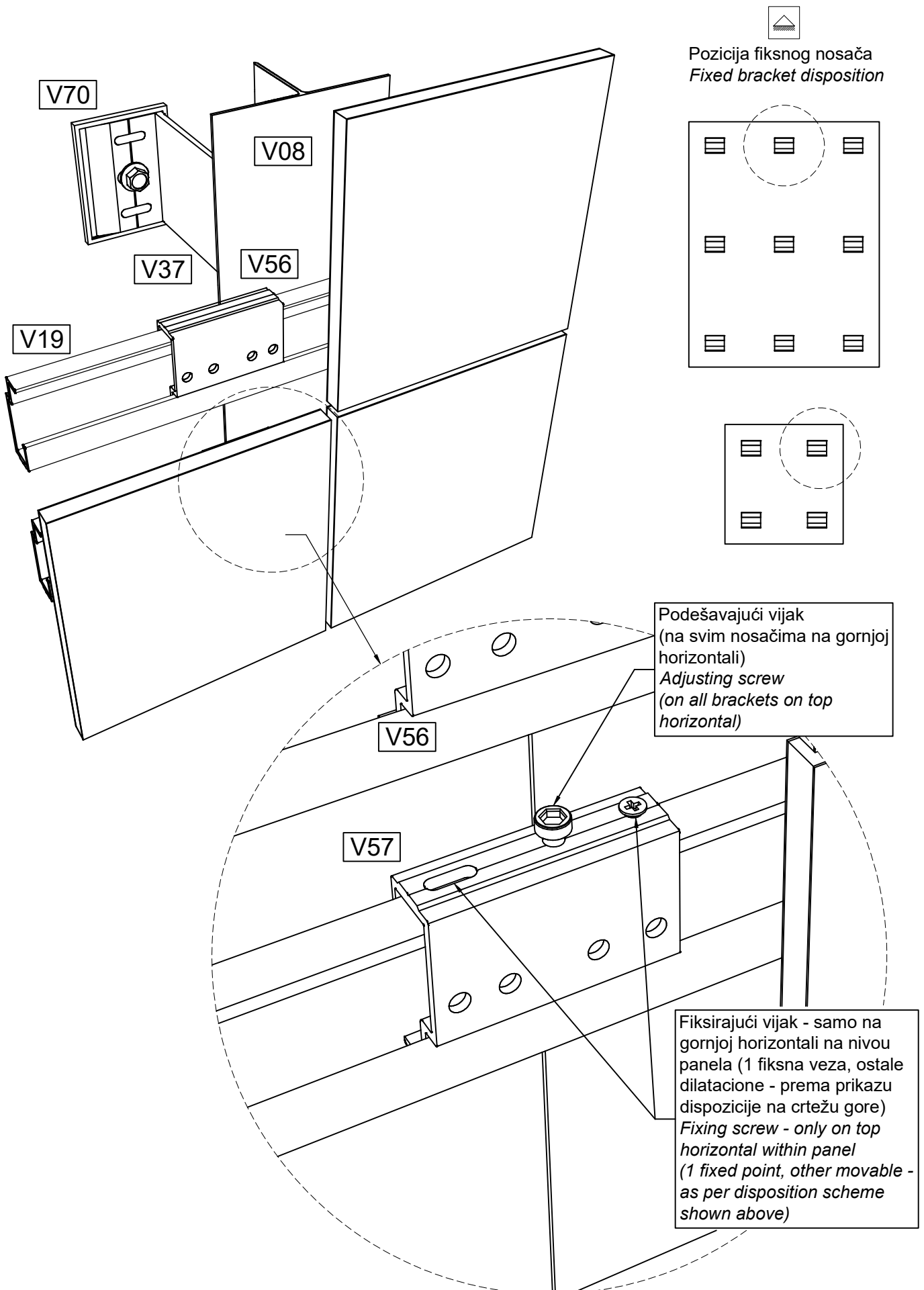


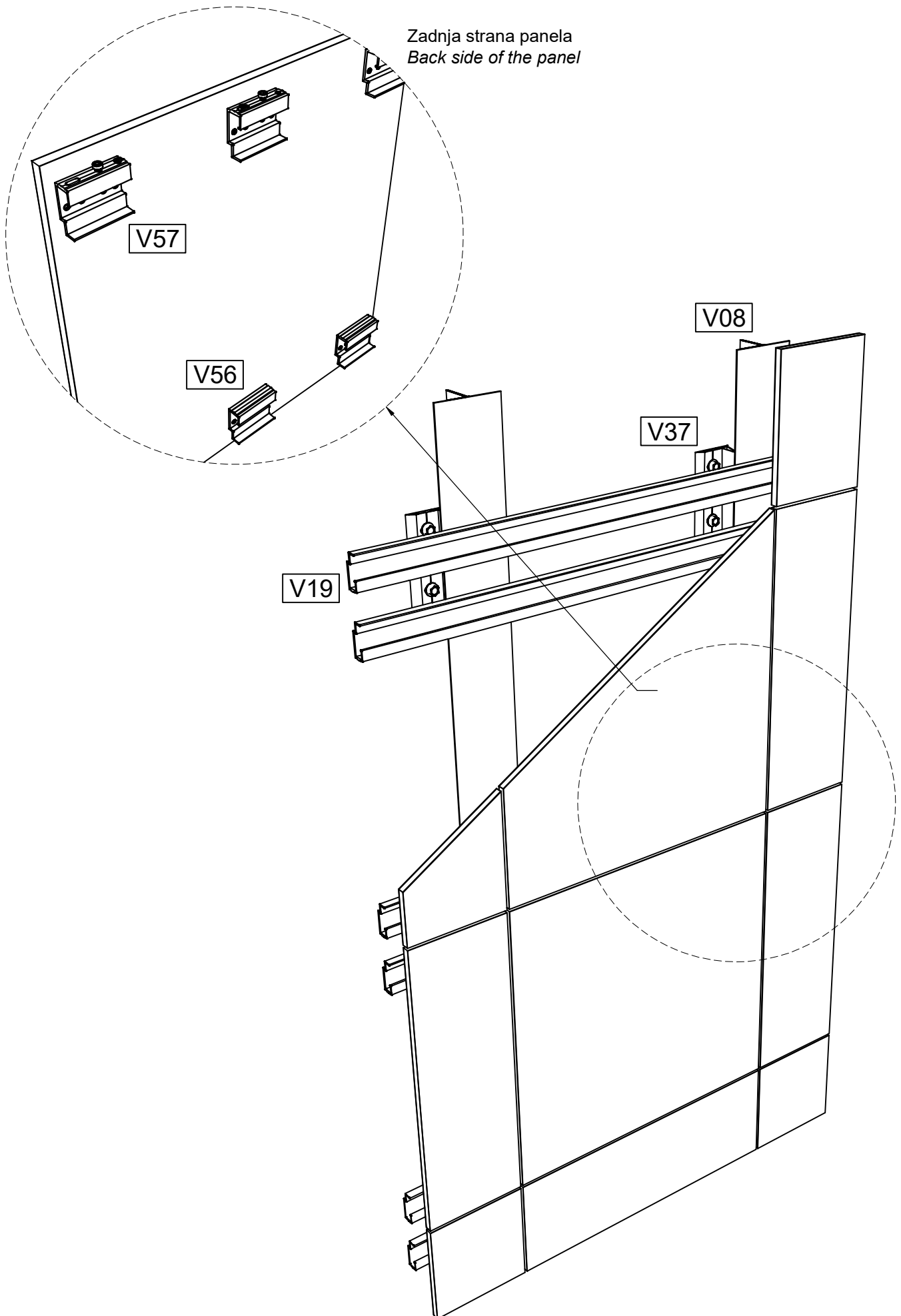
larcore®A2 sačasti
aluminijumski kompozitni panel
larcore®A2 honeycomb
aluminium composite panel

Vertikalni presek
Vertical section

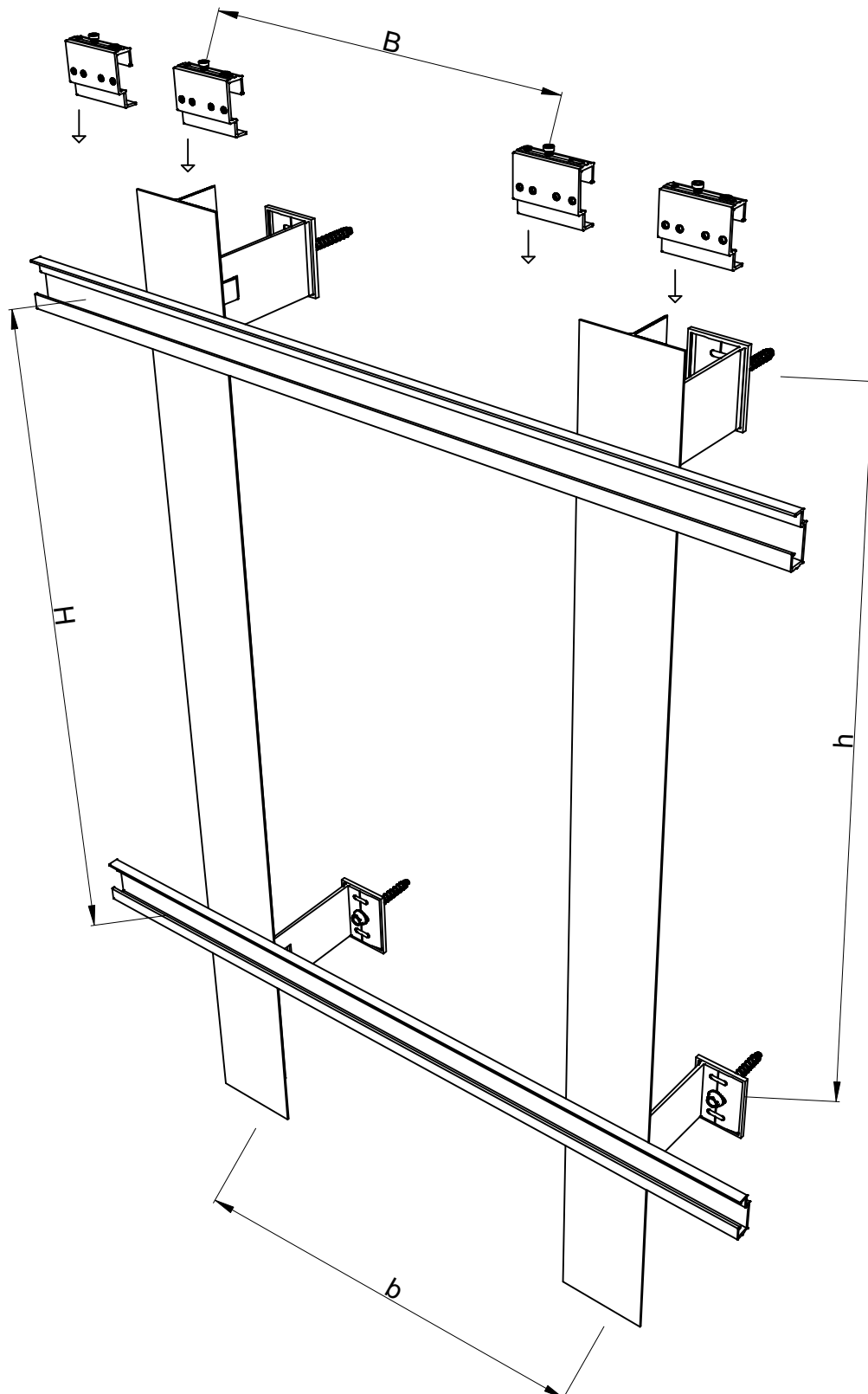


larcore®A2
sačasti
aluminijumski
kompozitni panel
larcore®A2
honeycomb
aluminium
composite panel





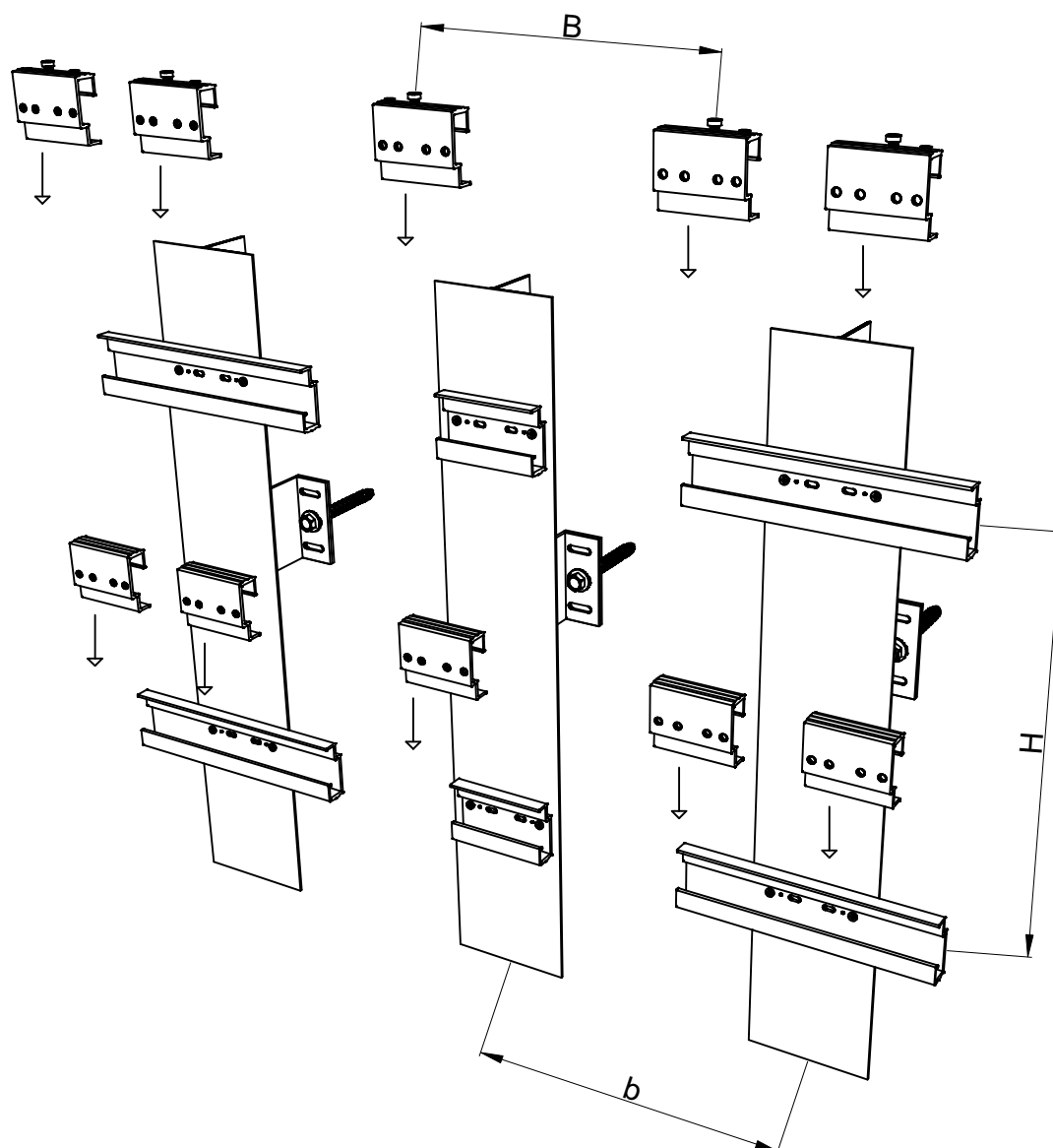
Opcija: noseći horizontalni profili
Option: horizontal load-bearing profiles



b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

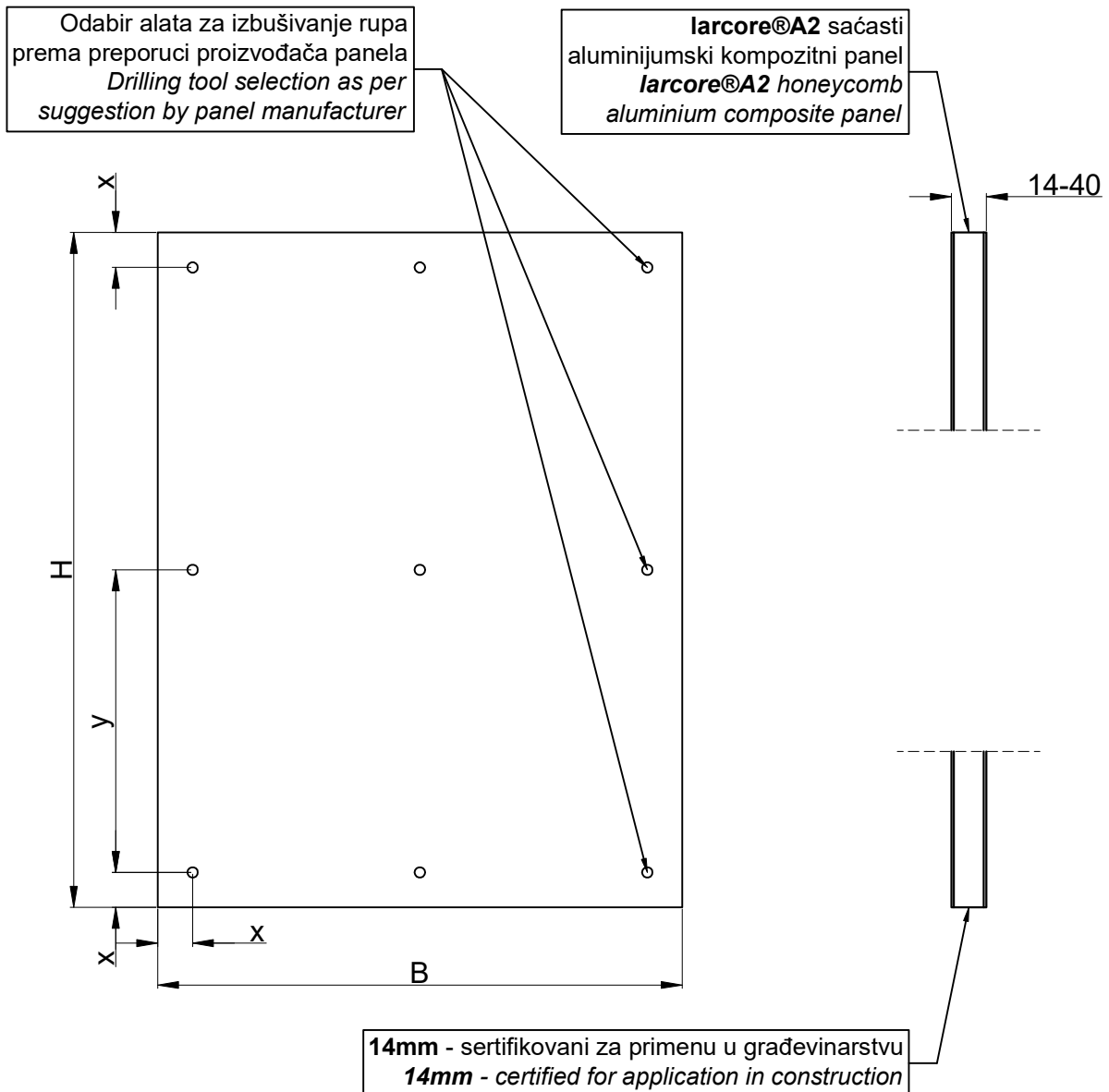
B, H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
B, H - according to structural analysis and depending on applied cladding material, but no more than 900mm

Opcija: noseći vertikalni profili
Option: vertical load-bearing profiles



b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

B, H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
B, H - according to structural analysis and depending on applied cladding material, but no more than 900mm



B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

B - designed panel width - within limitations according to specification by manufacturer

H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

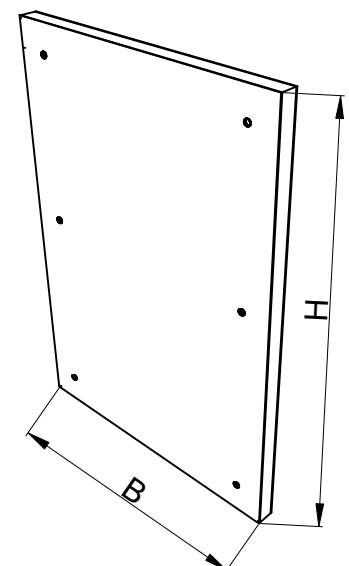
H - designed panel height - within limitations according to specification by manufacturer

x - u zavisnosti od odabira materijala obloge, ali ne manje od 50mm

x - depending on the selection of cladding material, but no less than 50mm

y - u zavisnosti od odabira materijala obloge i prema specifikaciji proizvođača panela i statičkom proračunu

y - depending on the selection of cladding material and according to specification by panel manufacturer and structural analysis



Vertikalni presek
Vertical section

Detalj okapnice i parapeta
Window sill and parapet detail

Aluminijumski lim #3mm
Aluminum sheet #3mm

110

L4040

Aluminijumski lim #3mm
Aluminum sheet #3mm

V57

V56

V19

V57

V08

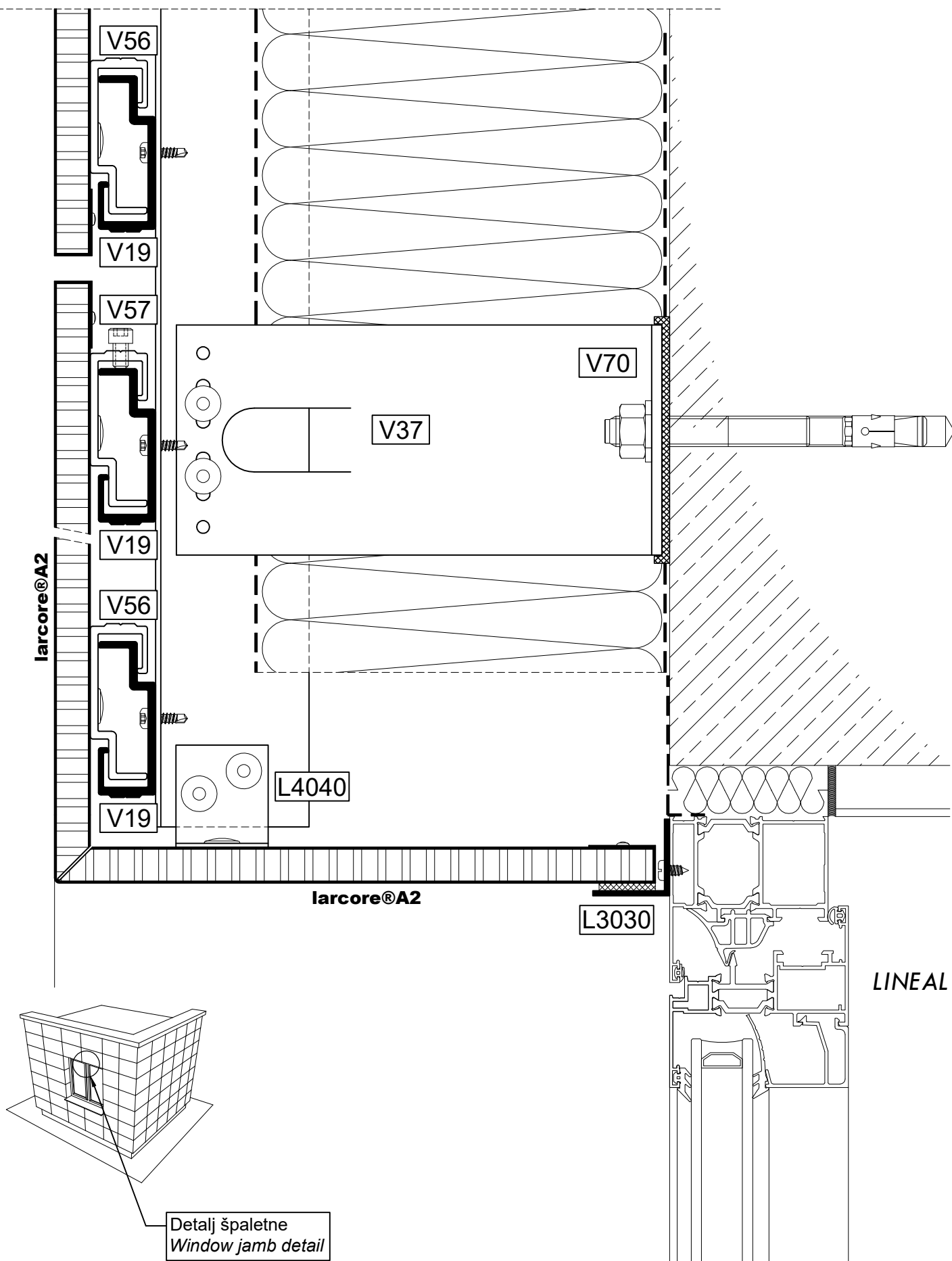
V37

V70

larcore®A2

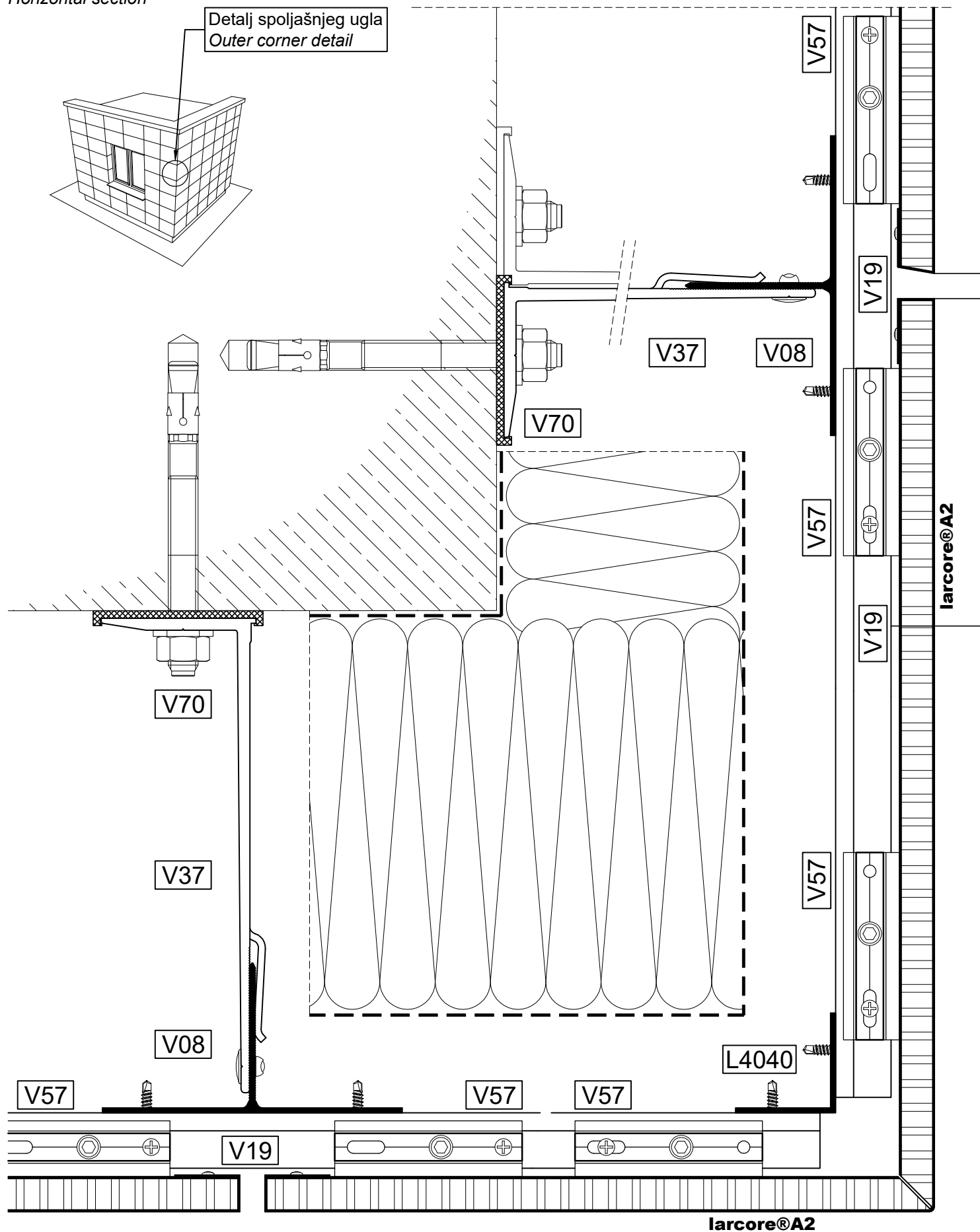
LINEAL

Vertikalni presek
Vertical section



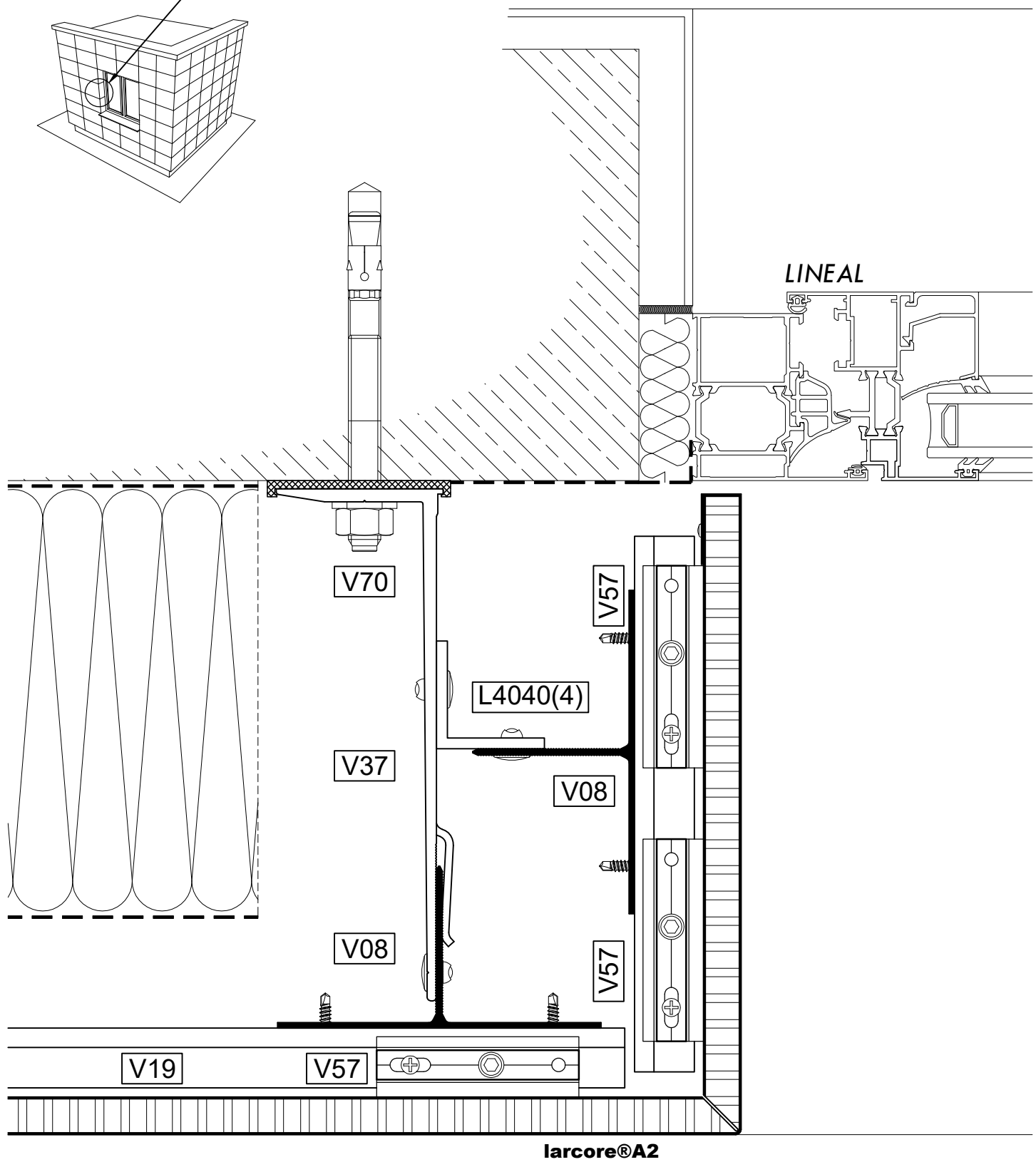
Horizontalni preseki
Horizontal section

Detalj spoljašnjeg ugla
Outer corner detail

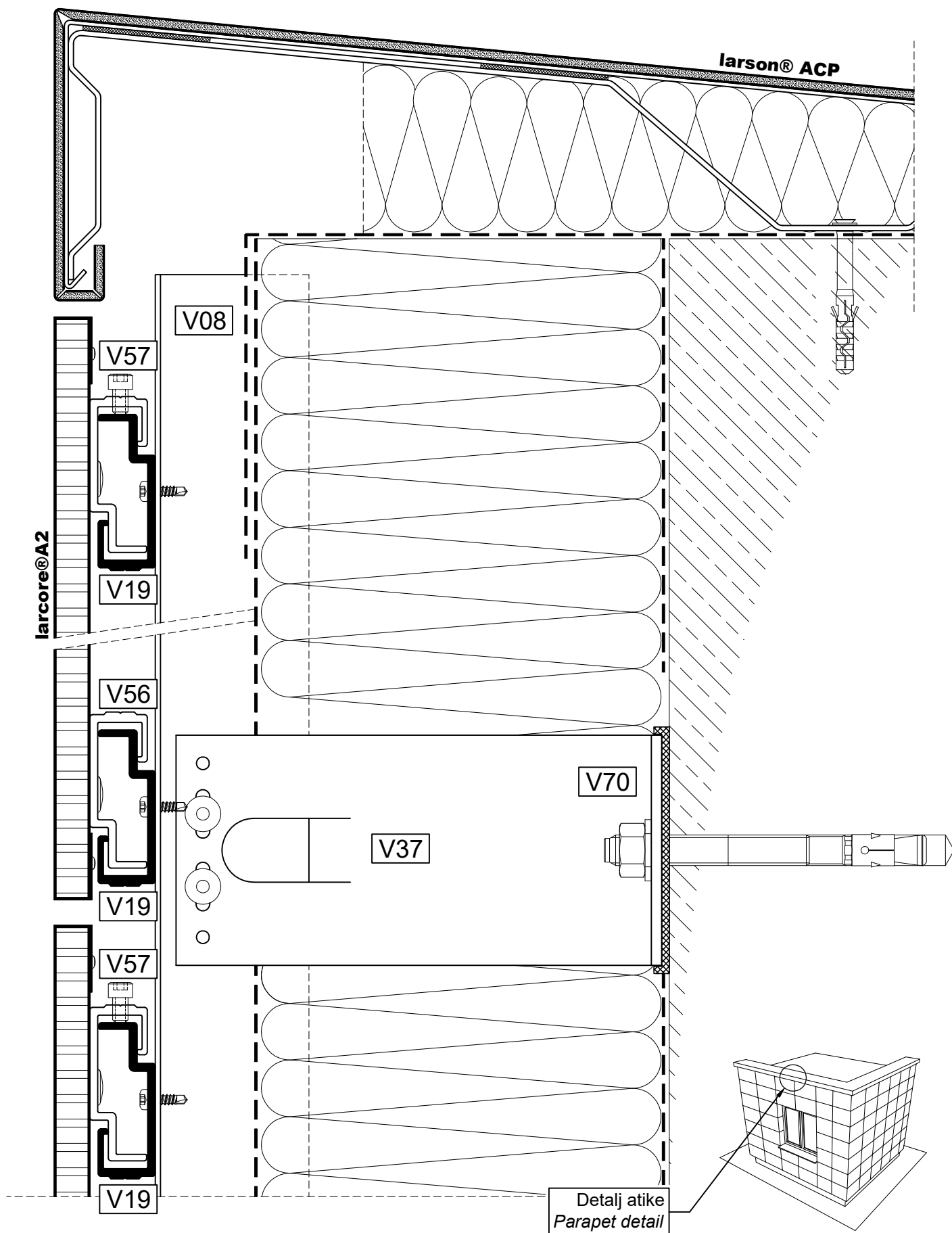


Horizontalni presek
Horizontal section

Detalj špaletne
Window jamb detail

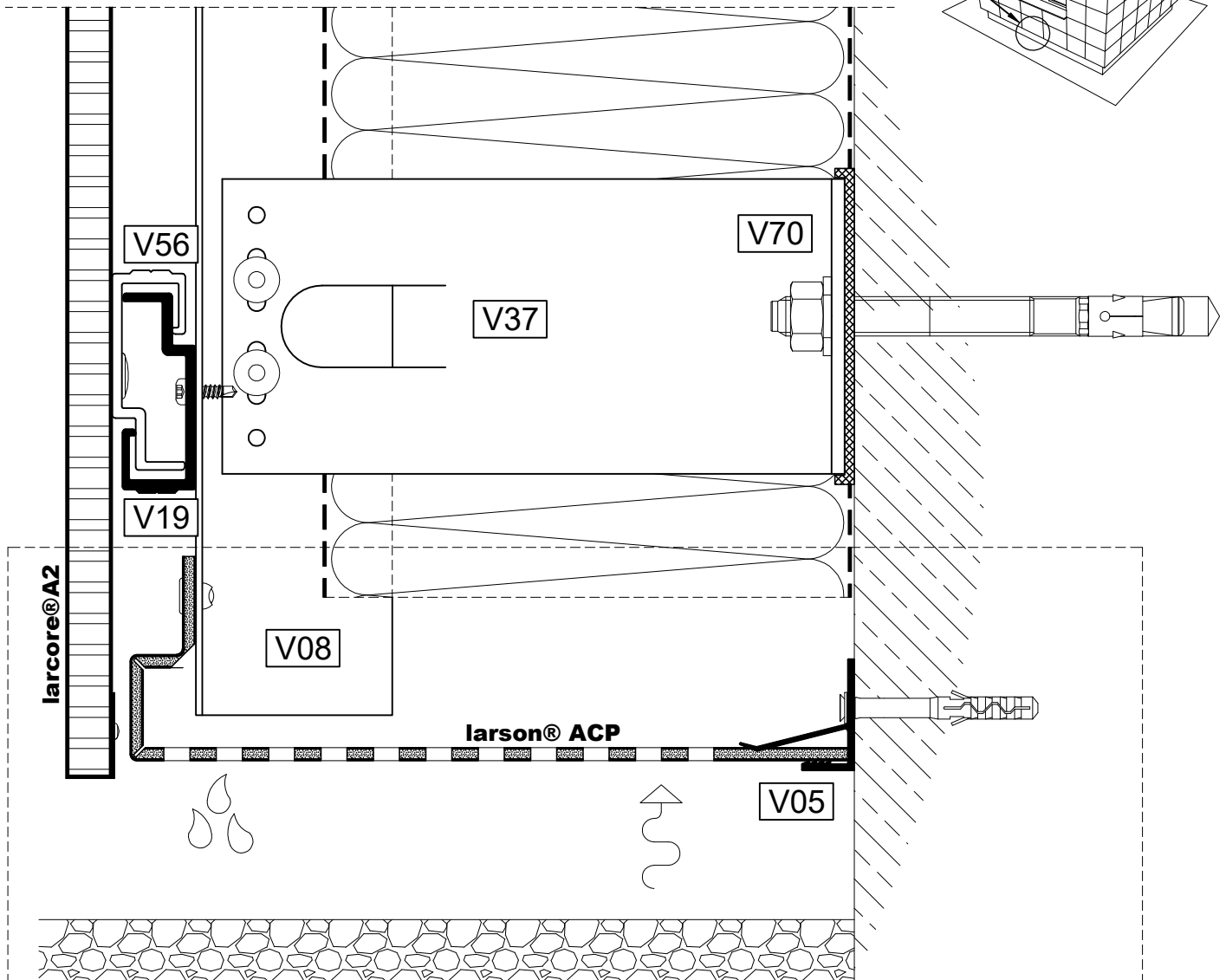
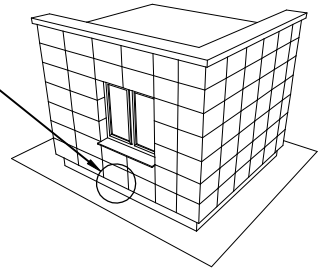


Vertikalni presek
Vertical section

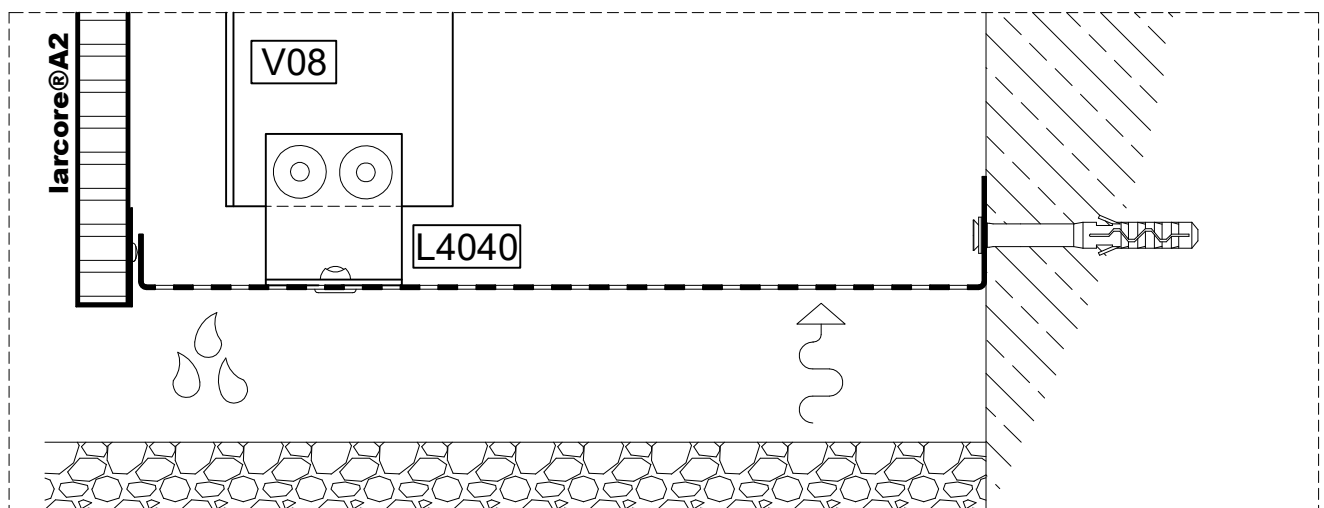


Vertikalni presek
Vertical section

Donji detalj
Bottom detail



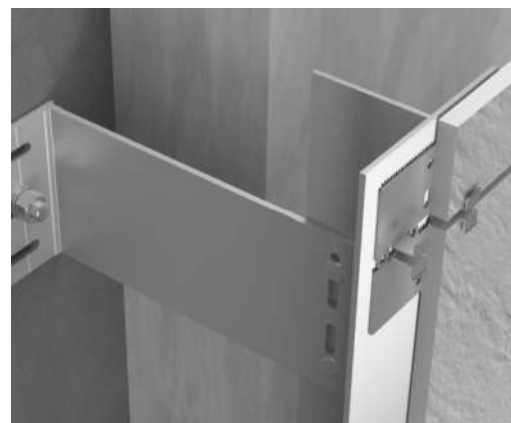
Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT STONE



Tehnički opis sistema

Sistem aluminijske podkonstrukcije namenjen prihvatanju ravnih ploča najčešće granitne keramike fiksiranih vidljivim nosačima sa lica fasade tzv. „žabicama“ od inox-a koje se u zavisnosti od zahteva u projektu mogu plastificirati u traženoj boji po RAL ton karti.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

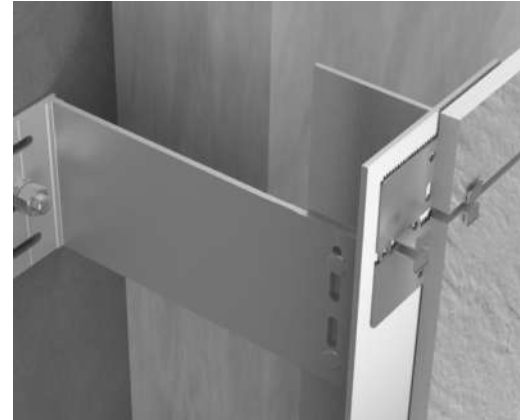
b) Noseći profil se u projektovanom rasteru postavlja na mestima vertikalnih spojeva/fuga fasadnih ploča. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između nosećih profila je 1,5m.

c) Fiksiranje nosećih profila se vrši kotvama, koje omogućavaju fino podešavanje/pozicioniranje nosećih aluminijskih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Maksimalna preporučena udaljenost kotvi je 1,5m (definisano statičkim računom). Njihov spoj sa vertikalama se ostvaruje u vidu pop-zakivaka kroz otvore u ankerima koje omogućuju kako fiksnu vezu, tako i dilatirajuću vezu. Ukoliko postoji zahtev za termoprekidom, neophodno je kao tampon sloj, između punog dela zida i aluminijskih kotvi (3), postaviti plastične podloške.

d) Nakon montaže vertikala, montiraju se inoks noseće pločice na mestima ukrštanja horizontalnih i vertikalnih fuga, a njihov spoj sa vertikalama ostvaruje se samorezujućim nerđajućim vijcima.

e) Prateći postavljanje inoks pločica paralelno se postavljaju ploče fasadne obloge nasedanjem na njih. Preporuka je da se pre postavljanja ploča na noseće pločice tačkasto, mestimično nanese PU lepak Sika FLEX kako bi se pojačala stabilnost usled udara vetra i neutralisalo dejstvo mikrovibracija između kermike i nosećih pločica.

f) Obrada izabranog tipa panela se vrši isecanjem ploča na ugradnu meru, a ako je granitna keramika u pitanju koriste se standardne ploče dim. 60x60cm ili 60x120cm. U slučaju skrivenog fiksiranja ploča (uglavnom granitne keramike debljine 10-11mm) potrebno je obraditi ivice ploča usecanjem šlica. Preporučuje se popunjavanje šlica silikonom nakon montiranja skrivenih žabica. Pre odabira granitne keramike potvrditi sa proizvođačem da je keramika armirana i pogodna za ugradnju u sklopu ventilisane fasade. Predviđena fuga u ovom sistemu je 9mm.



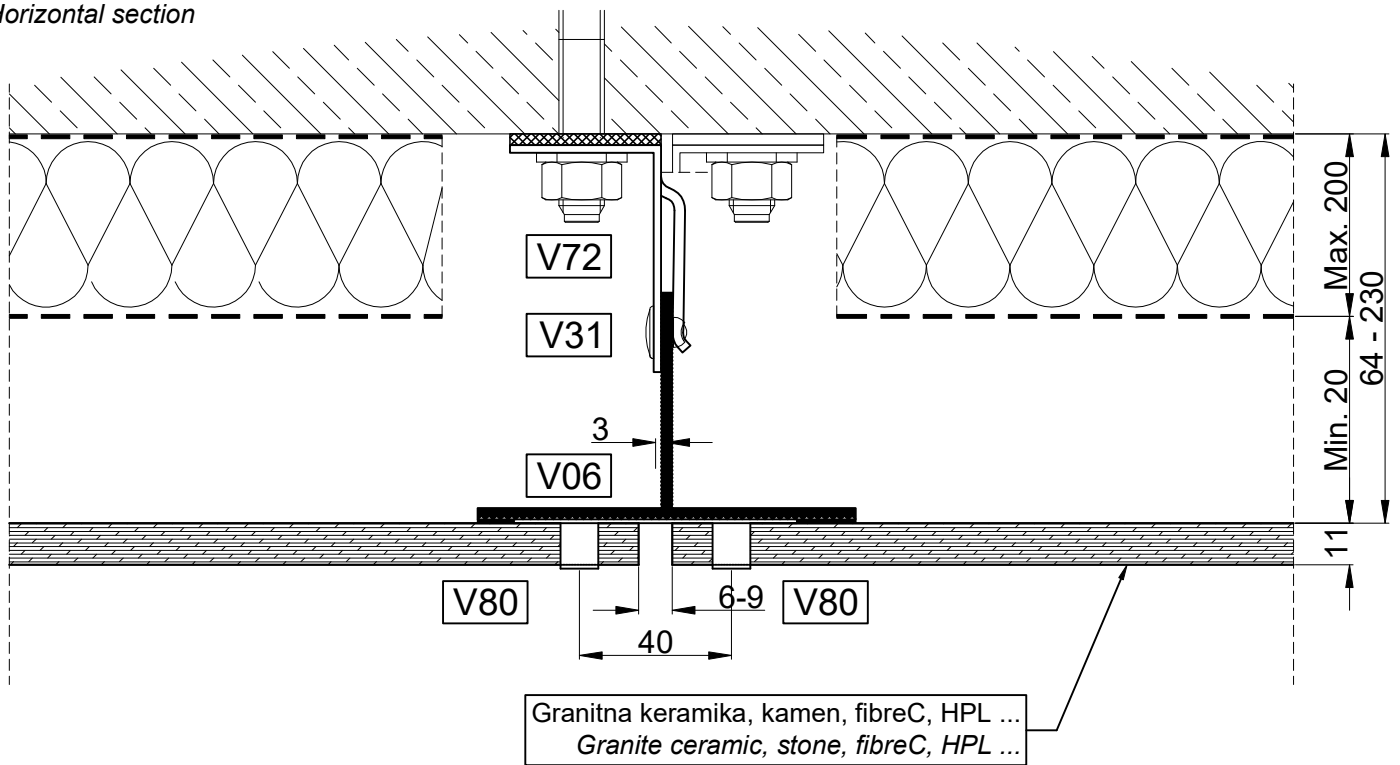
Technical description

Aluminium substructure system for flat panel cladding (usually granite ceramic tiles) fixed by stainless steel cleats with visible or hidden fixing system. The visible part of the stainless steel cleat can be powder coated in any RAL color according to project requirements. This dry installation system features simple installation, high load-bearing capacity which makes it the preferable option for heavy cladding materials.

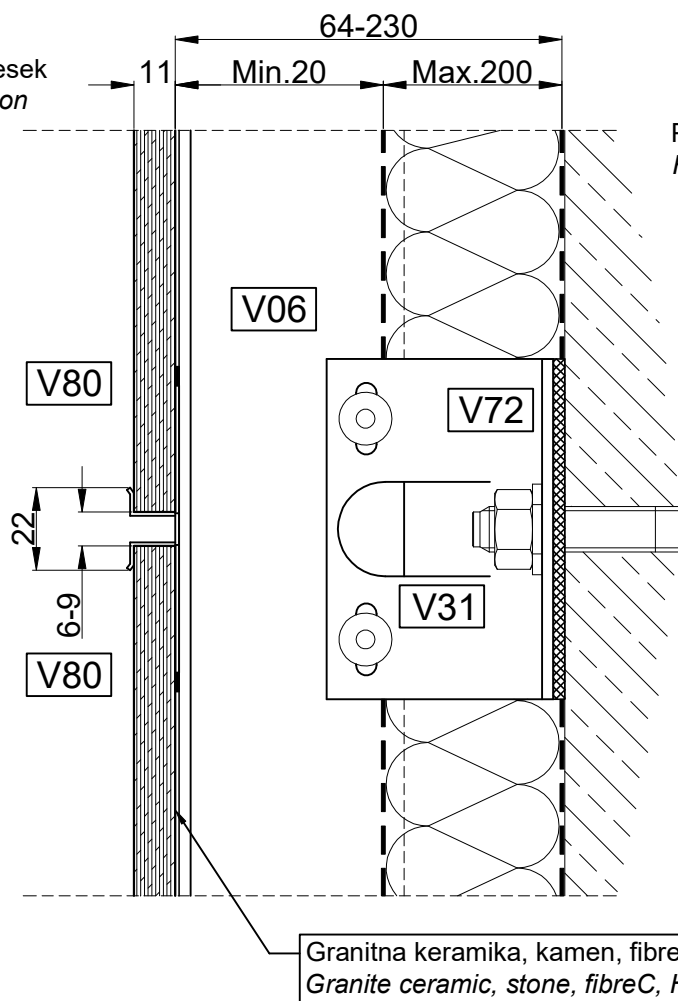
Assembly procedure:

- a) The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.
- b) Extruded load-bearing profiles are installed vertically and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main T or L profiles (item nr. V06, V07, V08) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to vertical profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) Specially designed stainless steel cleats with both visible or invisible attachment (items nr. from V80 to V86) are installed on the vertical profiles and connected with stainless steel screws.
- e) Cladding panels are installed along with the cleats, and each panel is locked into place. It is recommended to place a dab of Sika FLEX PU glue to increase stability due to wind-load and minimize the micro vibrations between the cladding and the cleats.
- f) The cladding panels are either used in their standard dimensions or cut to the required size. If hidden attachment is required (usually for granite ceramics, 10-11mm thickness), sides of panels need to be grooved. After installation of hidden cleats, it is recommended to seal the groove with silicone. It is mandatory to obtain a confirmation from ceramic tile manufacturer that the selected tiles are suitable for ventilated facade applications.

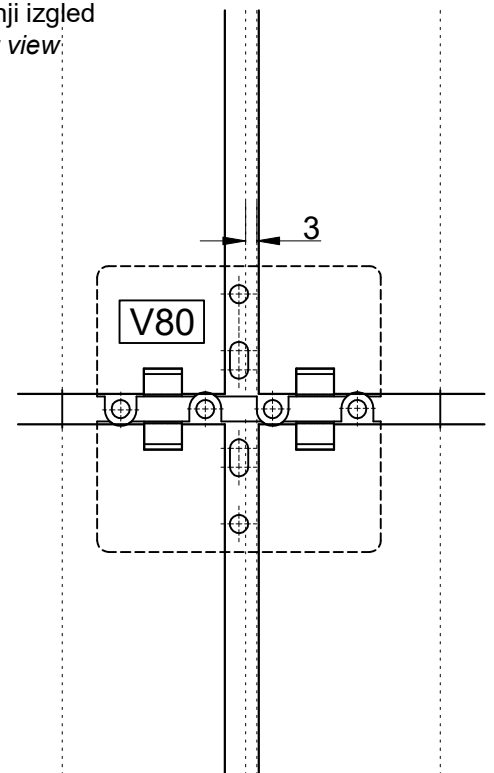
Horizontalni presek
Horizontal section

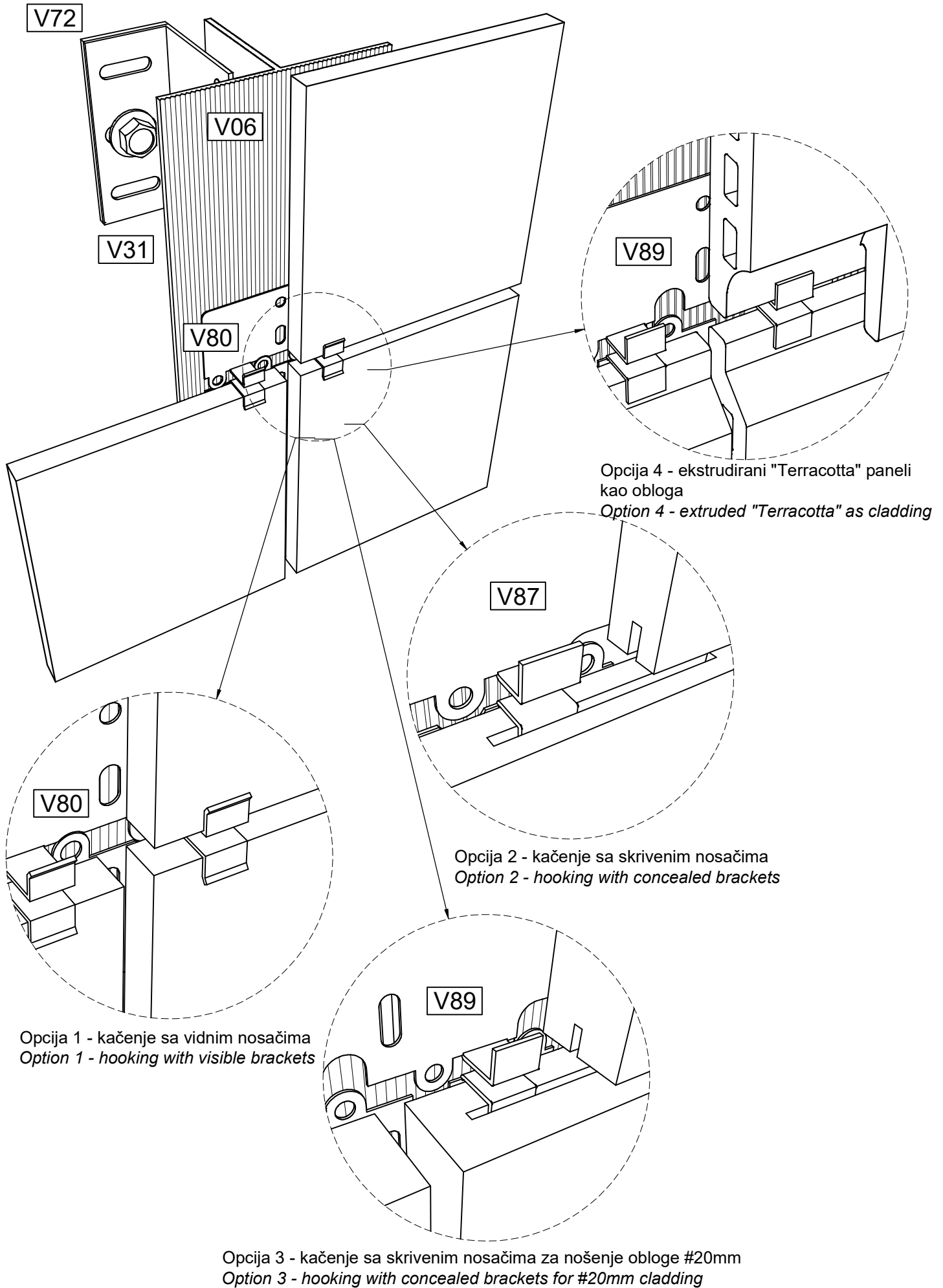


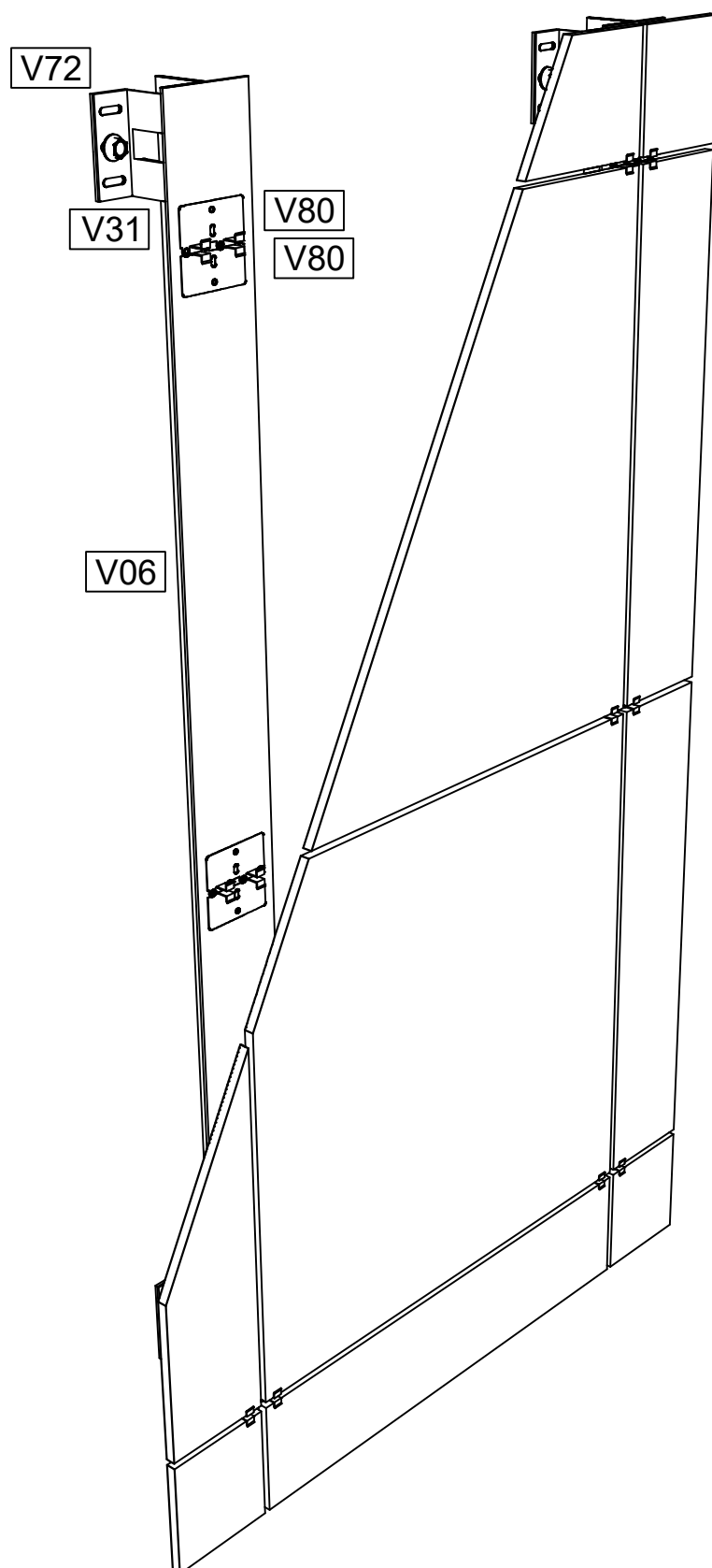
Vertikalni presek
Vertical section

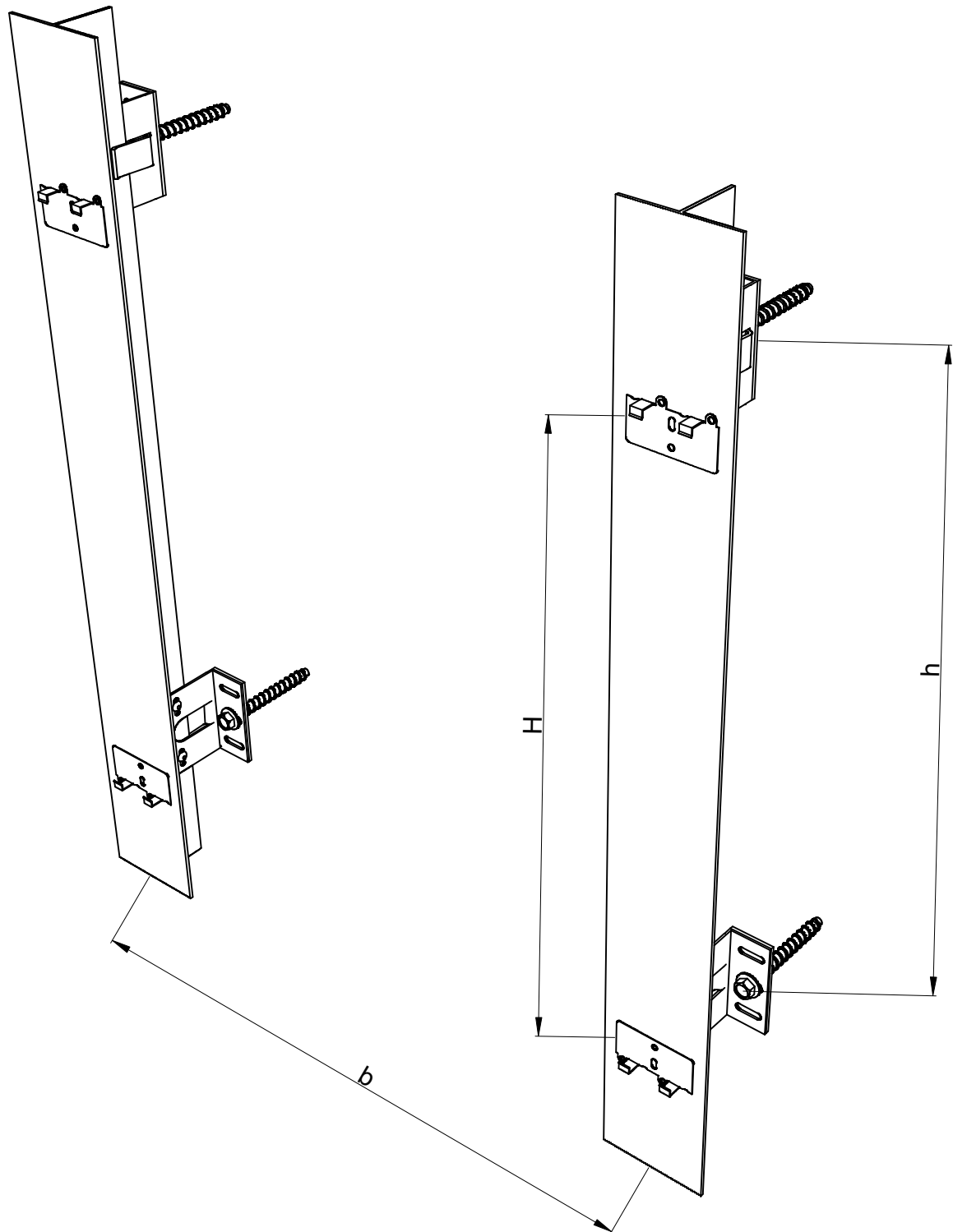


Prednji izgled
Front view



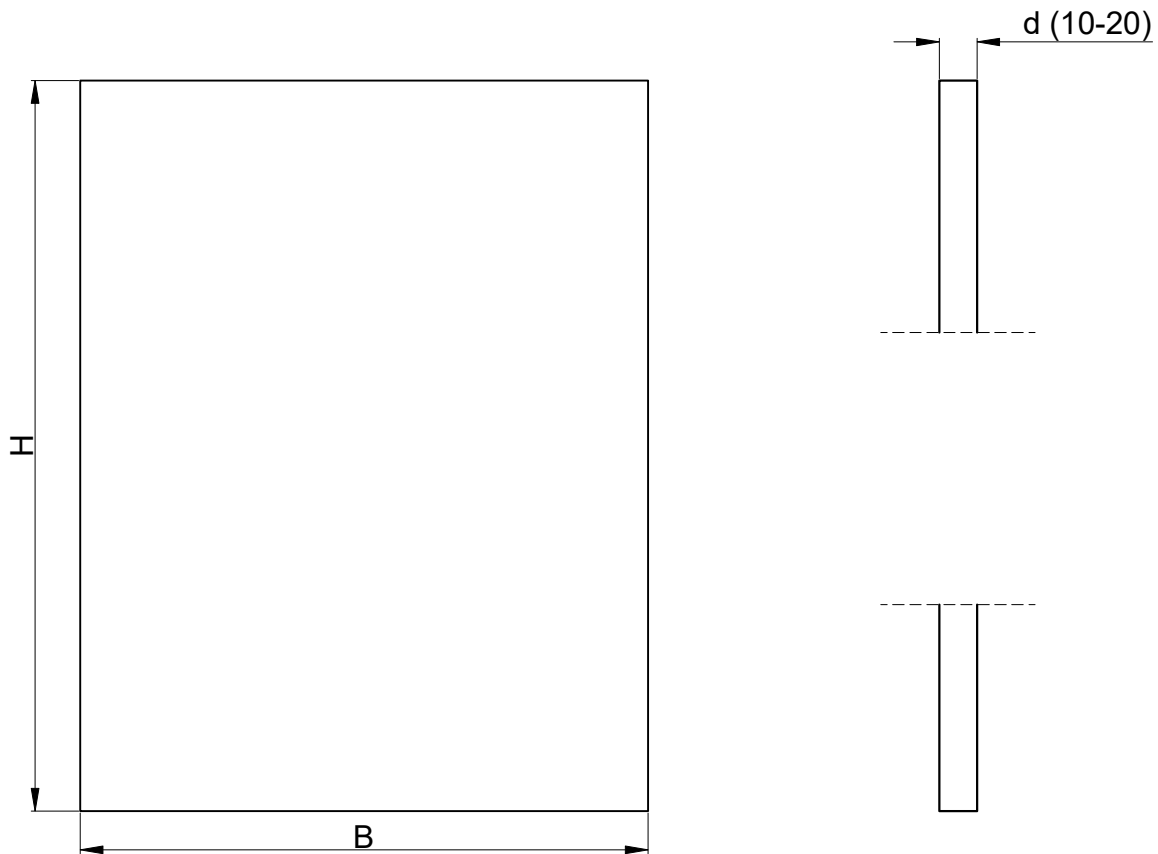






b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
H - according to structural analysis and depending on applied cladding material, but no more than 900mm



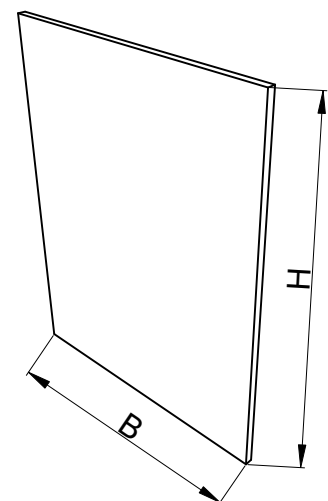
B - projektovana širina panela - uz ograničenja prema specifikaciji proizvođača panela

B - designed panel width - within limitations according to specification by manufacturer

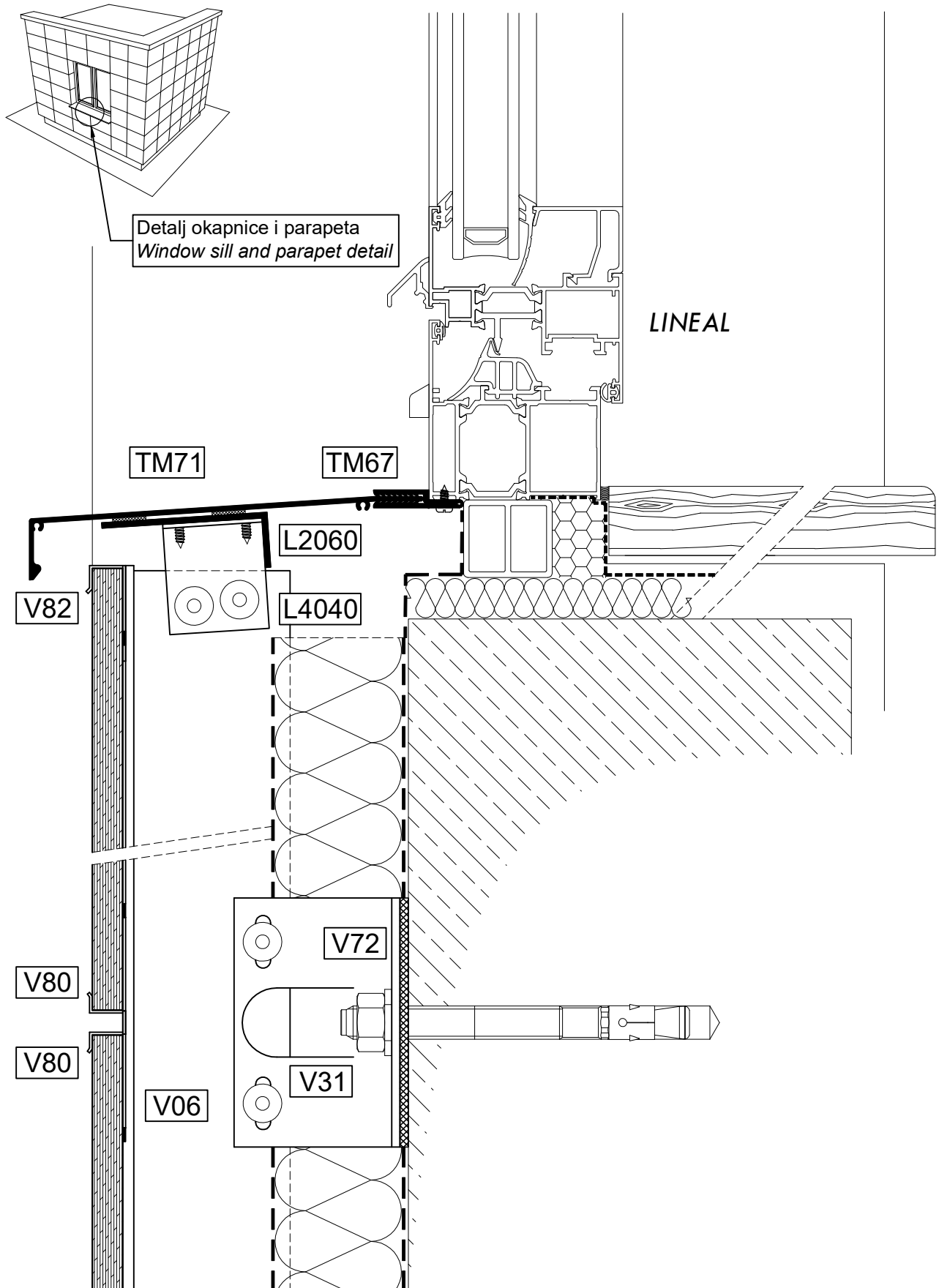
H - projektovana visina panela - uz ograničenja prema specifikaciji proizvođača panela

