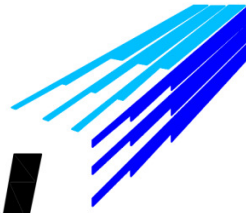
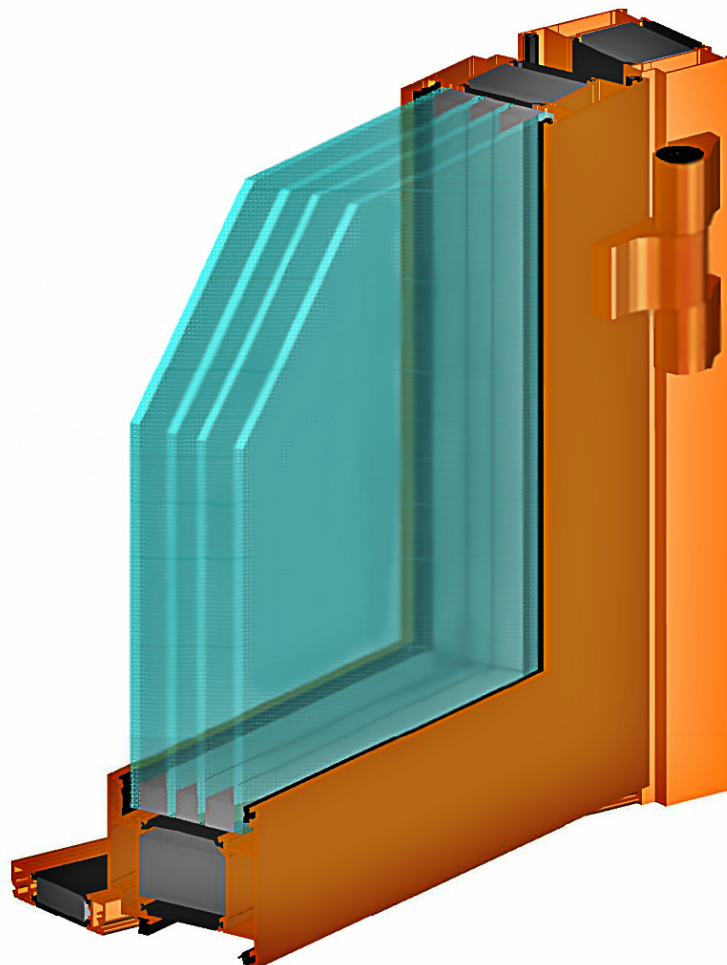


NOKIAN **PROFILES**



N98Si

DESIGN MANUAL



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MATERIAL CHARACTERISTICS

Aluminium profiles

AW-6060 T6	
Breaking strenght f_u (Rm)	190 N/mm ²
Yield strenght f_y (Rp 0,2)	150 N/mm ²
Elasticity modulus E	70 000 N/mm ²
Sliding factory G	27 000 N/mm ²
Density	2700 kg/m ³
Thermal expansion coefficient	23 · 10 ⁻⁶ /°C
Thermal conductivity	209 · W/m°C

Gaskets

EPDM/cellular-EPDM

Hardness	80±5 °Sh
Tensile strength	10 N/mm ²
Breaking strain	150 % min
Compression (22h/70 C)	25 % (max)

Thermal breaks

PA 6.6, Polyurethane

Screws

Delta coating	DT-DS 600 (DIN 50021)
or	
Stainless steel	A2

CROSS SECTION VALUES

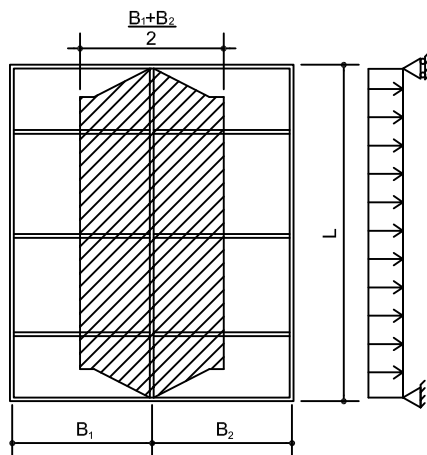
I_x [cm ⁴]	N98si-122	N98si-123	N98si-128	N98si-131	N98si-132	N98si-133
Length of profile						
1.0 m	24,3	23,0	21,9	21,1	22,2	19,4
1.5 m	39,3	37,2	34,9	34,1	35,4	30,3
2.0 m	52,4	49,2	45,8	44,9	46,1	38,7
2.5 m	62,6	58,5	54,0	52,9	54,1	44,8
3.0 m	70,2	65,4	60,0	58,7	59,8	49,0
3.5 m	75,9	70,4	64,4	63,0	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
Length of profile				
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

VERTICAL FRAME

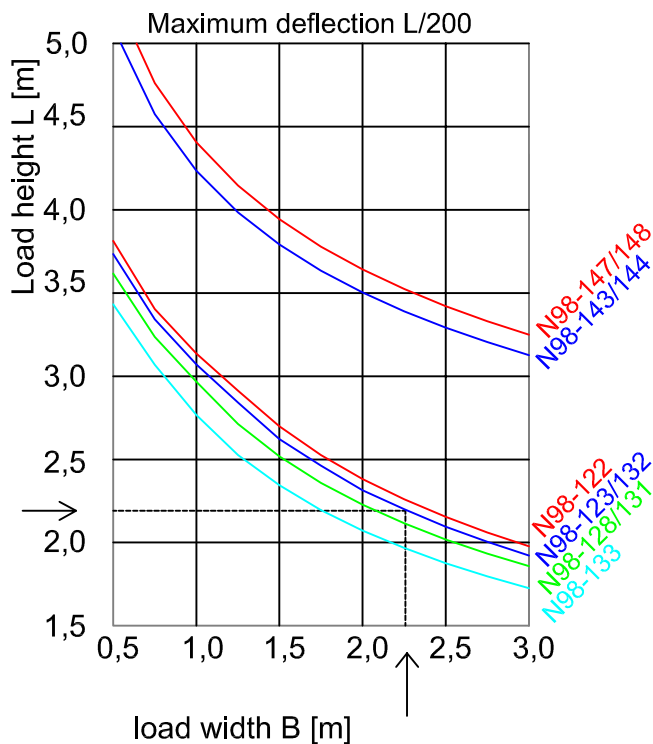
WIND LOAD

Span divided into sections



Dimensioning graph L/200

Wind load $q = 0,6 \text{ kN/m}^2$
Tension $< 100 \text{ N/mm}^2$

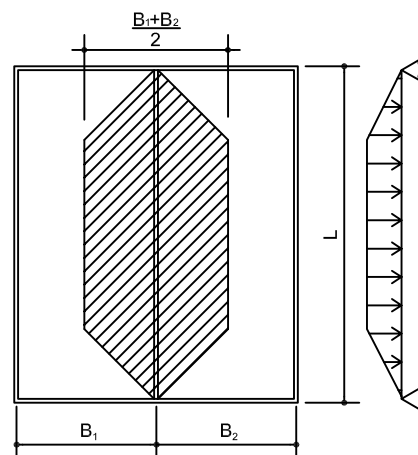


Design example

WIND LOAD:
Industrial area, terrain class III
Structure height 10 m
-->wind load $q = 0,6 \text{ kN/m}^2$
 $B_1 = 2,5 \text{ m}$, $B_2 = 2,0 \text{ m}$, $L = 2,2 \text{ m}$
Load width --> $\frac{B_1+B_2}{2} = 2,25 \text{ m}$

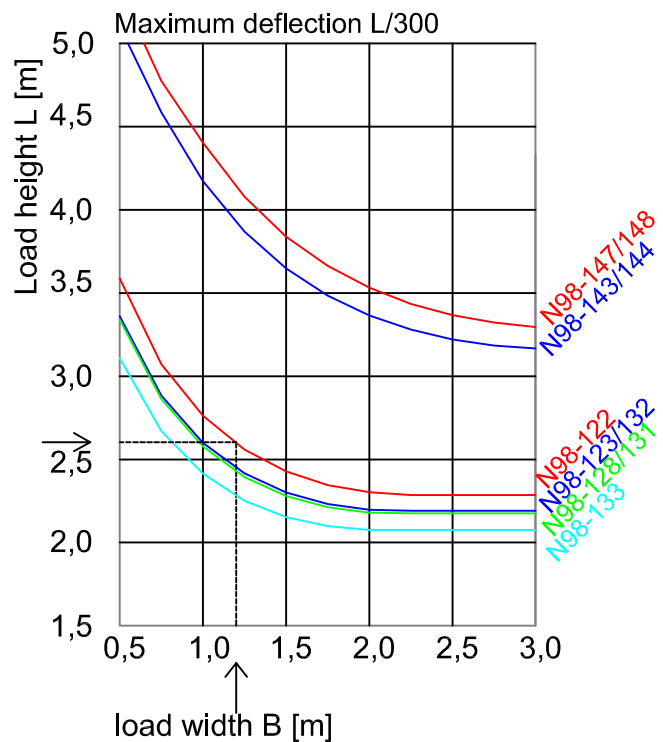
Dimensioning graph of vertical frame (L/200)
--> Vertical frame N98-132

