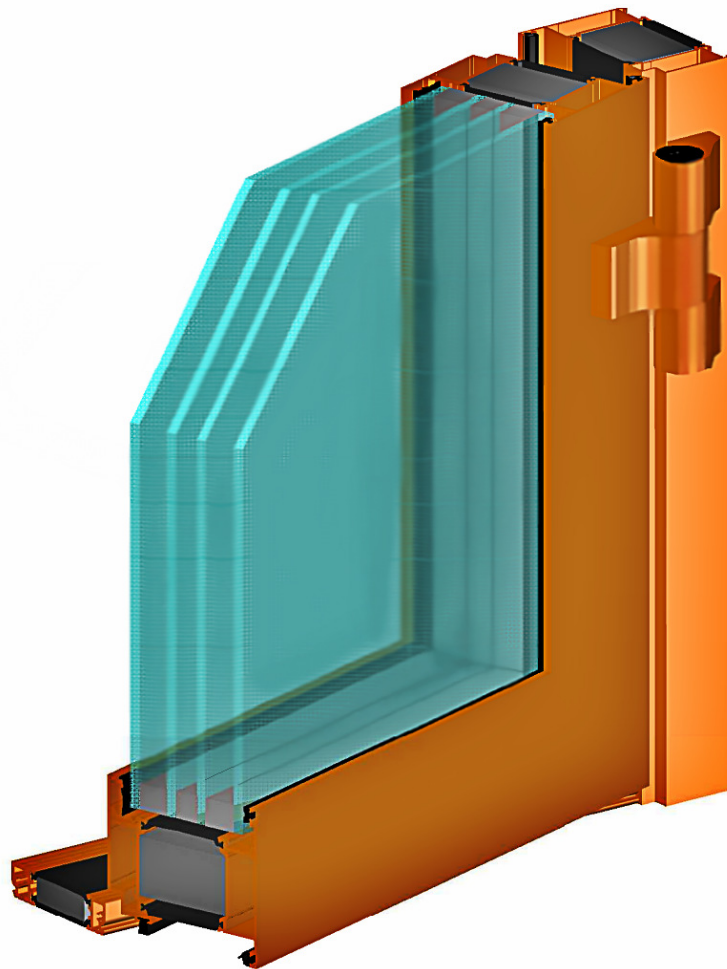


NOKIAN **PROFILES**



N98Si



SISÄLLYSLUETTELO

- | | | | |
|----------|--------------------------------------|----------|-----------------------------------------|
| 1 | Mitoitusperusteet | 5.9 | Pari-ikkuna, ei välipuitetta |
| 1.1 | Yleistä | 5.10 | Ulosavattava ikkuna, pystyleikkaukset |
| 1.2 | Pystyrungon mitoitus | 5.11 | Ulosavattava ikkuna, pystyleikkaukset |
| 1.3 | Vaakarungon mitoitus | 5.12 | Ulosavattava ikkuna, pystyleikkaukset |
| 1.4 | U-arvot | 5.13 | Ulosavattava ikkuna, pystyleikkaukset |
| 1.5 | Ovet, ikkunat koot ja kaistaleveydet | 5.14 | Ulosavattava ikkuna, vaakaleikkaukset |
| | | 5.15 | Ulosavattava ikkuna, vaakaleikkaukset |
| 2 | Profiilit | 5.16 | Liukuikkuna |
| 2.1 | Profiilien merkintä | 5.17 | Liukuikkuna |
| 2.2 | Profiilit | 6 | Lasiseinä |
| 2.3 | Profiilit | 6.1 | Lasiseinä |
| 2.4 | Profiilit | 6.2 | Lasiseinä |
| 2.5 | Profiilit | 6.3 | Lasiseinä |
| 2.6 | Lasilistat | 6.4 | Lasiseinä |
| | | 6.5 | Liikuntasauva |
| 3 | Tarvikkeet | 7 | Lasitus |
| 3.1 | Tarvikkeet | 7.1 | Tiivisteiden ja lasituslistojen valinta |
| 3.2 | Tarvikkeet | 7.2 | Lasitusohje |
| 3.3 | Tarvikkeet | 7.3 | Lasin liimaus |
| 3.4 | Tarvikkeet | 8 | Liittymät |
| 4 | Ovet | 8.1 | Oviliittymät N98si/N50si |
| 4.1 | Ulosavattava ovi, leikkaukset | 8.2 | Ikkunaliittymät N98si/N59si |
| 4.2 | Ulosavattava ovi, leikkaukset | 8.3 | Liittymät rak. runkoon |
| 4.3 | Ulosavattava ovi, leikkaukset | 8.4 | Liittymät rak. runkoon |
| 4.4 | Ulosavattava ovi, lukitukset | 8.5 | Liittymät rak. runkoon |
| 4.5 | Ulosavattava ovi, lukitukset | 9 | Laatutodistus |
| 4.6 | Ulosavattava ovi, lukitukset | 9.1 | Laatutodistus |
| 4.7 | Ulosavattava ovi, multilukko | | |
| 4.8 | Ulosavattava ovi, saranointi | | |
| 4.9 | Ulosavattava ovi, ovensulkijat | | |
| 4.10 | Ulosavattava ovi, reunasalpa | | |
| 4.11 | Sisäännavattava ovi, leikkaukset | | |
| 4.12 | Sisäännavattava ovi, leikkaukset | | |
| 4.13 | Sisäännavattava ovi, leikkaukset | | |
| 4.14 | Sisäännavattava ovi, lukitukset | | |
| 4.15 | Sisäännavattava ovi, lukitukset | | |
| 4.16 | Sisäännavattava ovi, multilukko | | |
| 4.17 | Sisäännavattava ovi, saranointi | | |
| 4.18 | Sisäännavattava ovi, ovensulkijat | | |
| 5 | Ikkunat | | |
| 5.1 | Ikkuna, pystyleikkaukset | | |
| 5.2 | Ikkuna, pystyleikkaukset | | |
| 5.3 | Ikkuna, pystyleikkaukset | | |
| 5.4 | Ikkuna, pystyleikkaukset | | |
| 5.5 | Ikkuna, vaakaleikkaukset | | |
| 5.6 | Ikkuna, vaakaleikkaukset | | |
| 5.7 | Ikkuna, vaakaleikkaukset | | |
| 5.8 | Ikkuna, vaakaleikkaukset | | |

MATERIAALIOMINAISUUDET

Alumiiniprofiilit

AW-6060 T6	
Murtolujuus f_u (Rm)	190 N/mm ²
Myötölujuus f_y (Rp 0,2)	150 N/mm ²
Kimmoerotoin E	70 000 N/mm ²
Liukerotoin G	27 000 N/mm ²
Tiheys	2700 kg/m ³
Lämpöpiteneiskerotoin	$23 \cdot 10^{-6}/^{\circ}\text{C}$
Lämmönjohtavuus	209 W/m ² °C

Tiivisteet

EPDM/solu-EPDM	
Kovuus	80±5°Sh
Vetolujuus	10 N/mm ²
Murtovenymä	150 % min
Puristuma (22h/70 °C)	25 % (max)

Lämpökatkot

PA 6.6, Polyuretaani

Ruuvit

Deltapinnoite	DT-DS 600 (DIN 50021)
tai	
Ruostumaton	A2

POIKKILEIKKAUSARVOT

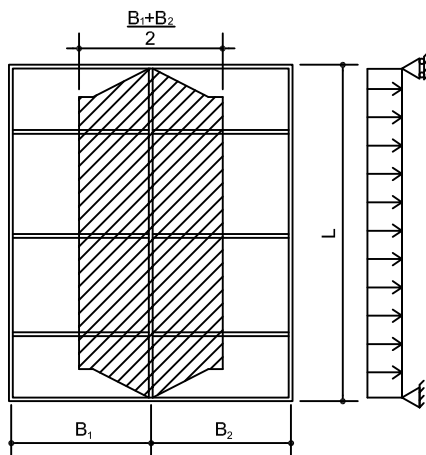
I_x [cm ⁴]	N98si-122	N98si-123	N98si-128	N98si-131	N98si-132	N98si-133
Profiilin pituus						
1.0 m	24,3	23,0	21,9	21,1	22,2	19,4
1.5 m	39,3	37,2	34,9	34,1	35,4	30,3
2.0 m	52,4	49,2	45,8	44,9	46,1	38,7
2.5 m	62,6	58,5	54,0	52,9	54,1	44,8
3.0 m	70,2	65,4	60,0	58,7	59,8	49,0
3.5 m	75,9	70,4	64,4	63,0	64,0	52,0
4.0 m	80,1	74,2	67,6	66,1	67,1	54,2
4.5 m	83,3	77,0	70,0	68,5	69,3	55,8
5.0 m	85,8	79,2	71,9	70,2	71,1	57,0
5.5 m	87,7	80,9	73,3	71,6	72,4	57,9
6.0 m	89,3	82,2	74,4	72,7	73,5	58,7
6.6 m	90,7	83,5	75,5	73,7	74,5	59,4
W_x [cm ³]	23,1	19,9	16,5	13,4	13,9	12,8
I_y [cm ⁴]	22,6	16,5	12,3	6,4	10,2	3,9
W_y [cm ³]	5,3	4,3	5,5	2,1	2,9	2,6

I_x [cm ⁴]	N98si-143	N98si-144	N98si-147	N98si-148
Profiilin pituus				
1.0 m	103,2	105,5	117,3	119,1
1.5 m	136,1	141,1	153,0	157,0
2.0 m	166,2	174,5	187,2	194,1
2.5 m	190,6	202,4	216,1	226,1
3.0 m	209,5	224,4	239,3	252,2
3.5 m	223,9	241,5	257,3	272,8
4.0 m	234,9	254,7	271,4	289,1
4.5 m	243,3	264,9	282,3	301,9
5.0 m	249,8	272,9	291,0	312,0
5.5 m	255,0	279,3	297,8	320,1
6.0 m	259,1	284,4	303,4	326,7
6.6 m	263,1	289,2	308,7	333,0
W_x [cm ³]	35,9	37,9	39,7	43,5
I_y [cm ⁴]	12,9	16,5	31,9	37,8
W_y [cm ³]	3,9	4,7	7,9	8,9

PYSTYRUNKO

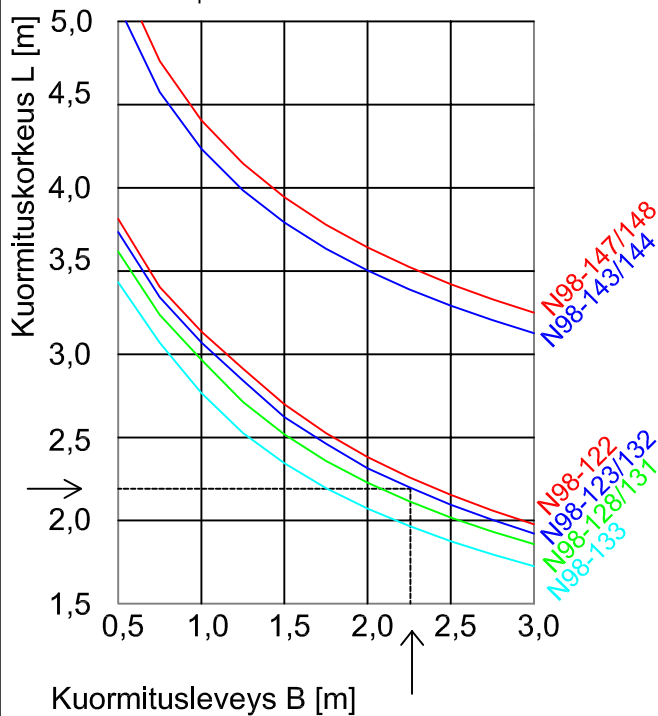
TUULIKUORMA

Jänneväli jaettu osiin



Mitoituskäyrä L/200

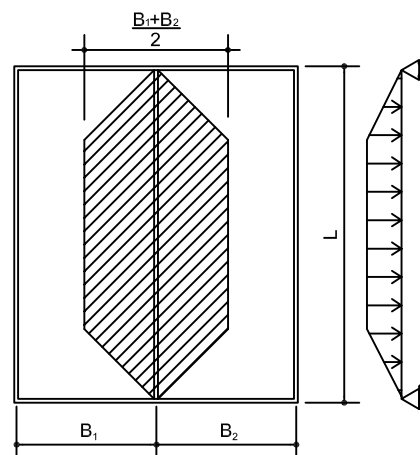
Tuulikuorma $q = 0,6 \text{ kN/m}^2$
 Jännitys $< 100 \text{ N/mm}^2$
 Max. taipuma 15 mm



Mitoitusesimerkki

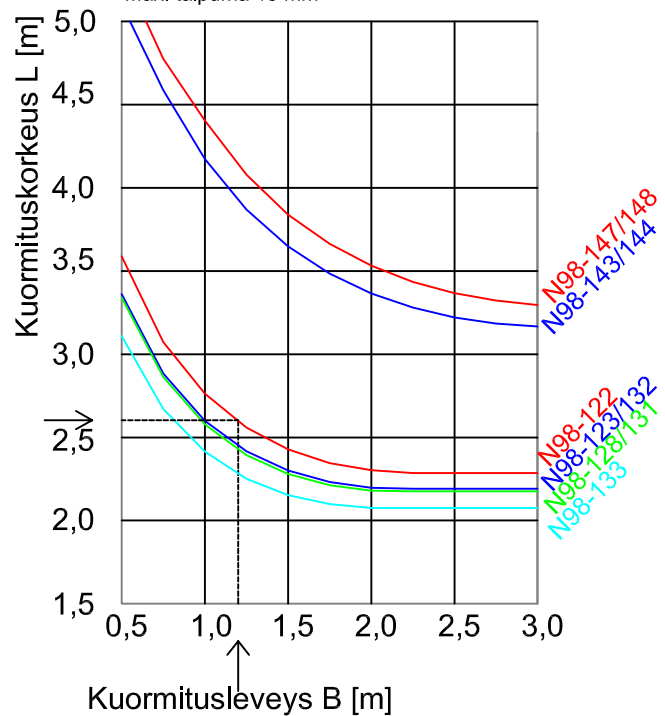
TUULIKUORMA:
 Maastoluokka 2
 Rakenteen korkeus 8 m
 --> tuulikuorma $q = 0,6 \text{ kN/m}^2$
 $B_1 = 2,5 \text{ m}$, $B_2 = 2,0 \text{ m}$, $L = 2,2 \text{ m}$
 Kuormitusleveys --> $\frac{B_1+B_2}{2} = 2,25 \text{ m}$
 Pystyrungon mitoituskäyrä (L/200)
 --> Pystyrunko N98-132

Jänneväliä ei ole jaettu osiin



Mitoituskäyrä L/300

Tuulikuorma $q = 0,6 \text{ kN/m}^2$
 Jännitys $< 100 \text{ N/mm}^2$
 Max. taipuma 15 mm

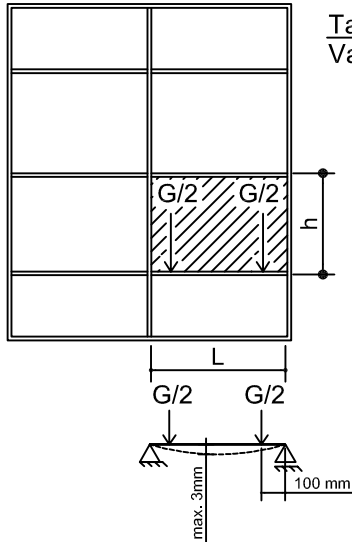


Mitoitusesimerkki

TUULIKUORMA:
 Maastoluokka 2
 Rakenteen korkeus 8 m
 --> tuulikuorma $q = 0,6 \text{ kN/m}^2$
 $B_1 = 1,2 \text{ m}$, $B_2 = 1,2 \text{ m}$, $L = 2,6 \text{ m}$
 Kuormitusleveys --> $\frac{B_1+B_2}{2} = 1,2 \text{ m}$
 Pystyrungon mitoituskäyrä (L/300)
 --> Pystyrunko N98-122

VAAKARUNKO

LASIN PAINO

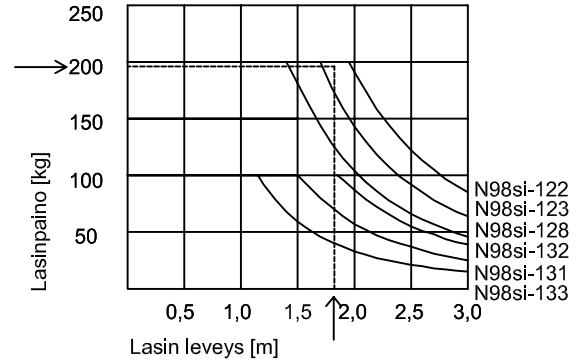


Taipuma

Vaakaprofiilin taipuma < 3 mm

Maksimi lasinpainot

Profiili	kg
N98si-131	100
N98si-132	100
N98si-133	100
N98si-122	200
N98si-123	200
N98si-128	200



Mitoitusesimerkki

L = 1,8 m, h = 2,25 m

3K-6 lasipaketti --> 45 kg/m² x 2,25 m x 1,95 m = 197 kg

Vaakarungon mitoitus käyrä (lasin paino)

--> vaakarunko N98si-122

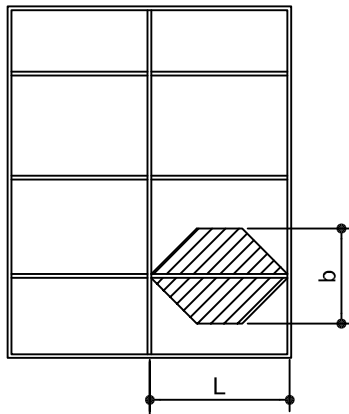
N98si-122 max. lasin paino

--> 200 kg > 197 kg ok

Lasipakettien painoja

Tyyppi	kg/m ²
3K-4	30
3K-5	38
3K-6	45
4K-4	40
4K-5	50
4K-6	60

TUULIKUORMA



Mitoitusesimerkki

-->tuulikuorma q = 0,6 kN/m²

L = 2,3 m, b = 2,25 m

Vaakarungon mitoitus käyrä (tuulikuorma)

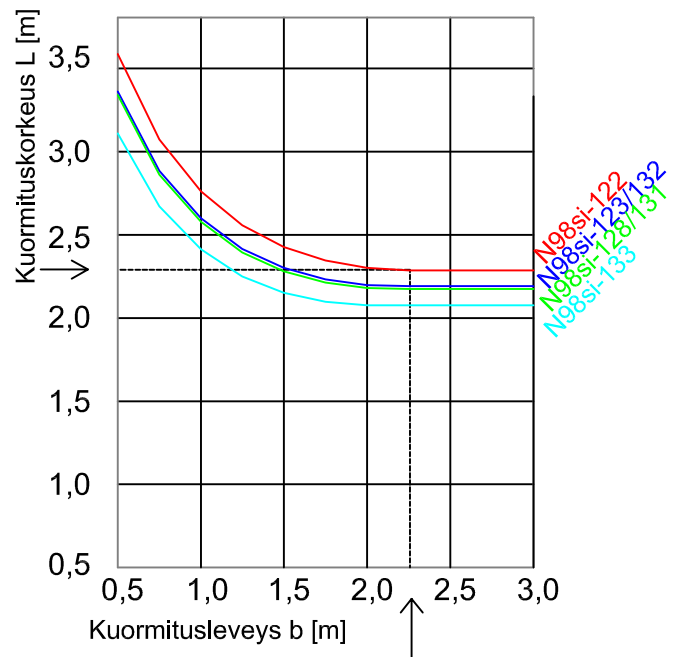
--> vaakarunko N98si-122

Mitoituskäyrä L/300

Tuulikuorma q = 0,6 kN/m²

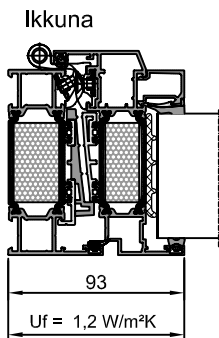
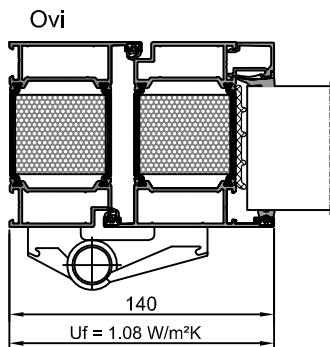
Jännitys < 100 N/mm²

Maksimi taipuma L/300

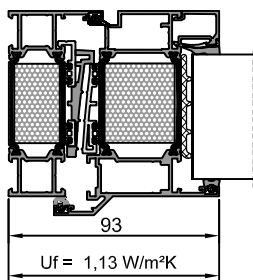


U-arvot

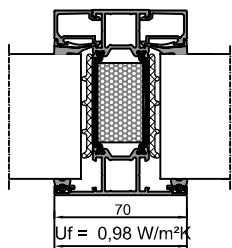
Keskimääräinen lämmönläpäisykerroin



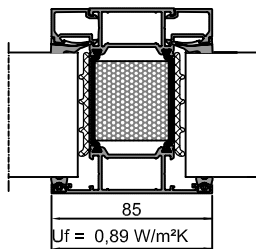
Ulosaukeava ikkuna



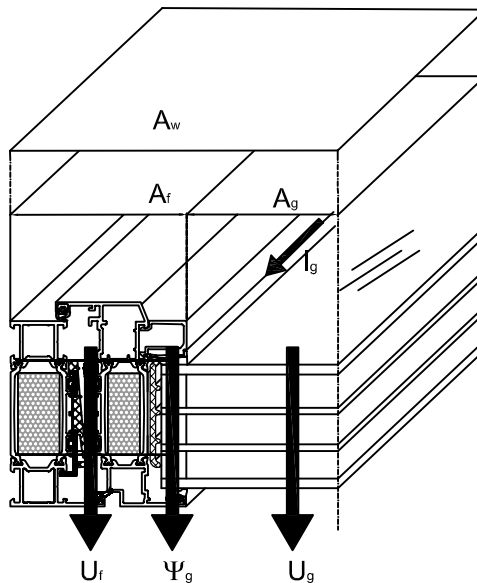
N98-132



N98-122



$$U_w = \frac{A_g U_g + A_f U_f + I_g \Psi_g}{A_g + A_f}$$



A_r = karmi- ja puiteosan projektiopinta-ala ikkunan lasituksen tasossa [m²]

A_g = valoaukon pinta-ala [m²]

A_w = A_r + A_g [m²]

I_g = valoaukon reunaan muodostuvan kylmäsilian pituus [m]

U_r = karmi- ja puiteosan lämmönläpäisykerroin [W/m²K]

U_g = valoaukon lämmönläpäisykerroin [W/m²K]

Ψ_g = valoaukon reunan viivamainen lisäkonduktanssi [W/m K]

Ψ_g = 0.04, TPS välilista

Ψ_g = 0.08, 2K/3K ei pinnoitetta

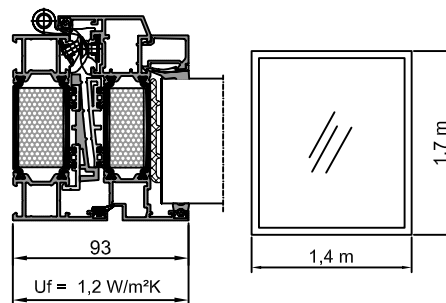
Ψ_g = 0.11, 2K/3K selektiivipinnoitteella

Esimerkki

- Ikkuna 1.4m x 1.7m

- Lasi 4K, U = 0,3 W/m²K

A_r = 0.66 [m²]
 A_g = 1.72 [m²]
 A_w = 2.37 [m²]
 I_g = 5.39 [m]
 U_r = 1,2 [W/m²K]
 U_g = 0,3 [W/m²K]
 Ψ_g = 0.04 [W/m K]

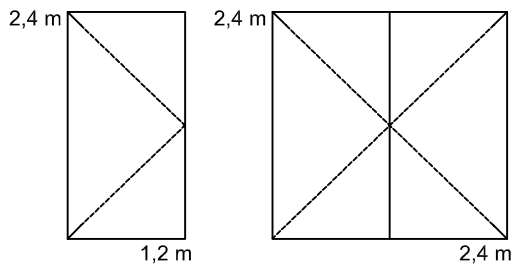


$$U_w = \frac{1.80 \times 0,3 + 0.66 \times 1.2 + 5.39 \times 0.04}{2.38} = 0,65 \text{ W/m}^2\text{K}$$

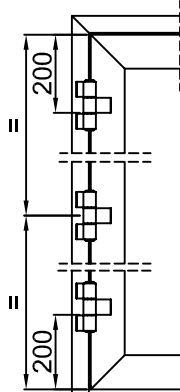
U_r arvot on määritelty standardin EN 10077-2 mukaan ohjelmallisesti, tai Hotbox menetelmällä.

01.06.2015

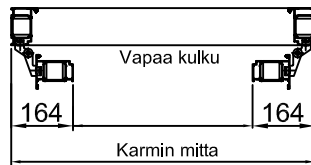
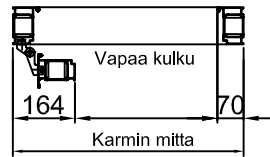
Ovet koko ja paino Kaistaleveydet



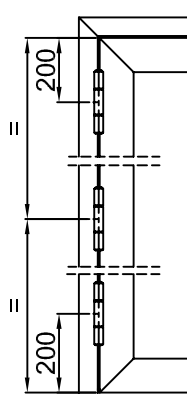
Vakiosarana



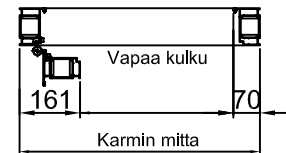
2 saranaa max. 120 kg
3 saranaa max. 135 kg



Putkisarana

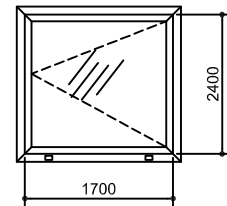


2 saranaa max. 90 kg
3 saranaa max. 105 kg

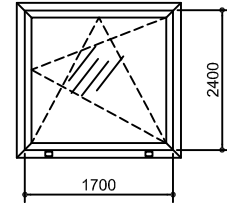


Ikkunat koko ja paino

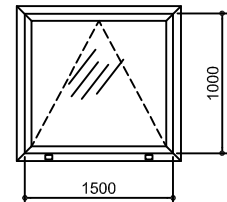
Puitteen ulkomitat



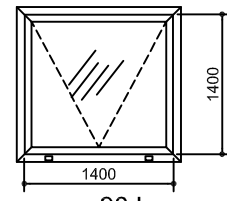
max. 100 kg



max. 150 kg

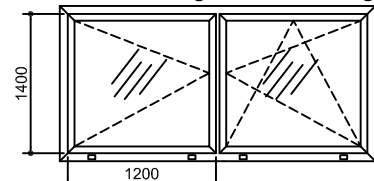


max. 70 kg

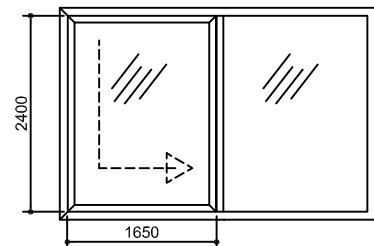


max. 70 kg

max. 90 kg max. 150 kg

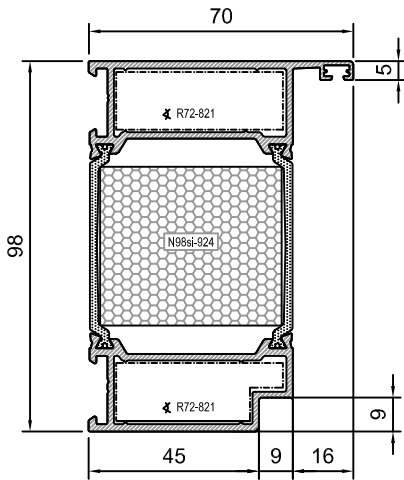


max. 150 kg

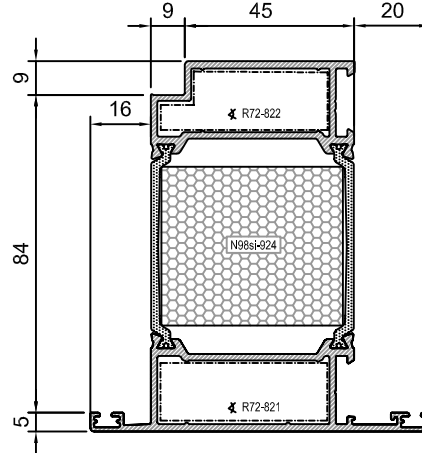


Tarkemmat tiedot ovien maksimitoista EN 1935:2002 Nokian Profiilit Oy

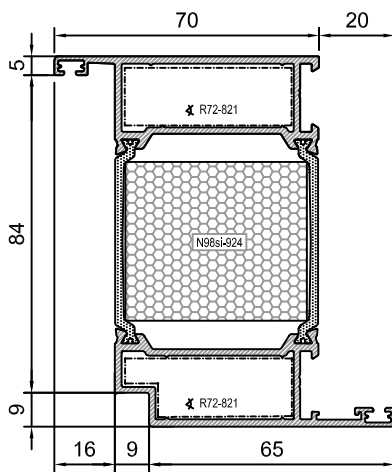
N98si-121



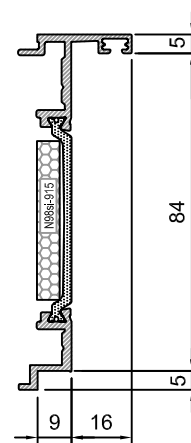
N98si-124



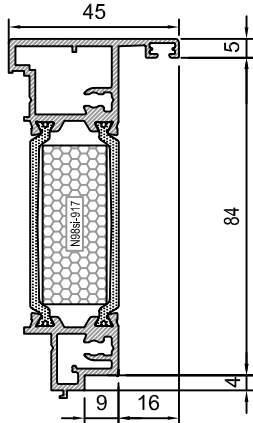
N98ss-125



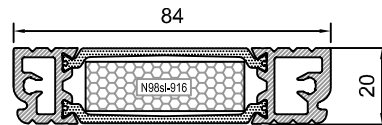
N98si-201



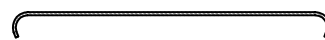
N98si-202



N98si-203



N98si-503



Kynnyksen rst-pinta

R72-505



Harjatiiviste profiili

R72-510



Liukuikkunan apuprofiili

R72-523

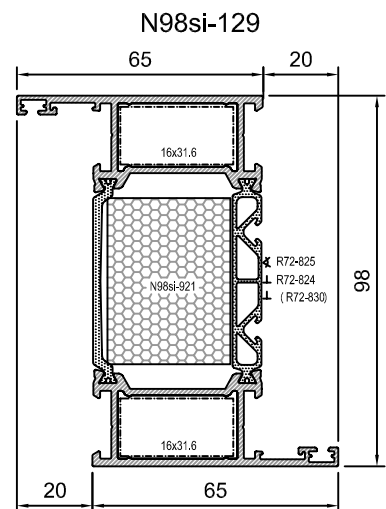
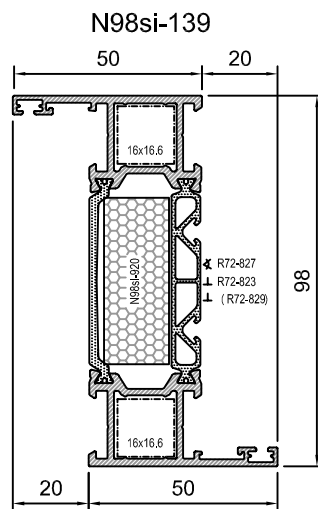
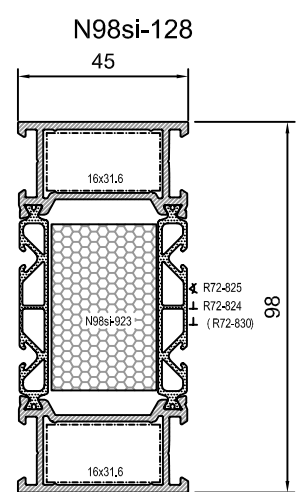
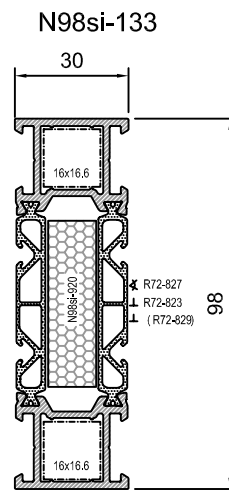
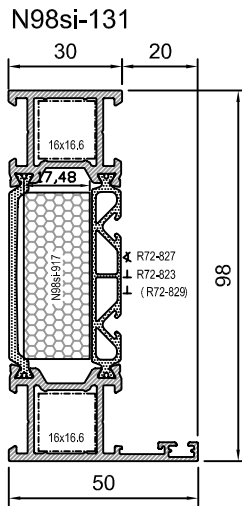
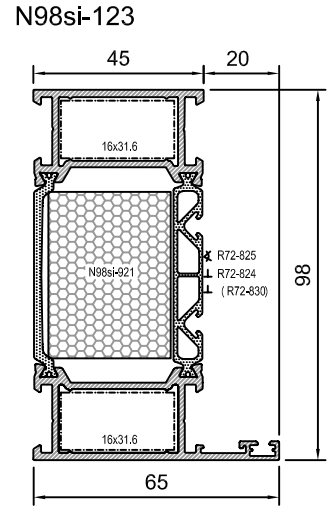
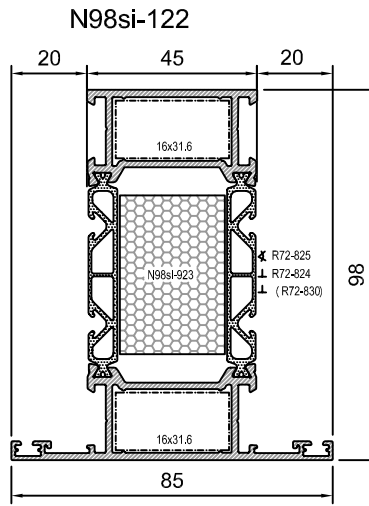
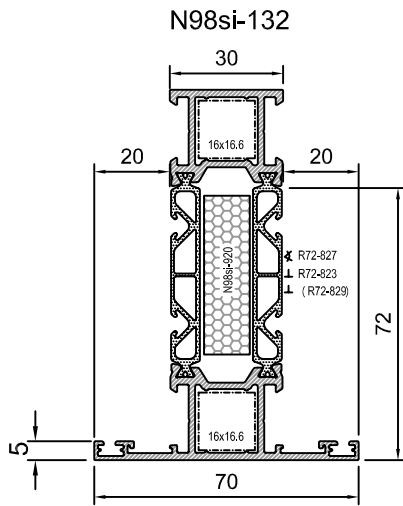