H - designed panel height - within limitations according to specification by manufacturer

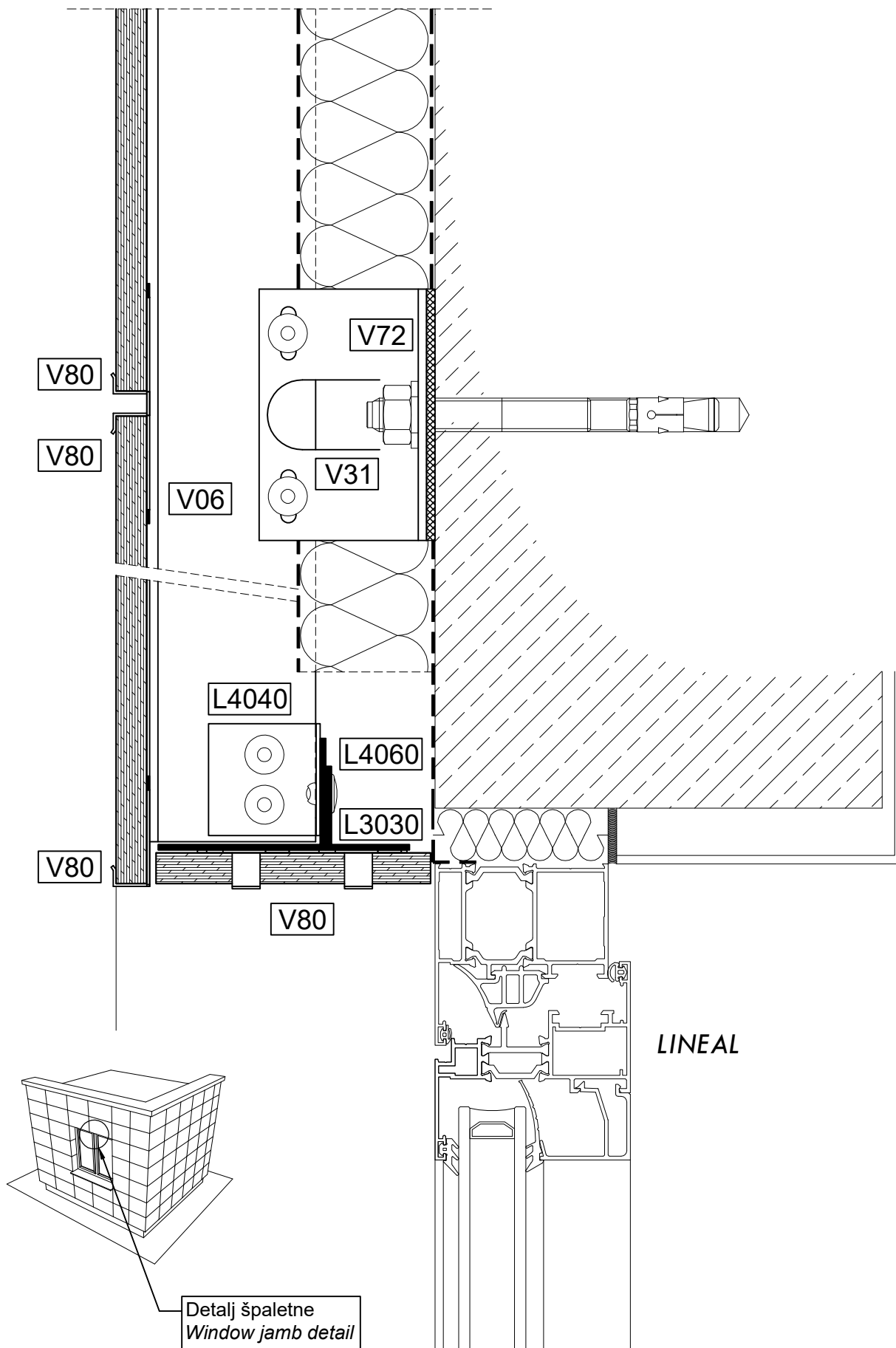
d - debljina panela, u zavisnosti od odabira materijala obloge i potreba projekta
d - panel thickness, depending on the selection of cladding material and project needs



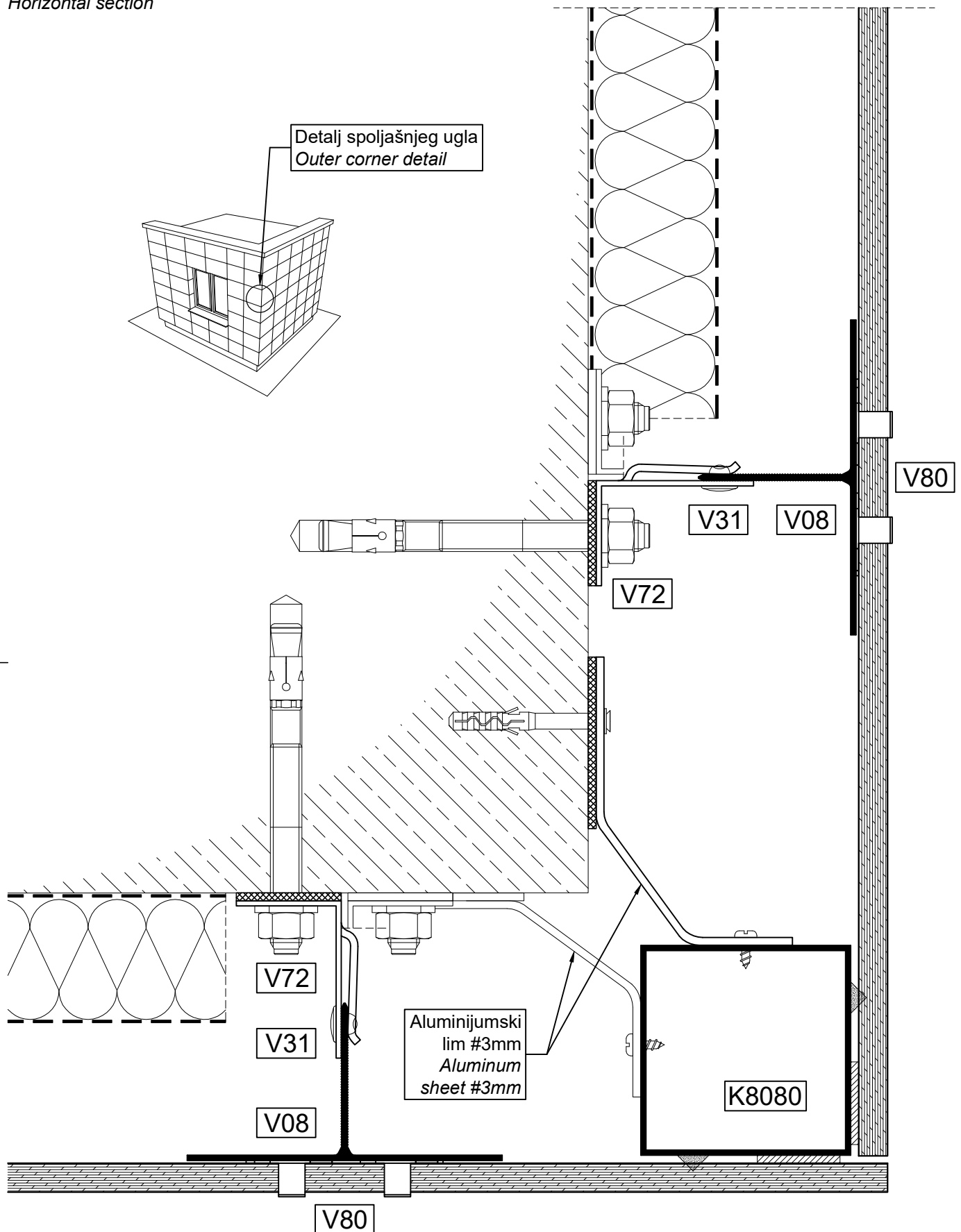
Vertikalni presek
Vertical section



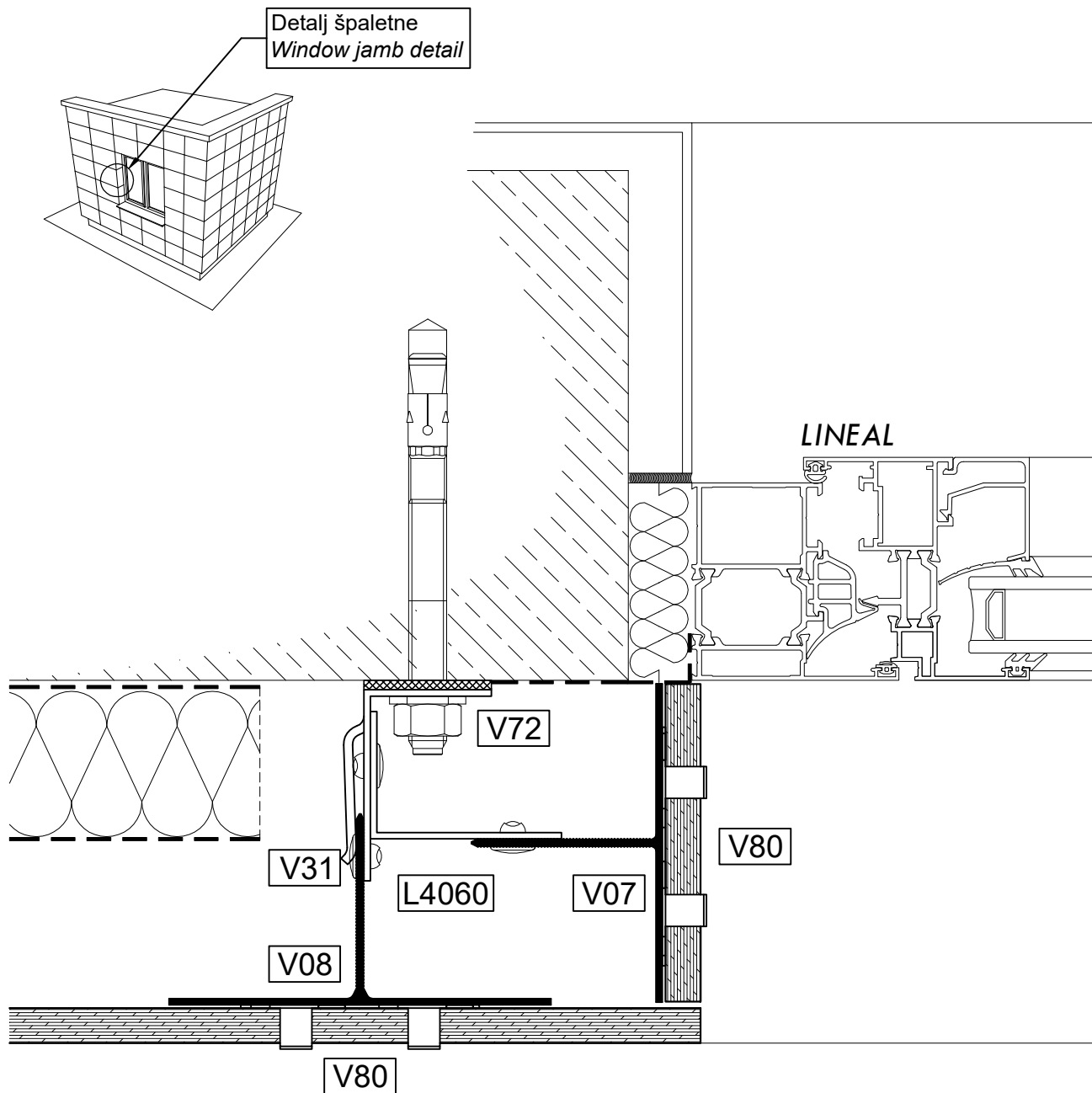
Vertikalni presek
Vertical section



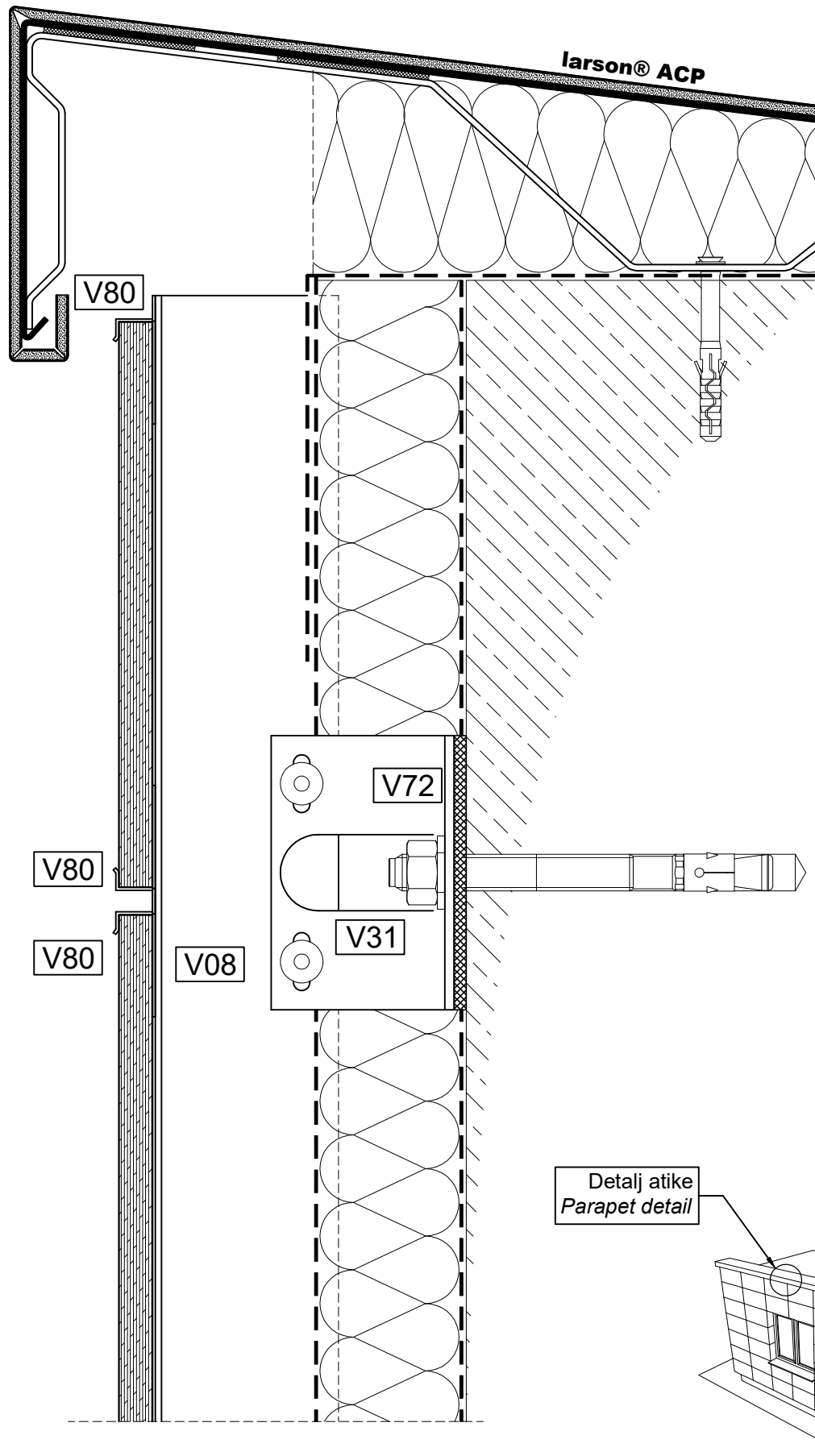
Horizontalni preseki
Horizontal section



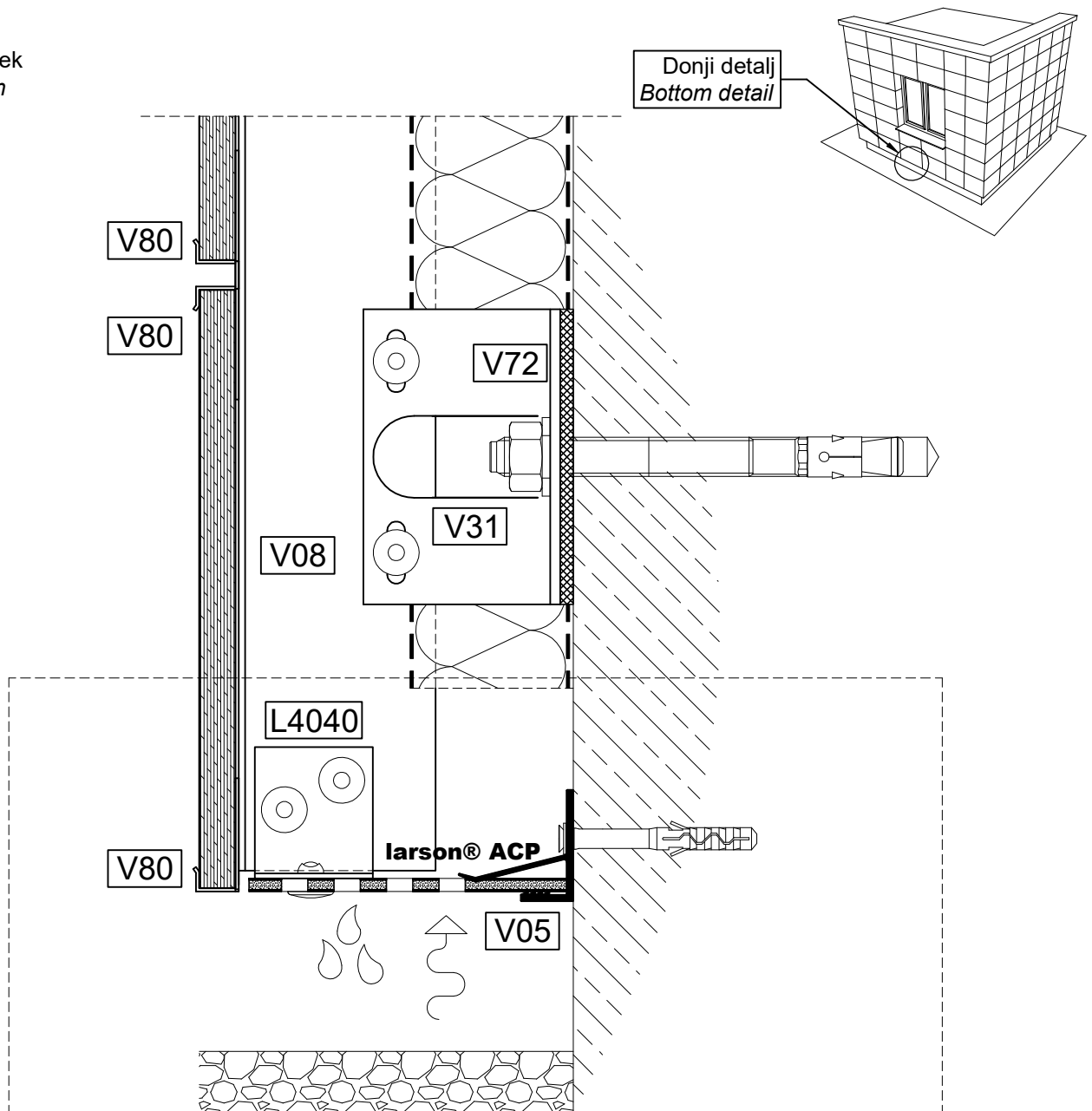
Horizontalni presek
Horizontal section



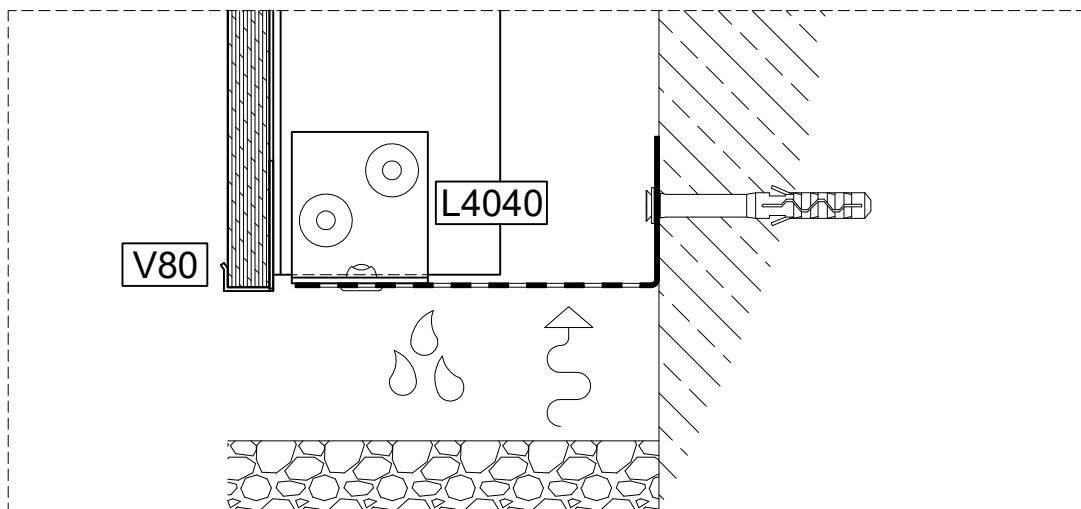
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

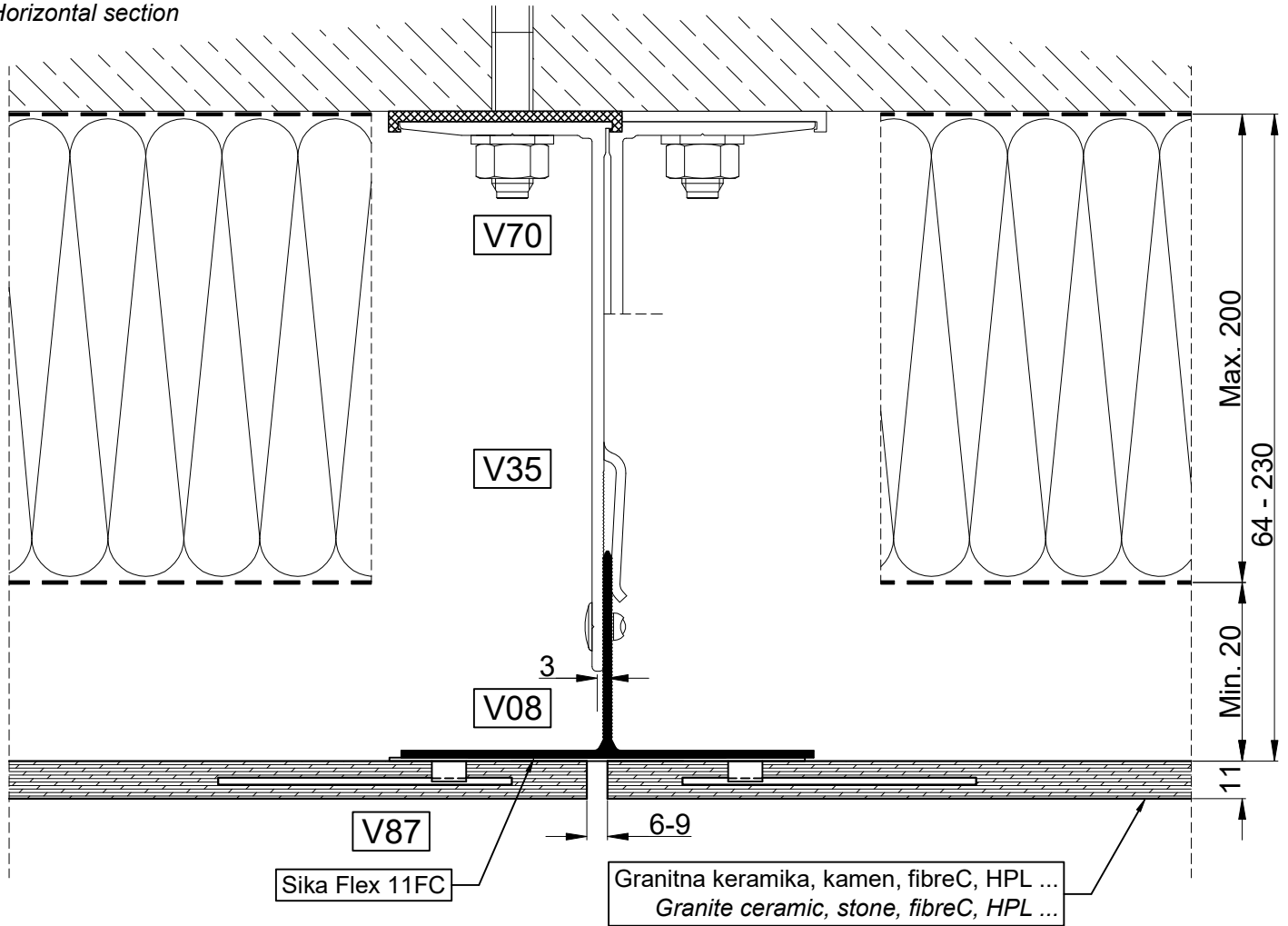


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

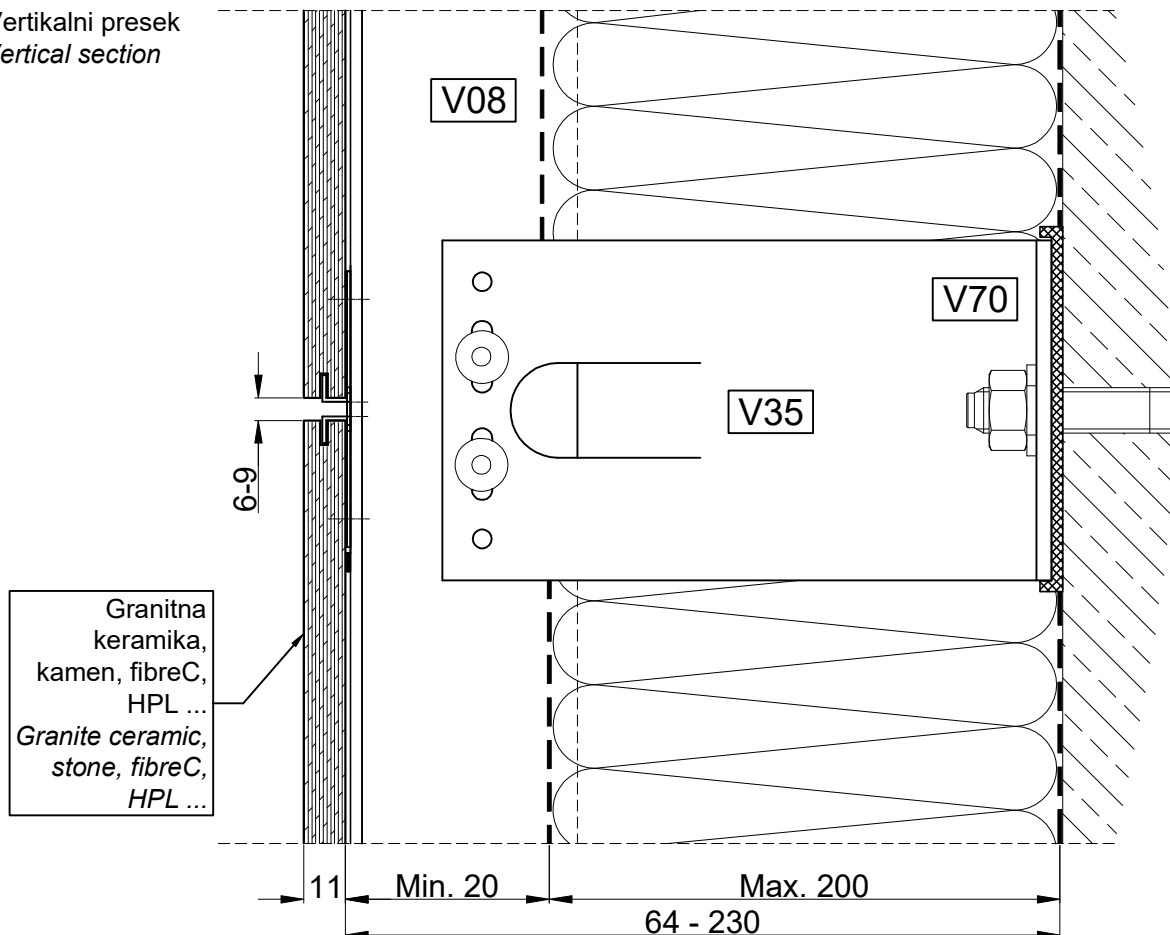


Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

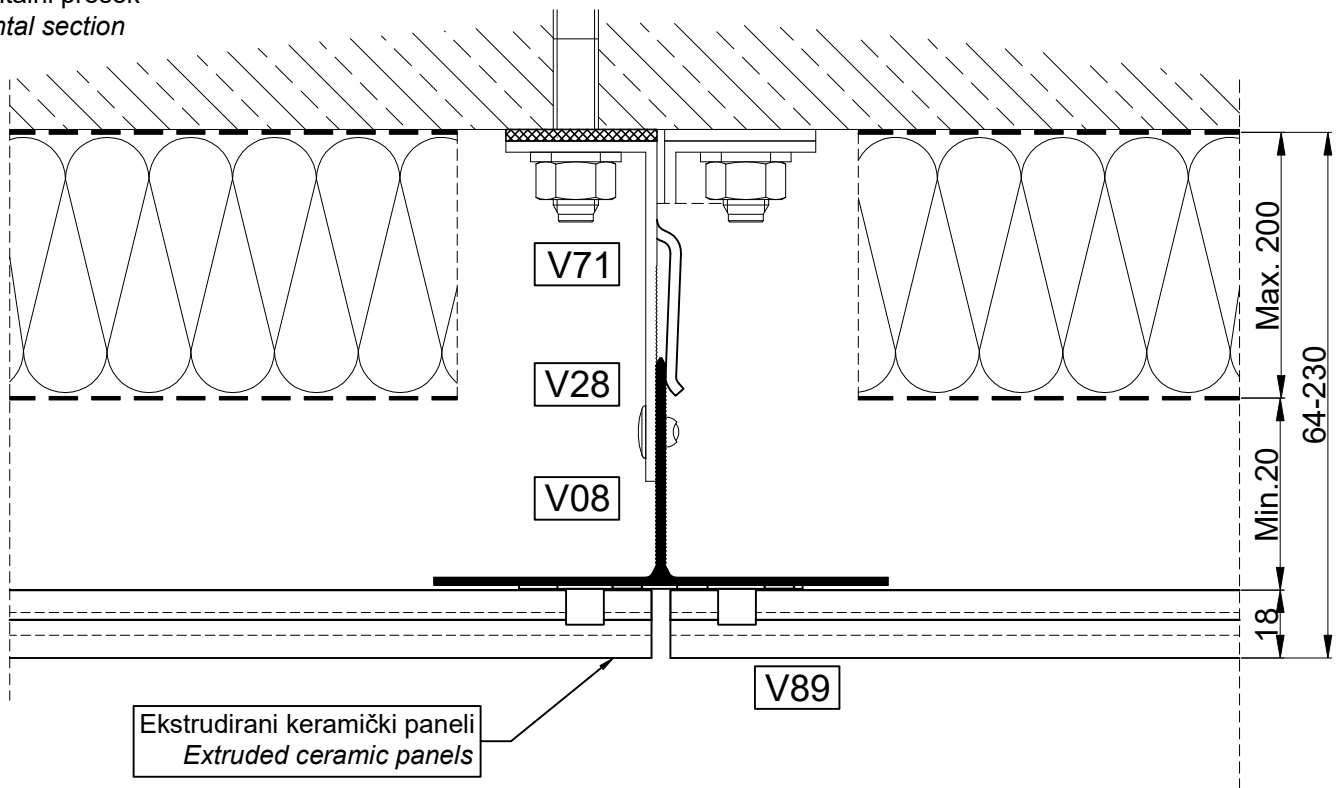
Horizontalni presek
Horizontal section



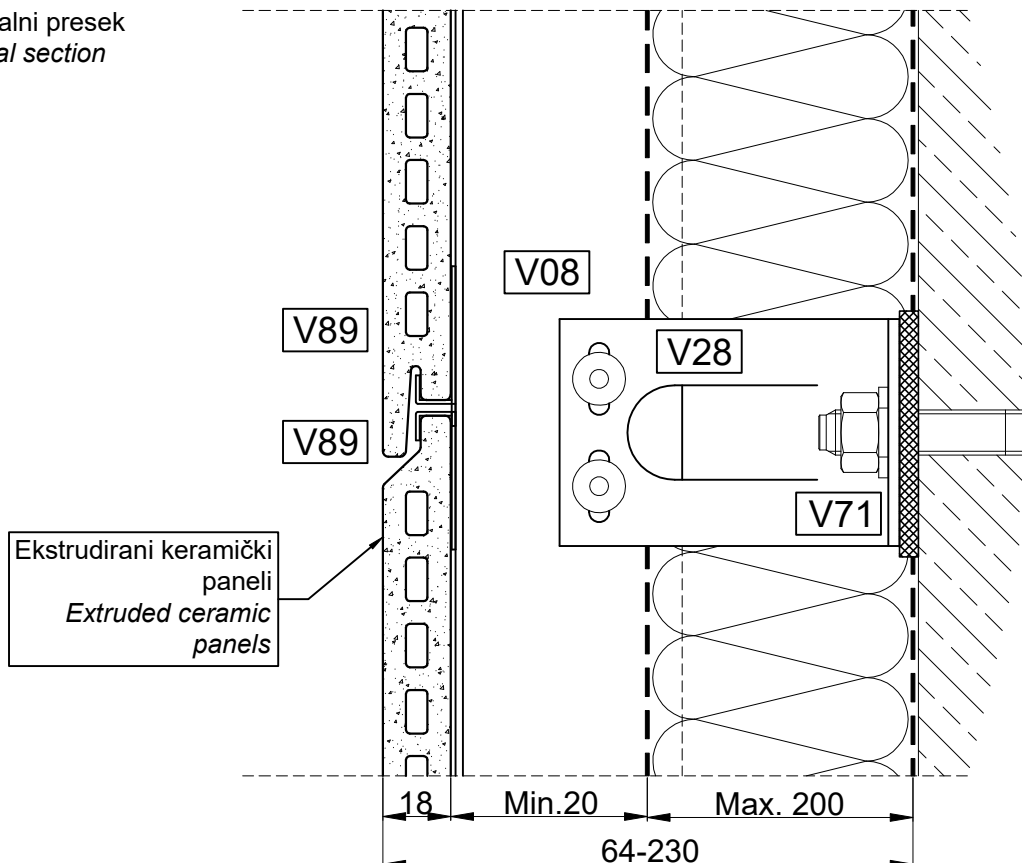
Vertikalni presek
Vertical section



Horizontalni presek
Horizontal section

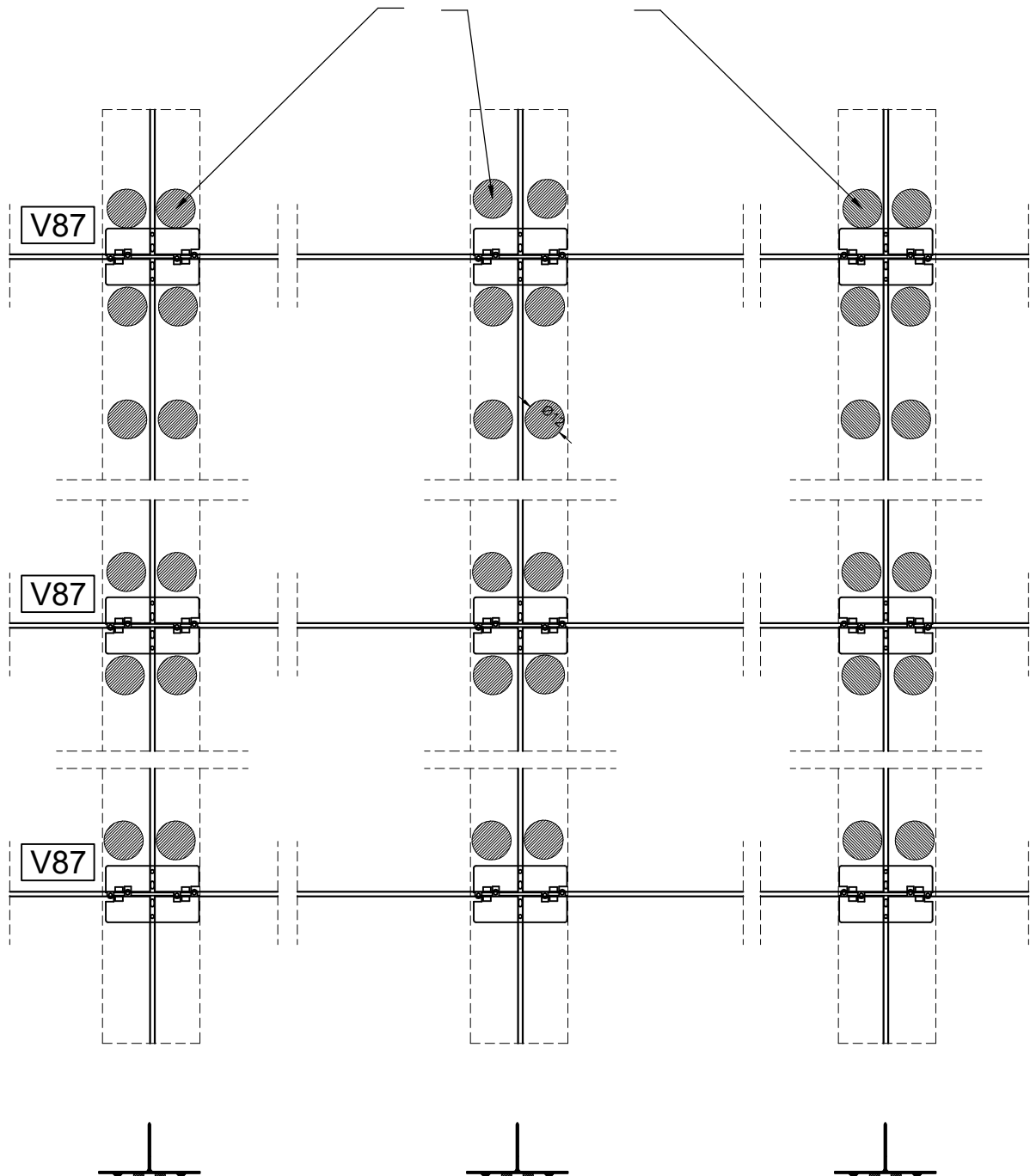


Vertikalni presek
Vertical section



Površina razlivenog lepka namontirane keramike
Spread adhesive area of the installed ceramics

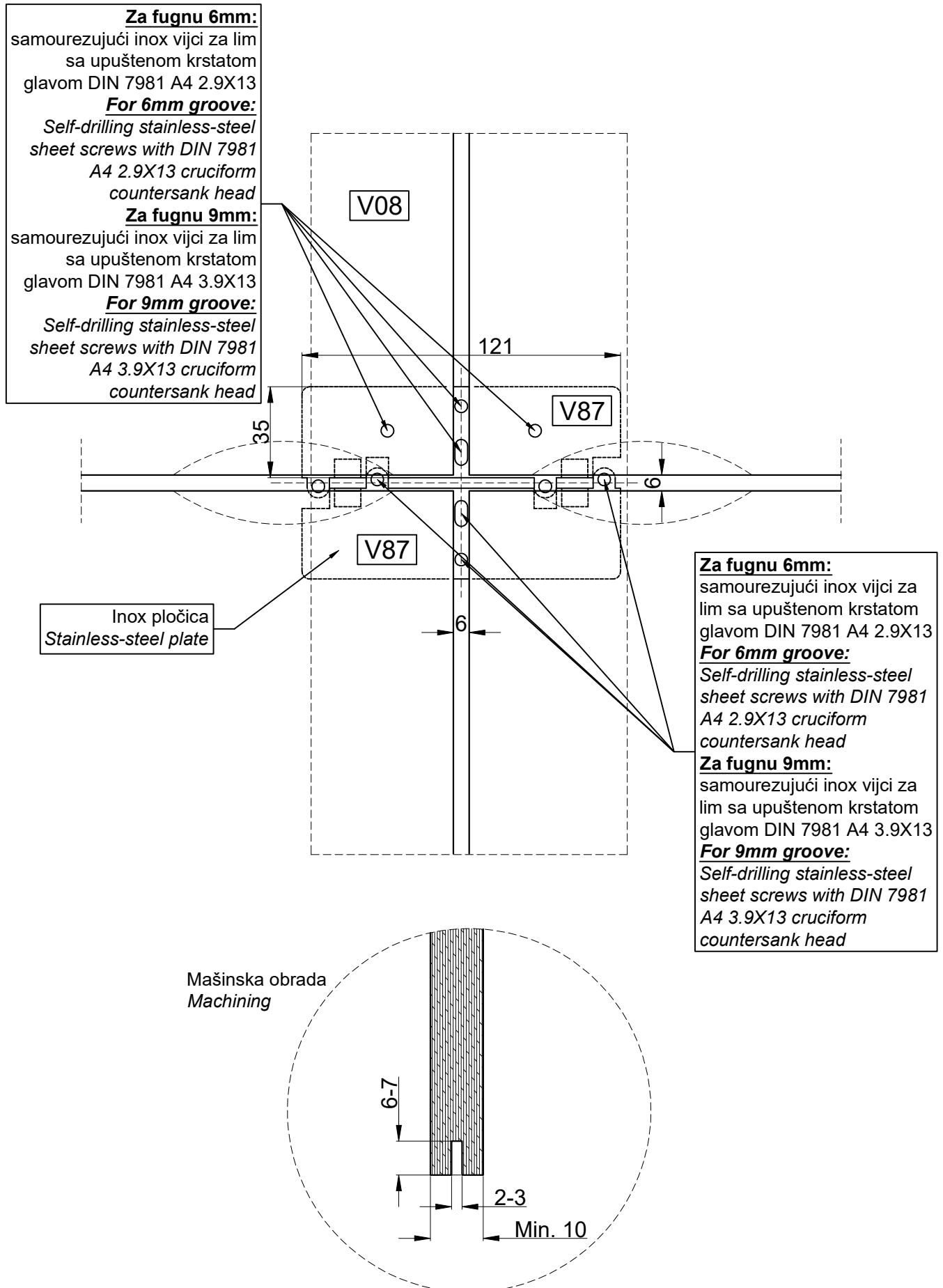
SIKA FLEX 11FC



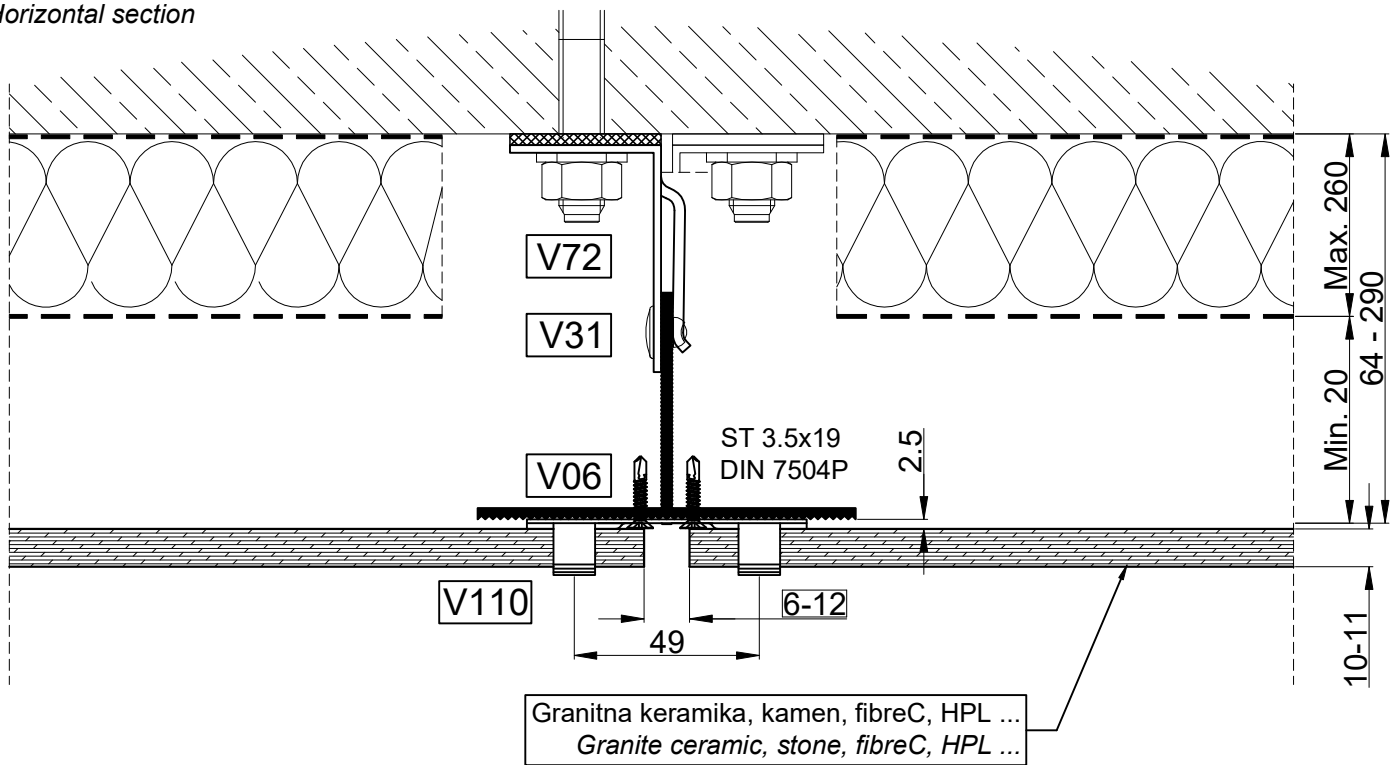
Sirov aluminijumski profil pripremljen za lepljenje prema specifikaciji proizvođača lepka.
Mill-finished aluminium profile prepared for gluing according to specification by adhesive manufacturer.

Lepak se nanosi na sirovu površinu. Ukoliko se želi fugna u boji, ukloniti sa plastificiranog profila boju u širini potrebnoj za nanošenje lepka.

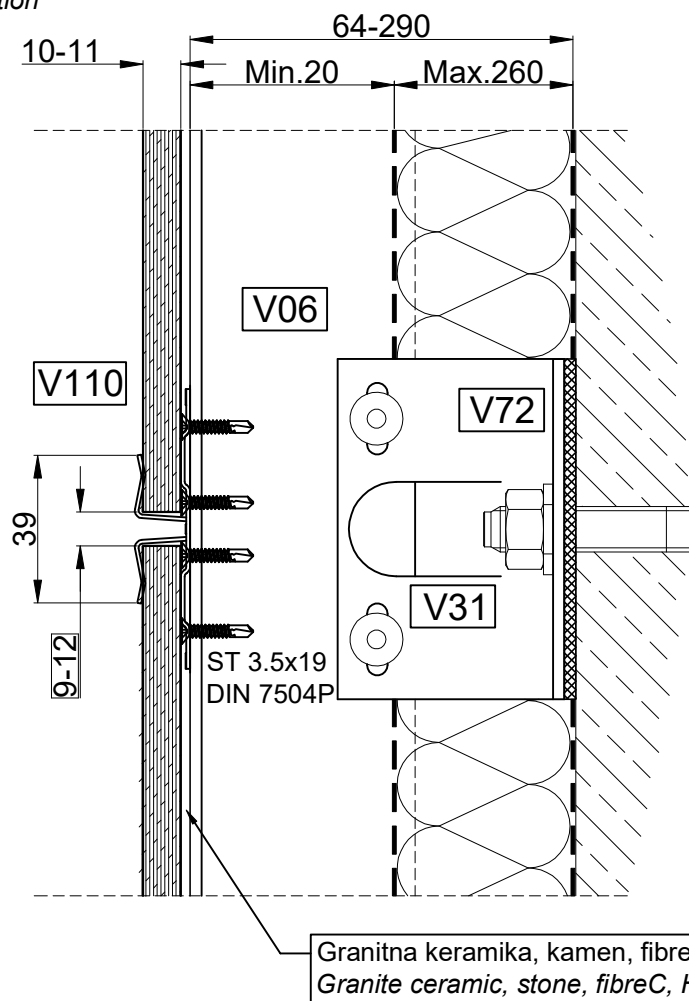
Adhesive is applied to mill-finished surface. In case a colored groove is desired, remove the layer of paint from the color-coated profile in width needed for application of adhesive.



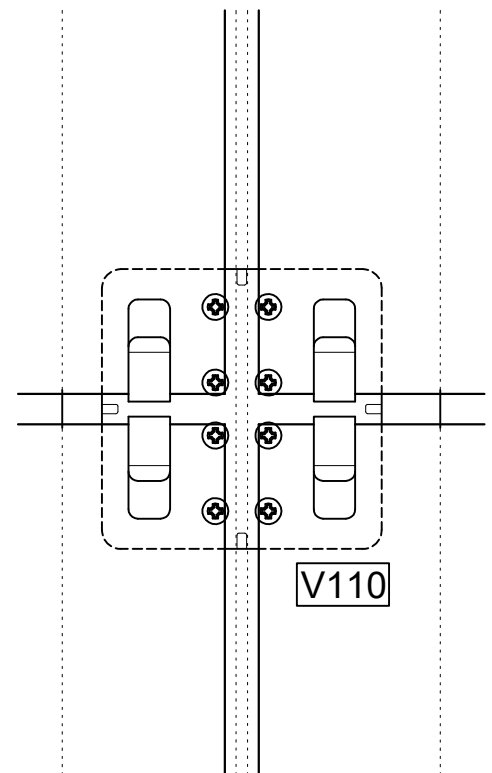
Horizontalni presek
Horizontal section



Vertikalni presek
Vertical section



Prednji izgled
Front view





Sistem
System
VENT ROCK



Tehnički opis sistema

Sistem aluminijske podkonstrukcije koji je namenjen prihvatanju ravnih ploča najčešće od prirodnog kamena, fiksiranih nevidljivim nosačima sa naličja ploča i delimično vidljivim profila nosača sa lica fasade u zoni horizontalnih fuga, koji se u zavisnosti od zahteva u projektu mogu plastificirati u traženoj boji po RAL ton karti. Suvi je postupak ugradnje, montaža je jednostavna, a neretko je prihvaćen kao standard za teške fasadne obloge. Debljina fasadne obloge može biti od 10-40mm u zavisnosti od strukture materijala.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

a) Primarni noseći profil - vertikala se u projektovanom rasteru postavlja na mestima vertikalnih spojeva/fuga fasadnih ploča. Maksimalna preporučena dužina nosećih profila je 3,5m, a njihovo maksimalno rastojanje između nosećih profila je 90cm, u zavisnosti od statičkog proračuna i primenjenog materijala za fasadnu oblogu.

b) Fiksiranje primarnih nosećih profila („T“, „L“ ili „Ω“ profili) se vrši kotvama, koje omogućavaju fino podešavanje/pozicioniranje nosećih aluminijskih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Maksimalna preporučena udaljenost kotvi je 1,2m (definiše se statičkim računom). Njihov spoj sa vertikalama se ostvaruje u vidu pop-zakivaka kroz otvore u ankerima koje omogućuju kako fiksnu vezu, tako i dilatirajuću vezu. Ukoliko postoji zahtev za termoprekidom, neophodno je kao izolacioni sloj, između punog dela zida i aluminijskih kotvi, postaviti plastične podloške.

c) Nakon montaže vertikala, montiraju se sekundarni noseći aluminijski profili na mestima horizontalnih fuga, a njihov spoj sa vertikalama ostvaruje se odgovarajućim nerđajućim vijcima.

d) Prateći postavljanje horizontalnih sekundarnih nosećih aluminijskih profila paralelno se postavljaju prethodno žlebovane ploče fasadne obloge naslanjanjem na njih. Preporuka je da se pre postavljanja ploča na noseće sekundarne profile stave plastične podloške kako bi se neutralisalo dejstvo mikrovibracija između kamena i nosećeg sekundarnog profila.

e) Obrada izabranog tipa ploča se vrši isecanjem ploča na ugradnu meru i žlebovanje dve suprotne stranice, koje će na fasadi predstavljati gornju i donju ivicu fasadne ploče. Predviđena fuga u ovom sistemu je 7,5mm.



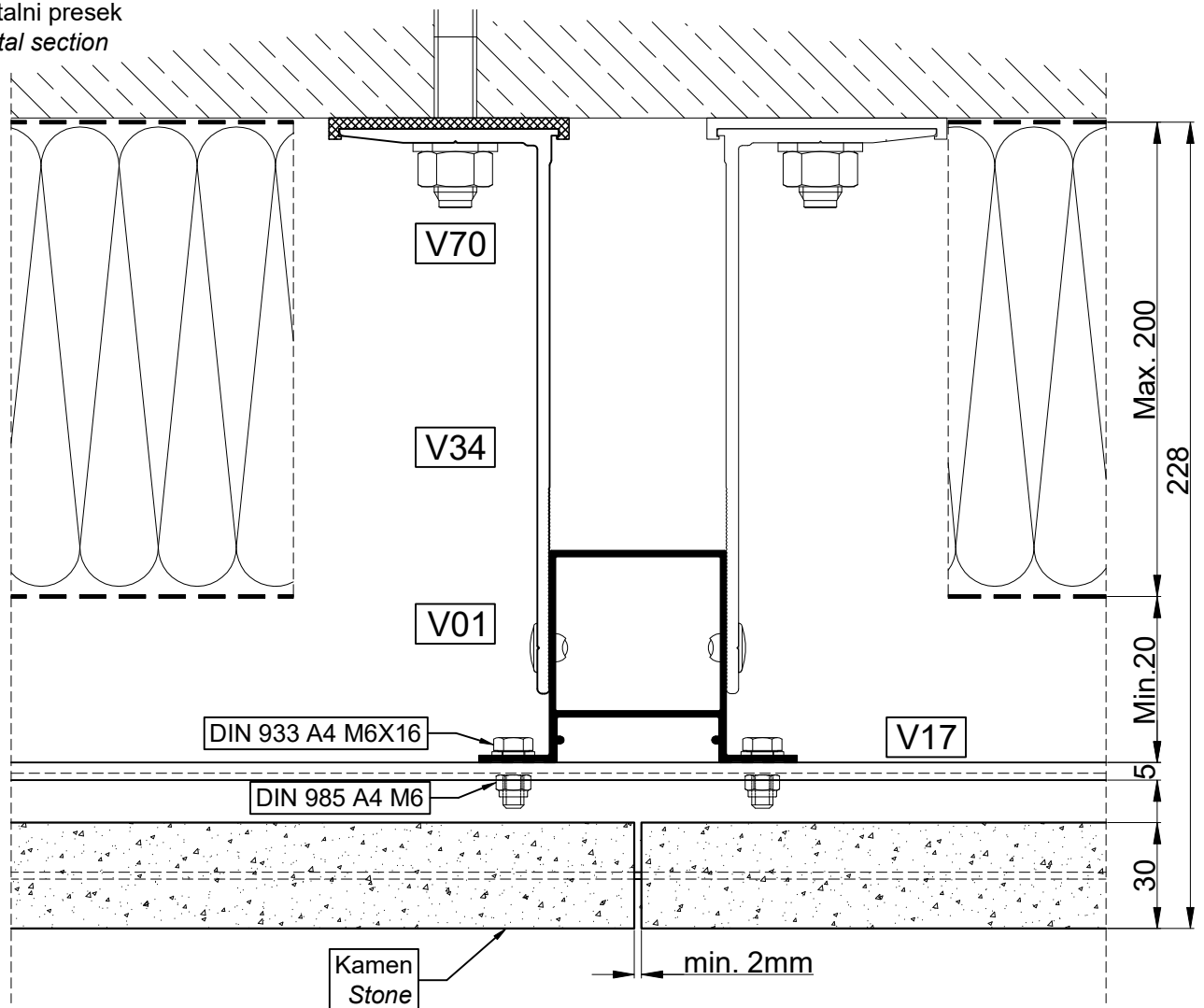
Technical description

Aluminium substructure system for natural stone tiles, fixed with hidden profiles, only partially visible from outside through horizontal gaps, and option to powder coat them according to RAL color chart. This dry installation system features full workshop preparation, simple installation and goes as standard for heavy facade cladding materials. Supported tile thickness is 10-40mm, depending on the material structure.

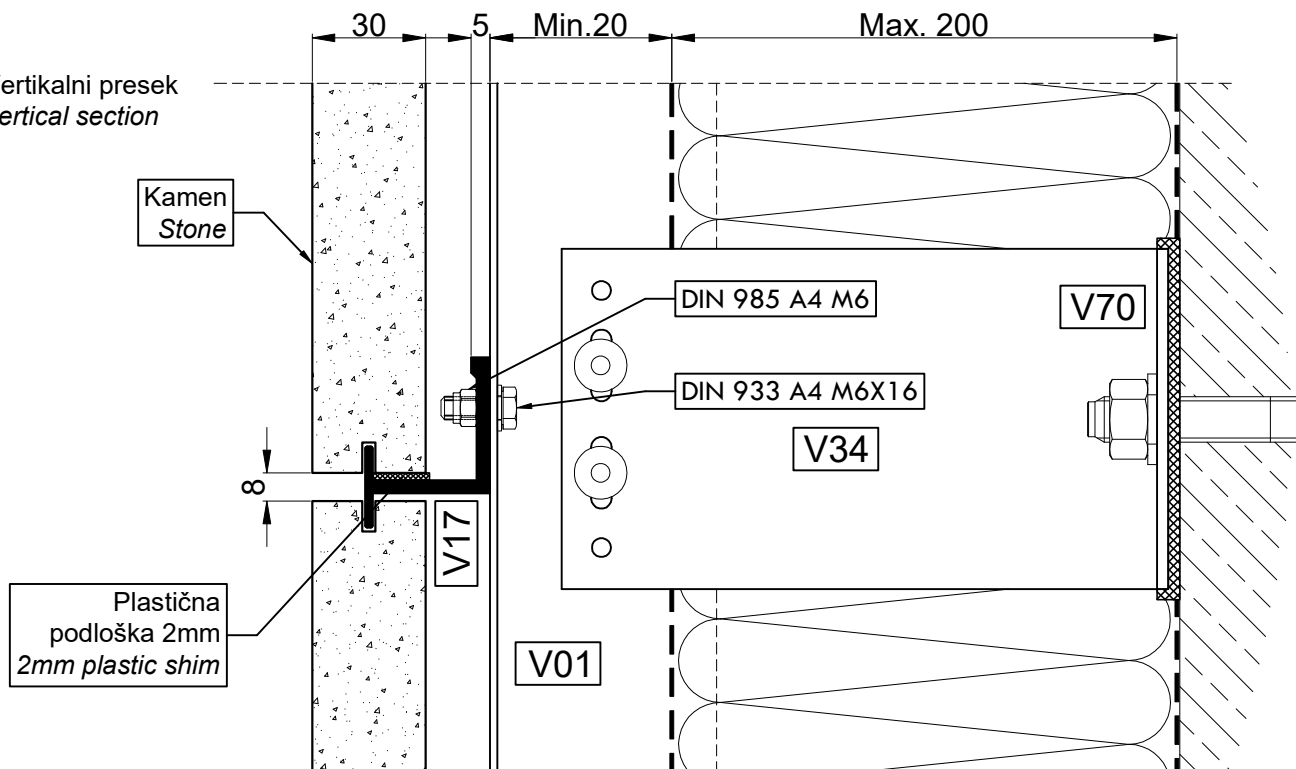
The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

- a)** Extruded load-bearing profiles are installed vertically and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 90cm between them, depending on the structural calculations for a specific project application.
- b)** The primary, load-bearing profiles („T“ „L“ ili „Ω“ profiles) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal recommended distance between system anchors is 1,2m (defined with structural calculations). System anchors and vertical profiles are connected with pop-rivets that feature integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- c)** After the installation of vertical profiles, secondary load-bearing profiles are installed in location of horizontal gaps, and attached to vertical profiles with recommended stainless steel screws.
- d)** Following the installation of horizontal profiles, facade cladding with proper grooves is installed, locking with horizontal profiles. It is recommended to install special plastic inserts on horizontal profiles to avoid micro vibrations and clatter between the stone tiles and facade profiles.
- e)** The chosen natural stone tiles for facade cladding are cut to measure and grooved on two opposite sides, so that it can safely lock with two horizontal profiles. This system features visible gap of 7,5mm.

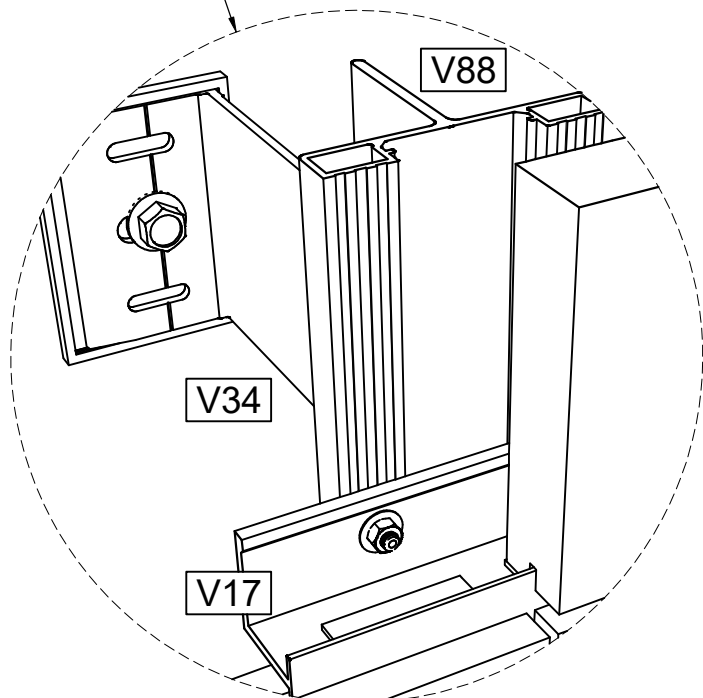
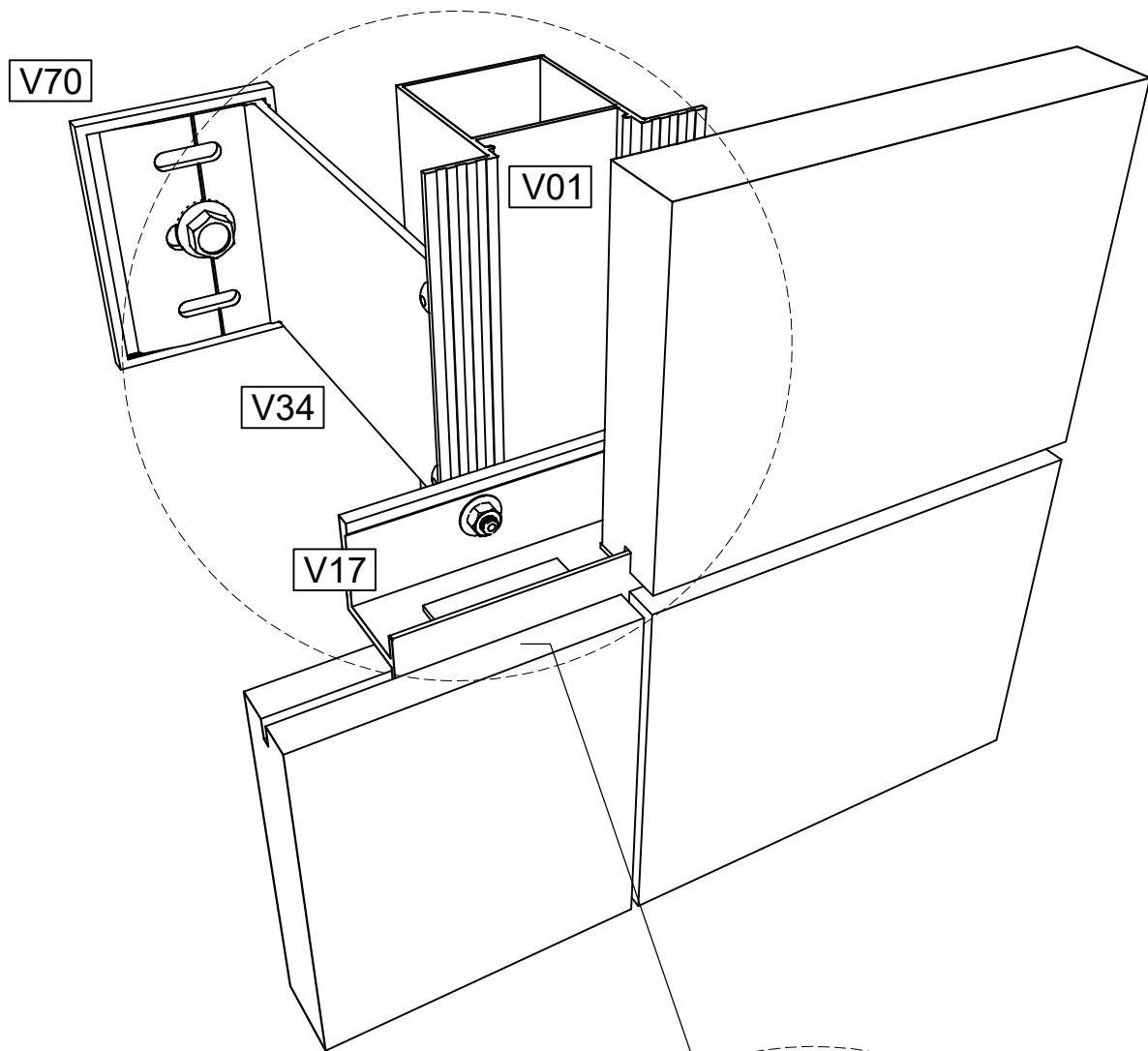
Horizontalni presek
Horizontal section



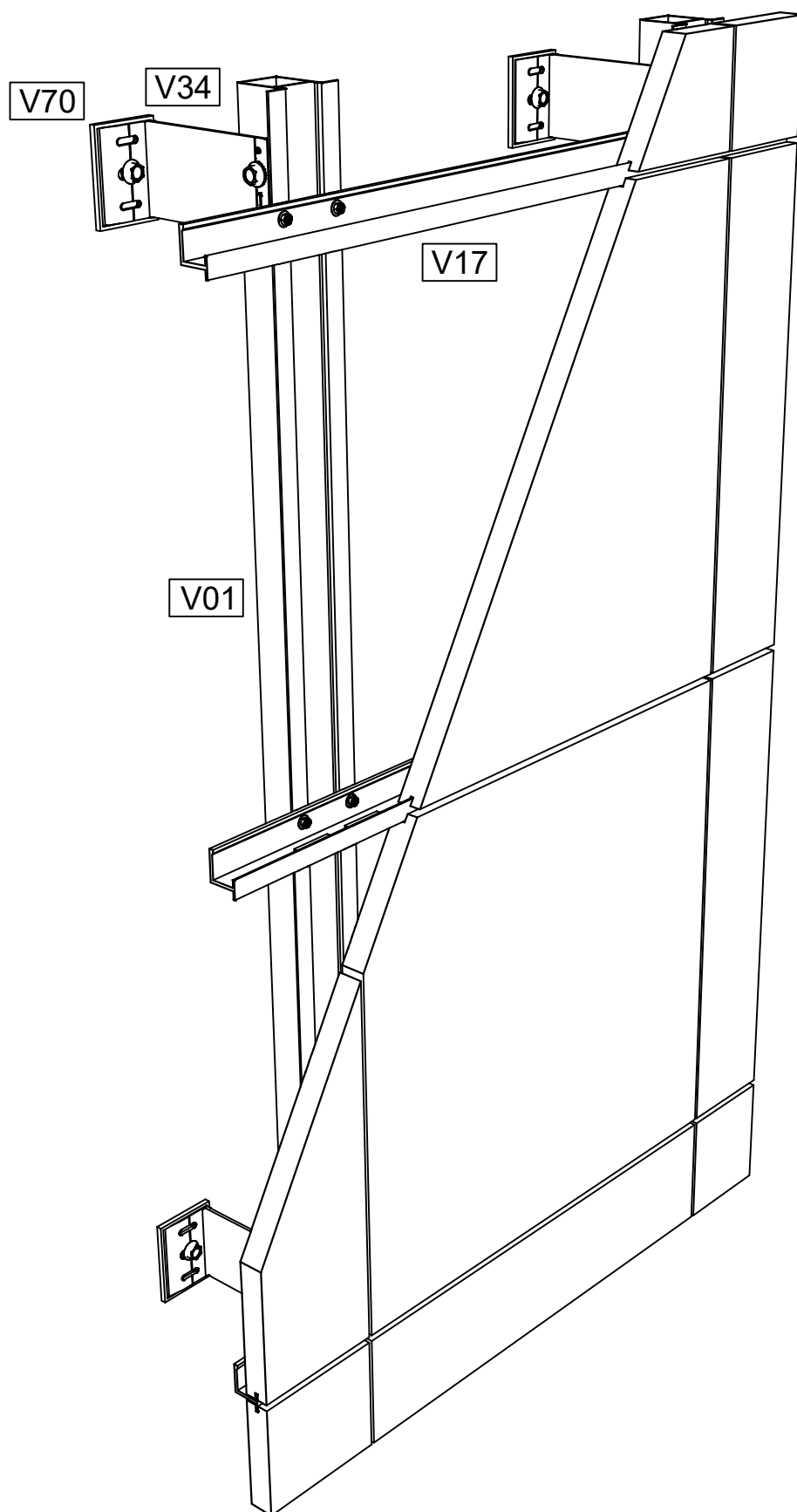
Vertikalni presek
Vertical section

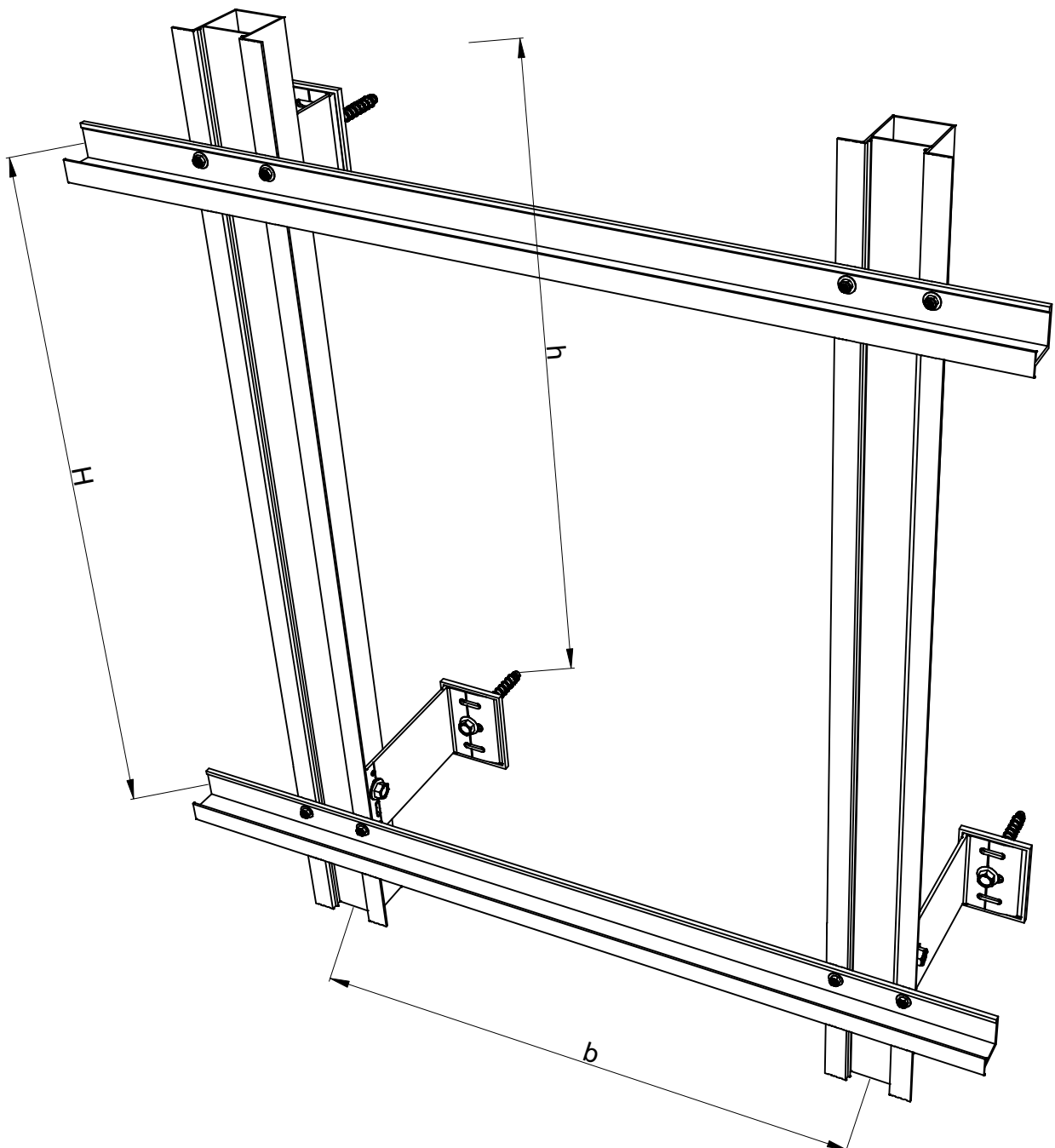


Opcija 1 - V01 kao primarna vertikalna noseća konstrukcija
Option 1 - V01 as primary vertical load bearing structure