Span not divided into sections



Dimensioning graph L/300

Wind load $q = 0,6 \text{ kN/m}^2$
Tension $< 100 \text{ N/mm}^2$



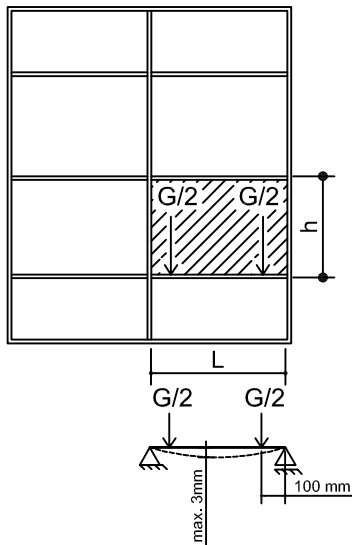
Design example

WIND LOAD:
Industrial area, terrain class III
Structure height 10 m
-->wind load $q = 0,6 \text{ kN/m}^2$
 $B_1 = 1,2 \text{ m}$, $B_2 = 1,2 \text{ m}$, $L = 2,6 \text{ m}$
Load width --> $\frac{B_1+B_2}{2} = 1,2 \text{ m}$

Dimensioning graph of vertical frame (L/300)
--> Vertical frame N98-122

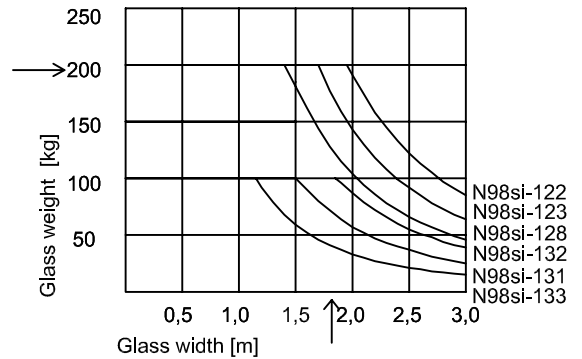
HORIZONTAL FRAME

WEIGHT OF GLASS



Deflection
deflection of horizontal profile < 3 mm

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



Design example

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

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

Dimensioning graph of horizontal frame (glass weight)

--> horizontal frame R72-122

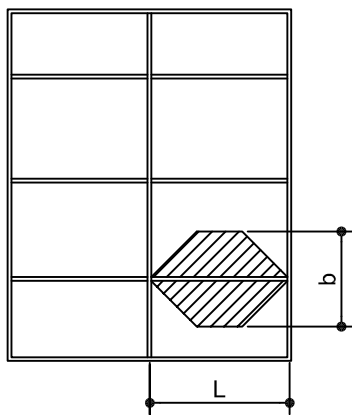
N98si-122 max. glass weight

--> 200 kg > 197 kg ok

Glass package weights

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

WIND LOAD



Design example

--> wind load q = 0,6 kN/m²

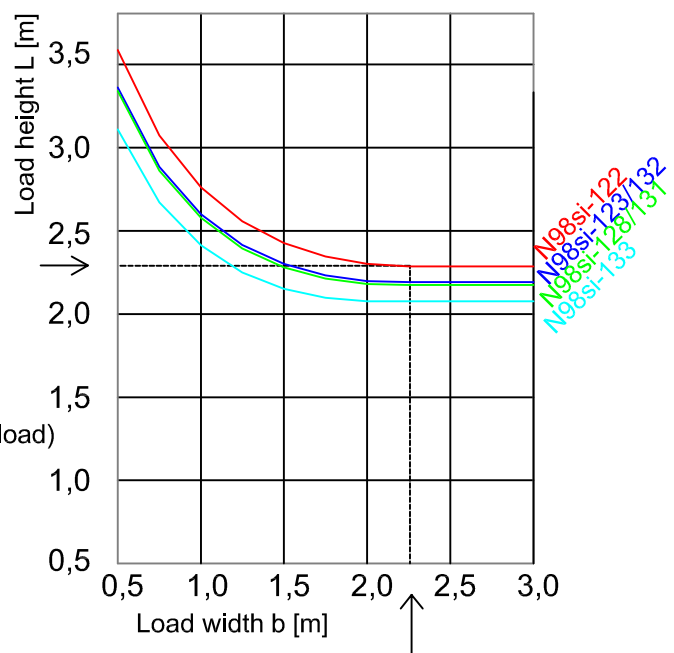
L = 2,3 m, b = 2,25 m

Dimensioning graph of horizontal frame (wind load)

--> Horizontal frame N98si-122

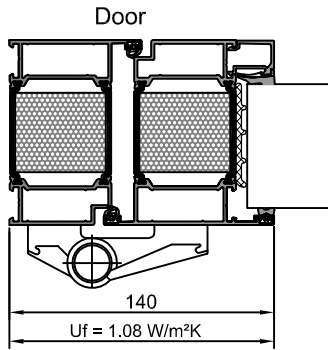
Dimensioning graph L/300

Wind load q = 0,6 kN/m²
Tension < 100 N/mm²
Maximum deflection L/300

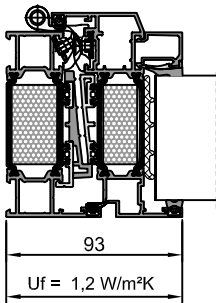


U-values

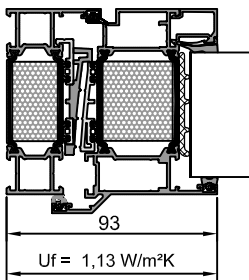
Average thermal transmittance



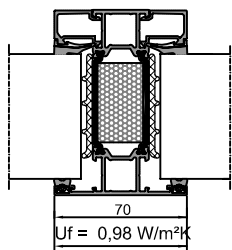
Window



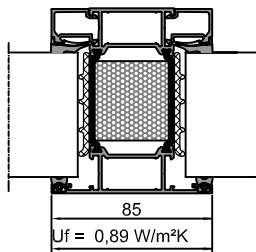
Outwards opening window



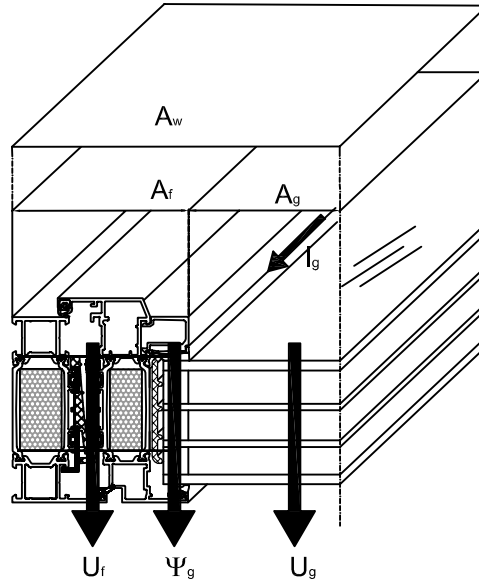
N98-132



N98-122



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



A_f = area of the frame [m²]

A_g = light opening area [m²]

A_w = A_f + A_g [m²]

l_g = length of the heat bridge forming on the edge of the light opening [m]

U_f = thermal transmittance of the frame [W/m²K]

U_g = thermal transmittance of the light opening [W/m²K]

Ψ_g = linear thermal transmittance [W/m²K]

Ψ_g = 0.06, 2K/3K no coating

Ψ_g = 0.08, 2K/3K with selective coating

Example

- Window 1.4m x 1.7m

- Glass 3K, U = 1.0 W/m²K

A_f = 0.66 [m²]

A_g = 1.72 [m²]

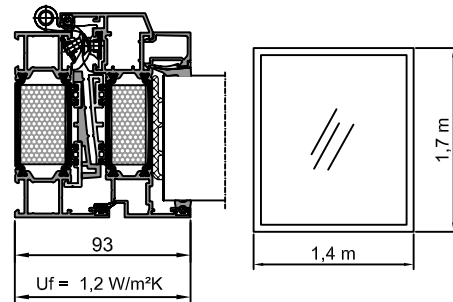
A_w = 2.37 [m²]

l_g = 5.39 [m]

U_f = 1.2 [W/m²K]

U_g = 0.3 [W/m²K]

Ψ_g = 0.04 [W/m²K]

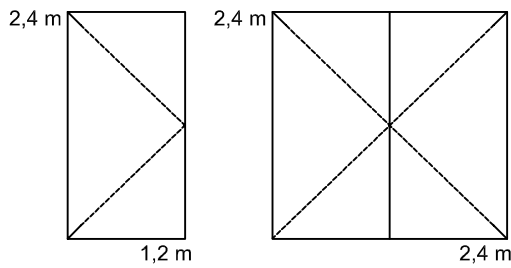


$$U_w = \frac{1.80 \times 0.3 + 0.66 \times 1.2 + 5.39 \times 0.04}{2.38} = 0.65 \text{ W/m}^2\text{K}$$