Vesipellin kiinnitys profiili

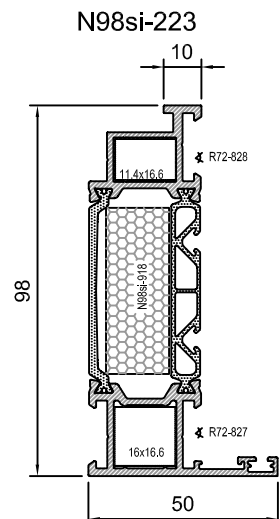
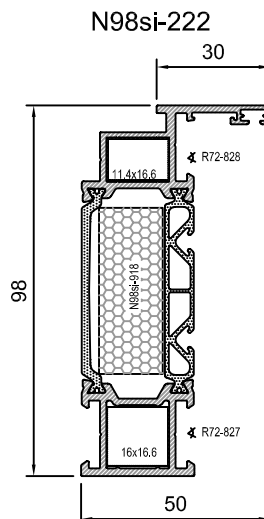
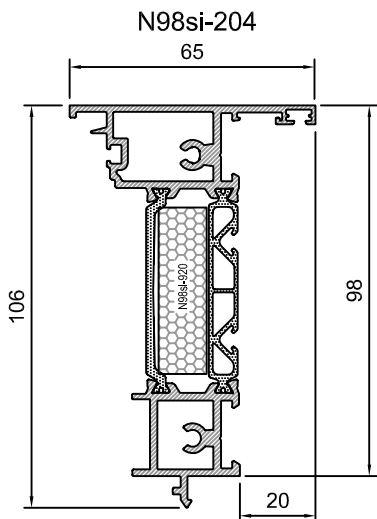
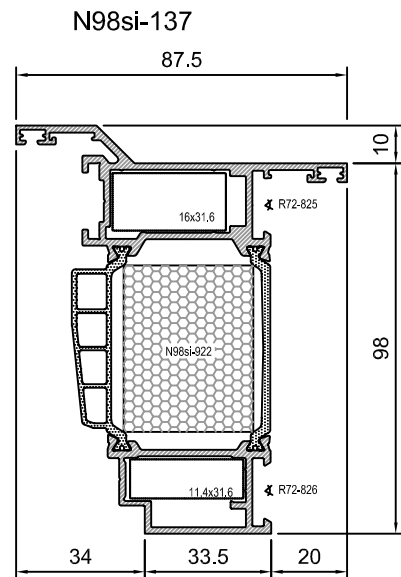
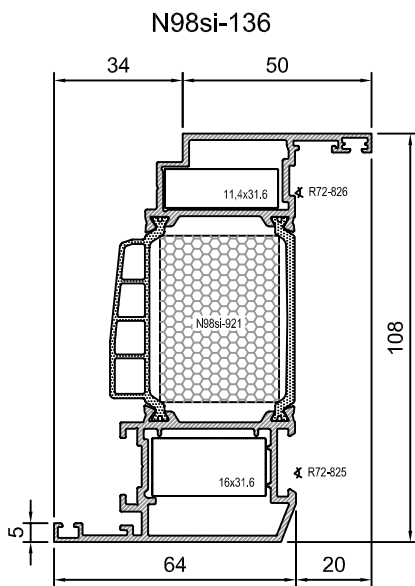
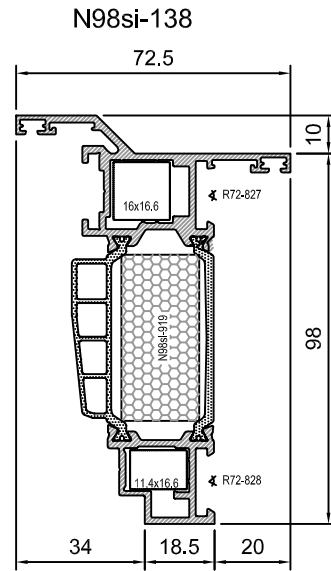
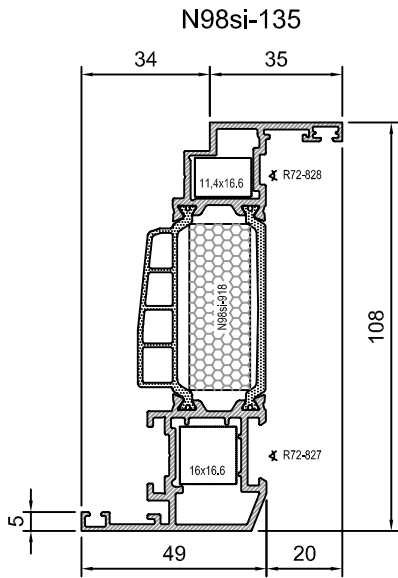
R72-524



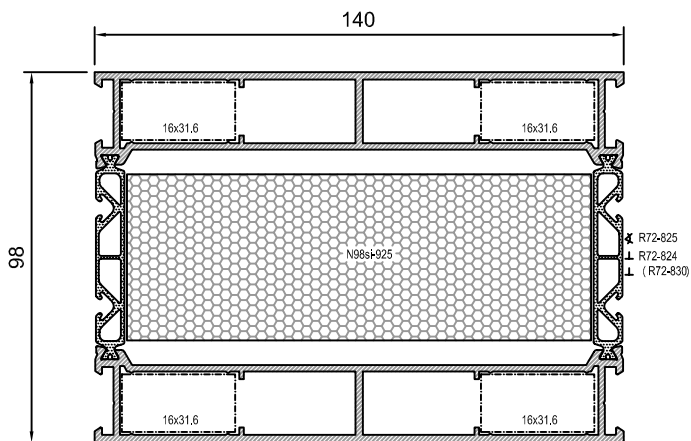
Tippanokka



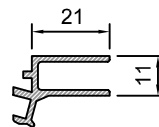
01.06.2015



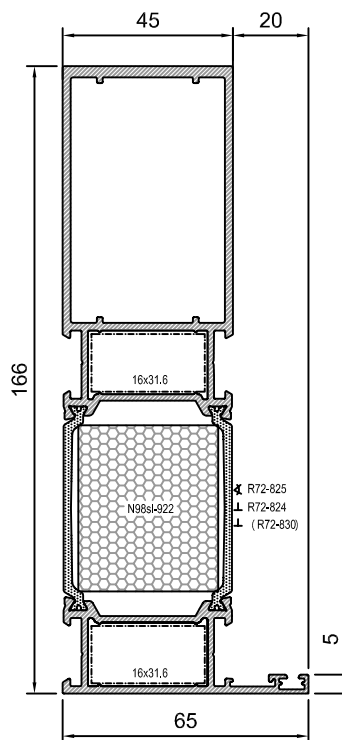
N98si-140



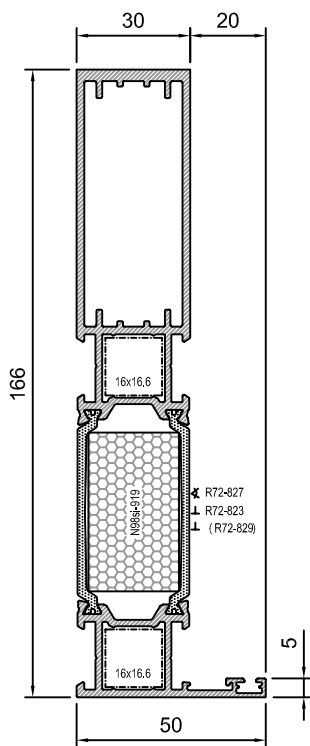
R72-509



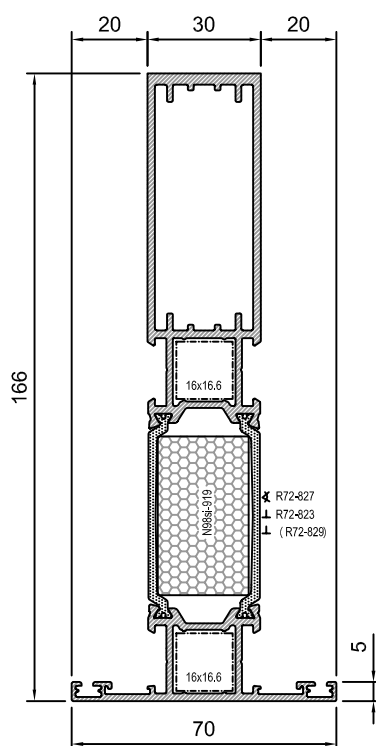
N98si-147



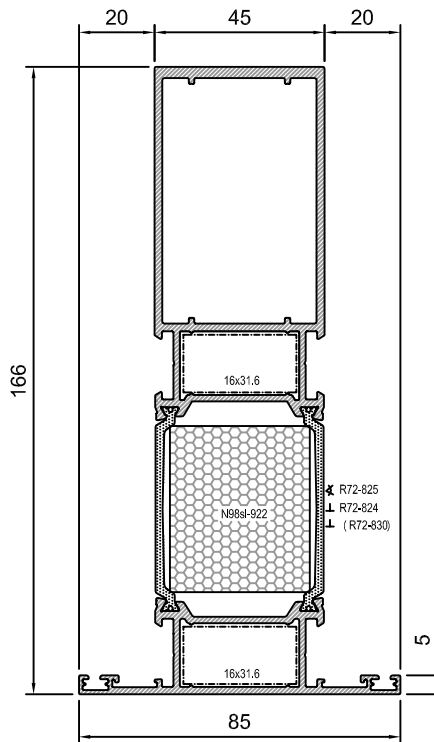
N98si-143



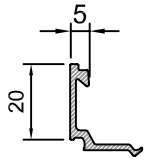
N98si-144



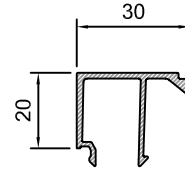
N98si-148



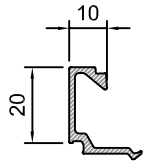
01.06.2015



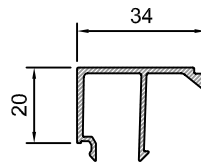
R72-320



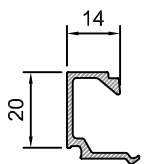
R72-326



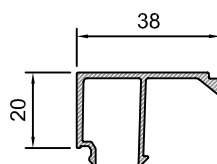
R72-321



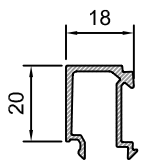
R72-327



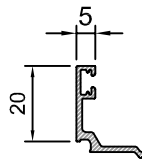
R72-322



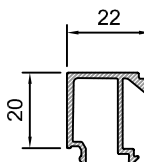
R72-328



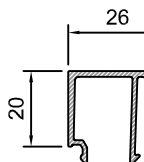
R72-323



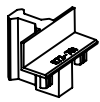
R72-329



R72-324



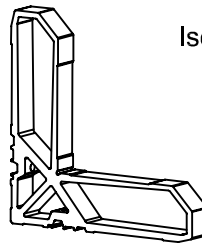
R72-325



R72-701

Parioven tiivistyskappale

N98si-124/125



R72-825

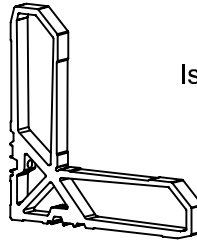
Iso kulmakappale 15,6 mm

N98si-122
N98si-123
N98si-128
N98si-129
N98si-136
N98si-137

Parioven tiivistyskappale

N98si-202

N98si-702



R72-826

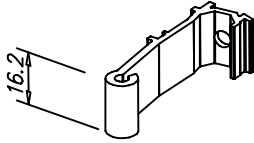
Iso kulmakappale 11 mm

N98si-136
N98si-137

Pari-ikkunan tiivistyskappale

N98si-204

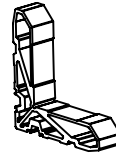
N98si-703



R72-823

T-liituskappale

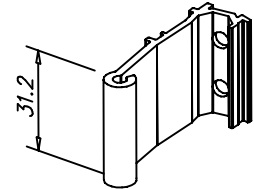
N98si-131
N98si-132
N98si-133
N98si-139



R72-827

Pieni kulmakappale 15,6 mm

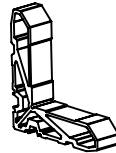
N98si-131
N98si-132
N98si-133
N98si-135
N98si-138
N98si-139



R72-824

Iso T-liituskappale

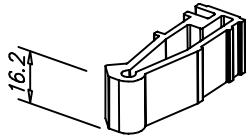
N98si-122
N98si-123
N98si-128
N98si-129



R72-828

Pieni kulmakappale 11 mm

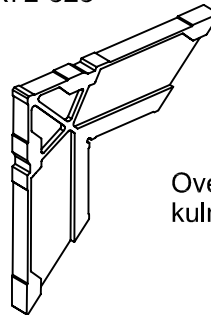
N98si-135
N98si-138



R72-829

T-liituskappale II

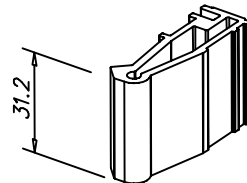
N98si-131
N98si-132
N98si-133
N98si-139



R72-821

Ovenlehden & karmin
kulmakappale

N98si-121
N98si-125



R72-830

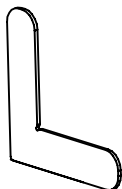
Iso T-liituskappale II

N98si-122
N98si-123
N98si-128
N98si-129



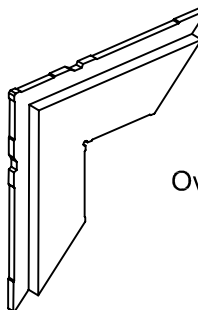
R72-801

Pieni kulmalevy



R72-802

Iso kulmalevy



R72-822

Ovilehden kulmakappale

N98si-121
N98si-124



R72-708

Tuuletustulppa



R72-710

Lasinkannatuskappale L=200 mm

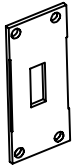
N98si-681L Tiivistenurkkakappale karmi (N98si-681)

N98si-682L Tiivistenurkkakappale puite (N98si-682)



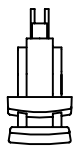
R72-725

Reunasalvan läpivienti



N98si-726

Lukon vastalevy



R72-727

Pitkäsulkija



R72-728

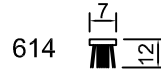
Reunasalpa



R72-401

Siirtotanko

Tiivisteet



614

Harjatiiviste



651

Huullostiiviste



652

Lasitustiiviste



653

Lasitustiiviste

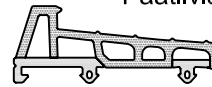


656

Jälkiasennustiiviste

N98si-681

Päätiiviste ikkuna puite



N98si-683



Kynnystiiviste

657



Huullostiiviste

638



Tupla-ikkunan tiiviste

661

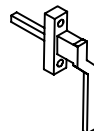


Harjatiiviste



R72-729

Ulosavattavan ikkunan koneisto

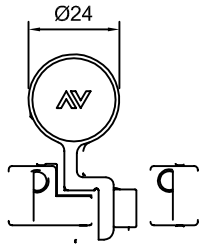


R72-730

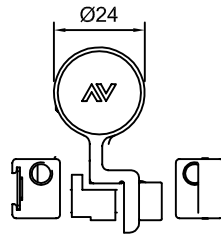
Ulosavattavan ikkunan painike

01.06.2015

Ovisaranat

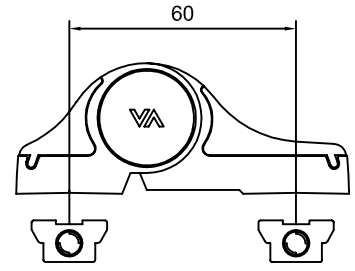


R72-722



R72-723

Karmi kääntölistalla N98si-201



R72-724

Ikkunahelasarjat

Sivusaranoitu	W (850-1700)	H (400-2400)
R72-901	850-1200	400-1400
R72-902	1201-1400	1401-2400
R72-903	1401-1700	1401-2400

Sivu/-alasaranoitu	W (850-1700)	H (850-2400)
R72-905	850-1200	850-1400
R72-906	1201-1700	1401-2400

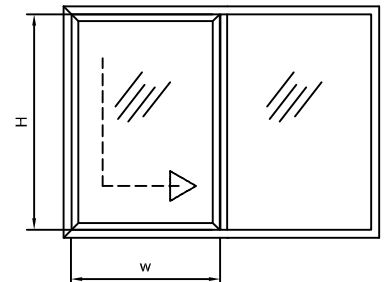
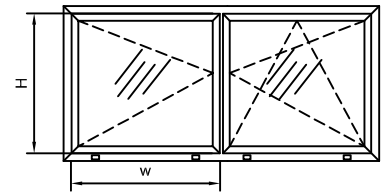
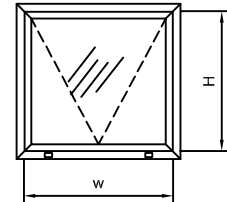
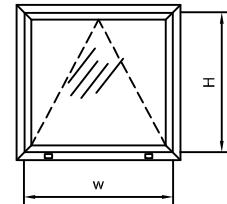
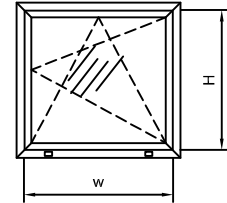
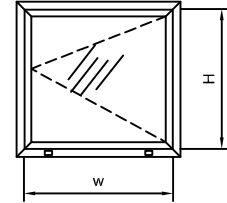
Alasaranoitu	W (450-1500)	H (850-1000)
R72-907	450-900	850-1000
R72-908	901-1500	850-1000

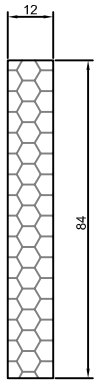
Yläsaranoitu	W (650-1000)	H (850-1400)
R72-910	650-1000	500-1400
R72-911	1000-1400	500-1400

Pari-ikkuna	W (850-1200)	H (850-1400)
R72-913	850-1200	850-1400

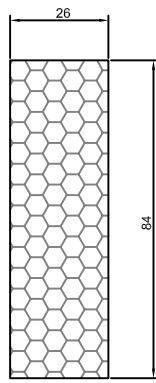
Liukuikkuna	W (900-1650)	H (1401-2400)
Erikoistilauksesta		

Puitteen ulkomitat

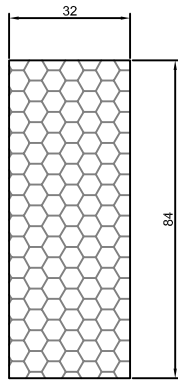




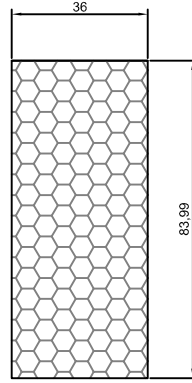
N98-915



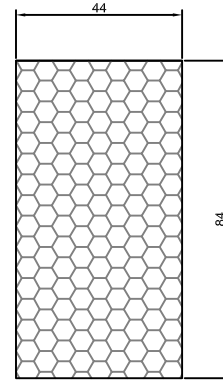
N98-916



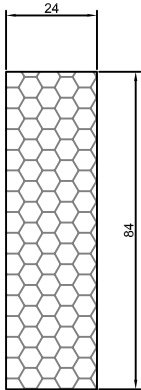
N98-917



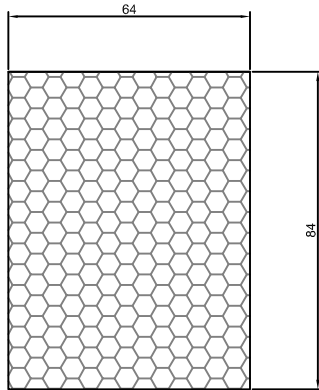
N98-918



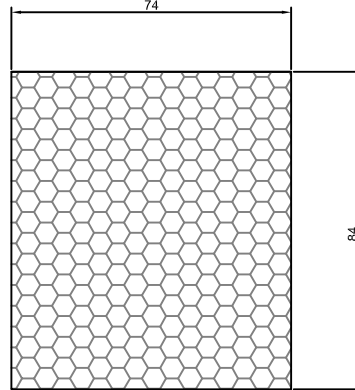
N98-919



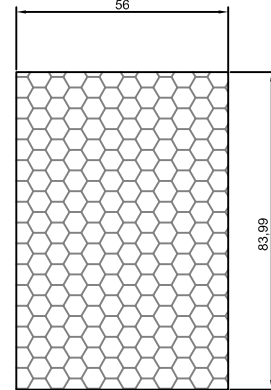
N98-920



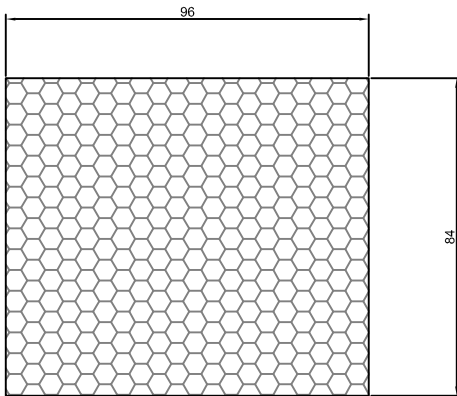
N98-921



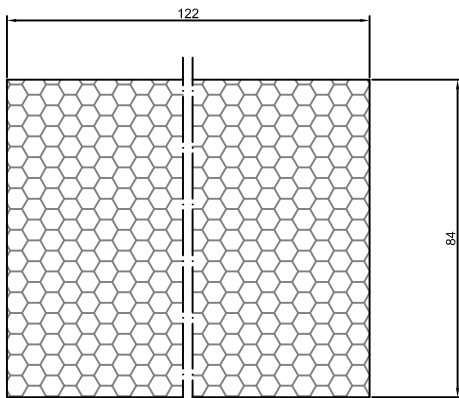
N98-922



N98-923



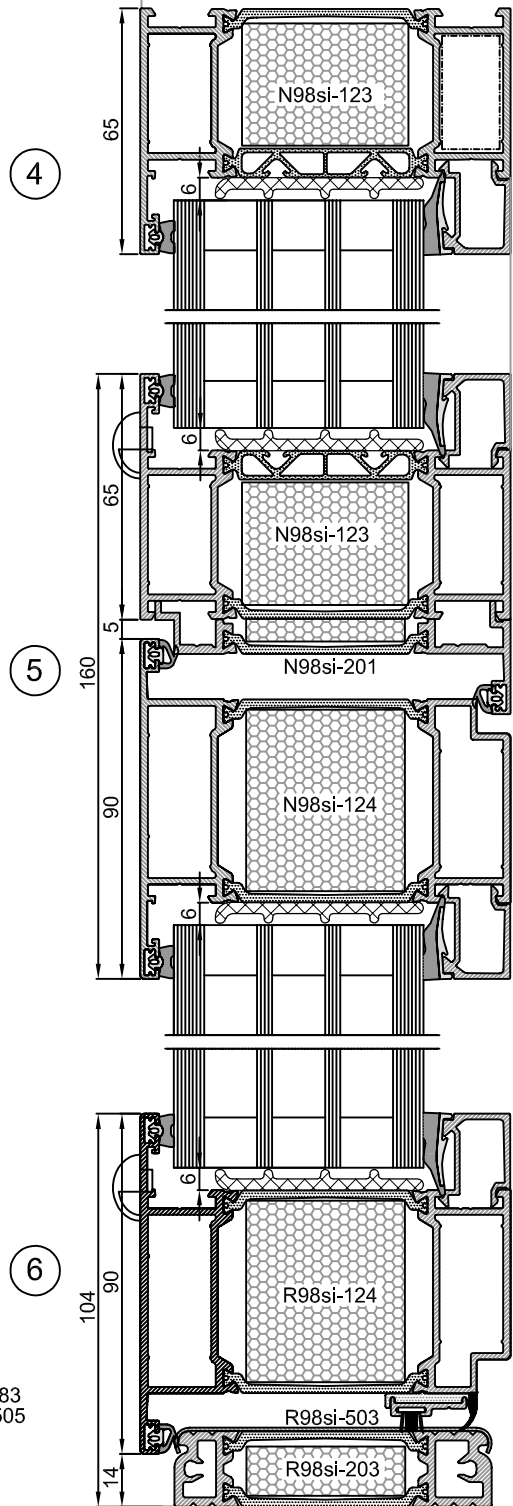
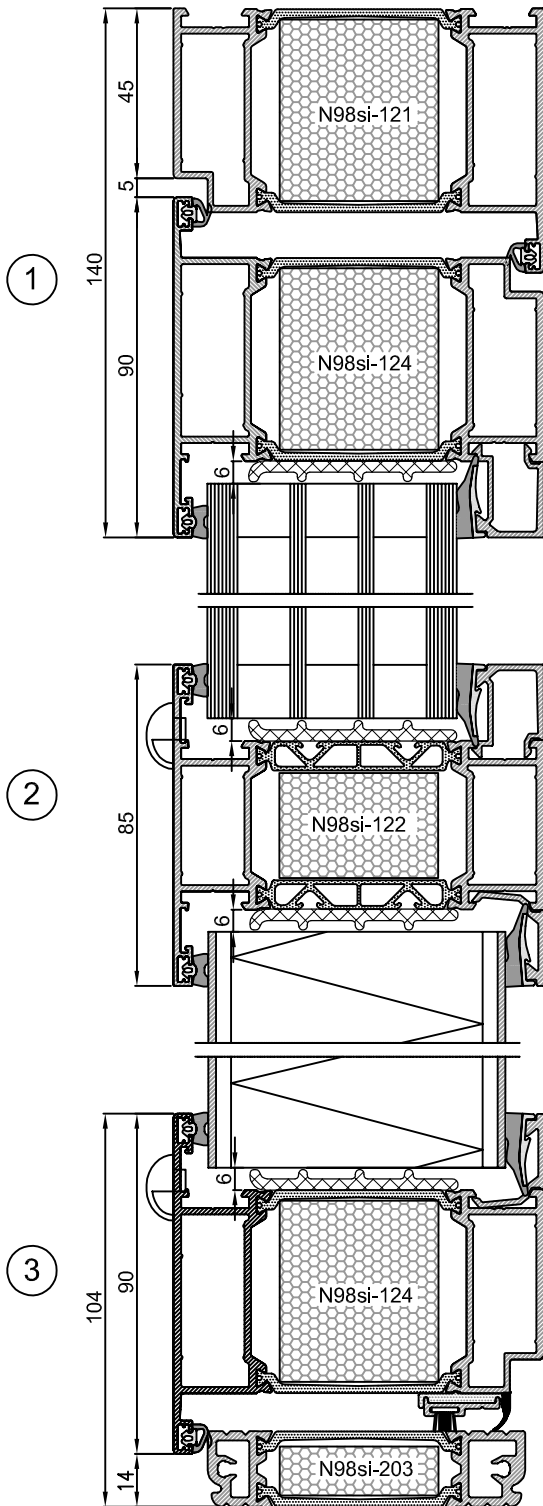
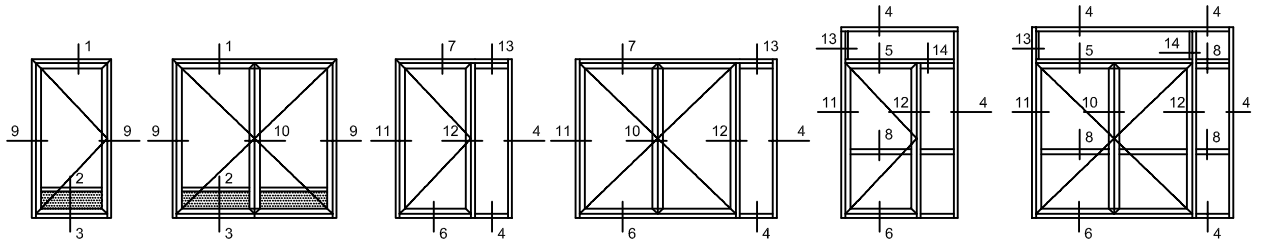
N98-924

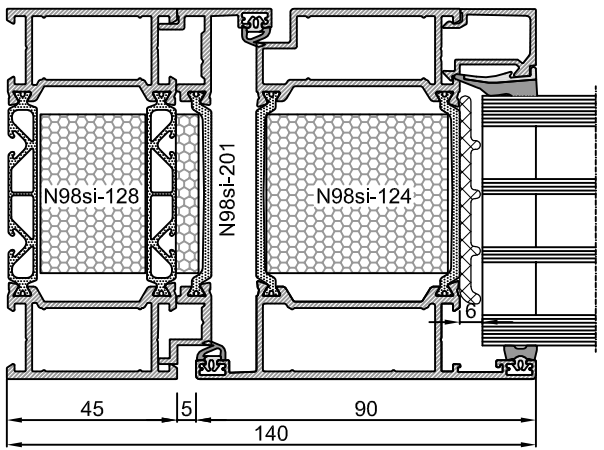
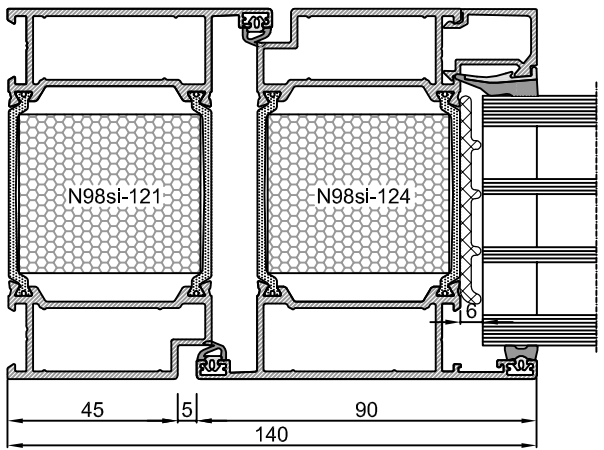
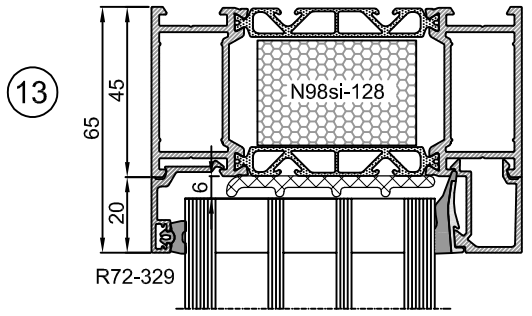
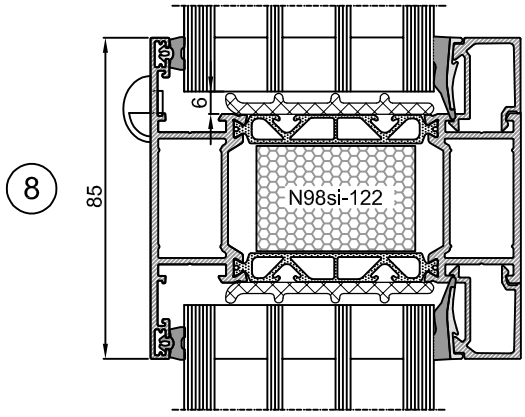
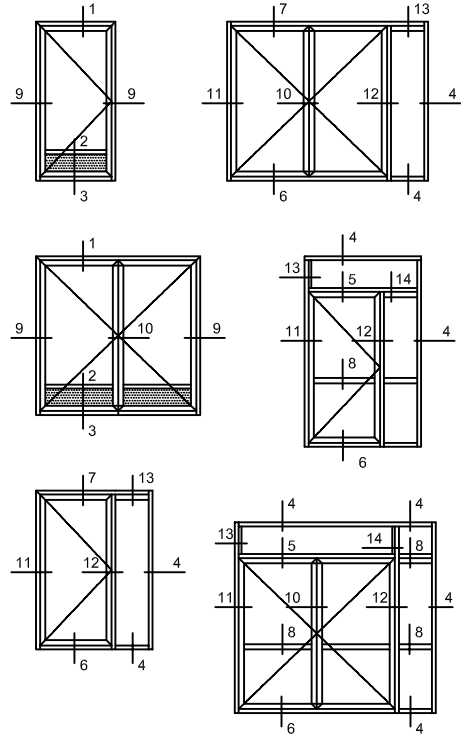
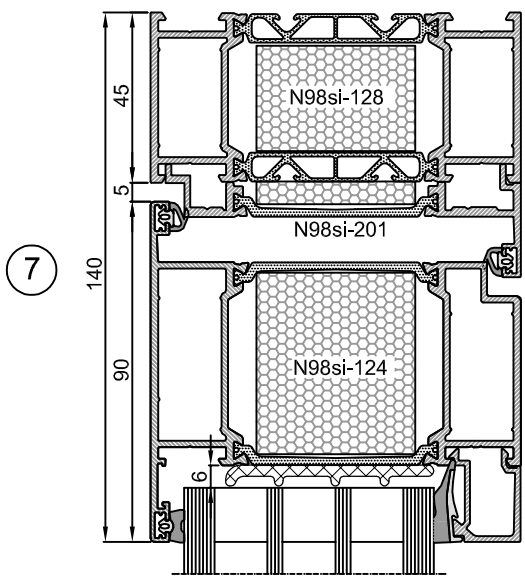


N98-925

PU-täyte	Profiili
N98si-915	N98si-201
N98si-916	N98si-203
N98si-917	N98si-202, N98si-131, N98si-139
N98si-918	N98si-135, N98si-222, N98si-223
N98si-919	N98si-138, N98si-143, N98si-144
N98si-920	N98si-132, N98si-133, N98si-204
N98si-921	N98si-123, N98si-129, N98si-136
N98si-922	N98si-137, N98si-147, N98si-148
N98si-923	N98si-122, N98si-128
N98si-924	N98si-121, N98si-124, N98si-125
N98si-925	N98si-140

01.06.2015

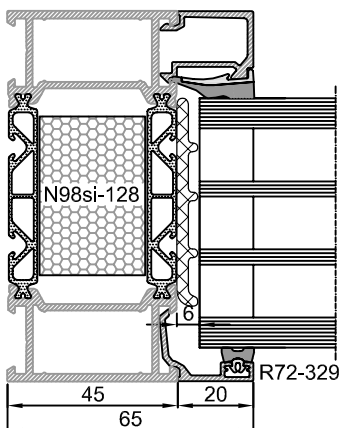
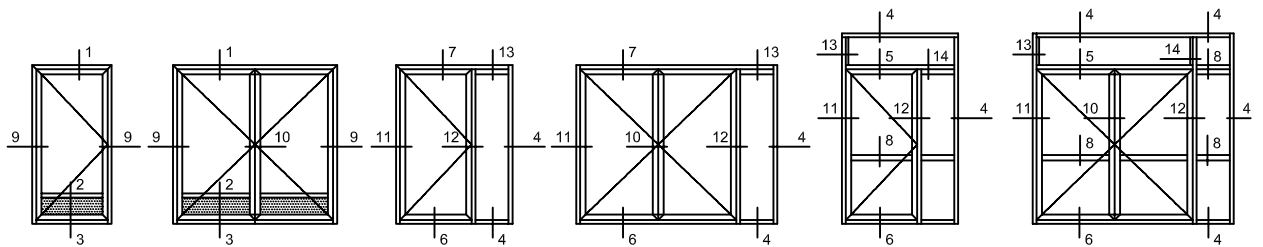