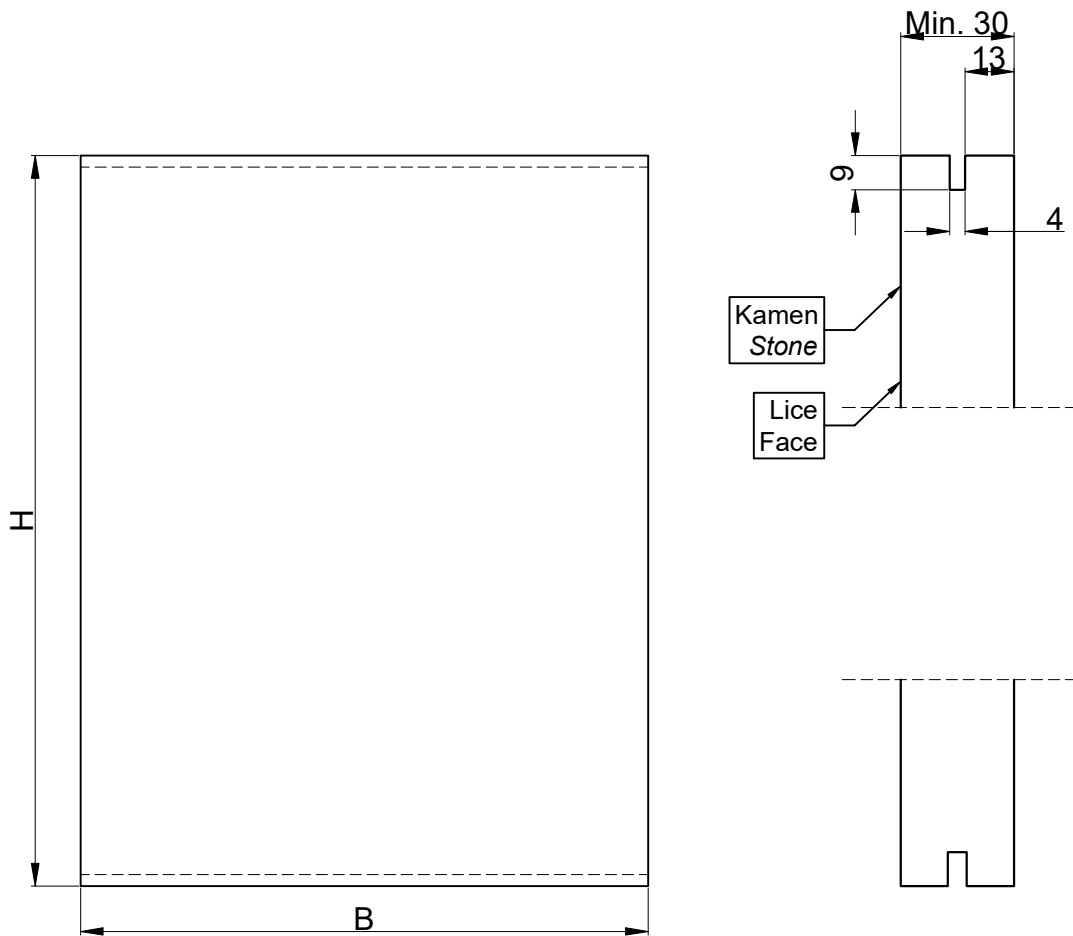
Opcija 2 - V88 kao primarna vertikalna noseća konstrukcija
Option 2 - V88 as primary vertical load bearing structure





b, h - prema statičkom proračunu, ali ne više od 1200mm
 b, h - according to structural analysis, but no more than 1200mm

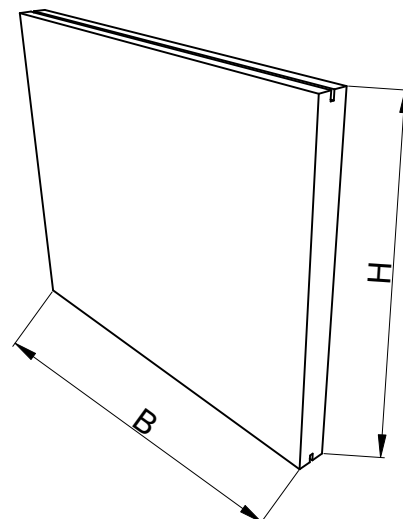
H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
 H - according to structural analysis and depending on applied cladding material, but no more than 900mm



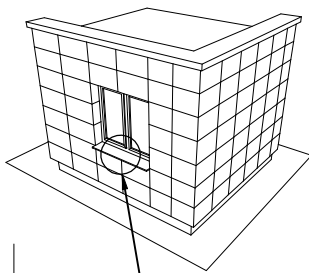
B - projektovana vidna širina panela
B - designed visible panel width

H - projektovana vidna visina panela
H - designed visible panel height

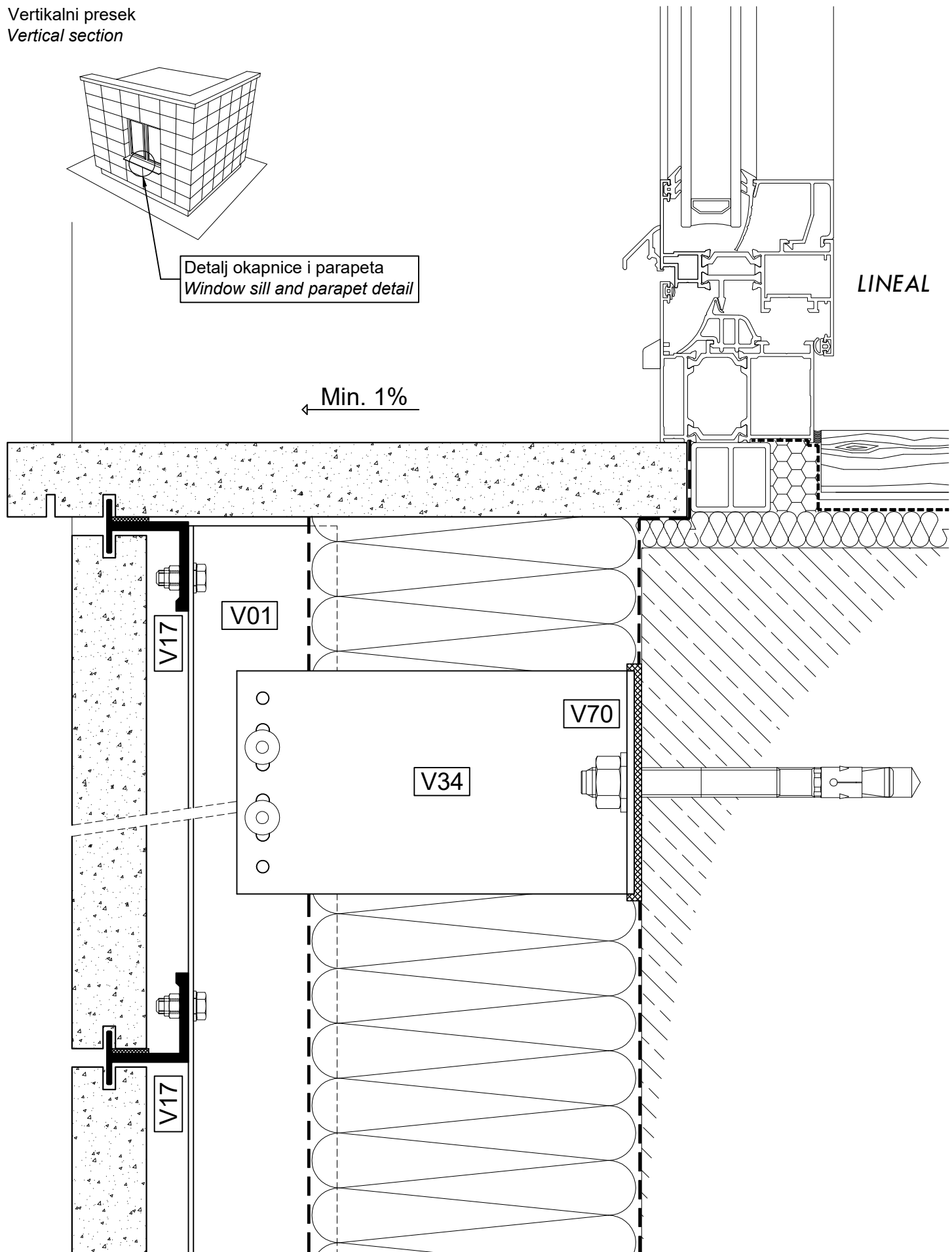
x - projektovana debljina panela
x - designed panel thickness



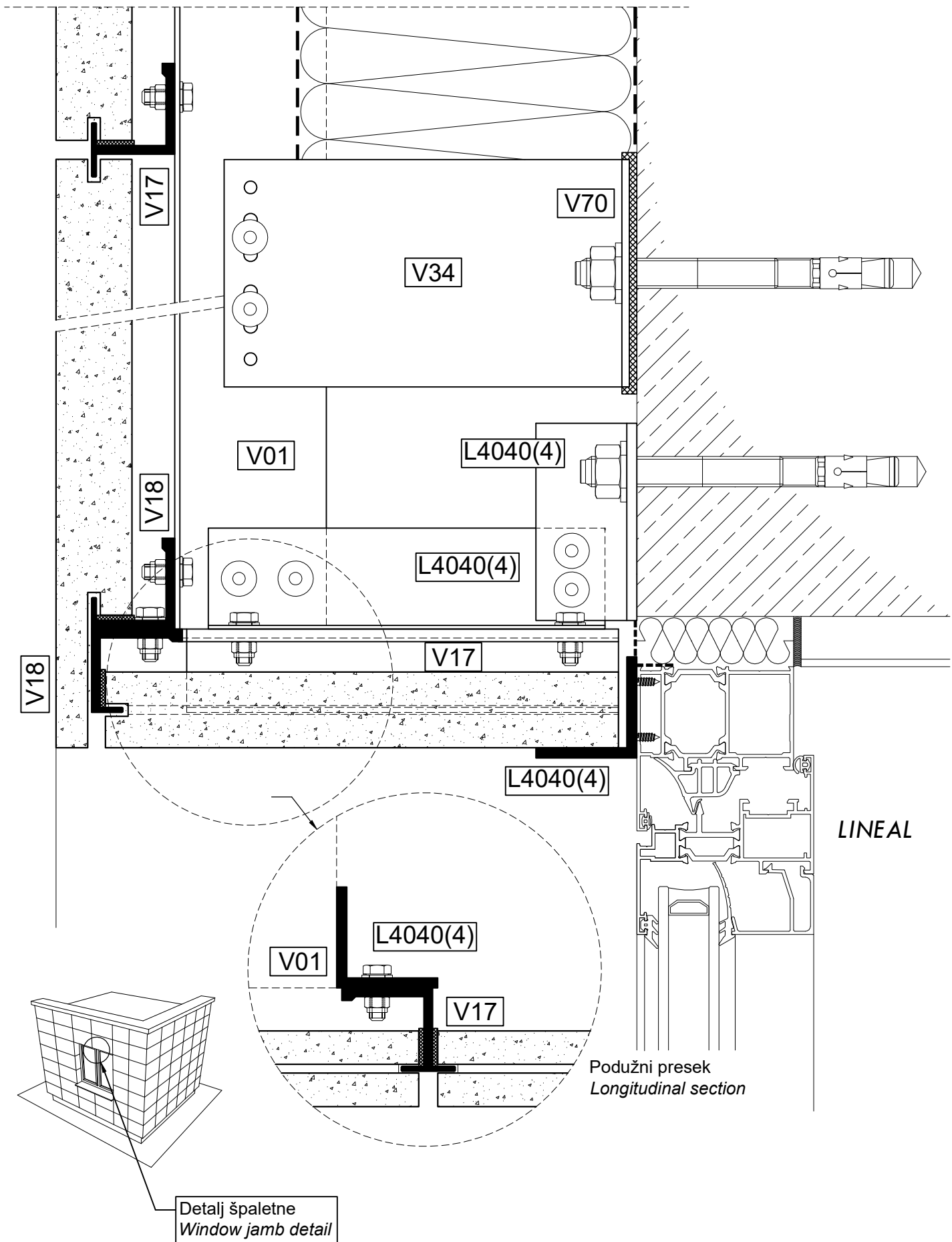
Vertikalni presek
Vertical section



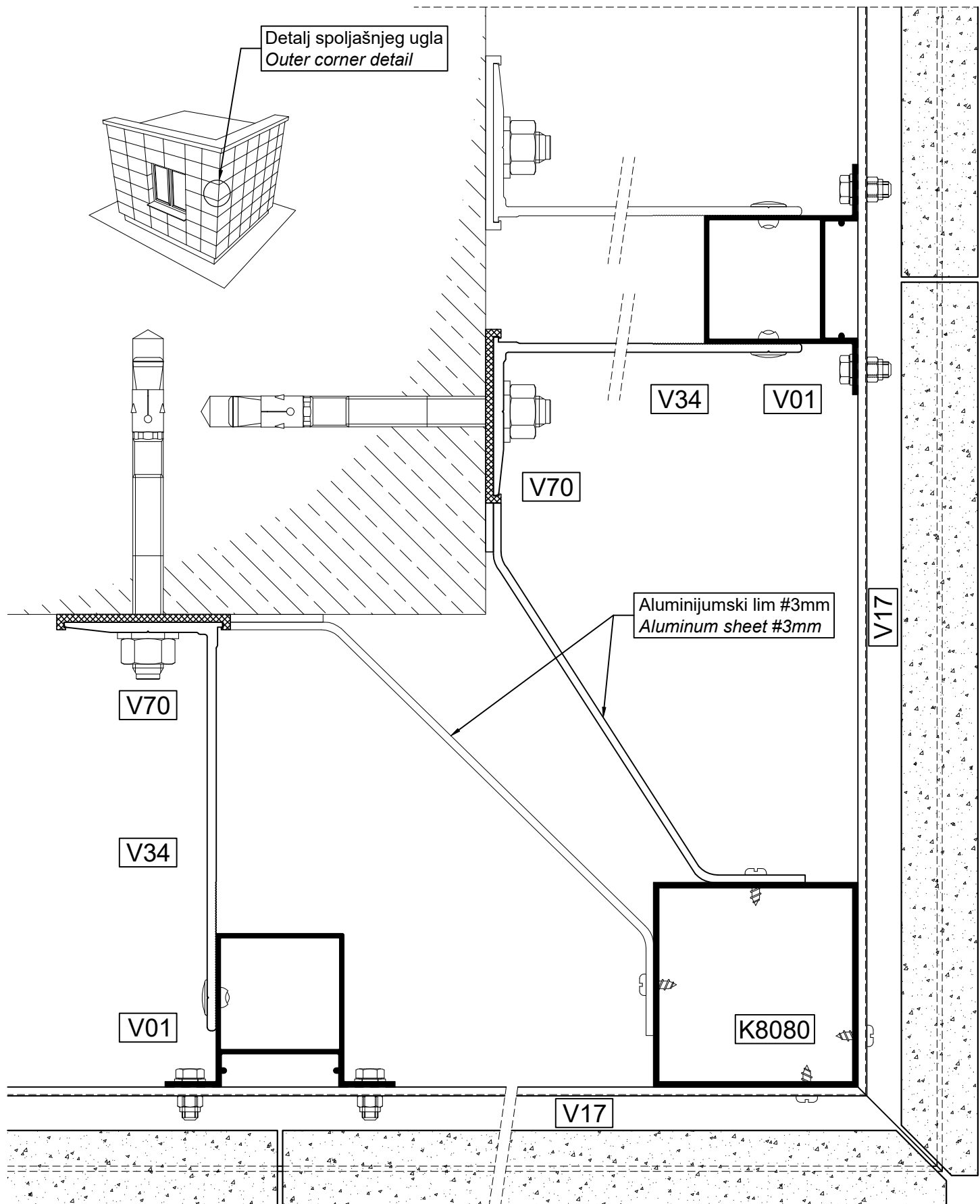
Detalj okapnice i parapeta
Window sill and parapet detail



Vertikalni presek
Vertical section

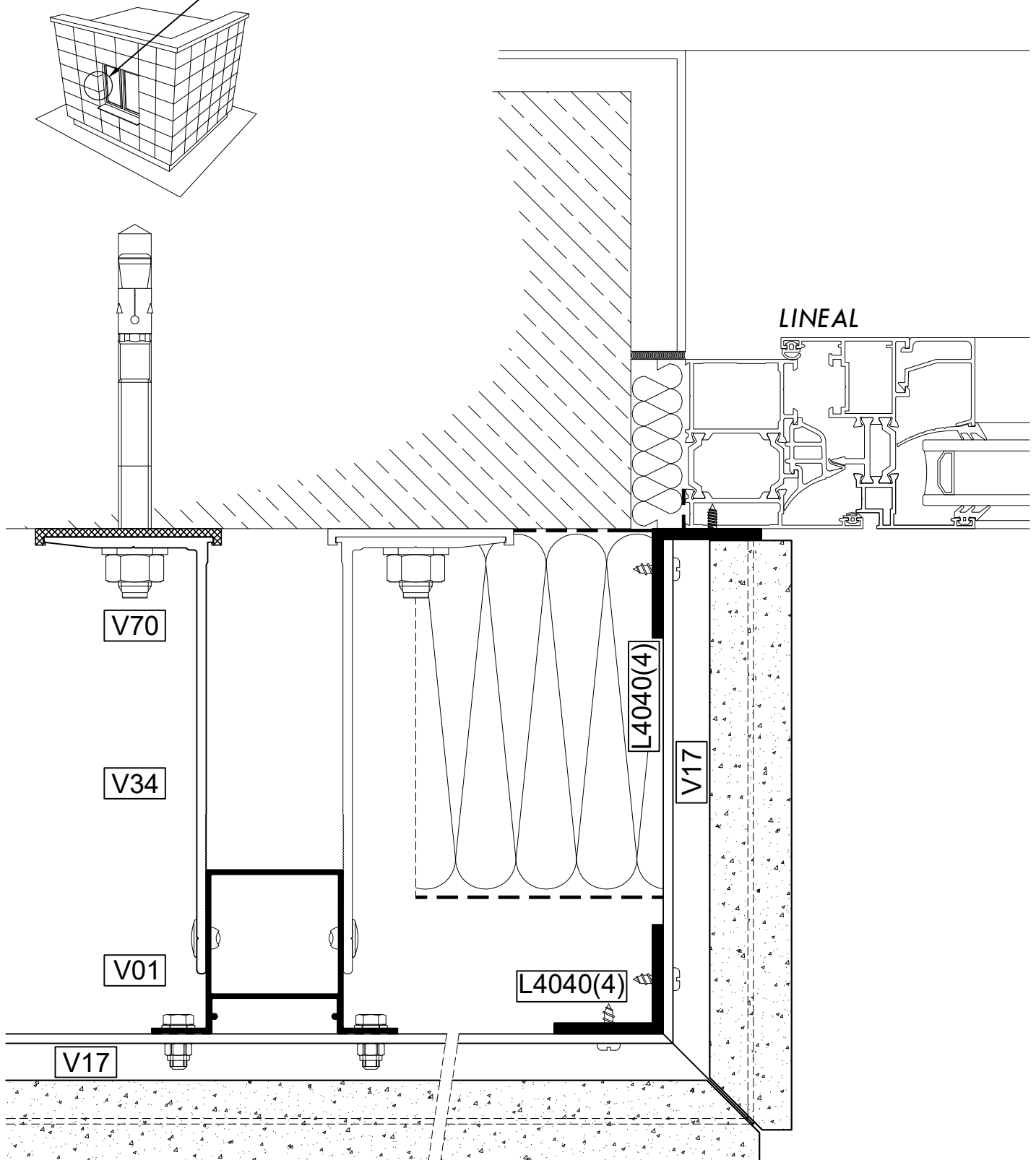


Horizontalni presek
Horizontal section

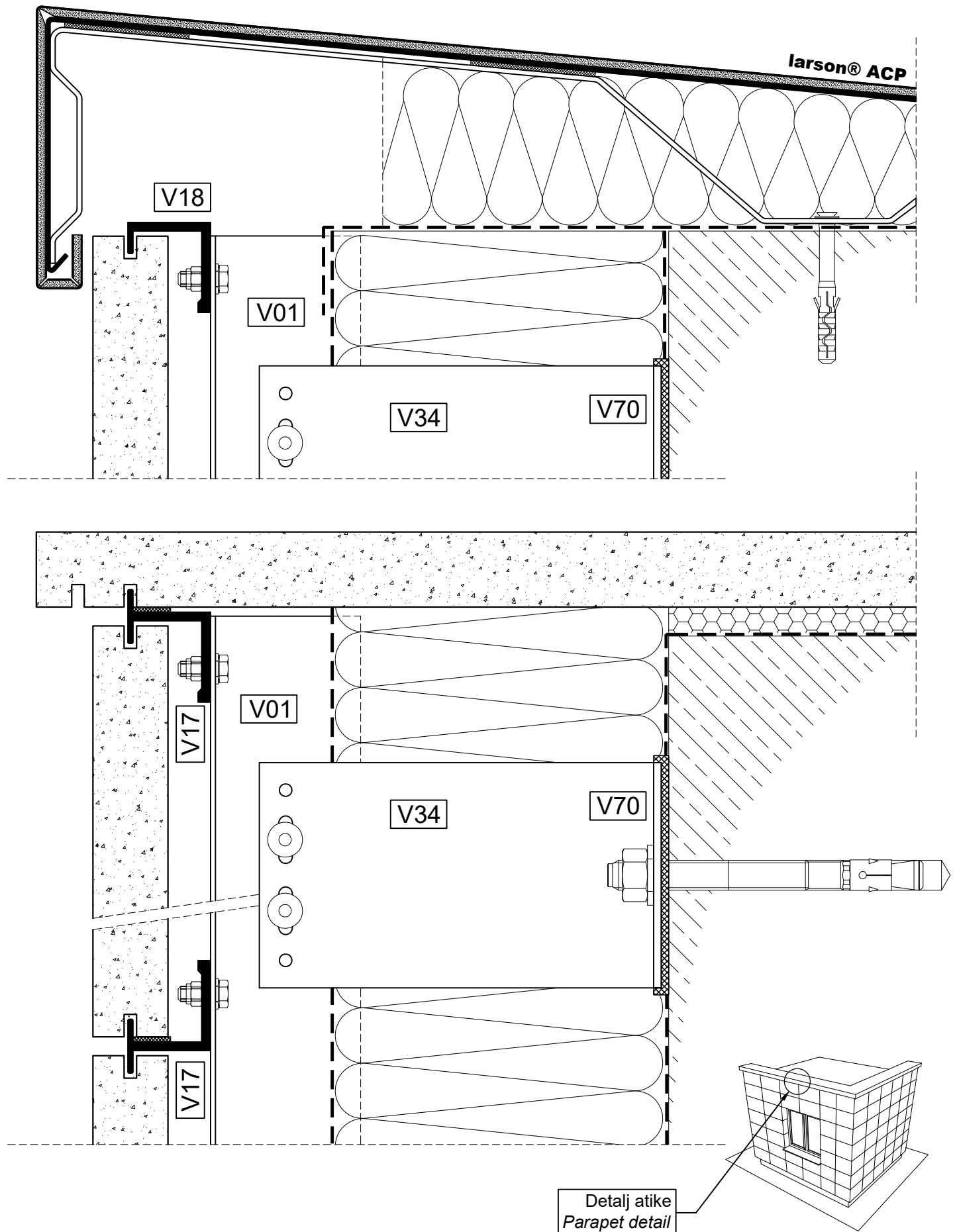


Horizontalni preseki
Horizontal section

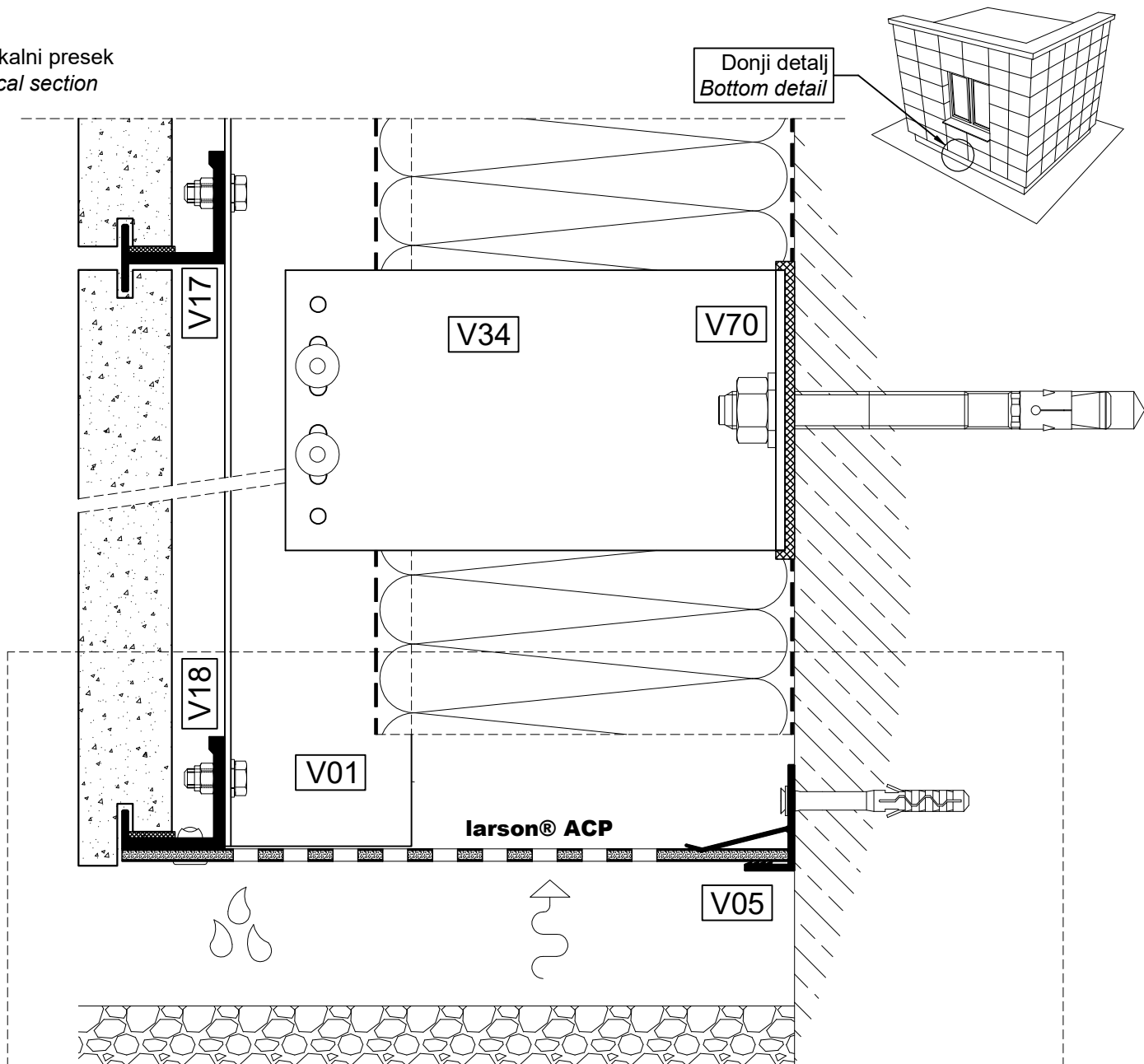
Detalj špaletne
Window jamb detail



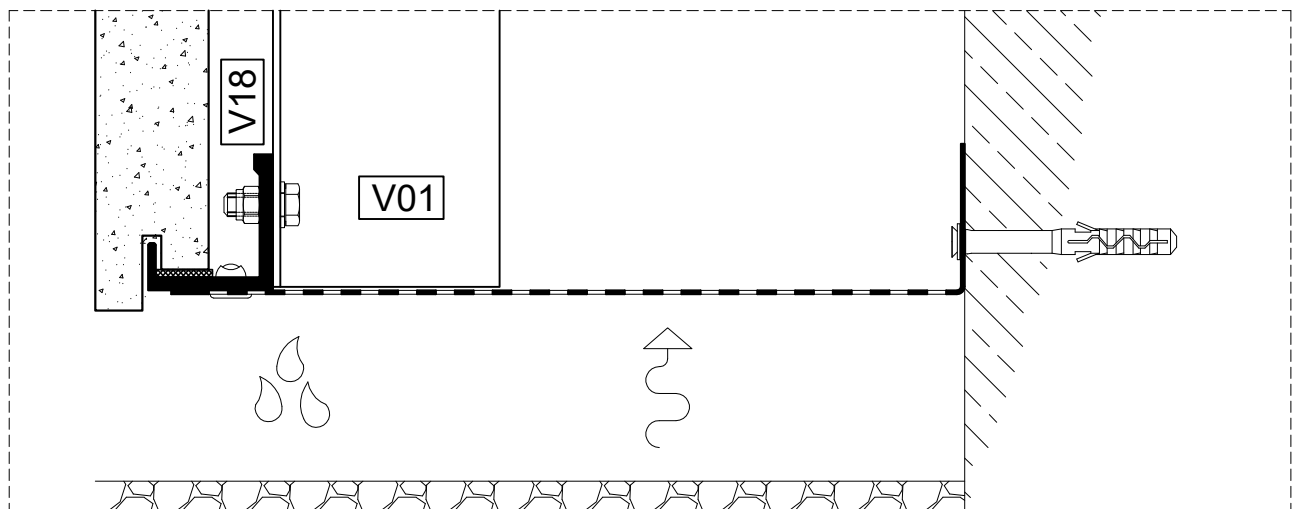
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

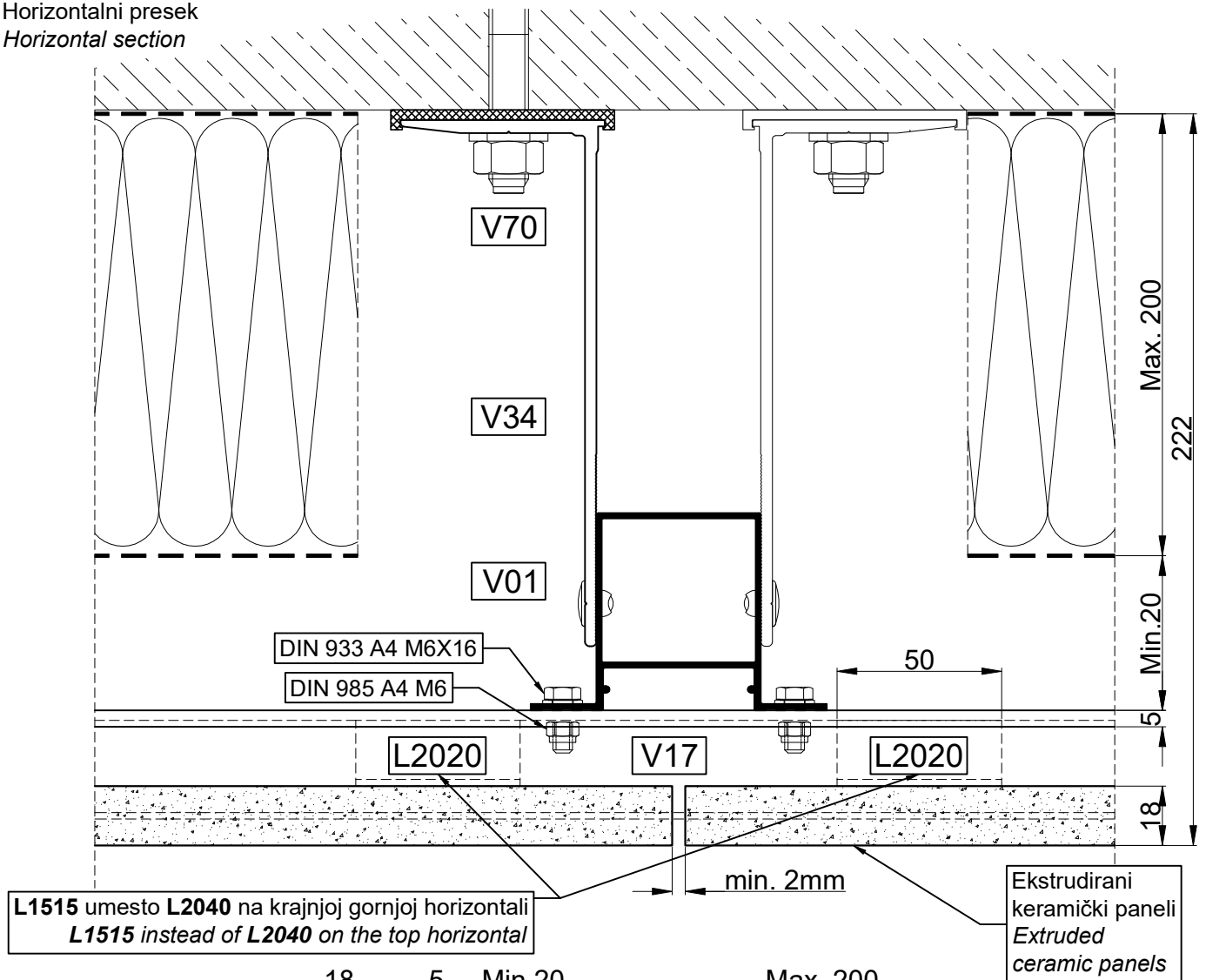


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

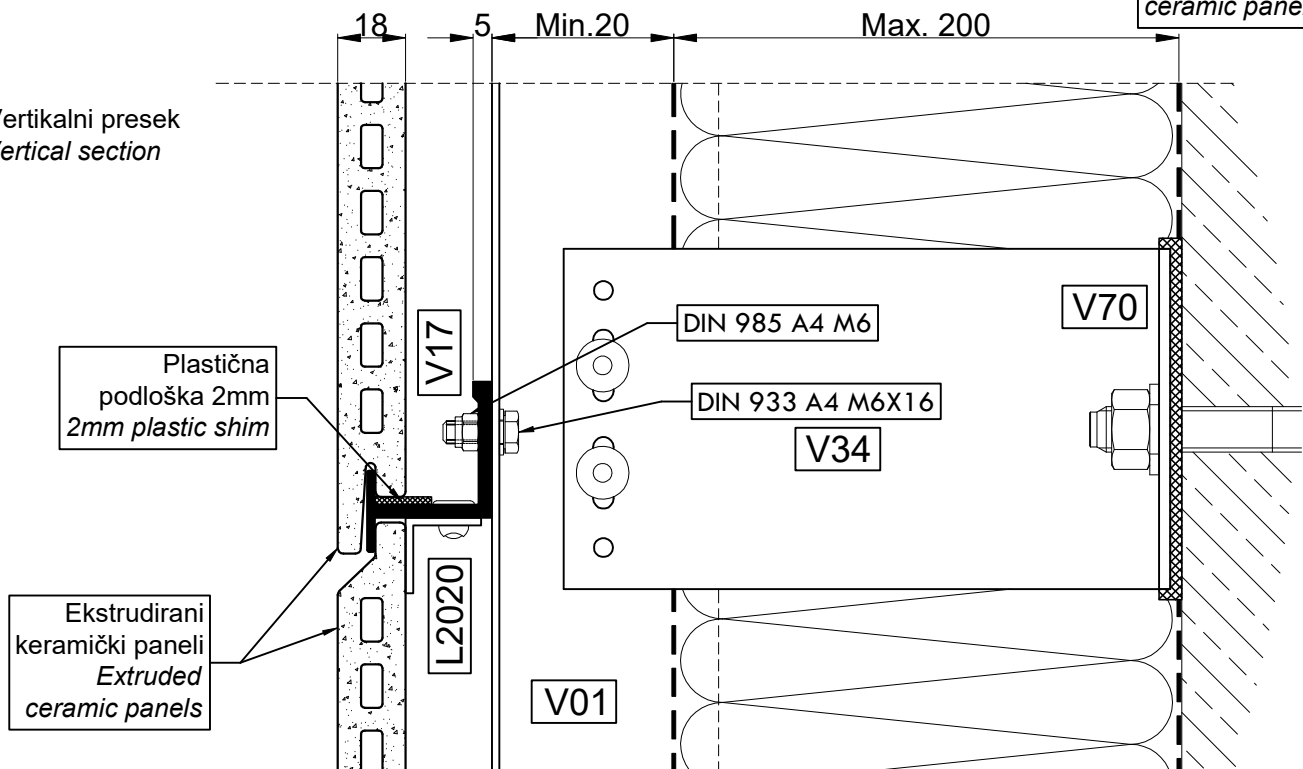


Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

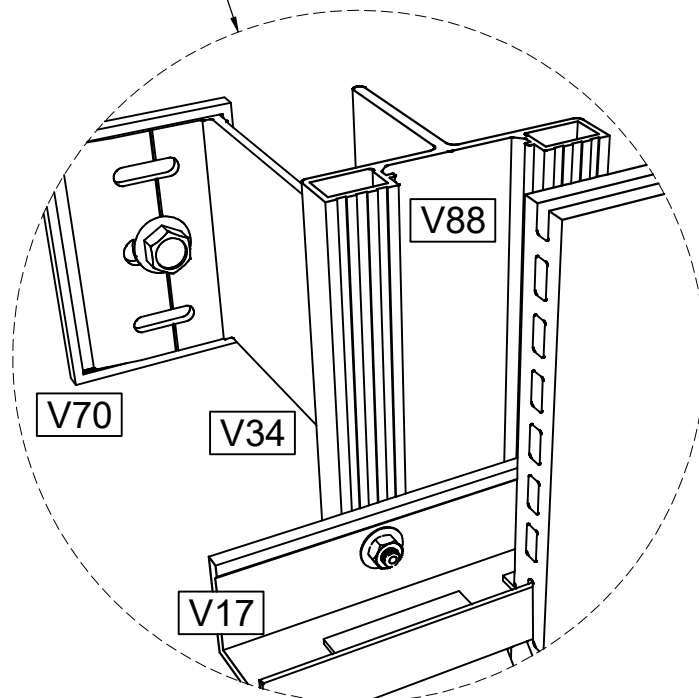
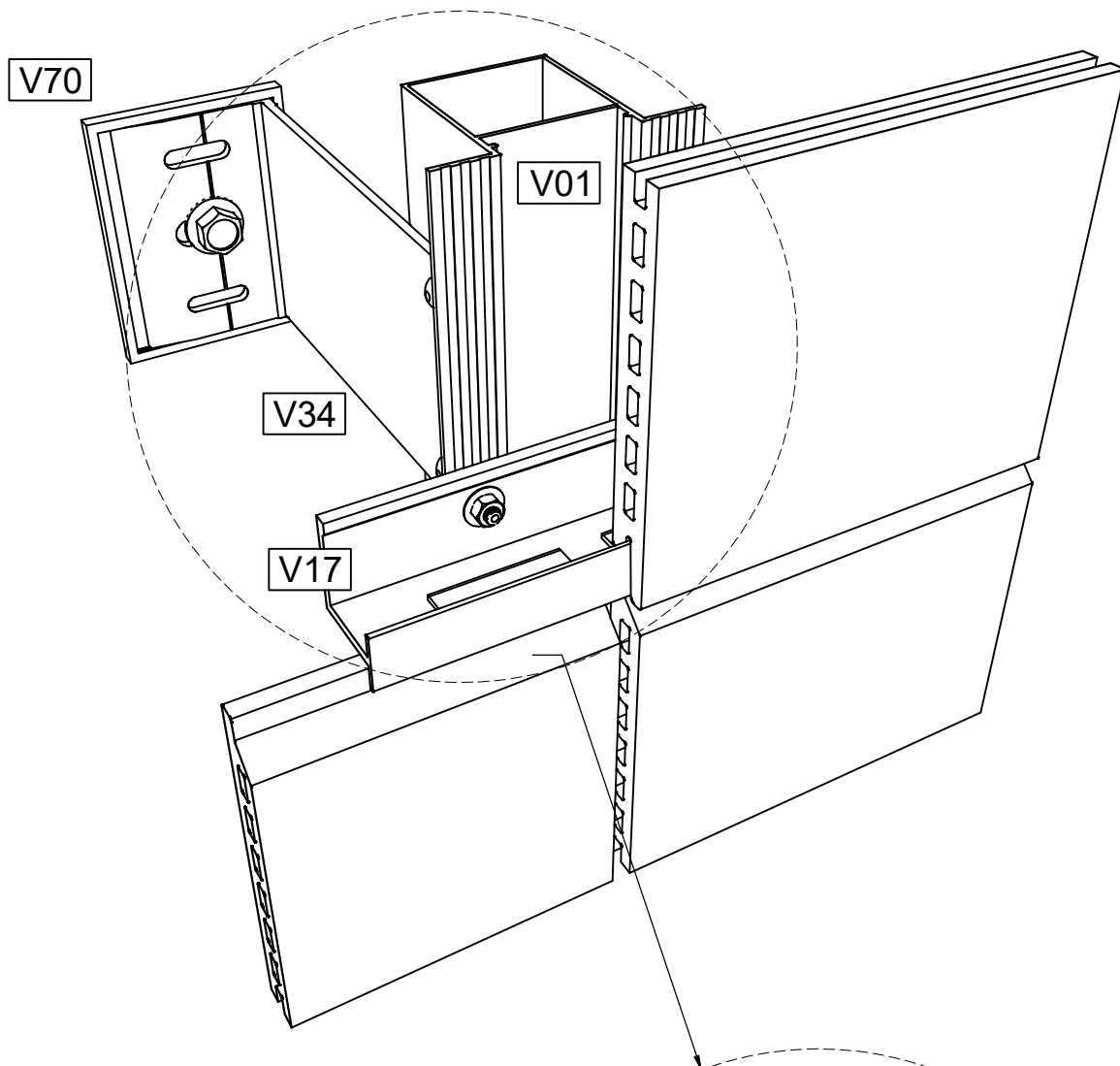
Horizontalni presek
Horizontal section



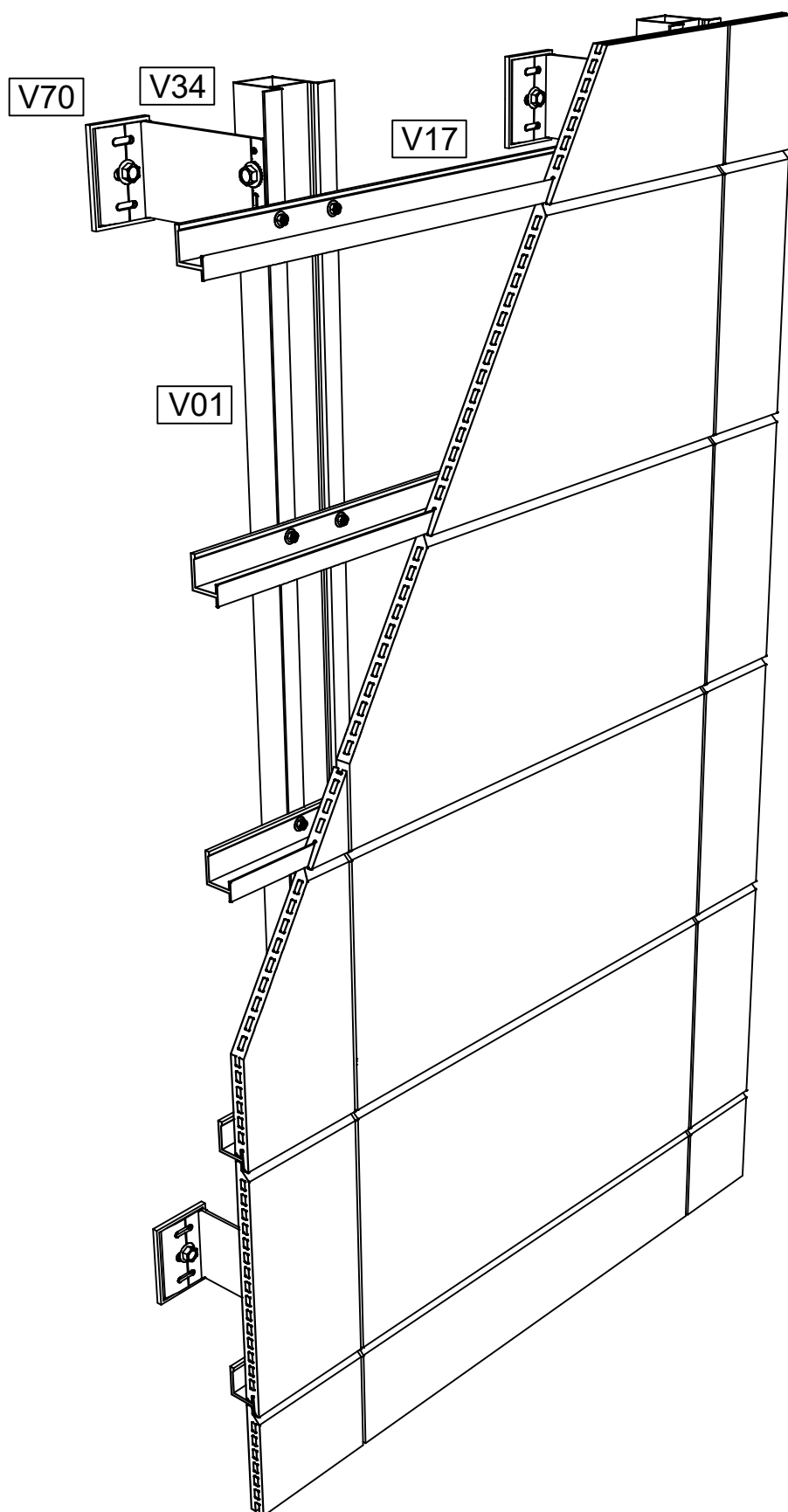
Vertikalni presek
Vertical section

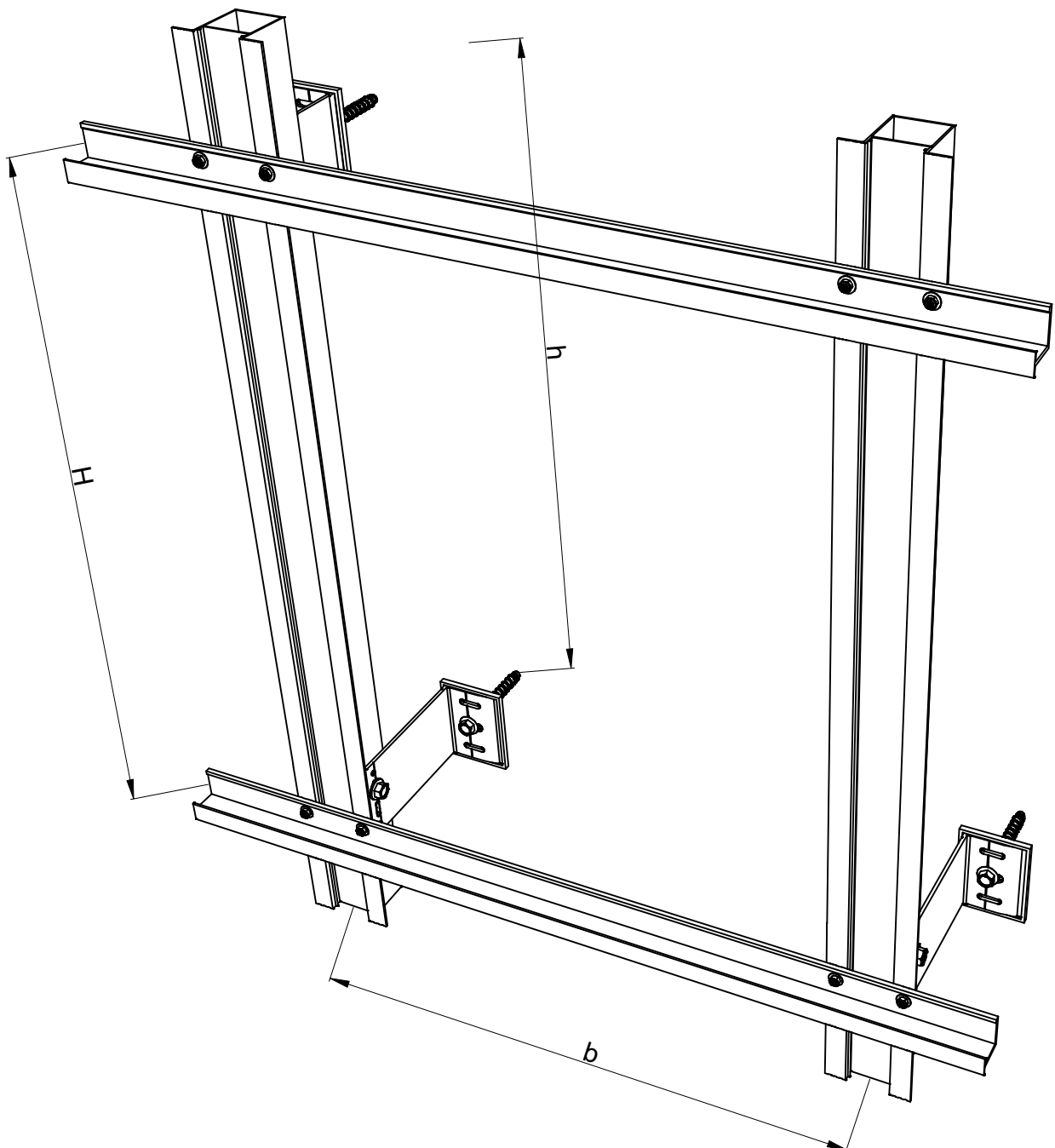


Opcija 1 - V01 kao primarna vertikalna noseća konstrukcija
Option 1 - V01 as primary vertical load bearing structure



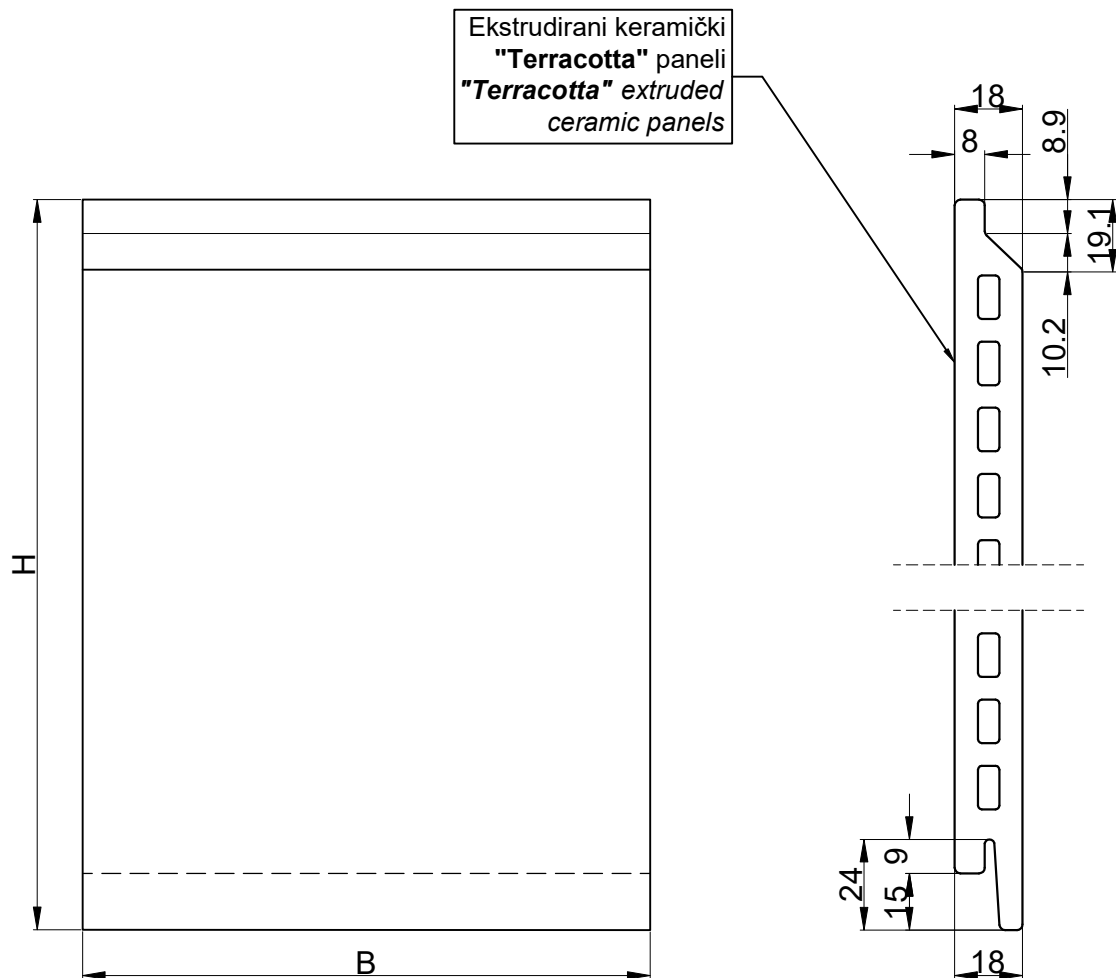
Opcija 2 - V88 kao primarna vertikalna noseća konstrukcija
Option 2 - V88 as primary vertical load bearing structure





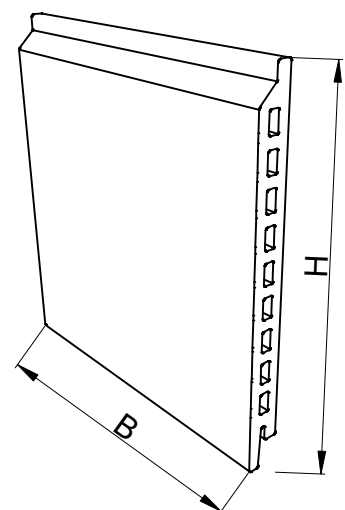
b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
H - according to structural analysis and depending on applied cladding material, but no more than 900mm

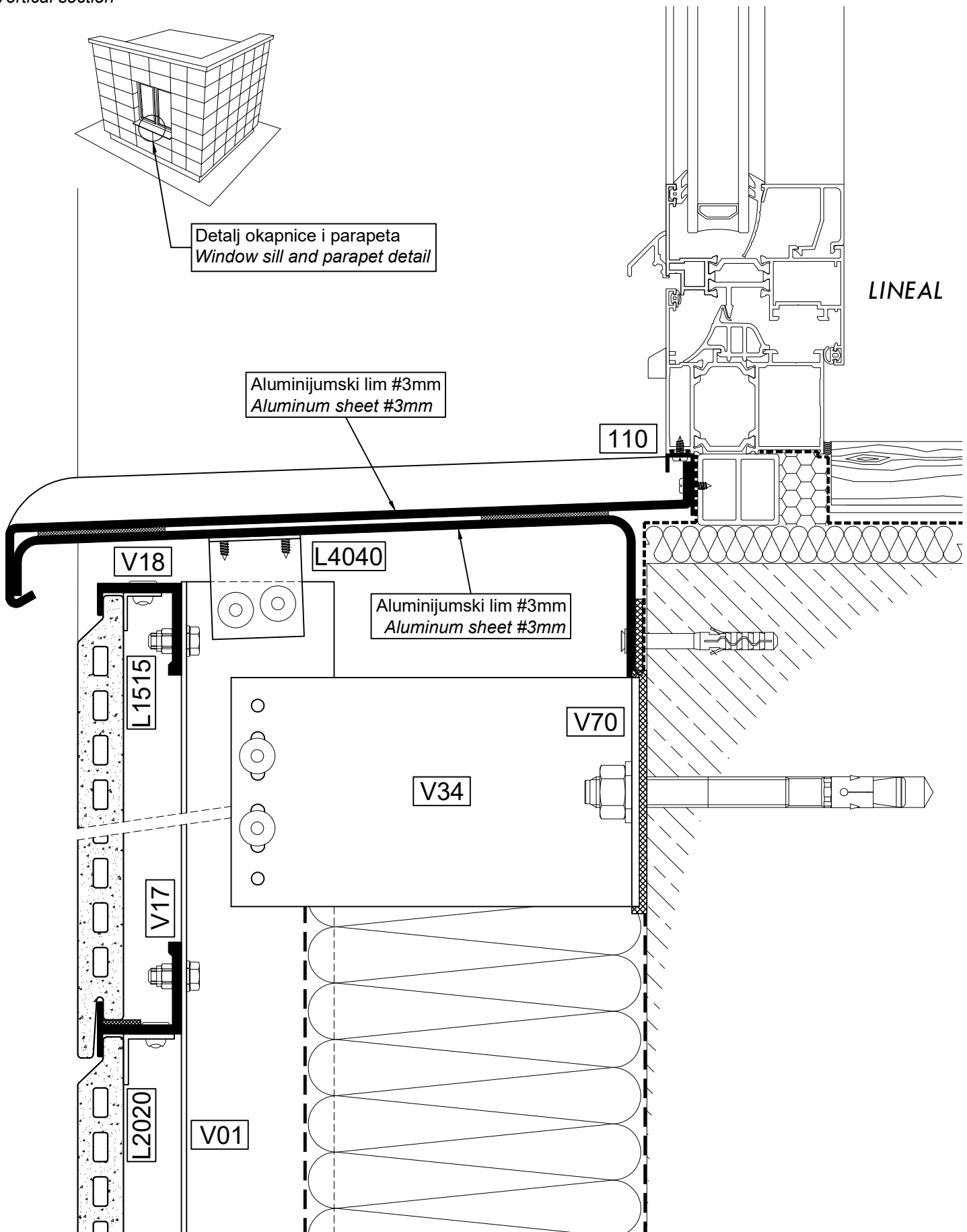


B - projektovana vidna širina panela - prema specifikaciji proizvođača
B - designed visible panel width - according to specification by manufacturer

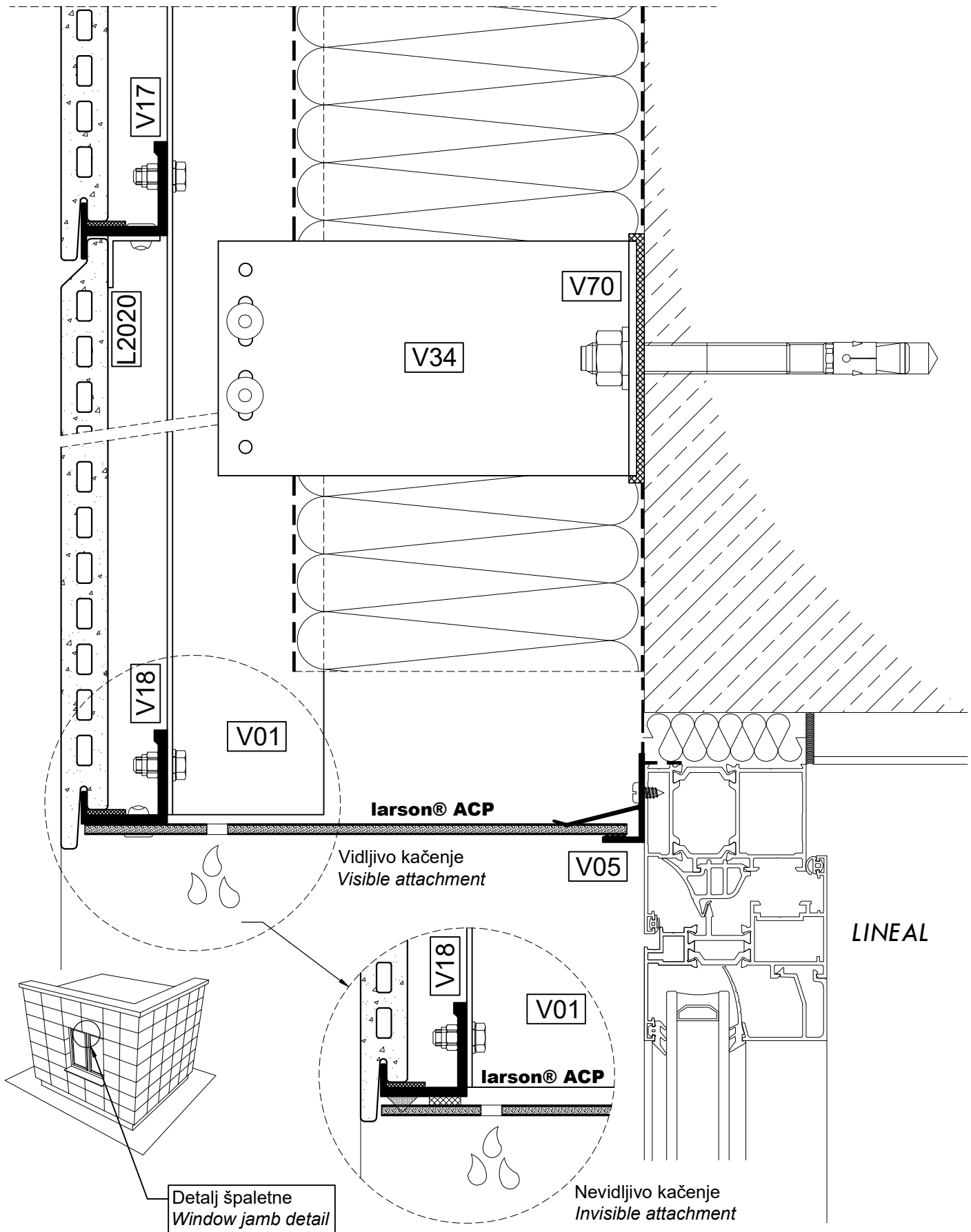
H - projektovana vidna visina panela - prema specifikaciji proizvođača
H - designed visible panel height - according to specification by manufacturer



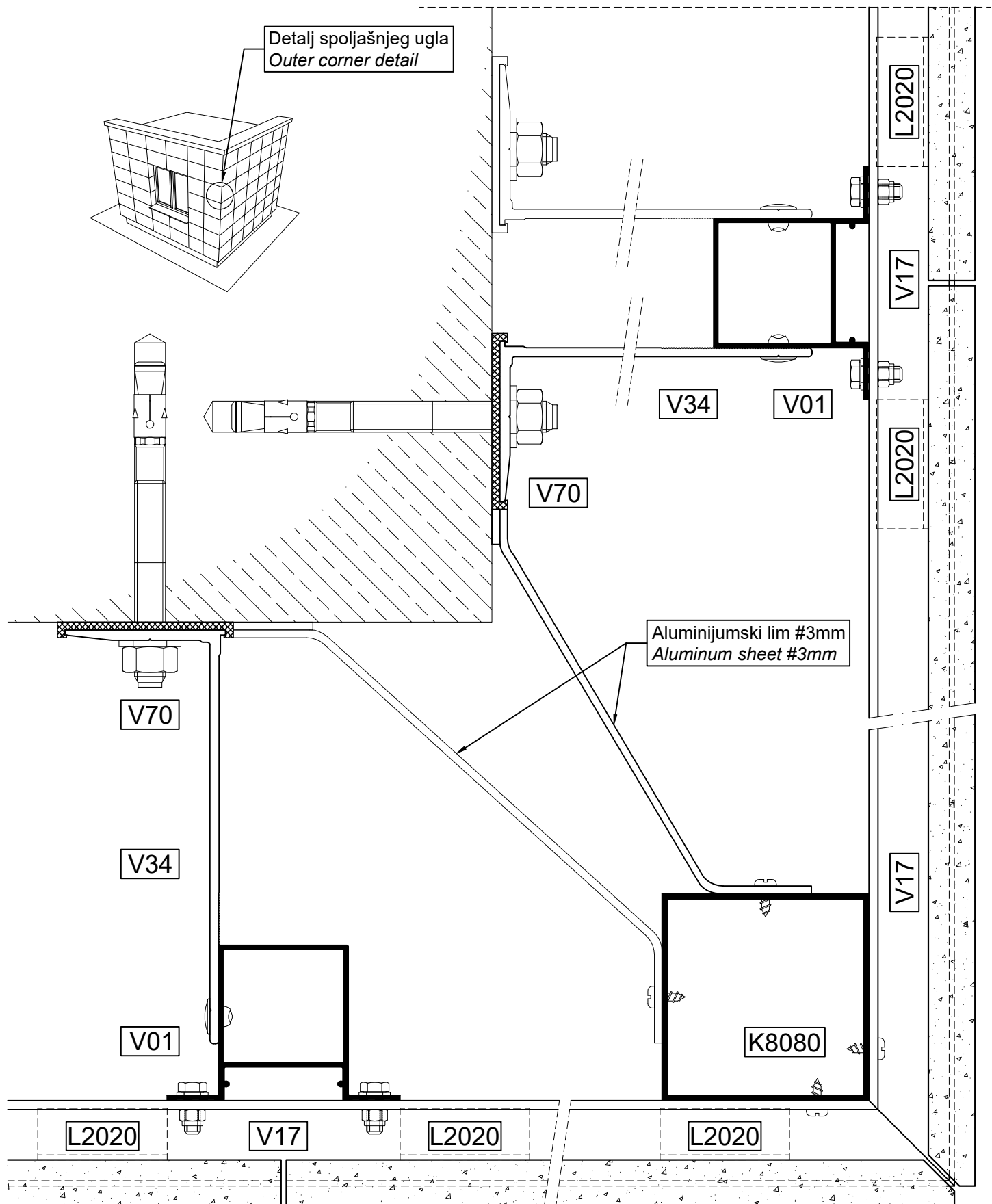
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

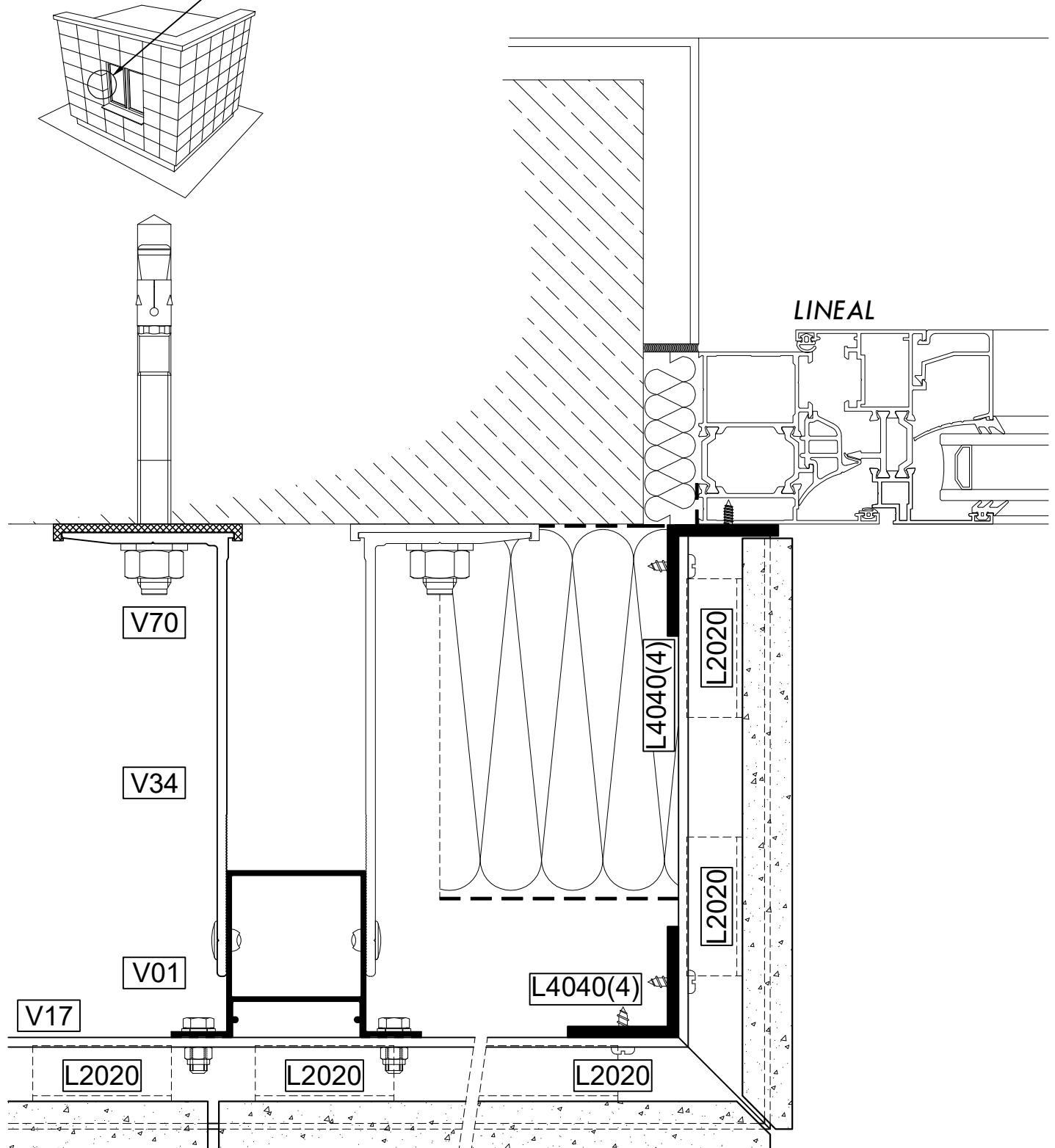


Horizontalni presek
Horizontal section

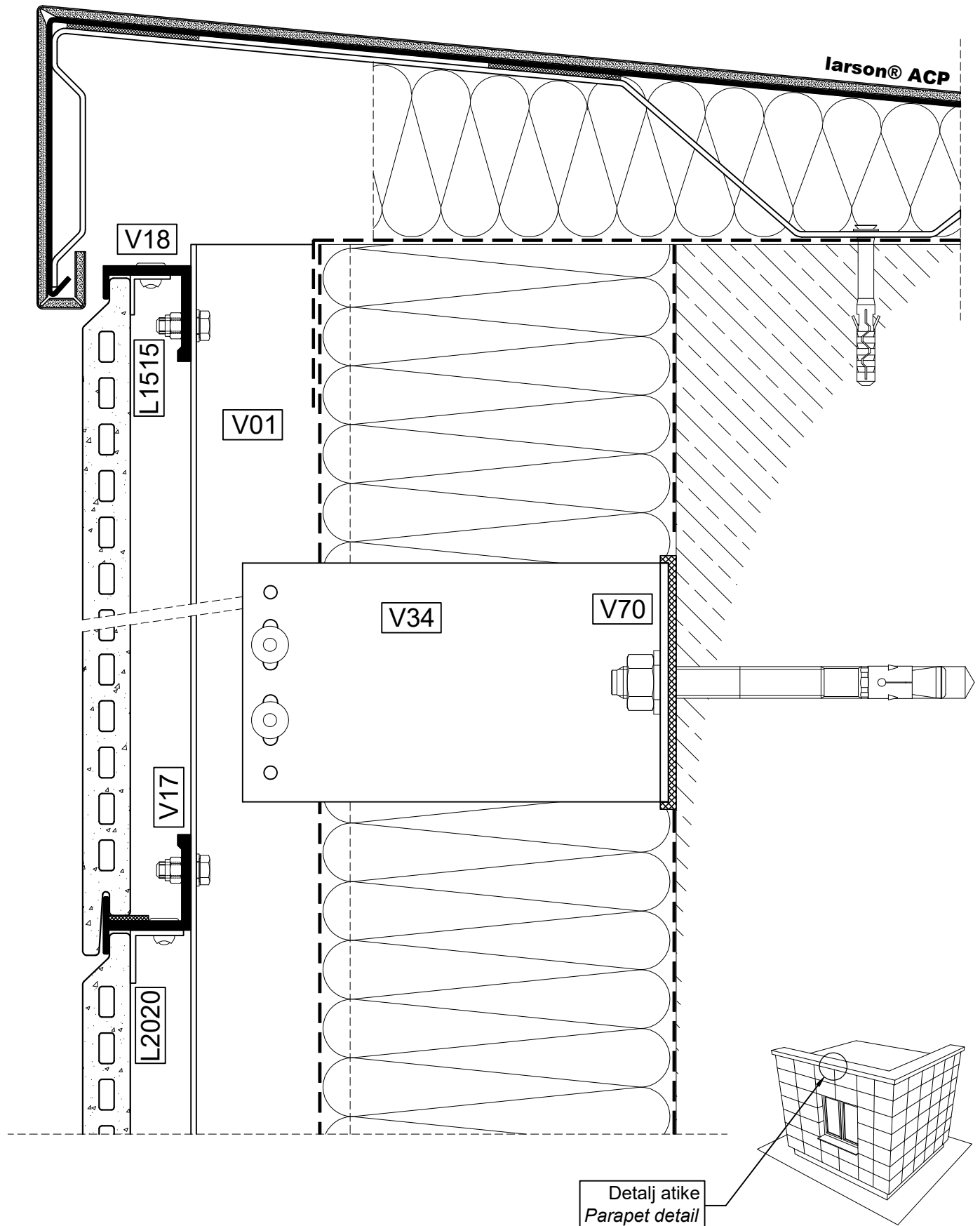


Horizontalni presek
Horizontal section

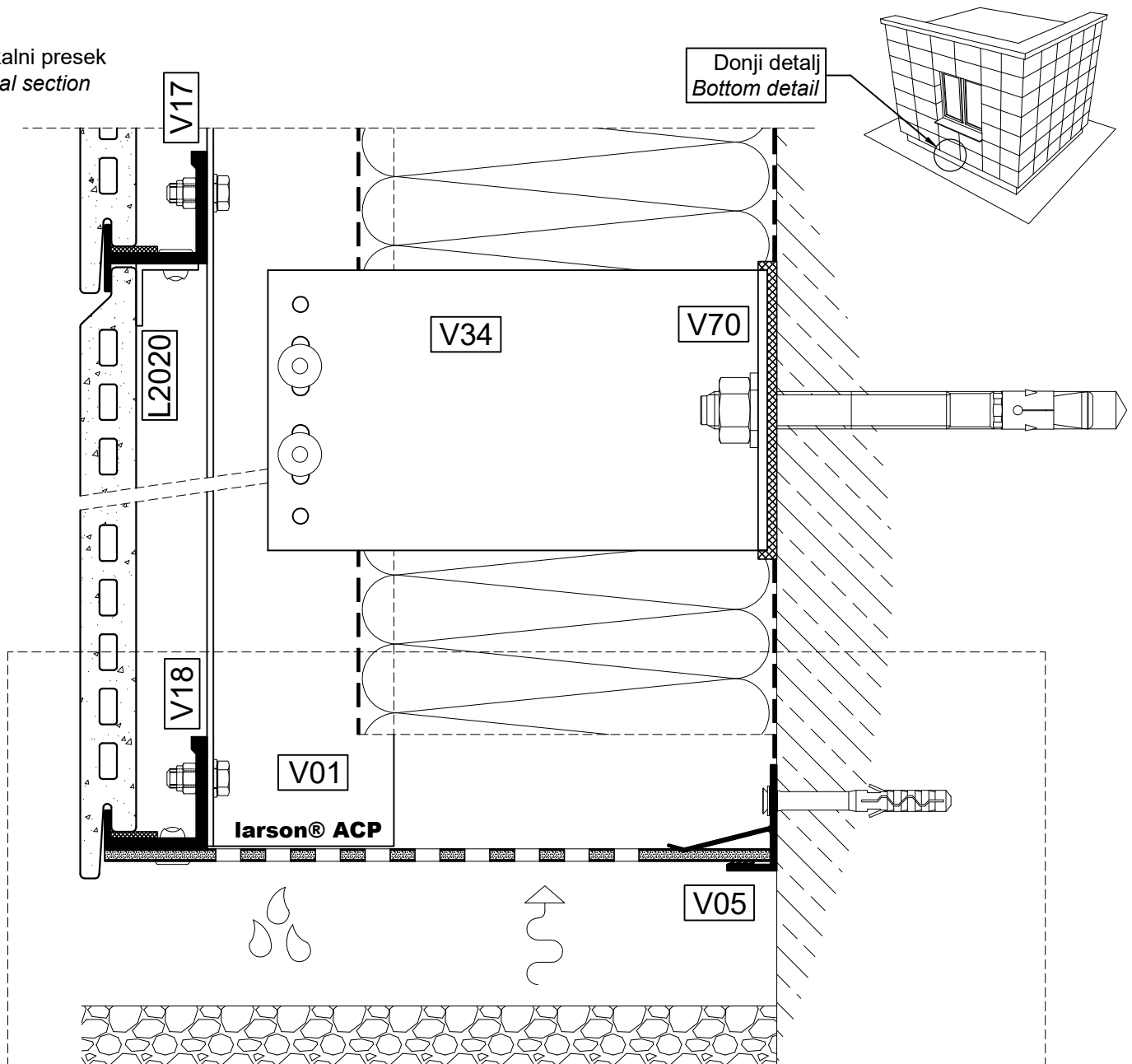
Detalj špaletne
Window jamb detail



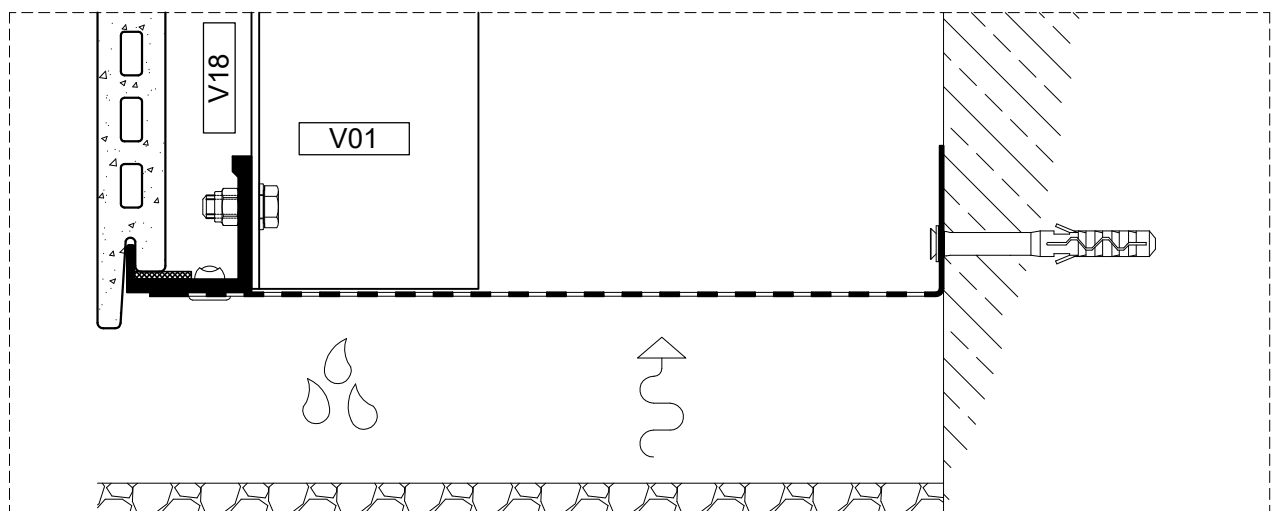
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section



Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT CONTINUAL



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije koji je namenjen prihvatanju ravnih ploča, prepoznatljiv po naglašenom rasteru na fasadi. To naglašavanje je omogućeno pokrivnim profilima, koji prema izboru projektanta na fasadi, mogu znatno isticati vertikale ili horizontale. Tako se dobija isti vizuelni efekat kao kod staklenih kontinualnih fasada po kojoj je ovaj sistem i nazvan (continual-neprekidan). Suvi je postupak ugradnje, a ne postoje ograničenja u izboru materijala fasadnih panela.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila.

a) Ekstrudirani noseći profili (vertikalni ili horizontalni) se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m.

b) Noseći vertikalni ili horizontalni T profili (kat. br. V06, V07, V08) pričvršćeni su za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

c) kutijasti profili(ikat br. K2040) se montiraju na glavne noseće profile, dok se potkape (kat br. TMF3, TMF17) montiraju na njih uz pomoć samorezujućih vijaka od inoxa.

d) Na kraju, montiraju se dekorativne pokrivne kape (kat br. TMF4, TMF5, TMF15, TMF20, TMF27, TM40) uz pomoć posebne zaptivke (kat br. TMG3) i potkape (kat br. TMF3), kako bi vizuelno naglasile fasadne horizontale ili vertikale u skladu sa projektom.

e) Ovaj sistem nema nikakvih ograničenja kada su u pitanju materijali za fasadno oblaganje, dok se paneli koriste u svojim originalnim dimenzijama ili seku na odgovarajuću meru.