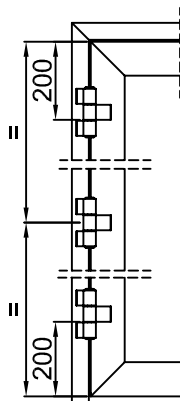
U_f values are defined according to the standard EN10077-2 with program or by Hotbox method

Doors size and weight Strip width

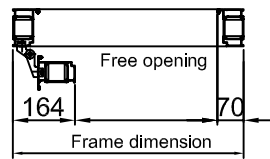
Windows size and weight



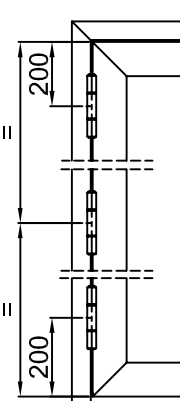
Standard hinge



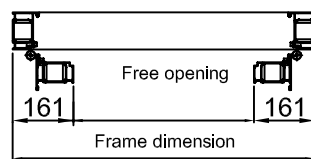
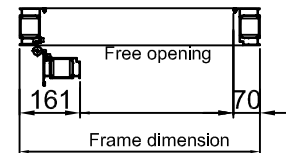
max. 120 kg



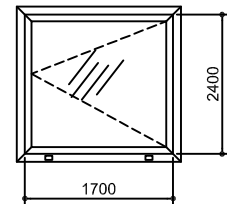
Pipe hinge



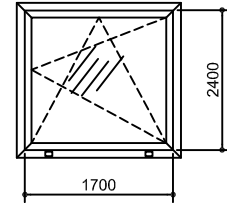
max. 100 kg



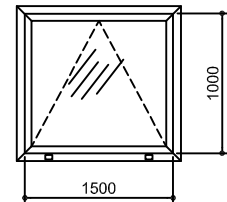
External dimensions of the sash



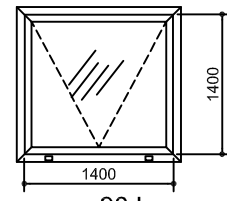
max. 100 kg



max. 150 kg

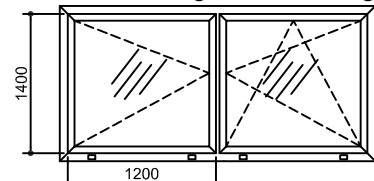


max. 70 kg

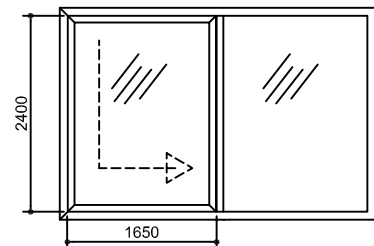


max. 70 kg

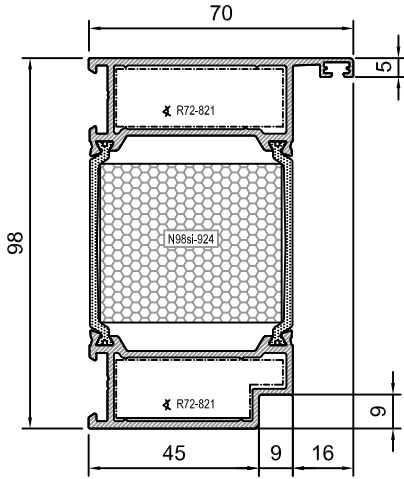
max. 90 kg max. 150 kg



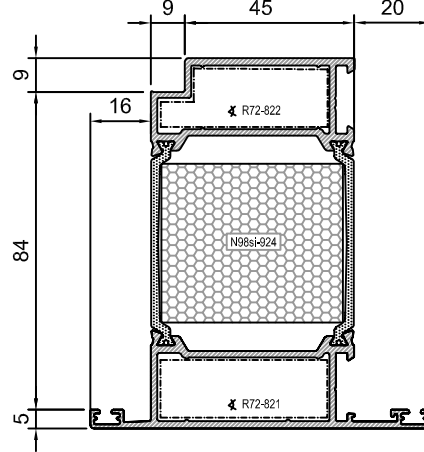
max. 150 kg



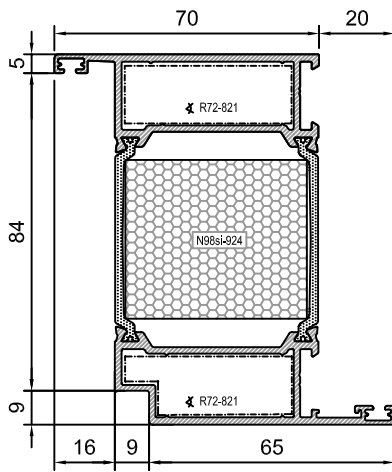
N98si-121



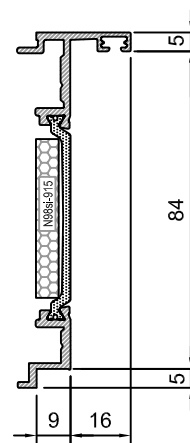
N98si-124