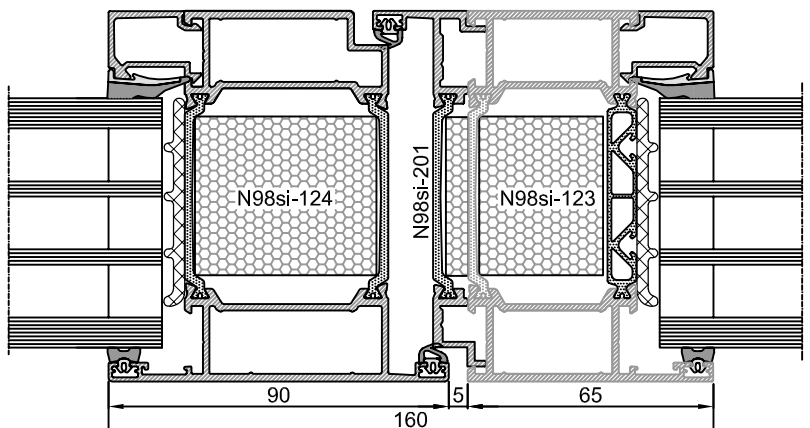
9

11

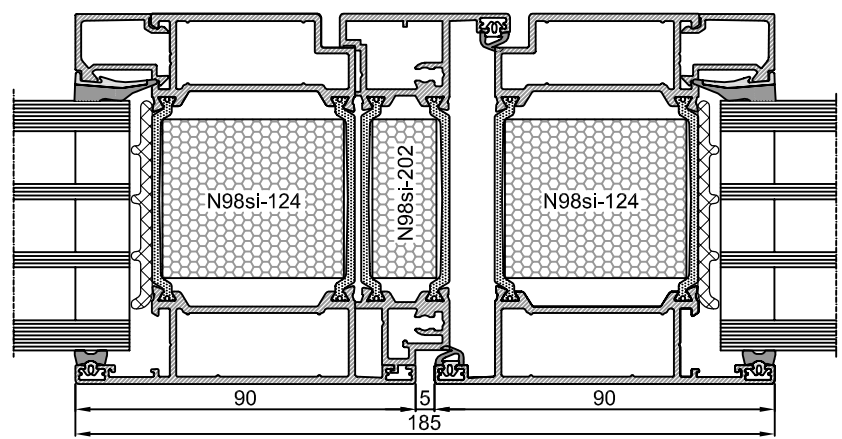
01.06.2015



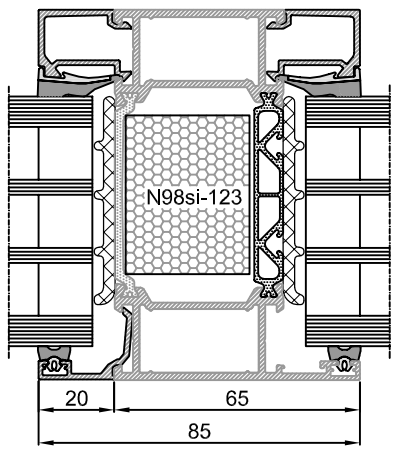
13



12

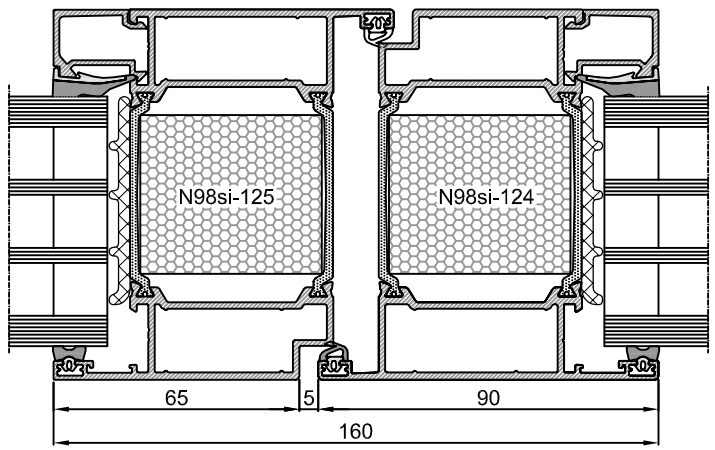


10

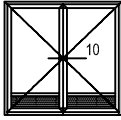


R72-329

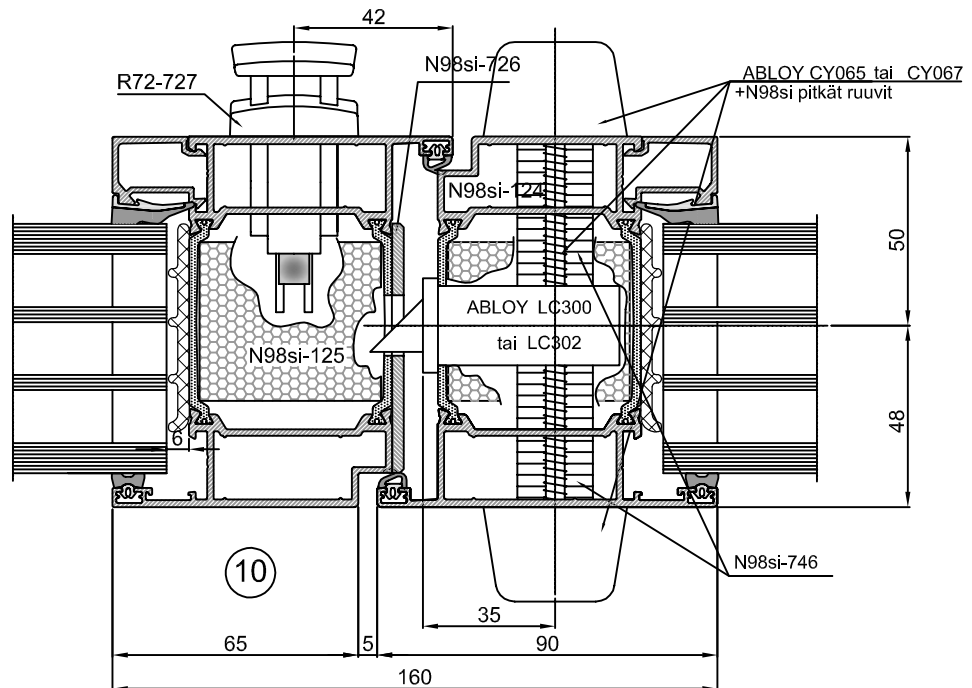
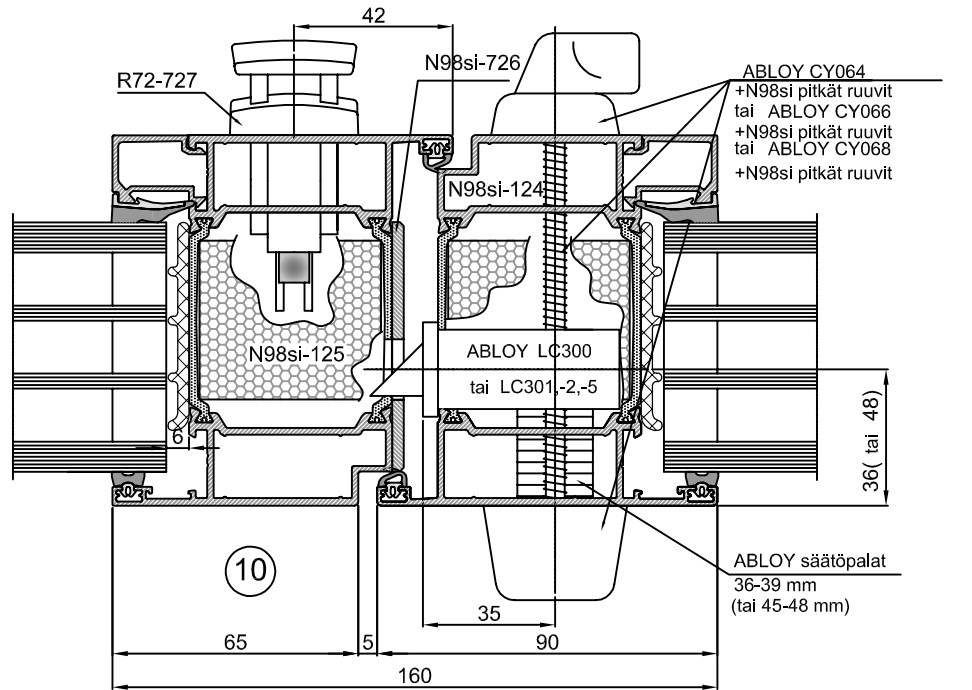
14

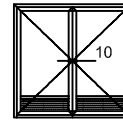


10

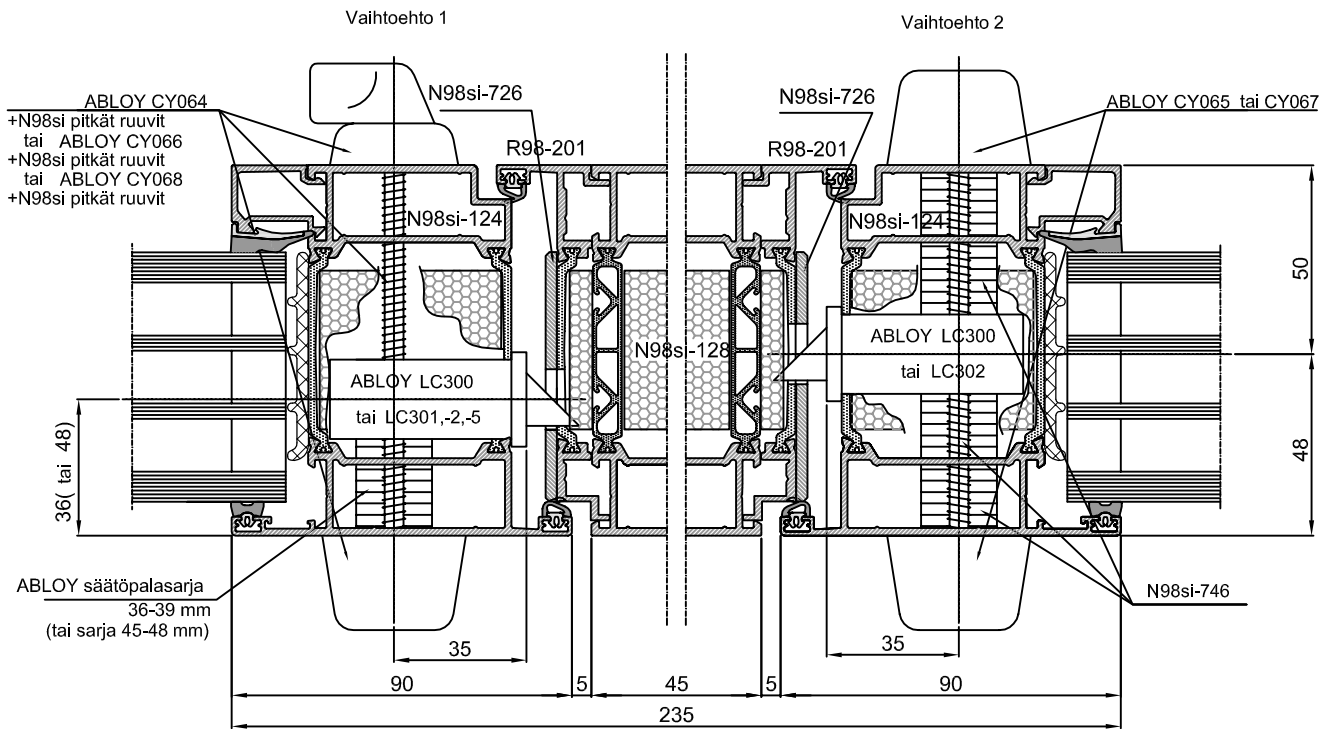


Automaatti- ja salpalukot





Automaatti- ja salpalukot

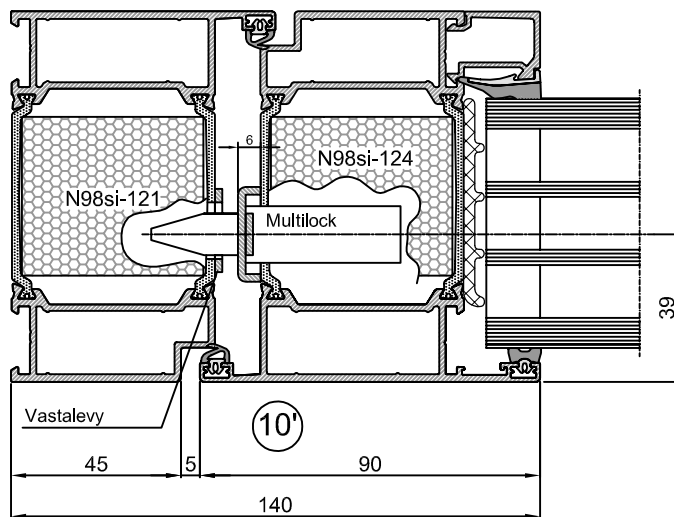
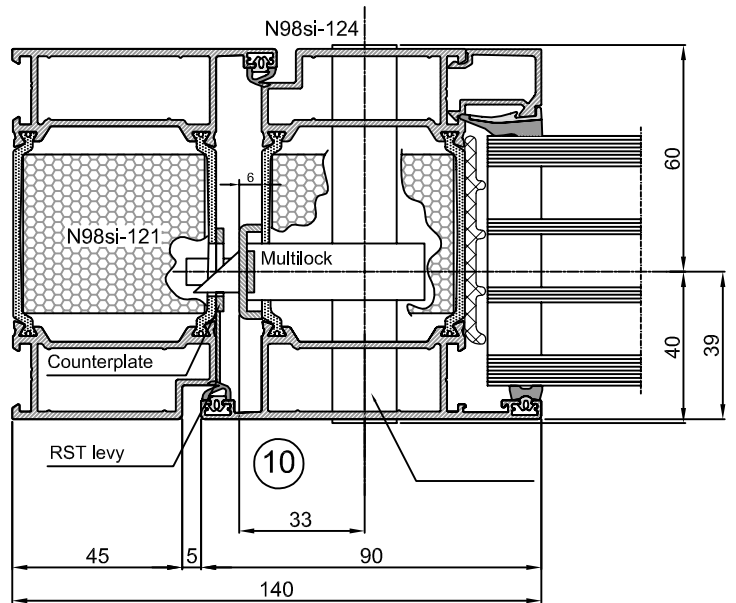


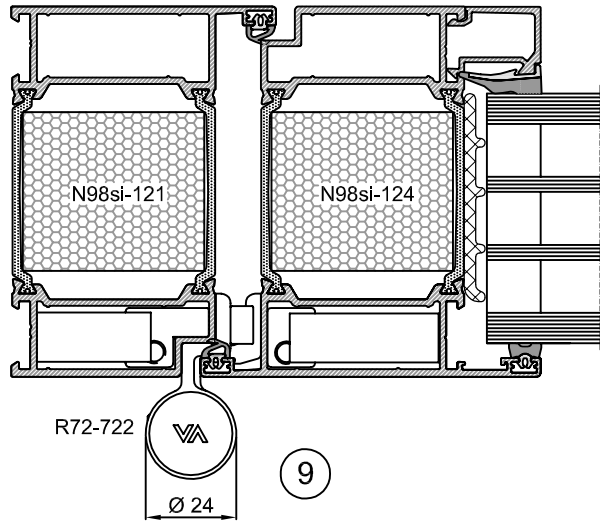
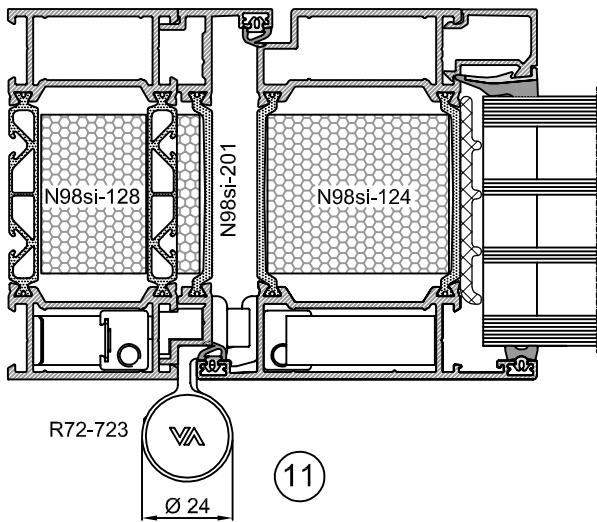
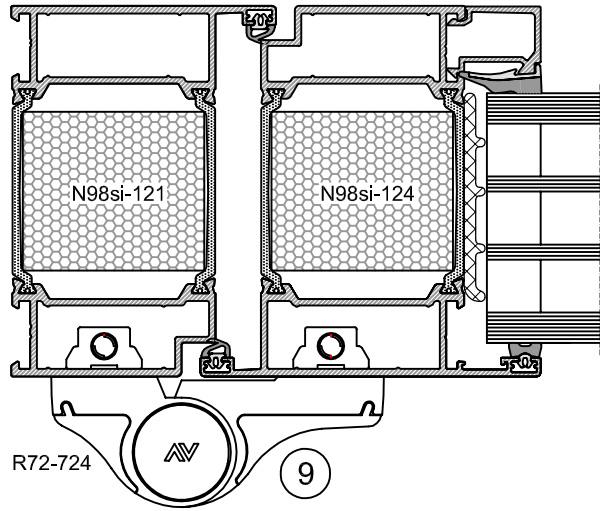
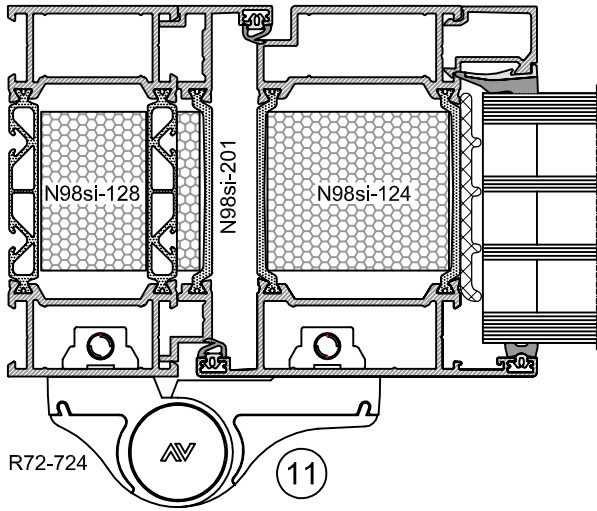
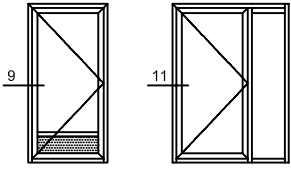
10

01.06.2015

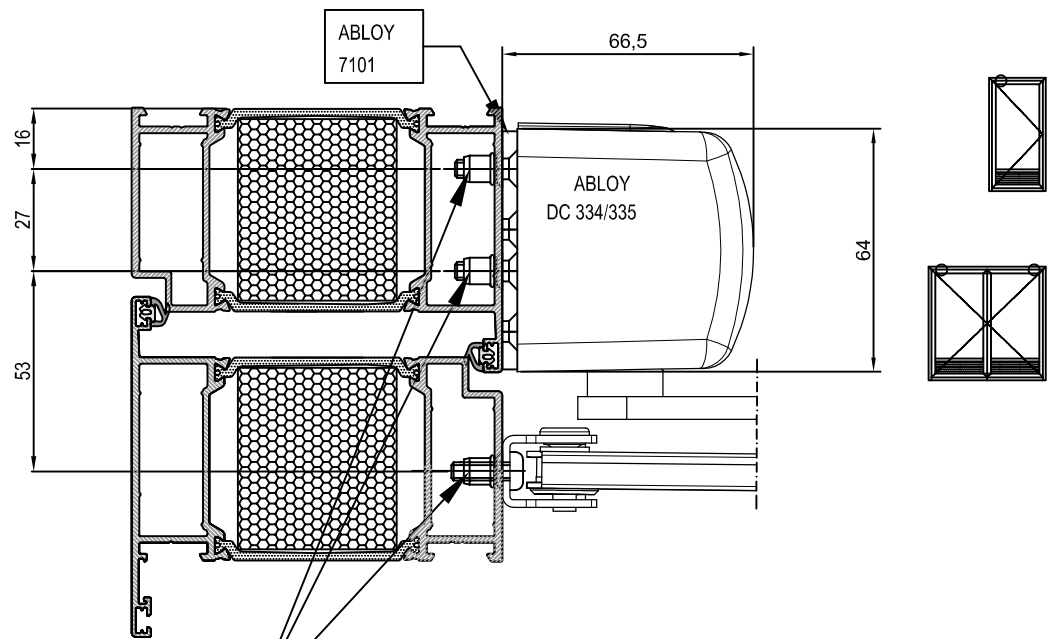
N98si 4.6 **NOKIAN**
PROFILIT

Ulosaukeava ovi

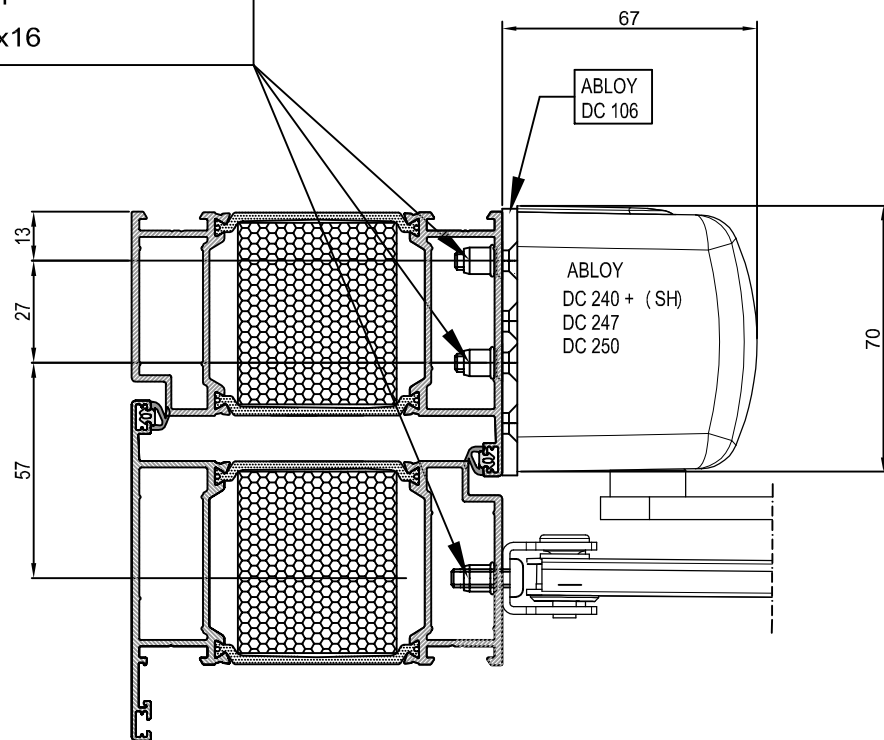




01.06.2015

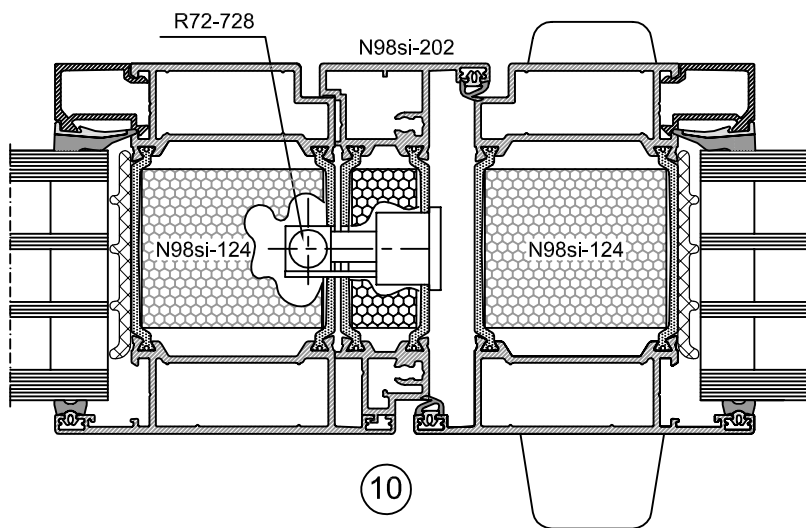
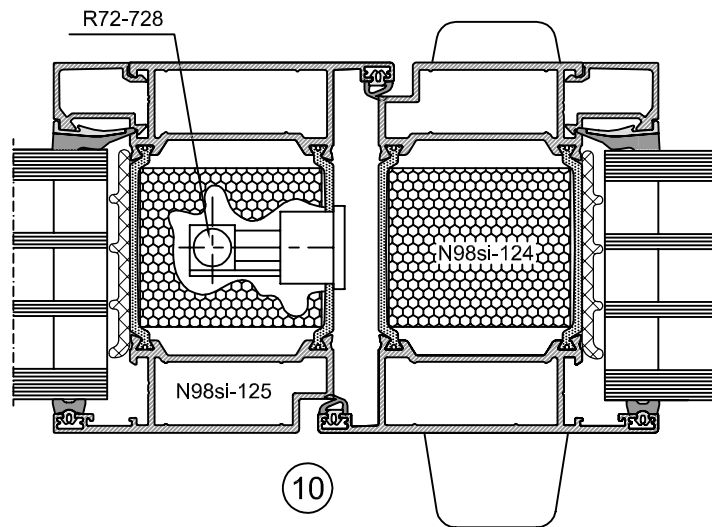
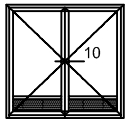


R72-721 (NIITTIMUTTERI M5)
REIKÄ Ø7,1
RUUVI M5x16



Kaikissa ULKO-OVISSA on käytettävä avautumisjarrullista (AJ) suljinta

Lisätietoja Abloy Metallioiv valmistajan Tietokansio



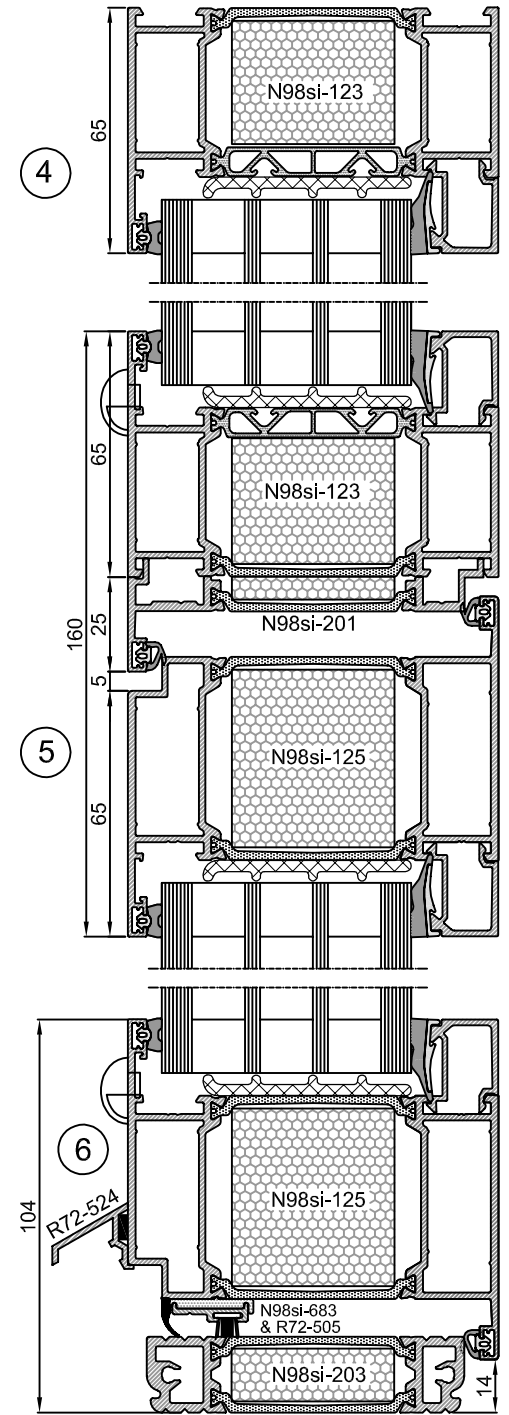
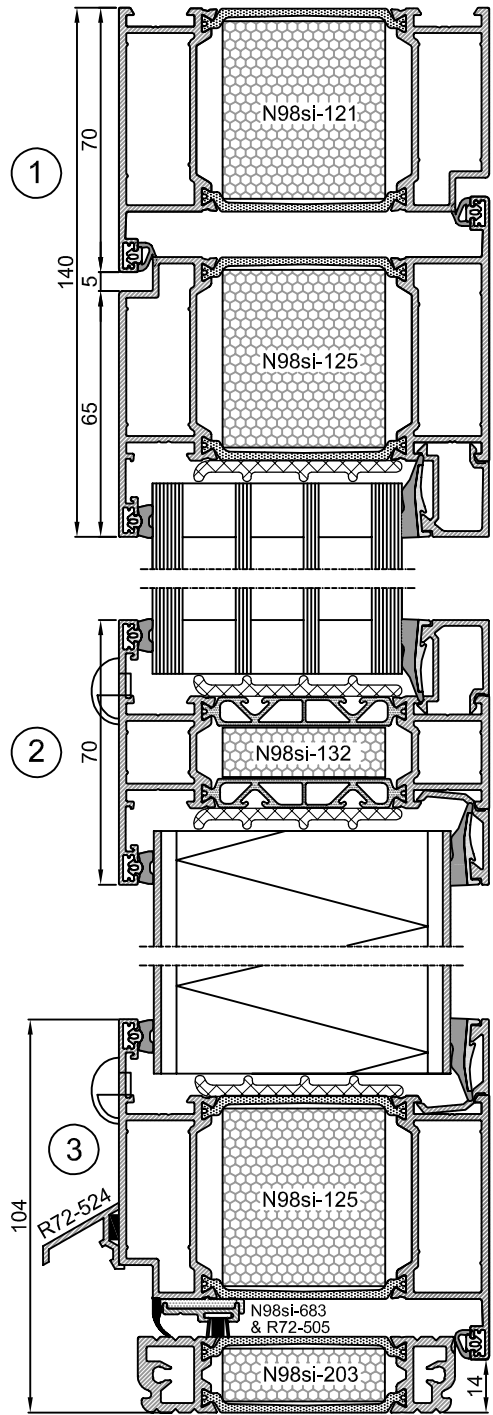
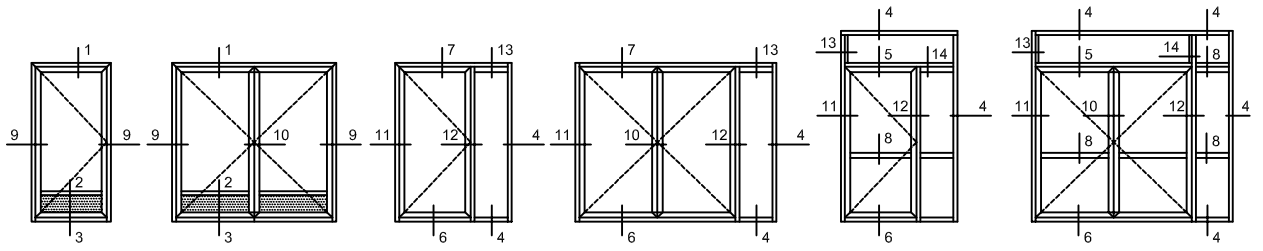
01.06.2015

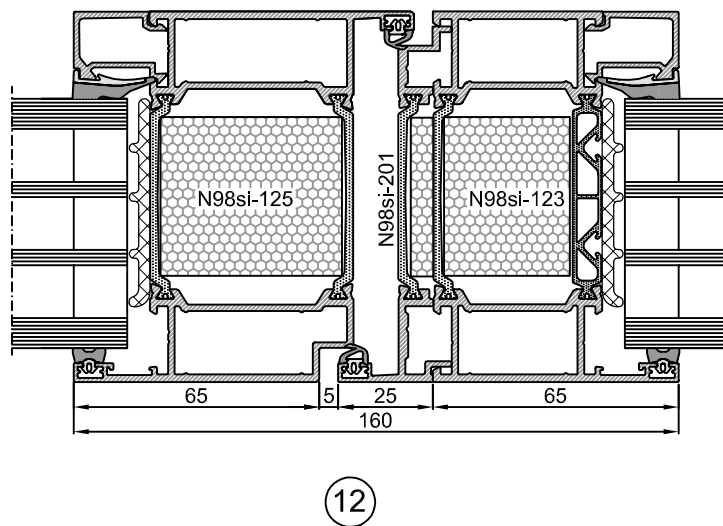
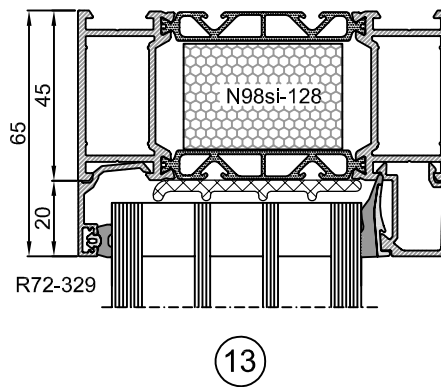
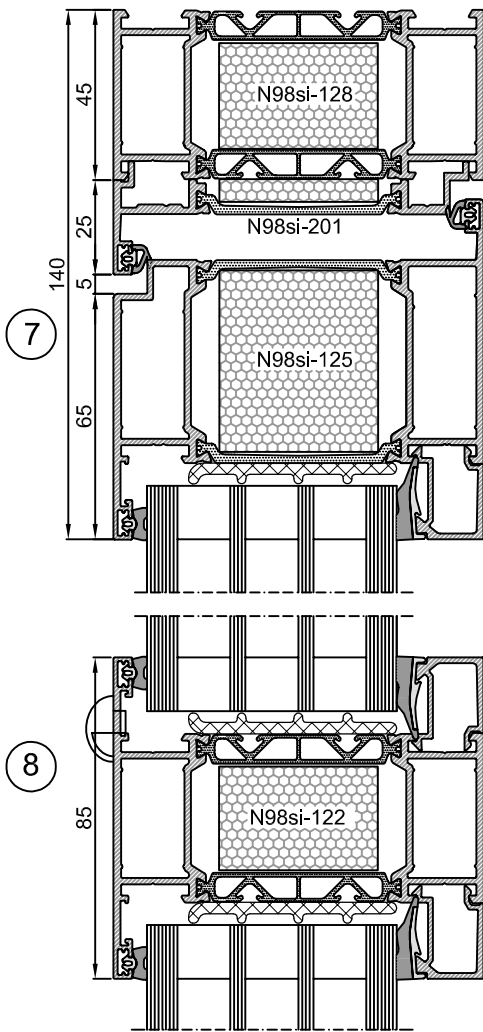
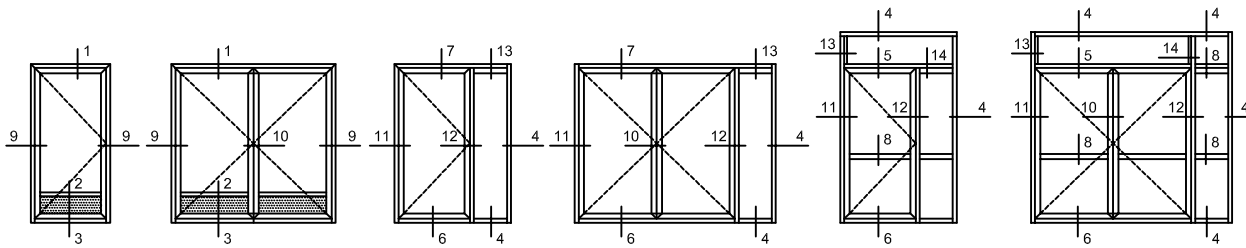
N98si 4.10