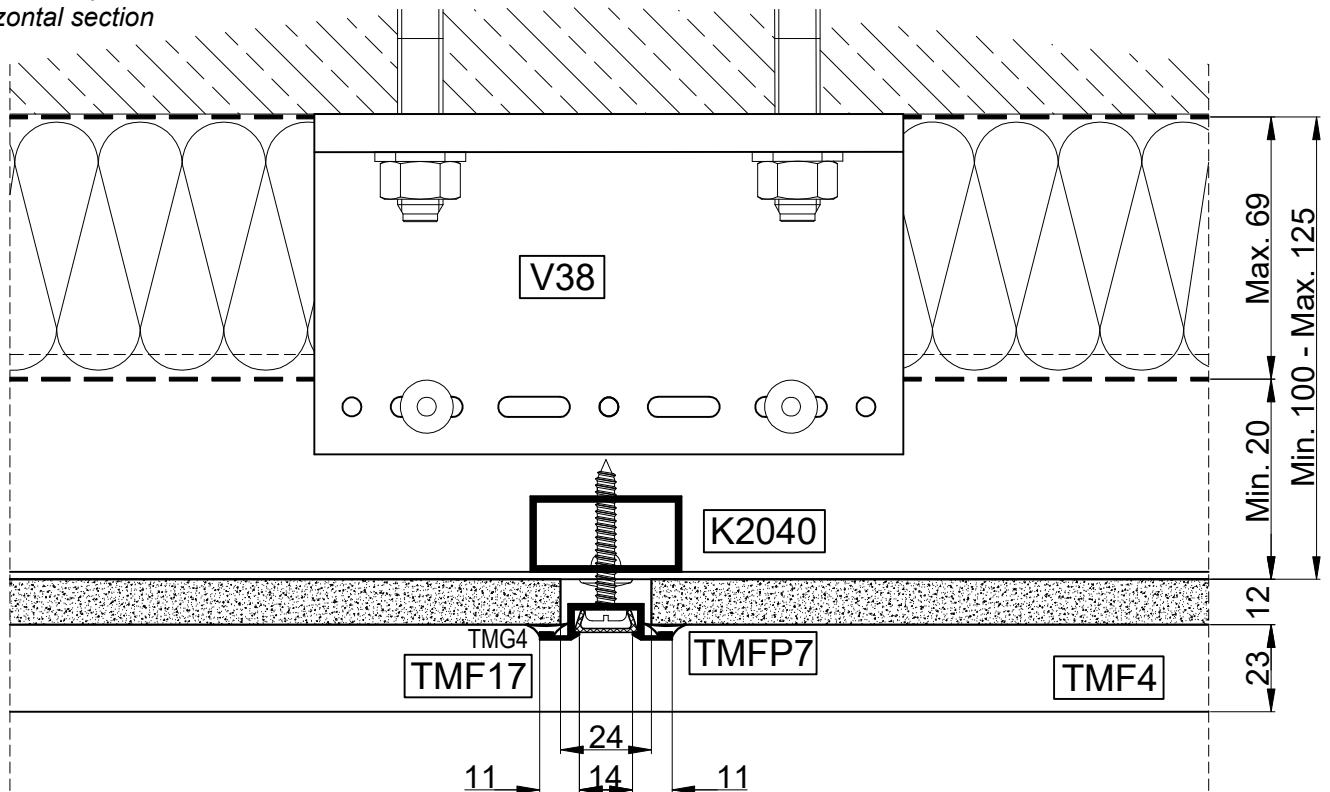
Technical description

Aluminium substructure system for flat panel cladding featuring emphasized visible facade partitions. This partitioning is possible via vertical and horizontal cover caps, in all according to architect's proposal. This way, achieved is the same visual effect as with glass curtain walls (therefore the system's name Continual). This dry installation system has no limits regarding the cladding panel material.

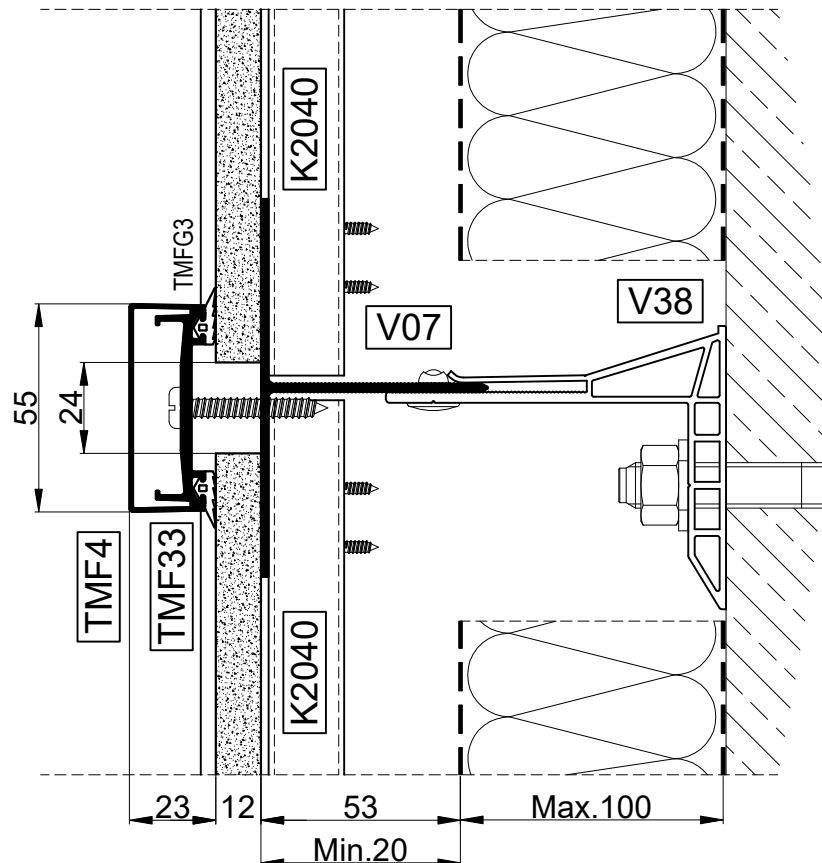
Assembly procedure:

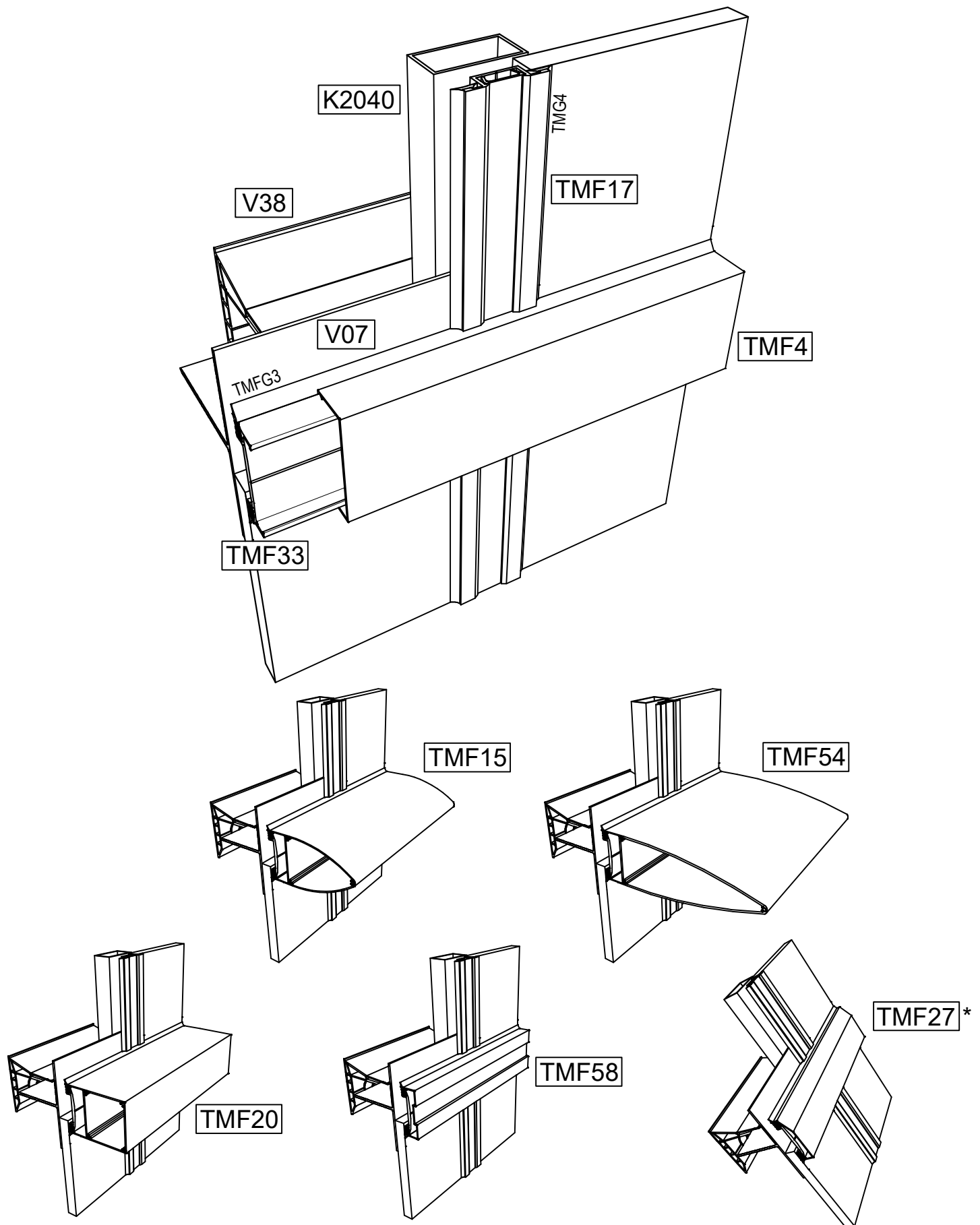
- a) The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.
- b) Extruded load-bearing profiles are installed vertically and spaced according to previously formed facade raster. The maximal recommended length of load-barring profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main T or L profiles (item nr. V06, V07, V08) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to vertical profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) The square tubes (item nr. K2040) are installed onto the main profiles, and pressure plates (item nr. TMF3, TMF17) are installed onto them with stainless steel screws.
- e) Finally, decorative cover caps are installed (item nr. TMF4, TMF5, TMF15, TMF20, TMF27, TM40), with special gasket (item nr. TMG3) and pressure plate (item nr. TMF3) to visually accentuate horizontal or vertical facade partitions according to project.
- f) This system imposes no limitations to the cladding material selection, and the cladding panels are either used in their standard dimensions or cut to the required size.

Horizontalni presek
Horizontal section



Vertikalni presek
Vertical section



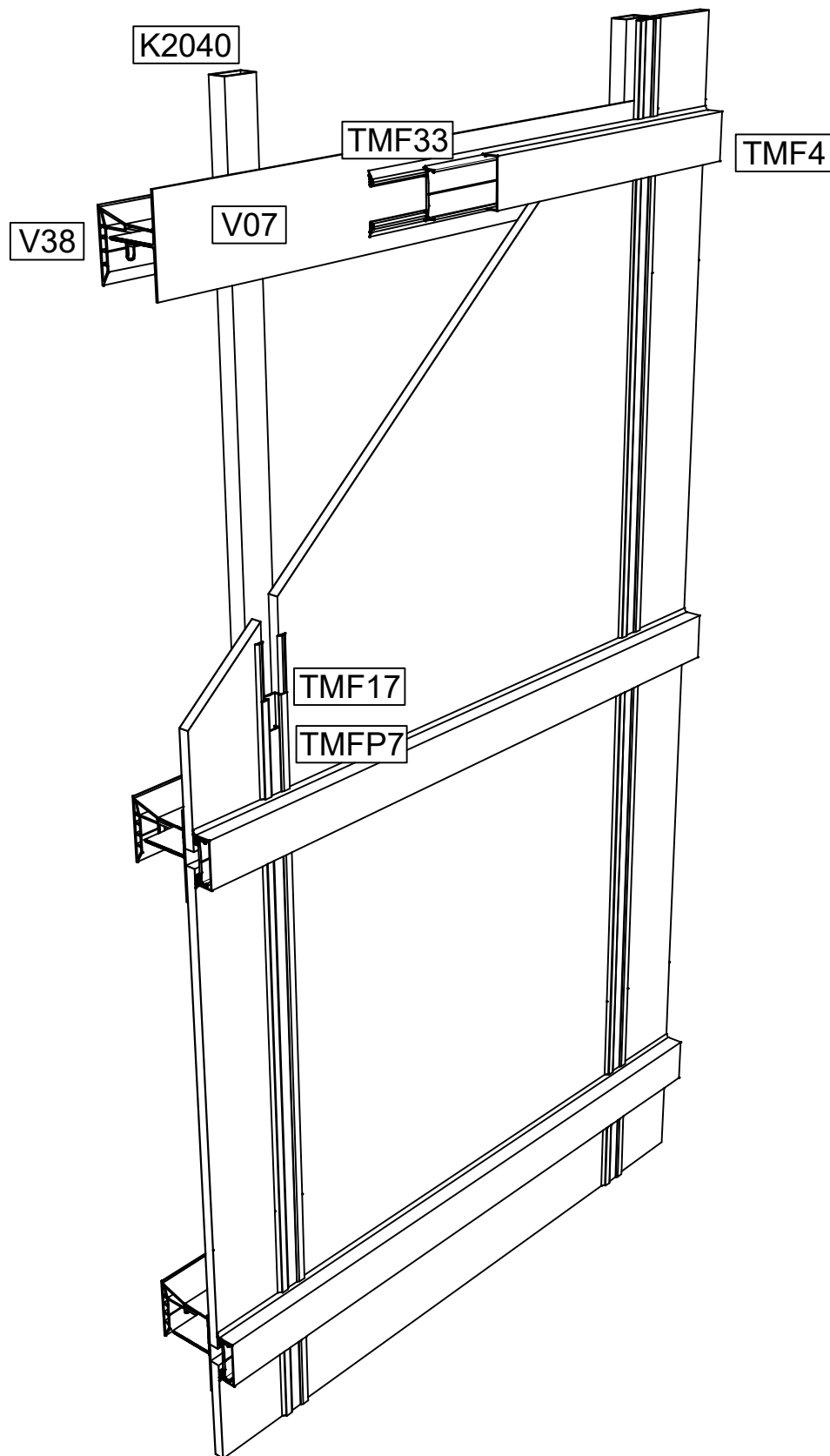


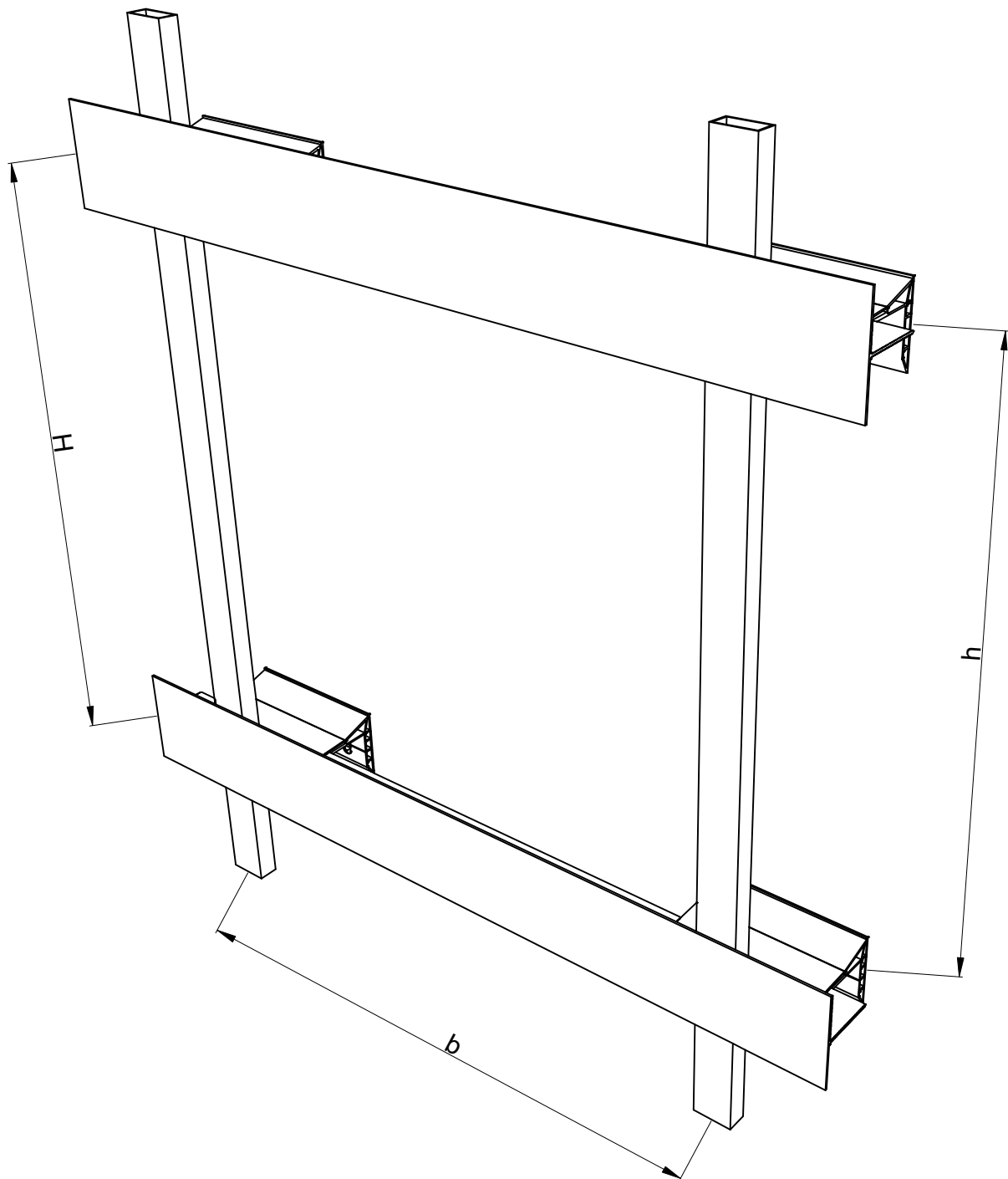
Mogućnost montiranja kapa vertikalno i horizontalno.

Possibility of installation of cover cap profiles vertically and horizontally.

*Zbog svoje geometrije, postavlja se na kosoj ravni (za razliku od ostalih kapa, ne dozvoljava zadržavanje vode)

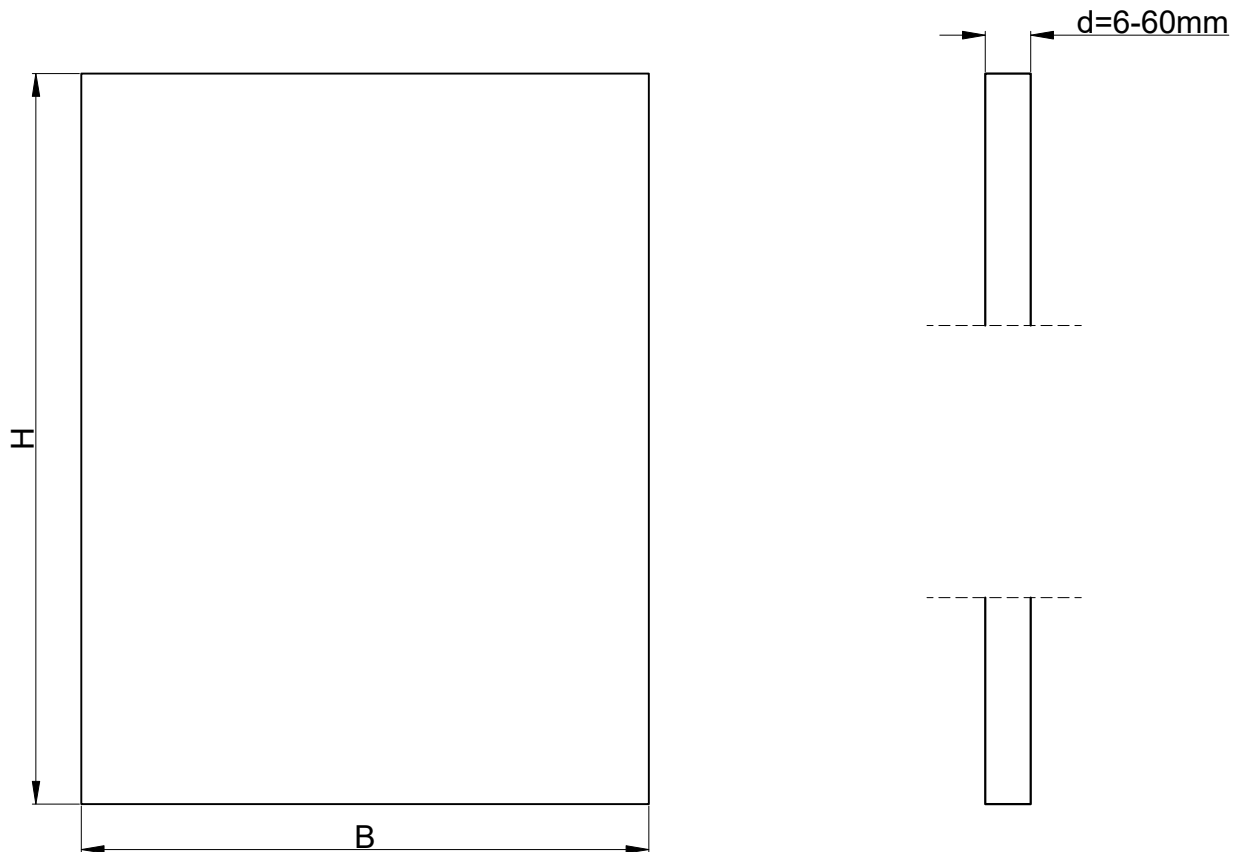
**Due to its geometry, it is installed inclined (unlike other cap profiles, it prevents water retention)*





b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 900mm
H - according to structural analysis and depending on applied cladding material, but no more than 900mm



B - projektovana vidna širina panela

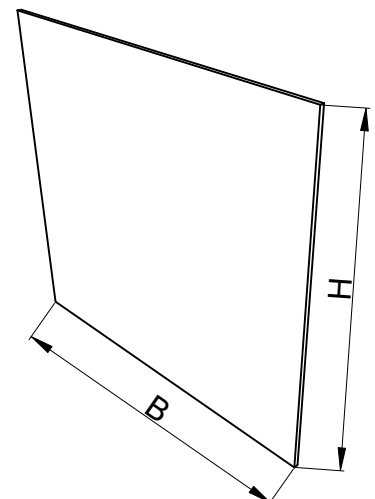
B - *designed visible panel width*

H - projektovana vidna visina panela

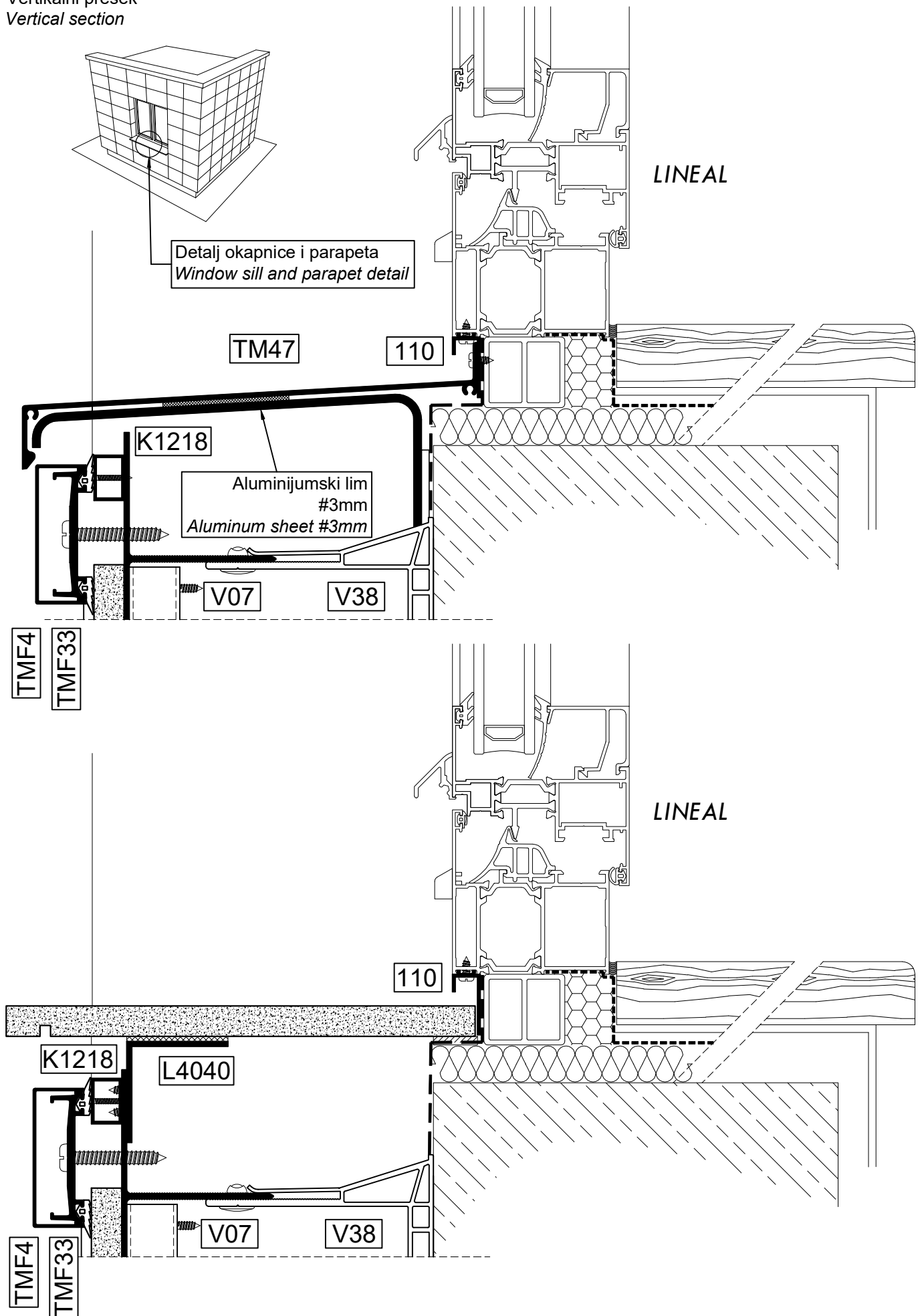
H - *designed visible panel height*

d - debljina panela, u zavisnosti od odabira materijala obloge i potreba projekta

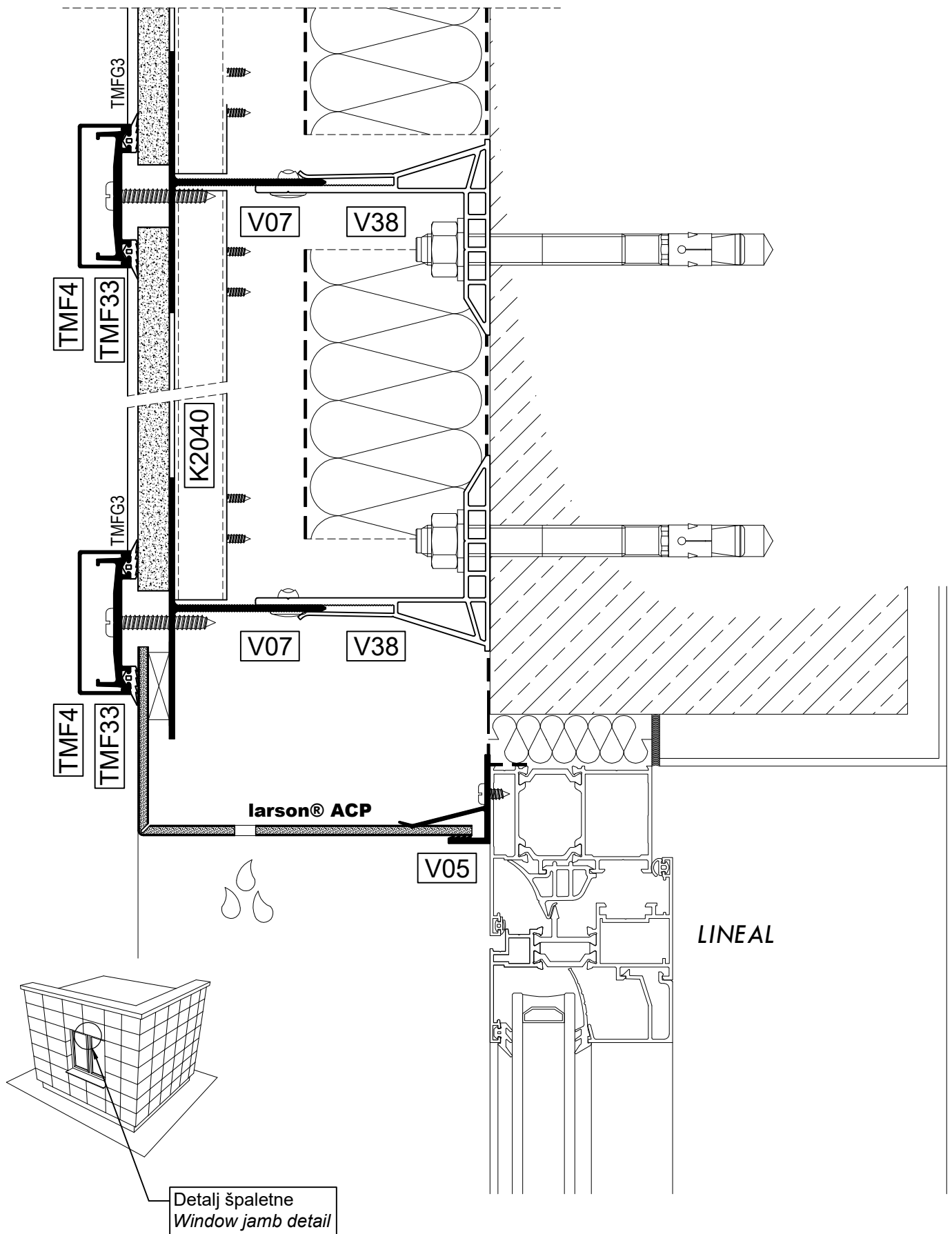
d - *panel thickness, depending on cladding material selection and project needs*



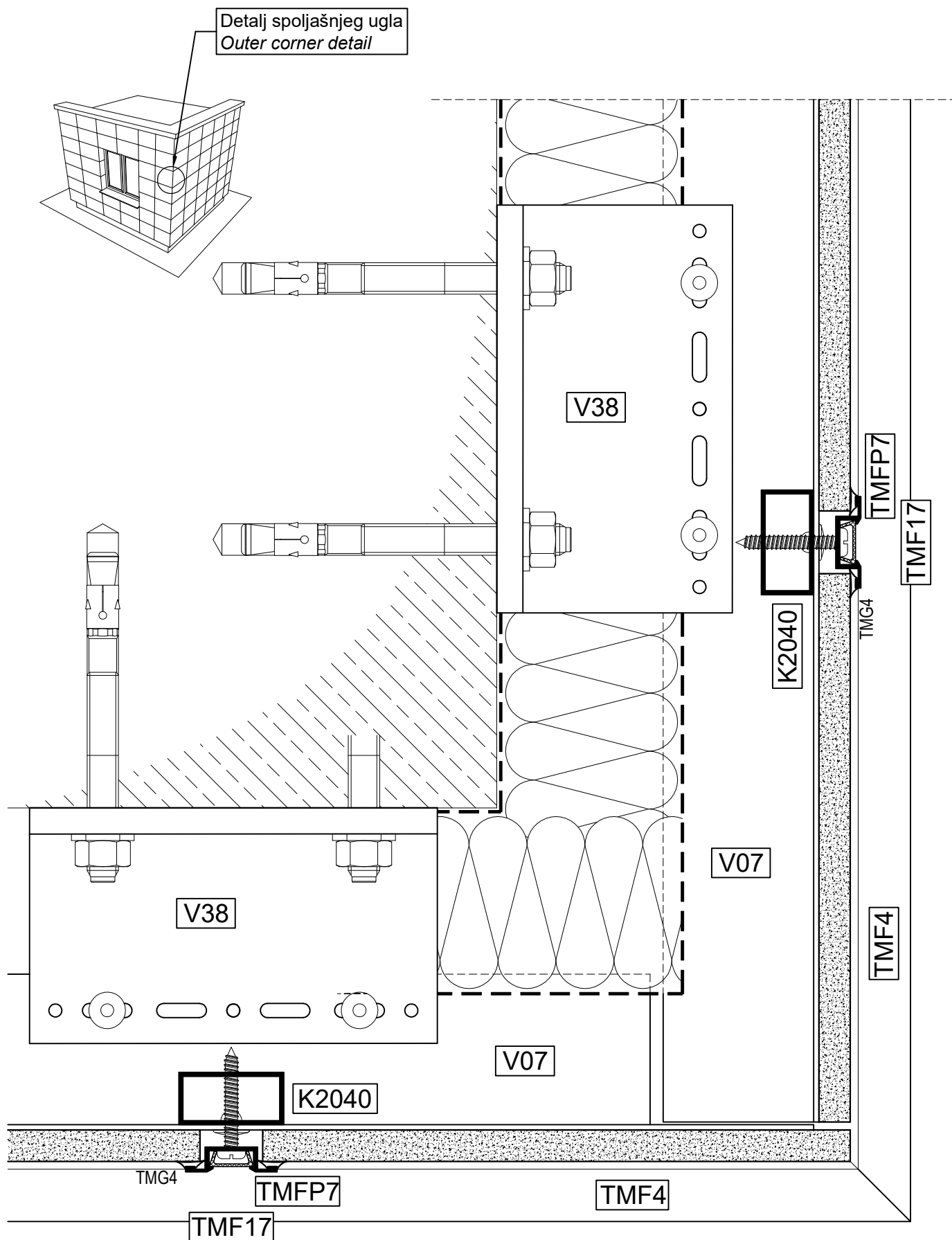
Vertikalni presek
Vertical section



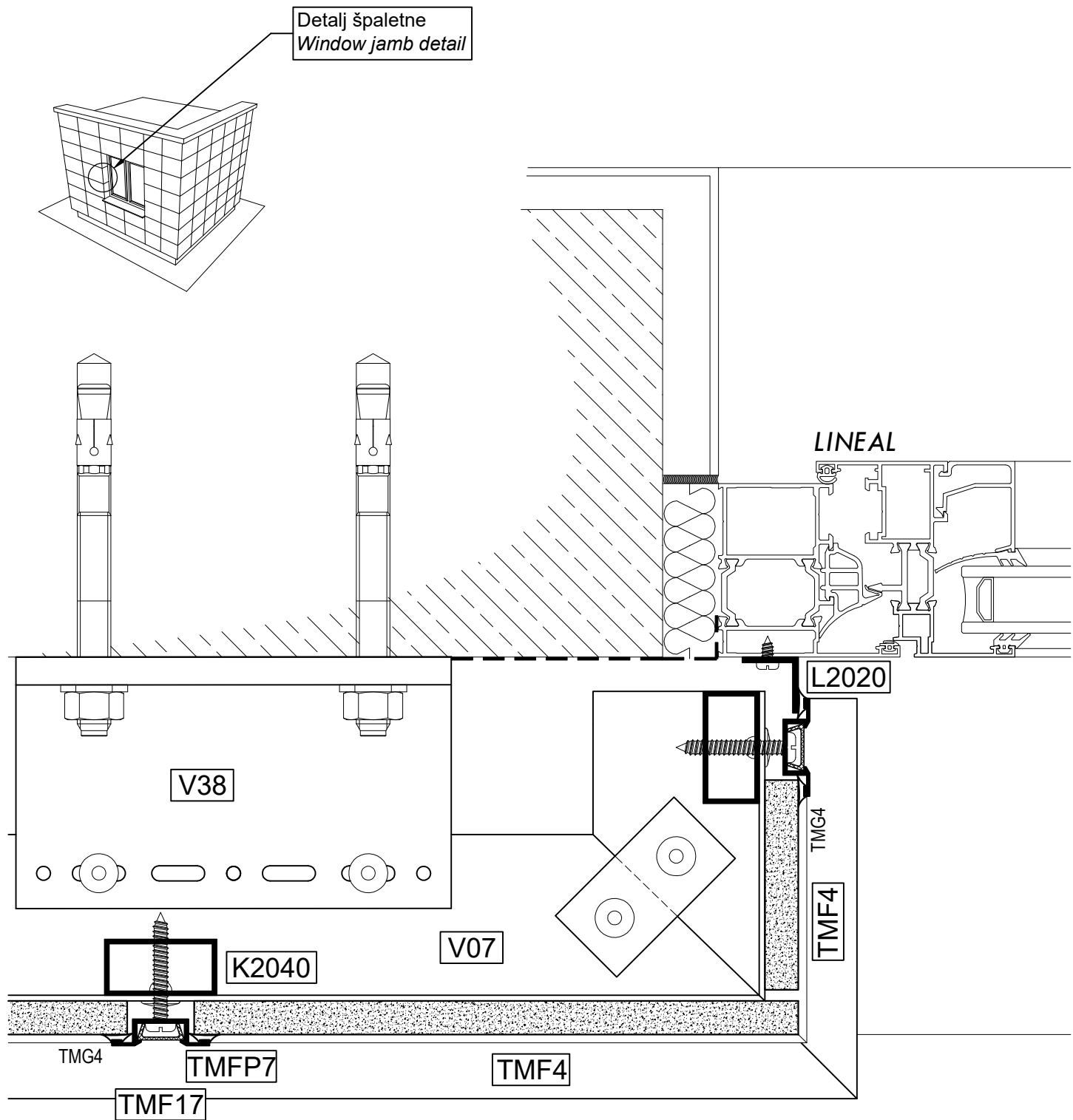
Vertikalni presek
Vertical section



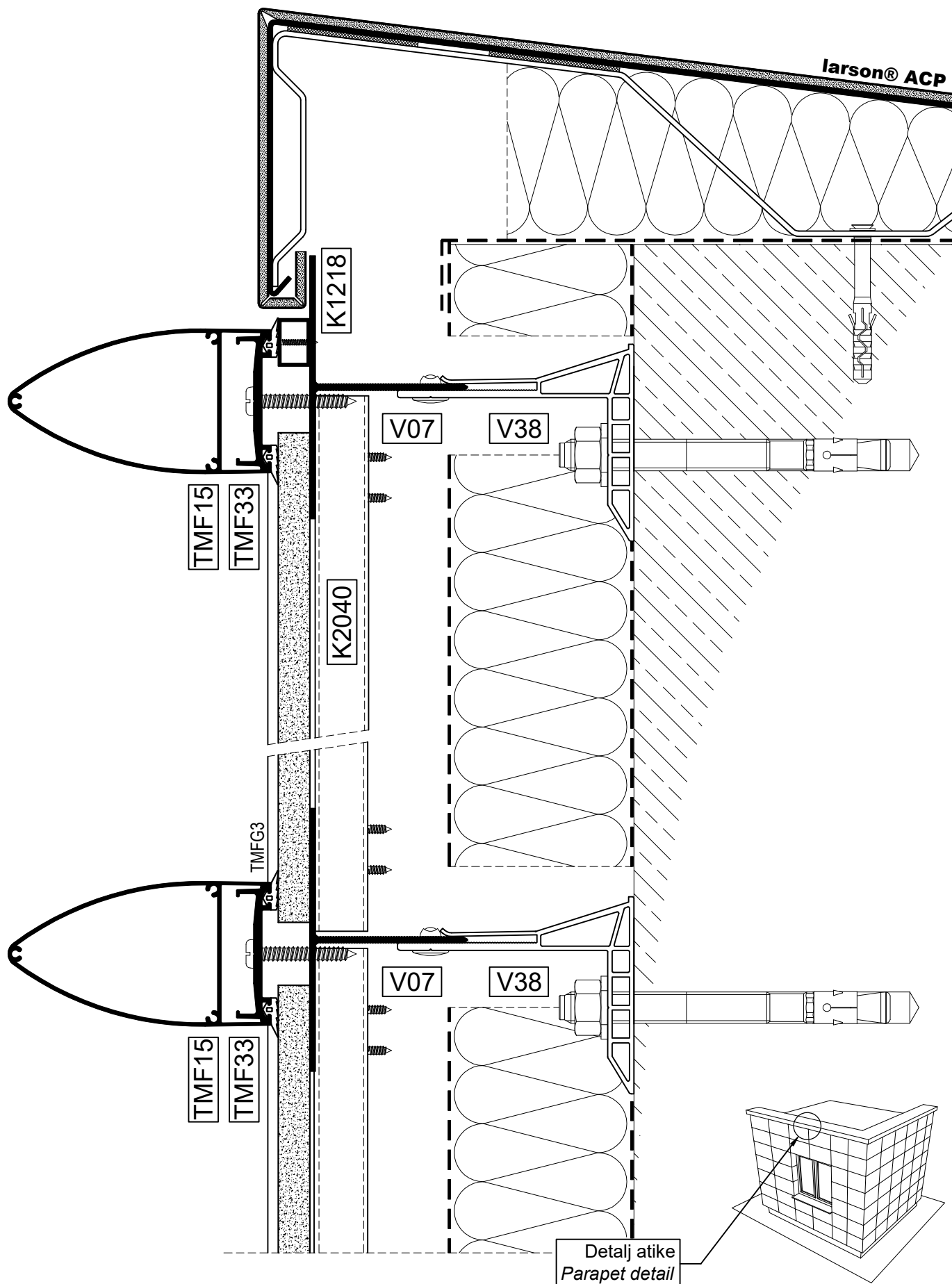
Horizontalni presek
Horizontal section



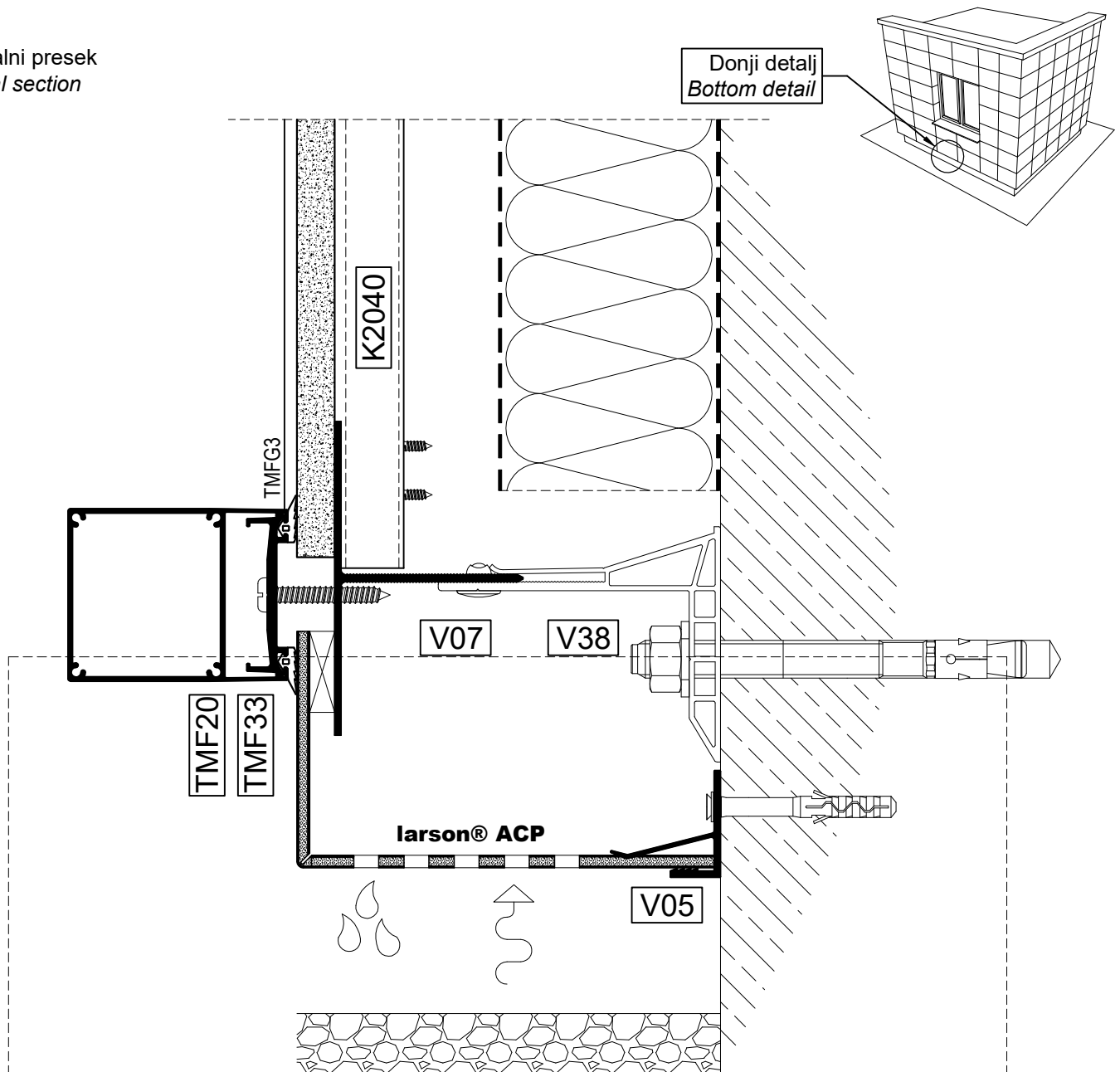
Horizontalni preseki
Horizontal section



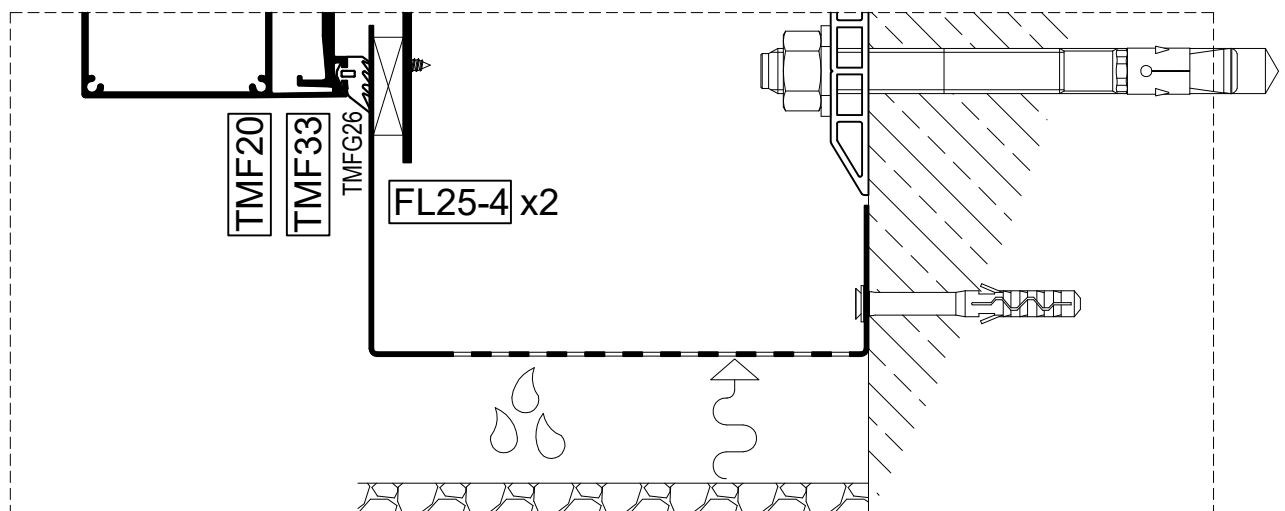
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section



Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT BOX



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije namenjen prihvatanju posebno formiranih kaseta fiksiranih skrivenim nosačima i prihvatajućim elementima veze u obliku malih kutijastih aluminijumskih cevi (kutija-box) po kojima je ovaj sistem i dobio naziv. Suvi je postupak montaže, a kompletnu pripremu kaseta je moguće odraditi u radioničkim uslovima. Tako pripremljene kasete se na gradilištu samo slažu prema planiranim pozicijama na fasadi.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

a) Ekstrudirani noseći profili se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m

b) Vertikalni noseći omega profili (kat. br. V01) su pričvršćeni za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

c) Klizni nosači (kat. br. V51) se postavljaju u omega profile. Kada su montirani predstavljaju glavne spojne tačke između podkonstrukcije i prethodno formiranih kaseta.

d) Fasadni paneli se obrađuju na CNC centru u radioničkim uslovima (sečenjem na meru i odgovarajućim žljebovanjem), a zatim tako obrađeni paneli savijanjem formiraju kasete. Na kraju se u uglove gotovih kaseta pop nitnama pričvršćuju kutijasti brofili (kat. br. K2020).

e) Tako pripremljene kasete se montiraju na fasadu, pri čemu se svaka kasete "zaključa" na mesto naponom između gornjeg i donjeg nosača. U ovom sistemu predviđena je fuga od 14mm, kao i montaža fasade od dole ka gore.



Technical description

Aluminium substructure system for installation of specially machined and formed cassettes fixed with hidden cantilevers and brackets machined from small square tubes. This dry installation system features full workshop preparation of cassettes that are quickly installed on a construction site as finished facade elements.

The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

a) Extruded load-bearing profiles are installed vertically and spaced according to previously formed facade raster. The maximal recommended length of load-barring profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.

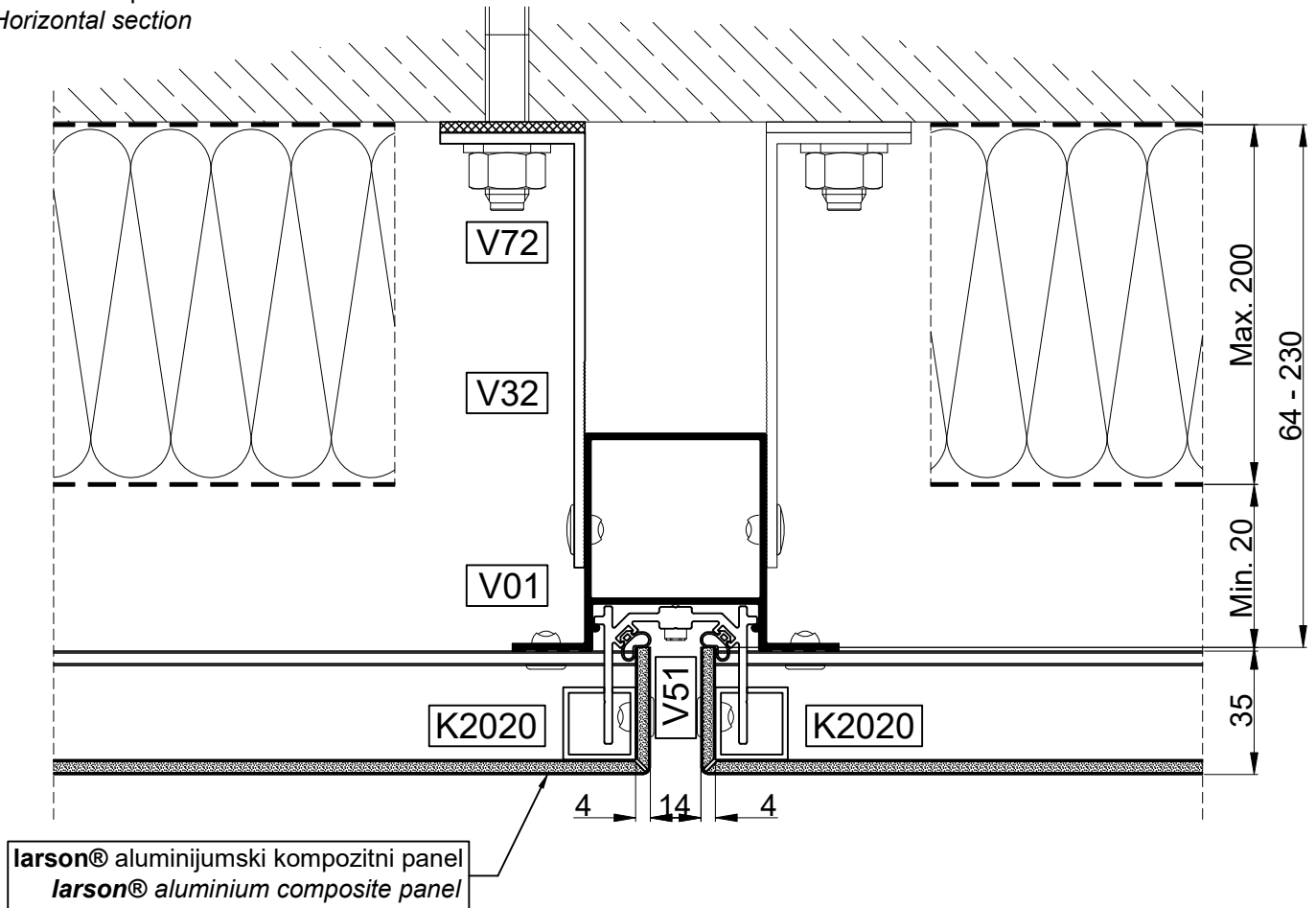
b) Vertical omega shaped profiles (item nr. V01) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors and vertical profiles are connected with threaded rods that feature integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.

c) Sliding bracket sets (item nr. V51) are inserted in omega profiles. These items form main attachment points for previously prepared cladding cassettes.

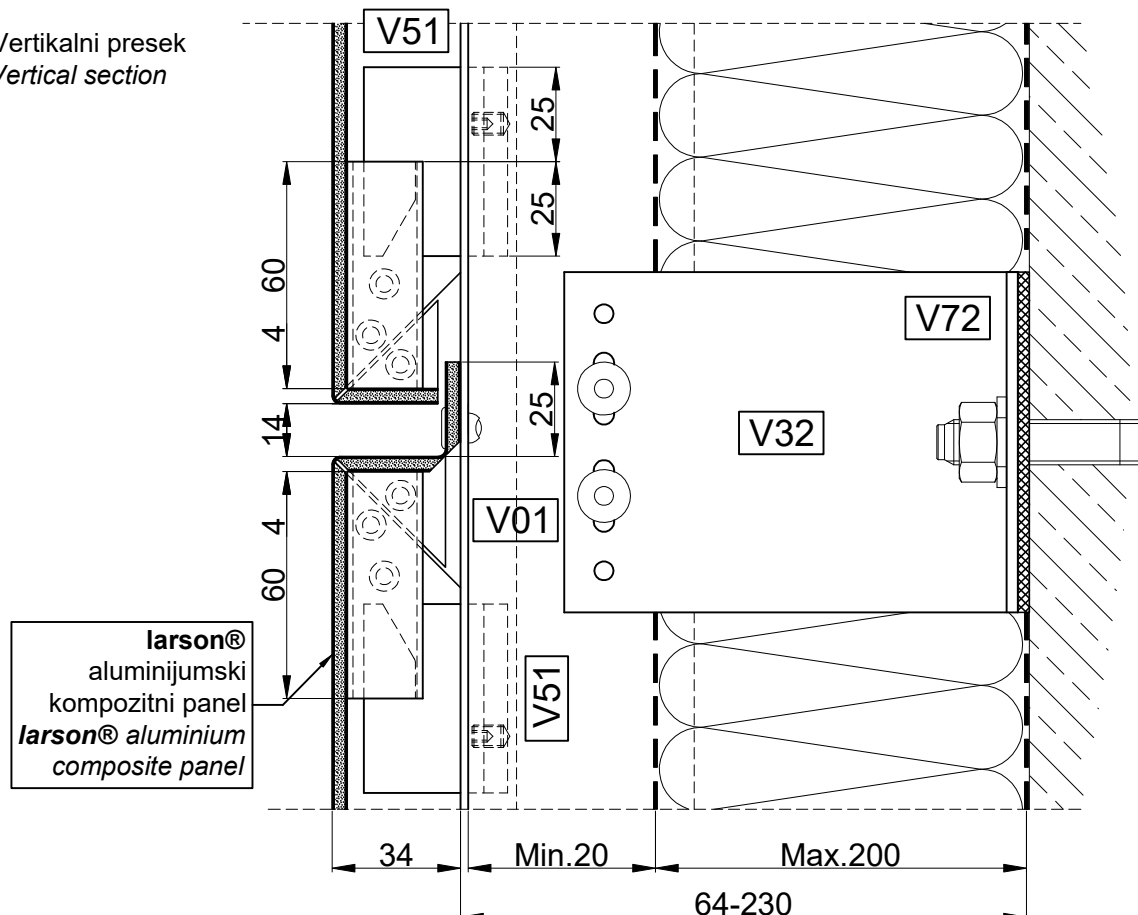
d) Facade panels are CNC machined (cut to measure and grooved), then folded into cassettes with riveted box profile inserts (item nr. K2020).

e) The prepared cassettes are mounted and spanned into place. Each cassette is safely locked by tensioning between lower and upper sliding bracket. This system features 14mm wide gap and installation of facade goes from ground level up.