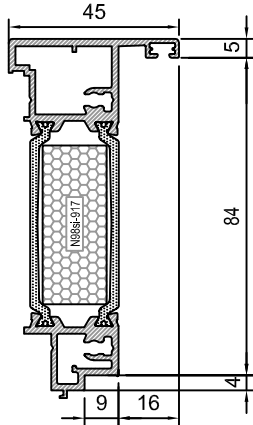
N98ss-125



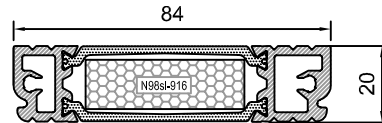
N98si-201



N98si-202



N98si-203



N98si-503

Stainless sill surface

R72-505

Brush seal profile

R72-510

Slide window sub-profile

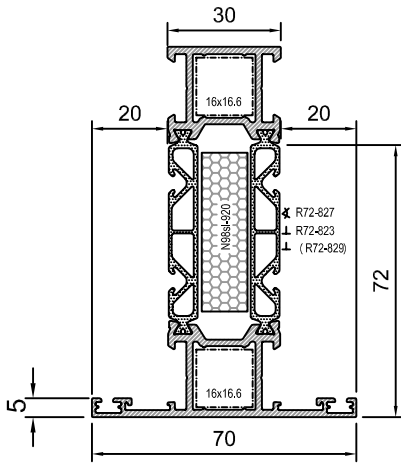
R72-523

External steel mounting

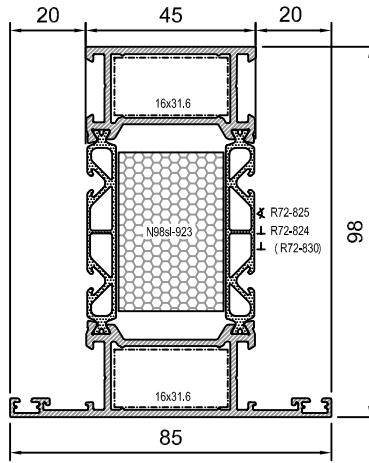
R72-524

Drip

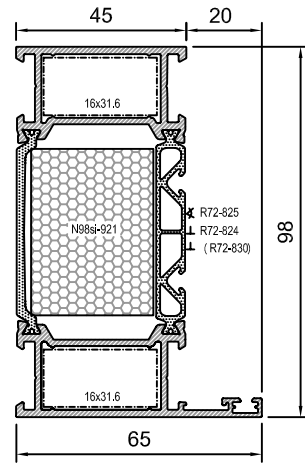
N98si-132



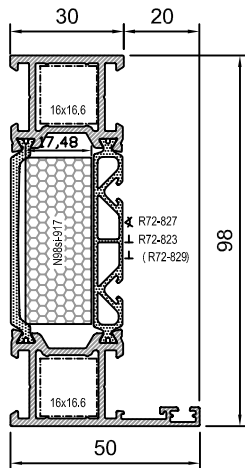
N98si-122



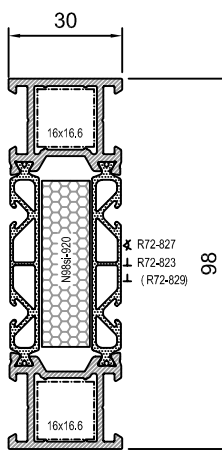
N98si-123



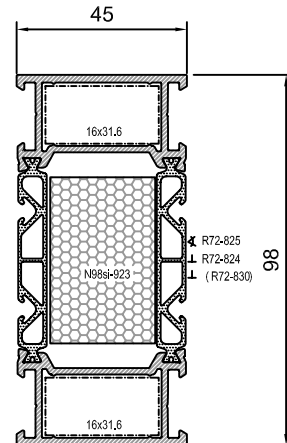
N98si-131



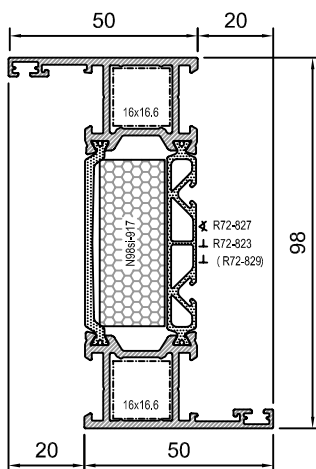
N98si-133



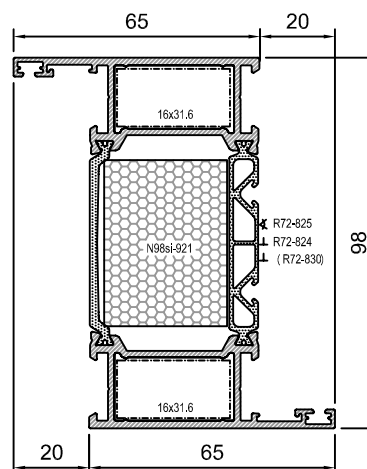
N98si-128



N98si-139



N98si-129



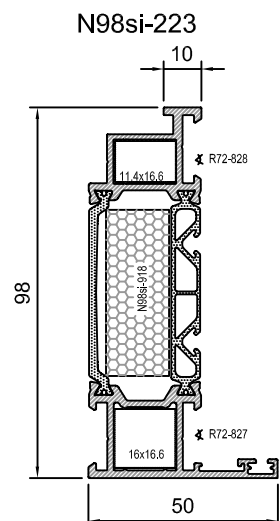
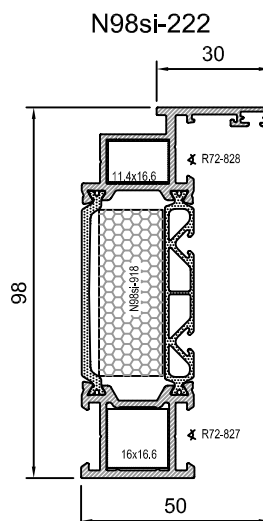
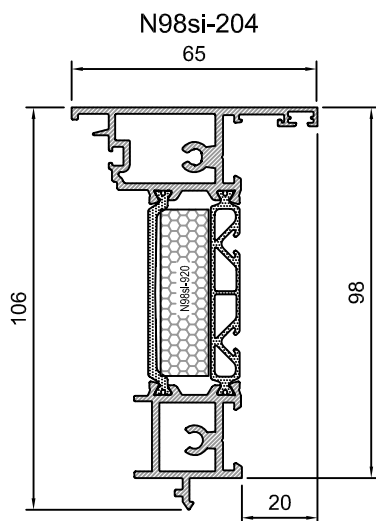
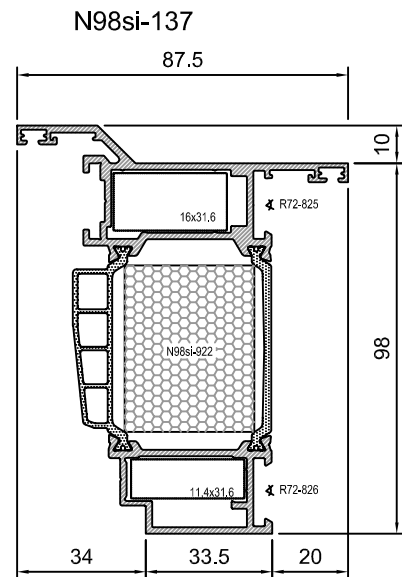
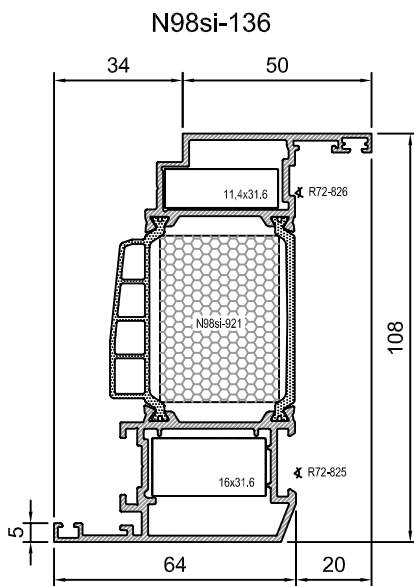
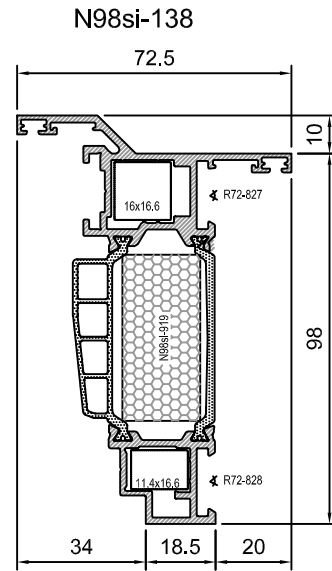
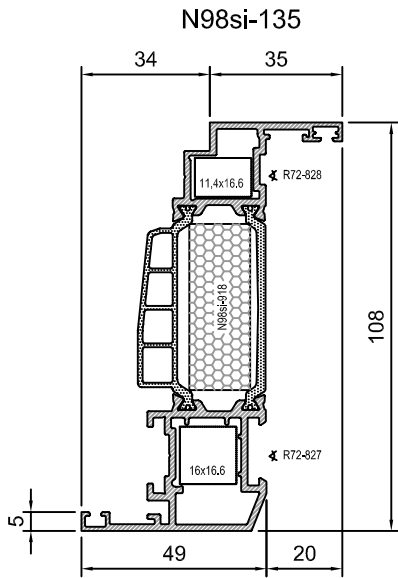
01.06.2015