NOKIAN
PROFILIT

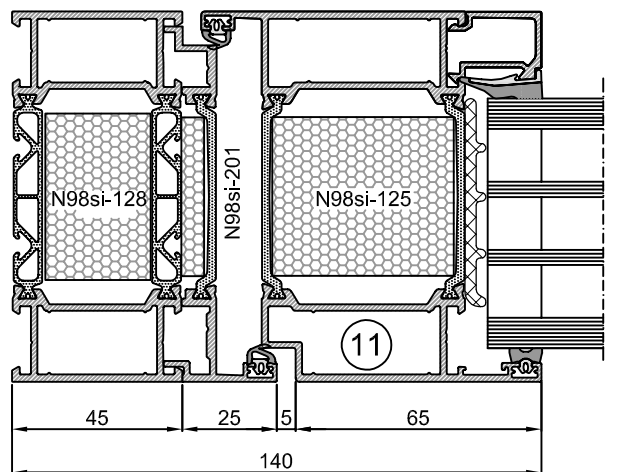
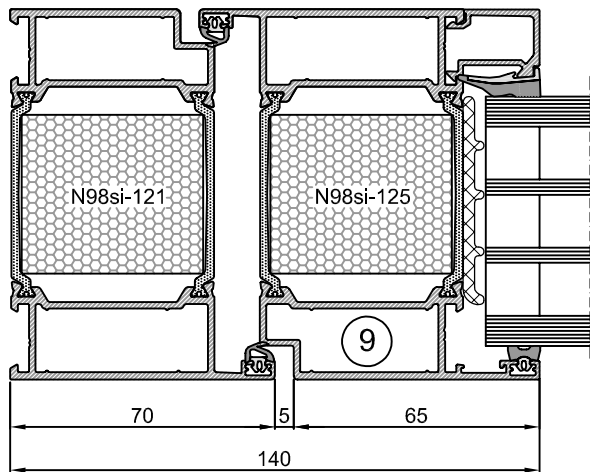
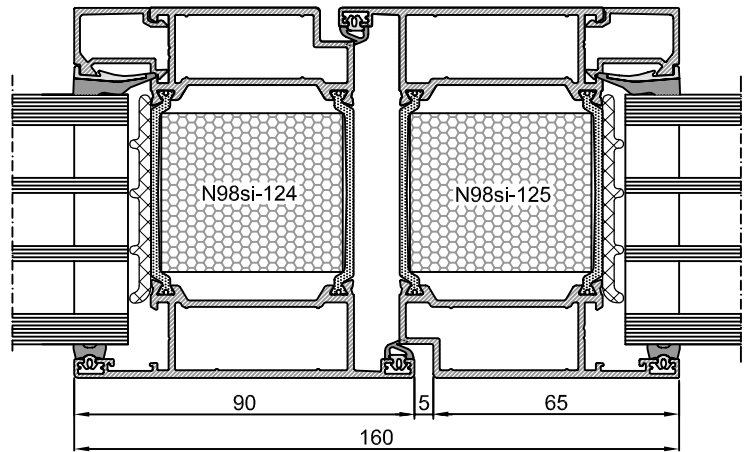
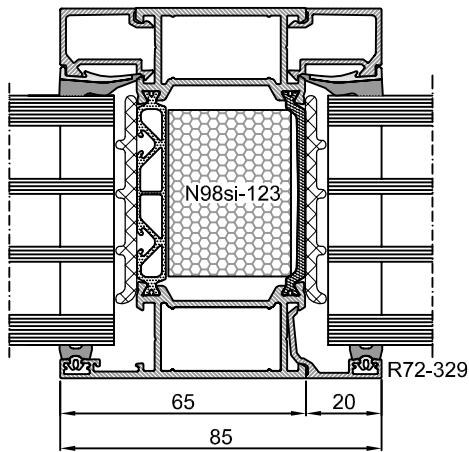
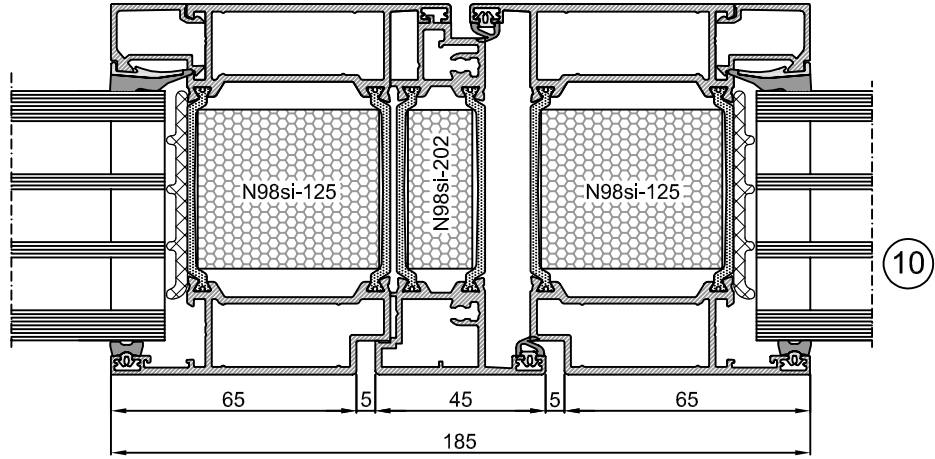
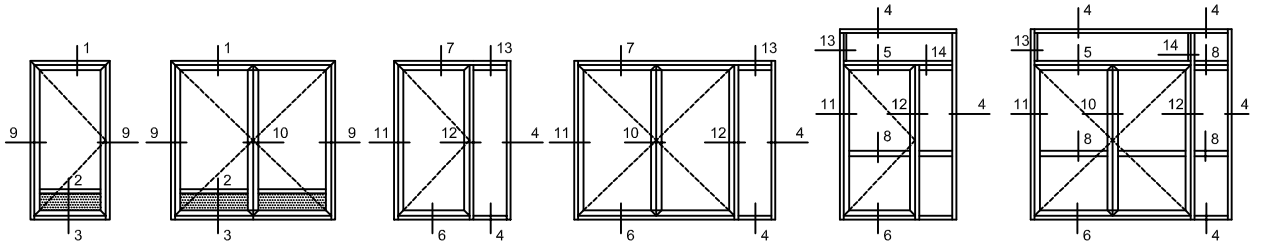


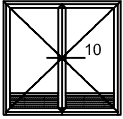
Ulosaukeava ovi



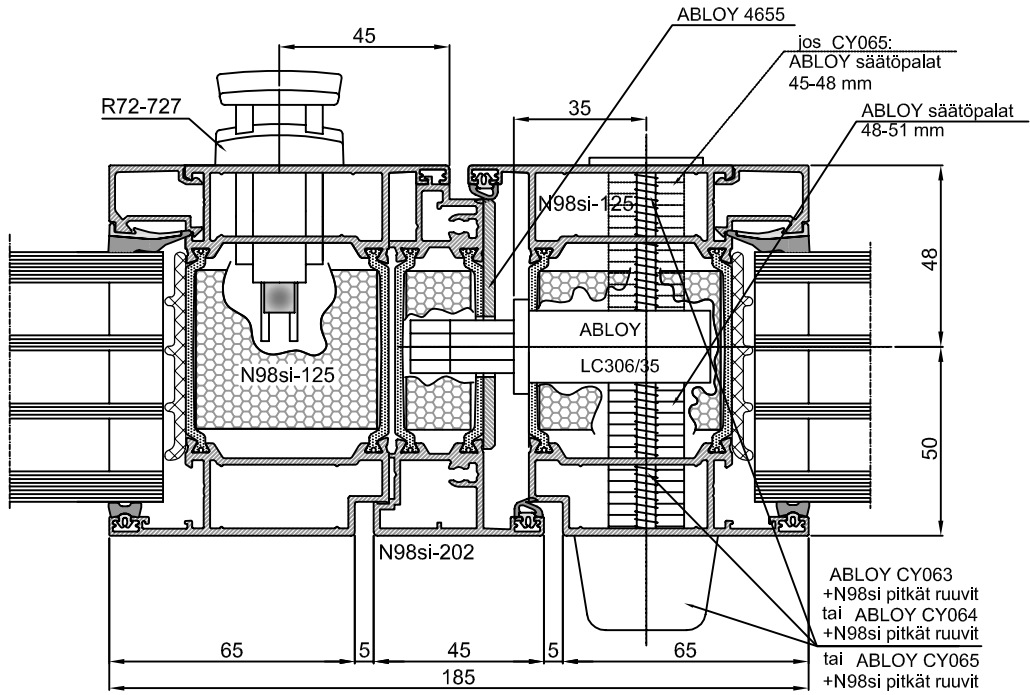


01.06.2015

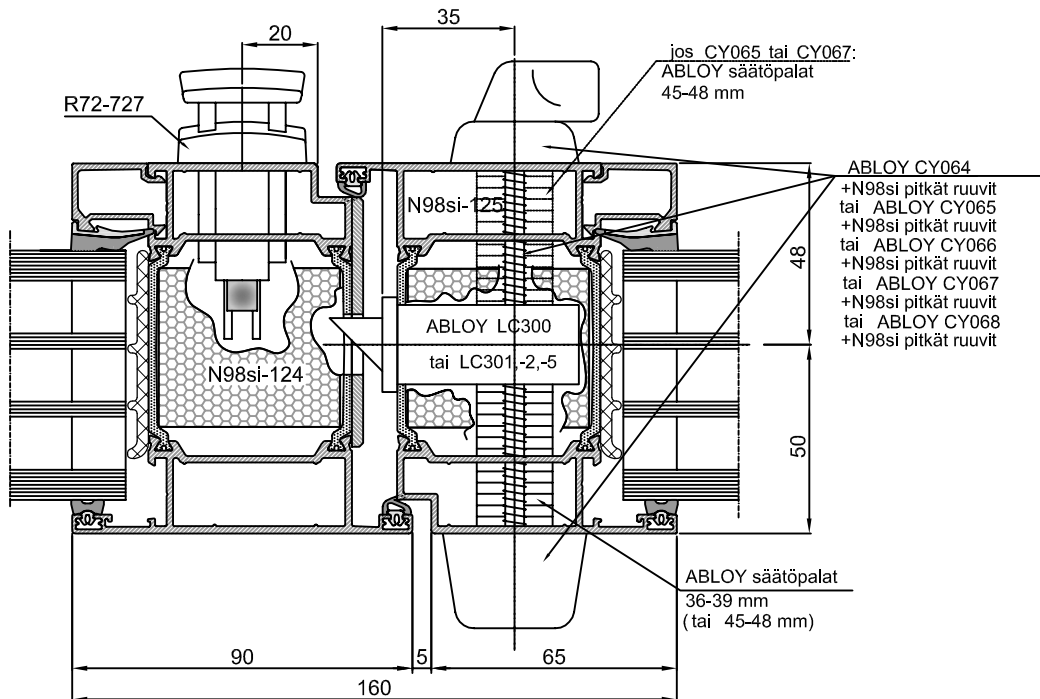




Mekaaninen varmuuslukko



Automaatti- ja salpalukot



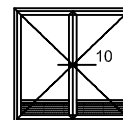
01.06.2015

N98si 4.14

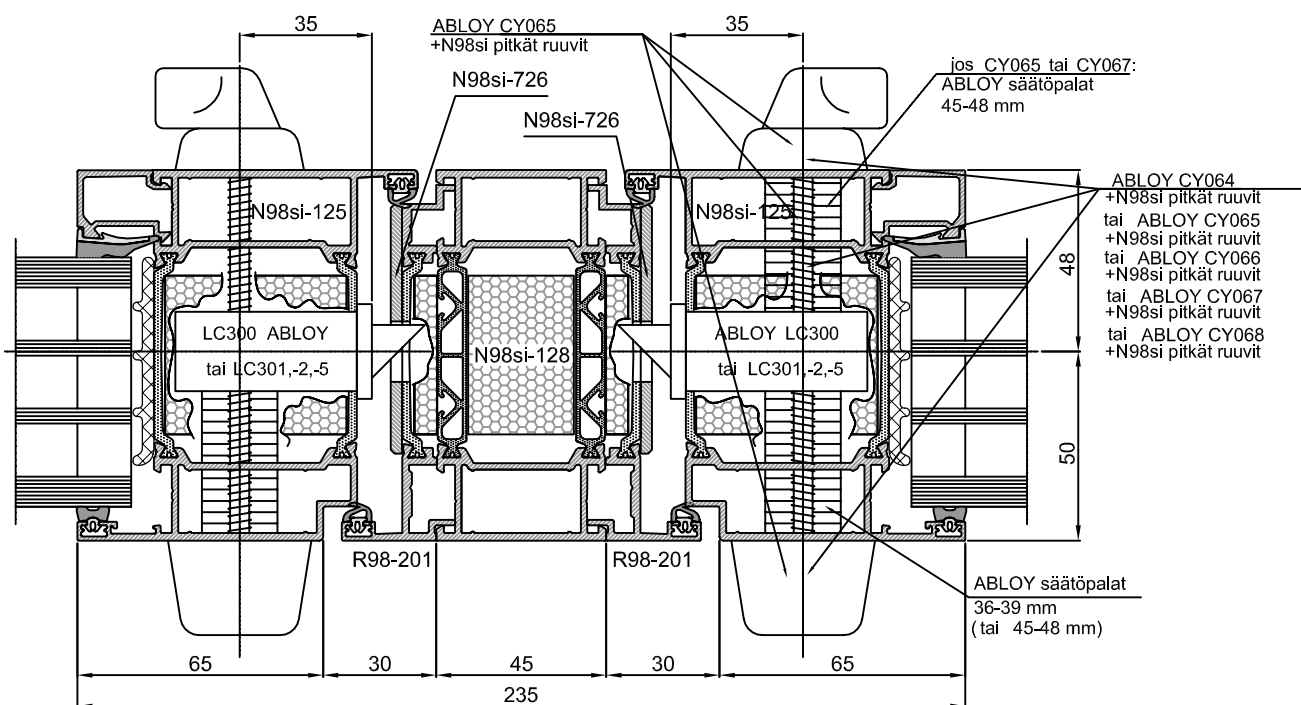
**NOKIAN
PROFILIT**



Sisäänaukeava ovi

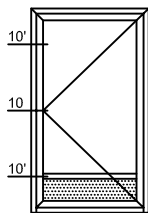


Automaatti- ja salpalukot

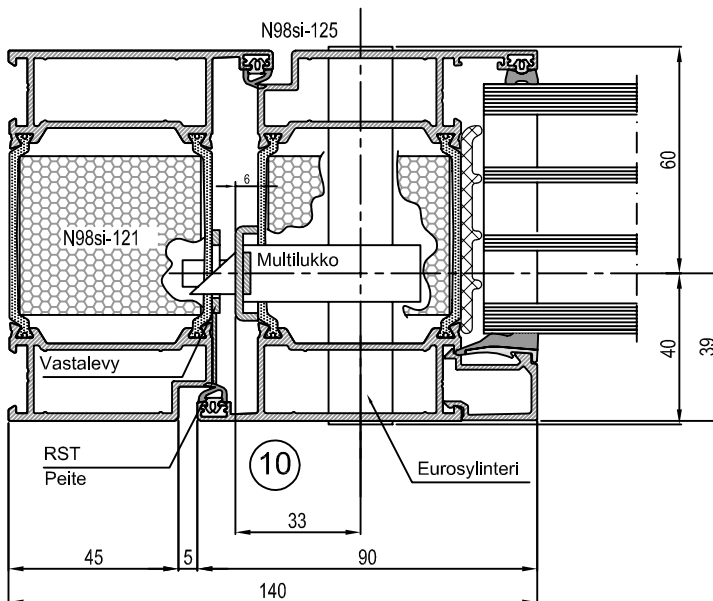


10

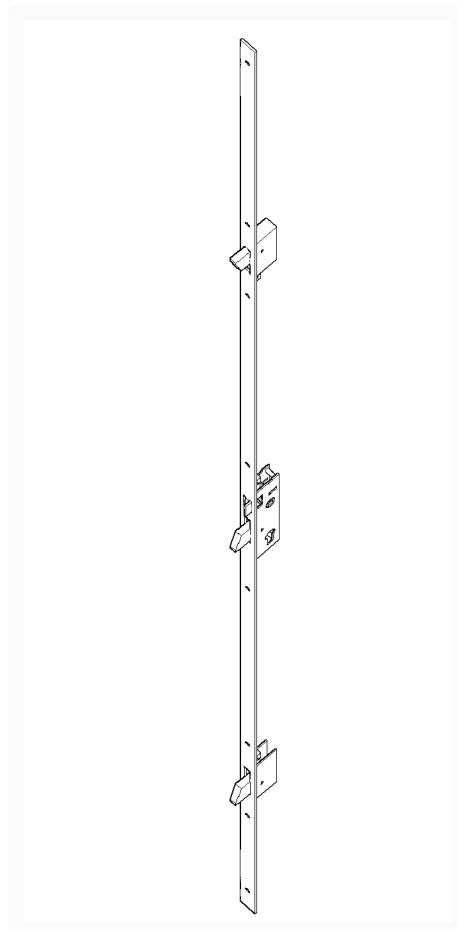
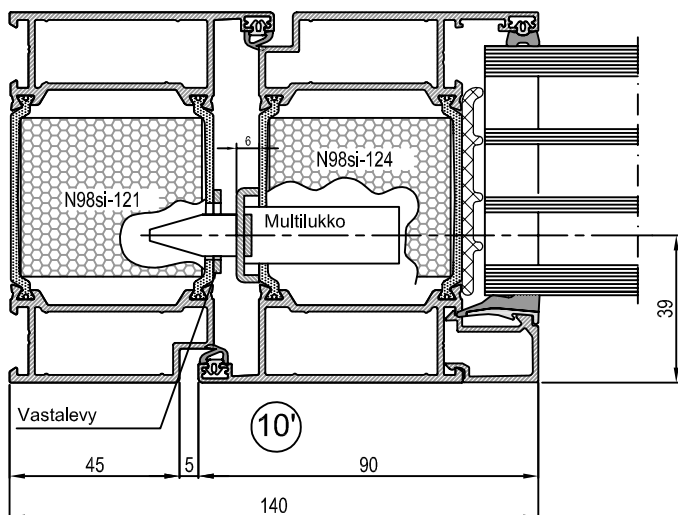
Multilukko



Keskimmäinen lukitus piste



Reunan lukitus piste

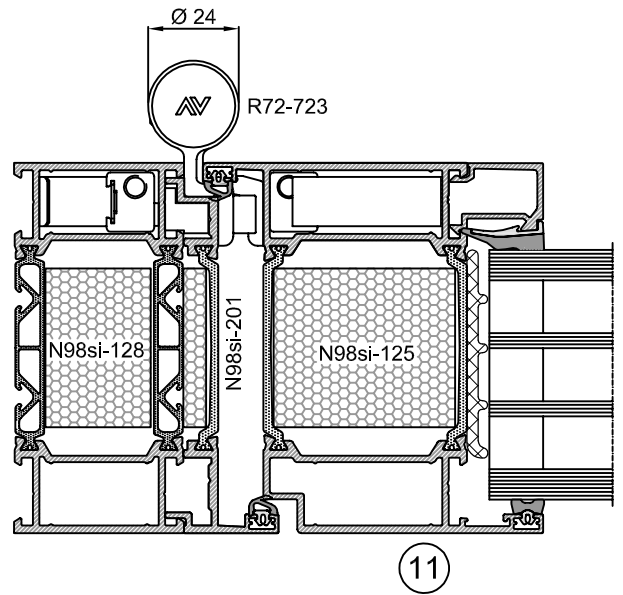
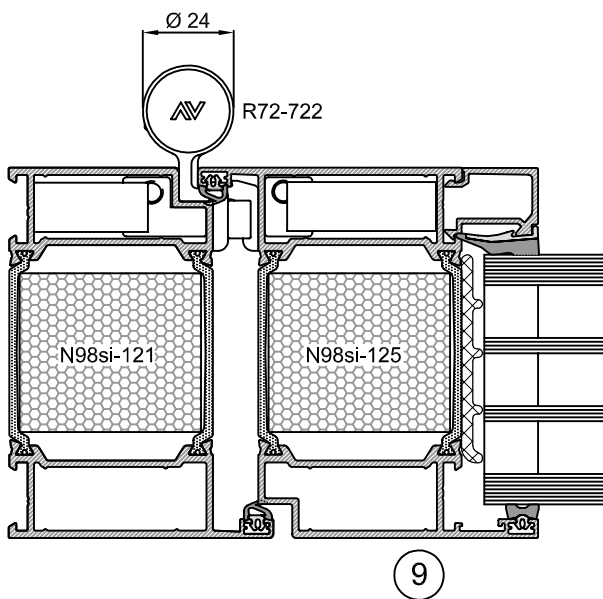
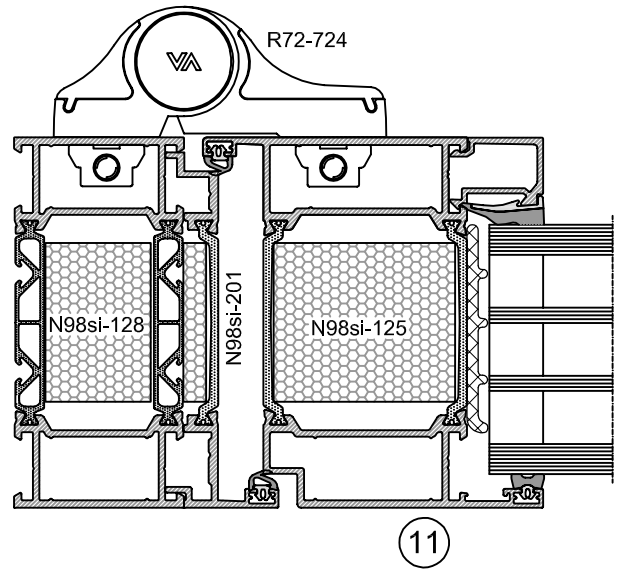
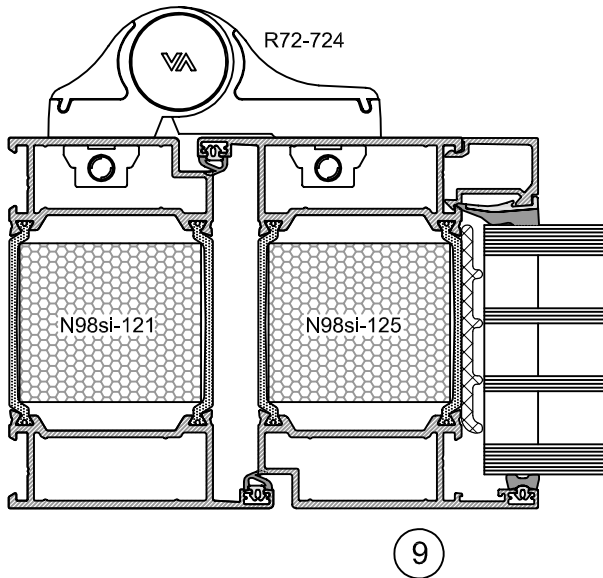
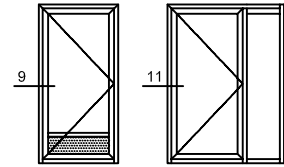


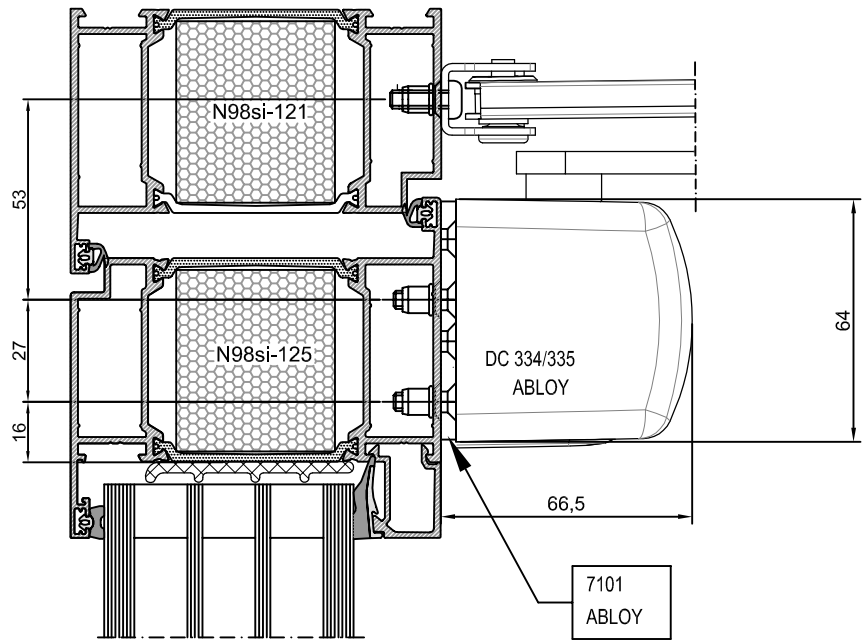
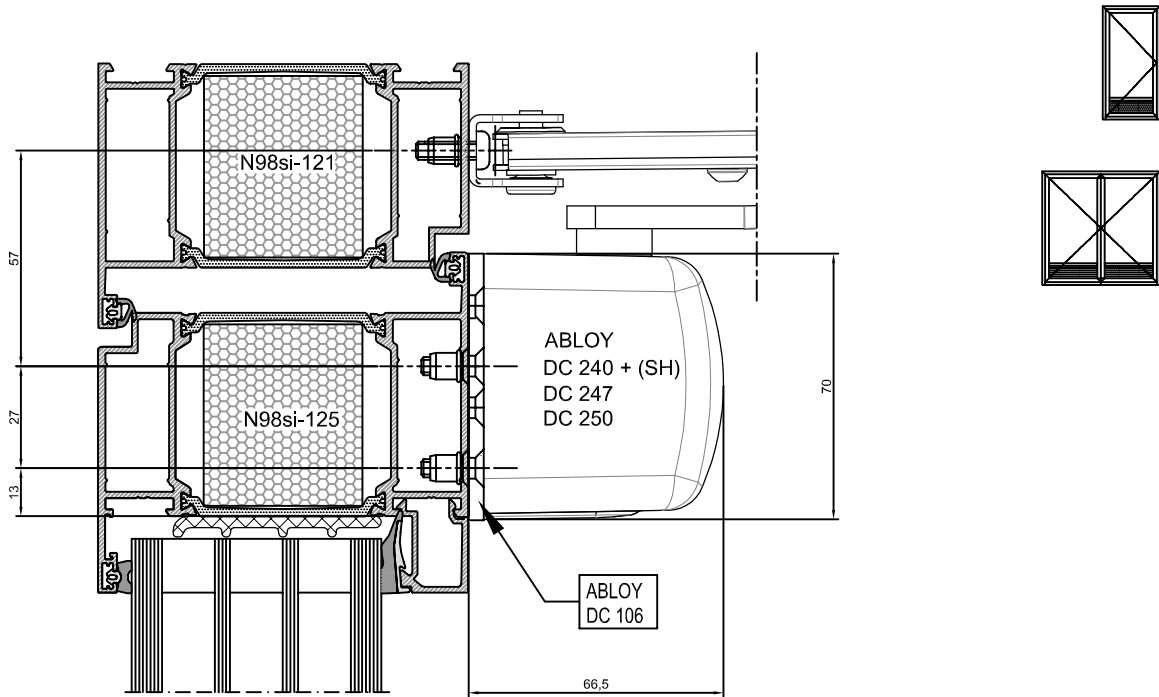
01.06.2015

N98si 4.16

NOKIAN
PROFILIT

Sisäänaukeava ovi



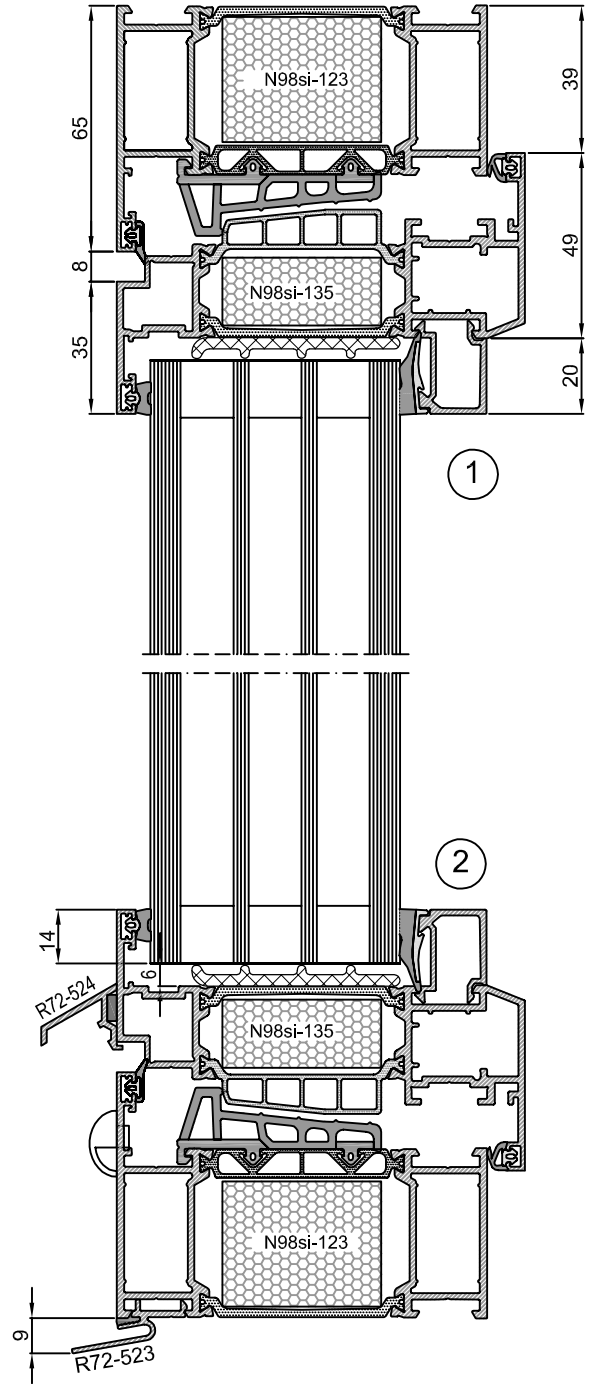
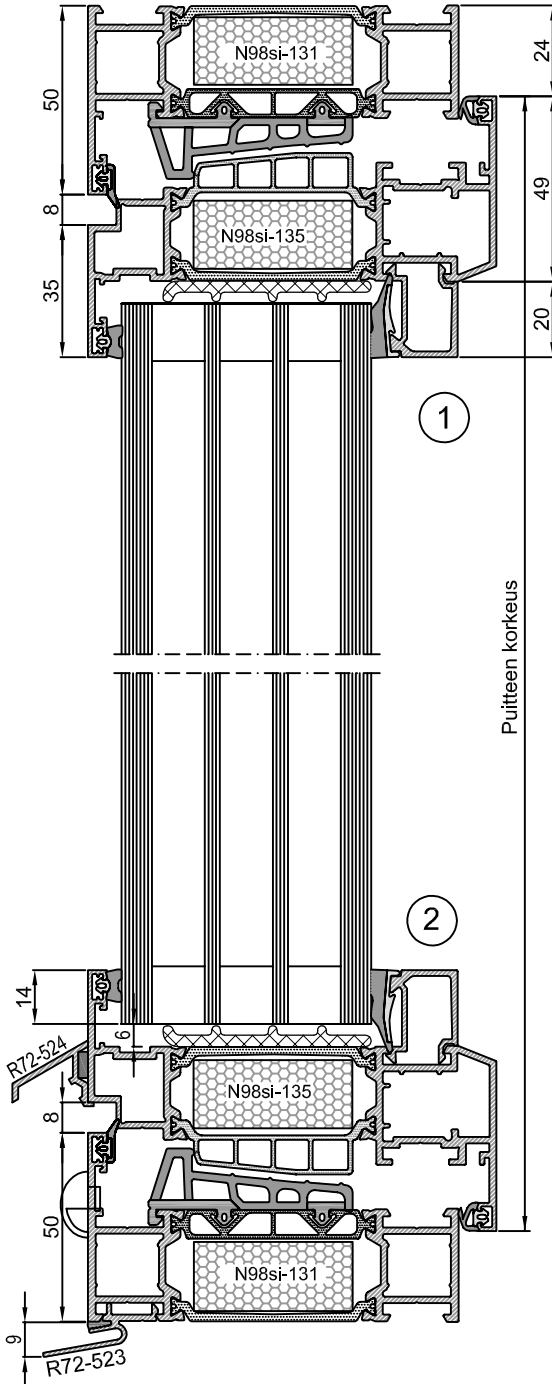
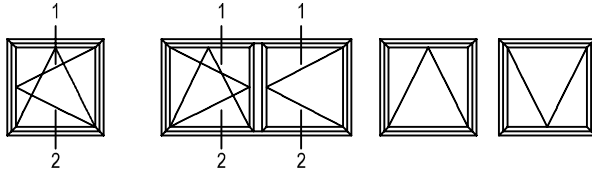