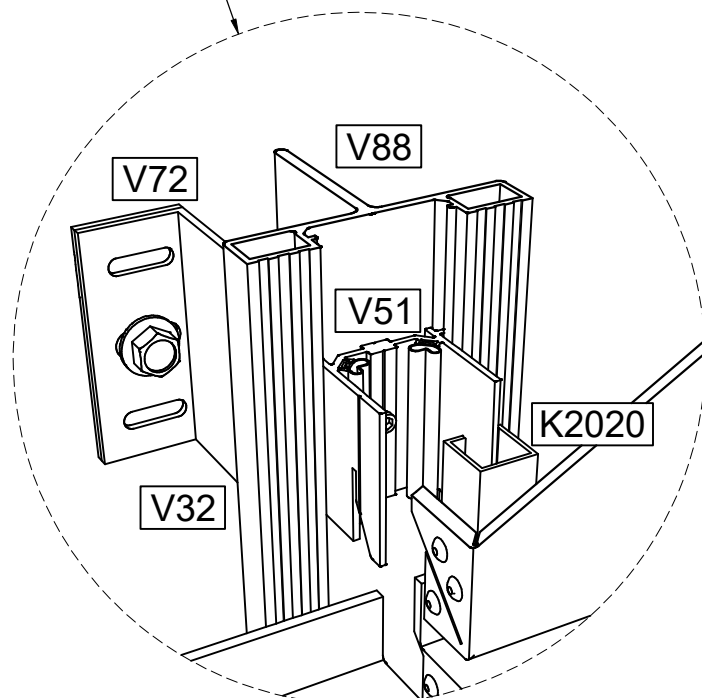
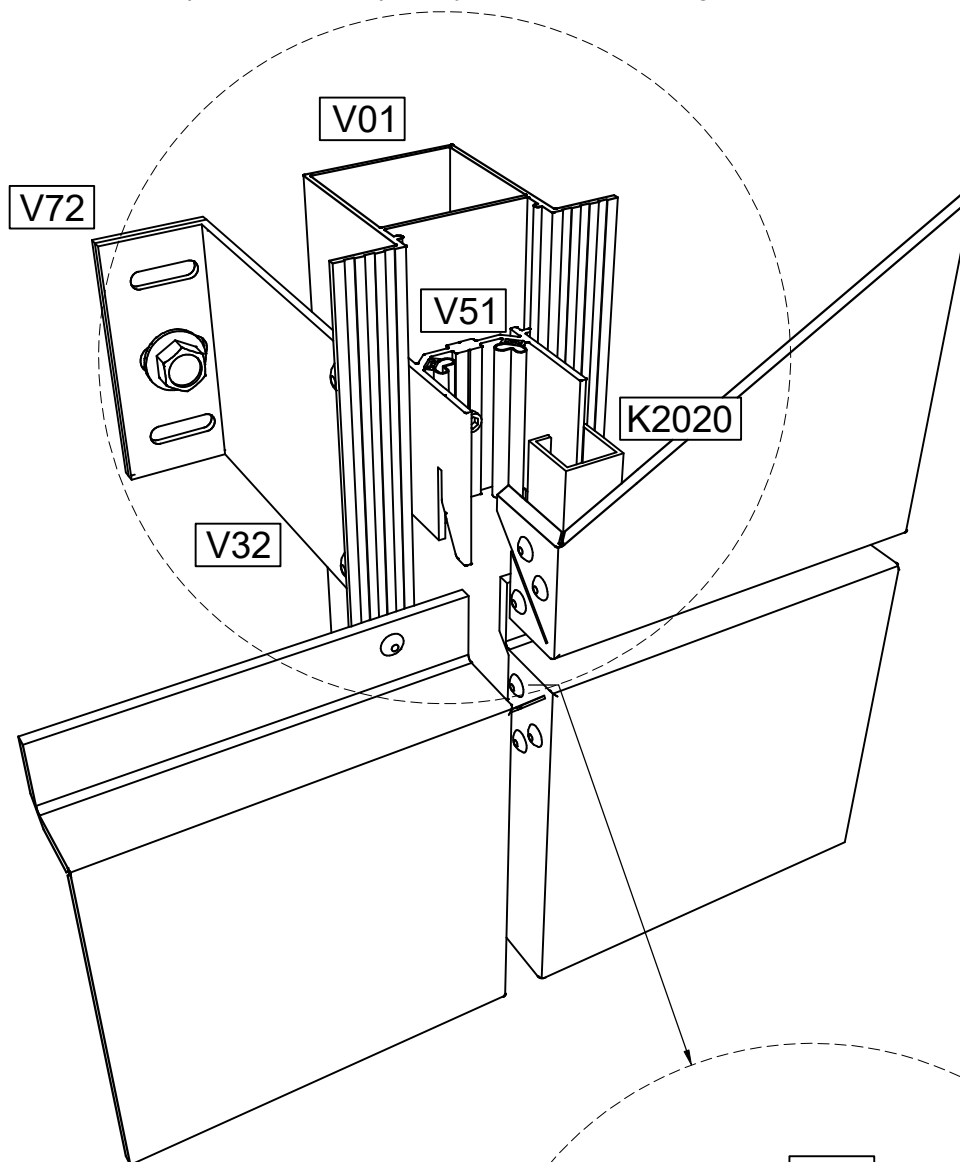
Horizontalni presek
Horizontal section



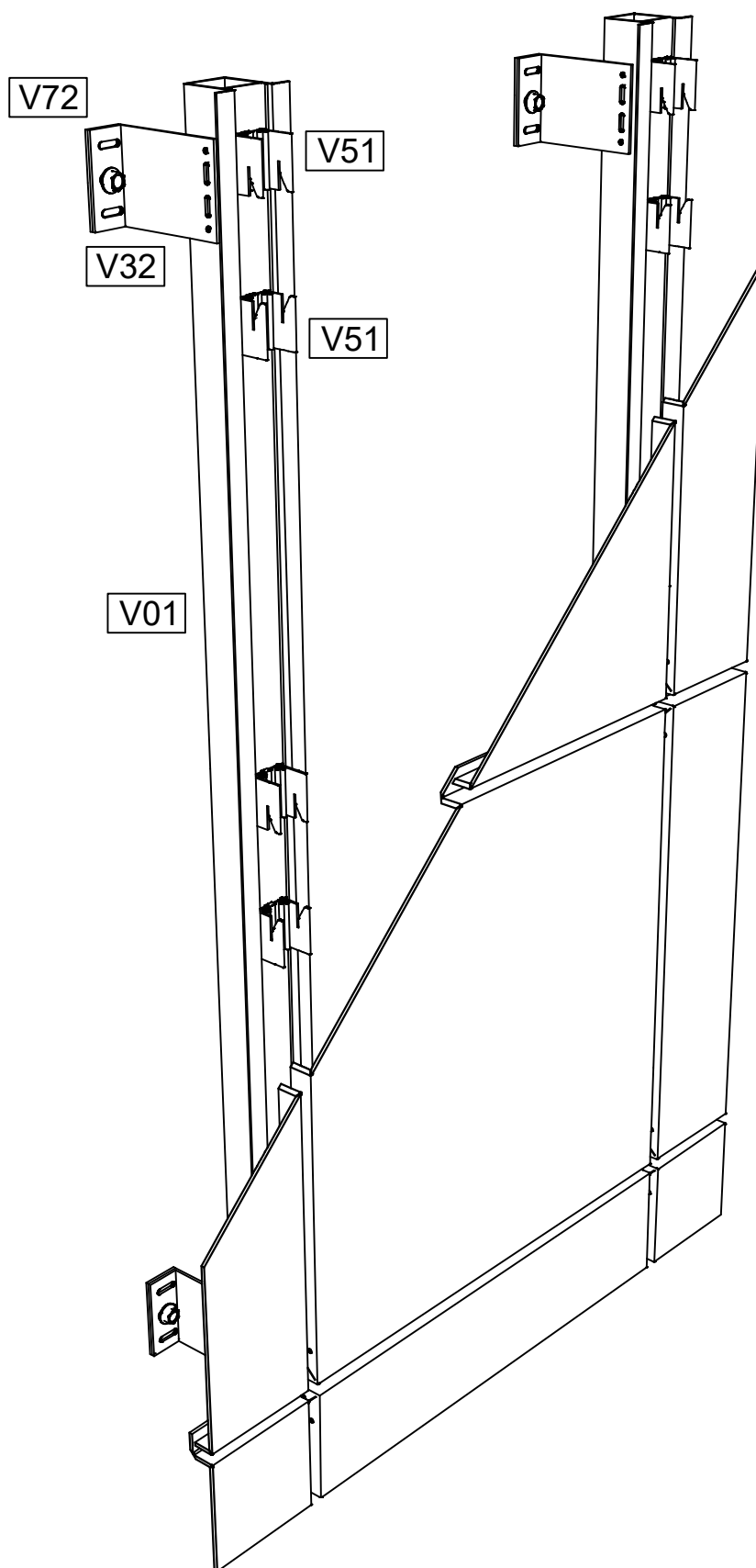
Vertikalni presek
Vertical section

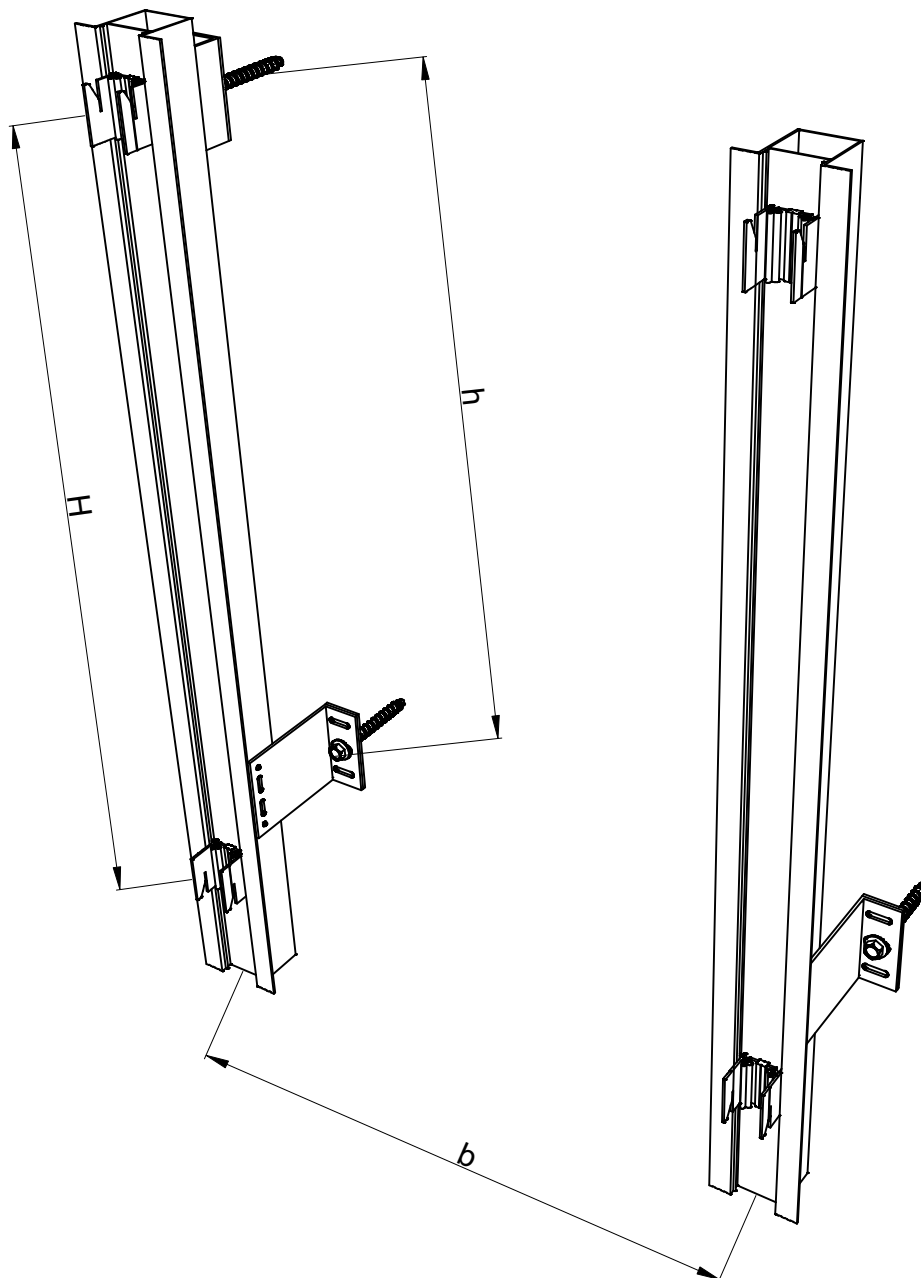


Opcija 1 - V01 kao primarna vertikalna noseća konstrukcija
Option 1 - V01 as primary vertical load bearing structure



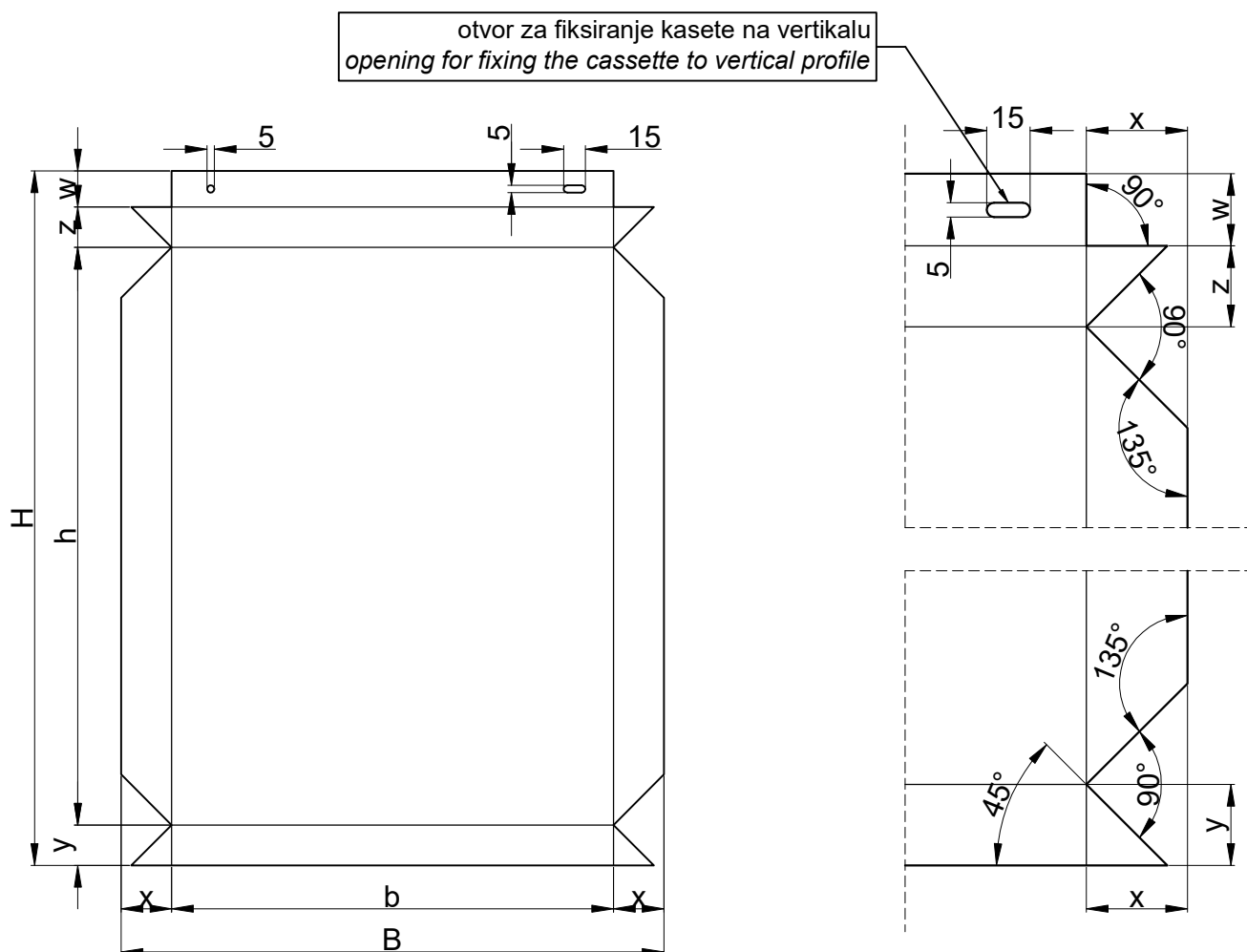
Opcija 2 - V88 kao primarna vertikalna noseća konstrukcija
Option 2 - V88 as primary vertical load bearing structure





b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 600mm
H - according to structural analysis and depending on applied cladding material, but no more than 600mm



b	x	h	y	z	w
	35		28	28	25

(mm)

B	H
$b + 2x$	$h + y + z + w$

(mm)

b - projektovana vidna širina kasete
 b - designed visible cassette width

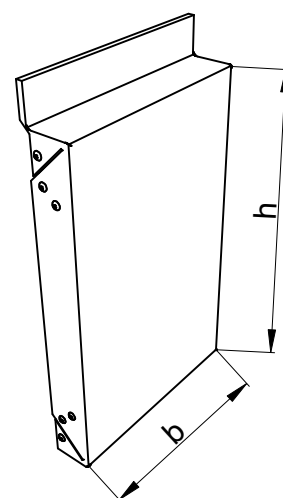
h - projektovana vidna visina kasete
 h - designed visible cassette height

B - ukupna širina razvijene mreže kasete
 B - developed cassette scheme total width

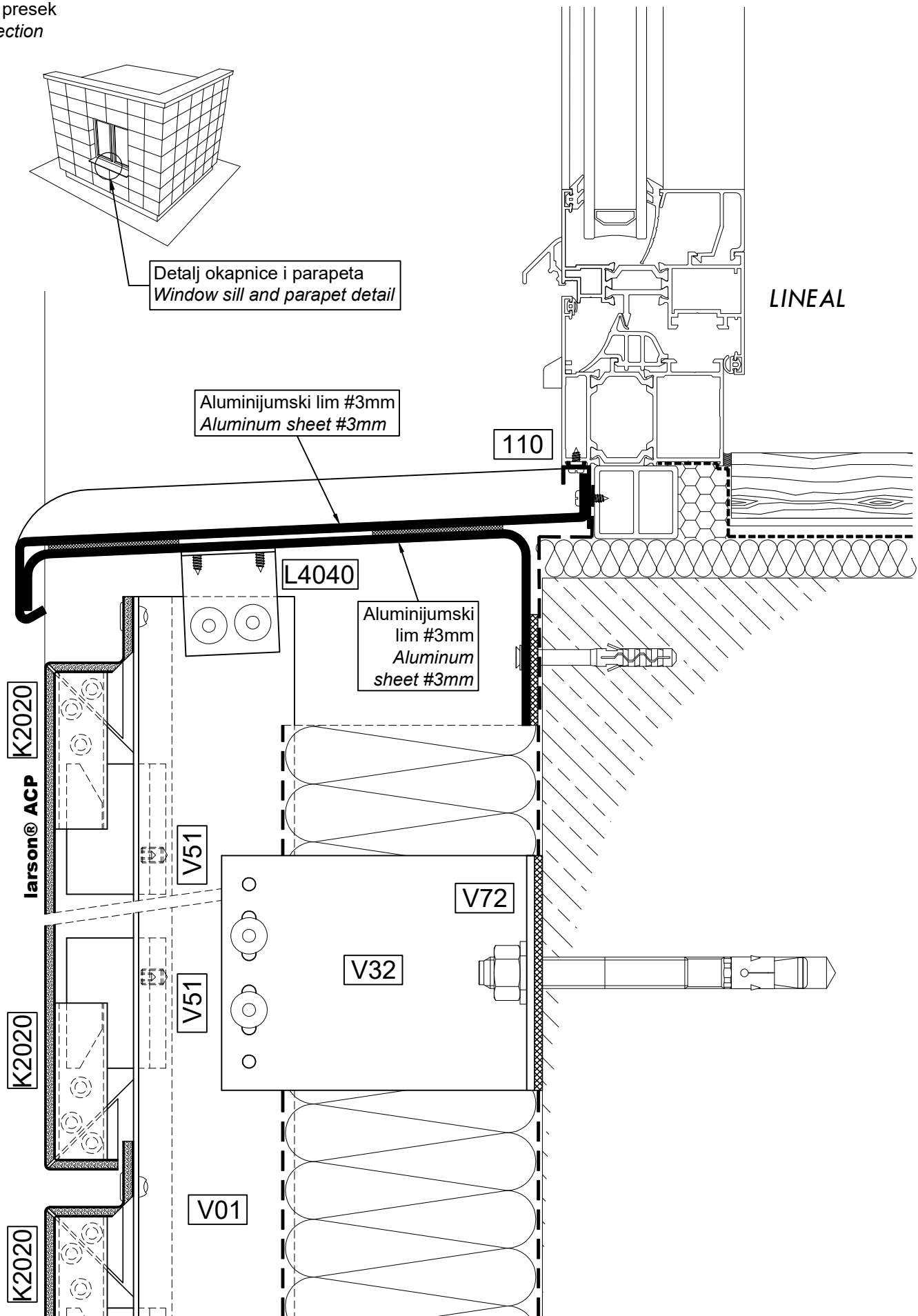
H - visina razvijene mreže kasete
 H - developed cassette scheme total height

x , y , z , w - prikazane dimenzije su minimalne preporučene od strane projektanta sistema, ali se mogu povećati u zavisnosti od potreba konkretnog projekta (način fiksiranja i vrsta primenjenih spojnih sredstava, projektovana dubina kasete itd.)

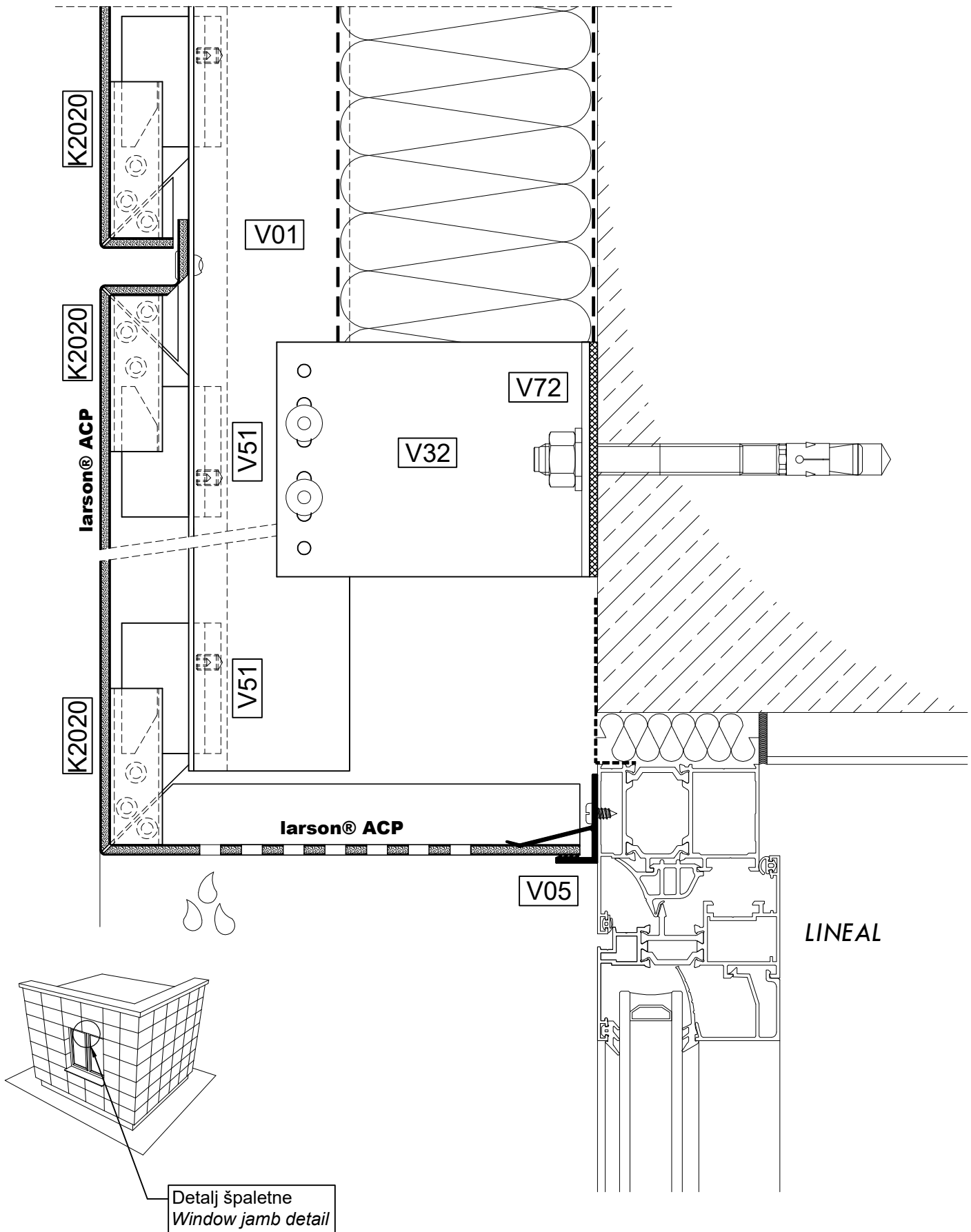
x , y , z , w - listed values are minimal as per system designer's recommendation, but could be increased depending on needs of specific project (fixing method and type of applied fasteners, designed cassette depth etc.)



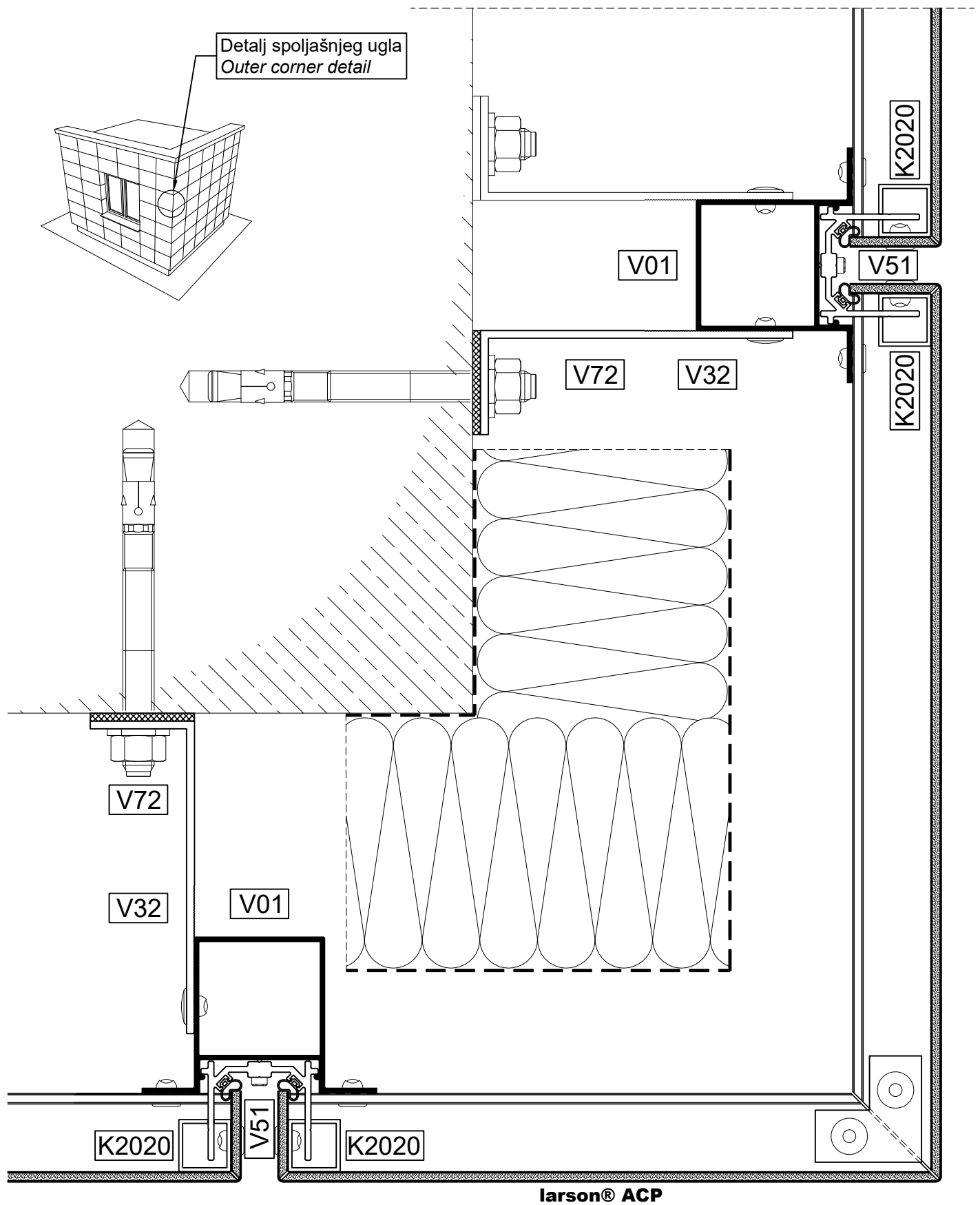
Vertikalni presek
Vertical section



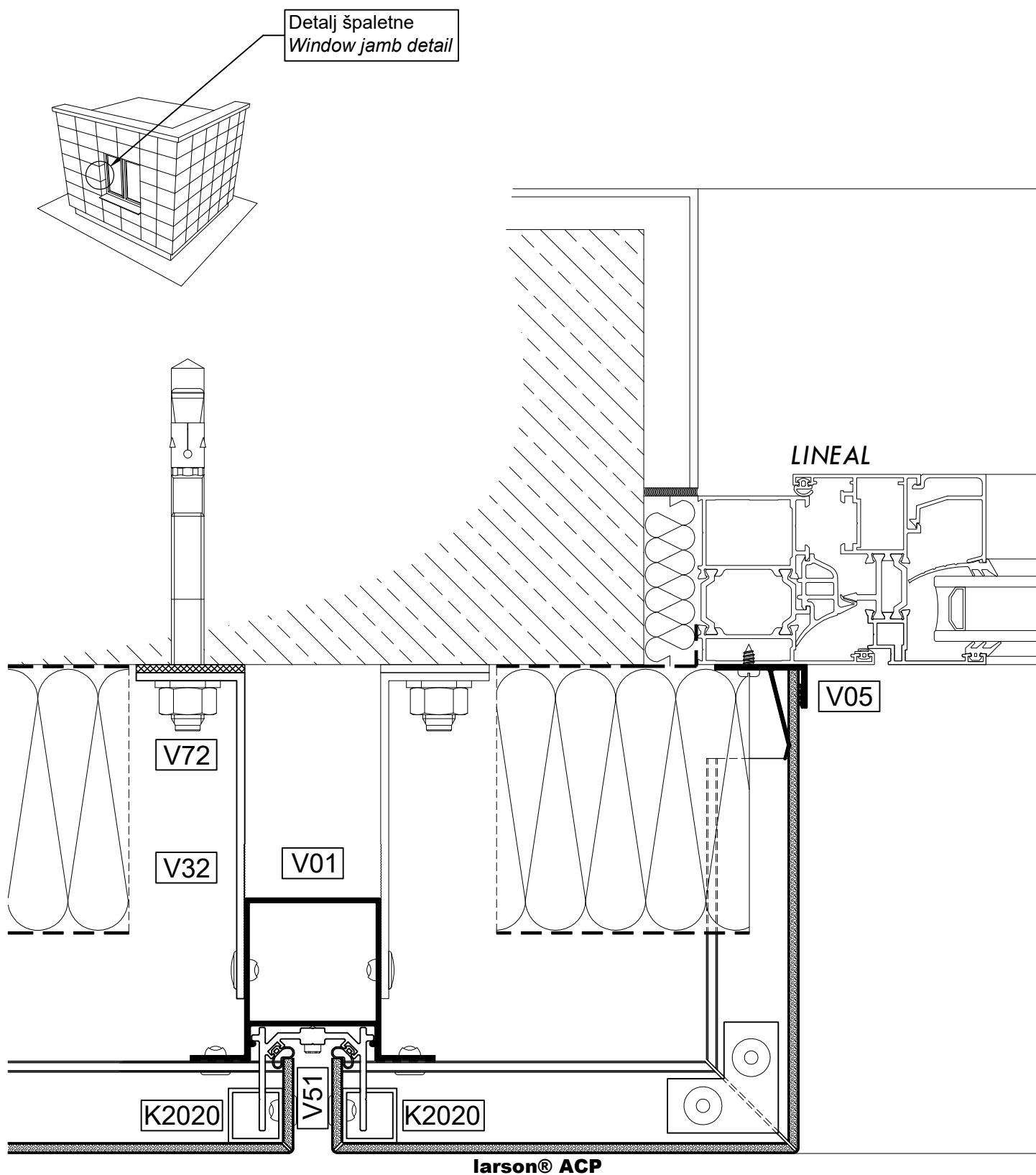
Vertikalni presek
Vertical section



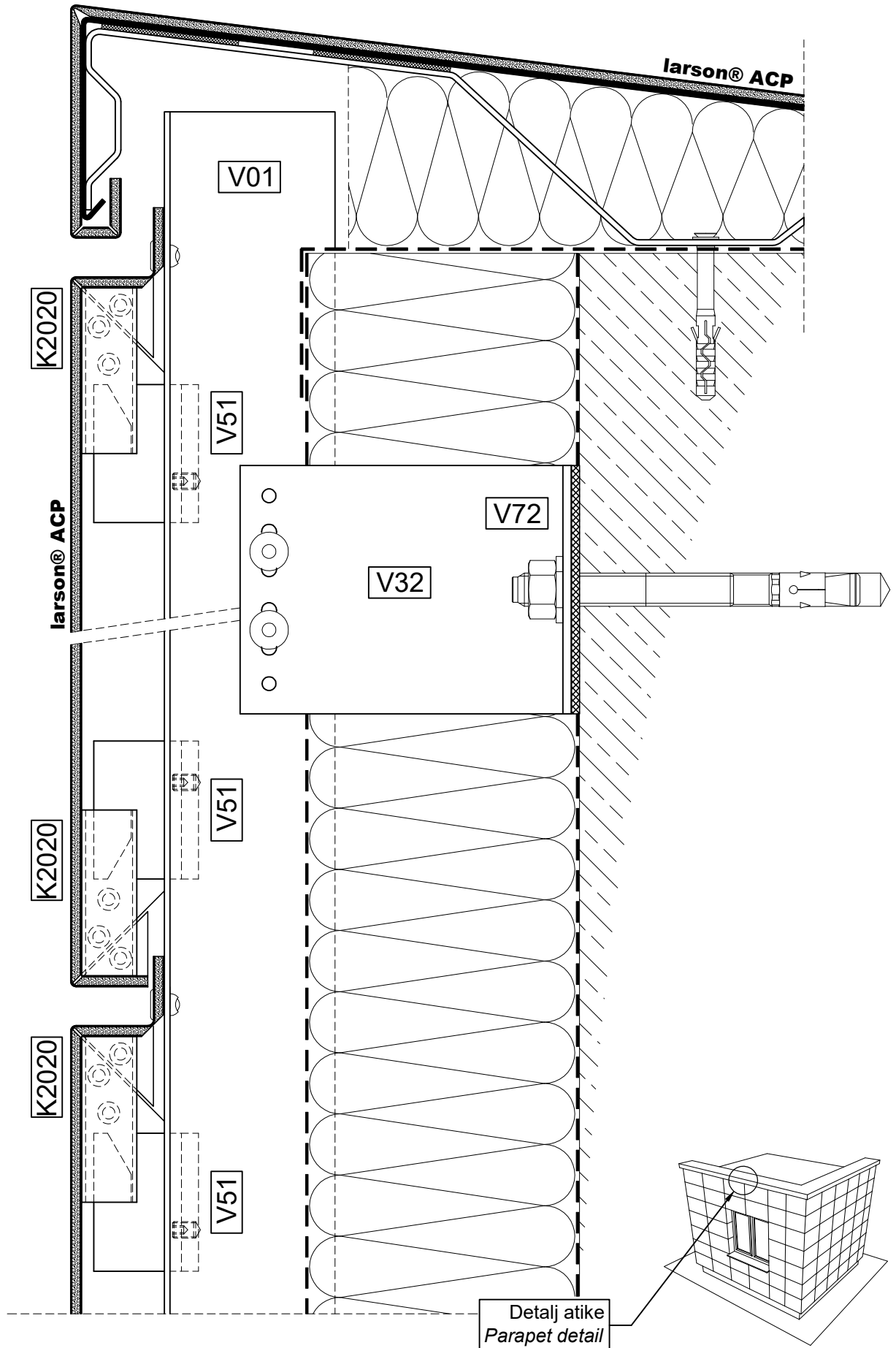
Horizontalni presek
Horizontal section



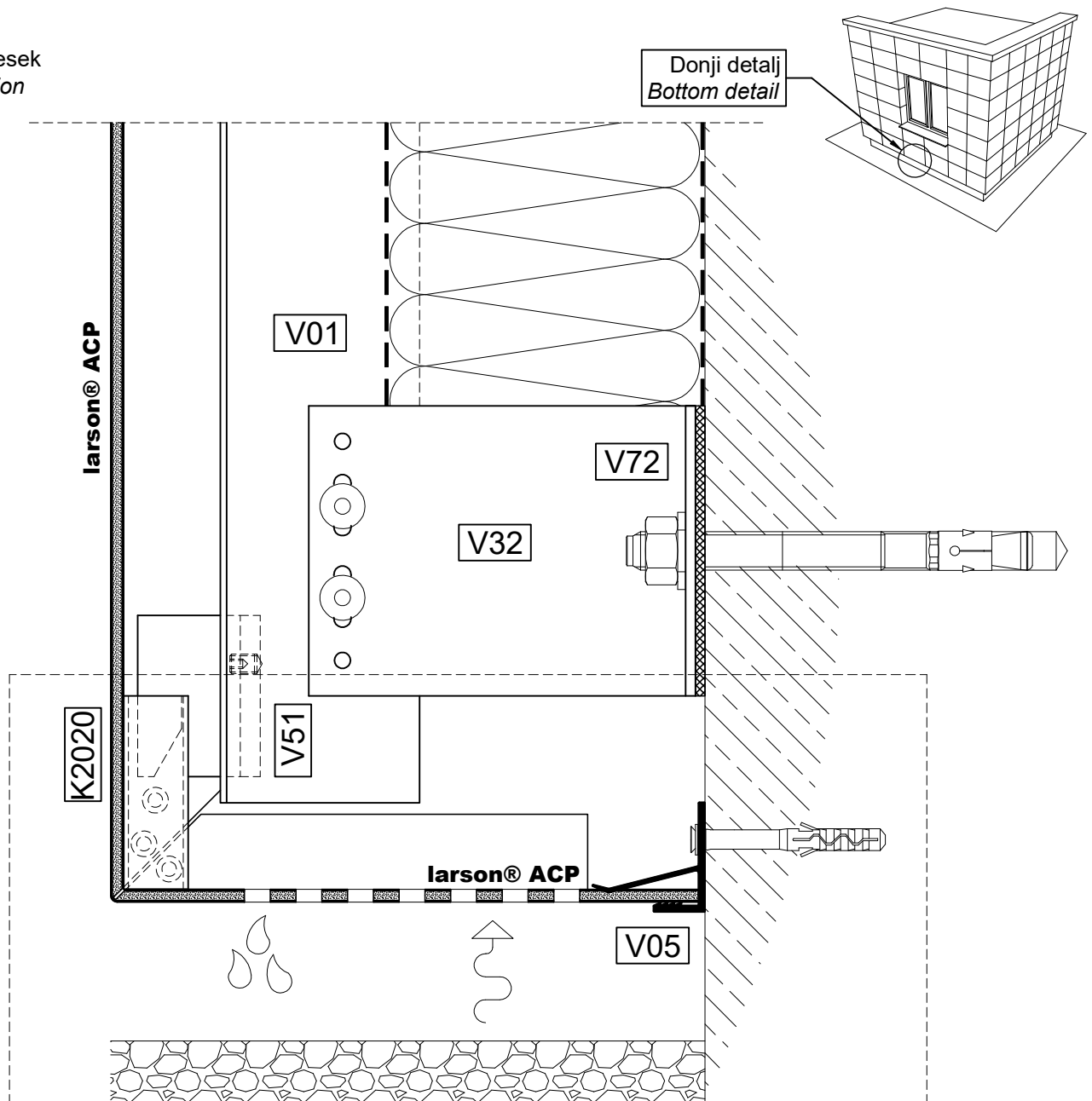
Horizontalni presek
Horizontal section



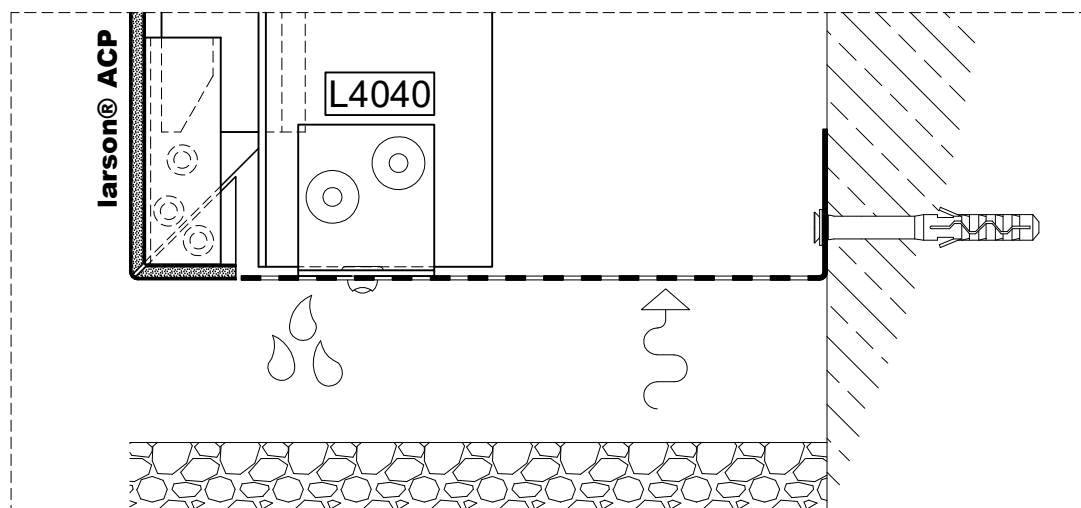
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

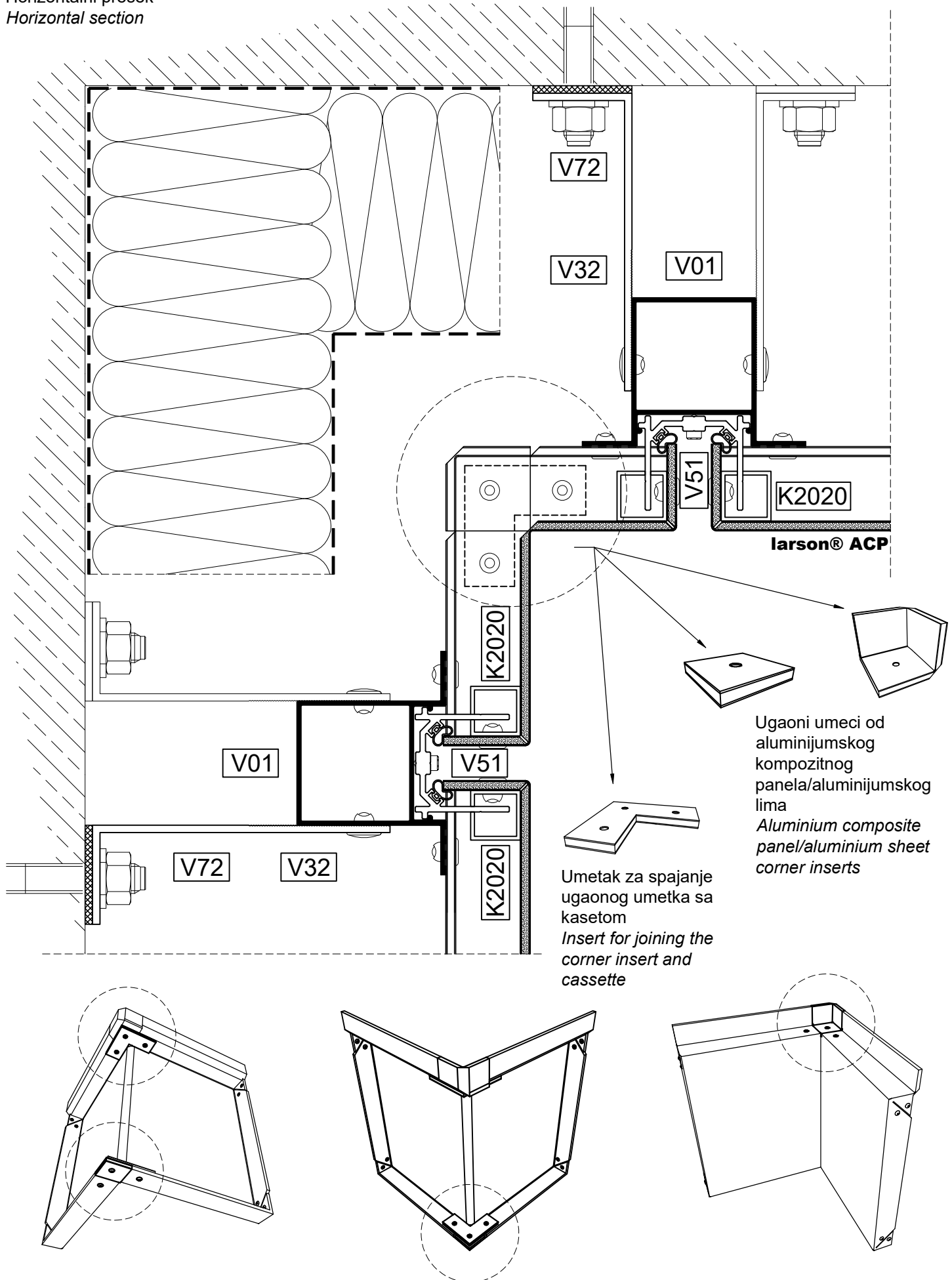


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

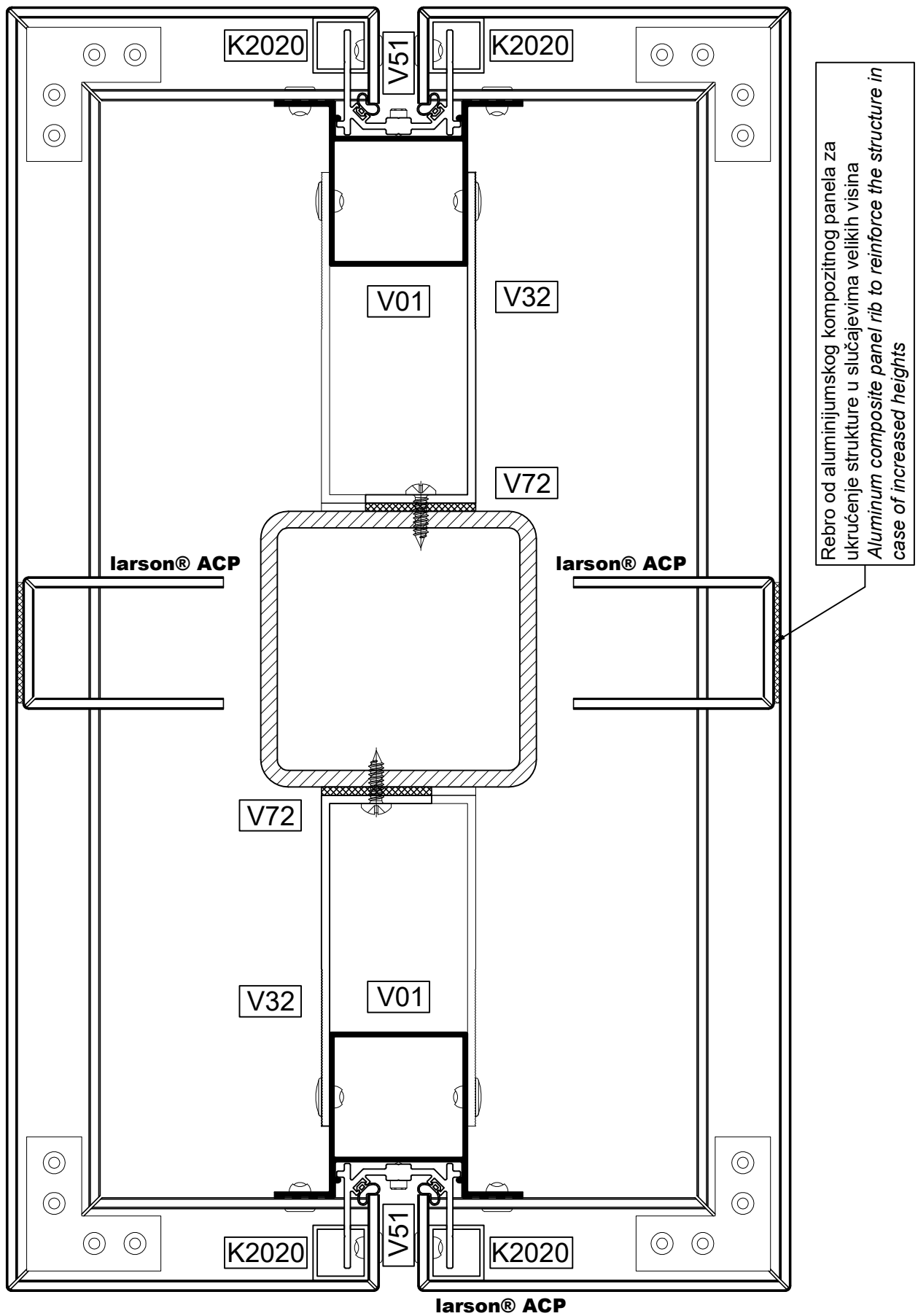


Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

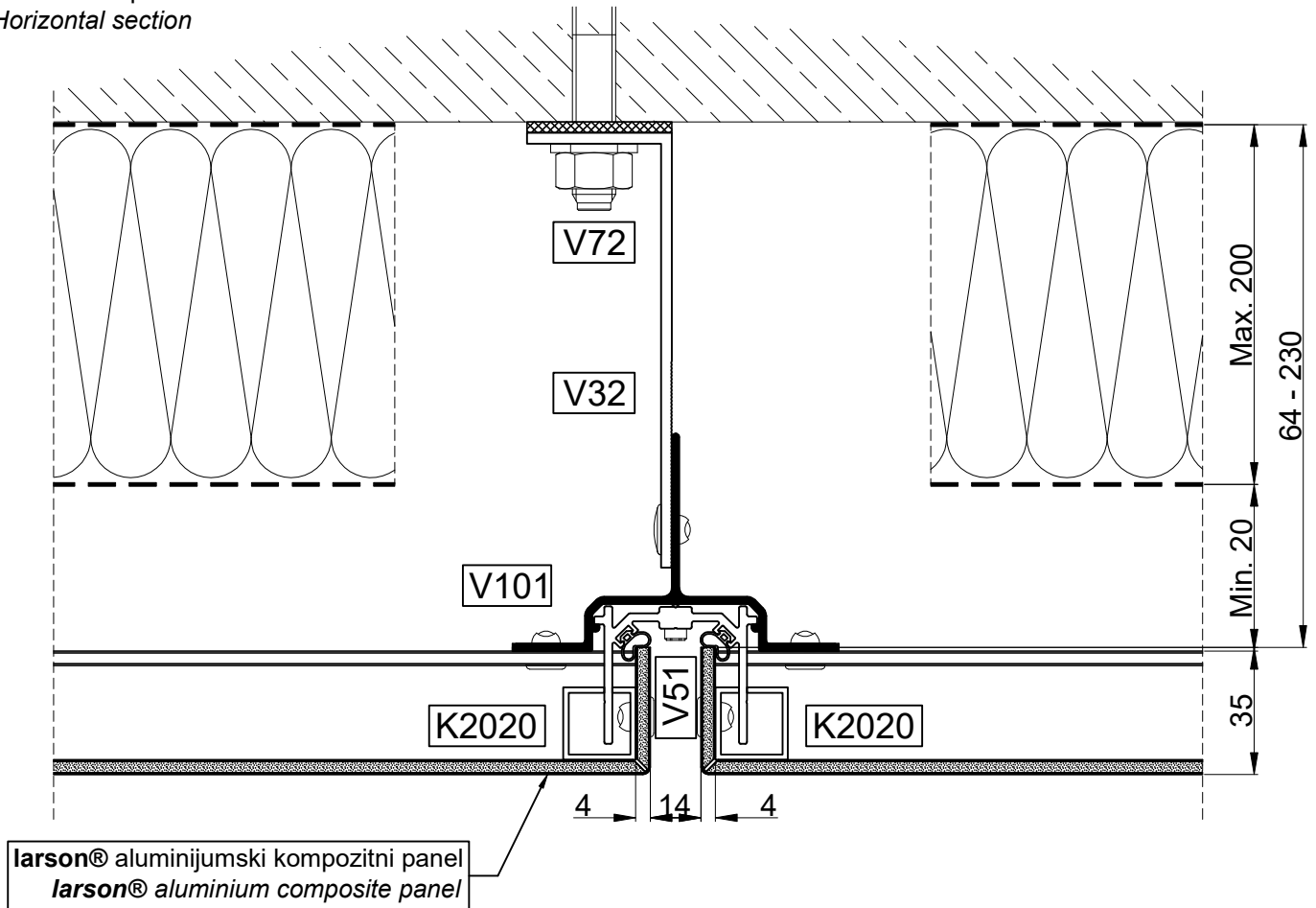
Horizontalni presek
Horizontal section



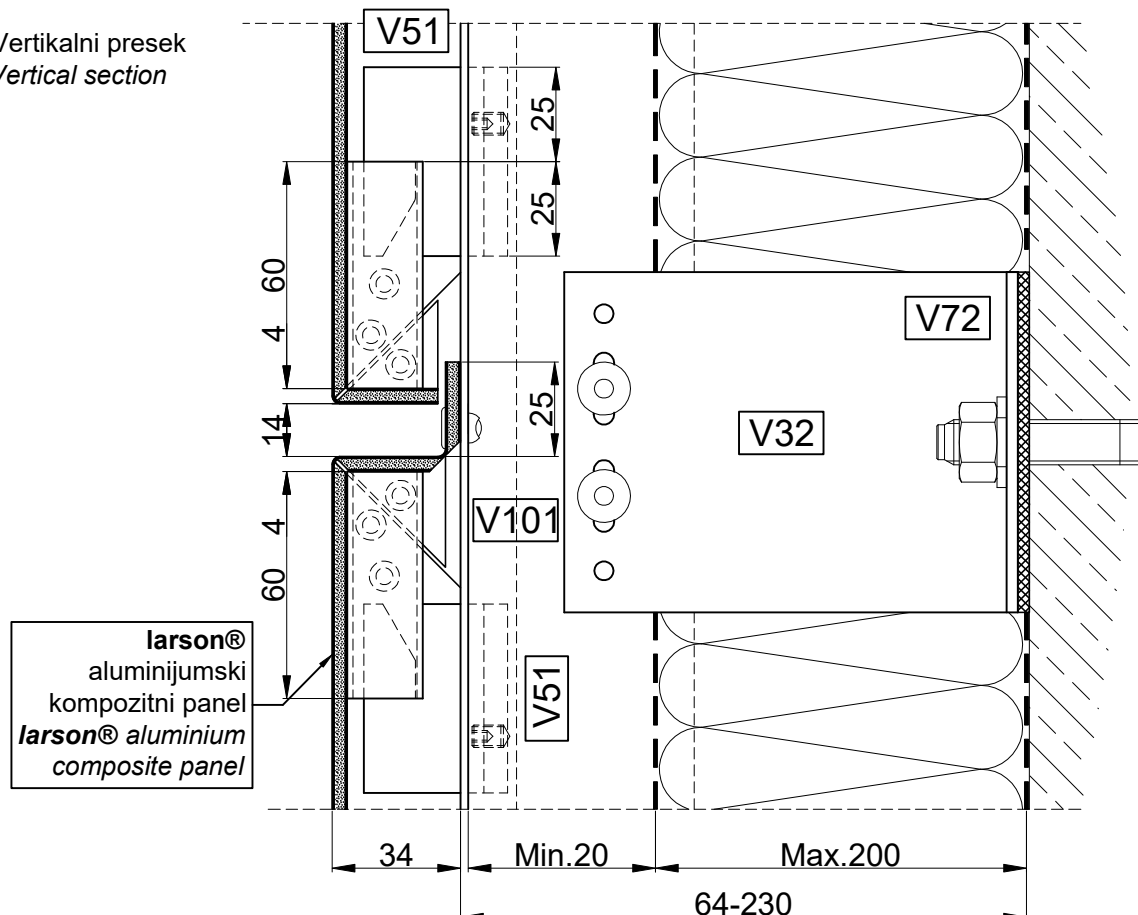
Horizontalni presek
Horizontal section



Horizontalni presek
Horizontal section

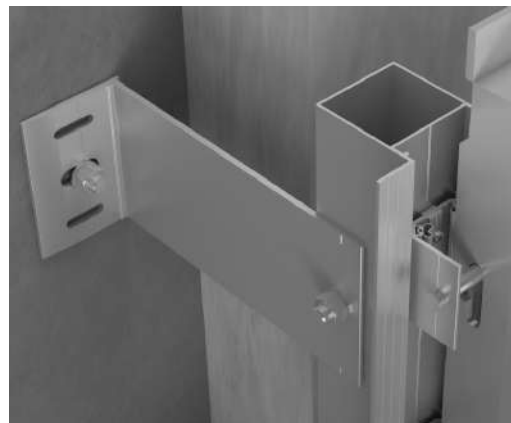


Vertikalni presek
Vertical section





Sistem
System
VENT SLIDER



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije namenjen prihvatanju posebno formiranih kaseti fiksnim skrivenim nosačima i vidnim prihvatajućim elementima veze u obliku osovina u predelu fuga. Pripremu kaseti je moguće odraditi kompletno u radionici, kako bi na gradilištu ovaj suvi postupak montaže bio brz i efikasan. Naziv je dobio prema načinu postavljanja kasetnih obloga na manje nosače, koji se pozicioniraju klizanjem na noseći deo podkonstrukcije i kasnijim fiksiranjem na istu (klizač-slider).

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila

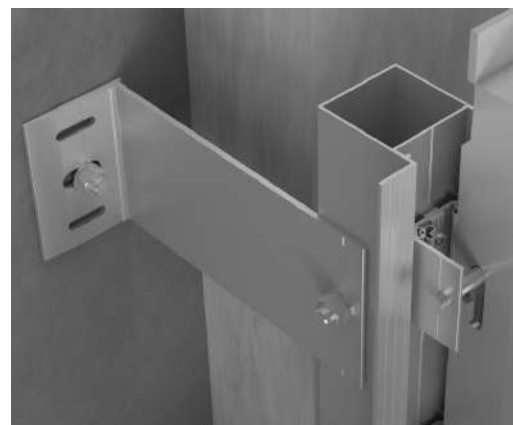
a) Ekstrudirani noseći profili se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m.

b) Vertikalni noseći omega profili (kat. br. V01) su pričvršćeni za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

d) Klizni nosači (kat br. V51) se postavljaju u omega profile. Kada su montirani predstavljaju glavne spojne tačke između podkonstrukcije i prethodno formiranih kaseti.

e) Fasadni paneli se obrađuju na CNC centru u radioničkim uslovima (sečenjem na meru i odgovarajućim žljebovanjem). Sistem Slider zahteva precizno sečenje slotova za fiksiranje kaseti koji se nalaze na bočnim stranama. Uz pomoć ovih slotova kaseti se fiksira na klizne nosače u omega profilima.

f) Tako pripremljene kasete se montiraju na fasadu, pri čemu se svaka kaseti "zaključa" na mesto naponom između gornjeg i donjeg nosača. U ovom sistemu predviđena je fuga od 16mm, kao i montaža fasade od dole ka gore.



Technical description

Aluminium substructure system for specially machined and shaped cassettes fixed by sliding panel brackets with visible bolts in gaps between cassettes. This dry installation system features a quick and efficient installation due to complete workshop preparation of all cassettes. It is named after special sliding brackets that are fixed to each cassette and later slide onto a load-barring substructure.

The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

a) Extruded load-bearing profiles are installed vertically and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.

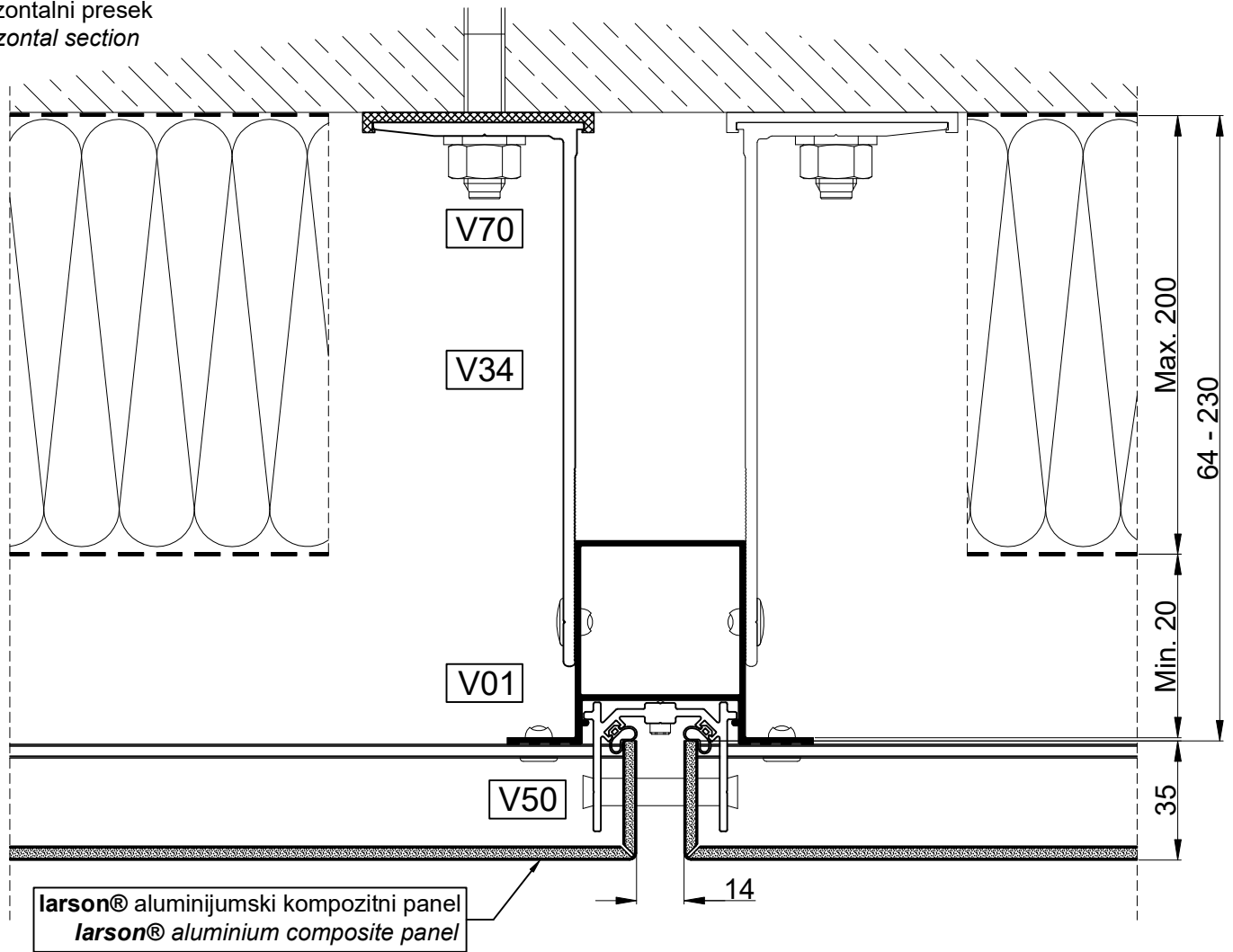
b) Vertical omega shaped profiles (item nr. V01) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors and vertical profiles are connected with threaded rods that feature integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.

c) Sliding bracket sets (item nr. V50) are inserted in omega profiles. These items form main attachment points for previously prepared cladding cassettes.

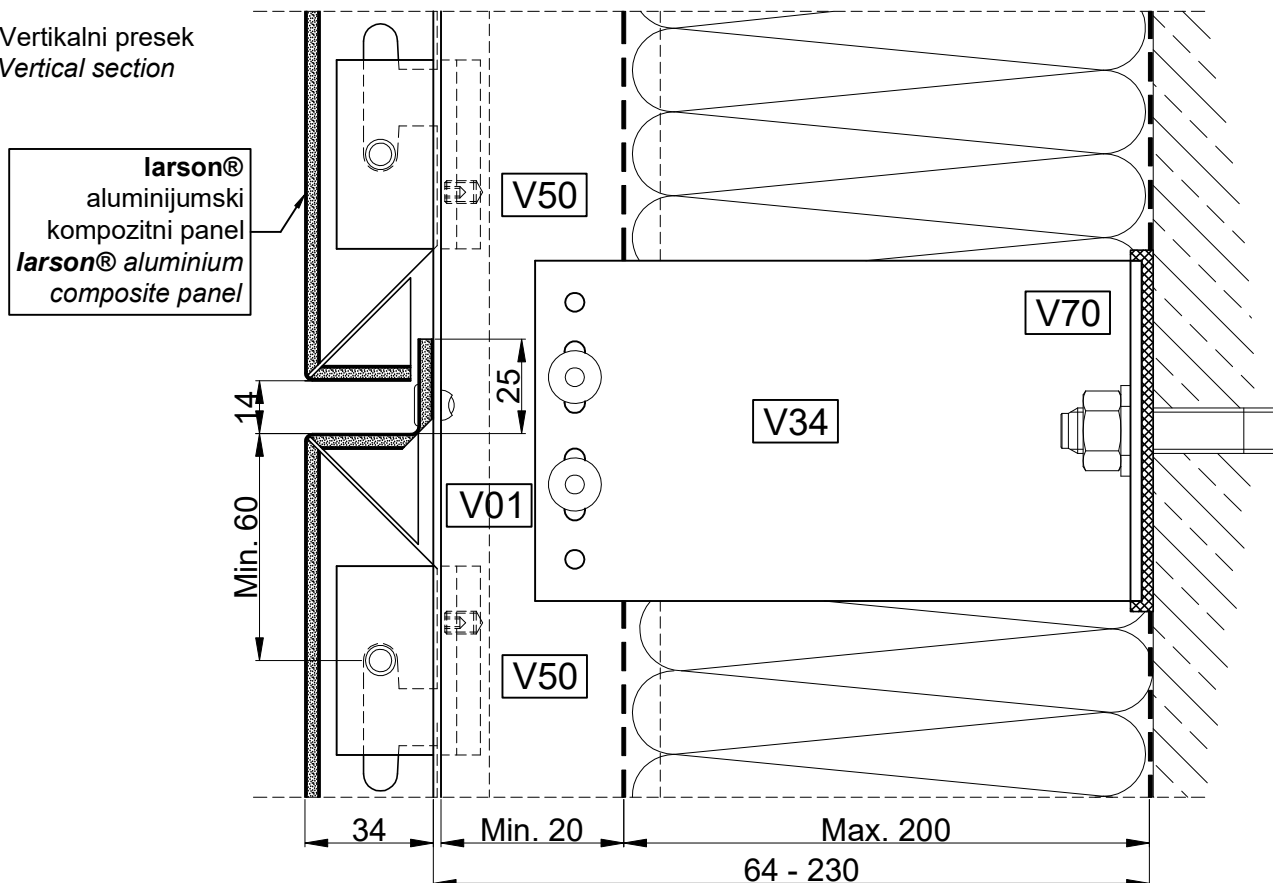
d) Facade panels are CNC machined (cut to measure and grooved). Slider system requires precise cutting of attachment slots on side flaps of the cassette for locking on to sliding bracket bolts.

e) The prepared cassettes are mounted and spanned into place. Each cassette is safely locked by tensioning between lower and upper sliding bracket bolt. This system features 16mm wide gap and installation of facade goes from ground level up.