N98si 2.2

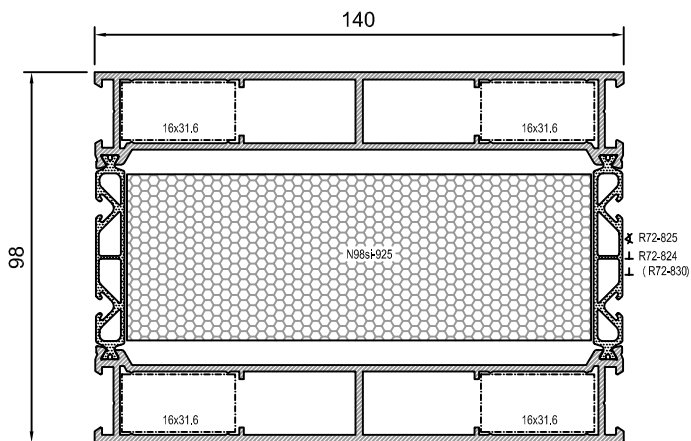
**NOKIAN
PROFILES**



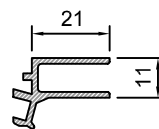
Profiles



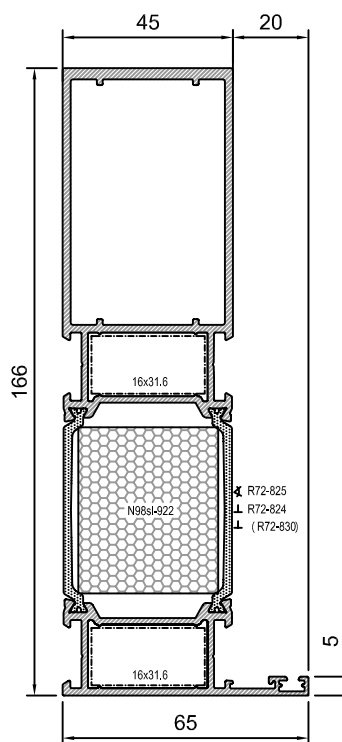
N98si-140



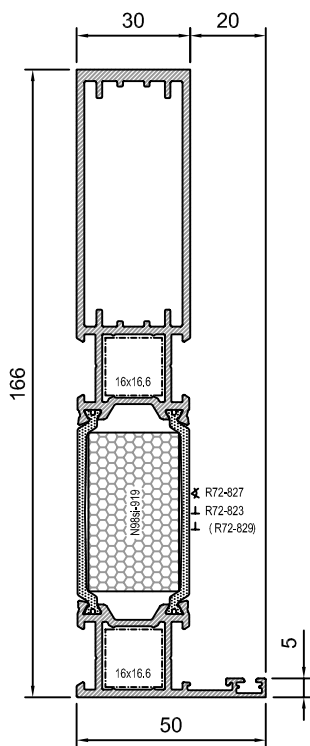
R72-509



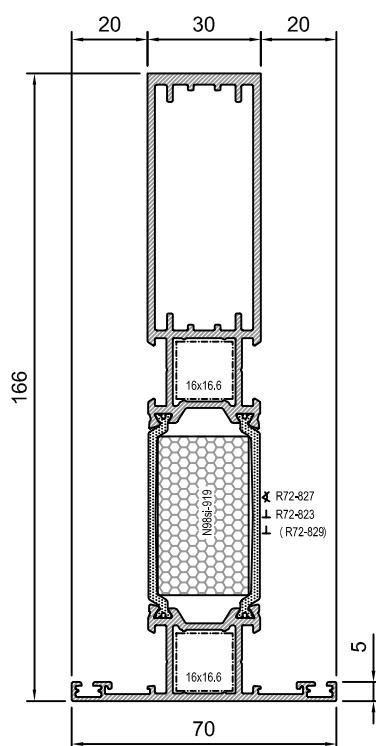
N98si-147



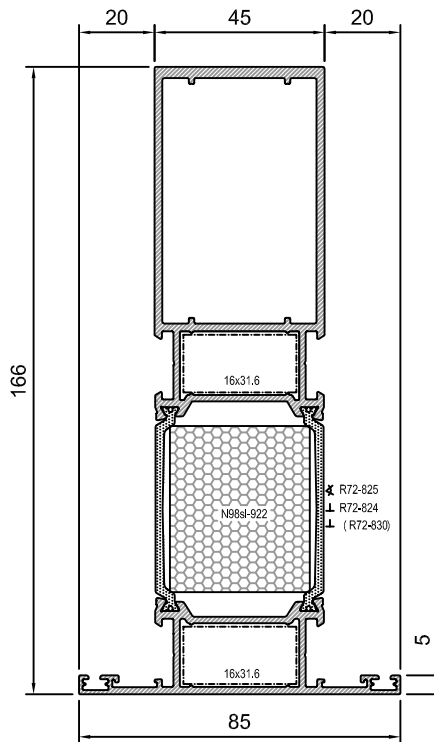
N98si-143

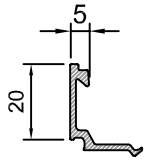


N98si-144

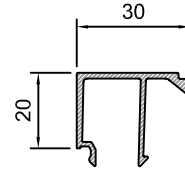


N98si-148

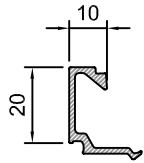




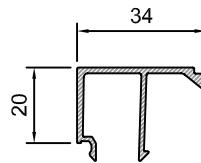
R72-320



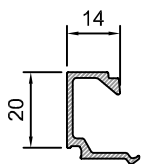
R72-326



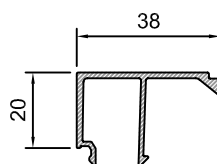
R72-321



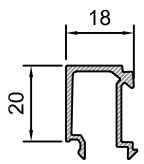
R72-327



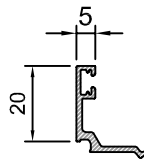
R72-322



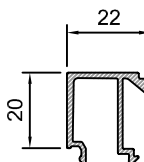
R72-328



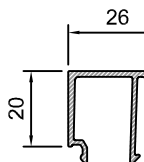
R72-323



R72-329



R72-324



R72-325



R72-701

Double door cap-piece

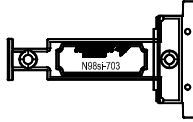
N98si-124/125



N98si-702

Double door cap-piece

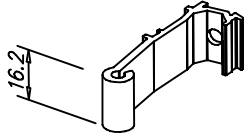
N98si-202



N98si-703

Double door cap-piece

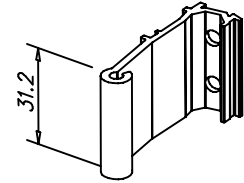
N98si-204



R72-823

T-connection piece

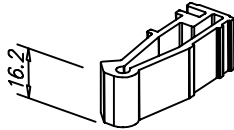
N98si-131
N98si-132
N98si-133
N98si-139



R72-824

Big T-connection piece

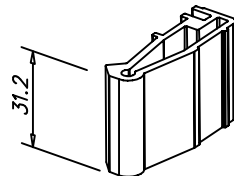
N98si-122
N98si-123
N98si-128
N98si-129



R72-829

T-connection piece II

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



R72-830

Big T-connection piece II

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



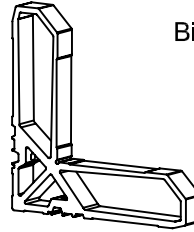
R72-801

Small corner plate



R72-802

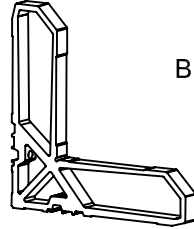
Big corner plate



R72-825

Big corner piece 15,6 mm

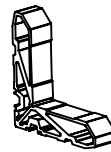
N98si-122
N98si-123
N98si-128
N98si-129
N98si-136
N98si-137



R72-826

Big corner piece 11 mm

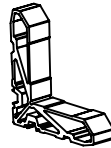
N98si-136
N98si-137



R72-827

Small corner piece 15,6 mm

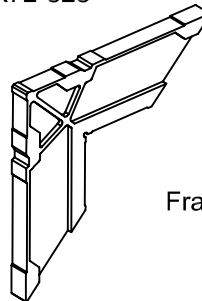
N98si-131
N98si-132
N98si-133
N98si-135
N98si-138
N98si-139



R72-828

Small corner piece 11 mm

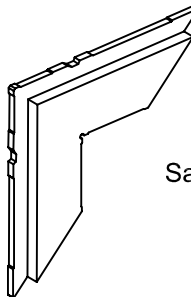
N98si-135
N98si-138



R72-821

Frame & sash corner element

N98si-121
N98si-125



R72-822

Sash corner element

N98si-121
N98si-124



R72-708

Ventilation plug



R72-710

Glass support element L=200 mm

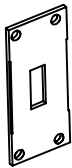
Frame corner gasket (N98si-681)
N98si-681L

Sash corner gasket (N98si-682)
N98si-682L



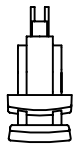
R72-725

Edge bolt lead-through



N98si-726

Lock counterplate



R72-727

Lever bolt



R72-728


Edge bolt





R72-401


Slider


Gaskets

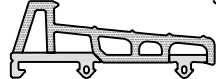
614  Brush seal

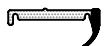
651  Rabbit seal


652  Glazing gasket


653  Glazing gasket


656  Retrofit gasket

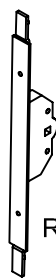
N98si-681  Central gasket of frame

N98si-683  Threshold seal

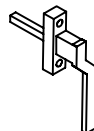
657  Rebate seal

638  Double-window gasket

661  Brush seal



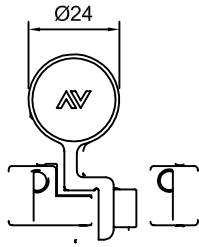
R72-729 Outwards opening window mechanism



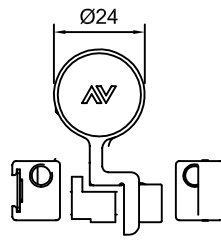
R72-730

Outwards opening window handle

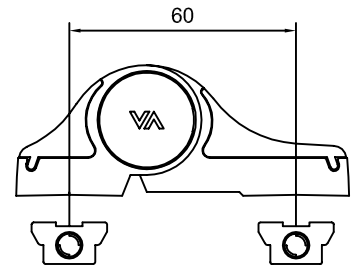
Door hinges



R72-722



R72-723
Frame with profile N98si-201



R72-724

Window fittings

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

Side/bottom hinged	W (850-1700)	H (850-2400)
R72-905	850-1200	850-1400
R72-906	1201-1700	1401-2400

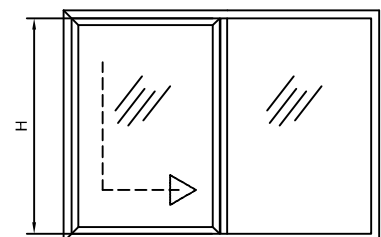
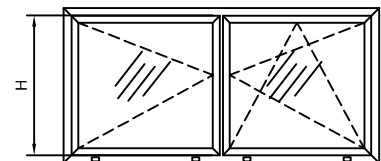
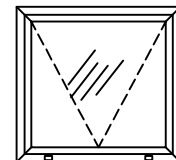
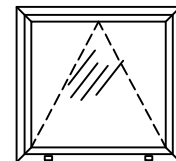
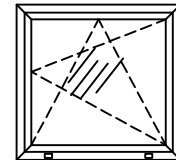
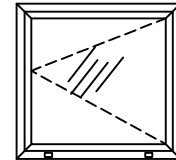
Bottom hinged	W (450-1500)	H (850-1000)
R72-907	450-900	850-1000
R72-908	901-1500	850-1000

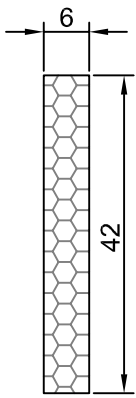
Top hinged	W (650-1000)	H (850-1400)
R72-910	650-1000	500-1400
R72-911	1000-1400	500-1400