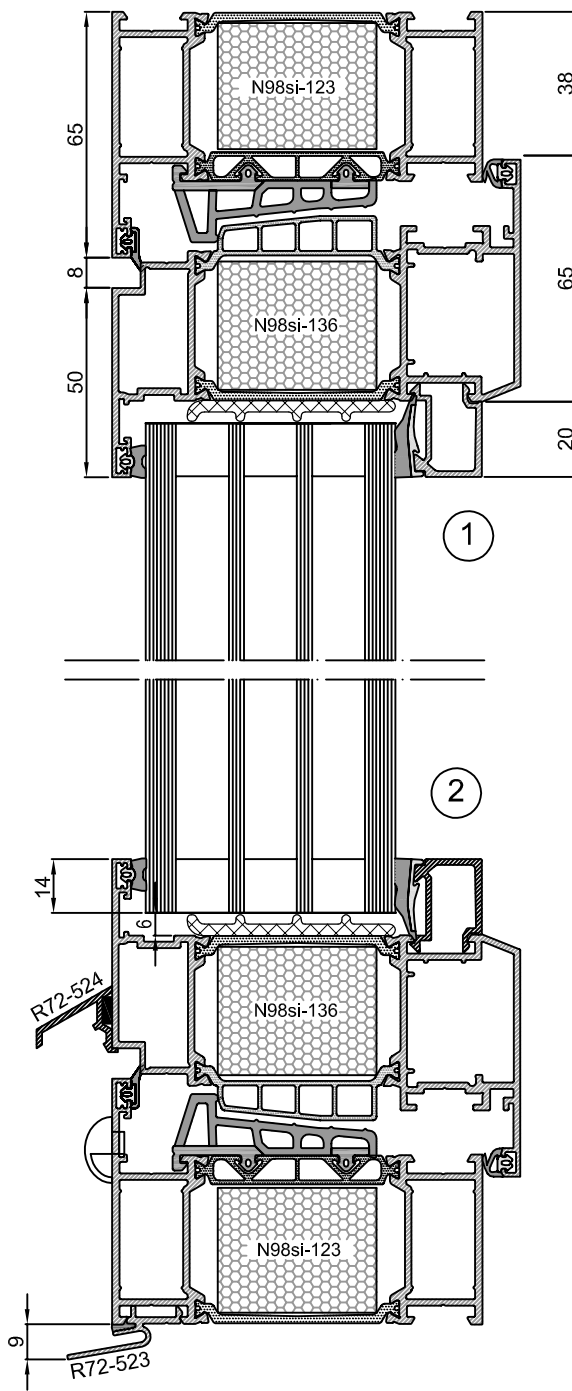
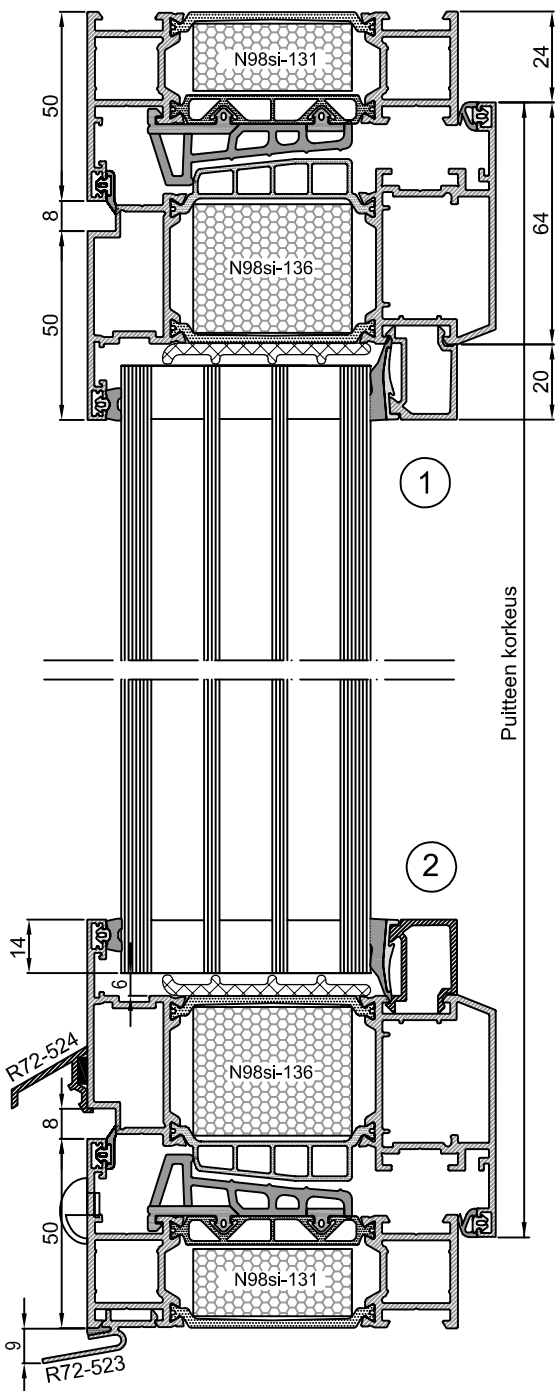
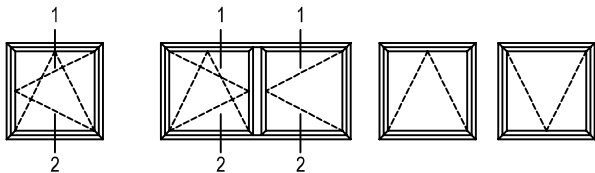
01.06.2015

N98si 4.18

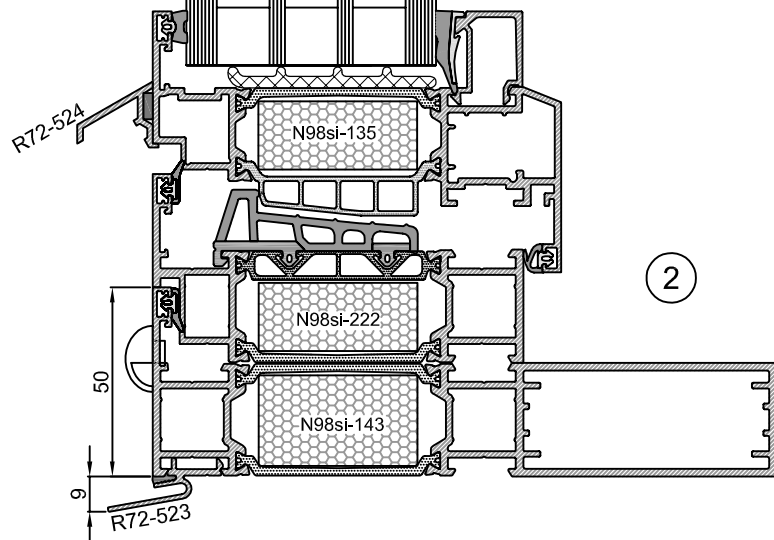
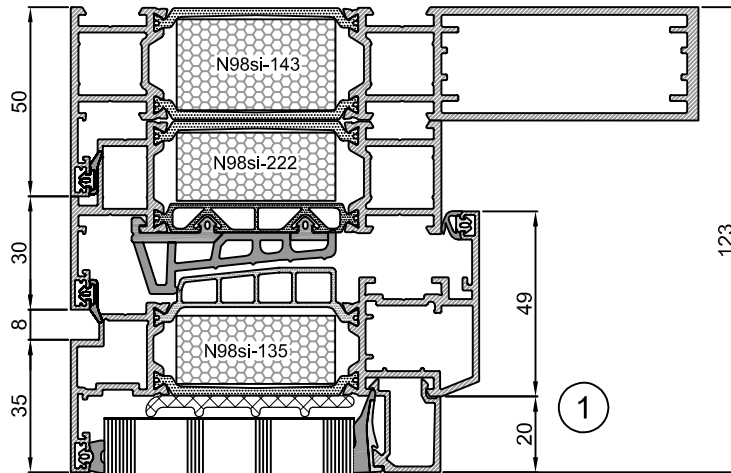
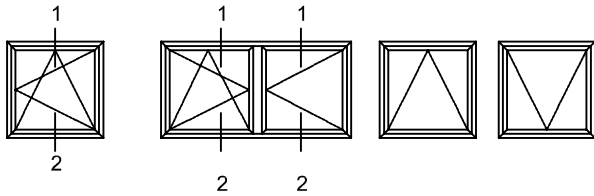


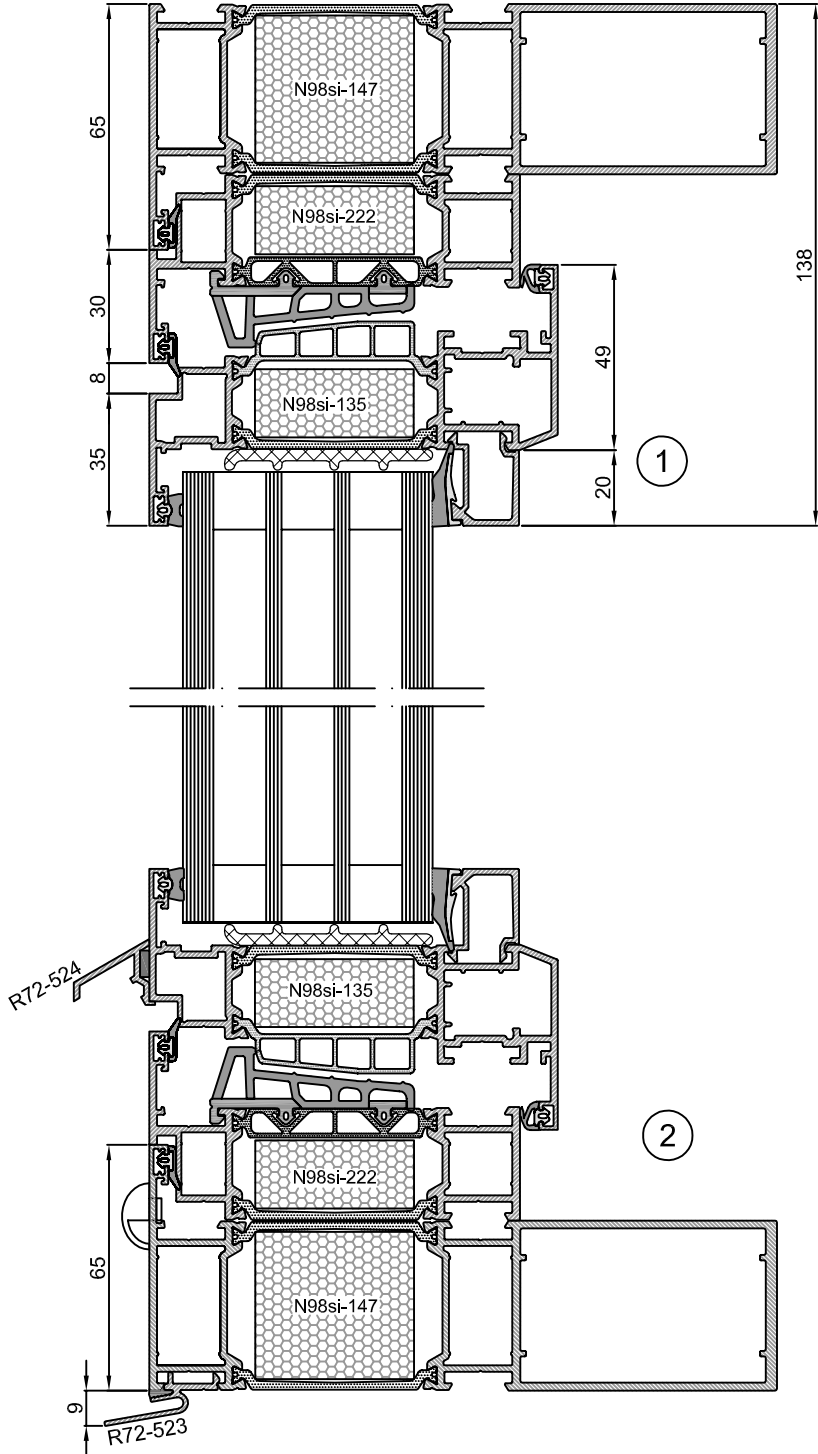
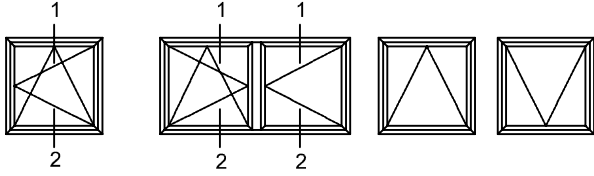
Sisäänaukeava ovi





01.06.2015



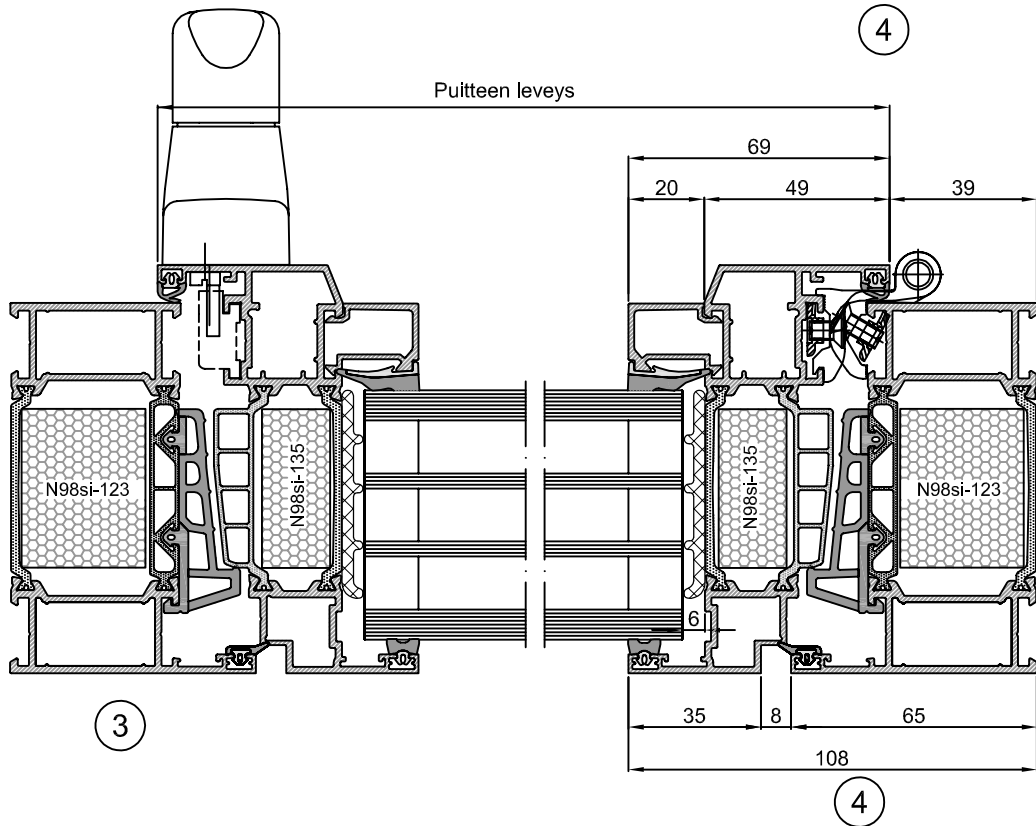
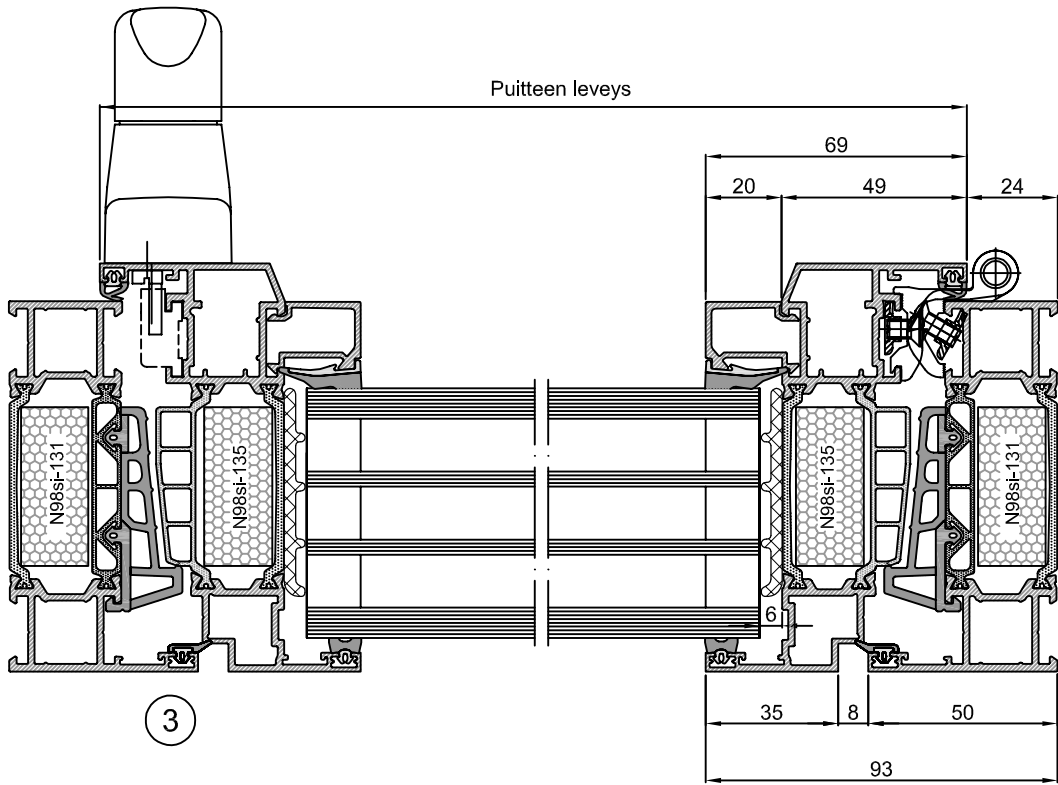
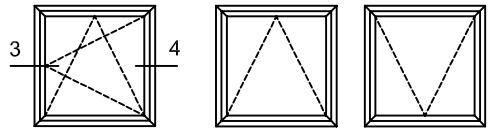


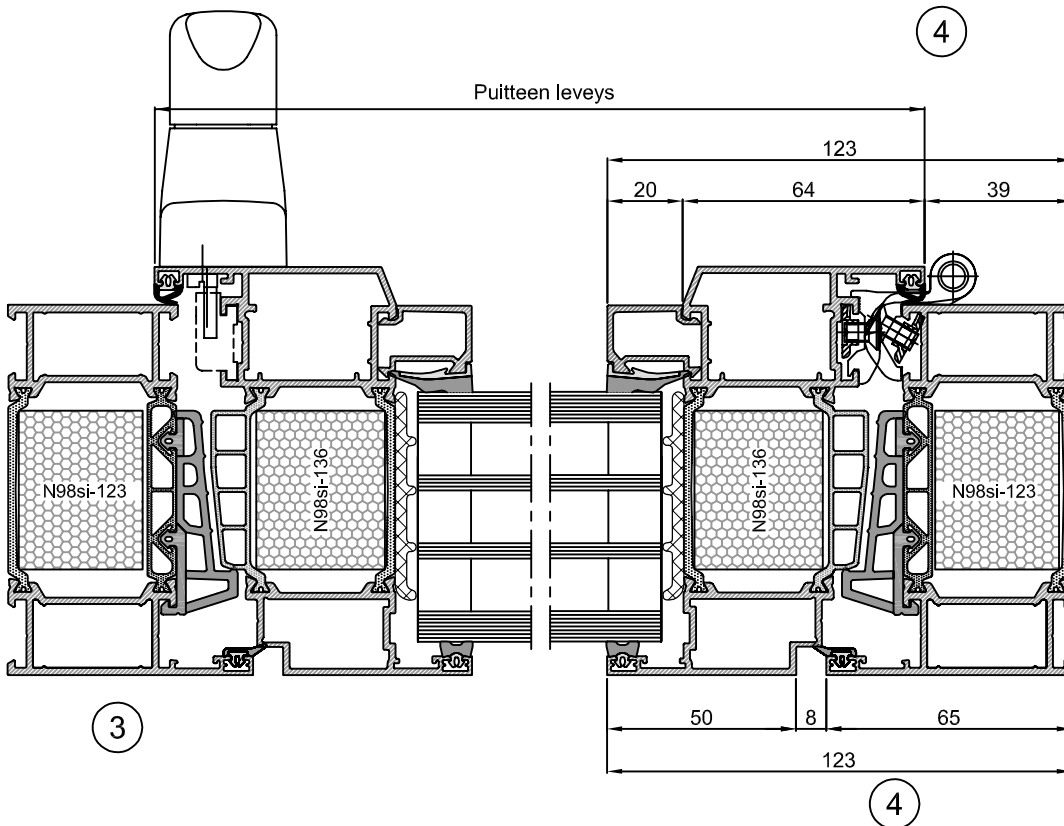
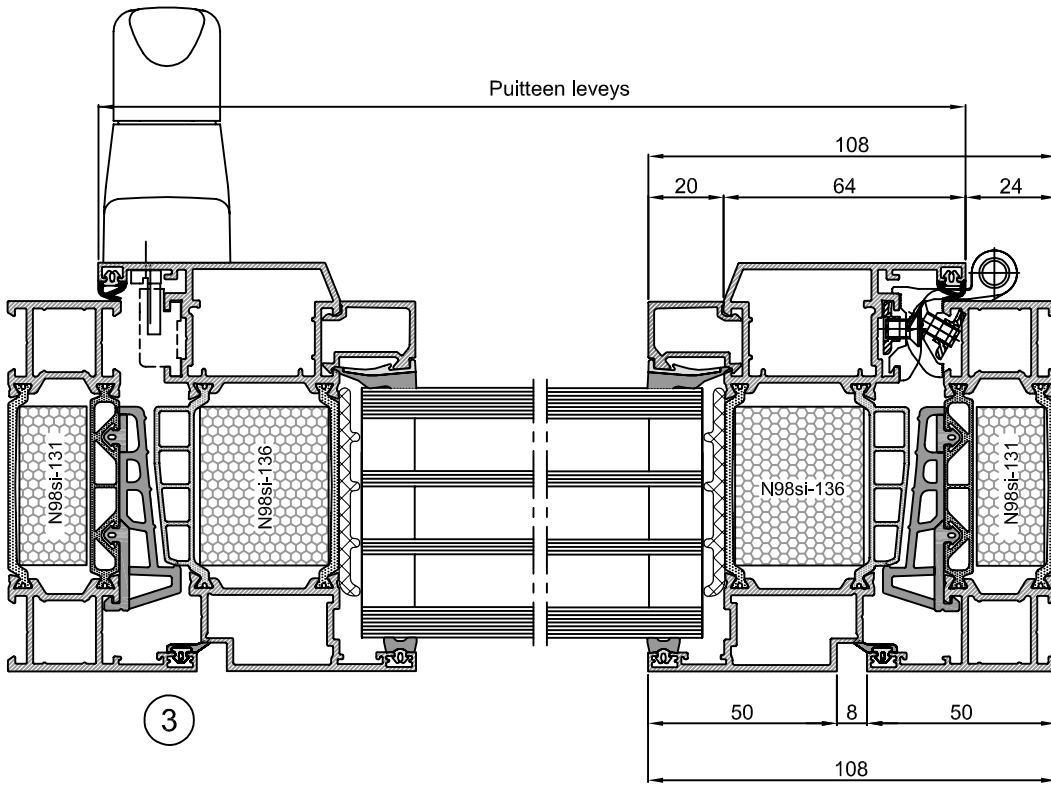
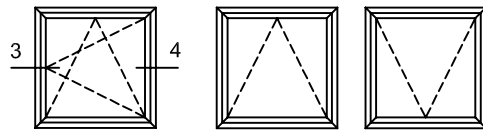
01.06.2015

N98si 5.4

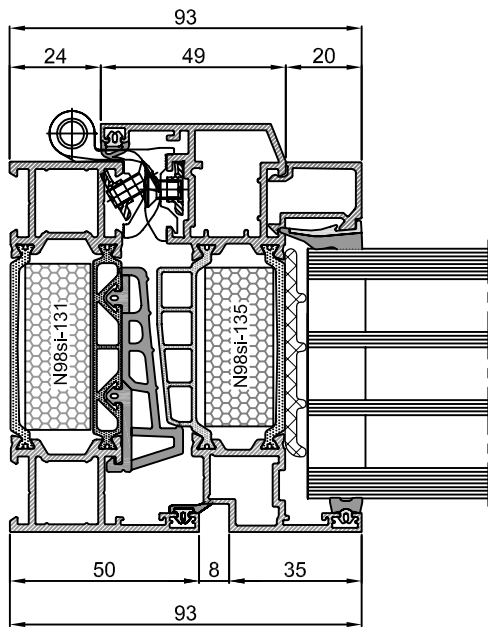


Ulosaukeava ovi

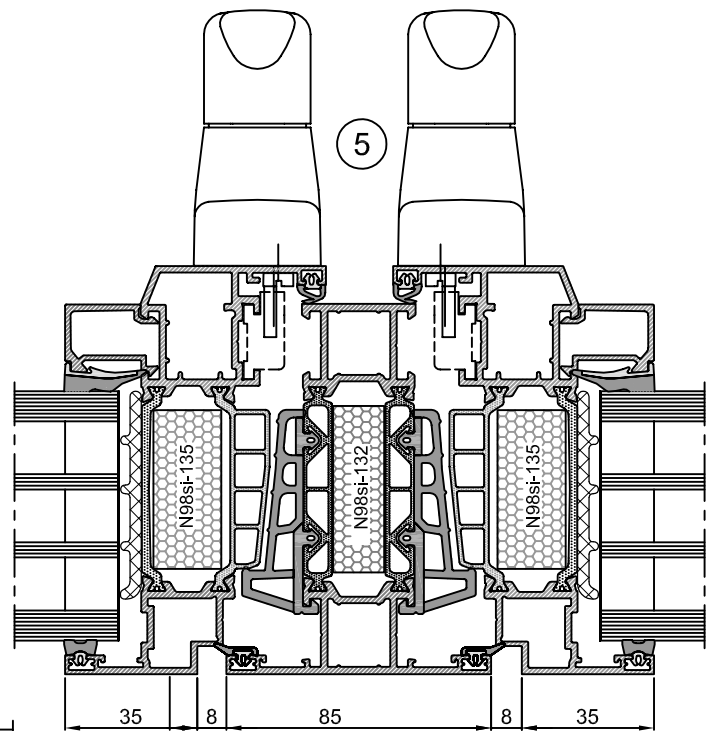
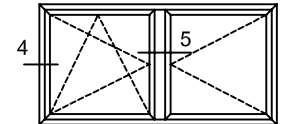




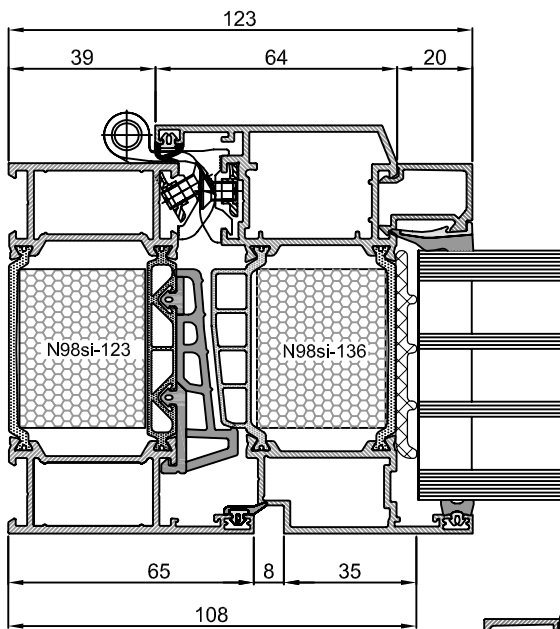
01.06.2015



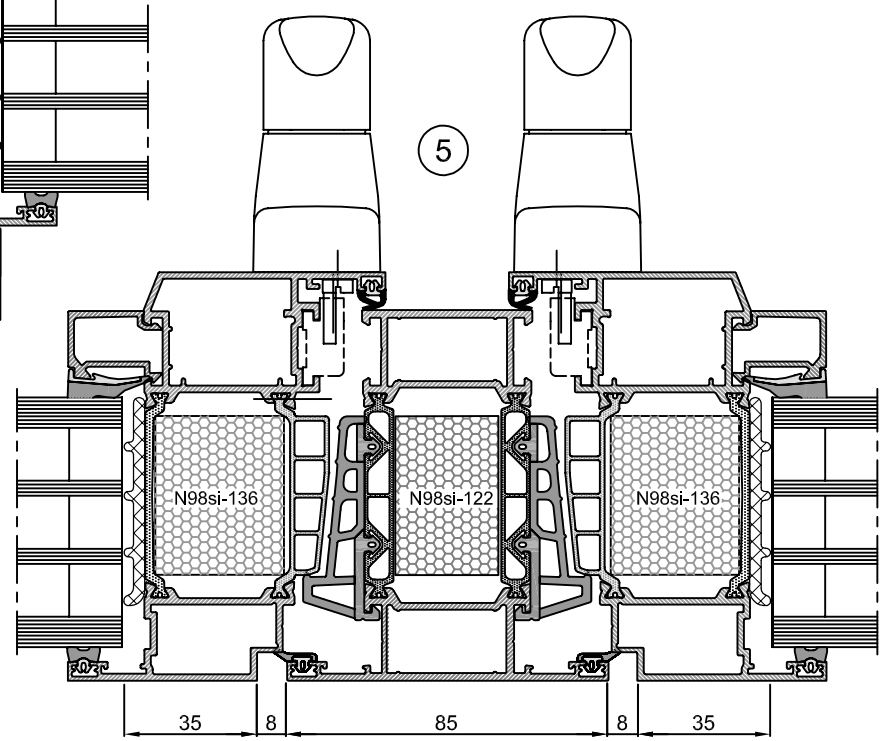
4



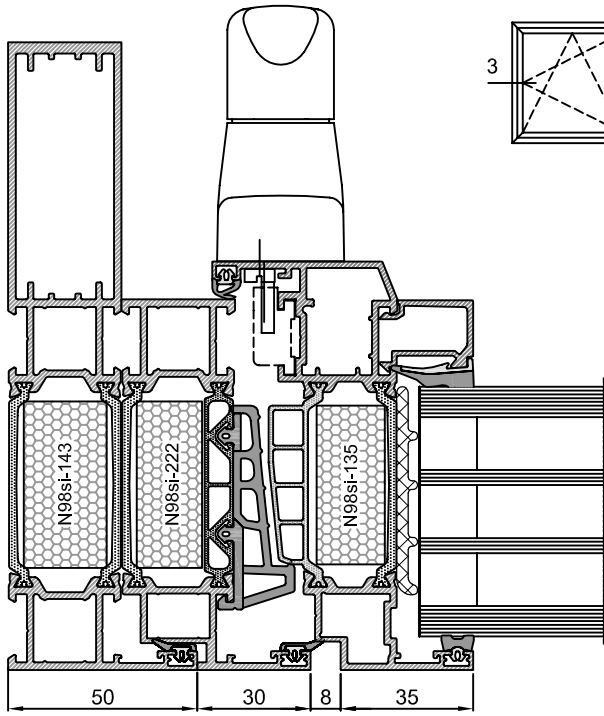
5



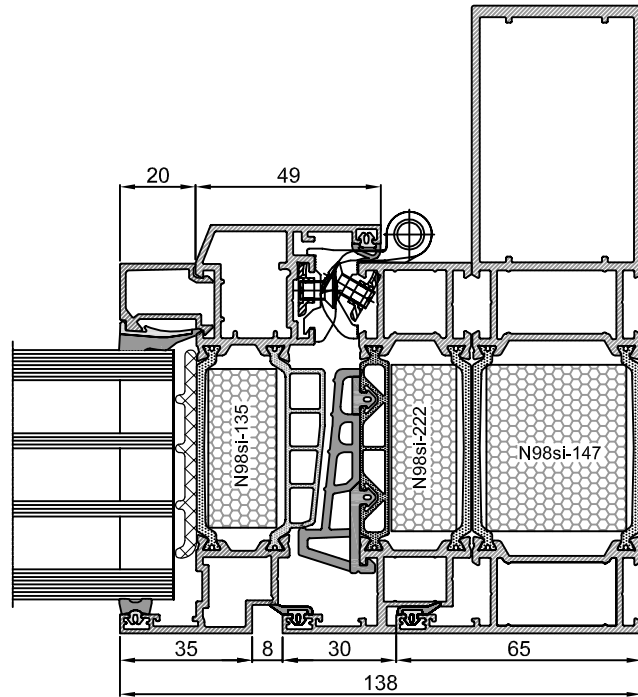
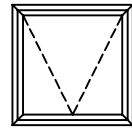
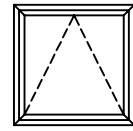
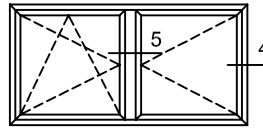
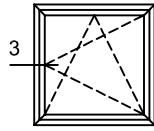
4