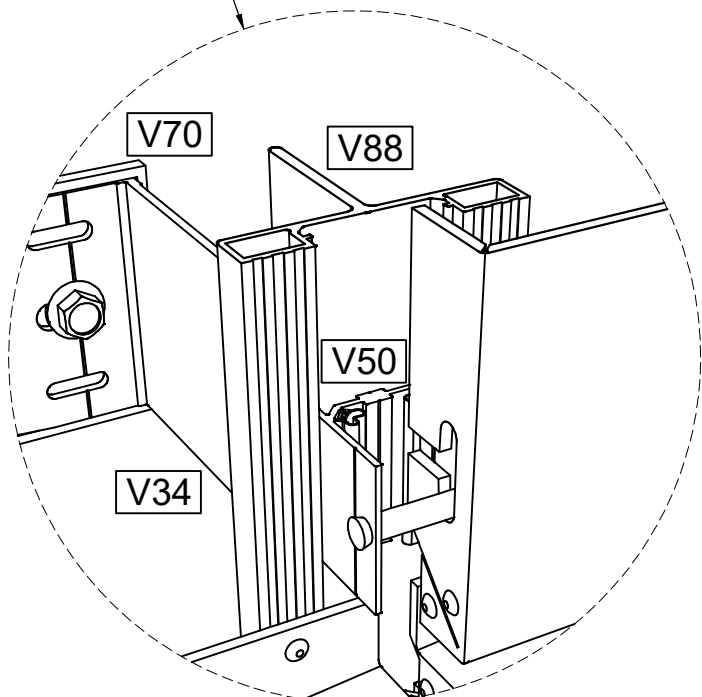
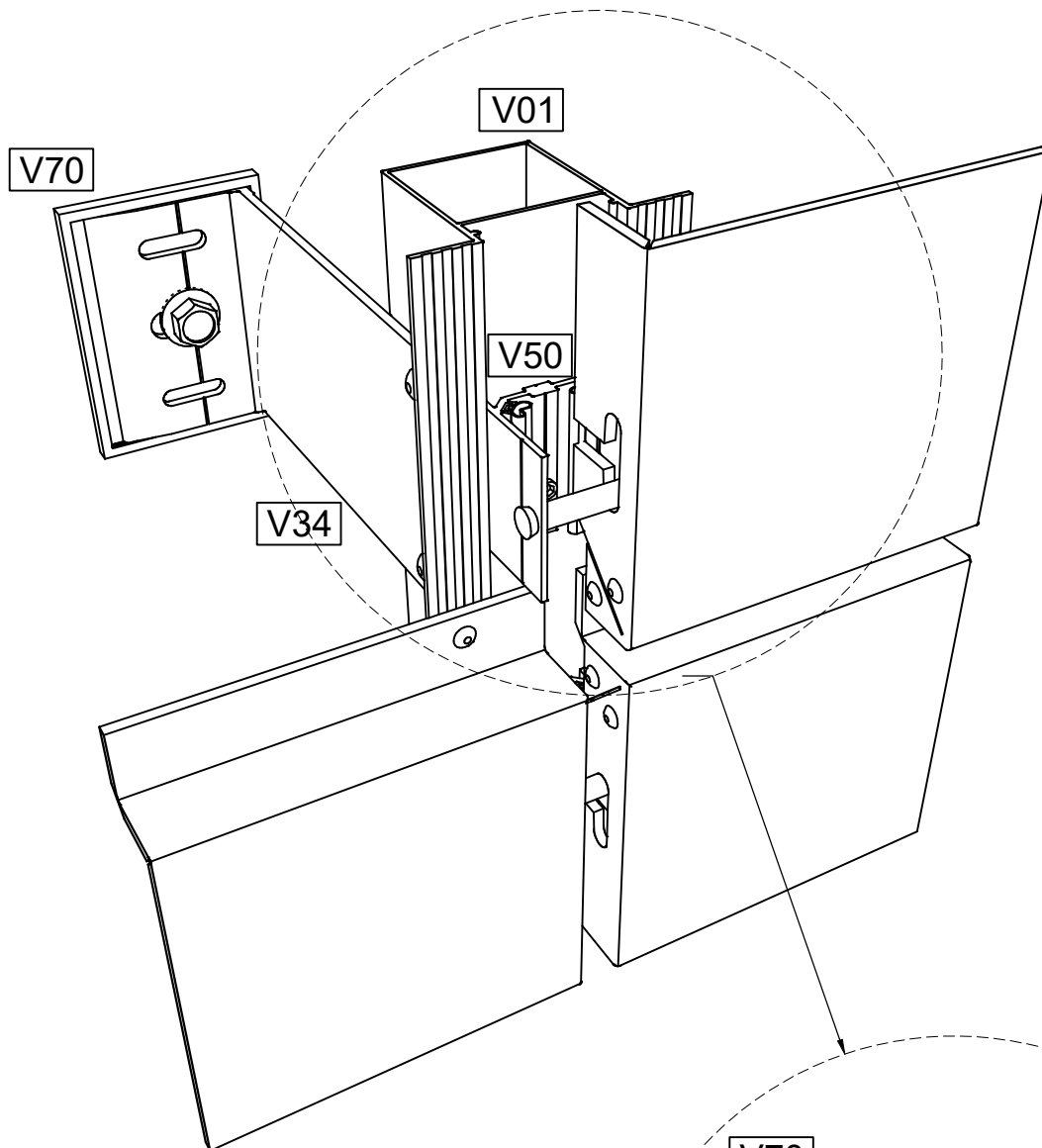
Horizontalni presek
Horizontal section



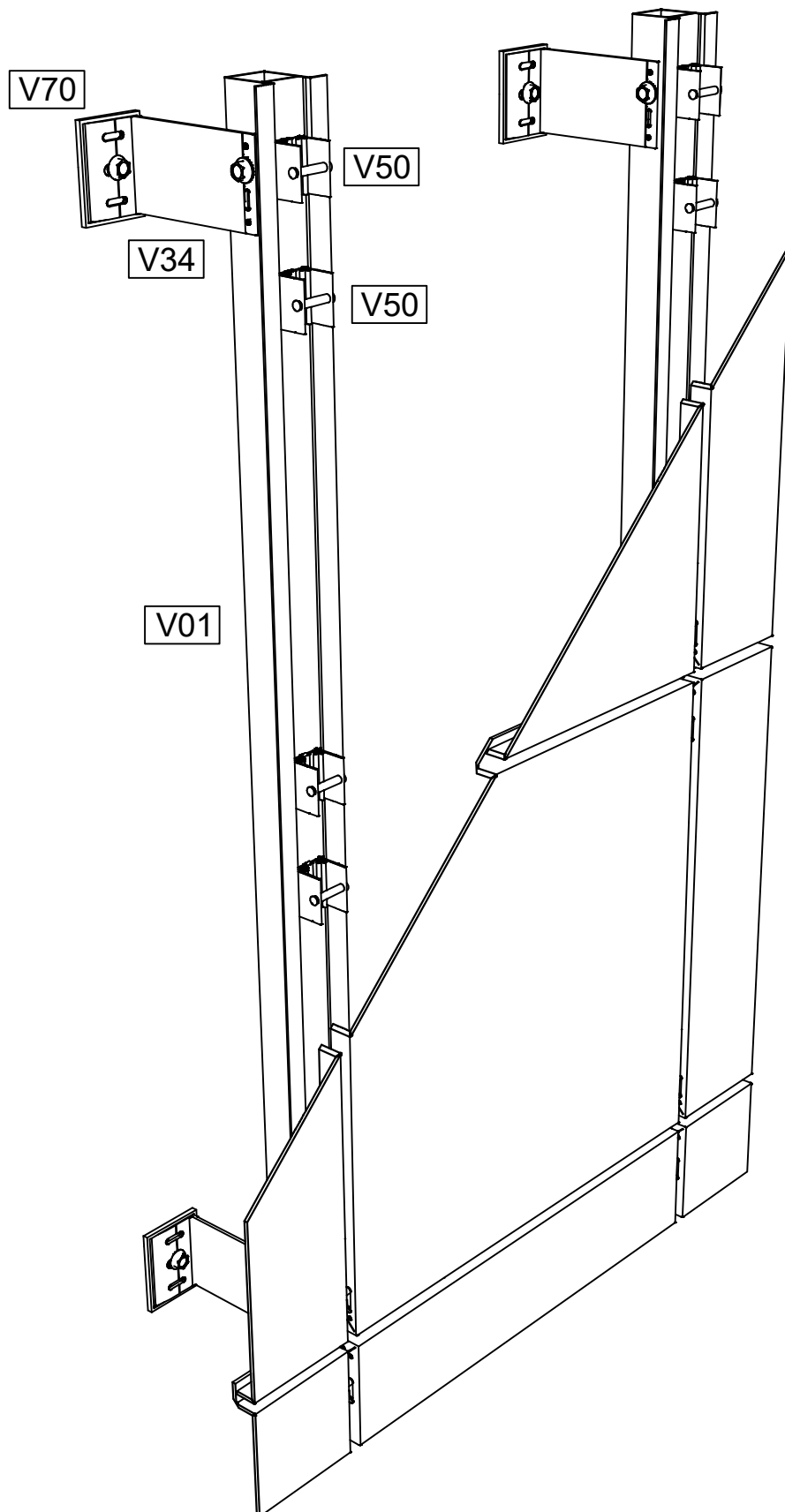
Vertikalni presek
Vertical section

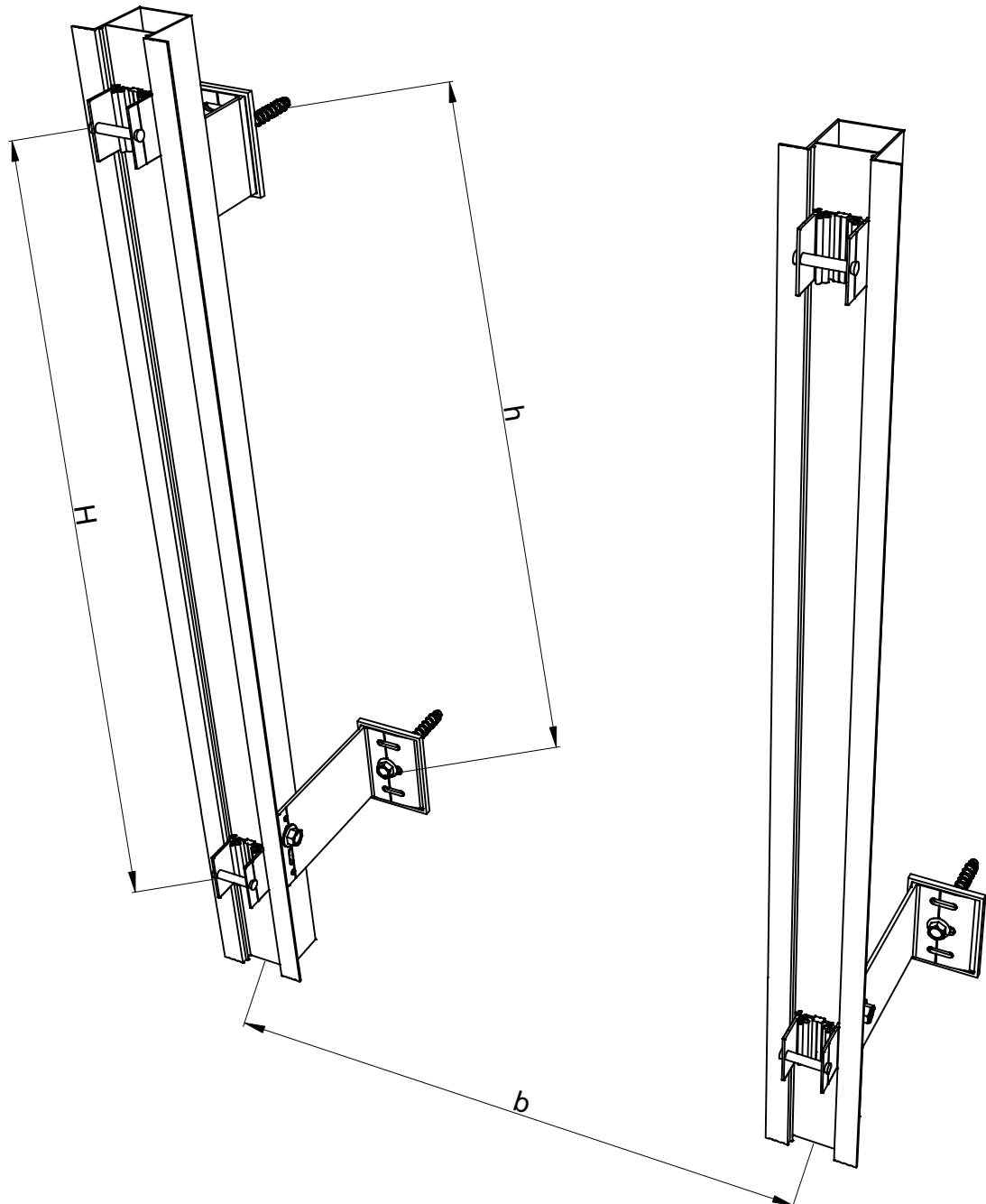


Opcija 1 - V01 kao primarna vertikalna noseća konstrukcija
Option 1 - V01 as primary vertical load bearing structure



Opcija 2 - V88 kao primarna vertikalna noseća konstrukcija
Option 2 - V88 as primary vertical load bearing structure

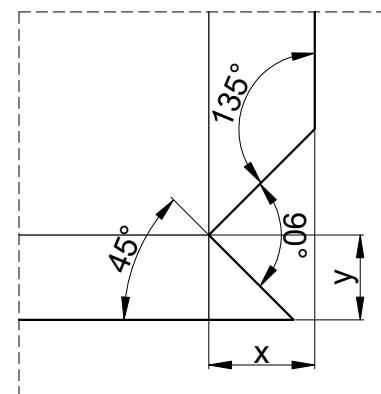
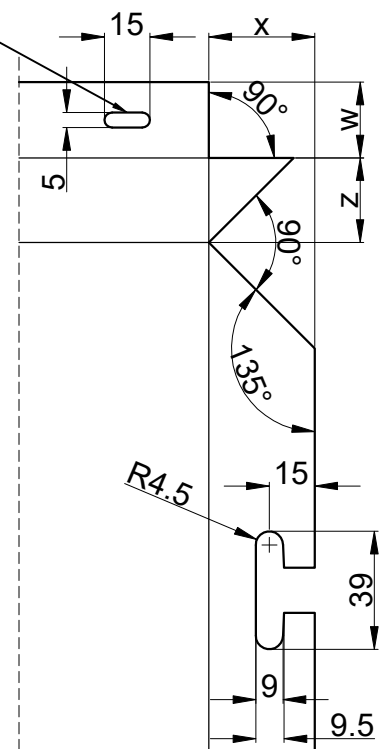
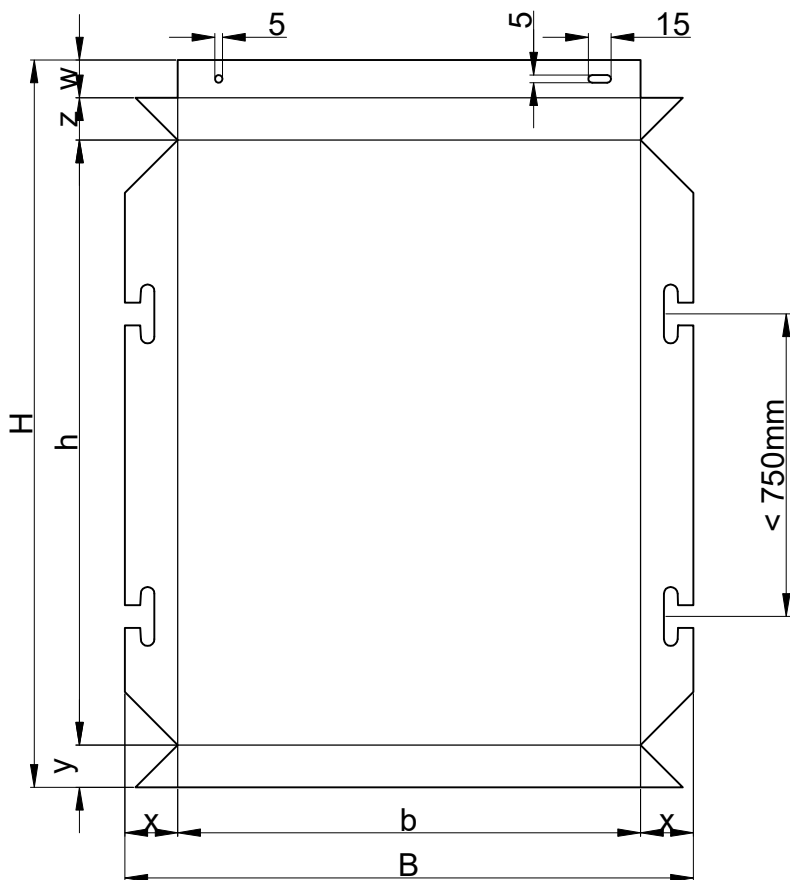




b, h - prema statičkom proračunu, ali ne više od 1200mm
 b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 600mm
 H - according to structural analysis and depending on applied cladding material, but no more than 600mm

otvor za fiksiranje kasete na vertikalnu
opening for fixing the cassette for vertical profile



b	x	h	y	z	w
	35		28	28	25

(mm)

B	H
$b + 2x$	$h + y + z + w$

(mm)

b - projektovana vidna širina kasete
b - designed visible cassette width

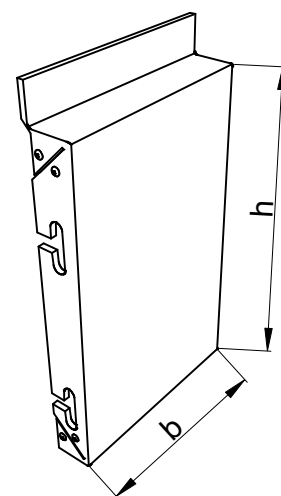
h - projektovana vidna visina kasete
h - designed visible cassette height

B - ukupna širina razvijene mreže kasete
B - developed cassette scheme total width

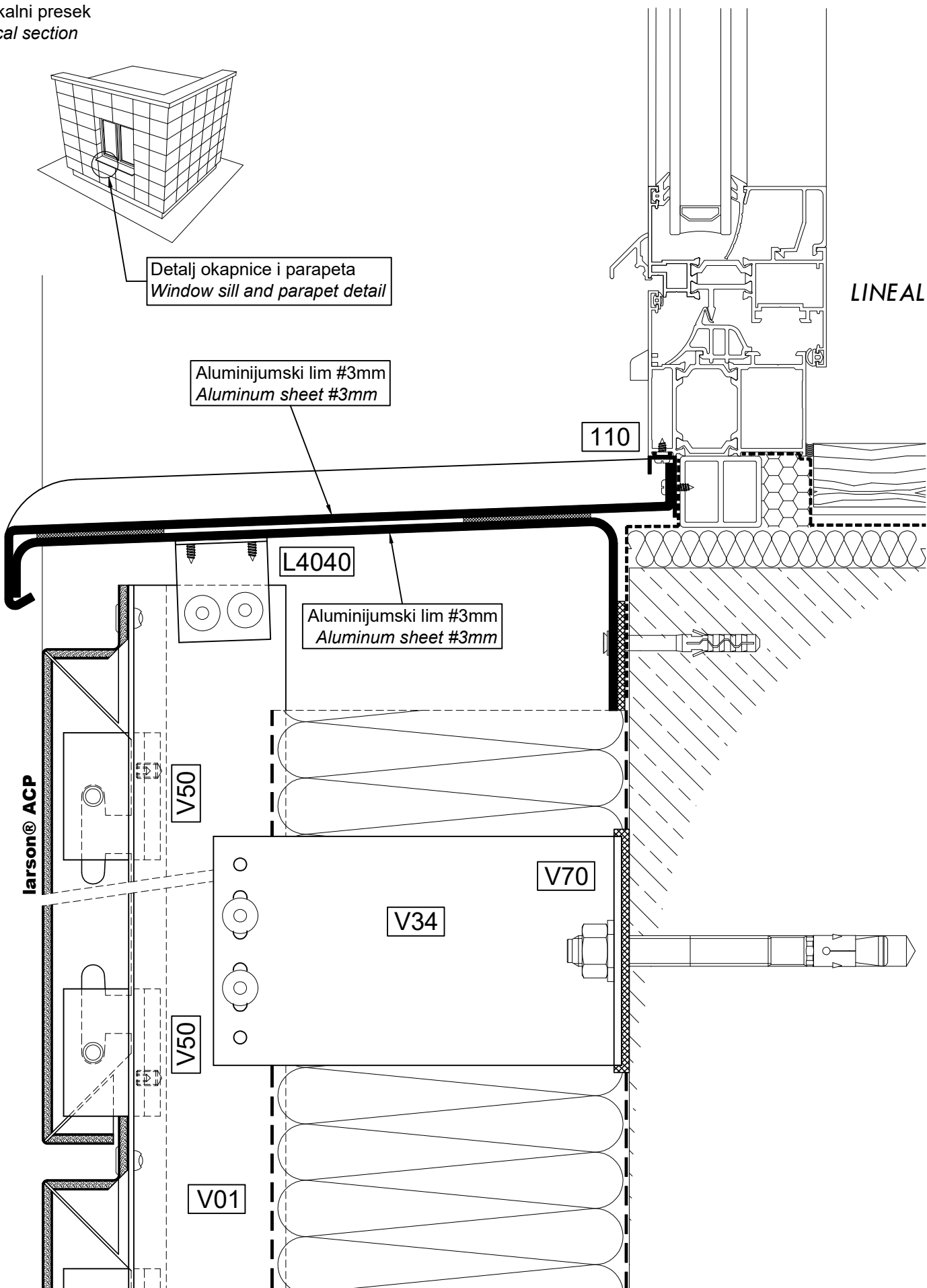
H - visina razvijene mreže kasete
H - developed cassette scheme total height

x, y, z, w - prikazane dimenzije su minimalne preporučene od strane projektanta sistema, ali se mogu povećati u zavisnosti od potreba konkretnog projekta (način fiksiranja i vrsta primenjenih spojnih sredstava, projektovana dubina kasete itd.)

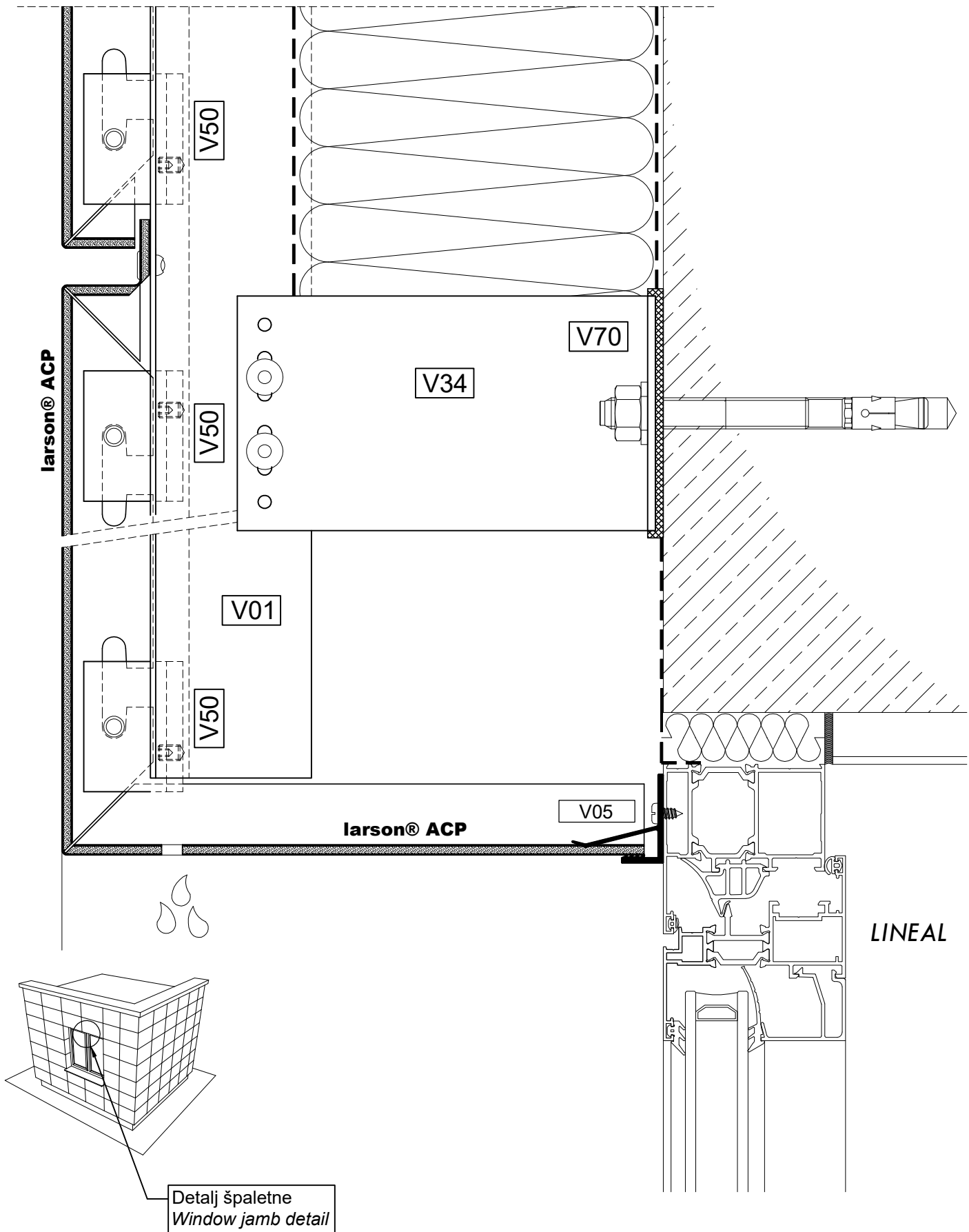
x, y, z, w - listed values are minimal as per system designer's recommendation, but could be increased depending on needs of specific project (fixing method and type of applied fasteners, designed cassette depth etc.)



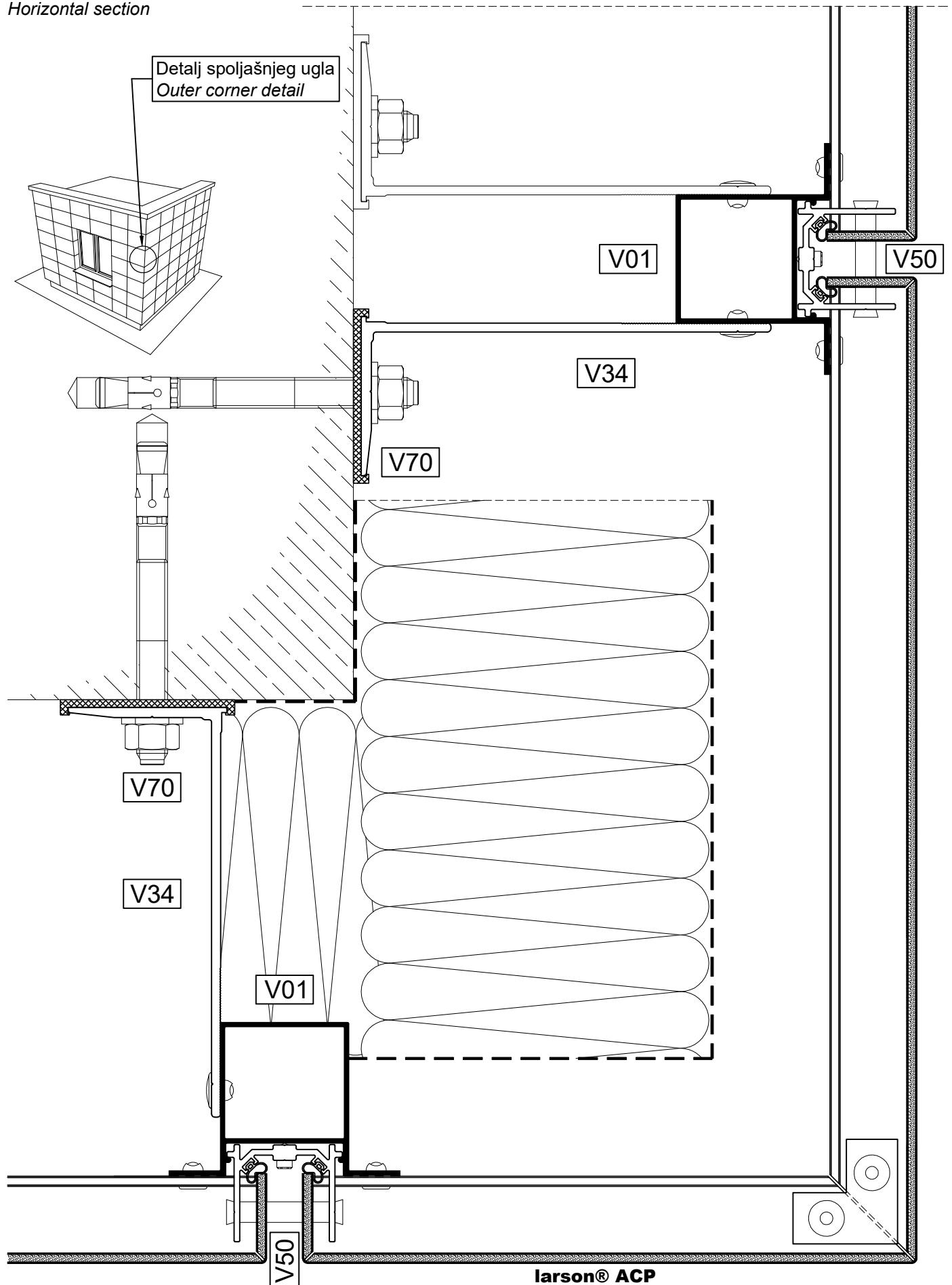
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

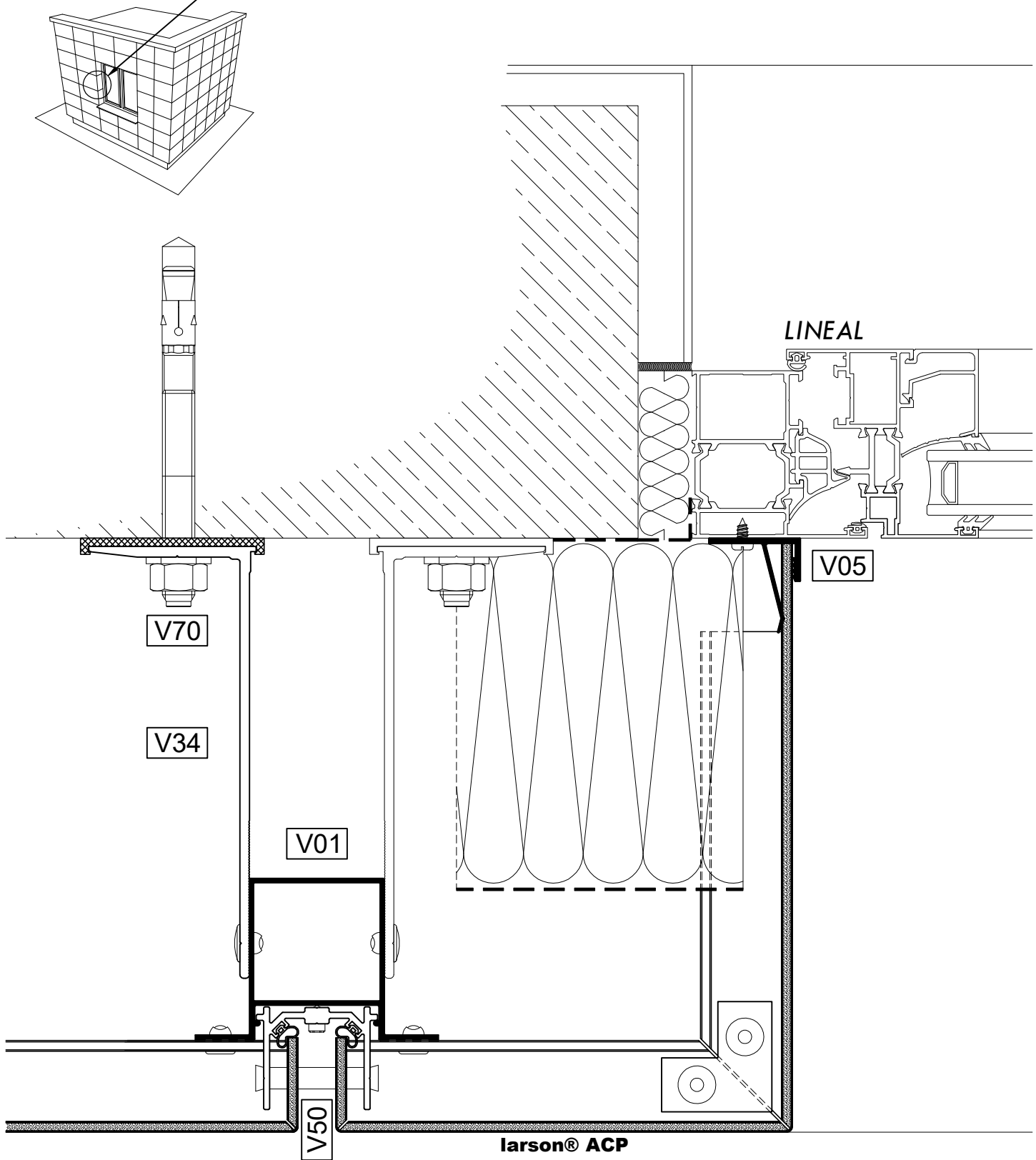


Horizontalni presek
Horizontal section

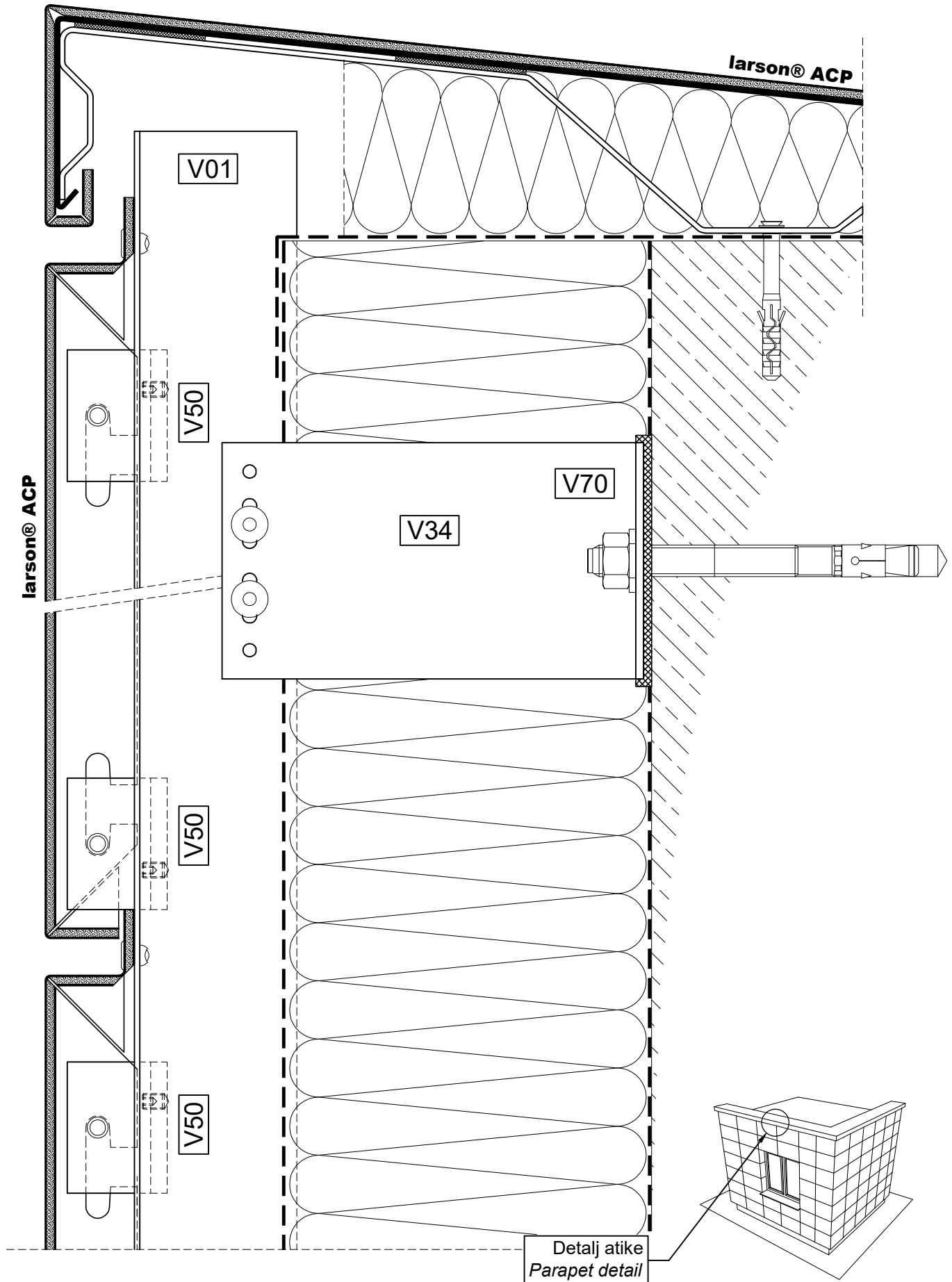


Horizontalni preseki
Horizontal section

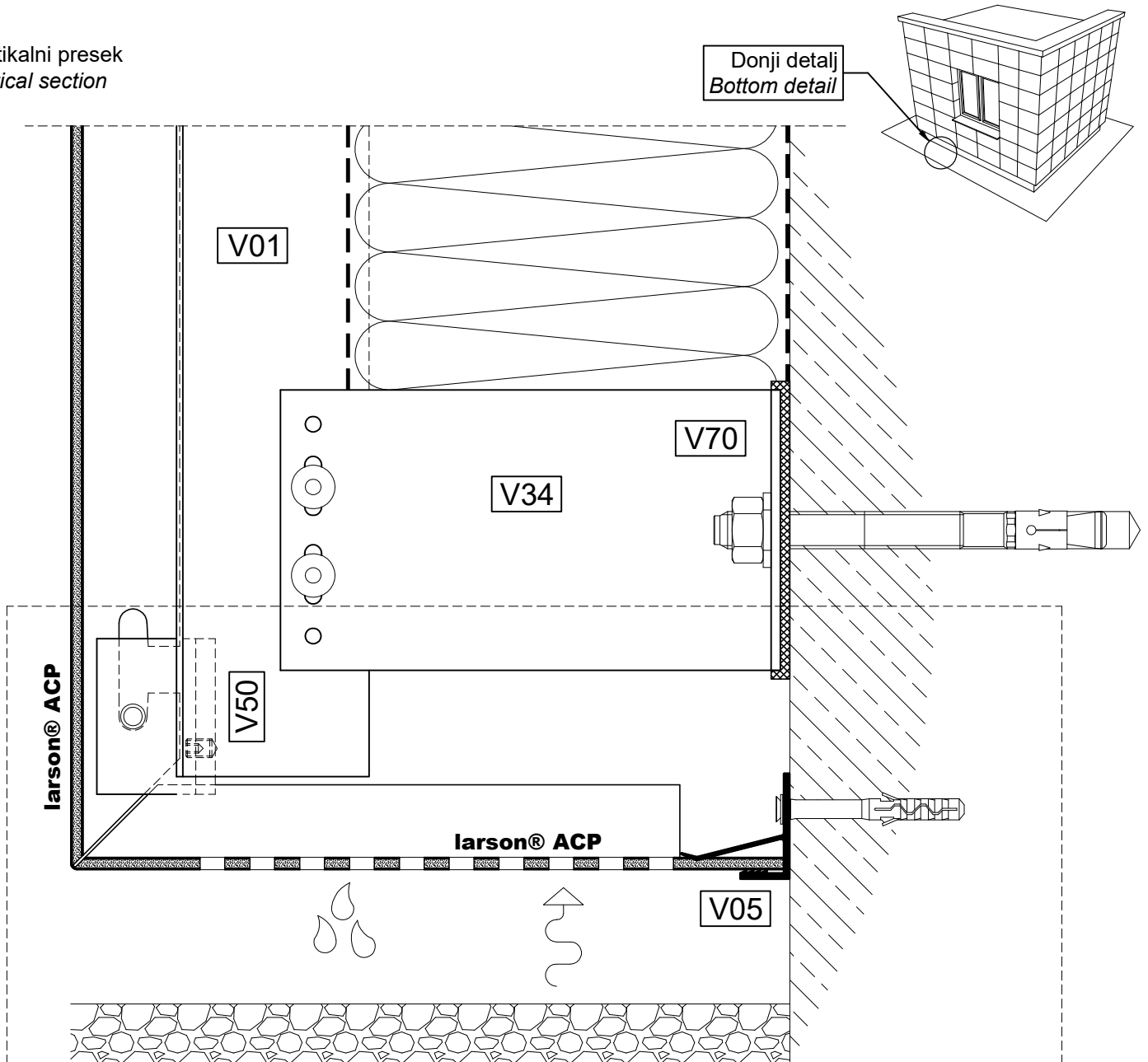
Detalj špaletne
Window jamb detail



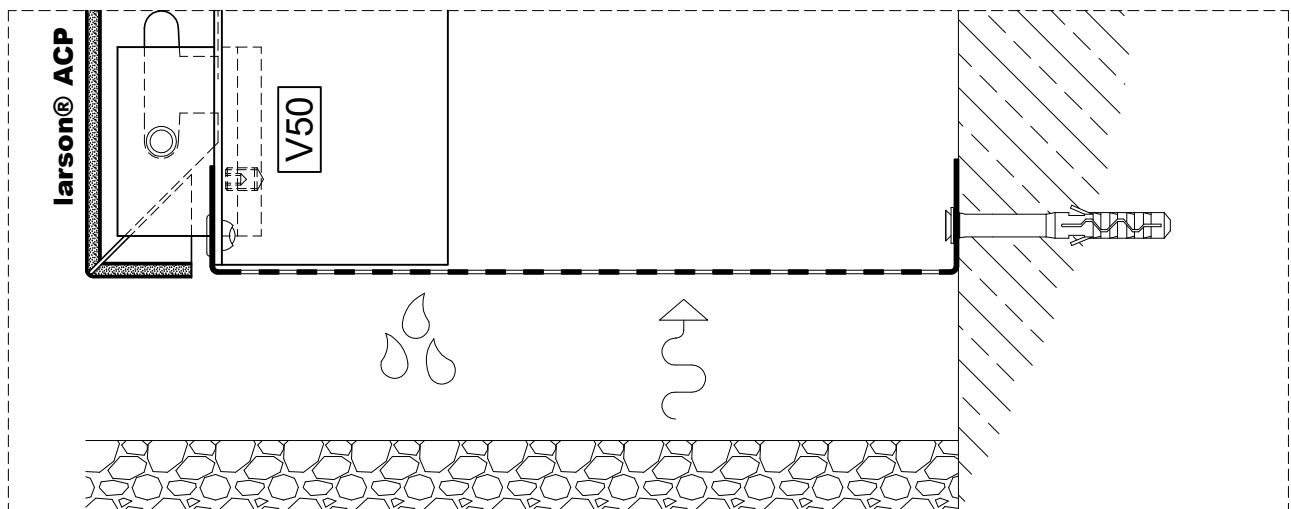
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section

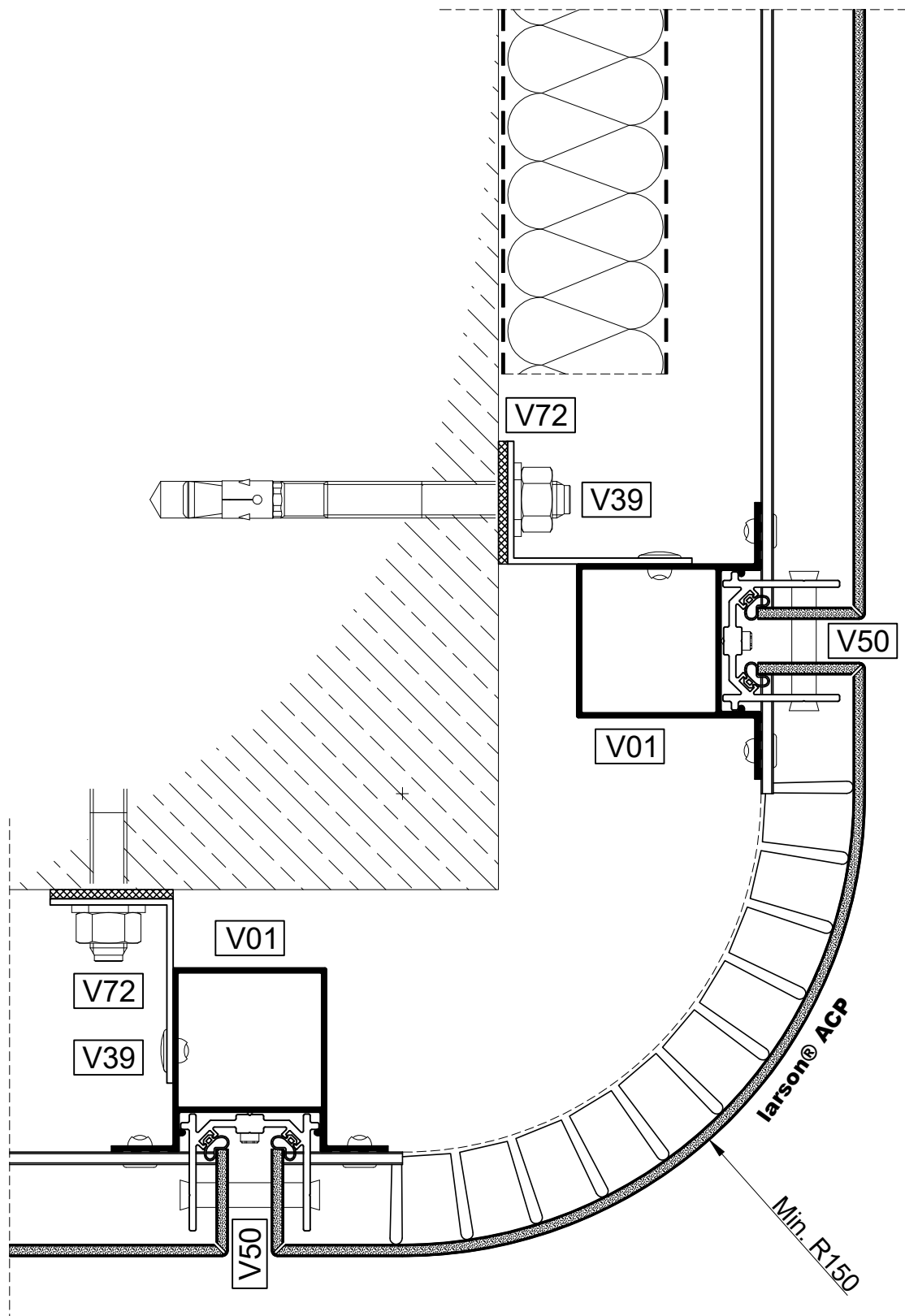


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

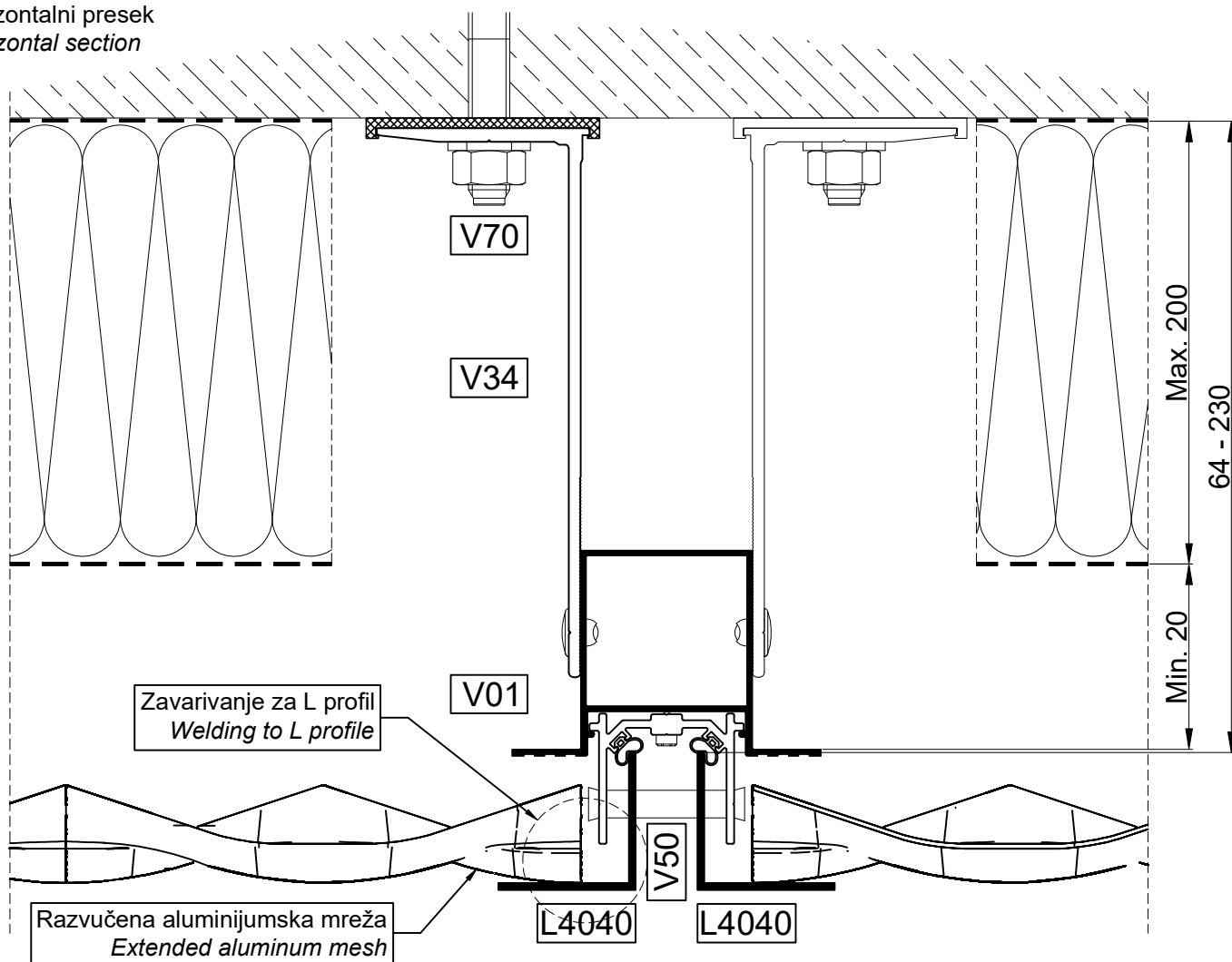


Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

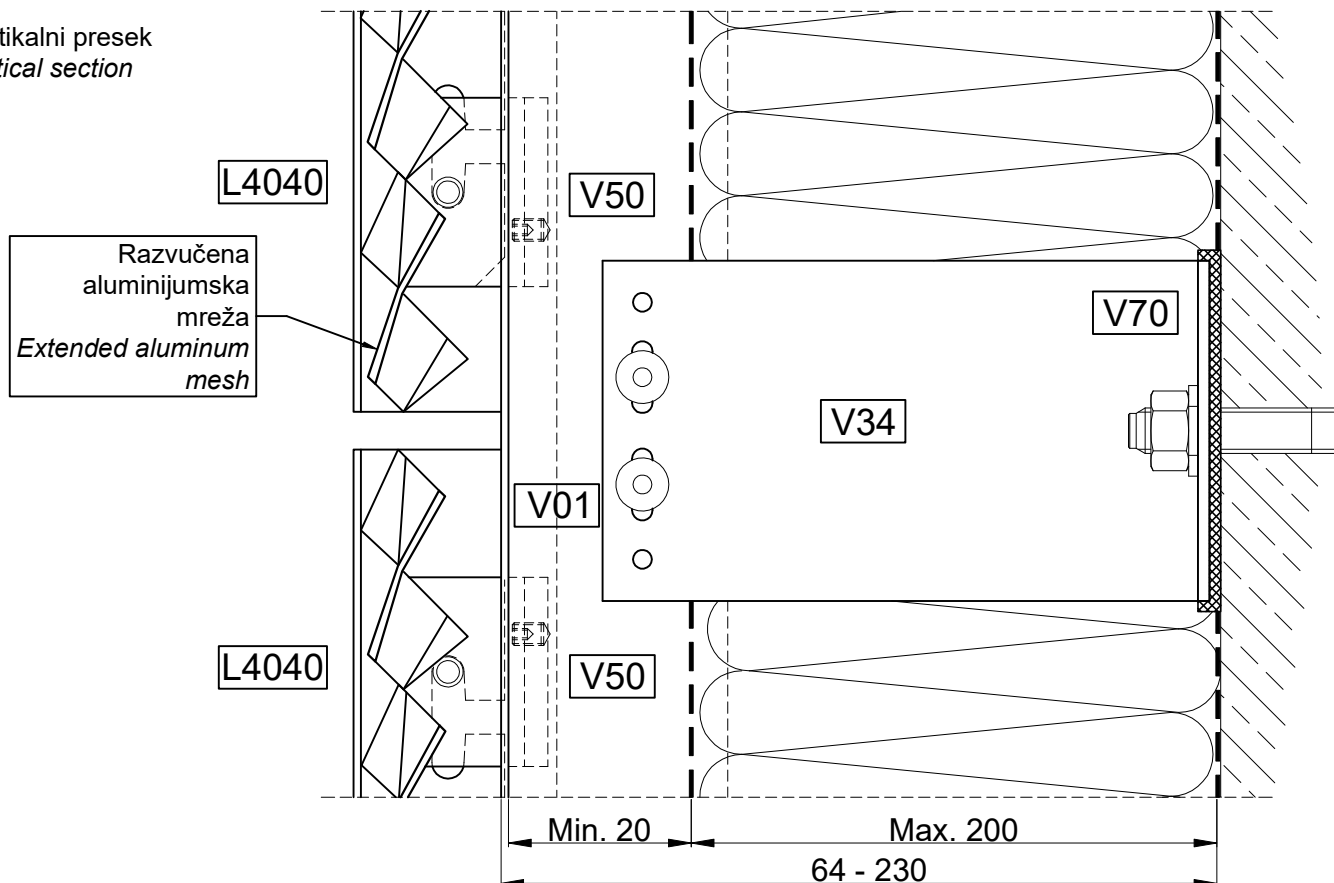
Horizontalni presek
Horizontal section

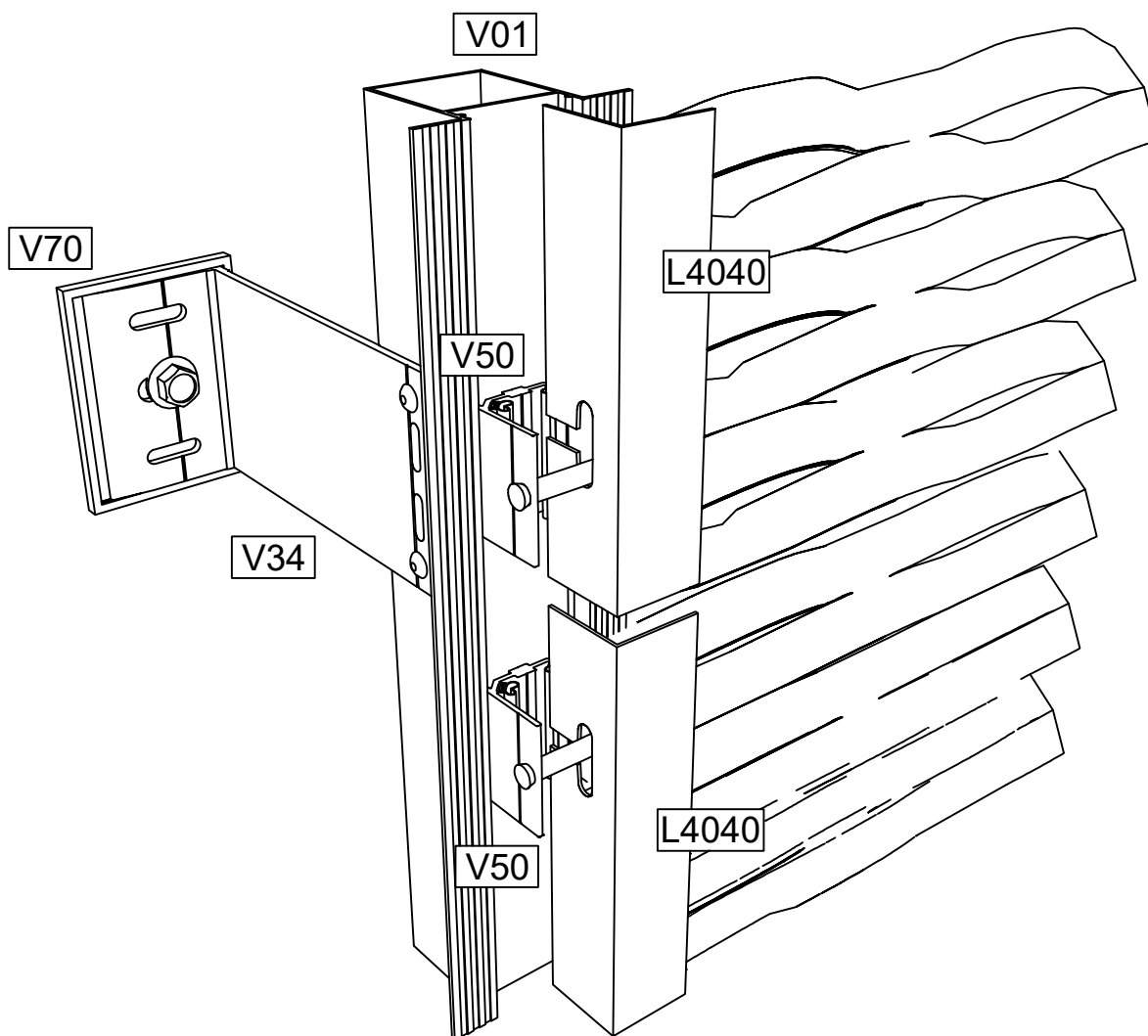


Horizontalni presek
Horizontal section



Vertikalni presek
Vertical section





*Prezentovani detalj predstavlja samo predlog rešenja u sistemu VENT Rivet. Svaki tip mreže, njena dispozicija na/u objektu i njena funkcija će usloviti rešenje koje mora biti statički provereno za svaki konkretan slučaj.

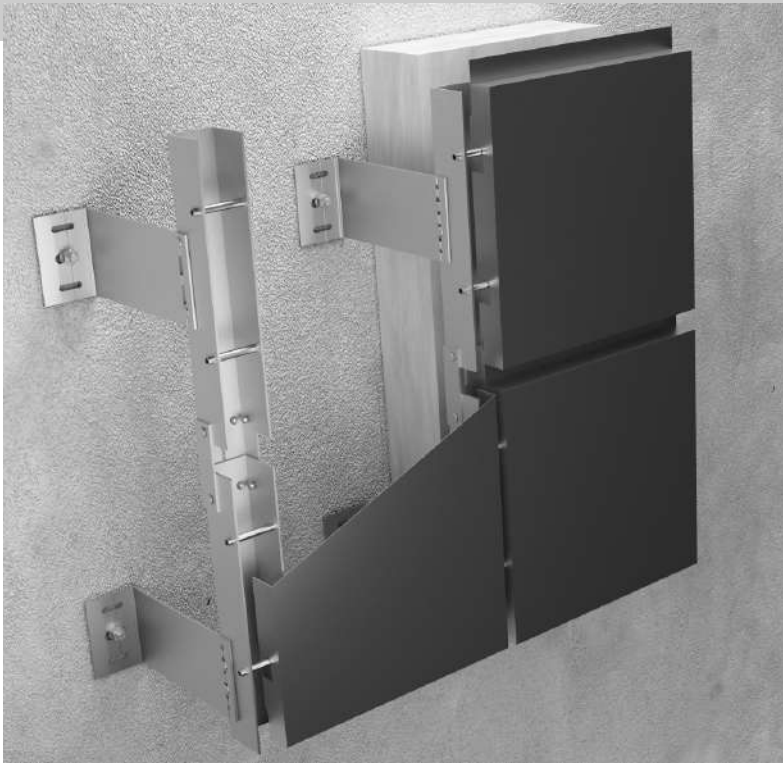
**The presented detail is merely a preliminary technical solution in system VENT Rivet. Every individual mesh type, its disposition on/in the building and its function would condition a technical solution that must be structurally analysed for every particular situation.*

*Tehničko rešenje je validno za određene tipove mreže. U toku izbora mustre, konsultovati se sa prodajno-tehničkom službom.

**Technical solution is valid for certain mesh types. When deciding on a mesh type, consult the commercial and technical department.*



Sistem
System
VENT BOLT



Tehnički opis sistema

Sistem aluminijske podkonstrukcije namenjen prihvatanju posebno formiranih „kaseti“ fiksiranih skrivenim nosačima i vidnim prihvaćajućim elementima veze u obliku malih cevčica u predelu fuga, bolcnama, po čemu je sistem i dobio naziv (bolcna- bolt).

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila.

- a) Noseći profil se u projektovanom rasteru postavlja na mestima vertikalnih spojeva/fuga fasadnih polja. Dužina nosećih profila je definisana slobodnim prostorom u samoj kaseti po vertikali, a maksimalno rastojanje između nosećih profila je 1,5m.
- b) Fiksiranje nosećih profila se vrši kotvama, koje omogućavaju fino podešavanje/pozicioniranje nosećih aluminijskih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Maksimalna preporučena udaljenost kotvi je 1,5m (definisano statičkim računom). Njihov spoj sa vertikalama se ostvaruje u vidu pop-zakivaka ili vijaka kroz otvore u ankerima koji omogućuju kako fiksnu, tako i dilatirajuću vezu. Ukoliko postoji zahtev za termoprekidom, neophodno je kao tampon sloj, između punog dela zida i aluminijskih kotvi, postaviti plastične podloške.
- c) Na „U“ profilima se buše otvori za postavljanje aluminijskih cevčica-bolci i to na mestima gde će prihvatati formirane kasetne obloge.
- d) Obrada izabranog tipa panela se vrši uglavnom u radioničkim uslovima, prvo se vrši isecanje i žlebovanje na CNC obradnom centru sa prorezima na „krilcima“ kaseti tačno projektovanim za nasedanje na bolcne koje su deo podkonstrukcije. Zatim se kasete savijaju po žlebovima, ubacuju se „L“ profili u uglove savijenih kaseti i vrši se njihovo spajanje pop-zakivcima.
- e) Kasete pripremljene u radionici se na gradilištu samo „kače“ i to tako da kasete sa prorezima „nalegnu“ na bolcne. Ovo kačenje se odvija od donjih ka gornjim poljima na fasadi. Sistem predviđa fugu širine 10mm.



Technical description

Aluminium substructure system for specially machined and shaped cassettes fixed by panel brackets with visible bolts in gaps between cassettes (this is where the system's name comes from). This dry installation system features specially machined side cutouts used to fix cassettes for aluminium substructure.

The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

a) Extruded load-bearing T or L profiles are installed in any direction required by project (from horizontal to vertical) and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.

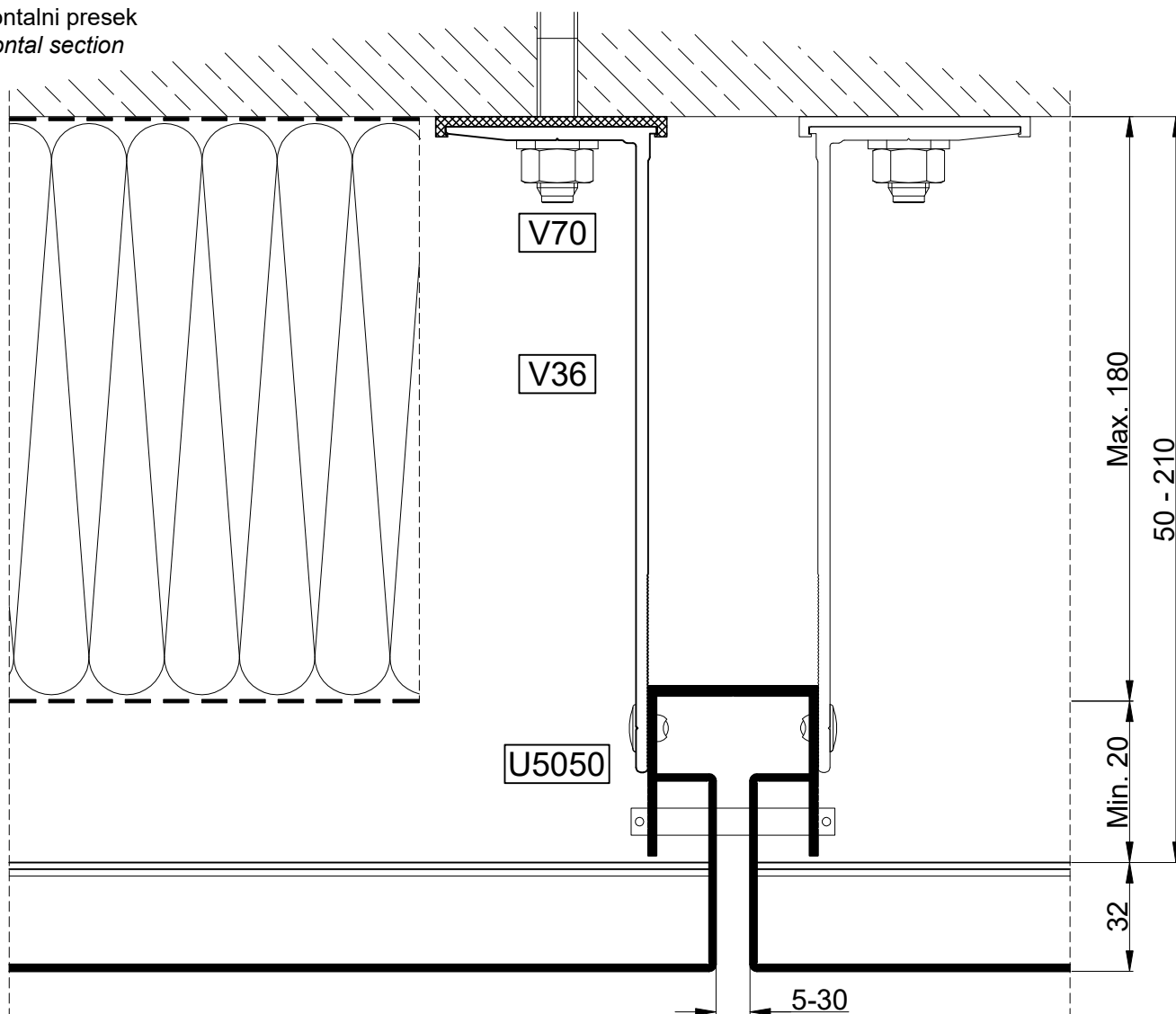
b) Main vertical "U" profiles (item nr. U5050) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade surface. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to main profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.

c) The "U" profiles are drilled to allow for installation of 60mm bolts that carry finished cladding cassettes according to project

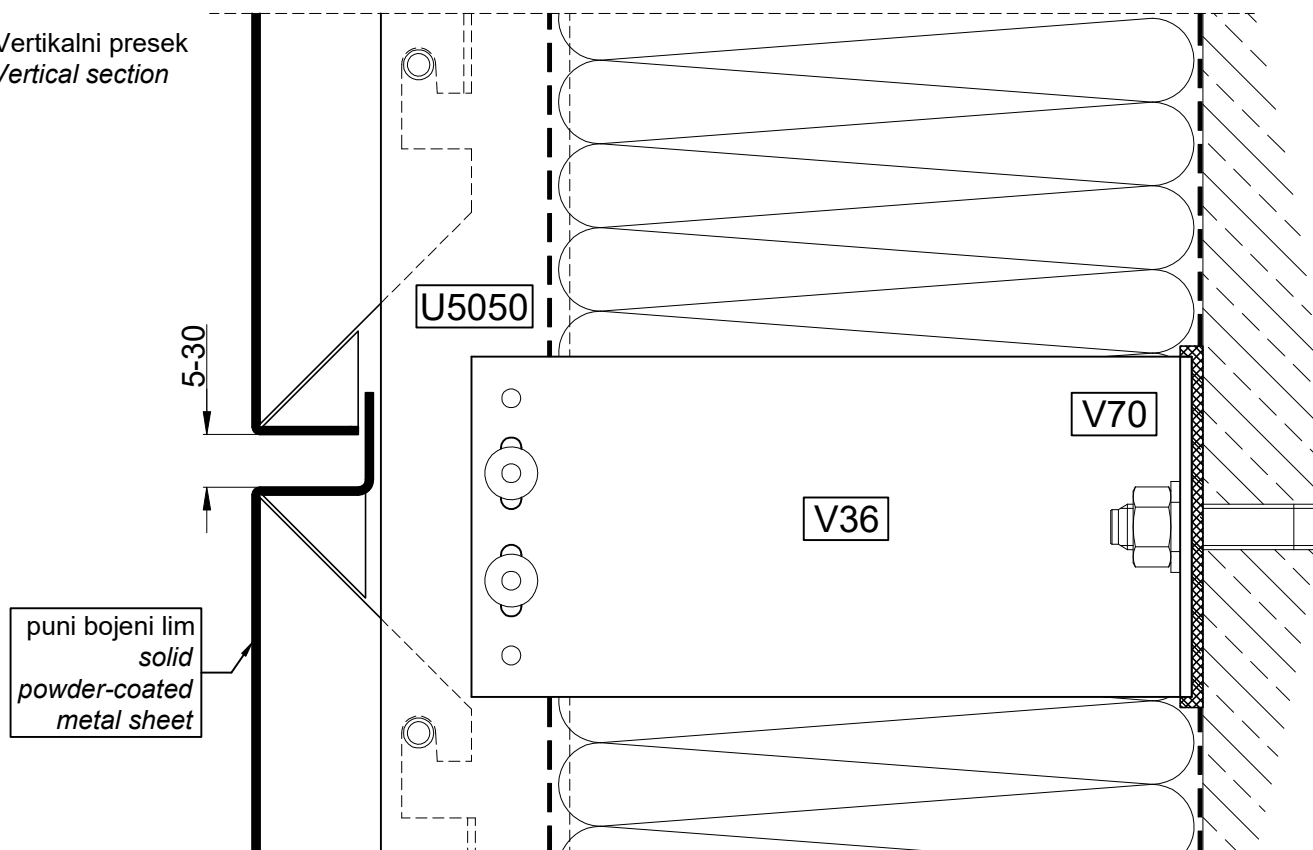
d) Facade panels are CNC machined (cut to measured, grooved and reinforced with small L profiles riveted into corners). Bolt system requires precise cutting of attachment slots on side flaps of the cassette for locking on to bolts.

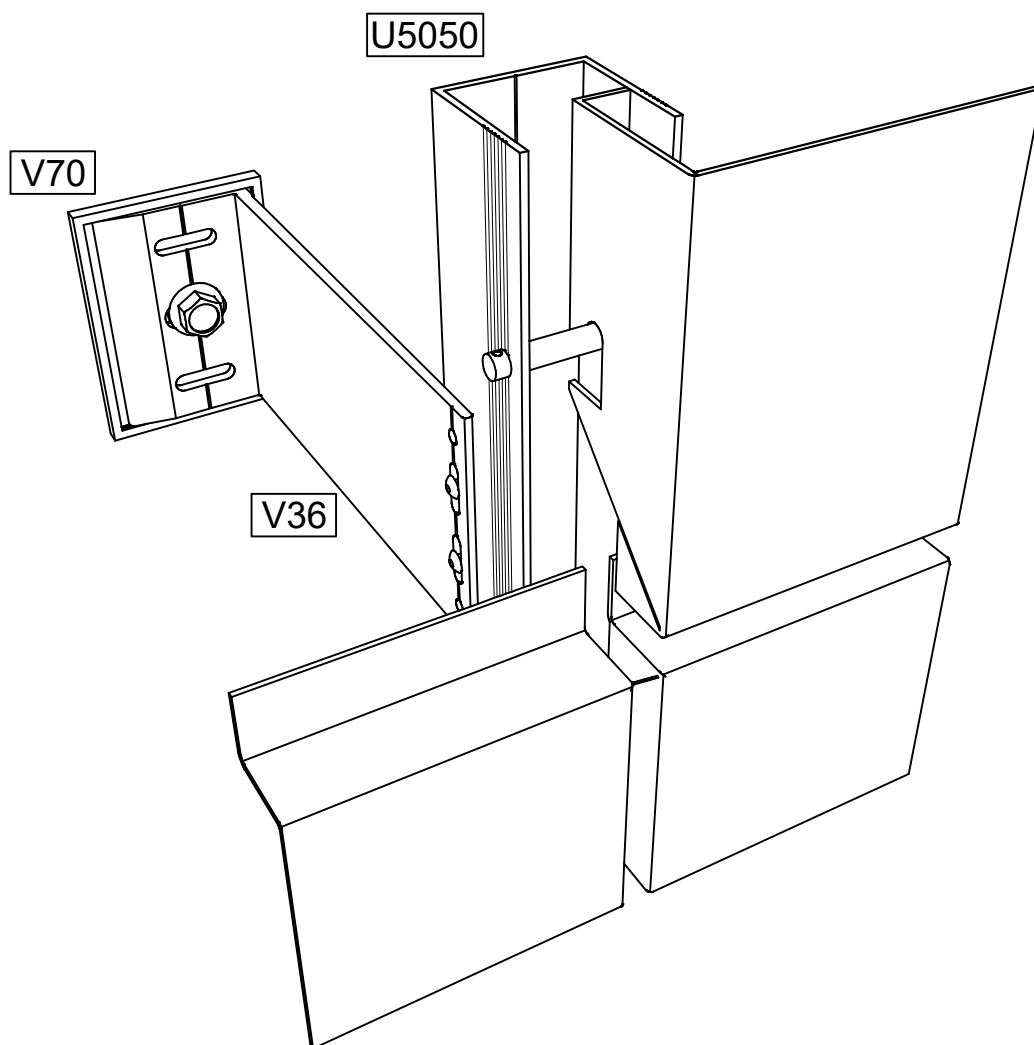
e) Finished cassettes are simply attached to a substructure on the building site. The installation should be performed from bottom to top of facade.

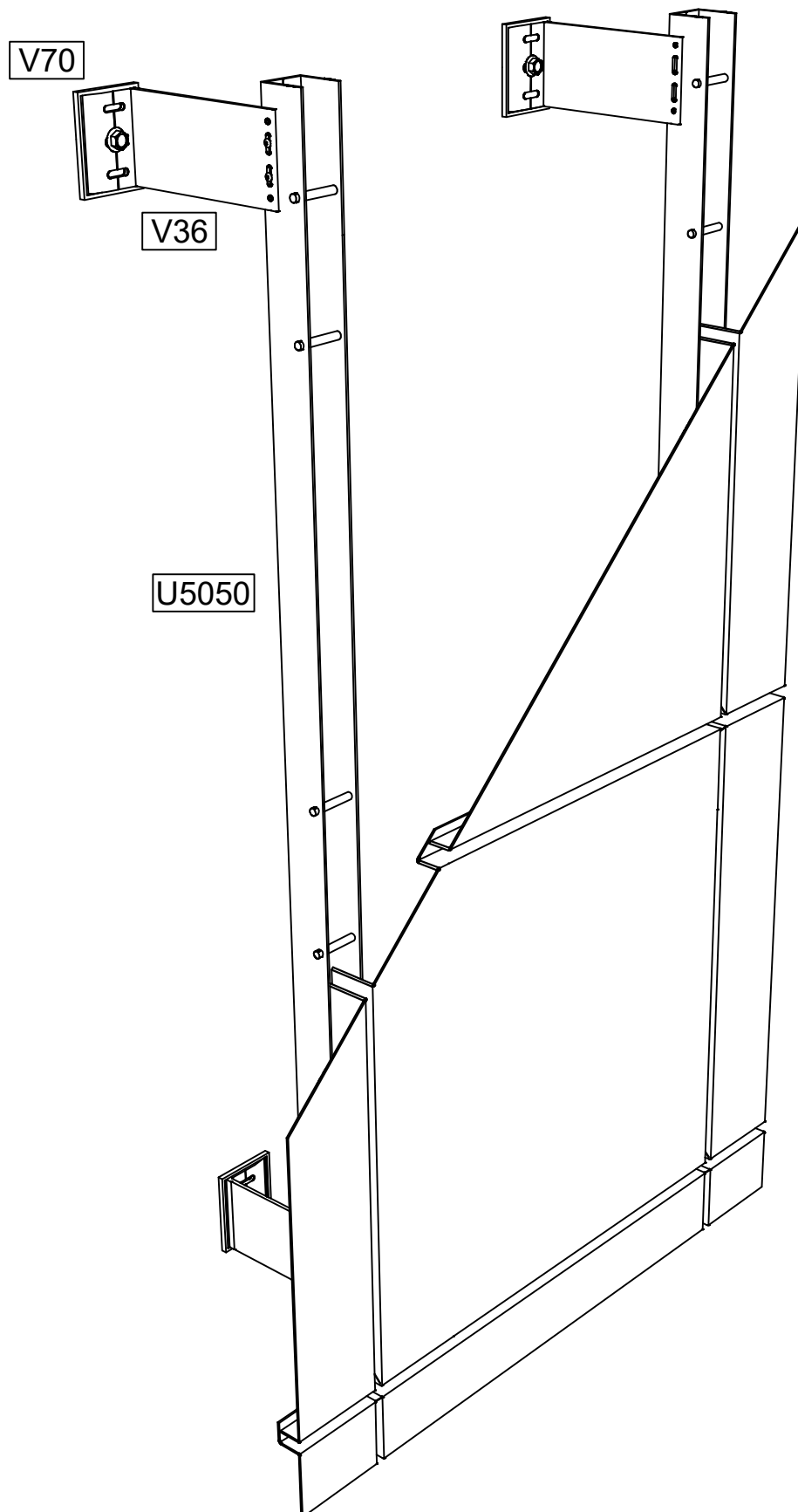
Horizontalni presek
Horizontal section

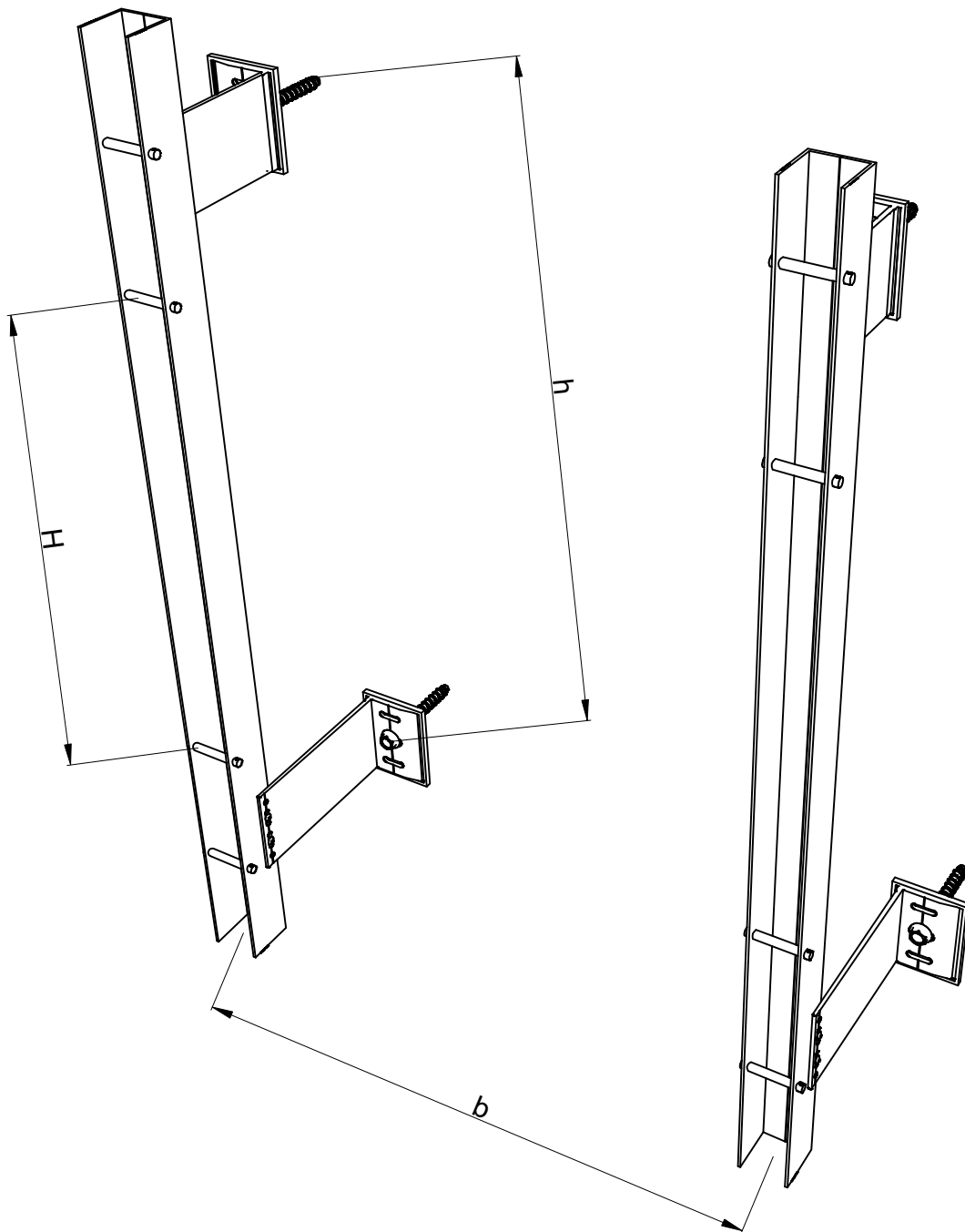


Vertikalni presek
Vertical section



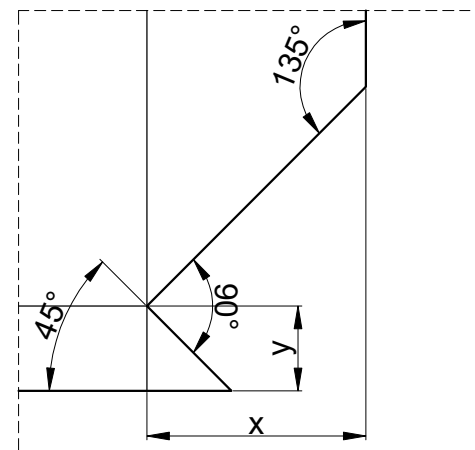
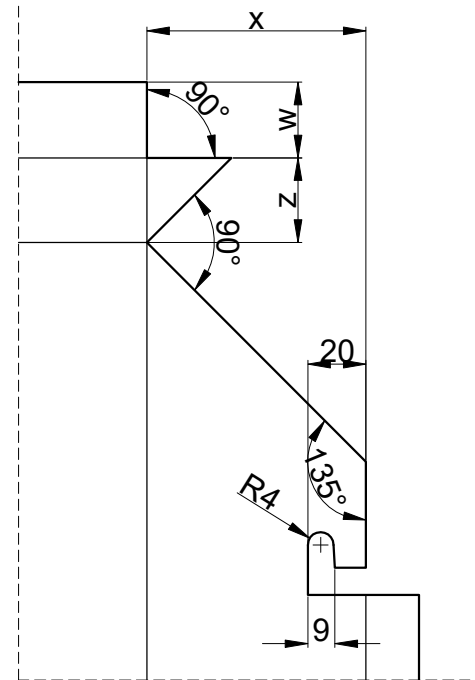
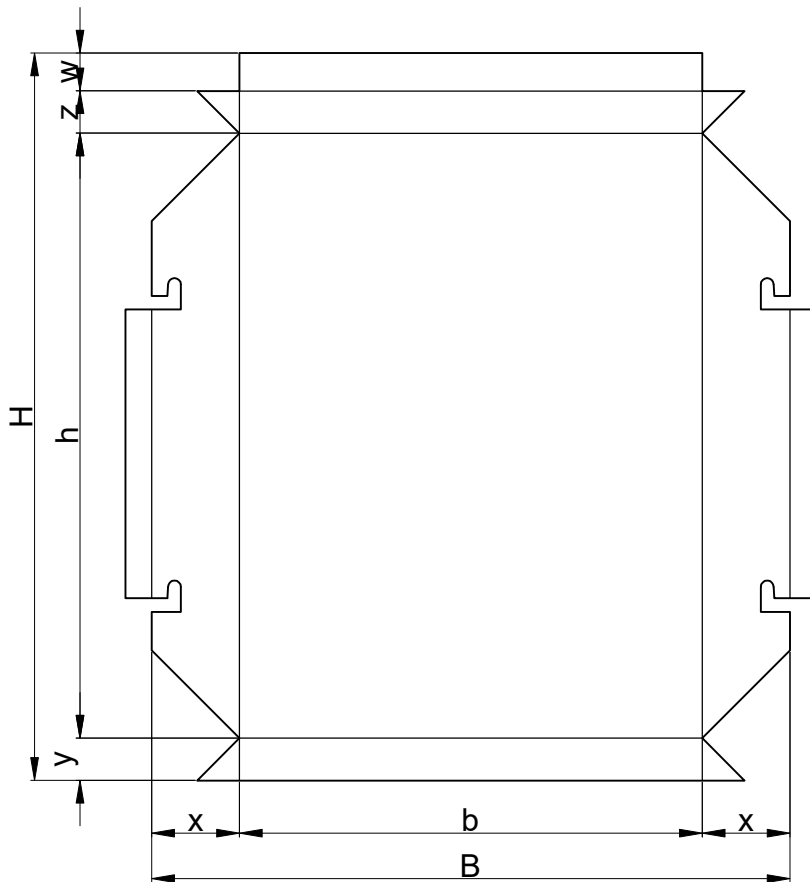






b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 600mm
H - according to structural analysis and depending on applied cladding material, but no more than 600mm



b	x	h	y	z	w
	min.58		28	28	25

(mm)

B	H
$b + 2x$	$h + y + z + w$

(mm)

b - projektovana vidna širina kasete
b - designed visible cassette width

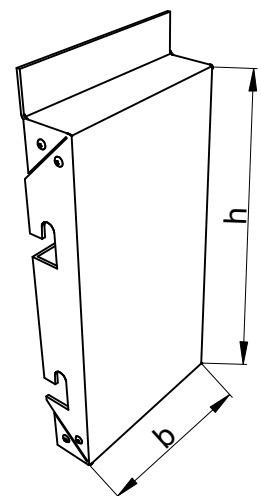
h - projektovana vidna visina kasete
h - designed visible cassette height

B - ukupna širina razvijene mreže kasete
B - developed cassette scheme total width

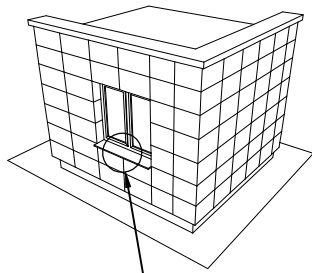
H - visina razvijene mreže kasete
H - developed cassette scheme total height

x, y, z, w - prikazane dimenzije su preporuka projektanta sistema, ali se mogu menjati u zavisnosti od potreba konkretnog projekta (način fiksiranja i vrsta primenjenih spojnih sredstava, projektovana dubina kasete itd.)