Pair window	W (850-1200)	H (850-1400)
R72-913	850-1200	850-1400

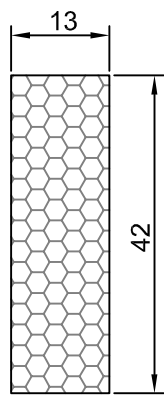
Sliding window	W (900-1650)	H (1401-2400)
On special request		

External dimensions of sash

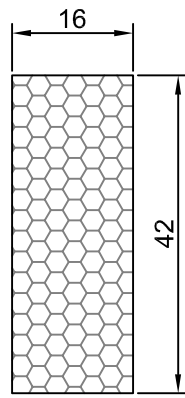




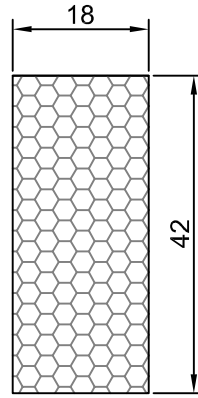
N98-915



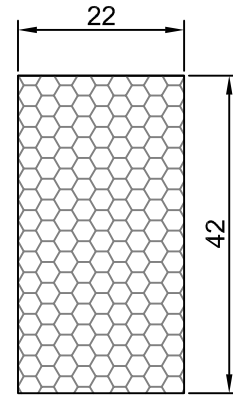
N98-916



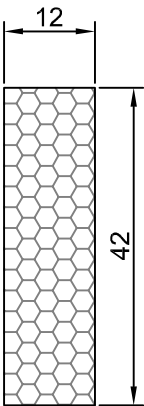
N98-917



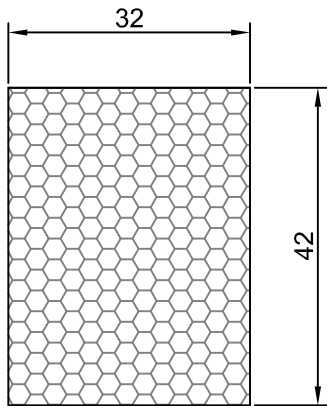
N98-918



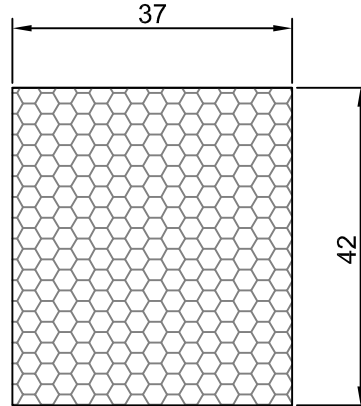
N98-919



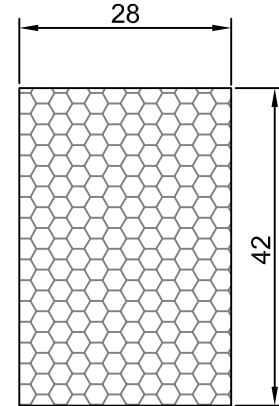
N98-920



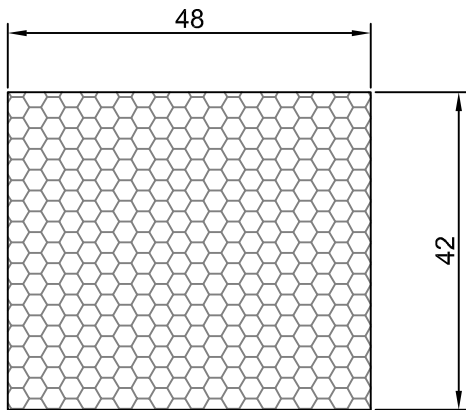
N98-921



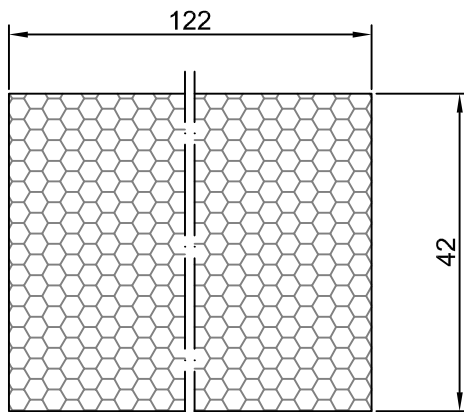
N98-922



N98-923

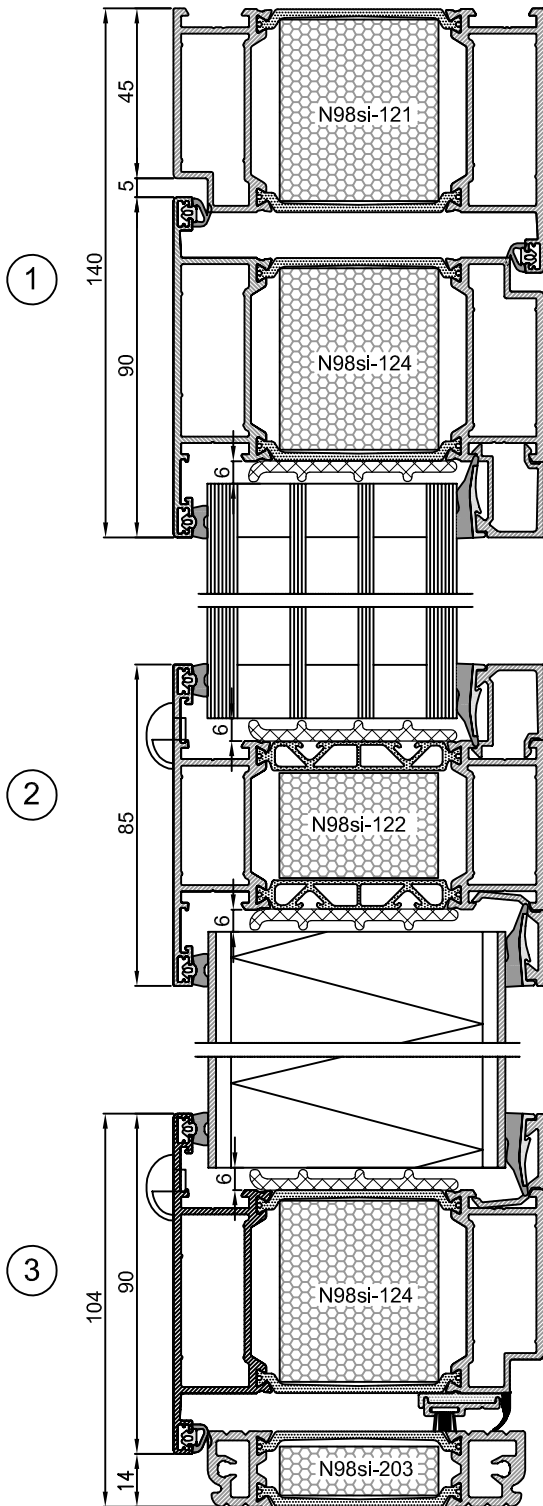
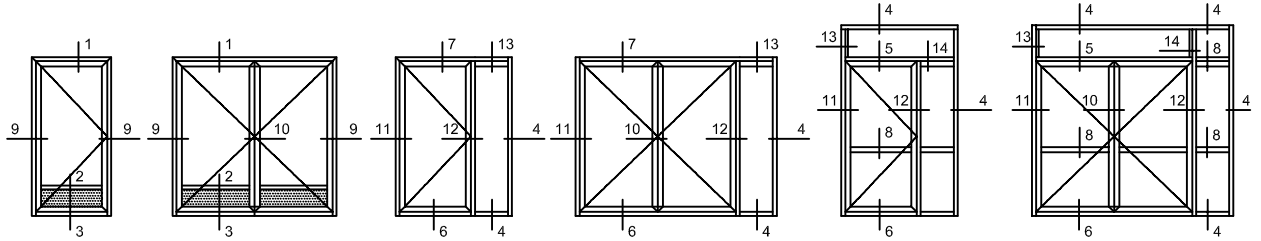