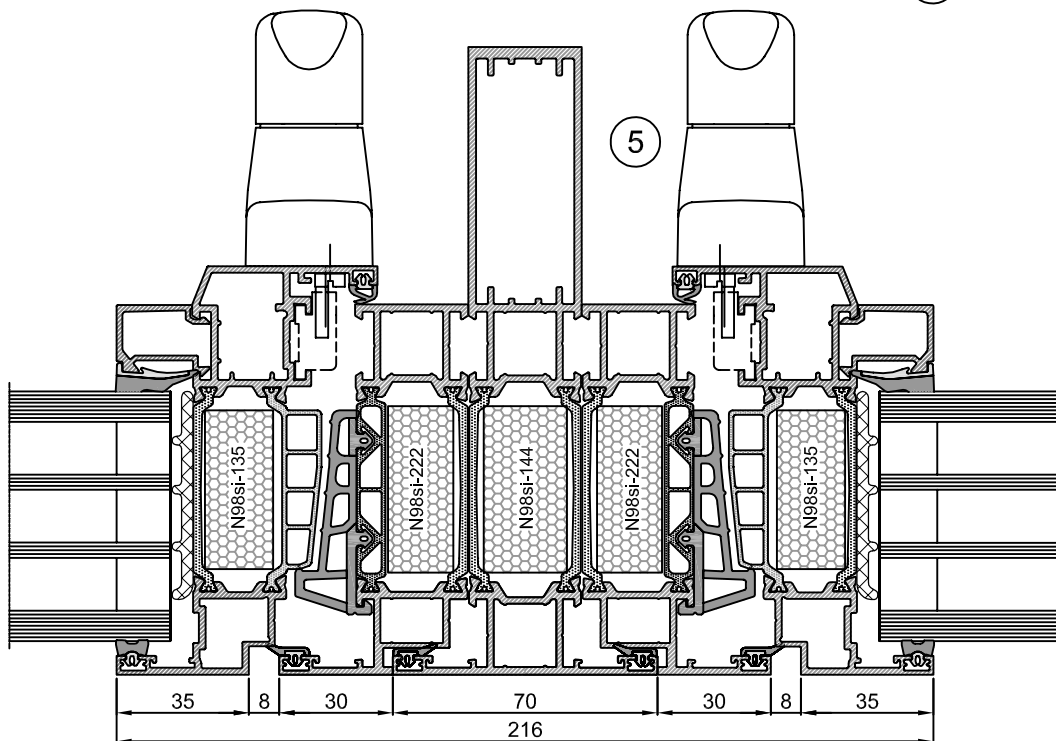
5



3



4

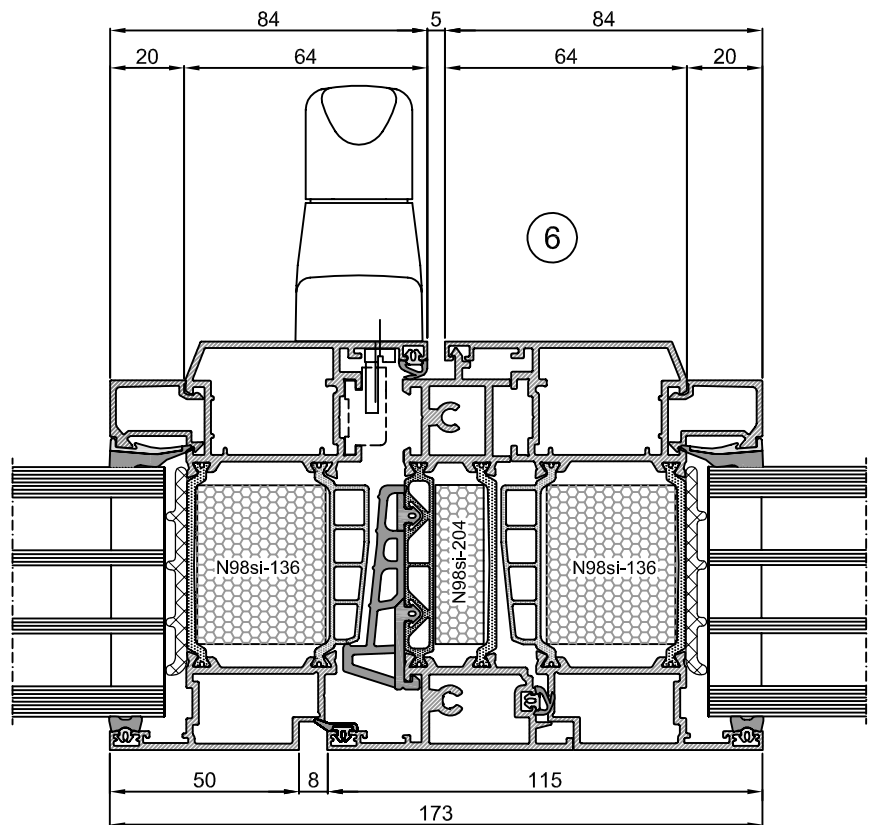
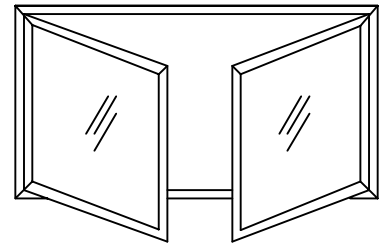
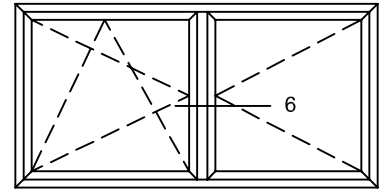
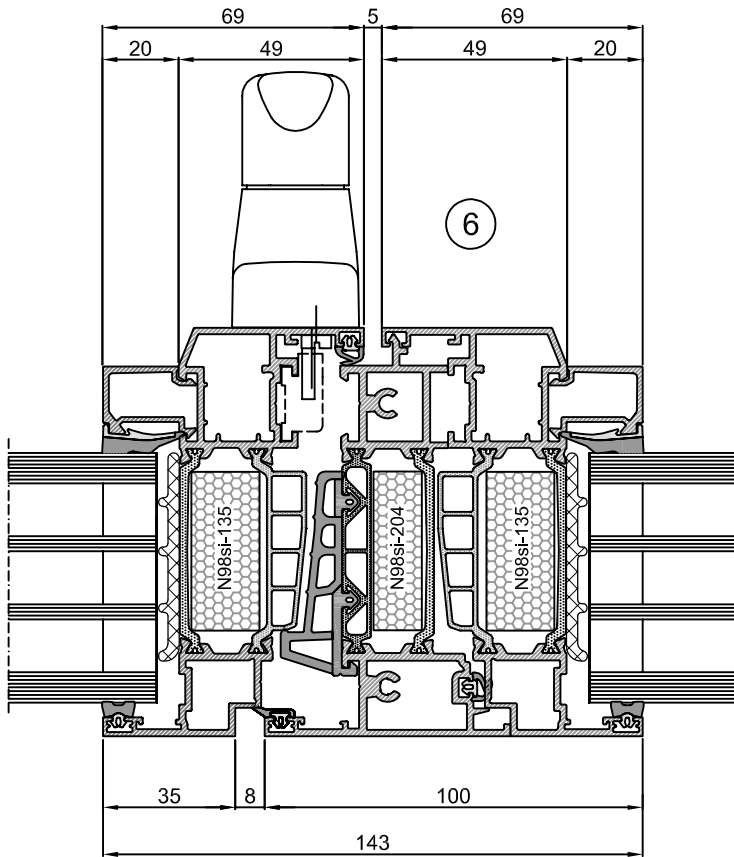


5

01.06.2015

N98si 5.8 NOKIAN PROFILIT

Ikkuna, vaakaleikkaukset

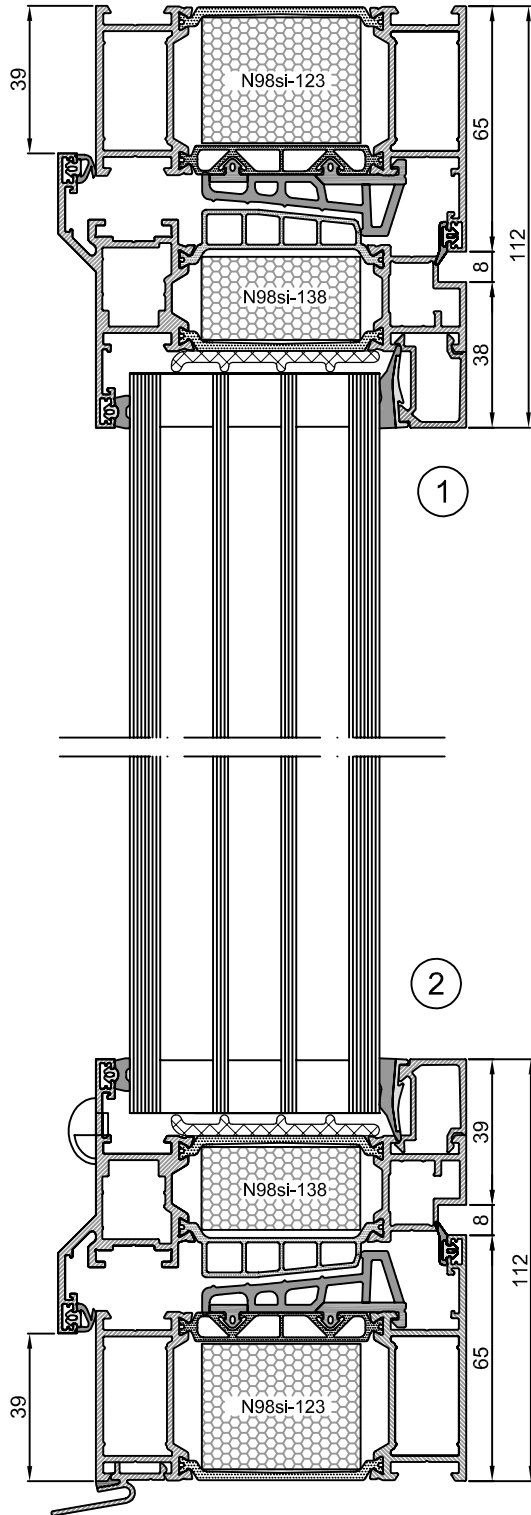
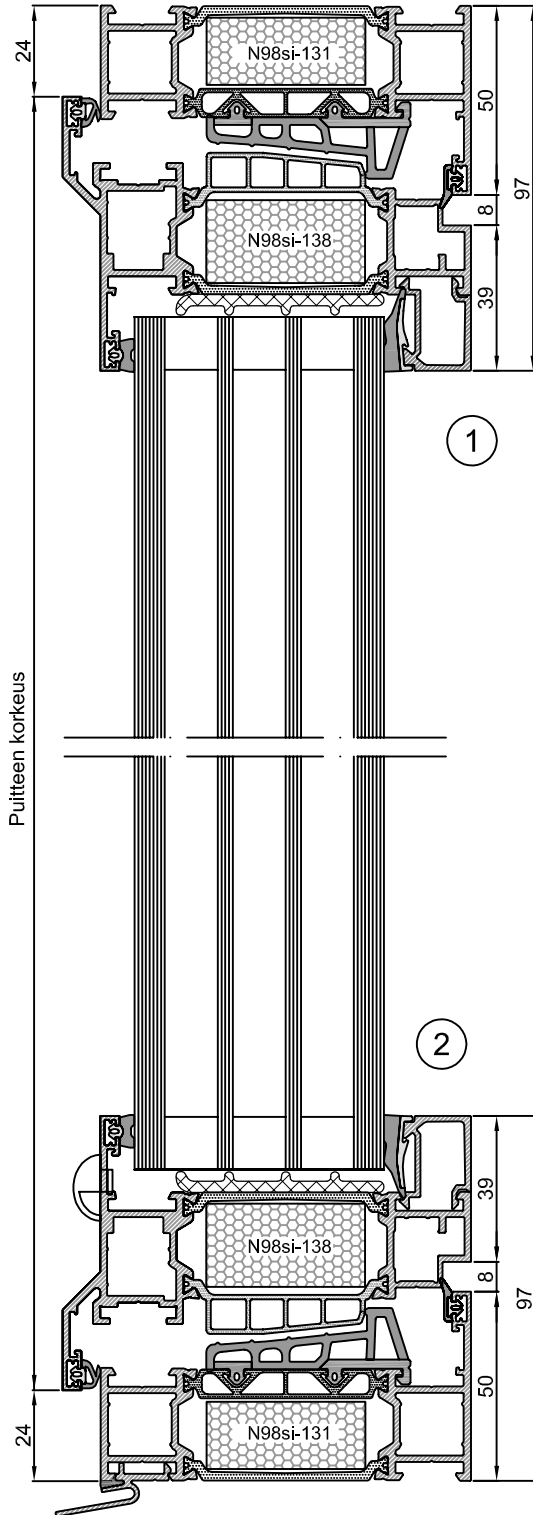
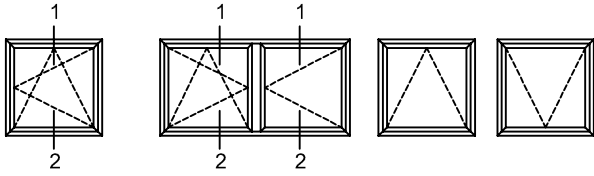


Pari-ikkuna, ei välipuitetta



N98si 5.9

01.06.2015

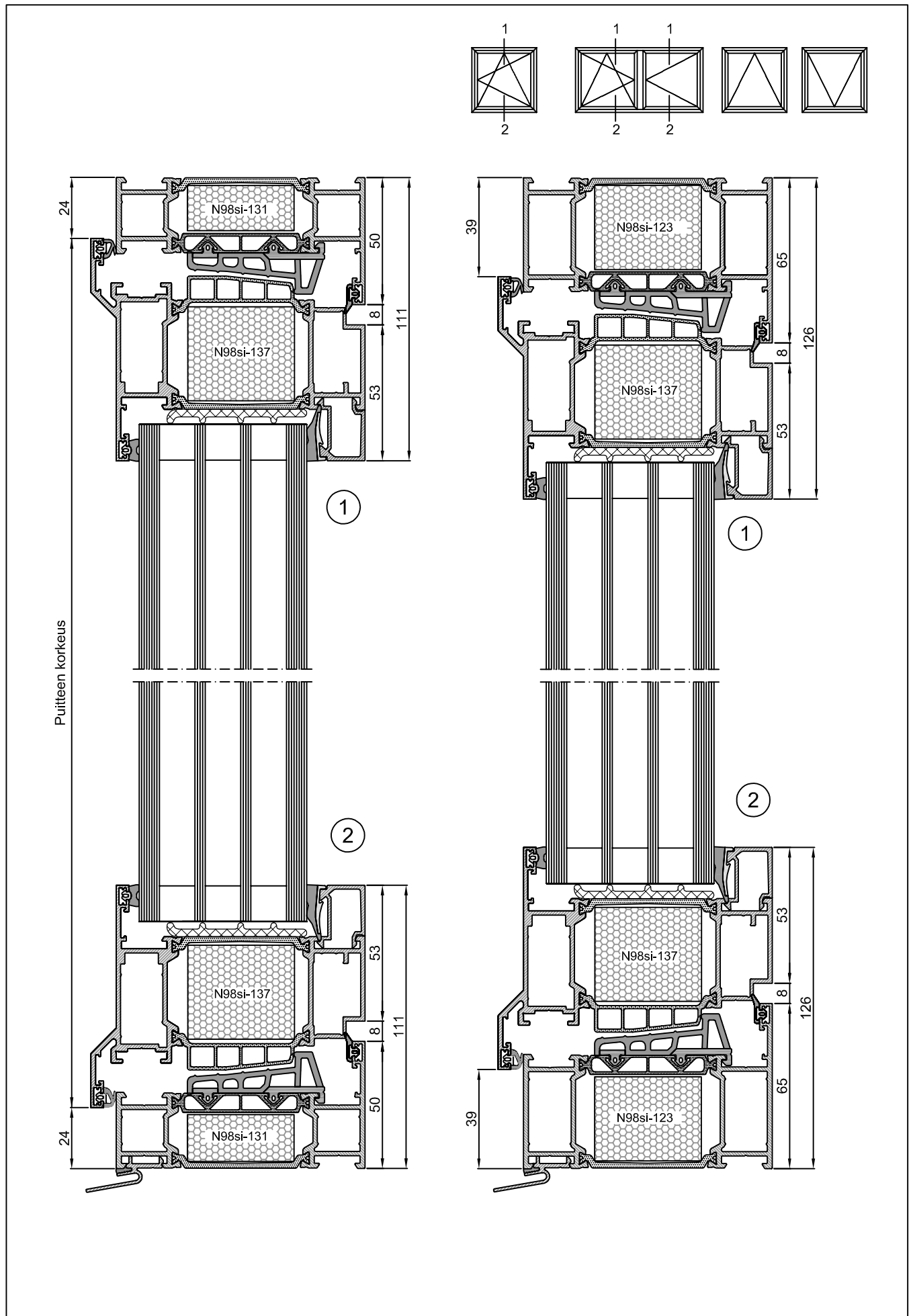


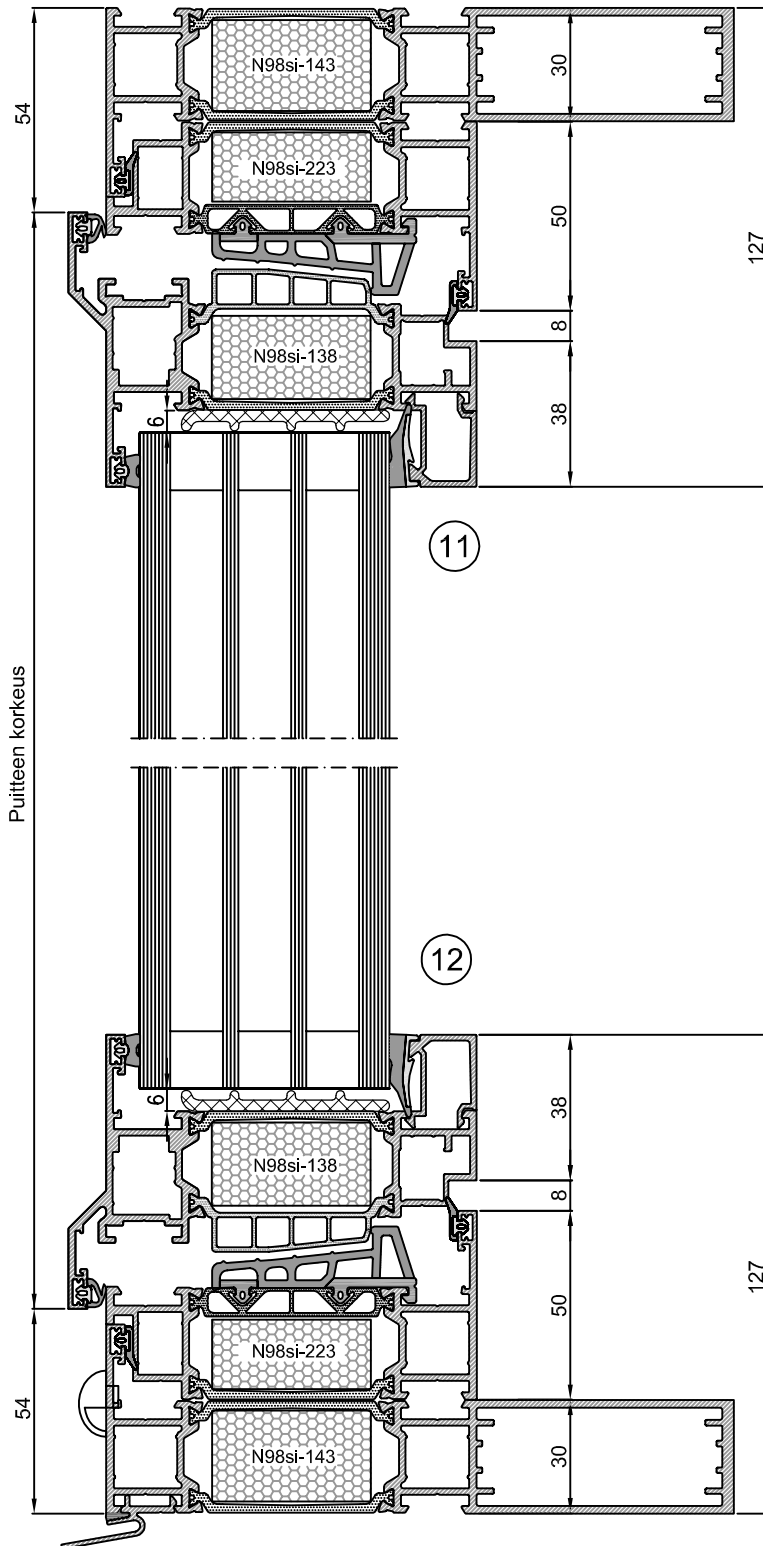
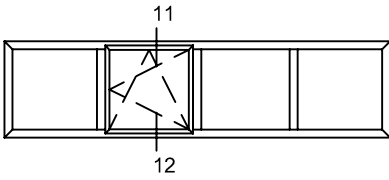
01.06.2015

N98si 5.10



Ulosavattava ikkuna, pystyleikkaukset



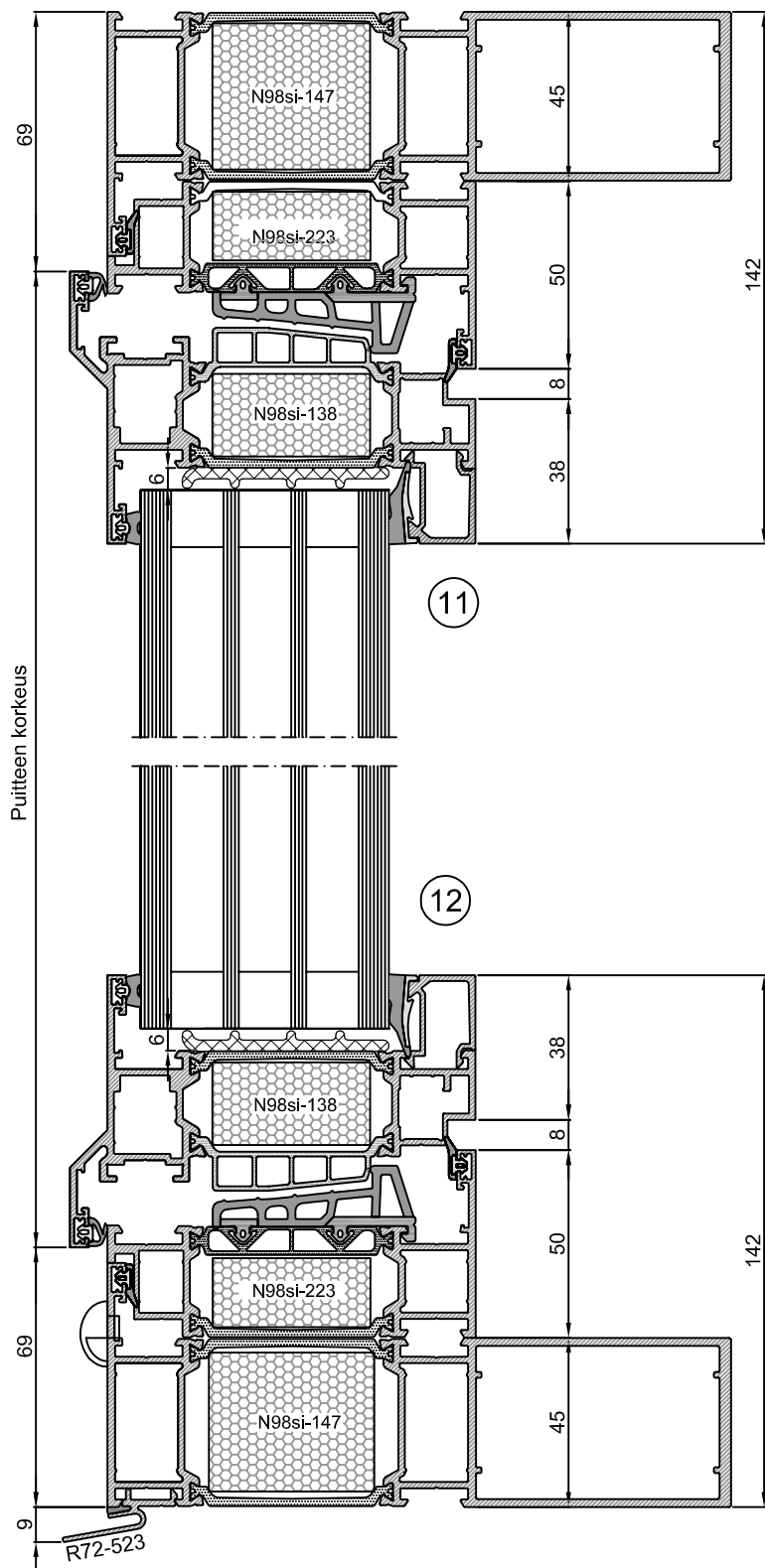
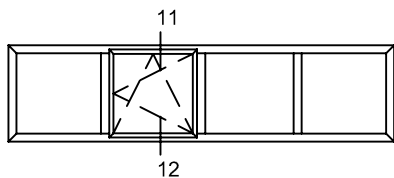


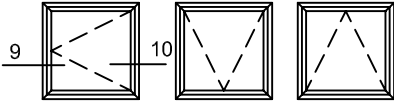
01.04.2016

N98si 5.12

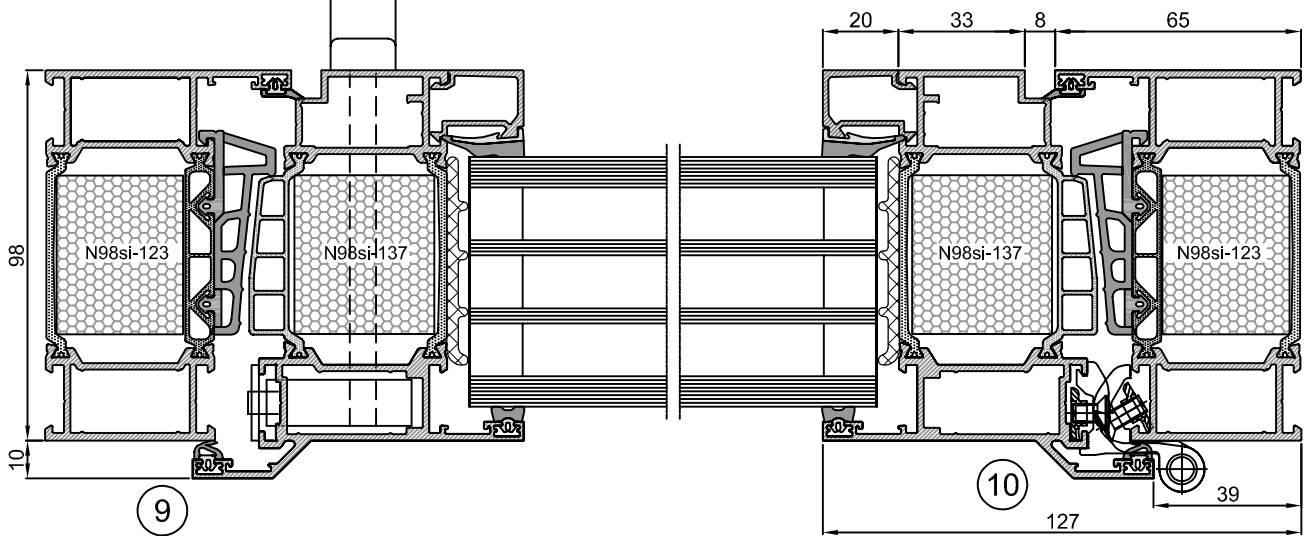
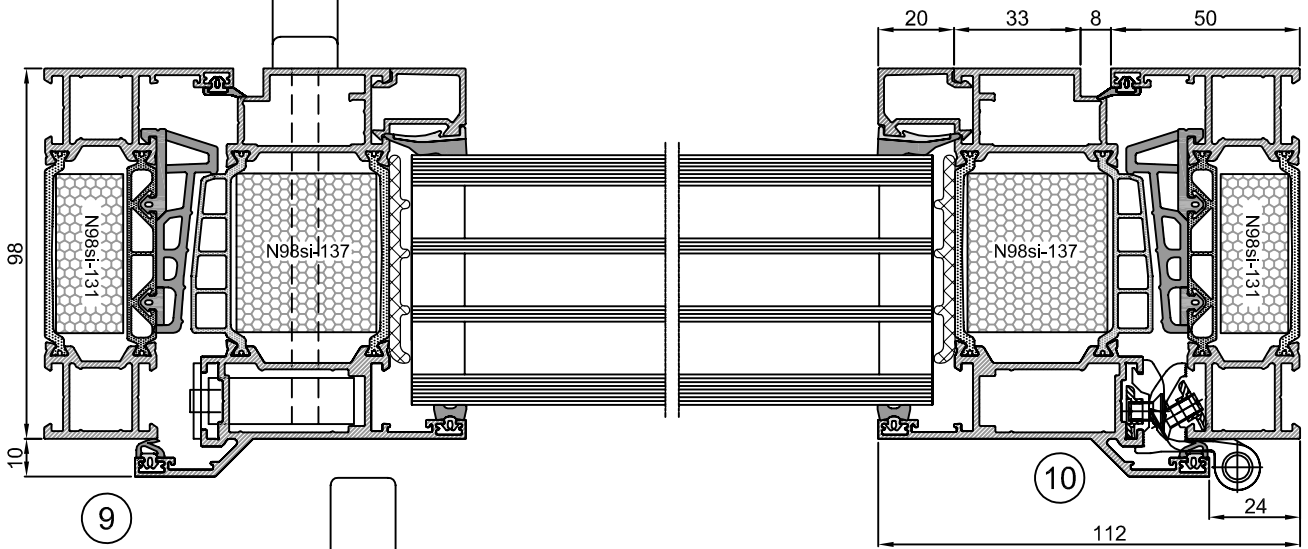
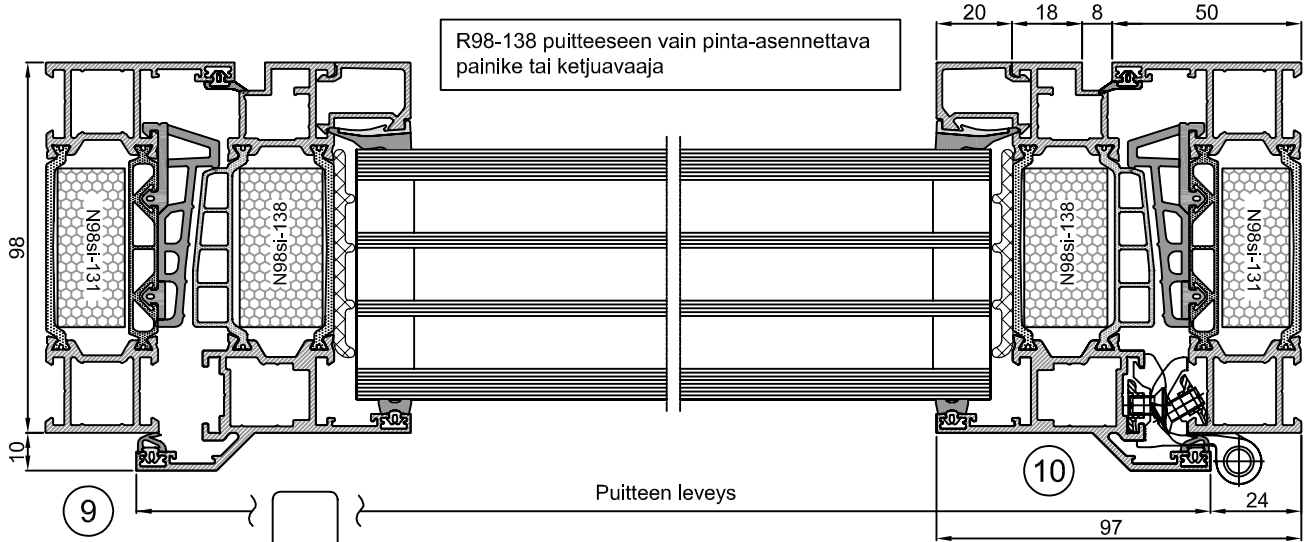