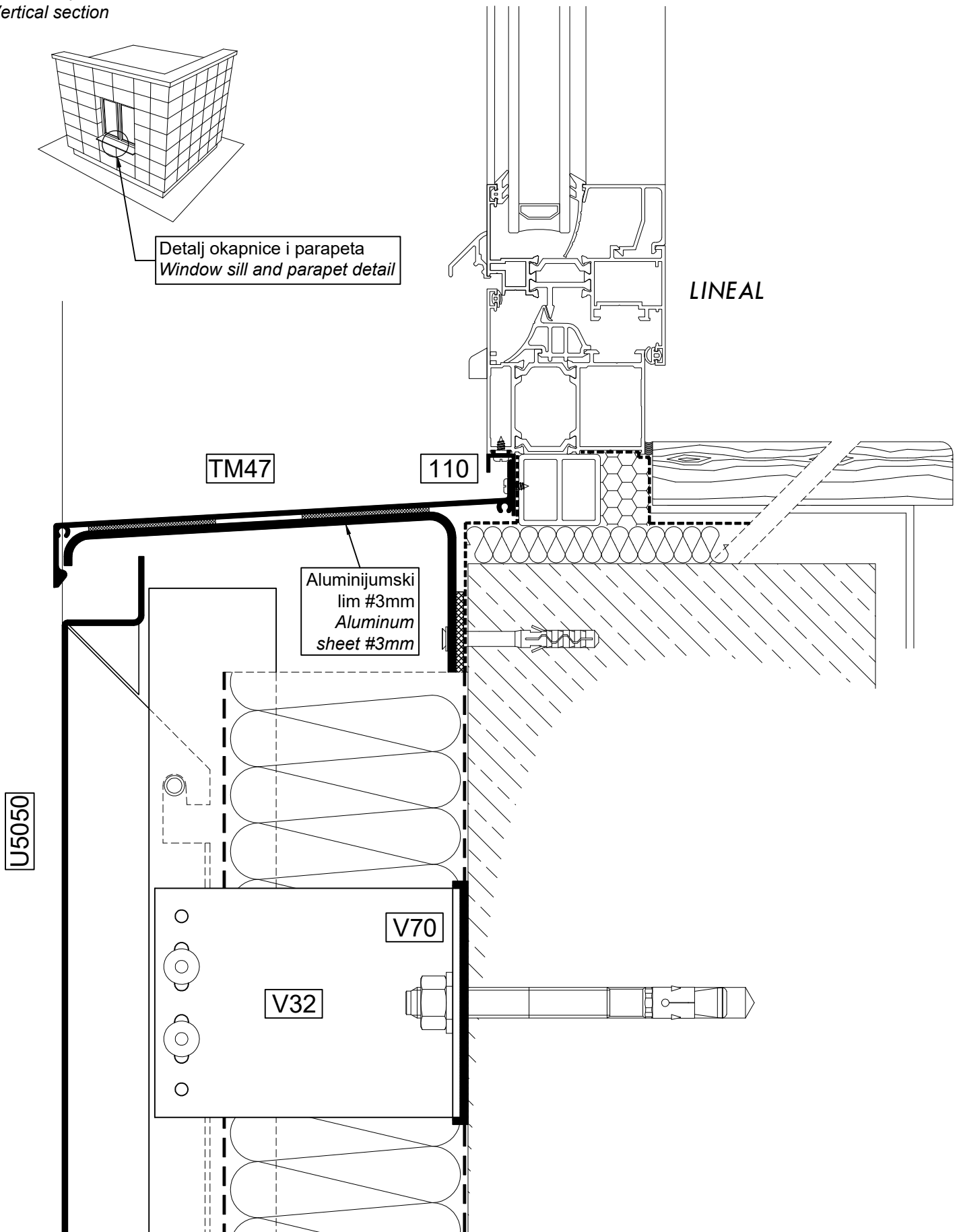
x, y, z, w - listed values are as per system designer's recommendation, but can be modified depending on needs of specific project (fixing method and type of applied fasteners, designed cassette depth etc.)



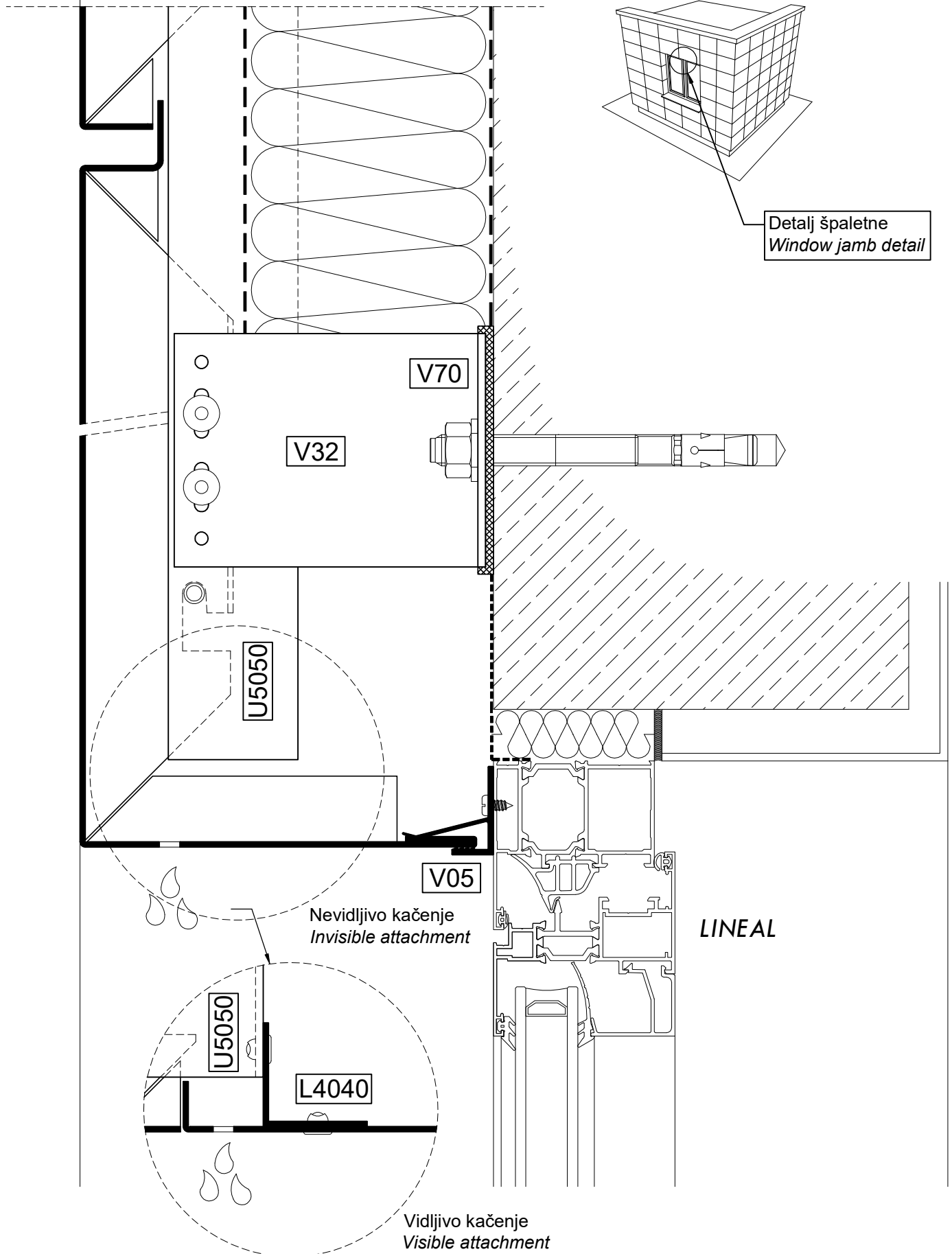
Vertikalni presek
Vertical section



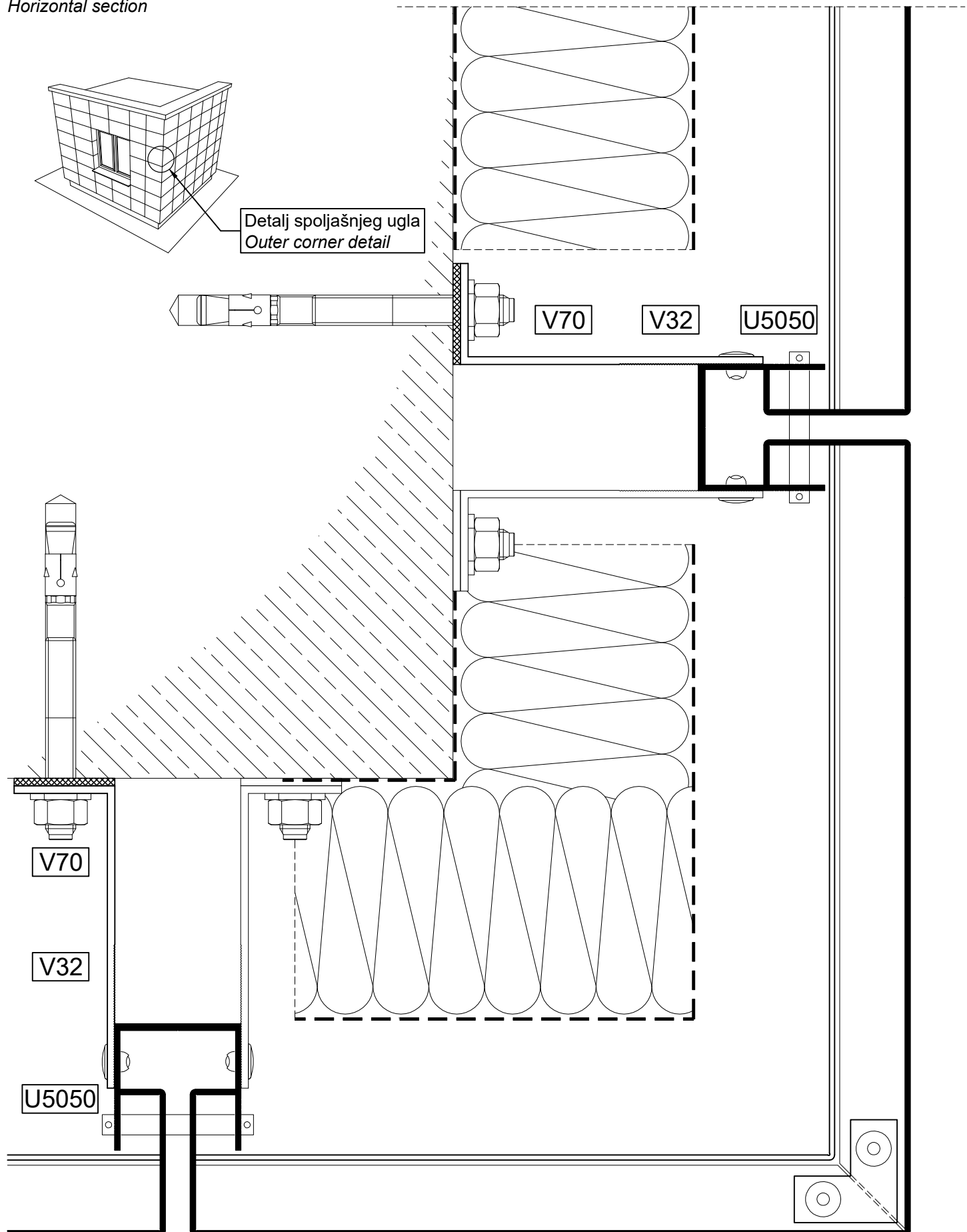
Detalj okapnice i parapeta
Window sill and parapet detail



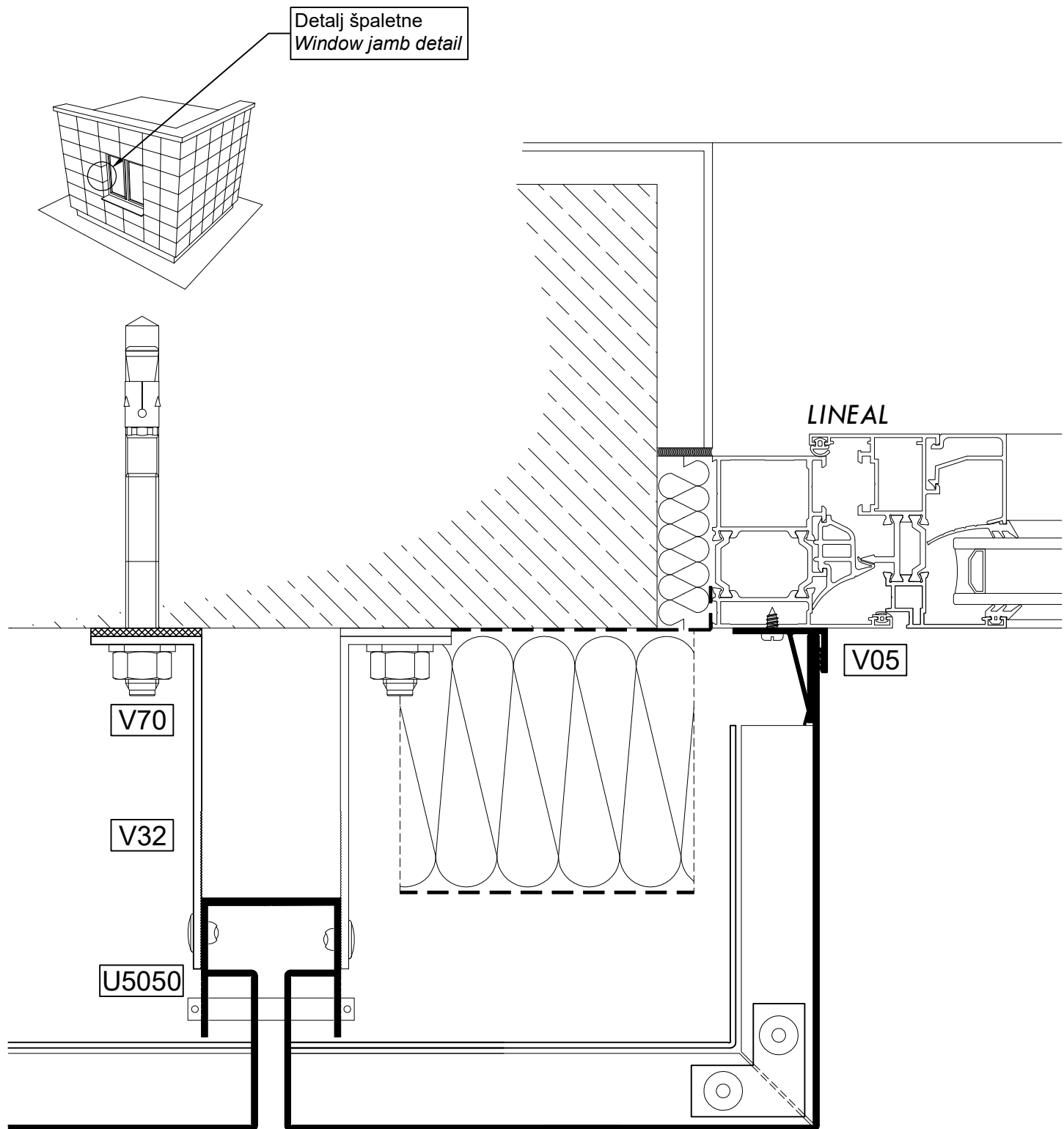
Vertikalni presek
Vertical section



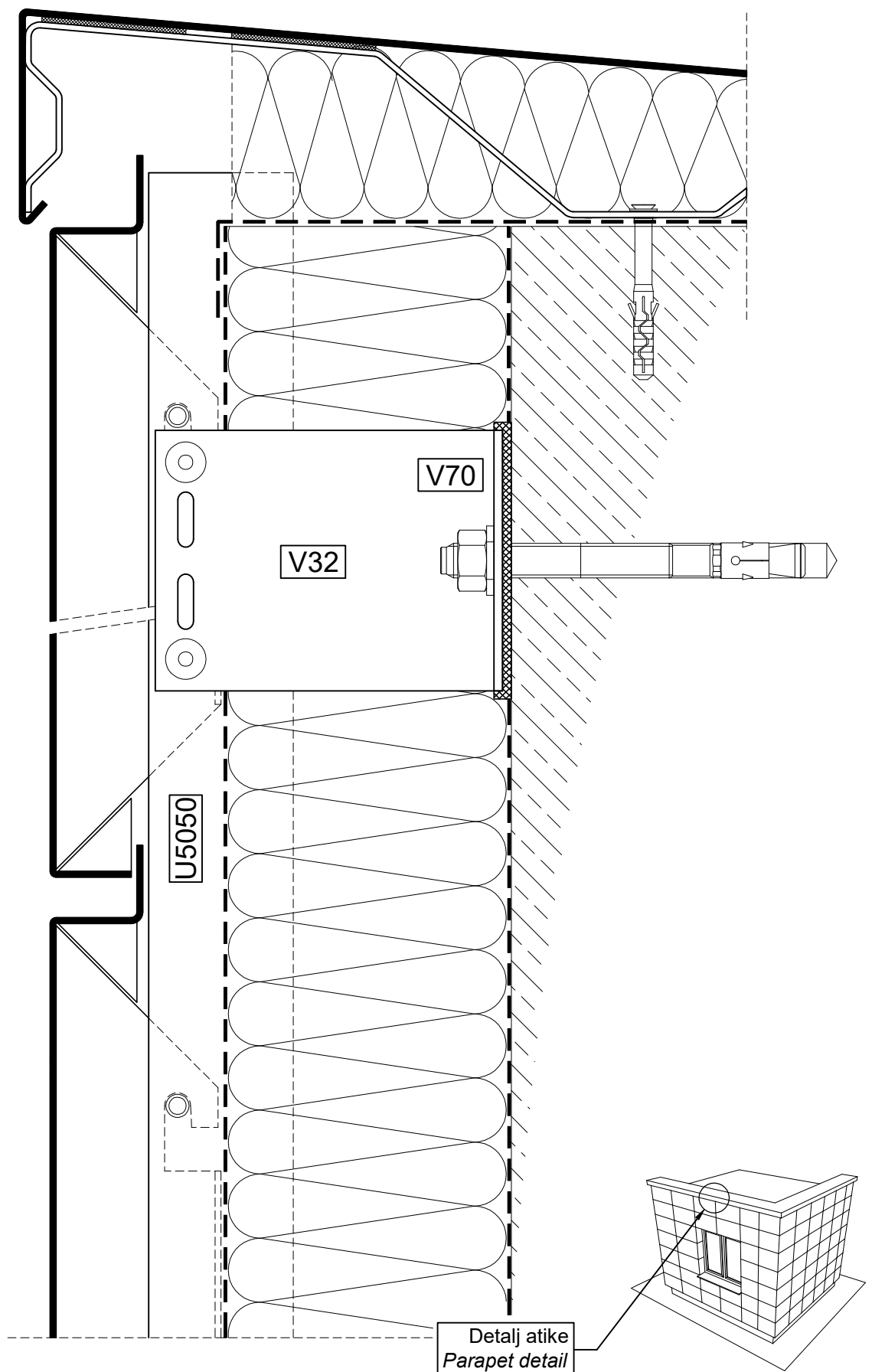
Horizontalni presek
Horizontal section



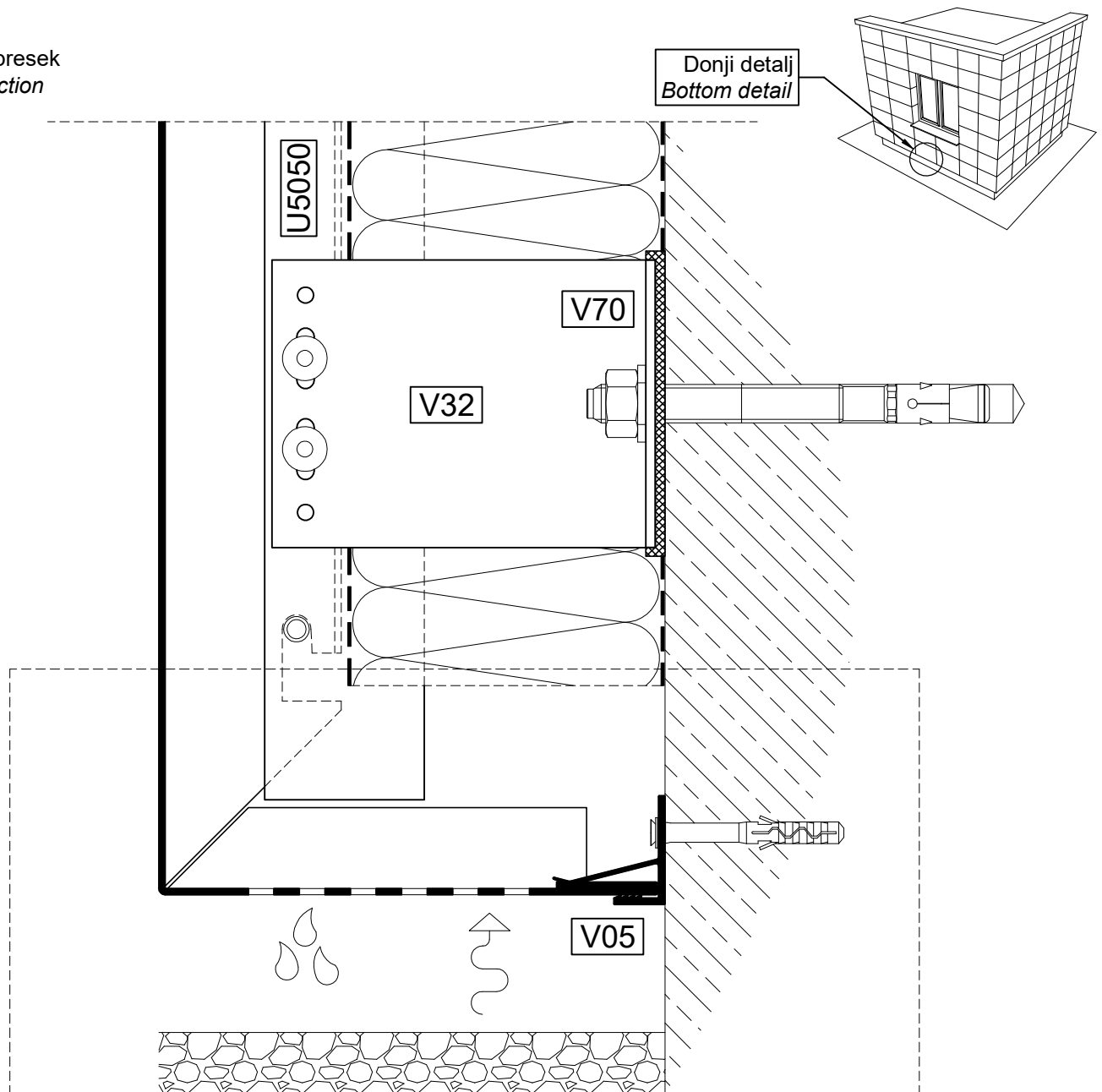
Horizontalni presek
Horizontal section



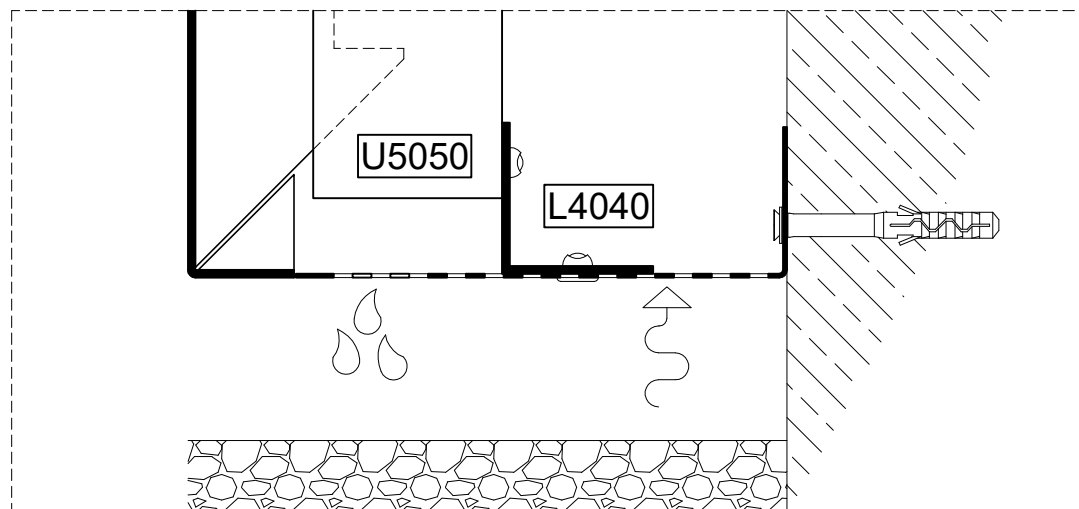
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section



Opcija drenaže: perforirani puni bojeni aluminijumski lim
Drainage option: perforated solid powder-coated aluminium sheet



Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet



Sistem
System
VENT GASKET



Tehnički opis sistema

Sistem aluminijske podkonstrukcije koji je namenjen prihvatanju posebno formiranih „kaseti“, vrlo pogodan za oblaganje ne samo zidnih površina, već i stubova, plafona, niša i drugih komplikovanih zona na objektu. Prepoznatljiv po naglašenim fugama na fasadi, najčešće u kontrastnim bojama. Takav vizuelni efekat se postiže ubacivanjem i fiksiranjem EPDM guma u fuge, a celokupni utisak je da je fasada zaptivena (gasket-zaptivka). Izuzetno praktičan način montaže, ne zahteva izuzetnu preciznost, a postupak ugradnje je suvi.

Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila.

a) Ekstrudirani noseći horizontalni ili vertikalni T ili L profili se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m.

b) Glavni vertikalni noseći profili (kat. br. K3030) su pričvršćeni za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

c) Fasadni paneli se obrađuju na CNC centru u radioničkim uslovima (sečenjem na meru i odgovarajućim žljebovanjem), a zatim tako obrađeni paneli savijanjem formiraju kasete. Na kraju se u uglove gotovih kaseti pop nitnama pričvršćuju L rofil (kat br. L2030). L profili se montiraju na različitim visinama kako bi se izbeglo preklapanje profila na susednim kasetama.

d) U ovom sistemu predviđena je fuga od 10 - 12mm koja se može ispuniti EPDM zaptivkom (kat br. V60, V61) ili zaliti strukturalnim silikonom u slučaju potrebe, dok su i jedna i druga opcija dostupne u više boja.



Technical description

Aluminium substructure system for specially machined and shaped cassettes, very suitable for encasement of not only walls, but also columns, ceilings, niches and other complicated areas. It is best known for its emphasized gaps between individual cassettes. This look is achieved through insertion and fixing of a special EPDM gasket into gaps which give the impression that entire facade is sealed. This dry installation system features extremely practical installation and doesn't require high precision.

The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

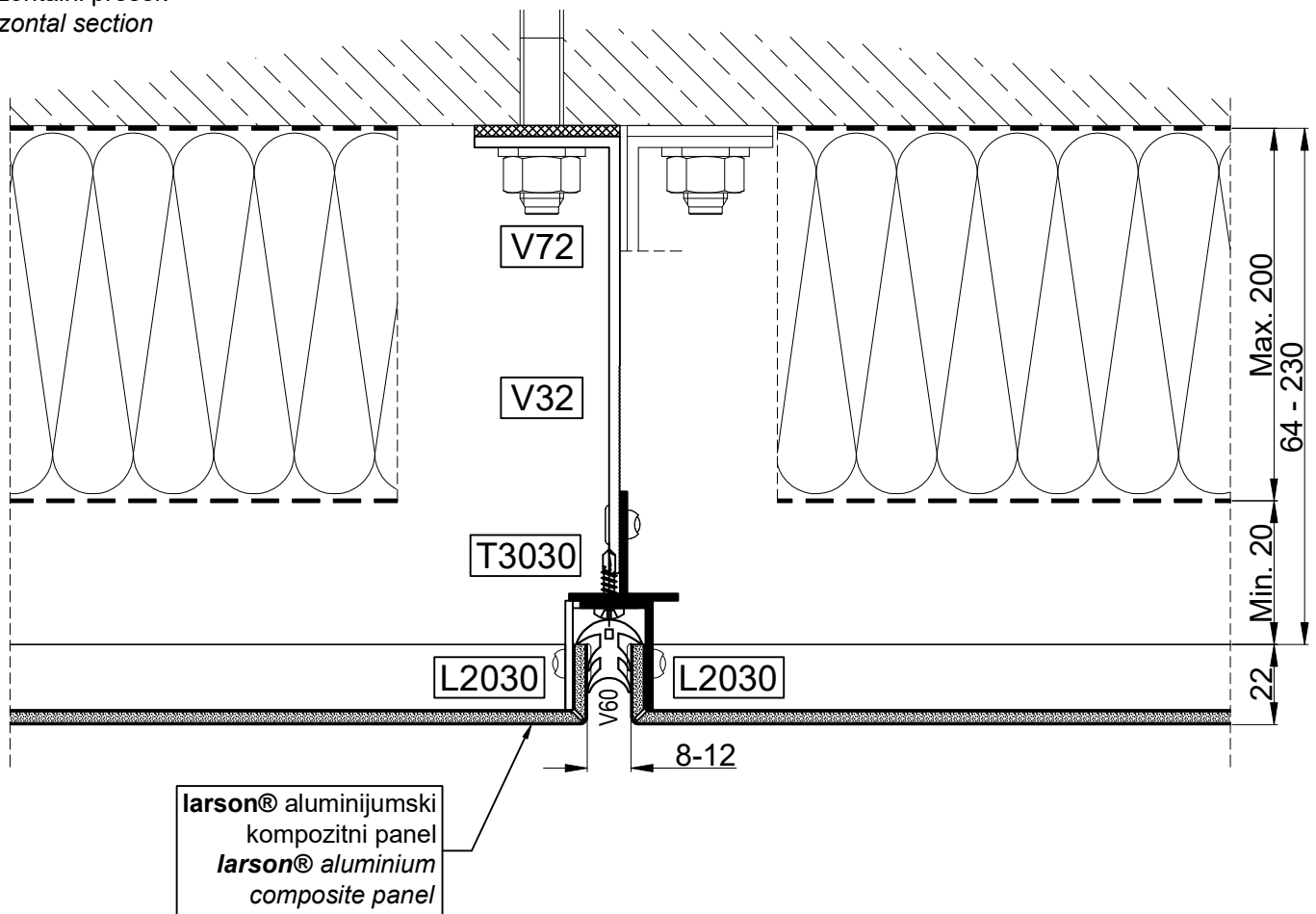
a) Extruded load-bearing T or L profiles are installed in any direction required by project (from horizontal to vertical) and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.

b) Main vertical substructure profiles (items nr. K3030) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade surface. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors feature easy-installation clips that hold main profiles during initial installation and adjustment. They are then connected to main profiles with pop rivets or stainless steel screws, with integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.

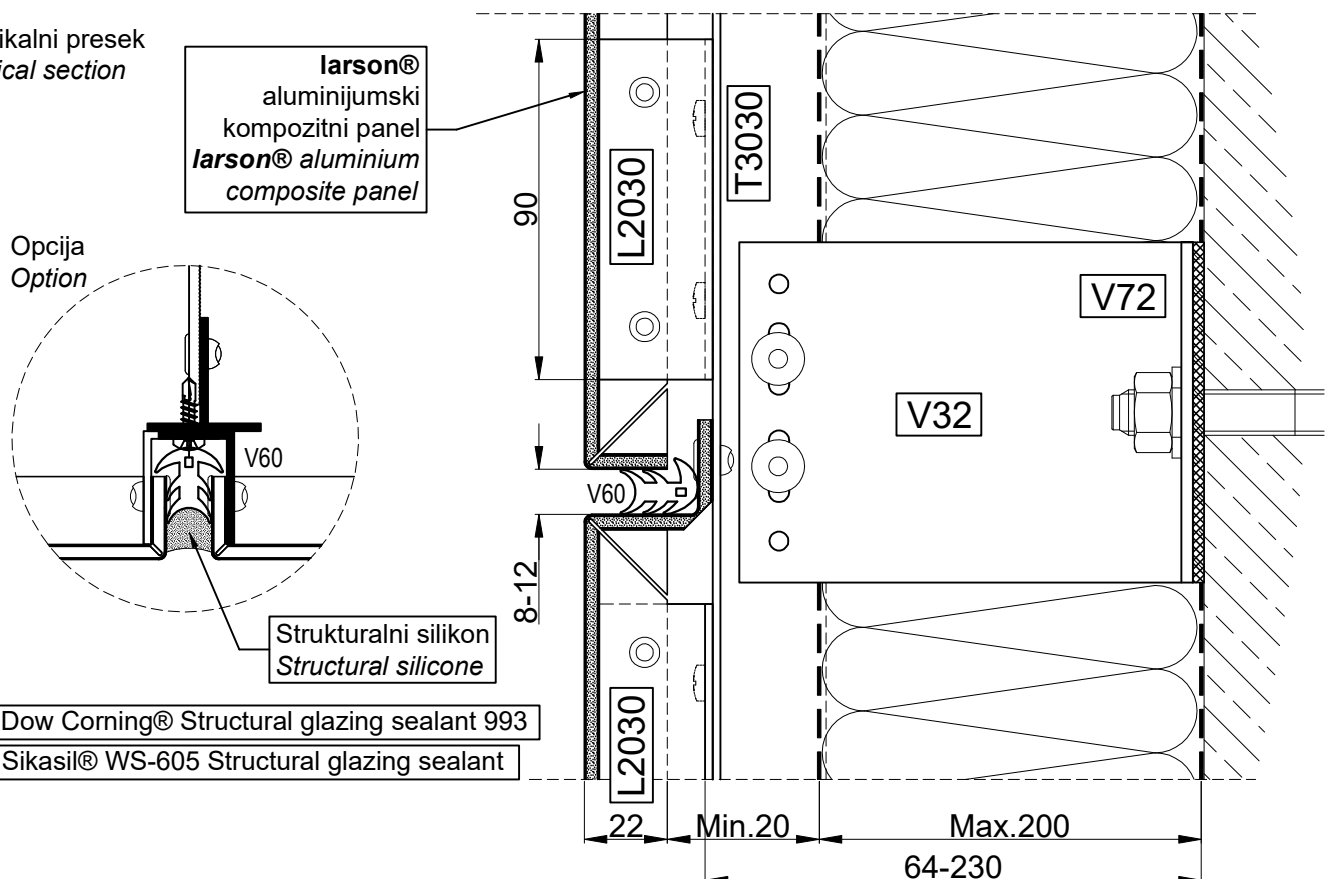
c) Facade panels are CNC machined (cut to measure and grooved), then folded into cassettes with riveted L profile inserts (item nr. L2030). L profiles should be mounted on different heights for neighboring cassettes to avoid overlapping.

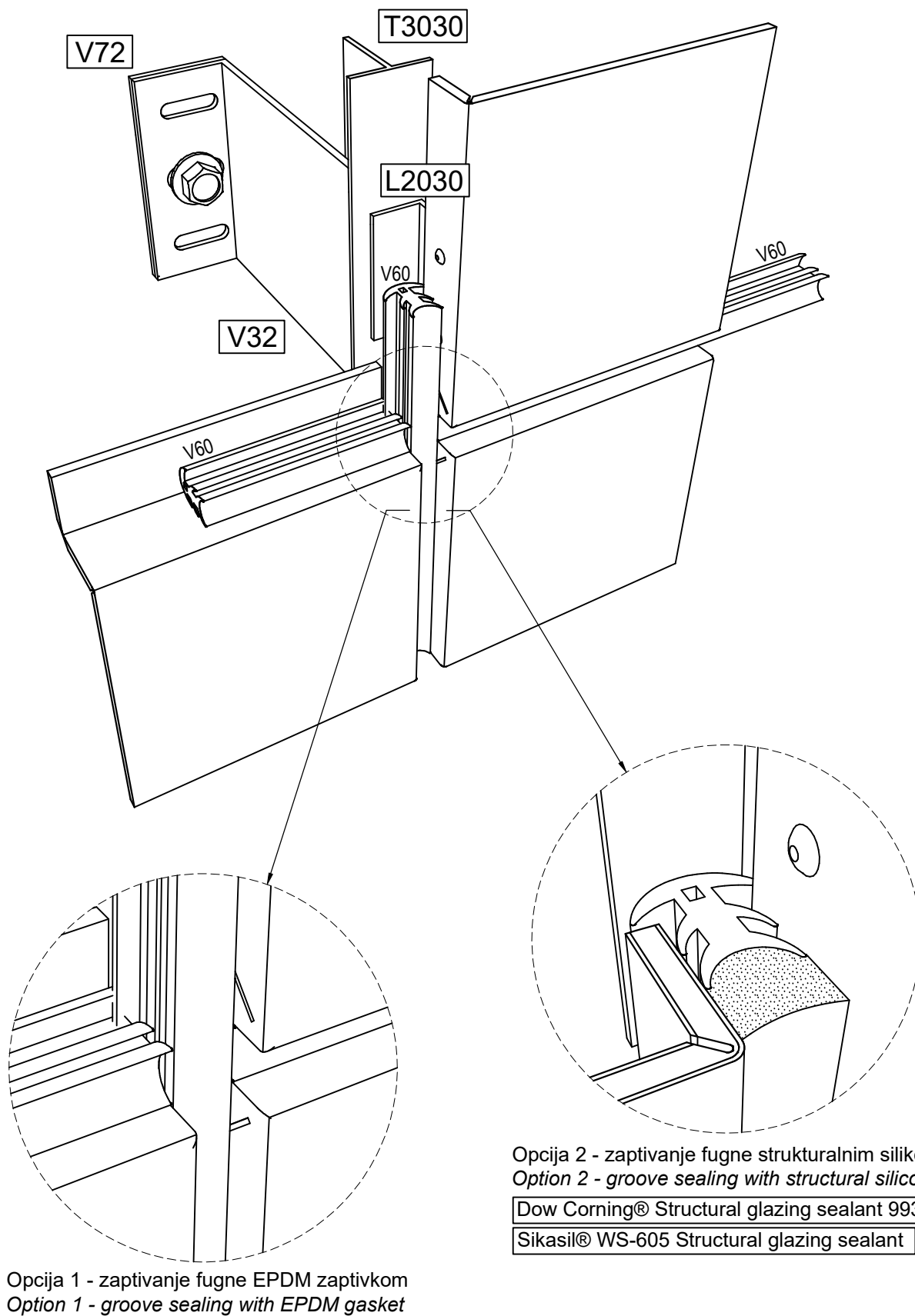
d) System gap is 10-12mm wide and can be filled with EPDM gaskets (item nr. V60, V61) or sealed with structural silicone if required. Both the gaskets and the silicone come in several colors.

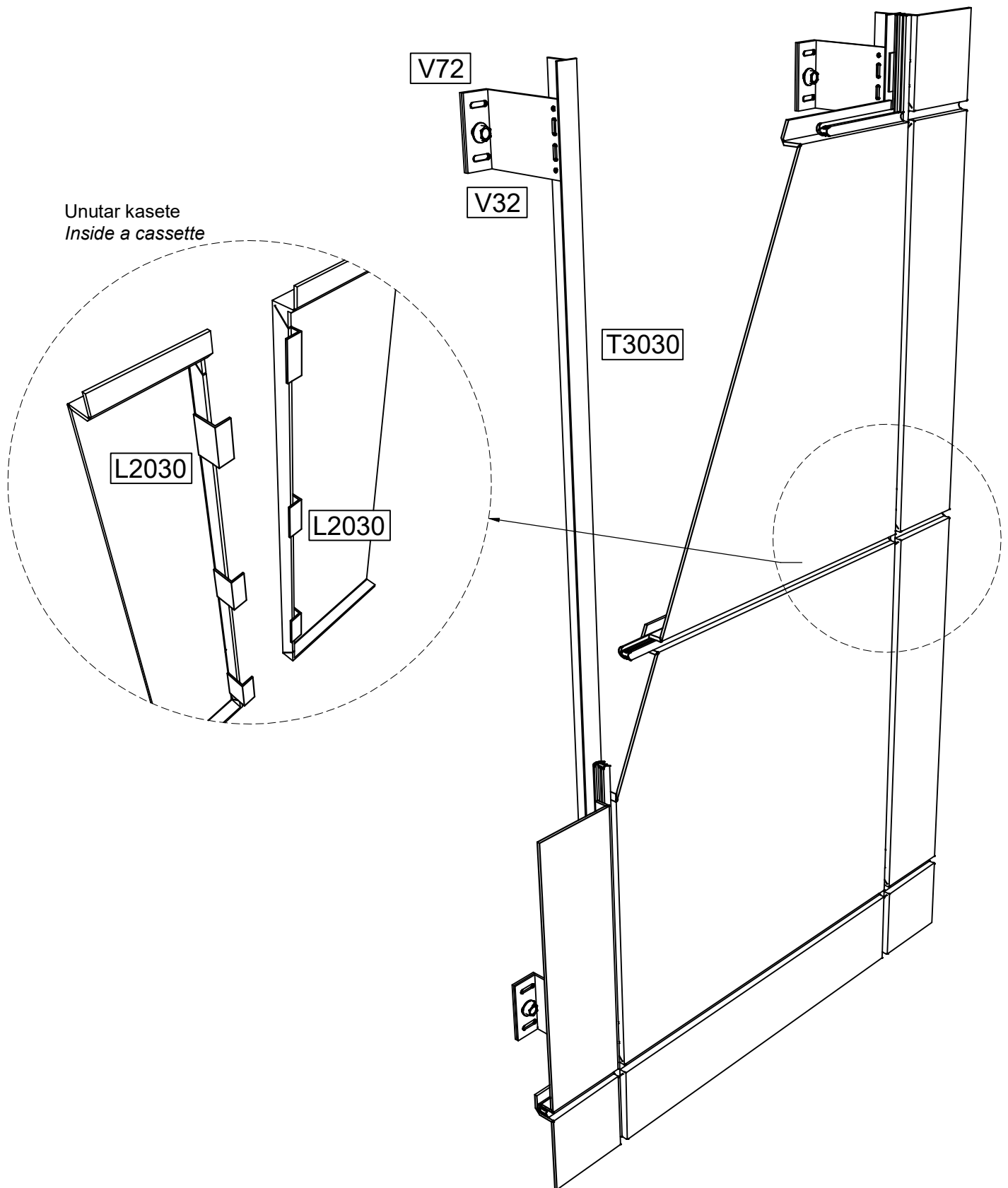
Horizontalni presek
Horizontal section

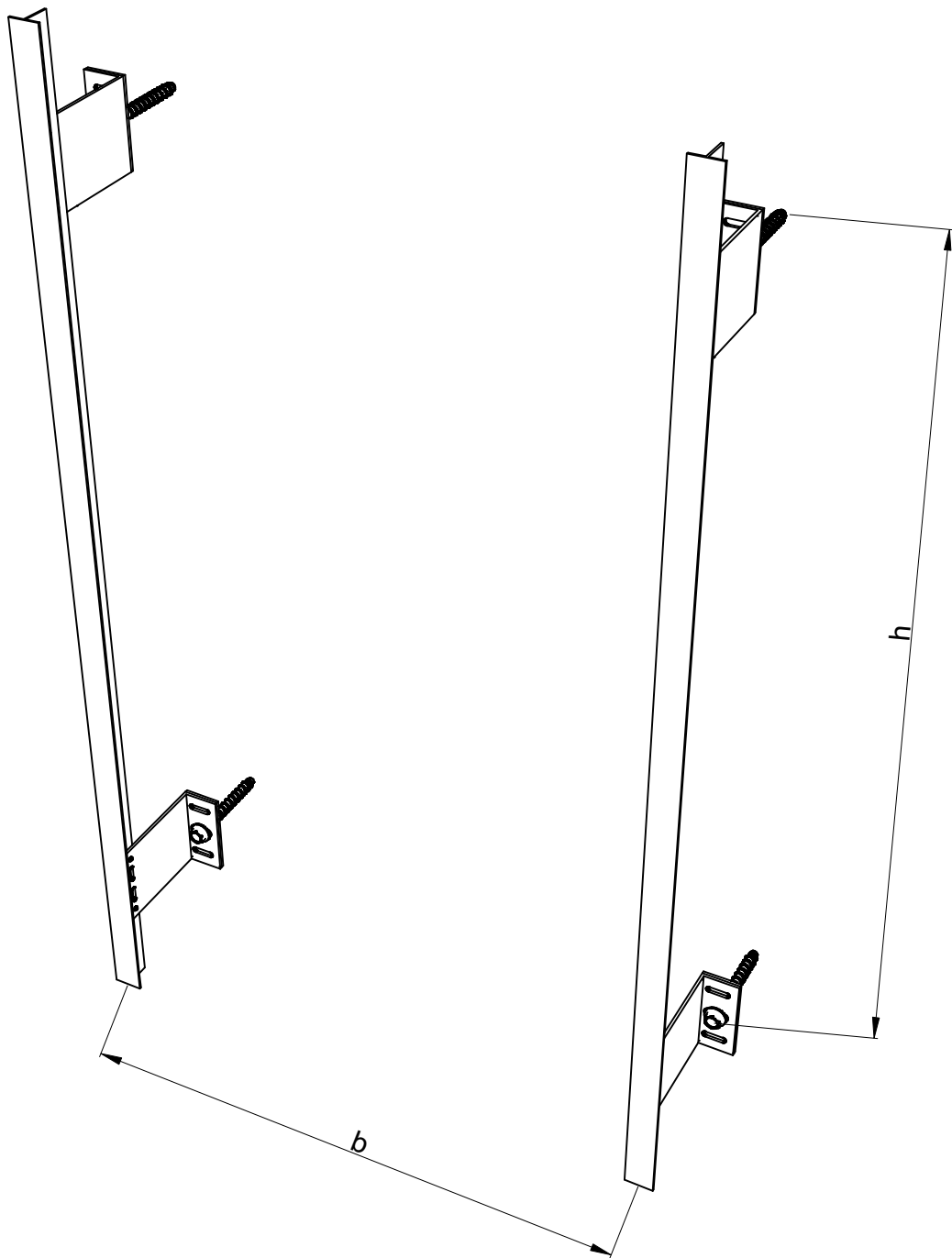


Vertikalni presek
Vertical section

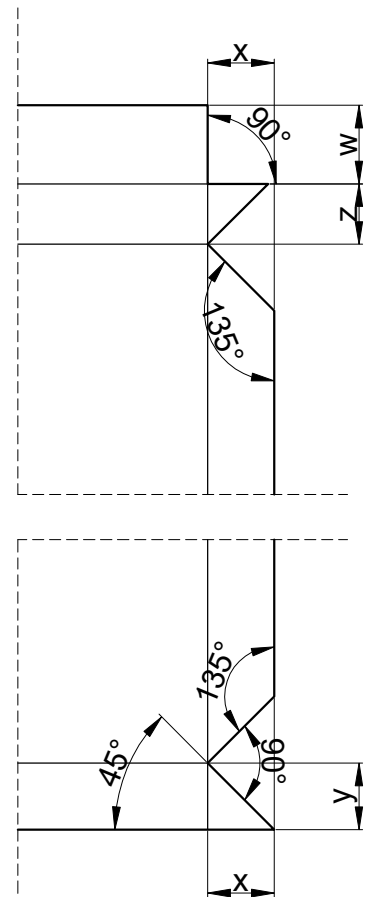
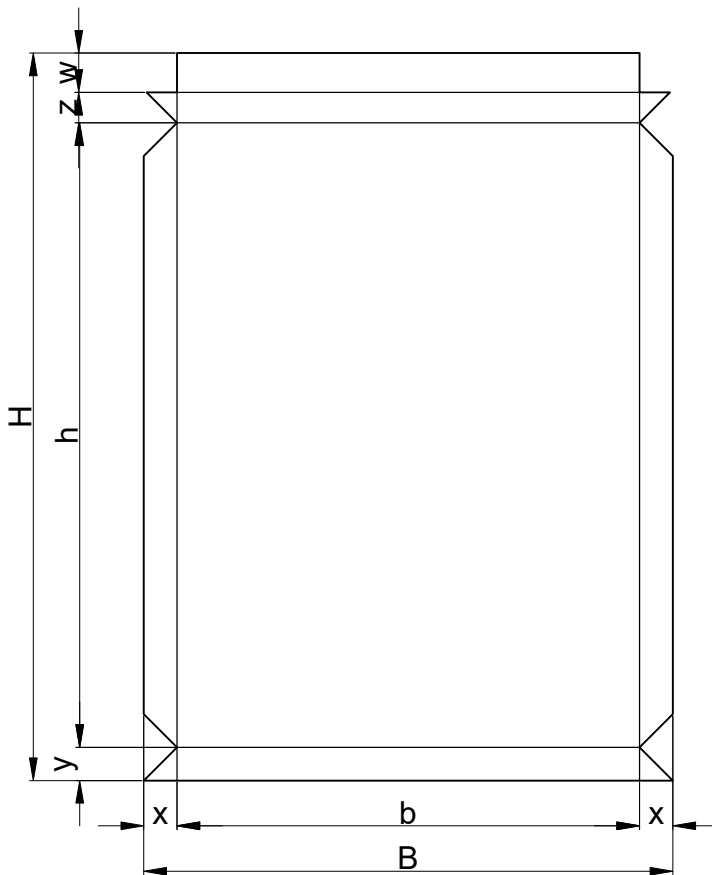








b, h - prema statičkom proračunu, ali ne više od 1200mm
b, h - according to structural analysis, but no more than 1200mm



b	x	h	y	z	w
	22		22	28	26

(mm)

B	H
$b + 2x$	$h + y + z + w$

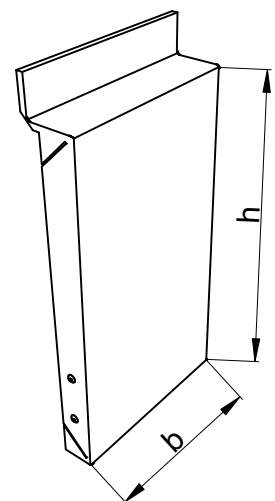
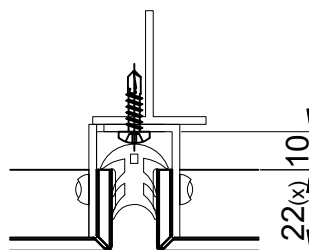
(mm)

b - projektovana vidna širina kasete
b - designed visible cassette width

h - projektovana vidna visina kasete
h - designed visible cassette height

B - ukupna širina razvijene mreže kasete
B - developed cassette scheme total width

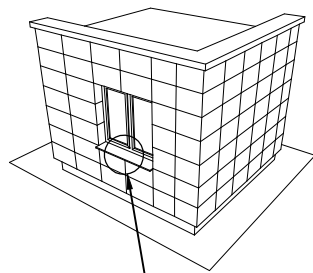
H - visina razvijene mreže kasete
H - developed cassette scheme total height



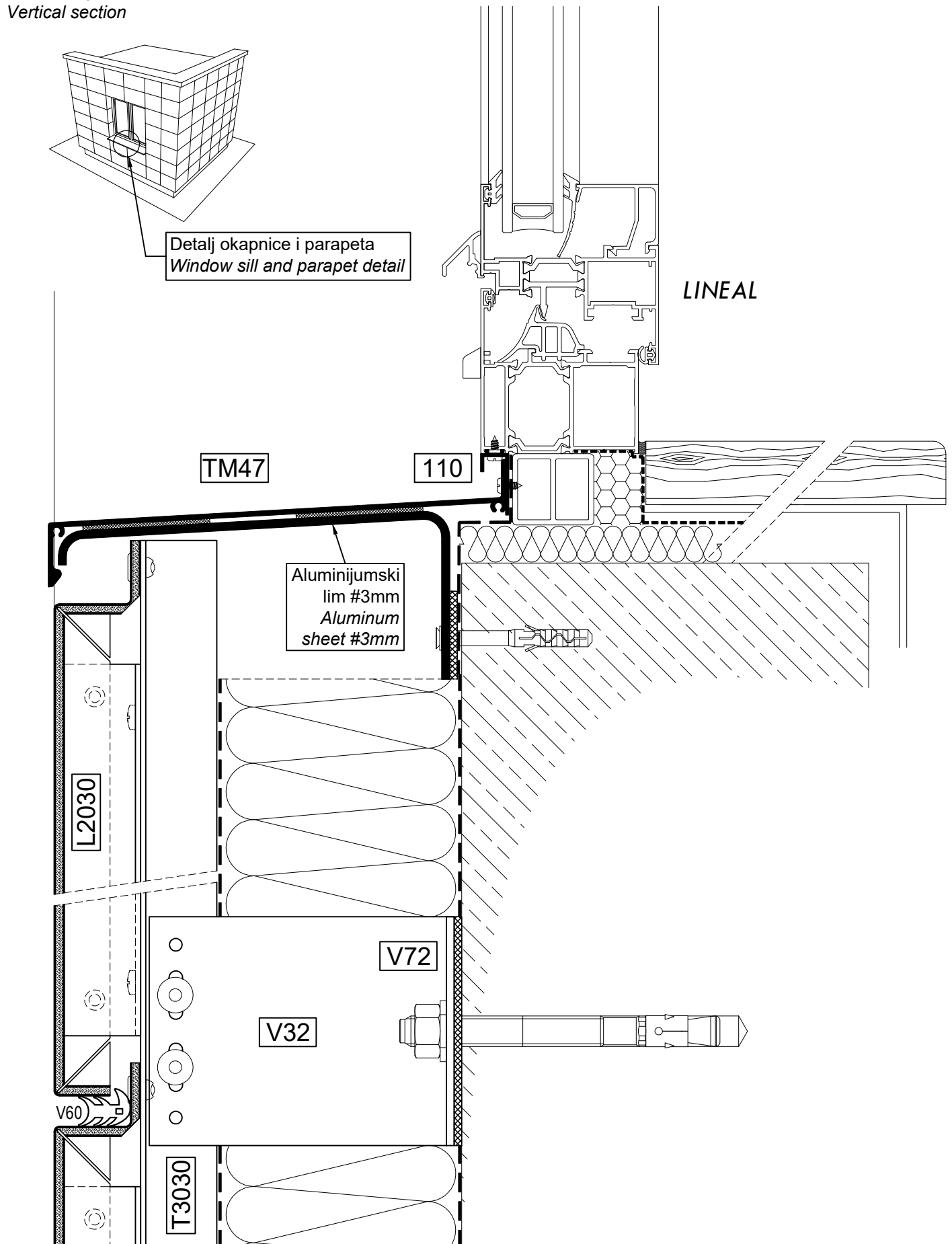
x, y, z, w - prikazane dimenzije su preporuka projektanta sistema, ali se mogu menjati u zavisnosti od potreba konkretnog projekta (način fiksiranja i vrsta primenjenih spojnih sredstava, projektovana dubina kasete itd.)

x, y, z, w - listed values are as per system designer's recommendation, but can be modified depending on needs of specific project (fixing method and type of applied fasteners, designed cassette depth etc.)

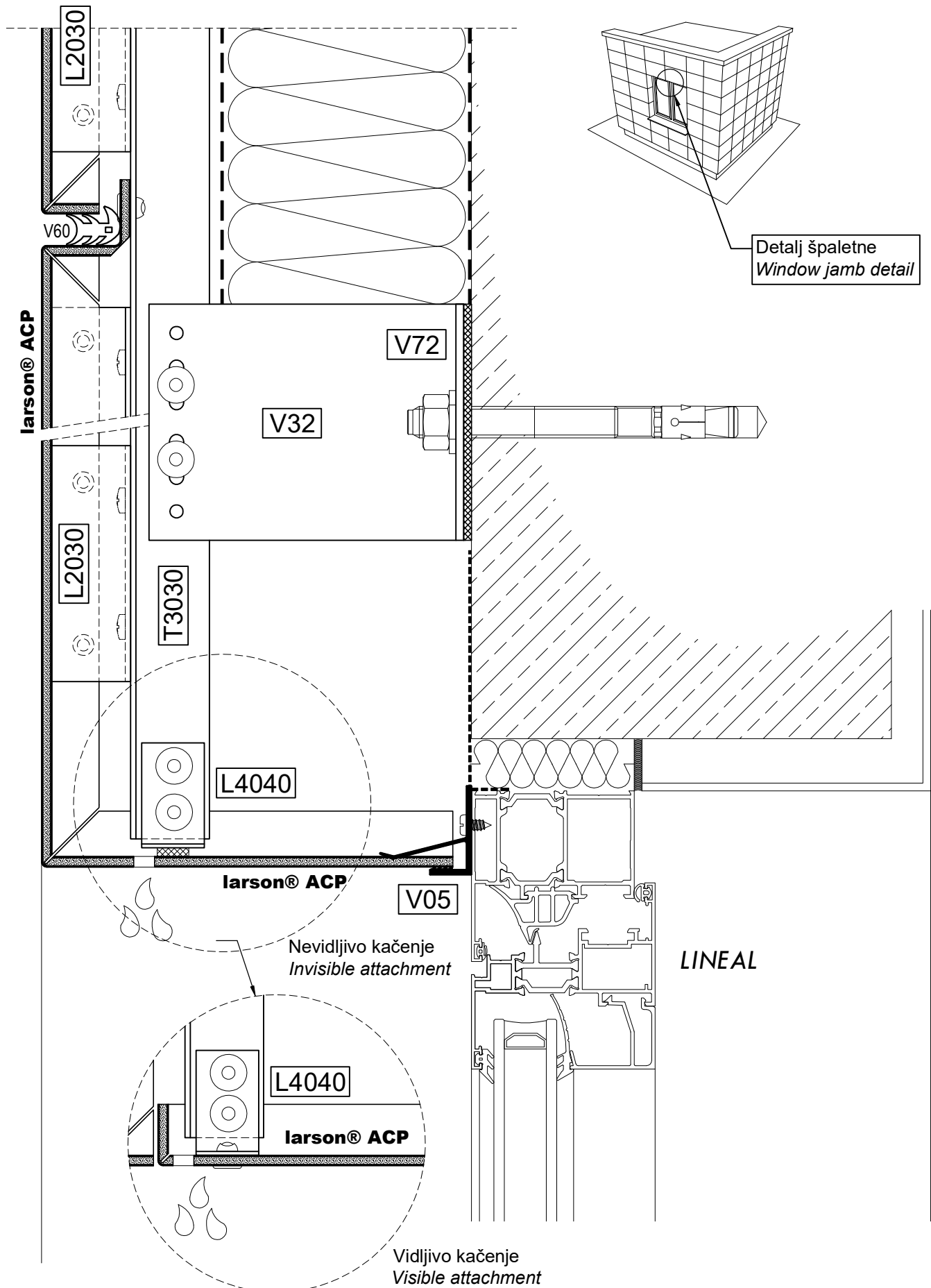
Vertikalni presek
Vertical section



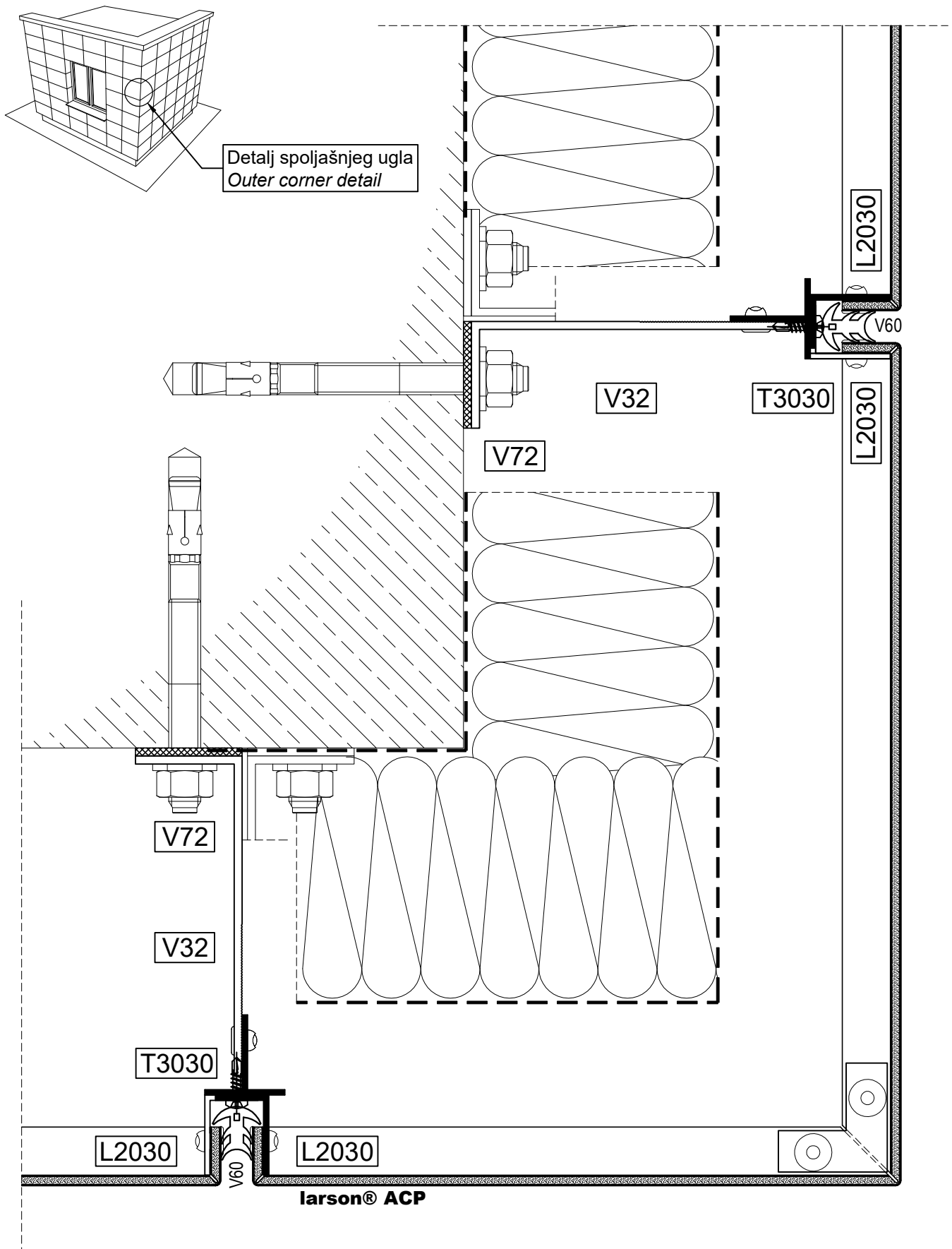
Detalj okapnice i parapeta
Window sill and parapet detail