N98-924

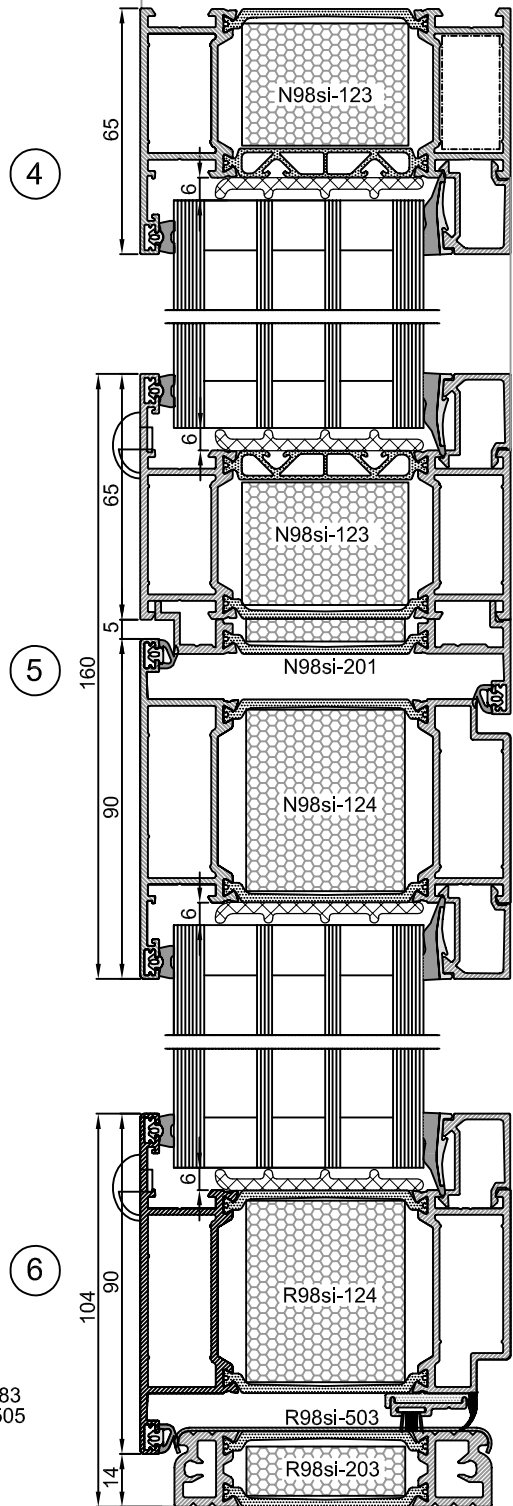


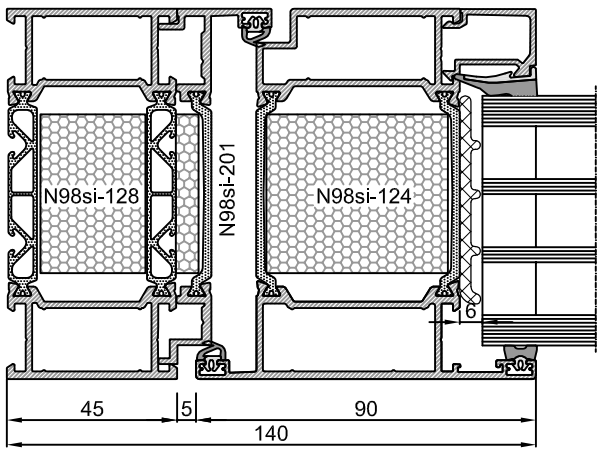
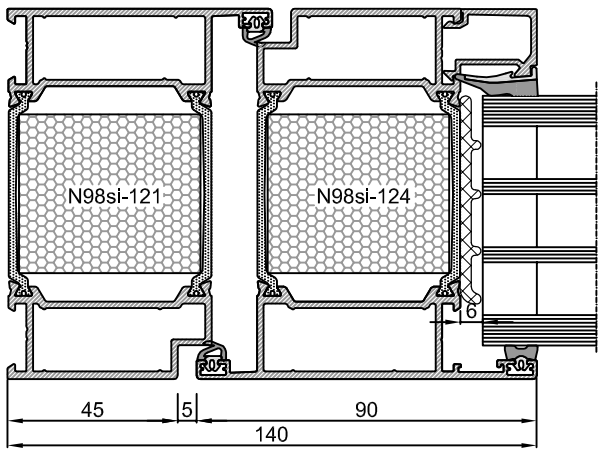
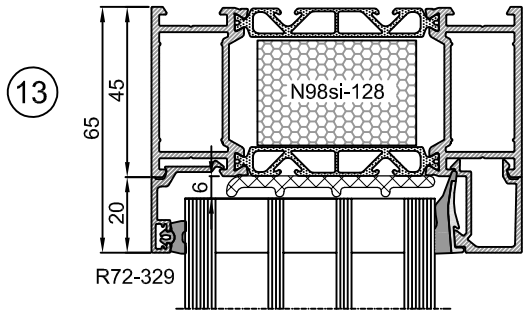
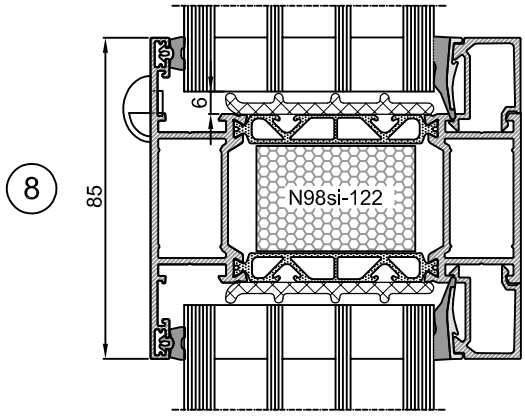
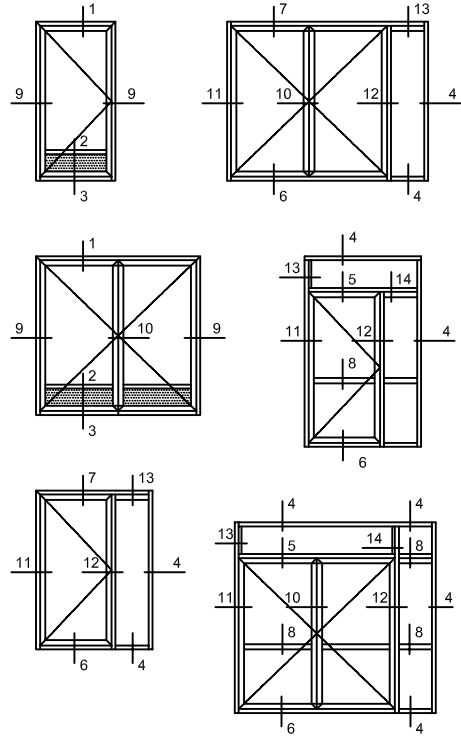
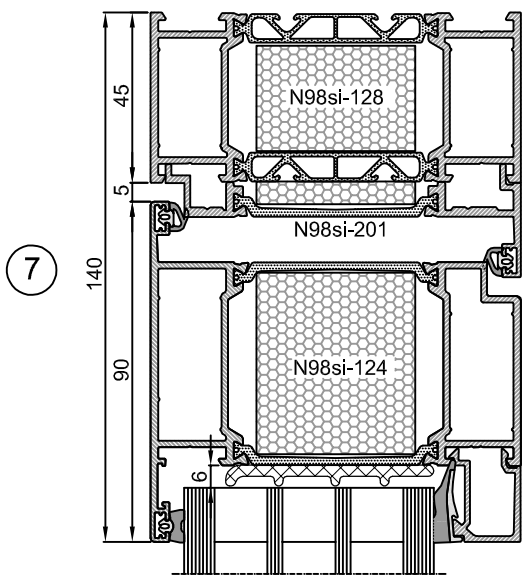
N98-925

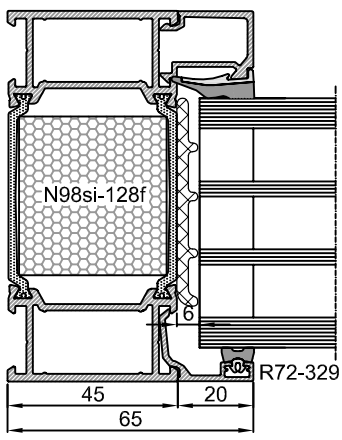
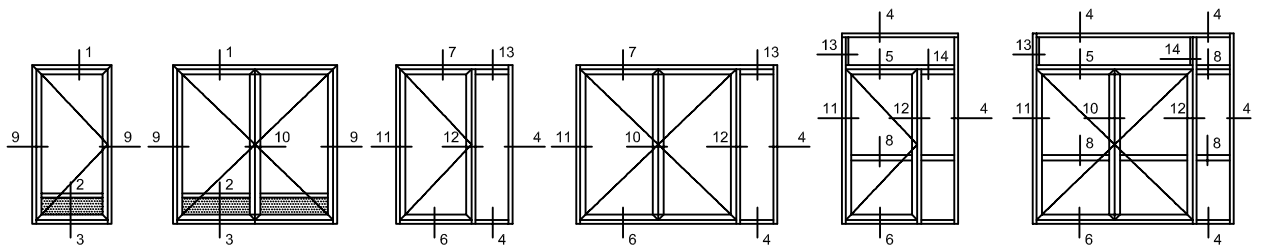
PU-filling	Compatible profiles
N98si-915	N98si-201
N98si-916	N98si-203
N98si-917	N98si-202, N98si-131, N98si-139
N98si-918	N98si-135, N98si-222, N98si-223
N98si-919	N98si-138, N98si-143, N98si-144
N98si-920	N98si-132, N98si-133, N98si-204
N98si-921	N98si-123, N98si-129, N98si-136
N98si-922	N98si-137,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