Ulosavattava ikkuna, pystyleikkaukset





R98-138 puitteeseen vain pinta-asennettava
painike tai ketjuavaaja

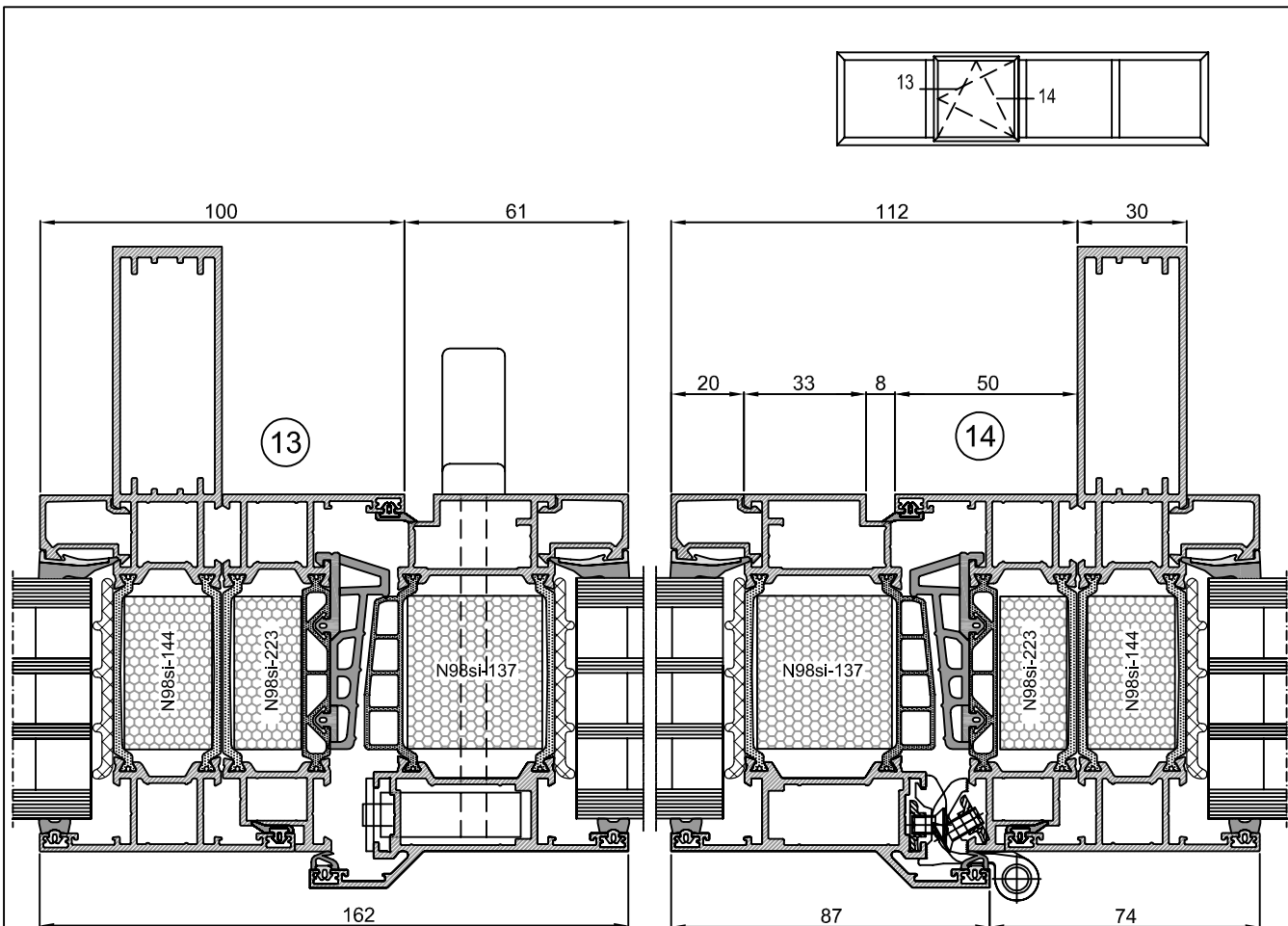


01.04.2016

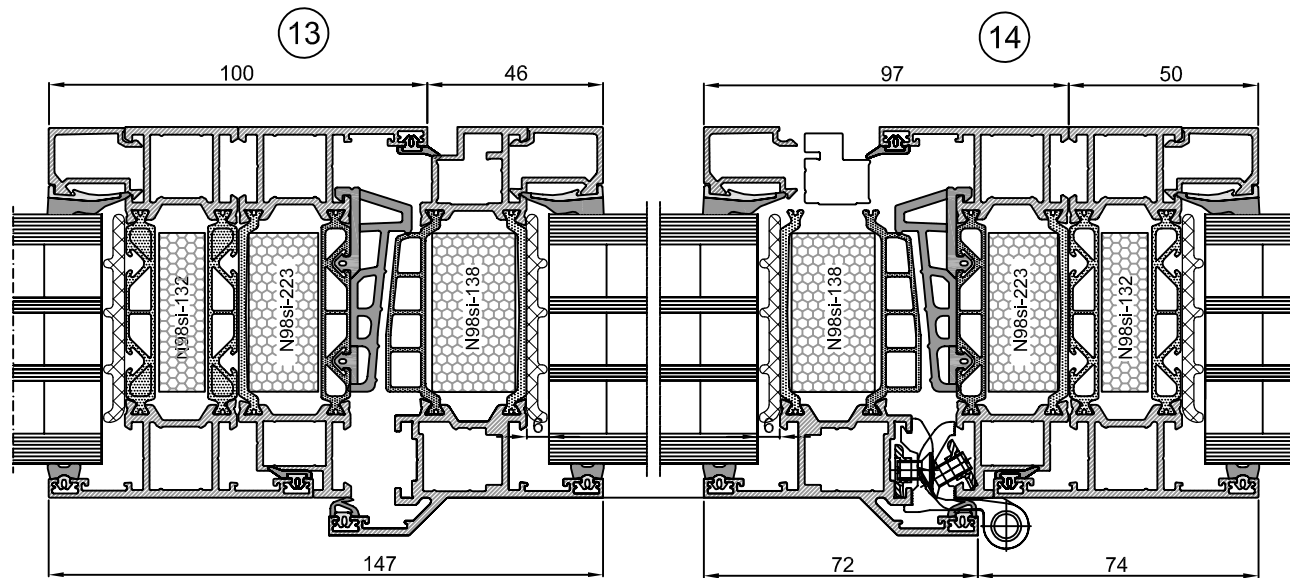
N98si 5.14

**NOKIAN
PROFILIT**

Ulosavattava ikkuna, vaakaleikkaukset



R98-138 puitteeseen vain pinta-asennettava painike tai ketjuavaaja

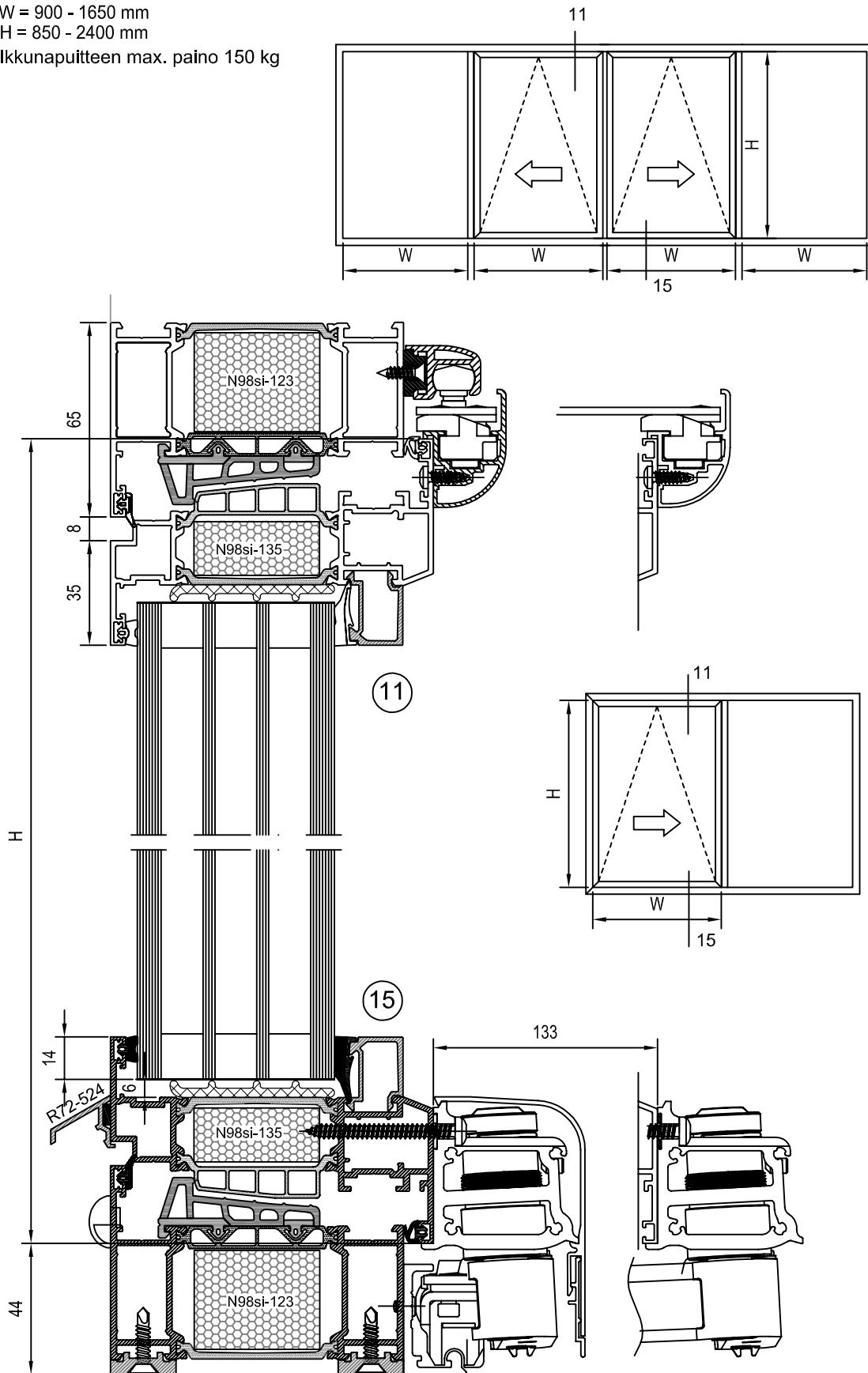


PUITTEEN MAX. MITAT

W = 900 - 1650 mm

H = 850 - 2400 mm

Ikkunapuitteen max. paino 150 kg

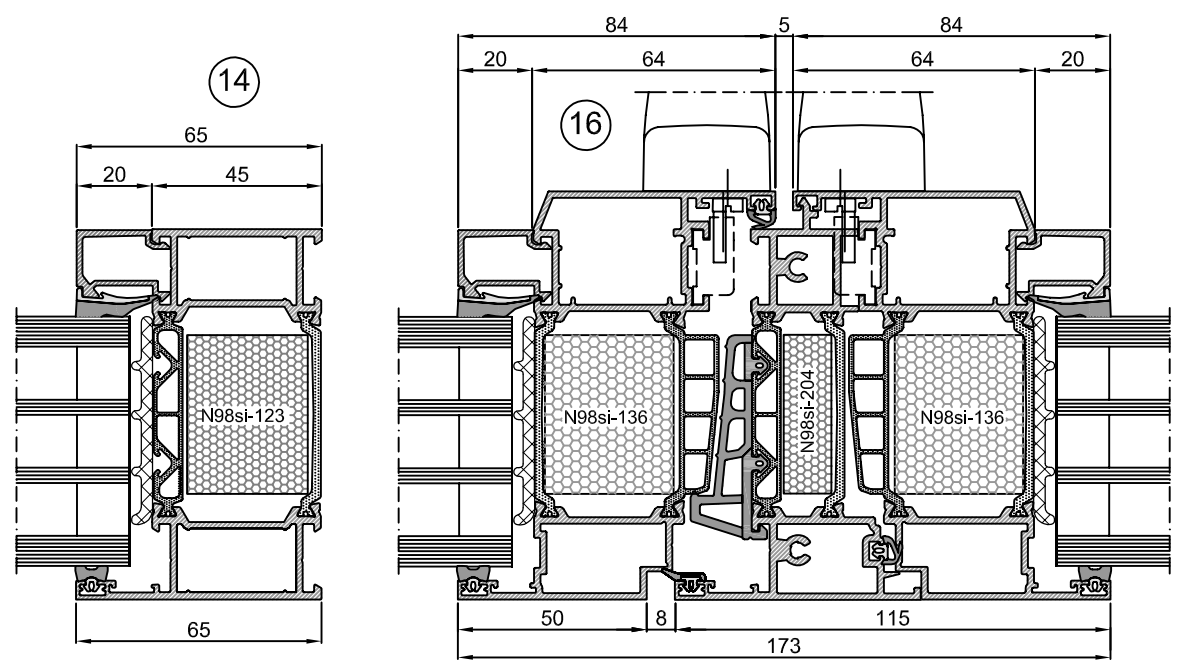
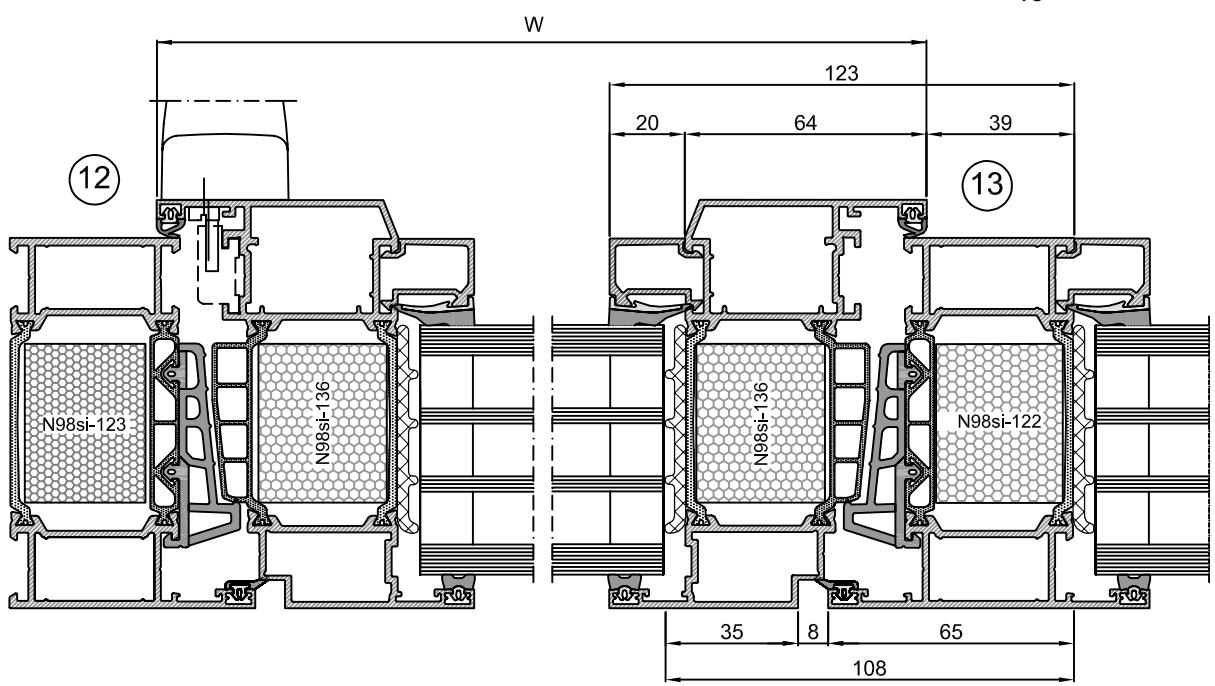
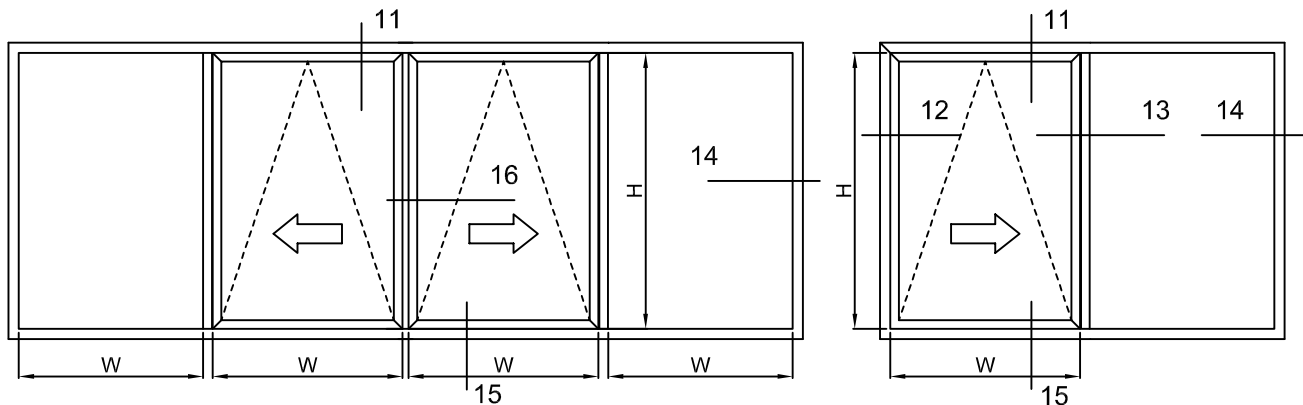


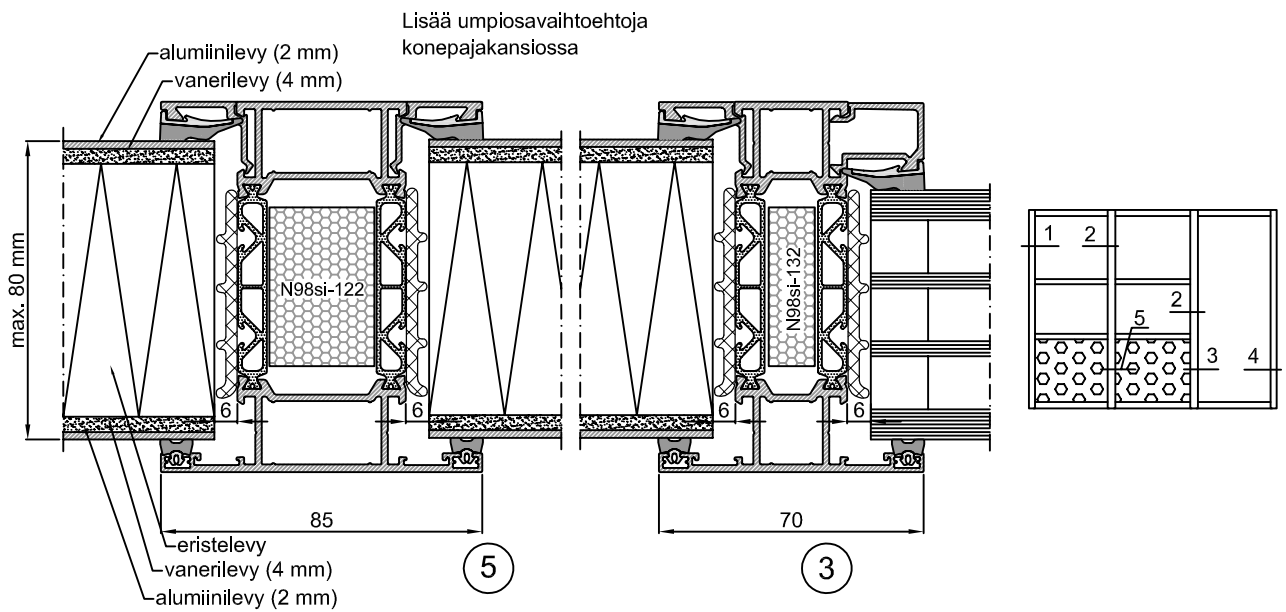
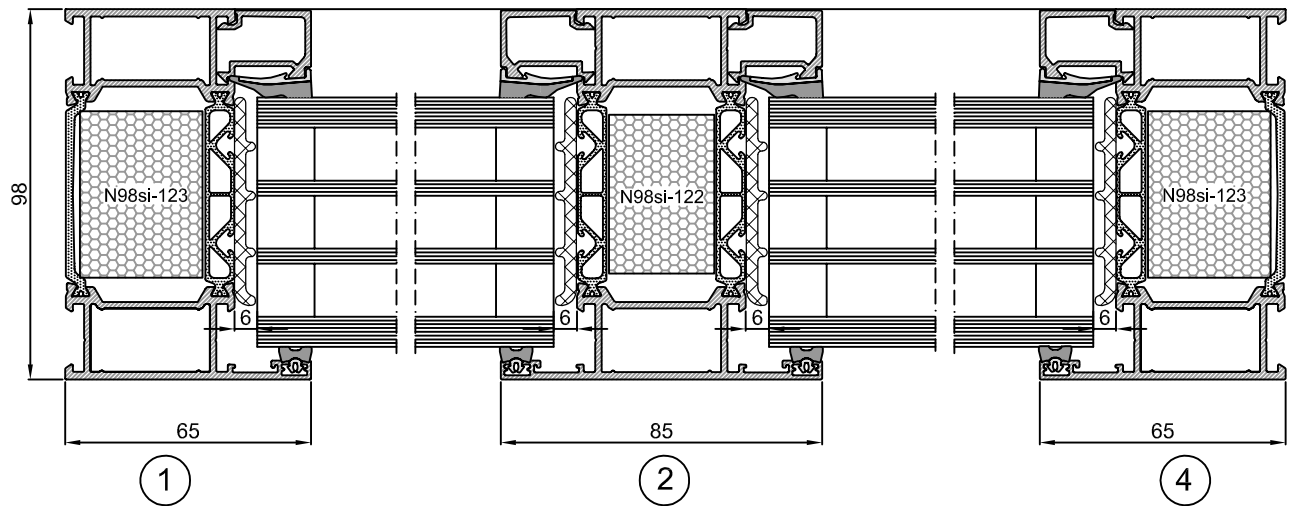
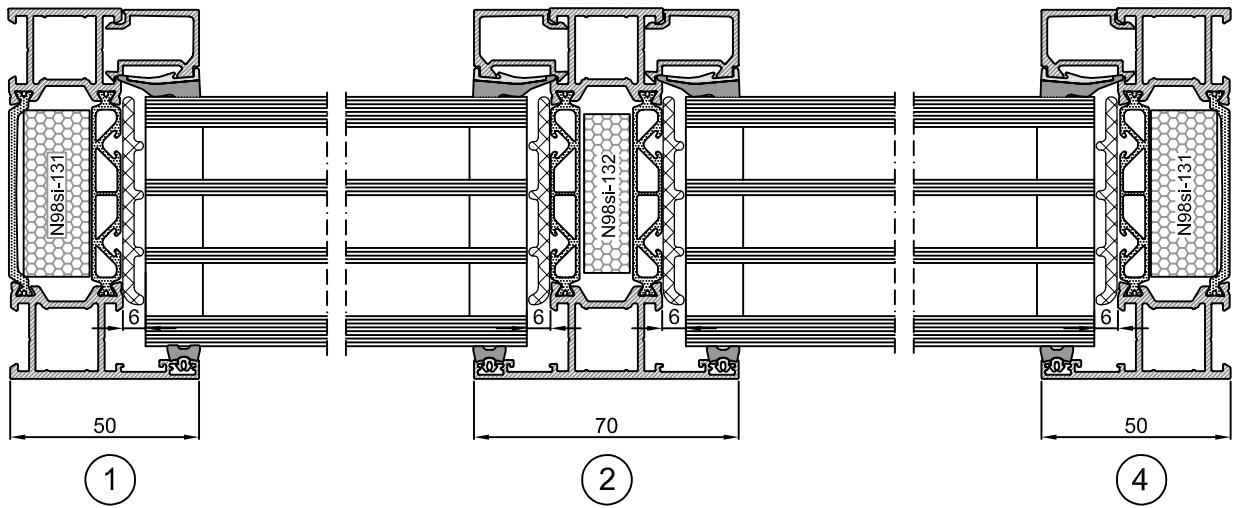
01.06.2015

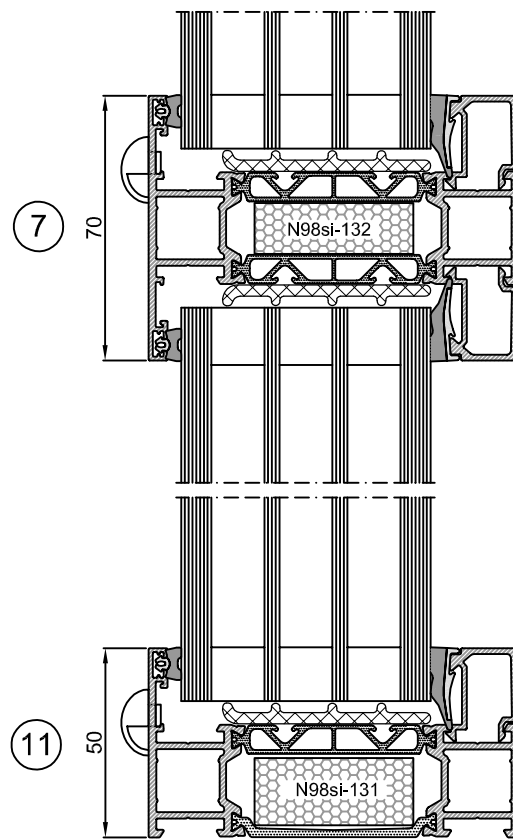
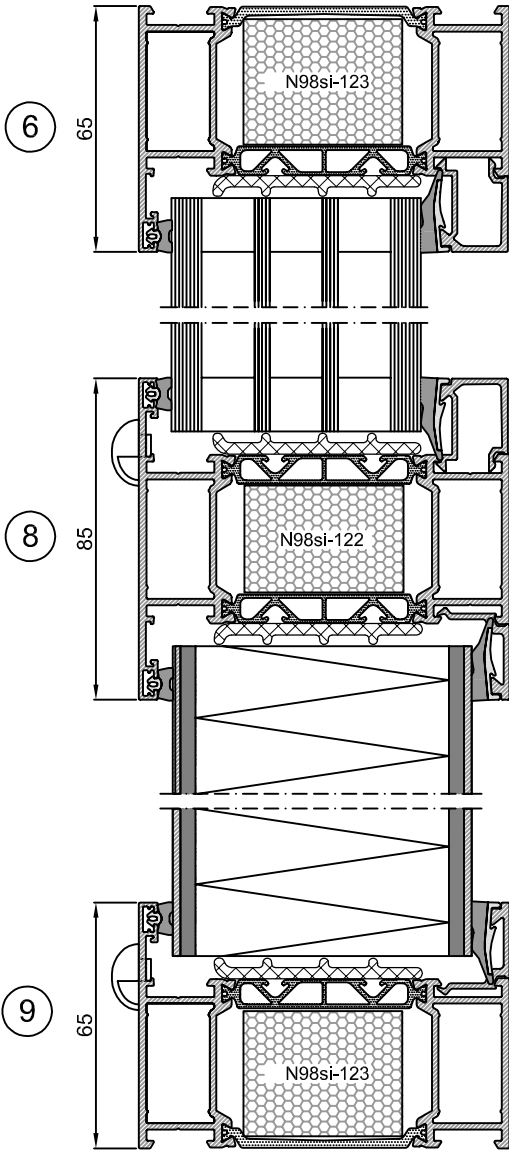
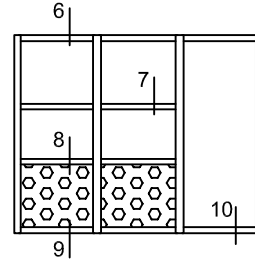
N98si 5.16

**NOKIAN
PROFILIT**

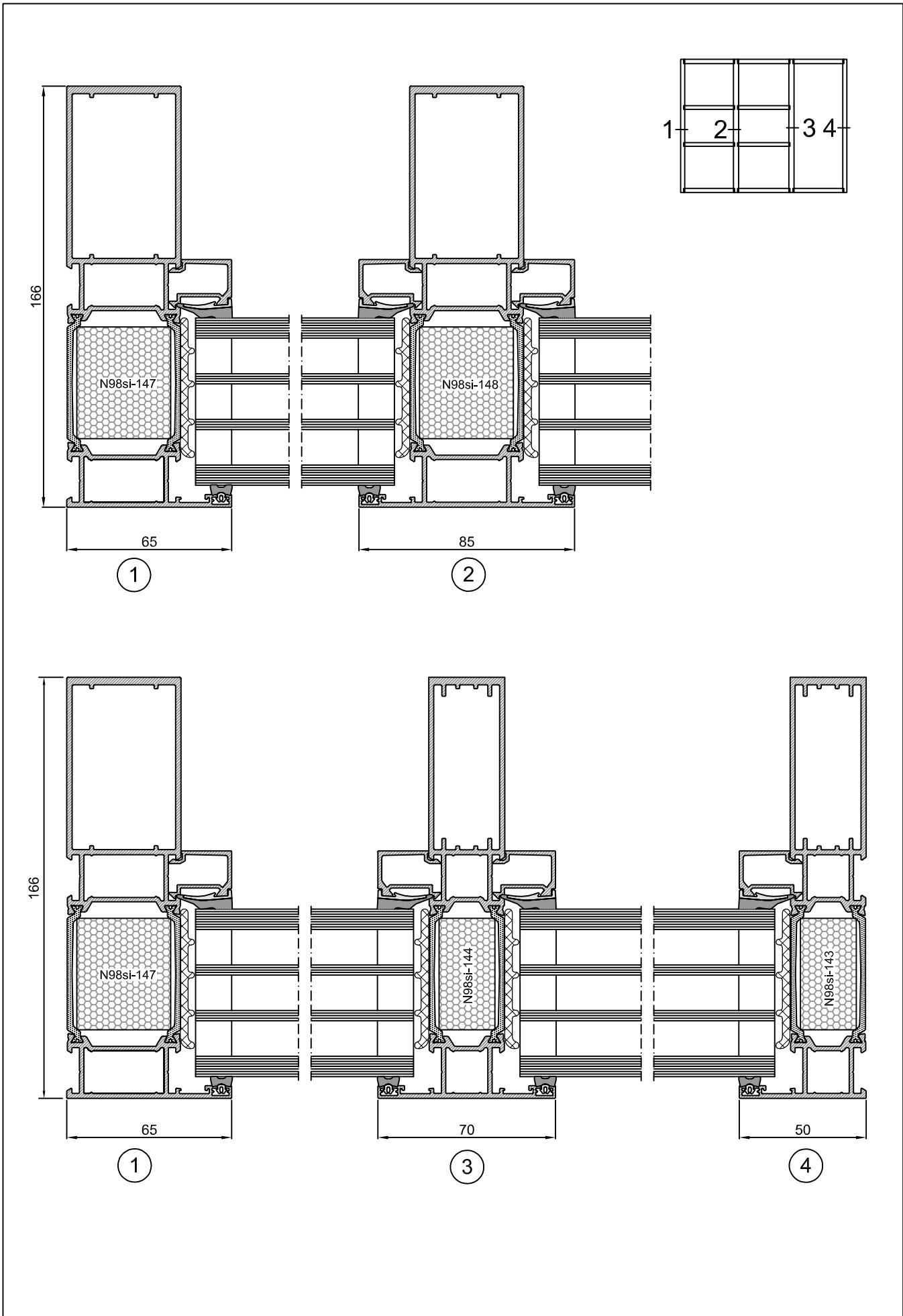
Liukuikkuna

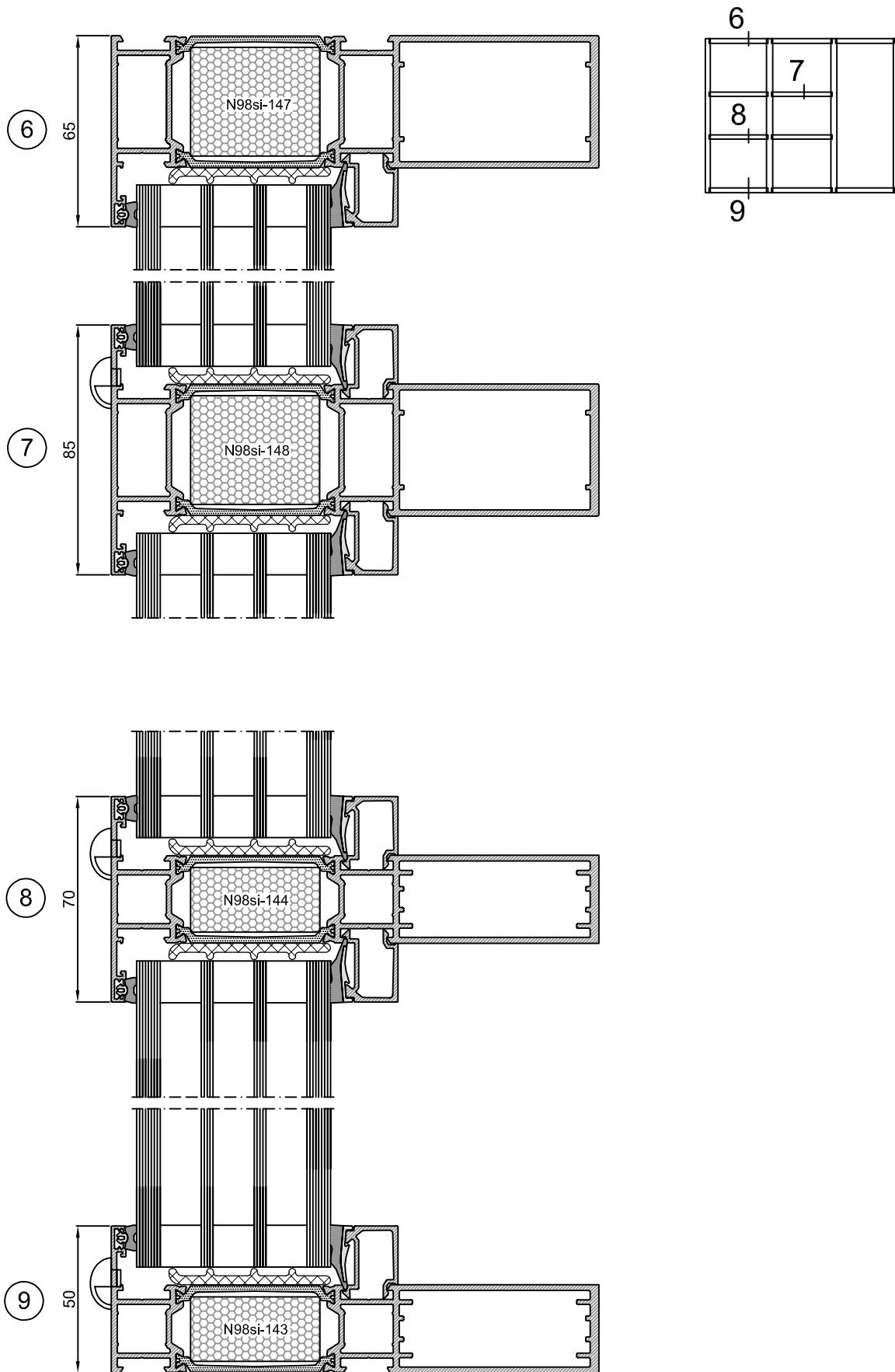






01.06.2015





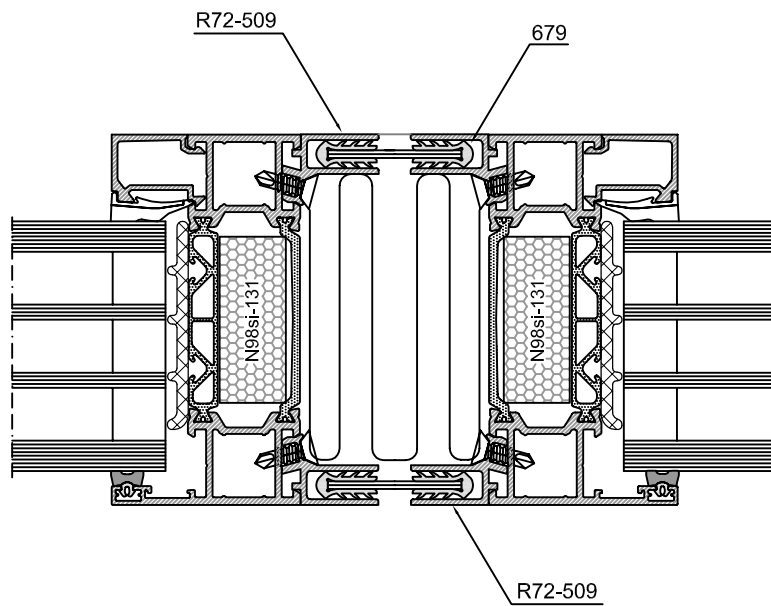
01.06.2015






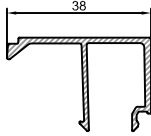









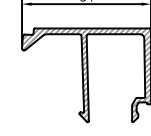









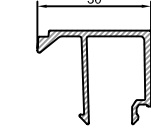









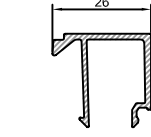









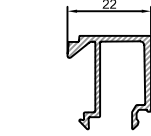









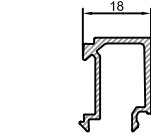









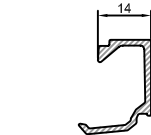









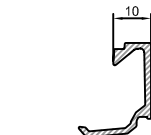









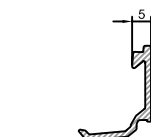




N98si 6.4

NOKIAN
PROFILIT



Lasiseinä



Kynte no:	Ulkopuolen tiiviste:	Lasin / Umpiosan nimellispaksuus:	Jälkiasennus-tiiviste:	Lasituslista:
1.	653 	 43  44  45 (+)	656 	 R72-328
	652 	 45  46  47 (+)		
2.	653 	 47  48  49(+)	656 	 R72-327
	652 	 49  50  51 (+)		
3.	653 	 51  52  53 (+)	656 	 R72-326
	652 	 53  54  55 (+)		
4.	653 	 55  56  57 (+)	656 	 R72-325
	652 	 57  58  59 (+)		
5.	653 	 59  60  61 (+)	656 	 R72-324
	652 	 61  62  63 (+)		
6.	653 	 63  64  65 (+)	656 	 R72-323
	652 	 65  66  67 (+)		
7.	653 	 68  69  70 (+)	656 	 R72-322
	652 	 70  71  72 (+)		
8.	653 	 72  73  74 (+)	656 	 R72-321
	652 	 74  75  76 (+)		
9.	653 	 76  77  78 (+)	656 	 R72-320
	652 	 78  79  80		

Osalle lasipaksuuksista on määritelty useita eri tiiviste- / lasituslistavaihtoehtoja.
Merkintä (+) lasipaksuuden perässä merkitsee suositeltavaa (=tiukempaa) lasitusvaihtoehtoa.