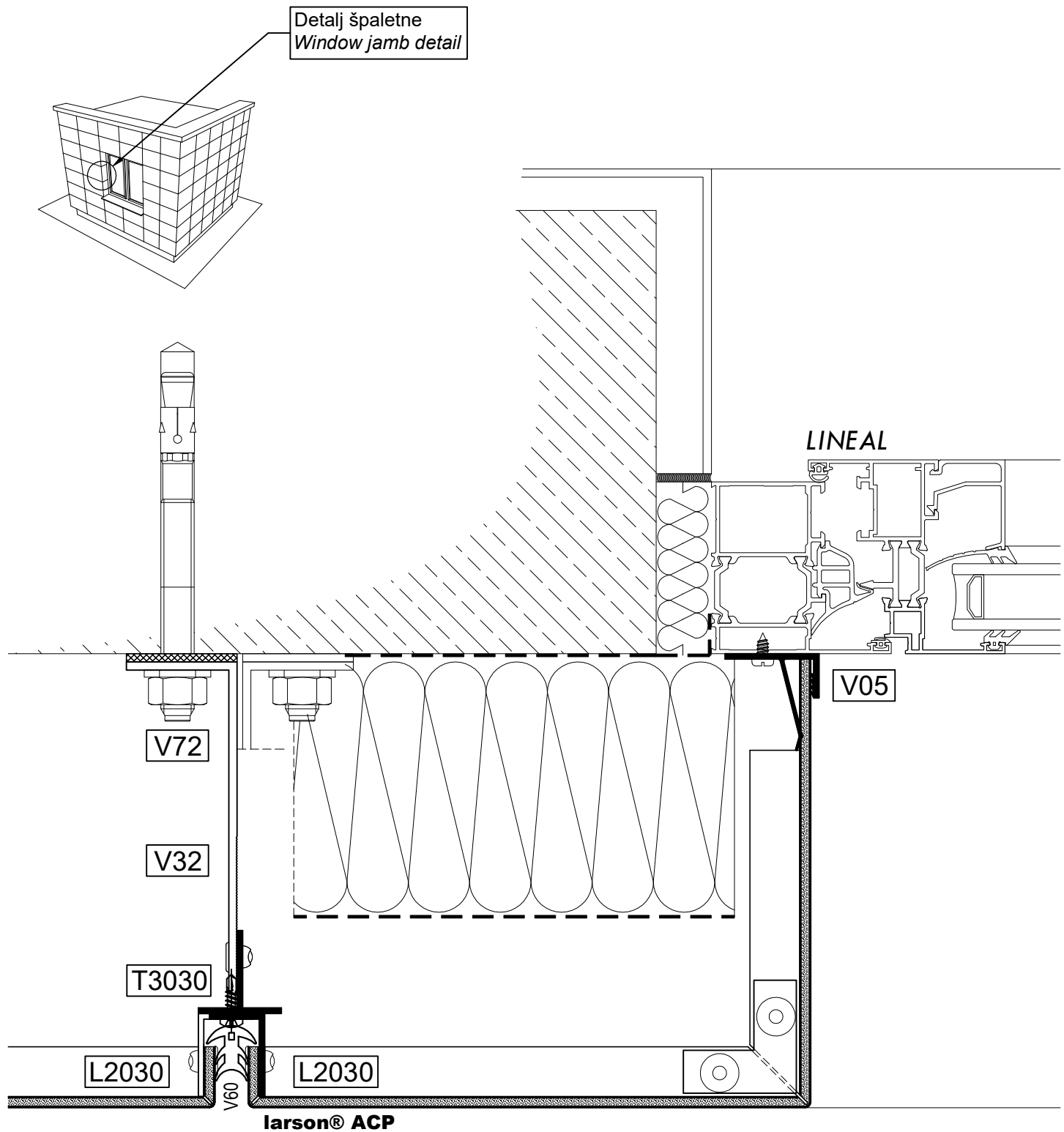
Vertikalni presek
Vertical section



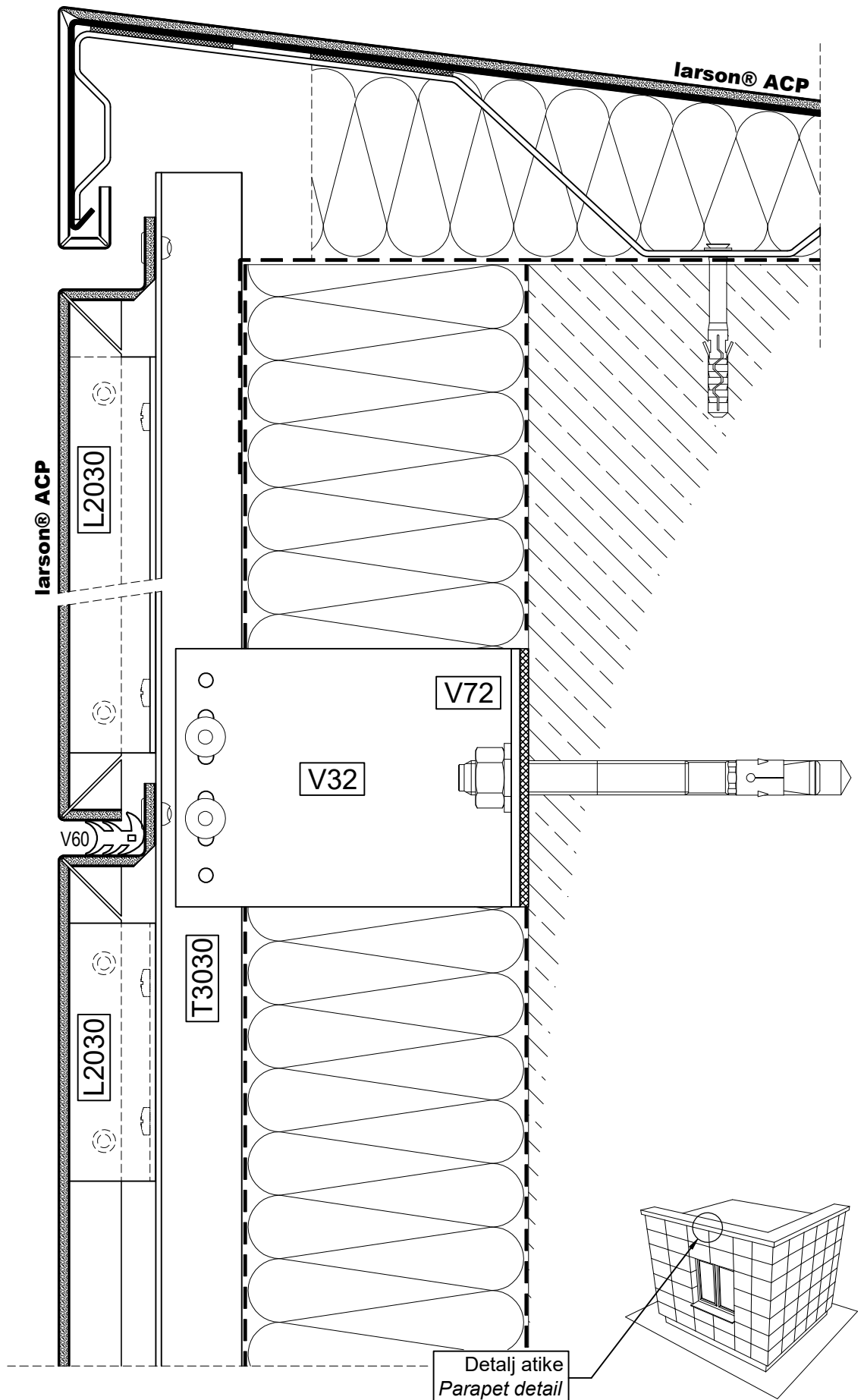
Horizontalni presek
Horizontal section



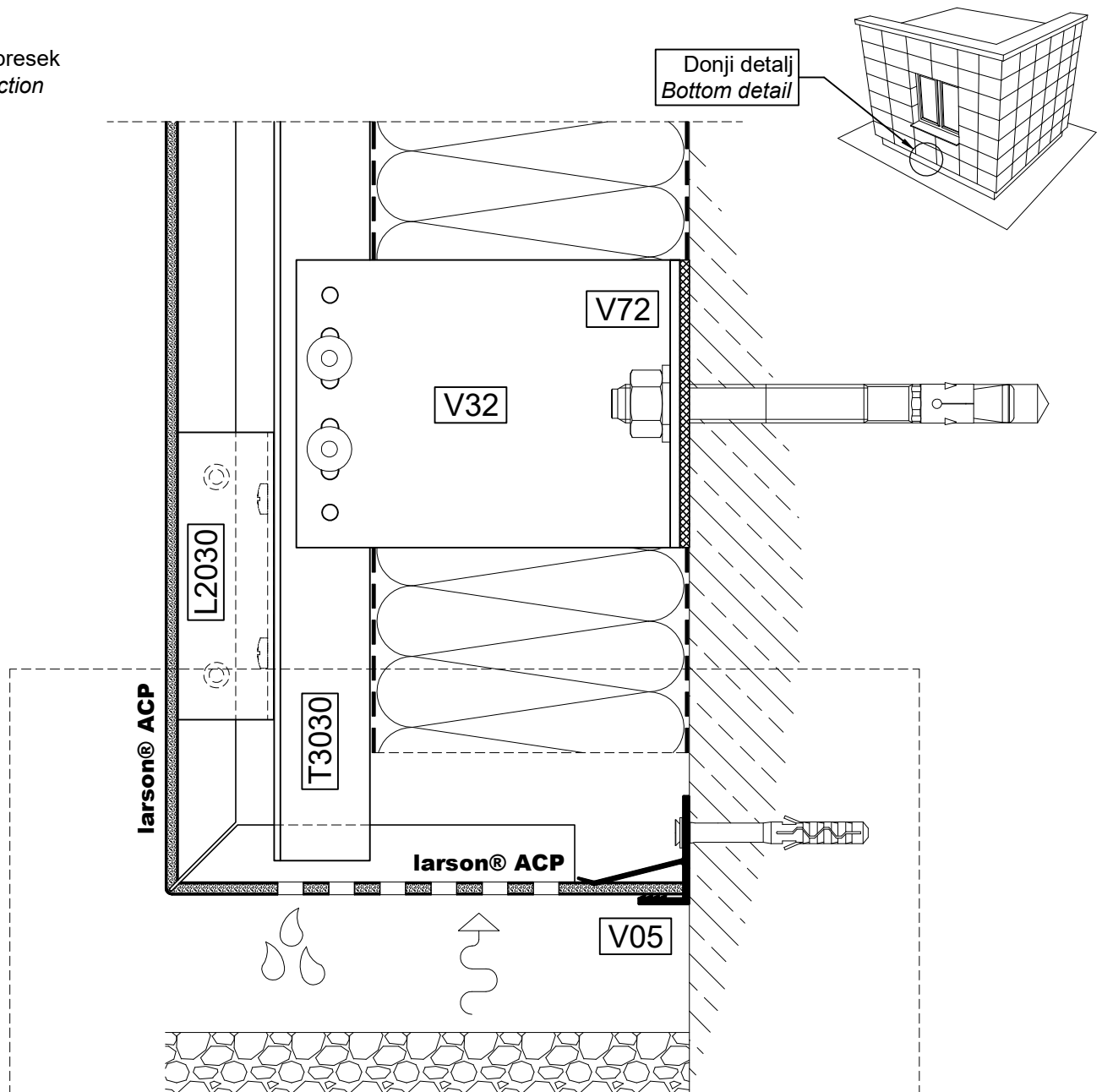
Horizontalni presek
Horizontal section



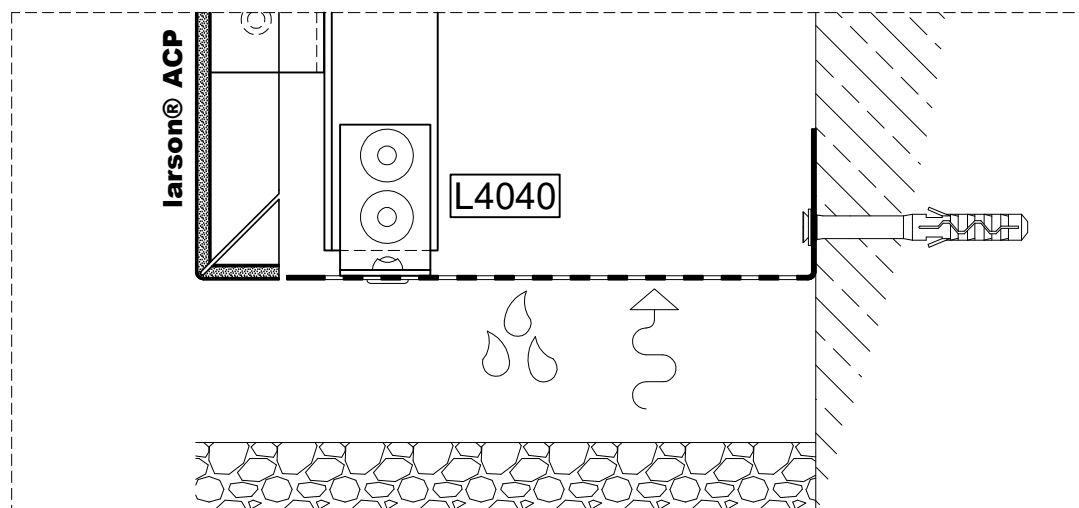
Vertikalni preseki
Vertical section



Vertikalni presek
Vertical section

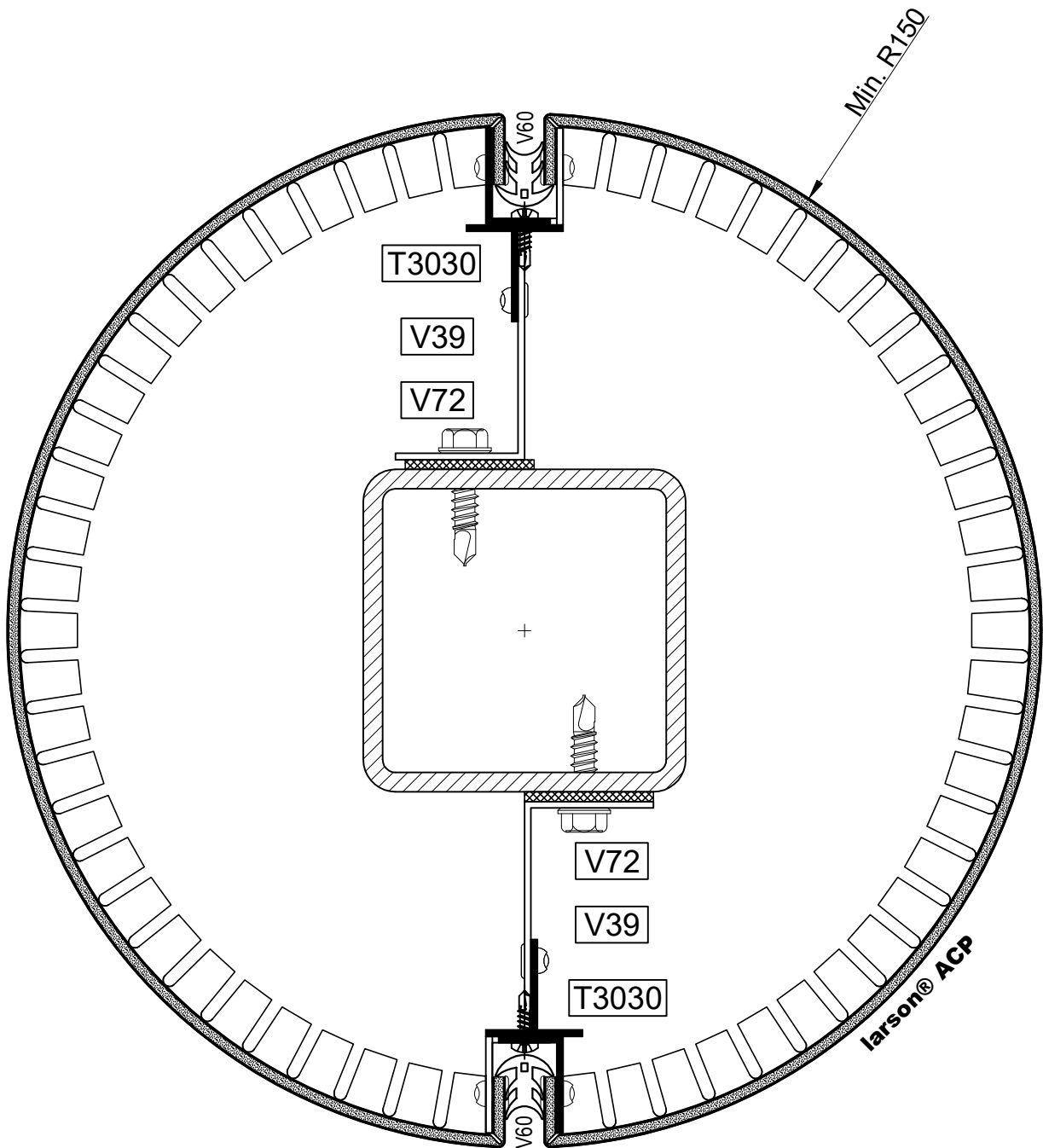


Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel



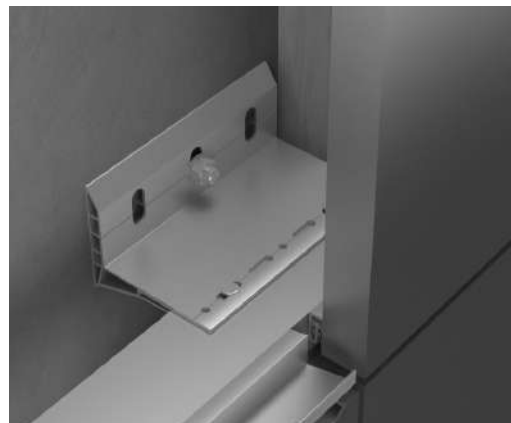
Opcija drenaže: perforirani aluminijumski lim
Drainage option: perforated aluminium sheet

Horizontalni presek
Horizontal section





Sistem
System
VENT FIT



Tehnički opis sistema

Sistem aluminijumske podkonstrukcije koji je namenjen prihvatanju posebno formiranih i pripremljenih kaseta. Njihova montaža je izuzetno laka, zbog lako uklopljivog sklopa, koji čine dva posebno projektovana aluminijumska profila, koji idealno naležu jedan na drugi (fit-sklop). Prepoznatljiv je po elegantnim fugama na fasadi, širine svega 9mm, a ukoliko se plastificira prihvatni profil, fuga može biti i u boji. Deo pripreme se vrši u samoj radionici, a postupak ugradnje je suvi.

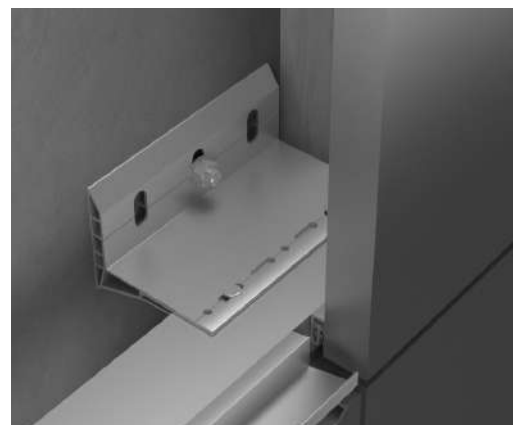
Postupak montaže startuje sa razmeravanjem i obeležavanjem pozicija nosećih profila.

b) Ekstrudirani noseći profili (horizontalni) se u projektovanom rasteru postavljaju na objekat. Maksimalna preporučena dužina nosećih profila je 3,5m, a maksimalno rastojanje između susednih nosećih profila je 1,5m.

c) Glavni horizontalni profili (kat br. V02) su pričvršćeni za noseći zid pomoću kotvi koje omogućavaju fino podešavanje/pozicioniranje nosećih profila u svim pravcima, kako bi se dobila potpuno ravna površina fasade. Njihov spoj može biti fiksni ili dilatirajući zahvaljujući integrisanom rešenju koje omogućuje obe opcije, a spajanje se izvodi pomoću pop-zakivaka ili samorezujućim nerđajućim vijcima. U slučaju zahteva za prekidom termo mosta, ispod kotvi se montiraju specijalno dizajnirane plastične podloške.

d) Fasadni paneli se obrađuju na CNC centru u radioničkim uslovima (sečenjem na meru i odgovarajućim žljebovanjem), a zatim tako obrađeni paneli savijanjem formiraju kasete. Profili za fiksiranje kaseta na sekundarnu noseću konstrukciju (kat br. V03) se seku na odgovarajuću meru i nituju za kasete.

e) Pripremljene kasete se montiraju na fasadu sa spojnom gumom (kat br. V62) između profila za fiksiranje kaseta i nosećih horizontalnih profila. U ovom sistemu predviđena je fuga od 9mm, dok profili vidljivi kroz nju mogu biti plastificirani u željenu boju radi postizanja različitih efekata.



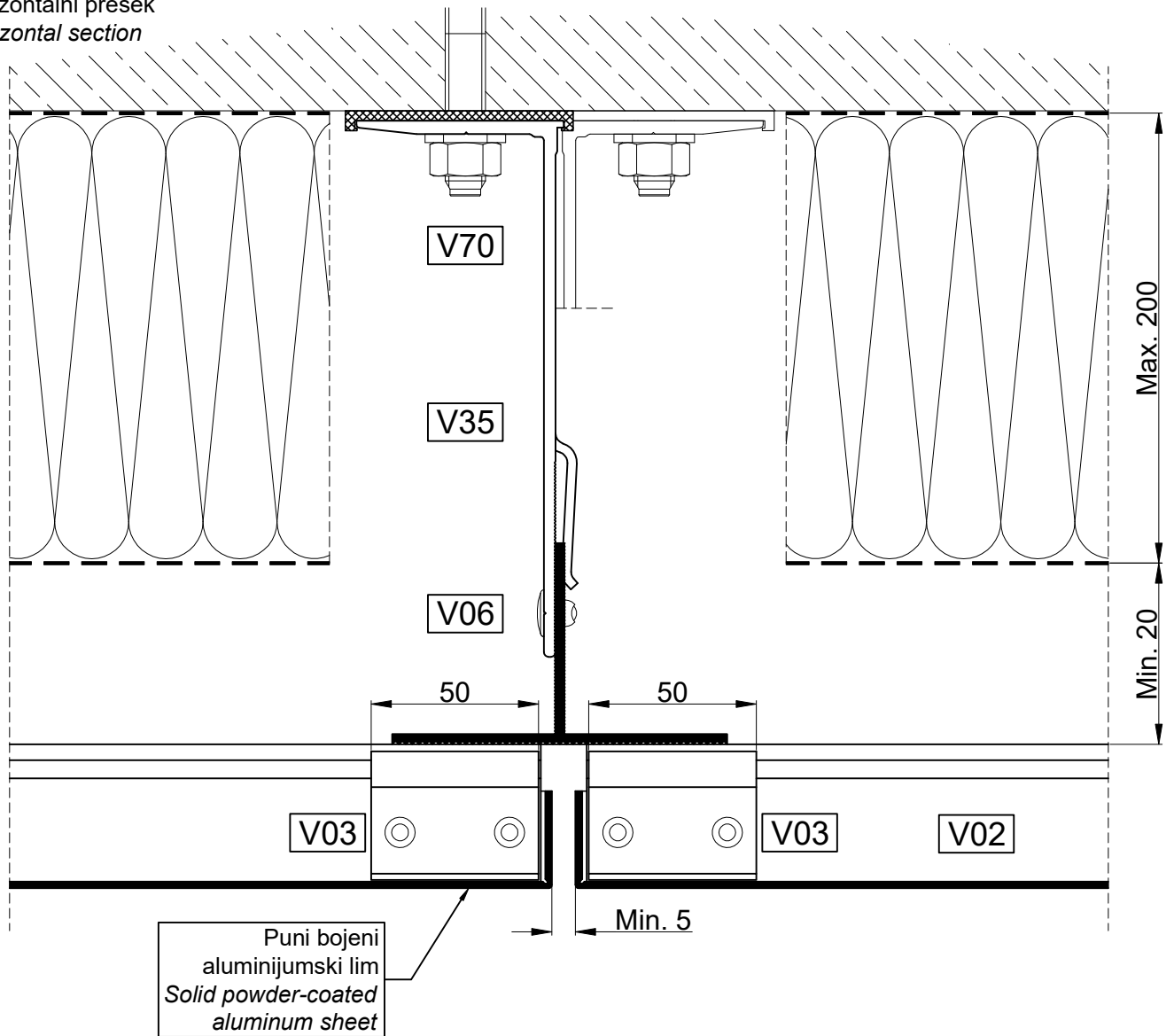
Technical description

Aluminium substructure system for specially machined and shaped cassettes. Their installation is extremely simple due to easy matching of two specially constructed aluminium profiles that fit perfectly together. It's trademark are fine visible gaps, only 9mm wide, and if underlying profile is powder coated the gap can even be colored. This dry installation system features partial workshop preparation and quick installation.

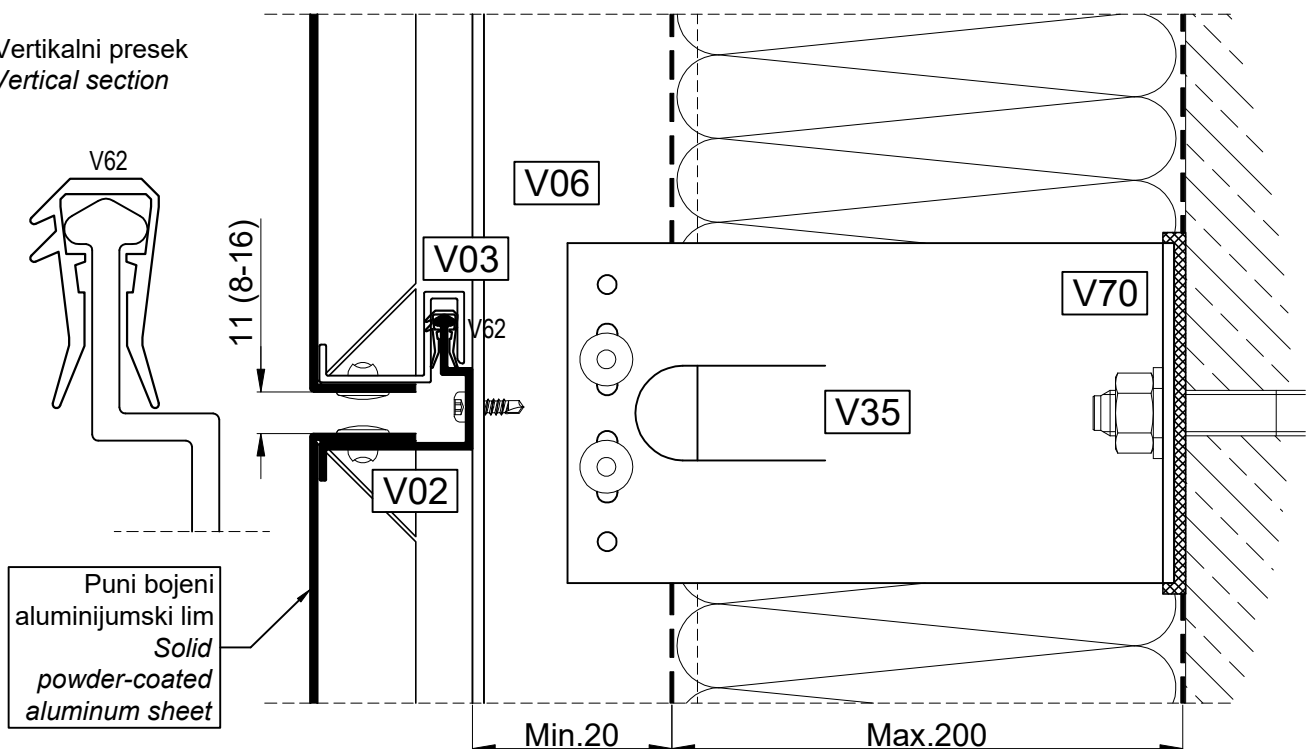
The assembly and installation of facade starts with measuring and positioning of main load-bearing profiles.

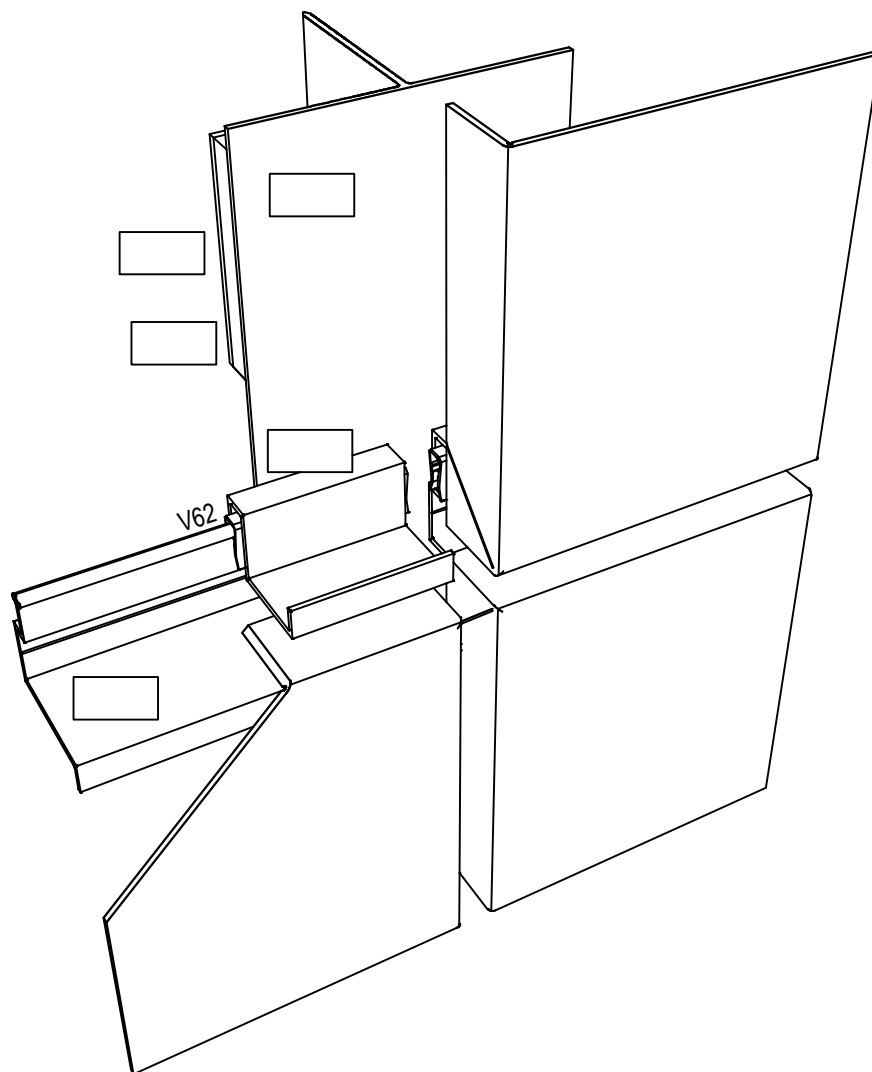
- a) The assembly and installation of facade starts with measuring and positioning of main load-barring profiles.
- b) Extruded load-barring profiles are installed vertically (or horizontally if specified in project) and spaced according to previously formed facade raster. The maximal recommended length of load-bearing profiles is up to 3,5m (relative to storey height), with maximal horizontal distance of 1,5m between them.
- c) Main horizontal profiles (item nr. V02) are attached by anchoring system that allows fine adjustments in all directions to achieve ideally flat facade. The maximal distance between system anchors is 1,5m (defined with static calculations). System anchors and horizontal profiles, connected with blind rivets or stainless steel screws, feature integrated both flexible and fixed point attachment. In case of specified thermal break, plastic insulators are installed between system anchors and a wall.
- d) Facade panels are CNC machined (cut to measure and grooved), then folded into cassettes. Cassette-fixing profiles for mounting onto secondary horizontal substructure (item nr. V03) are cut to measure and riveted onto cassettes.
- e) The prepared cassettes are mounted into place with connective gasket (item nr. V62) between cassette-fixing profiles and load - barring horizontal profiles. This system features 9mm wide gap that can feature custom powder coated main horizontal profiles for desired visual effects.

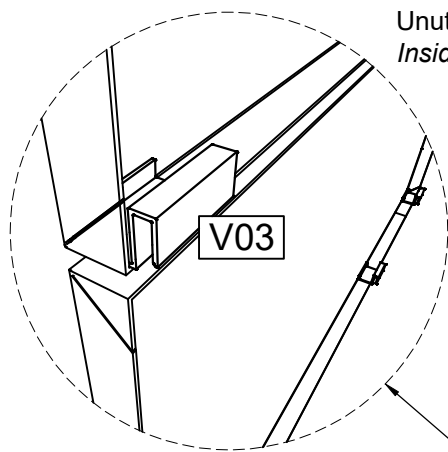
Horizontalni presek
Horizontal section



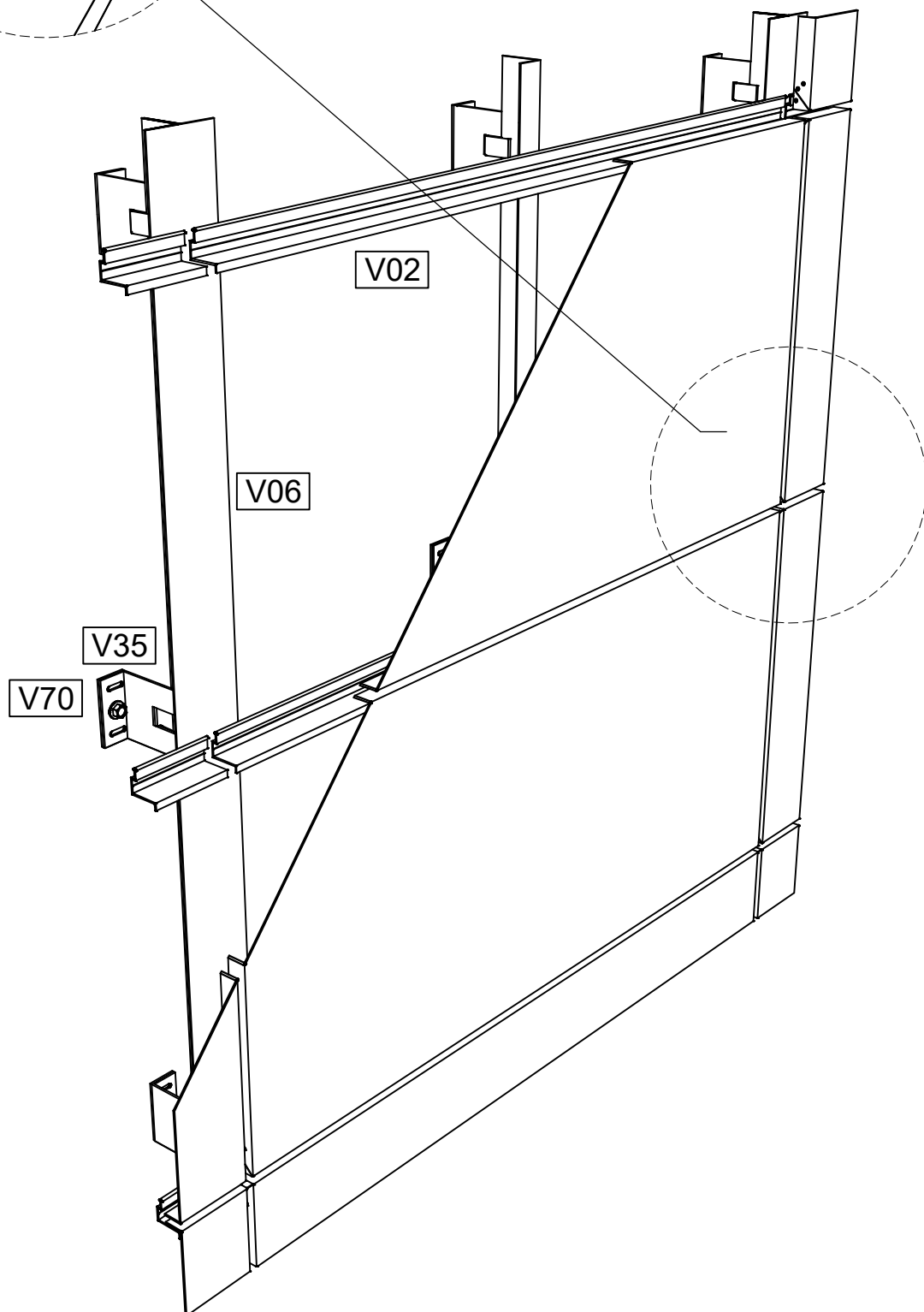
Vertikalni presek
Vertical section



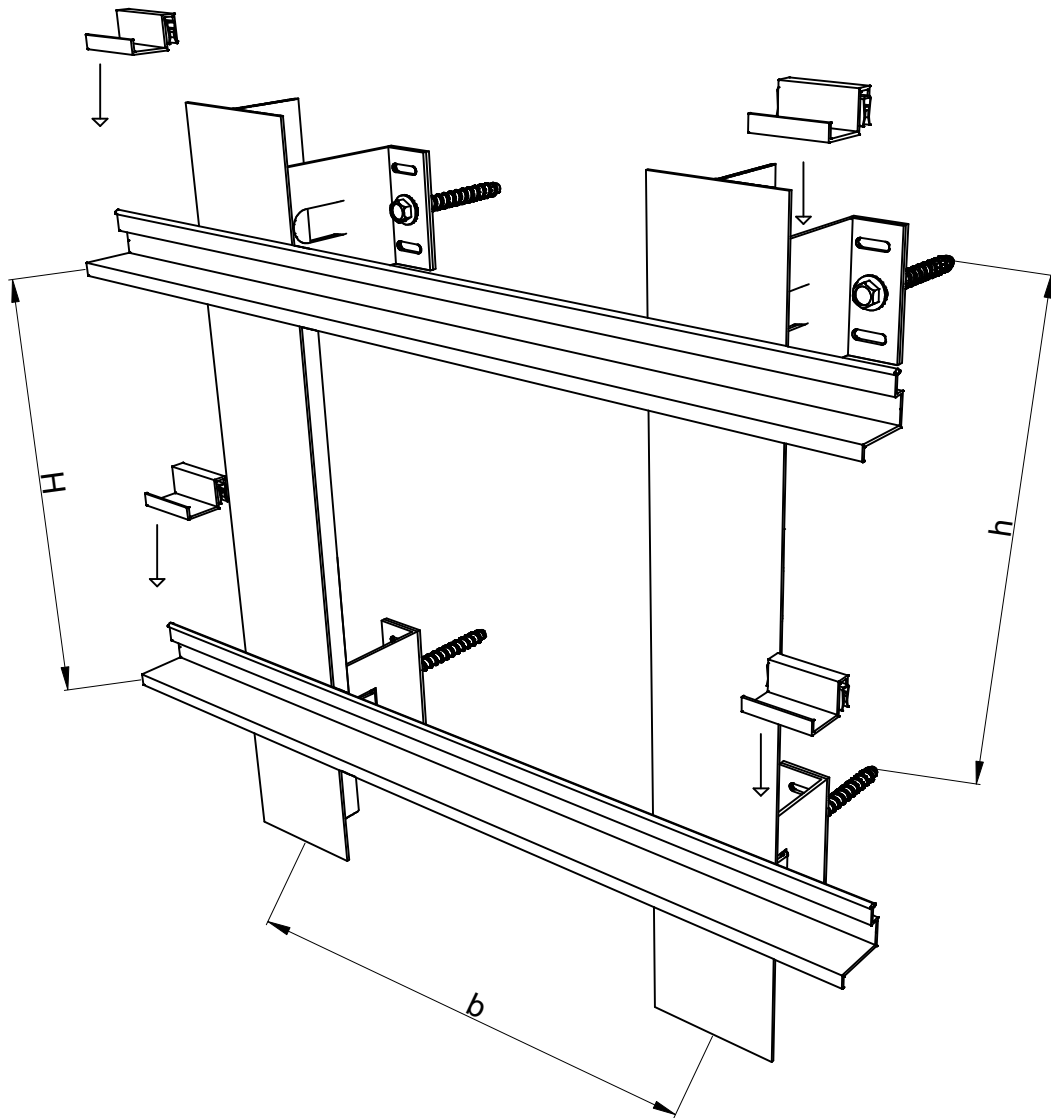




Unutar kasete
Inside a cassette



Opcija: noseći vertikalni profili
Option: vertical load-bearing profiles

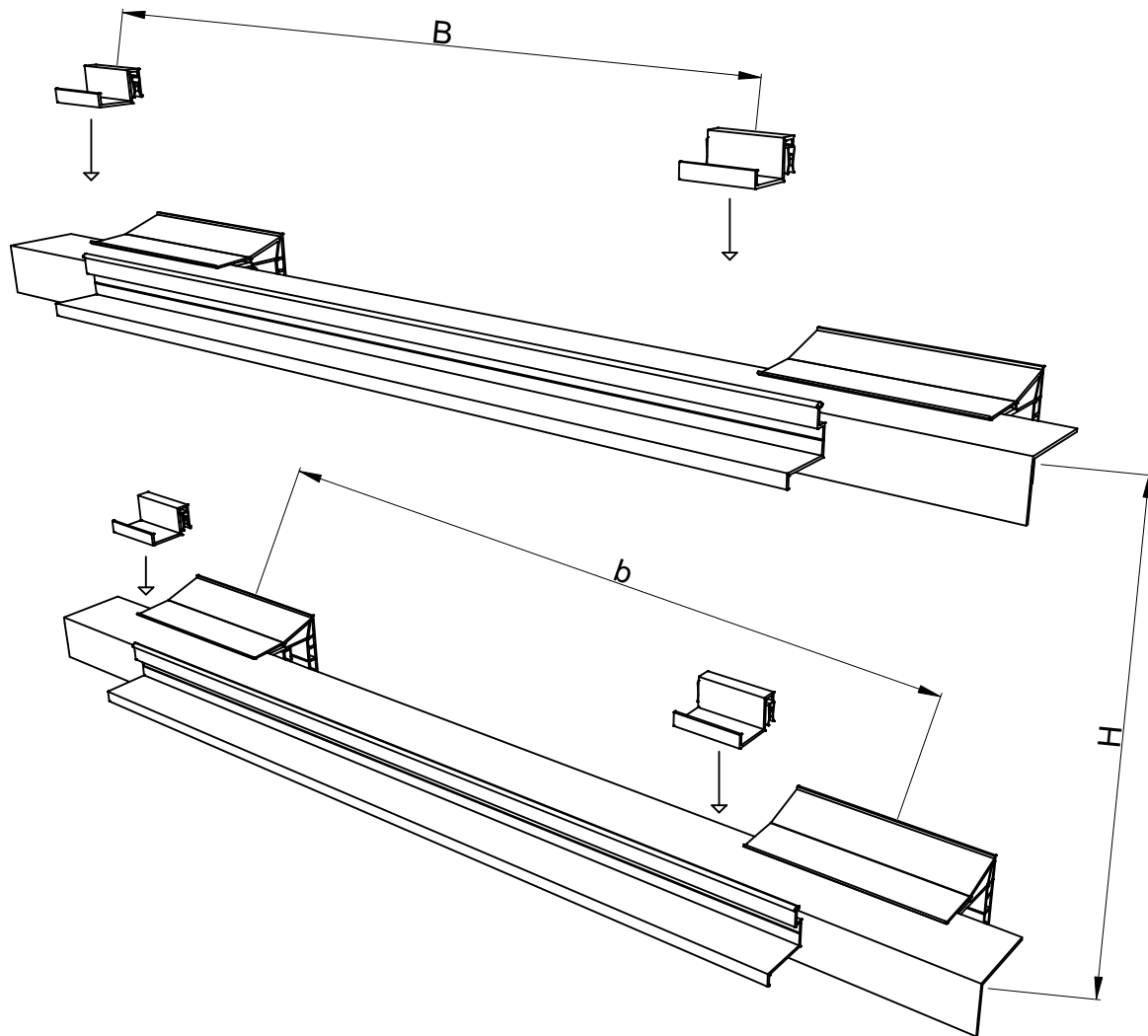


b - prema statičkom proračunu, ali ne više od 1200mm
b - according to structural analysis, but no more than 1200mm

B - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 700mm
B - according to structural analysis and depending on applied cladding material, but no more than 700mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 700mm
H - according to structural analysis and depending on applied cladding material, but no more than 700mm

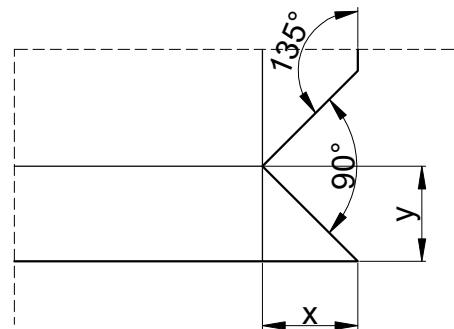
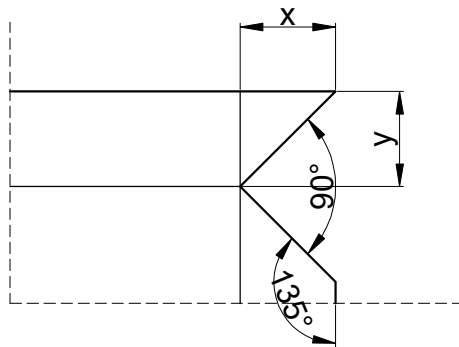
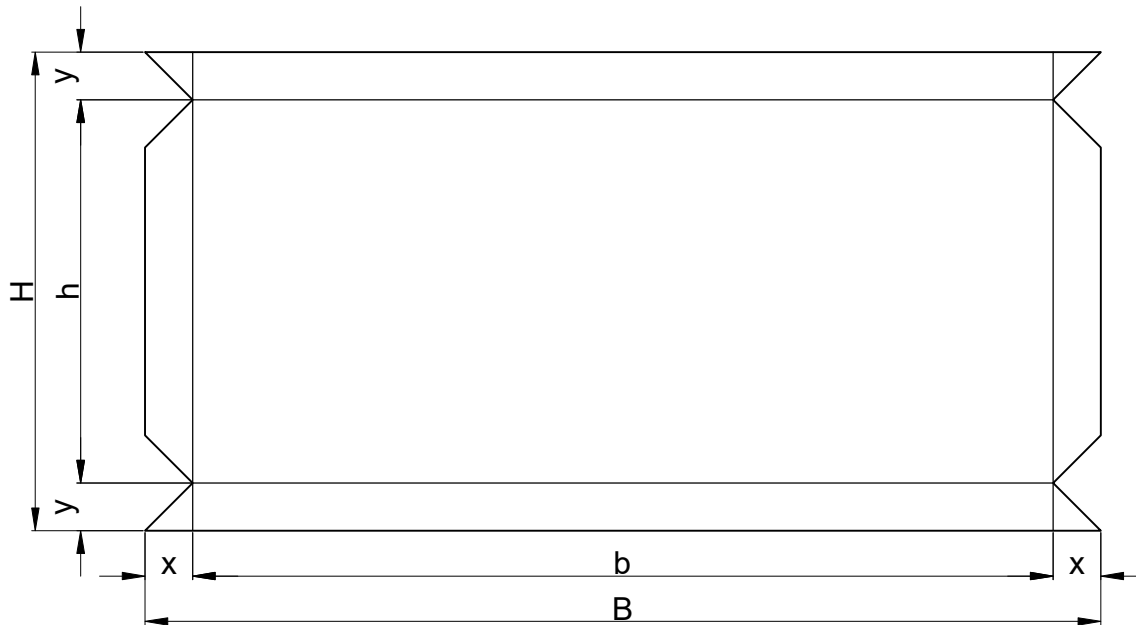
Opcija: noseći horizontalni profili
Option: horizontal load-bearing profiles



b - prema statičkom proračunu, ali ne više od 1200mm
b - according to structural analysis, but no more than 1200mm

B - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 700mm
B - according to structural analysis and depending on applied cladding material, but no more than 700mm

H - prema statičkom proračunu i u zavisnosti od primenjenog materijala obloge, ali ne više od 700mm
H - according to structural analysis and depending on applied cladding material, but no more than 700mm



b	x	h	y
	30		30

(mm)

B	H
$b + 2x$	$h + 2y$

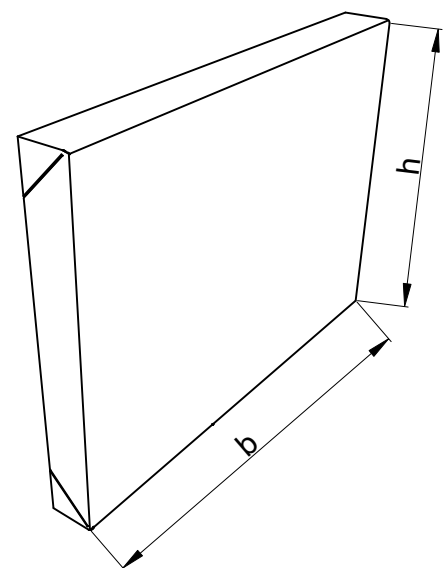
(mm)

b - projektovana vidna širina kasete
 b - designed visible cassette width

h - projektovana vidna visina kasete
 h - designed visible cassette height

B - ukupna širina razvijene mreže kasete
 B - developed cassette scheme total width

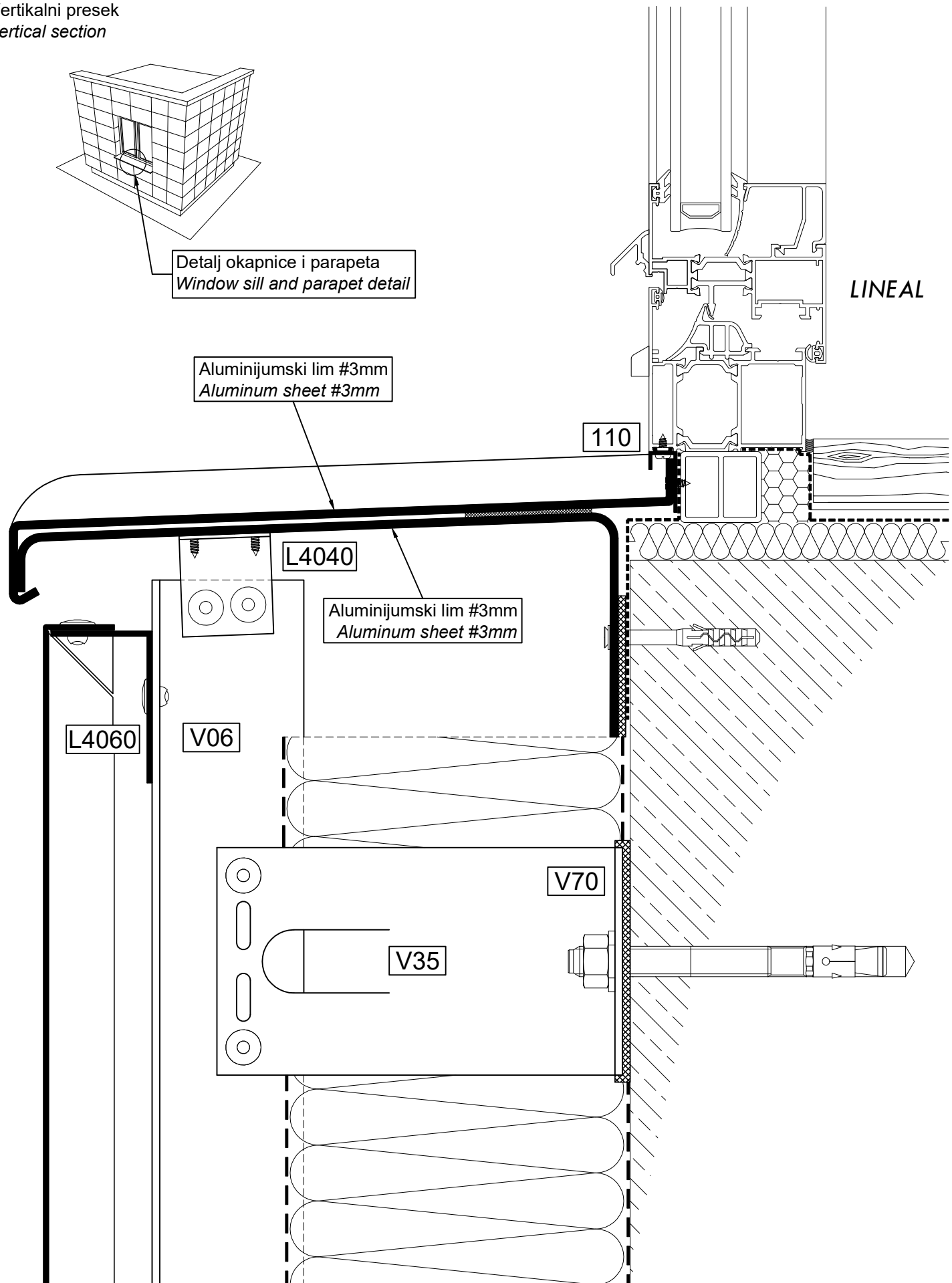
H - visina razvijene mreže kasete
 H - developed cassette scheme total height



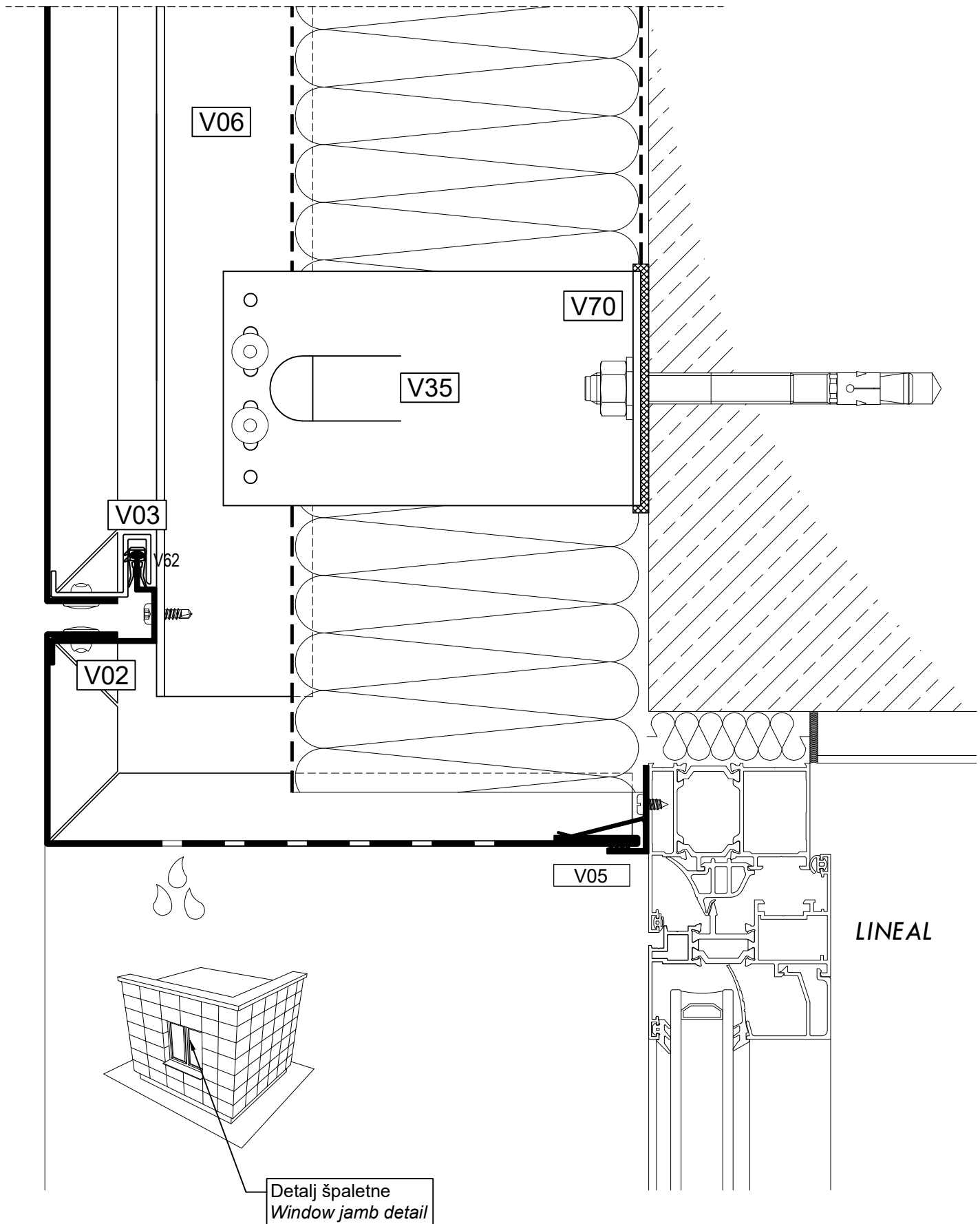
x, y - prikazane dimenzije su preporuka projektanta sistema, ali se mogu menjati u zavisnosti od potreba konkretnog projekta (način fiksiranja i vrsta primenjenih spojnih sredstava, projektovana dubina kasete itd.)

x, y - listed values are as per system designer's recommendation, but can be modified depending on needs of specific project (fixing method and type of applied fasteners, designed cassette depth etc.)

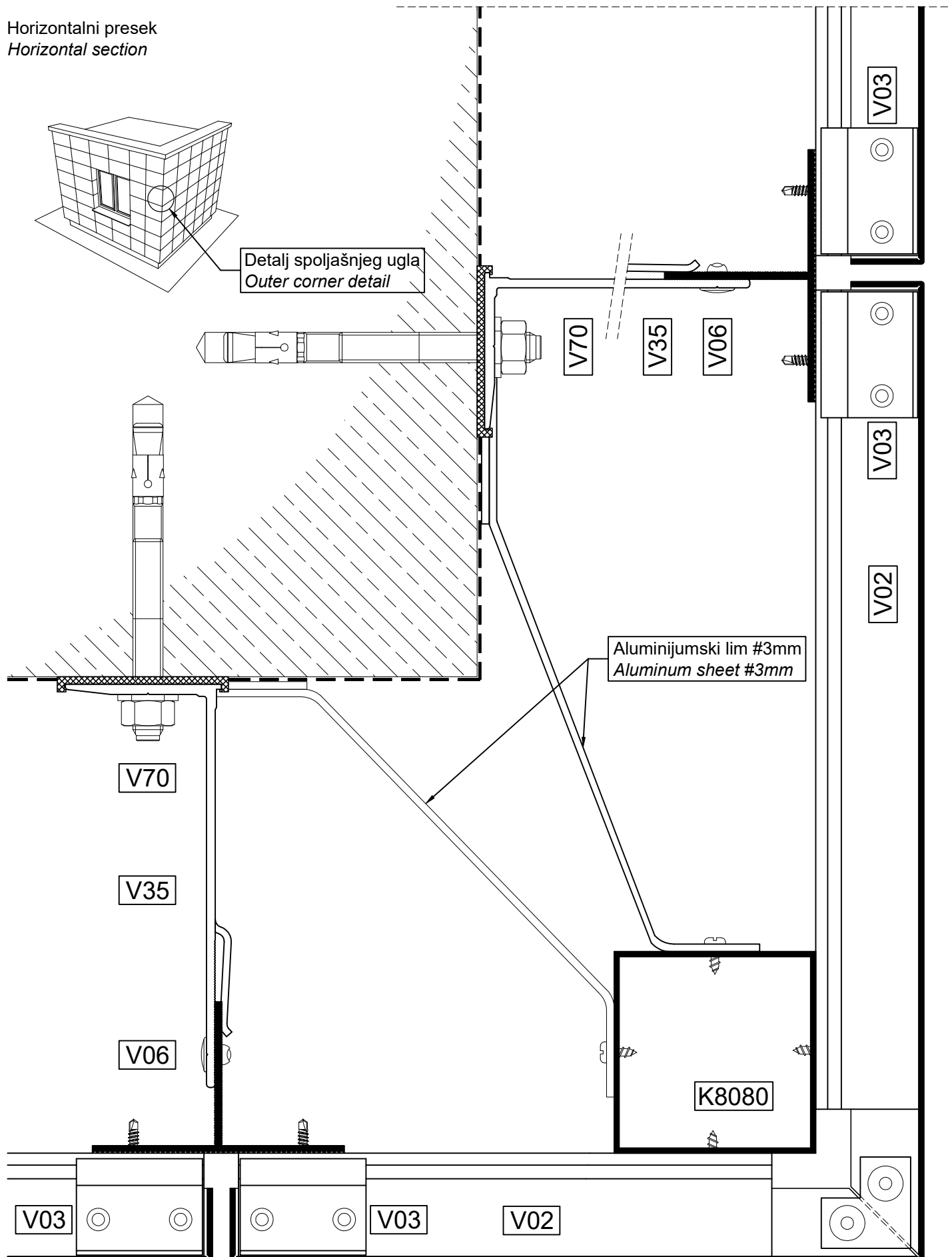
Vertikalni presek
Vertical section



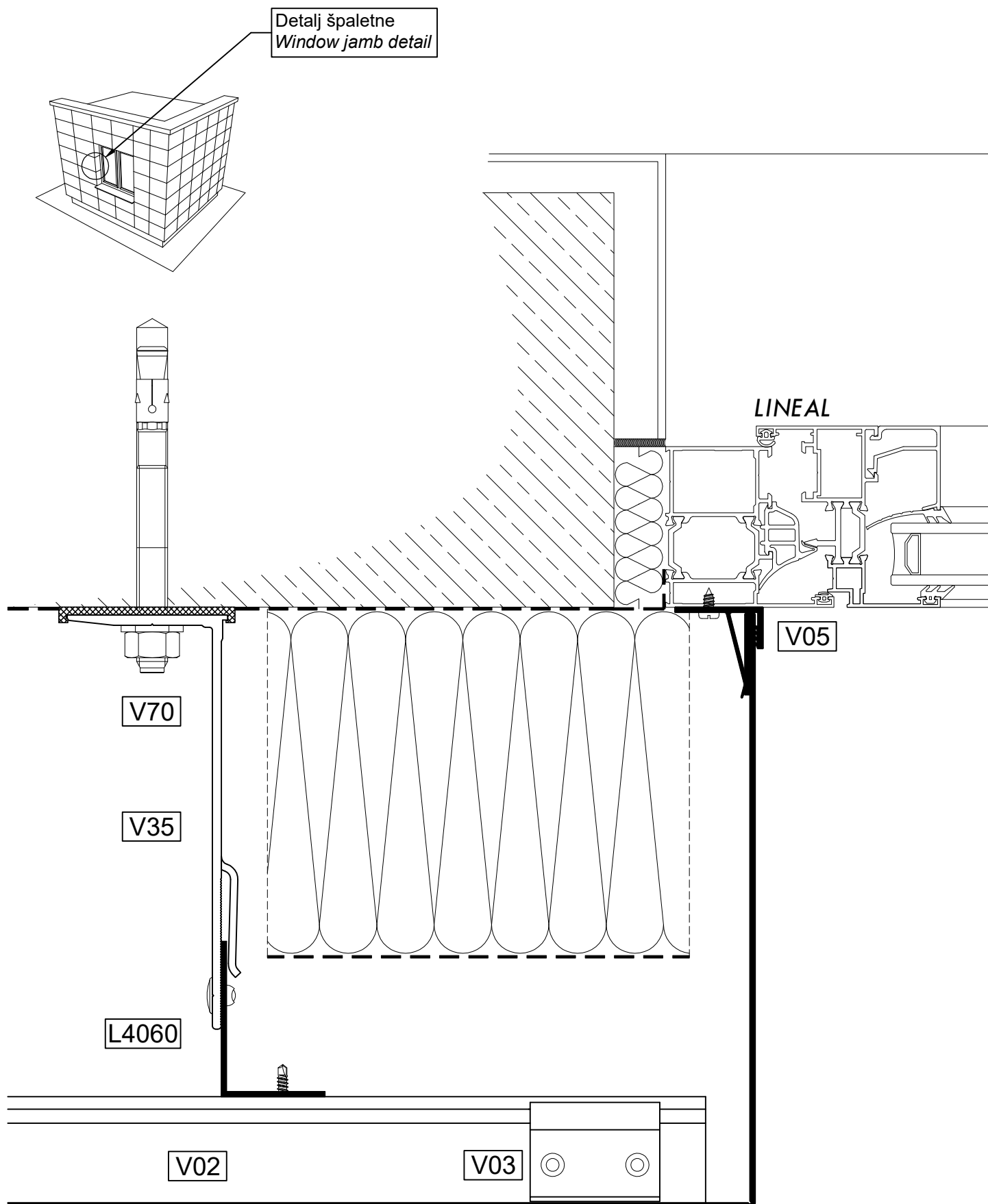
Vertikalni presek
Vertical section



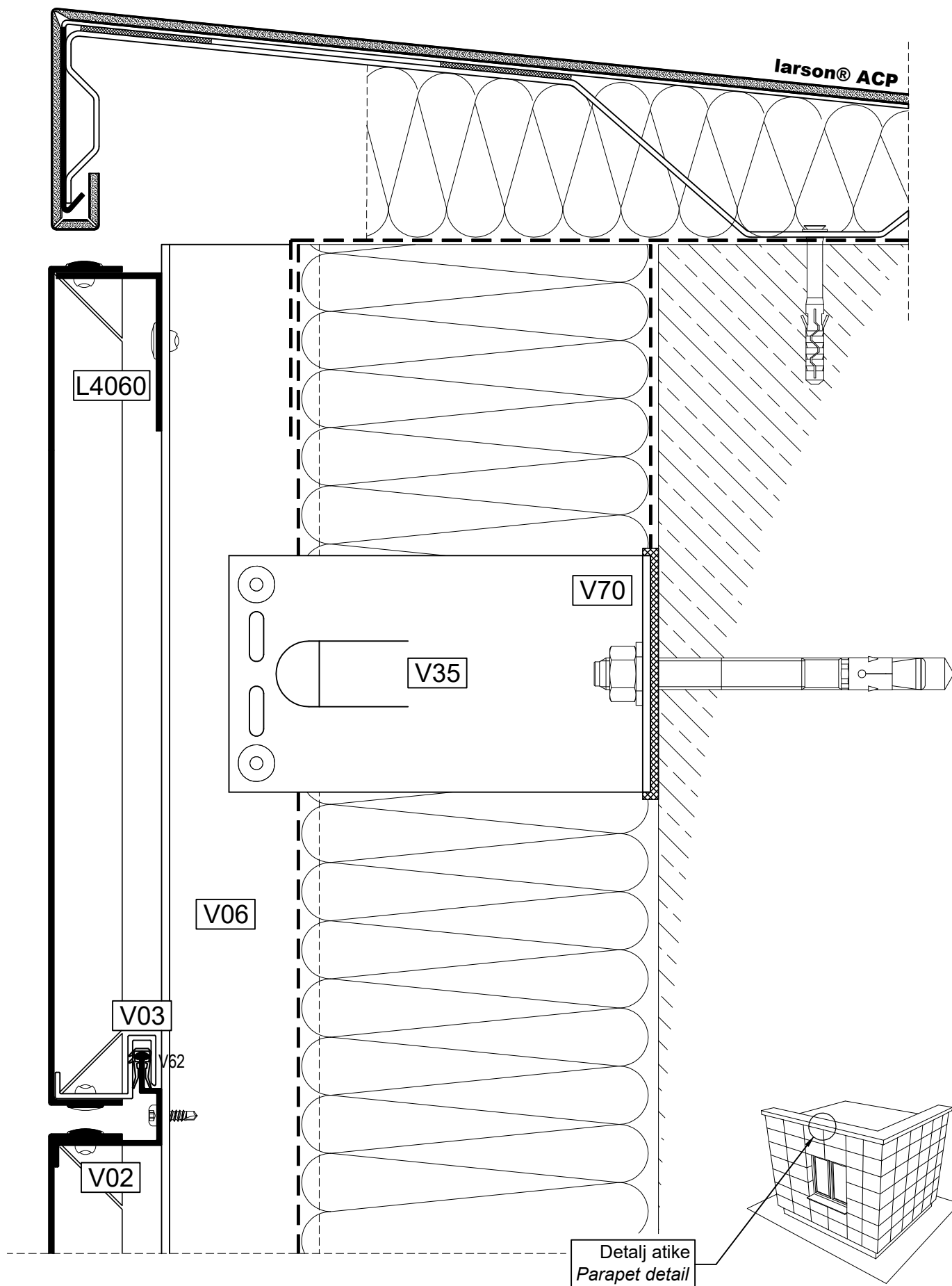
Horizontalni presek
Horizontal section



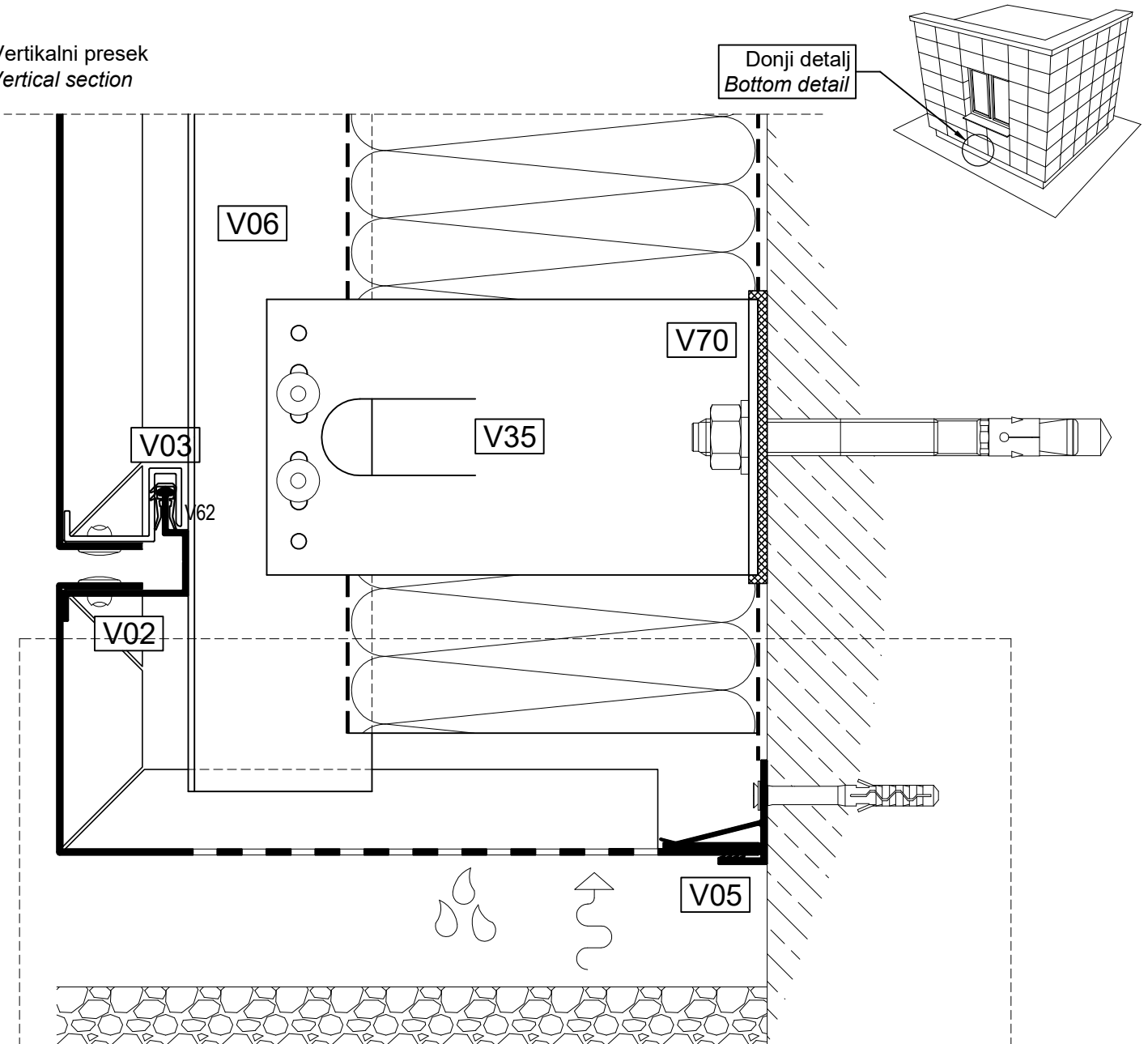
Horizontalni presek
Horizontal section



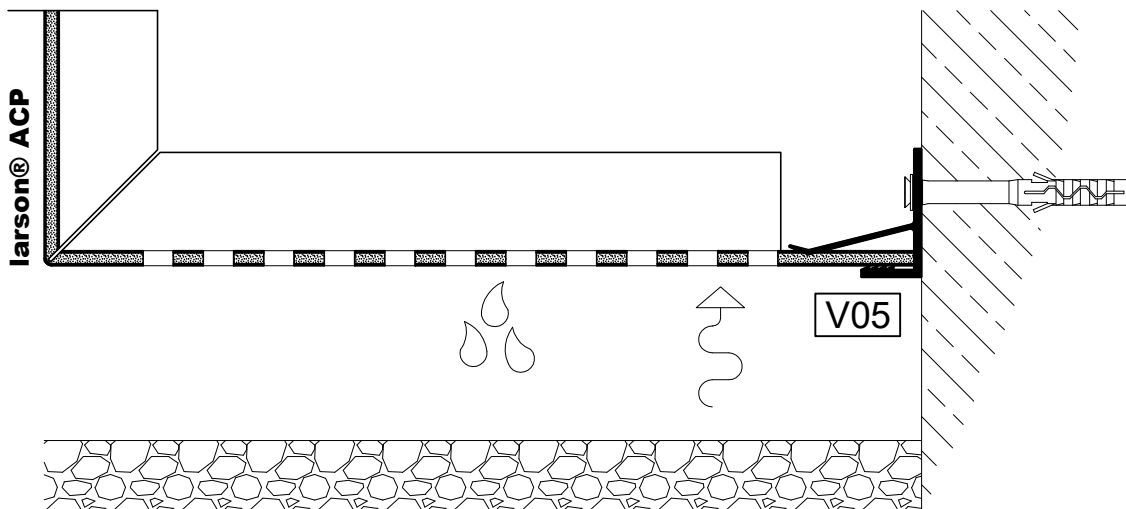
Vertikalni presek
Vertical section



Vertikalni presek
Vertical section



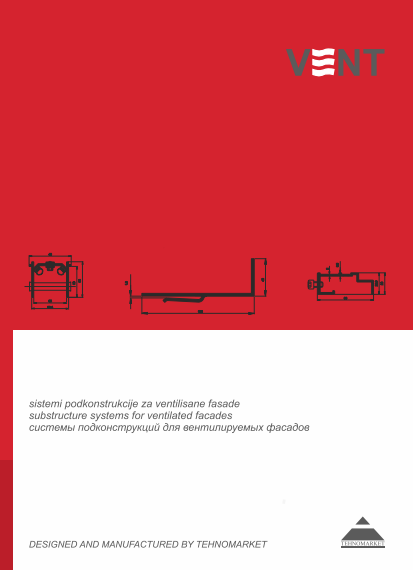
Opcija drenaže: perforirani puni bojeni aluminijumski lim
Drainage option: perforated solid powder-coated aluminium sheet



Opcija drenaže: perforirani aluminijumski kompozitni panel
Drainage option: perforated aluminium composite panel

[illegible]

VIŠE INFORMACIJA O VENT SISTEMIMA MORE INFORMATION ABOUT VENT SYSTEMS



PRODAJA PROFILA
PROFILE SALES

Skadarska 73
26 000 Pančevo
Srbija
Tel: +381 13 307 760; 307 752
Fax: +381 13 307 799
E-mail: profil@tehnomarket.com

PRODAJA KOMPOZITNIH PANELA
COMPOSITE PANEL SALES

Skadarska 73
26 000 Pančevo
Srbija
Tel: +381 13 307 700
Fax: +381 13 307 799
E-mail: panel@tehnomarket.com
www.tehnomarket.com