Lasin mitta: Valoaukko + 28 mm

01.04.2016

LASITUSOHJE

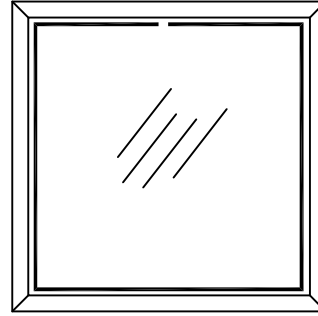
LASITUSTIIVISTEIDEN ASENNUS

Kun lasitus aloitetaan, varmistetaan että kyntteet, lasituslistat ja lasit ovat puhtaat. Tämän jälkeen sovitaan ulkopuolen lasitustiiviste no 652 tai 653 profiiluraan.

Lasin ja lasituslistojen asennuksen jälkeen sovitaan lasitustiiviste no 656 paikalleen. Tiivisteiden asennusta voidaan helpottaa silikonisumutteella tai muulla sopivalla liukastusaineella. Huomioitava liukastusaineen vaikutus itsepuhdistuvaan lasiin!

Lasitustiivisteiden katkaisussa on huomioitava niiden kutistumisvara, joka on noin 0,5 %. Ulkopuolella tiiviste asennetaan ehjänä kehän ympäri. Tiivisteiden asennus aloitetaan ylhäältä keskeltä. Sisäpuolen jälkiasennustiiviste asennetaan samoin kuin lasitilat. Vaa'at läpi runkoon asti. Pystylistat vaakalistojen väliin. Tiivistesaumut liimataan EPDM-liimalla.

LASITUSTIIVISTEEN 652 JA 653 ASENNUS:



LASIN ASENNUS

Kiilauksen tehtävänä on tukea, keskittää ja kantaa umpiolasi puitteessa tai karmissa tarkoitetulla tavalla ja varmistaa ikkunan tai oven pysyminen oikeassa muodossa. Kiiloja on kahta tyyppiä: -kannatuskiilat, jotka siirtävät lasiruudun painon puitteeseen tai karmiin. -tukikiilat jotka estävät lasiruudun liikkumisen käytössä.

Kannatuskiilojen tulee olla muotonsa pitävä, kestävä muovia kovuudeltaan 70-90° Shore A tai muuta tarkoitukseen sopivaa materiaalia. Muista materiaaleista valmistettujen kiilojen tulee olla vastaavaa kovuutta. (Paloitettavaa tai haitariikilaa ei saa käyttää.)

Ne lämpötilan vaihtelut, joille N98si-rakenteet saattavat joutua alttiiksi, eivät saa vaikuttaa haitallisesti kiilojen kovuuteen.

Kannatuskiilojen pituuden tulee olla 100 mm, ja leveys 4 mm suurempi kuin lasiruudun paksuus. Kannatuskiilojen paksuus on 5 mm.

Tukikiilojen pituus voi olla 50-100 mm ruudun koosta riippuen ja leveys sama kuin kannatuskiiloilla.

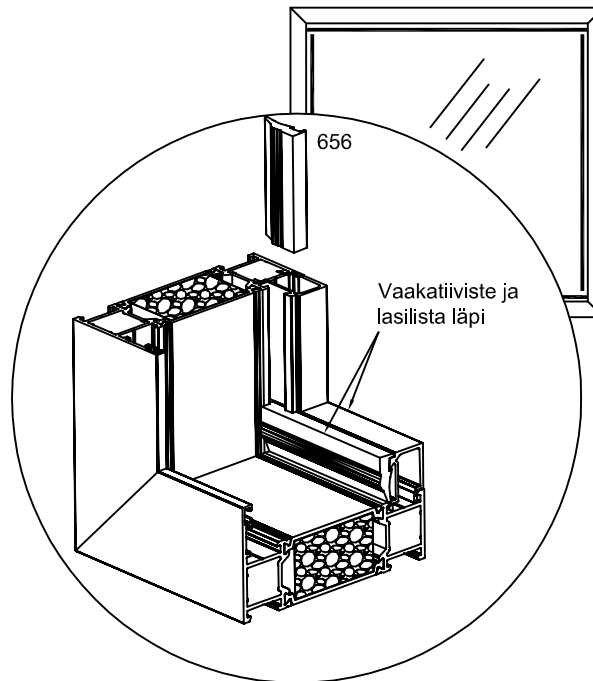
Kiilat asetetaan 100 mm:n päähän ruudun nurkista (mitta kiilan keskelle) .

Kuvissa esitetään kiilojen sijainti tavallisimmissa ovi- ja ikkunatyypeissä.

Tämä lasitusohje on periaatteellinen. Itse lasitus työstä, jota emme voi valvoa, emme luonnollisesti voi vastata.

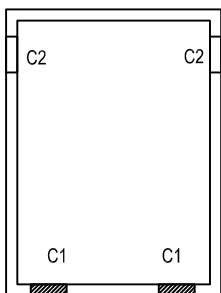
Tämä lasitusohje pätee ainoastaan pysty-suorille rakenteille.

LASITUSTIIVISTEEN 656 ASENNUS:

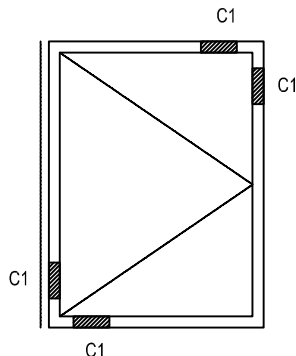


KIILOJEN SIJAINTI

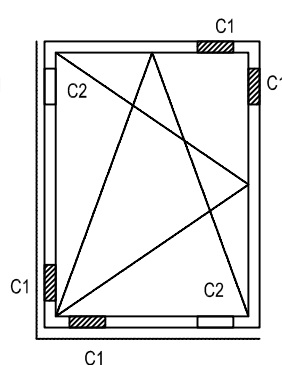
Kiinteä



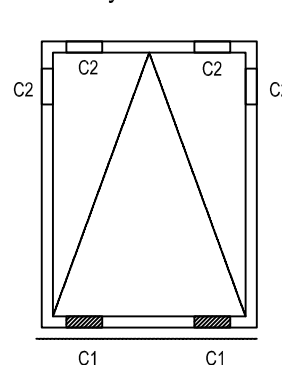
Sivusaranoitu



Sivu-alasaranoitu



Ala/ylä-saranoitu



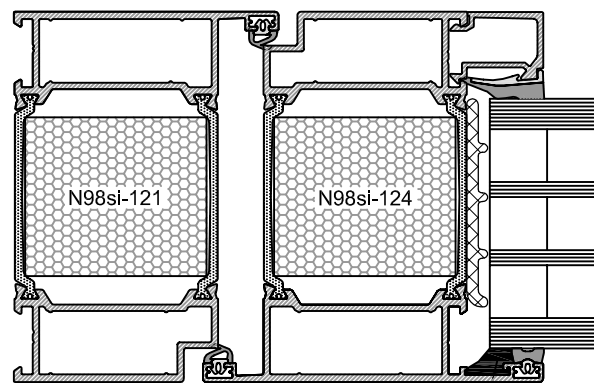
■ C1 = Kannatuskiila
□ C2 =Tukikiila

Ovien lämmöneristyskyvyn parantuessa voi, jos ulko- ja sisälämpötilojen ero on suuri esiintyä ovilehden käyristymistä.

Ulkopuolen alumiiniprofiili kutistuu lämpötilan laskiessa, kun taas sisäpuolen alumiini pysyessään vakiolämpötilassa säilyttää mittansa.

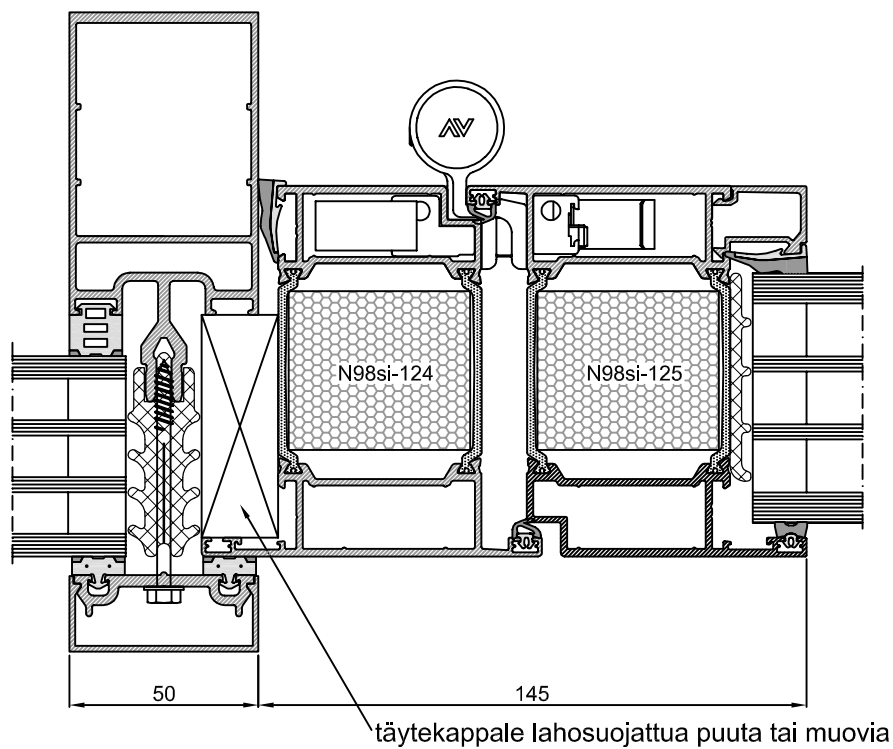
Käyristymistä voi pienentää liimaamalla lasielementin ulommainen lasi kiinni profiiliin. Tällöin lasi vastustaa profiilin kutistumista.

Lasi on liimattava kuvan mukaisella saumalla lämpötilassa, joka tulee olemaan oven käyttölämpötila.

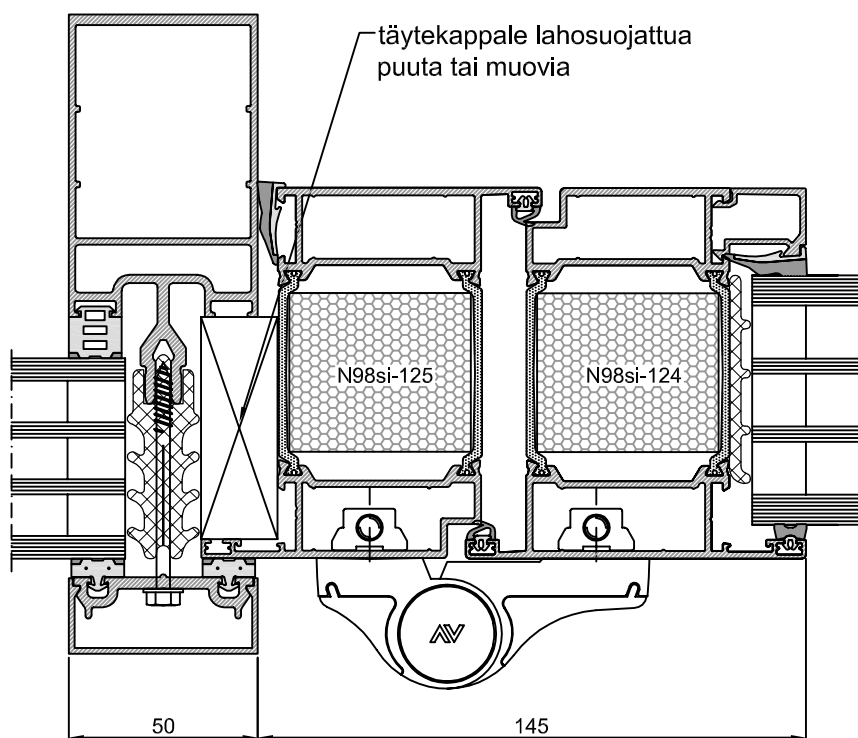


esim. Sikasil WT-480

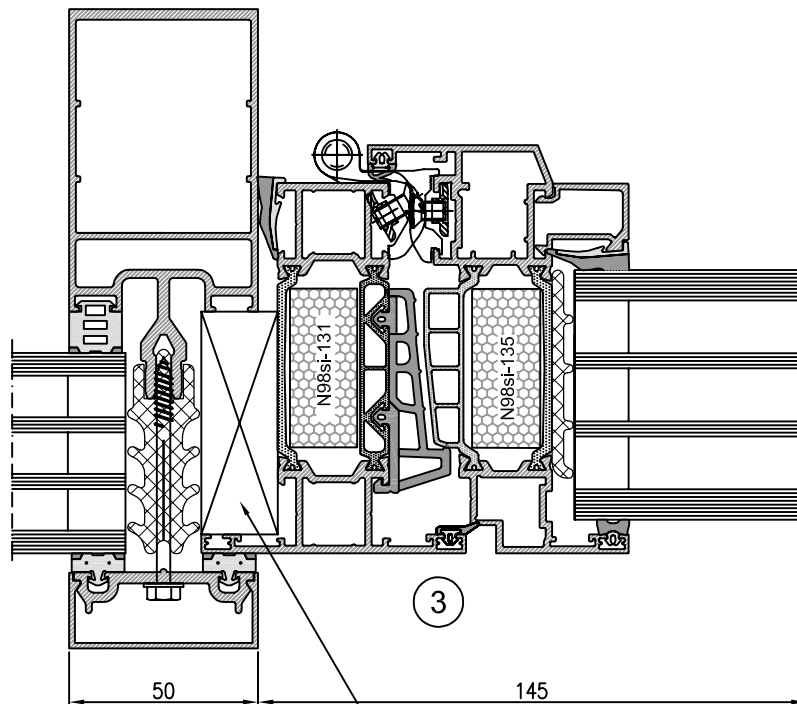
LIITOS R54-RUNKOON (SISÄÄNAUKEAVA OVI)



LIITOS R54-RUNKOON (ULOSAUKEAVA OVI)

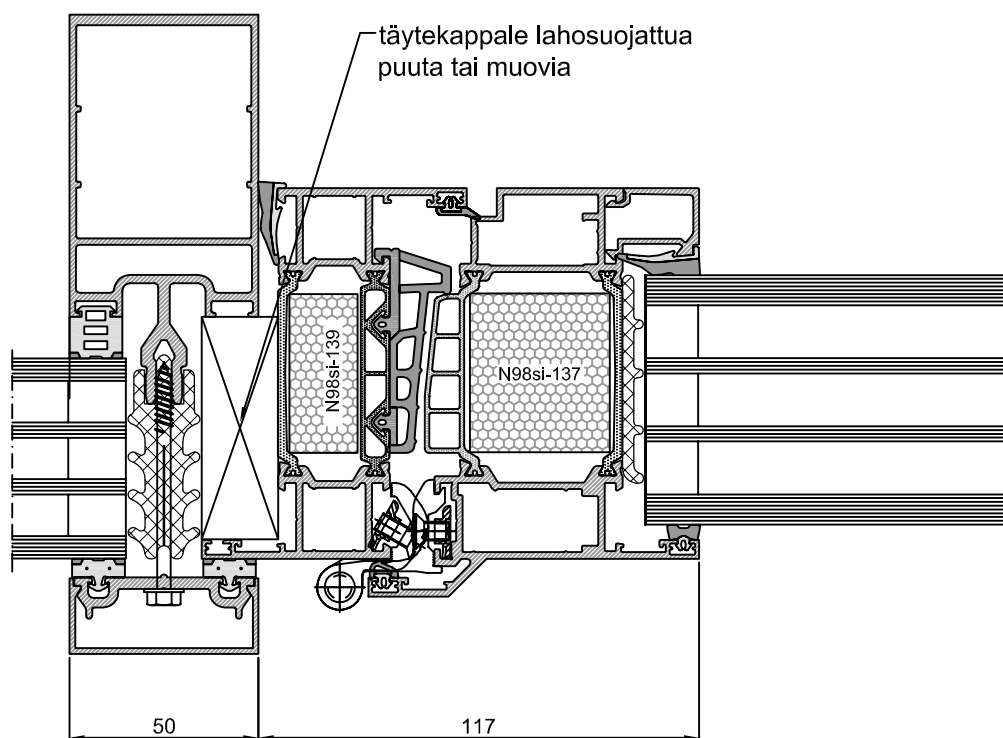


LIITOS N50si-RUNKOON (SISÄÄNAUKEAVA IKKUNA)



täytekappale lahosuojattua puuta tai muovia

LIITOS N50si-RUNKOON (ULOSAUKEAVA IKKUNA)



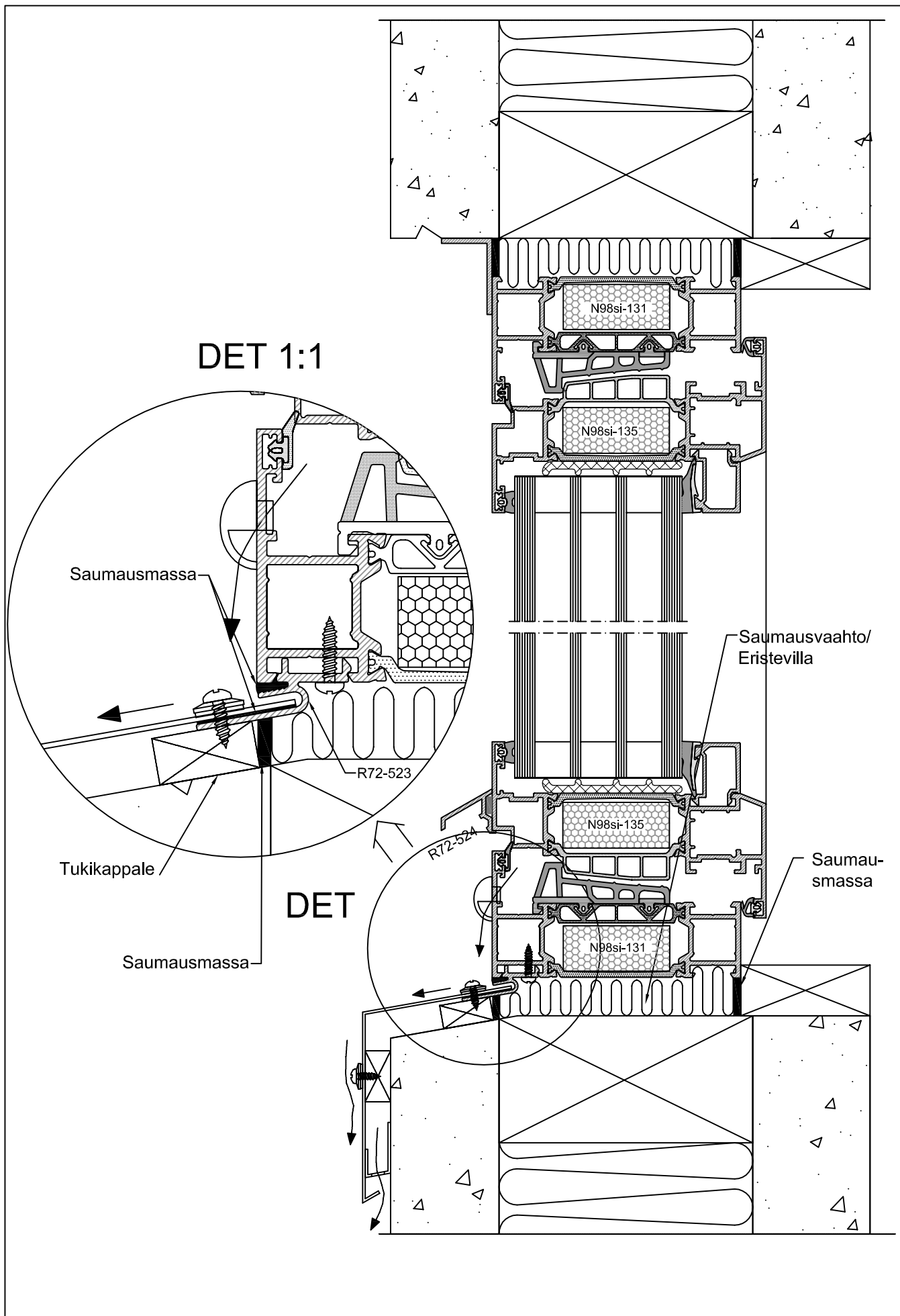
01.04.2016

N98si 8.2

NOKIAN
PROFILIT

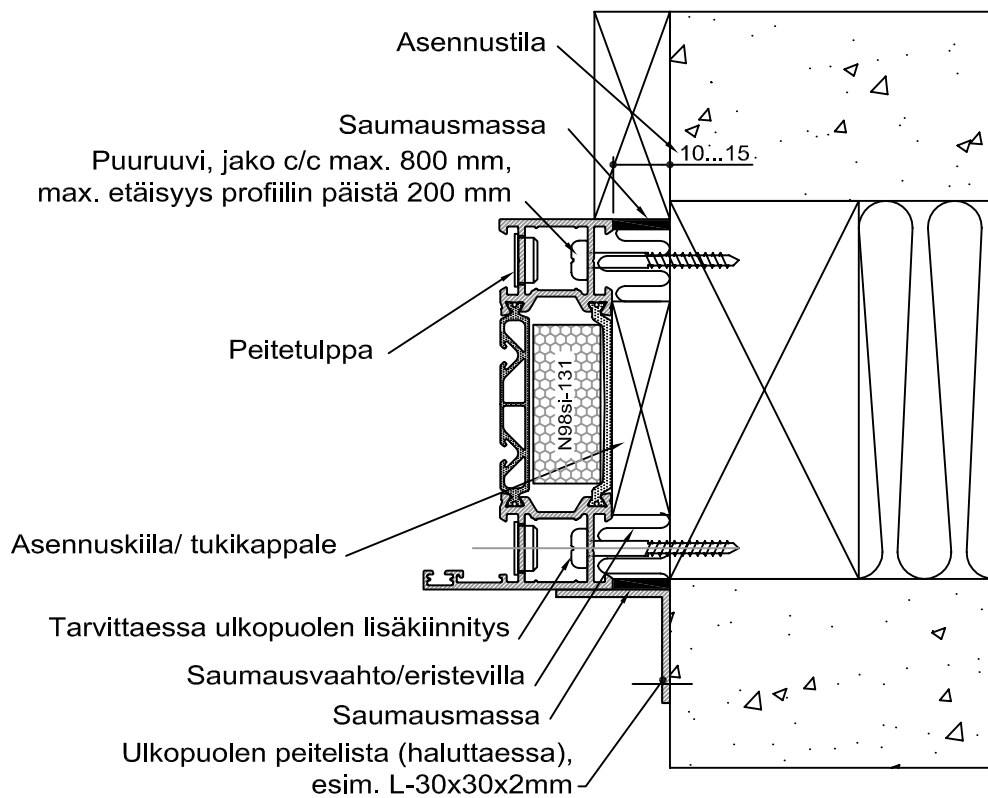


Ikkunaliittymät N98si/N50si

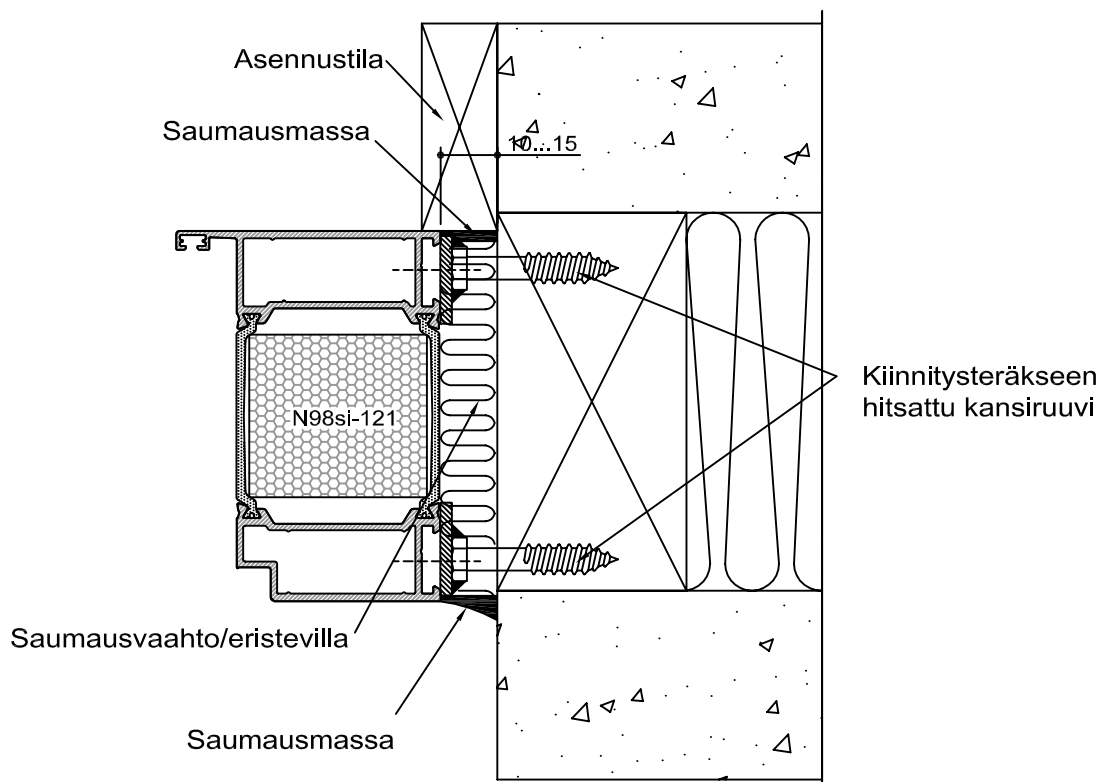


01.04.2016

VAIHTOEHTO 1 / PUURUUVI:



VAIHTOEHTO 2 / KANSIRUUVI + HITSAUS:



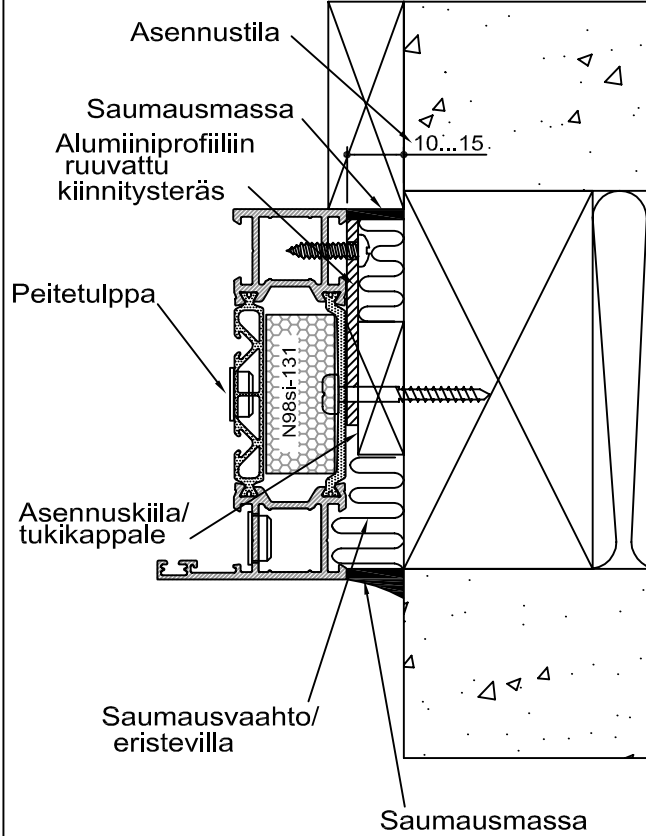
01.04.2016

N98si 8.4

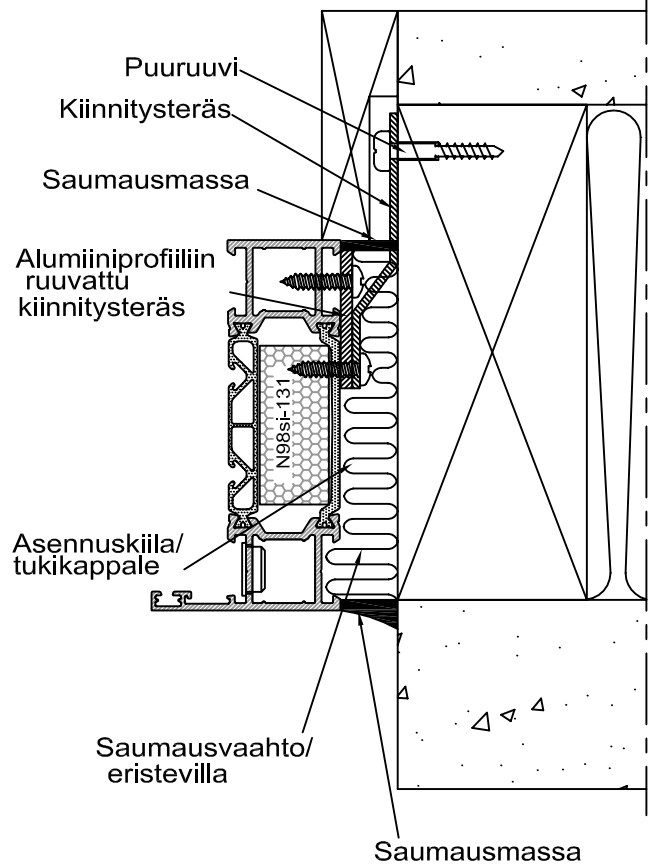
**NOKIAN
PROFILIT**

Liittymät rakennusrunkoon

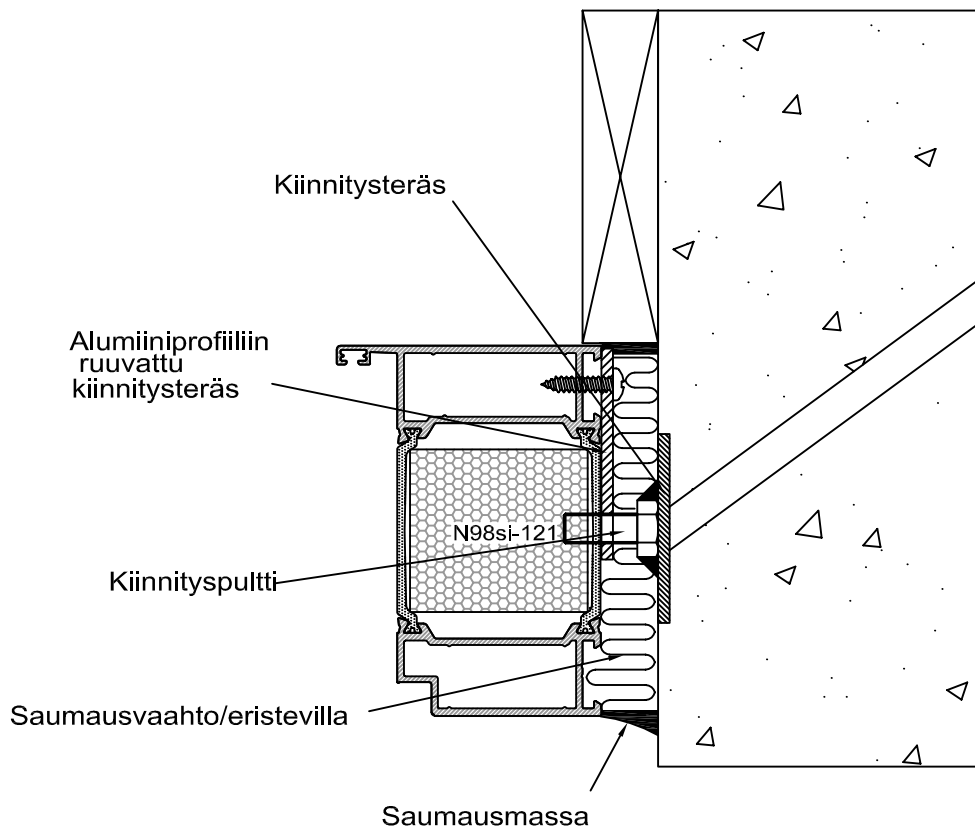
VAIHTOEHTO 1: KIINNITYSTERÄS + ASENNUSKIILA



VAIHTOEHTO 2: KIINNITYSTERÄS



VAIHTOEHTO 3: KIINNITYSTERÄS, SÄÄTÖPULTTI + HITSAUS



JÄRJESTELMÄ: N98si Lämpöeristetty ovi- ja ikkunajärjestelmä

MATERIAALIT: Seos EN AW-6060 [Al MgSi]
EN 573
EN 755 ja DIN 1748

PROFIILIMITAT: EN 755 tai DIN 1748
EN 12020 tai DIN 17615

PINTÄKÄSITTELYT: Anodisointi

Oksidikerrosten määrittäminen	SFS-EN ISO 12373-1
Kerrospaksuuden mitta	SFS-EN ISO 2360
Tiivistys	SFS-EN 12373-5 tai SFS-ISO 2932

Pulverimaalaus polyesteripohjaisella pulverilla

Kerrospaksuuden mitta	SFS-EN ISO 2360
Hilaristikkokoe	SFS-EN ISO 2409

LAATUJÄRJESTELMÄ: Nokian profiilit noudattaa ISO 9001 laatujärjestelmää

**YMPÄRISTÖJOHTAMIS-
JÄRJESTELMÄ:**

Nokian profiilit toimii ISO 14001:n mukaisesti

NokianProfiilit rakennusjärjestelmiä on valmistettu 40 vuotta. Perustuen meidän kokemukseemme, voimme ilmoittaa, että materiaalin ja pintakäsittelyn odotettu elinikä säännöllisesti ja asianmukaisesti huollettuna, on 50 vuotta.

Nokian Profiilit
Rakennusjärjestelmät