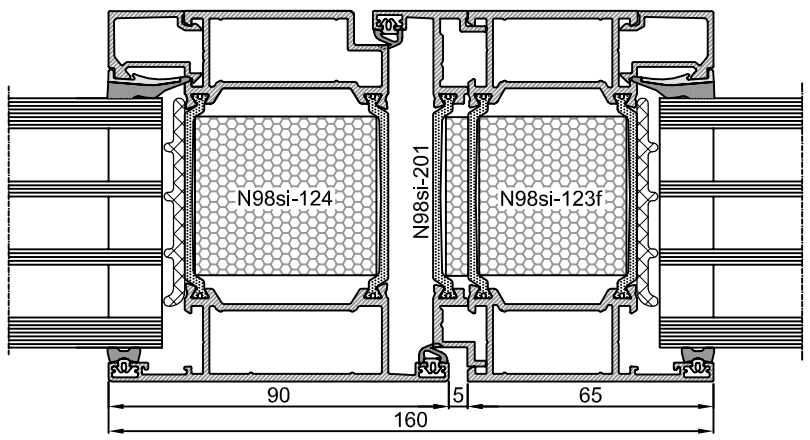
N98si-683
& R72-505



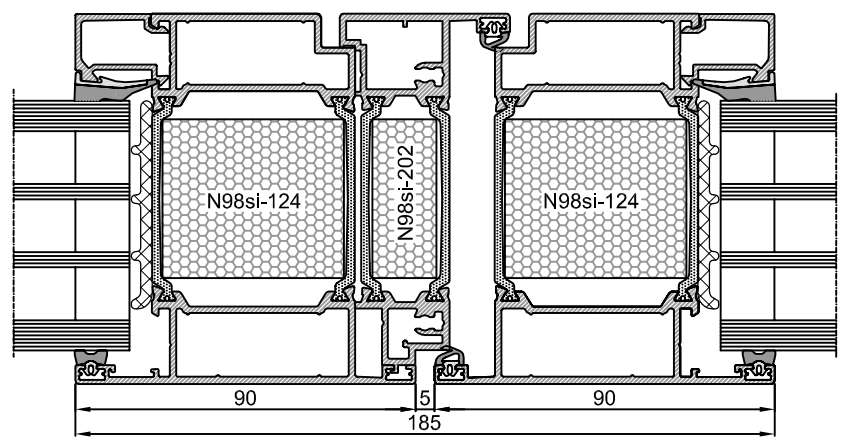




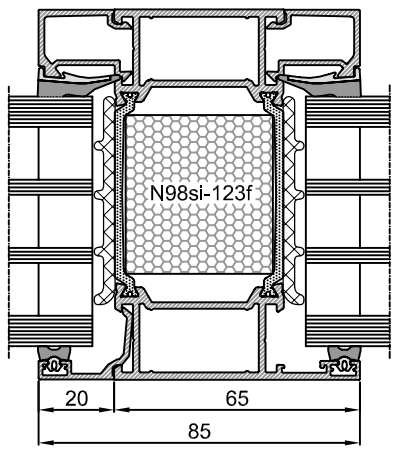
13



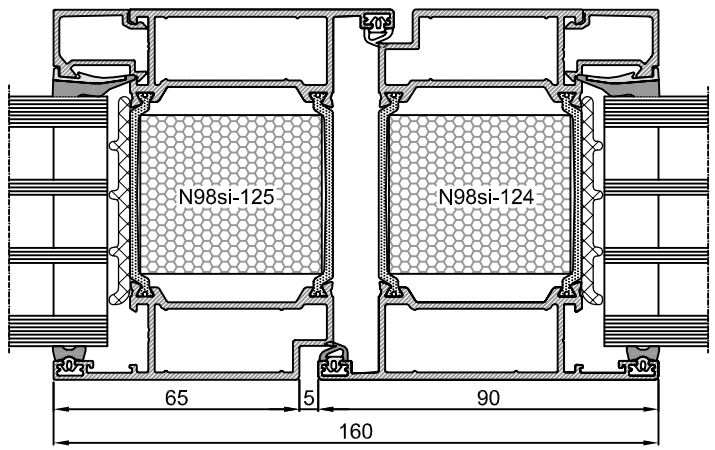
12



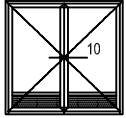
10



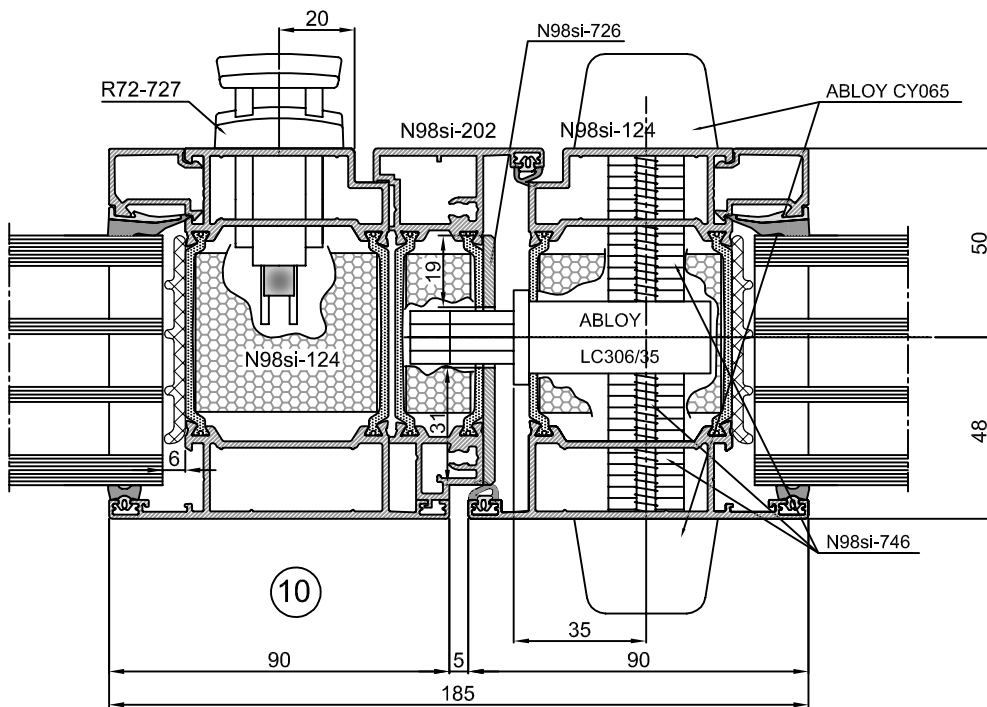
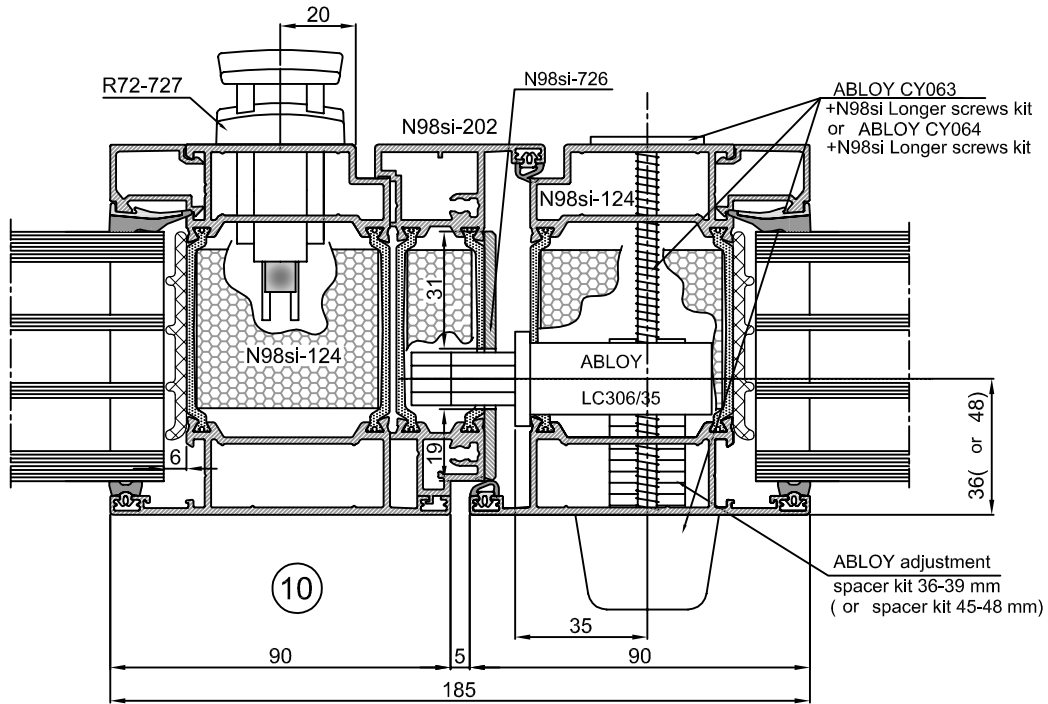
14



10



Mechanical safety lock



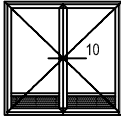
01.06.2015

N98si 4.4

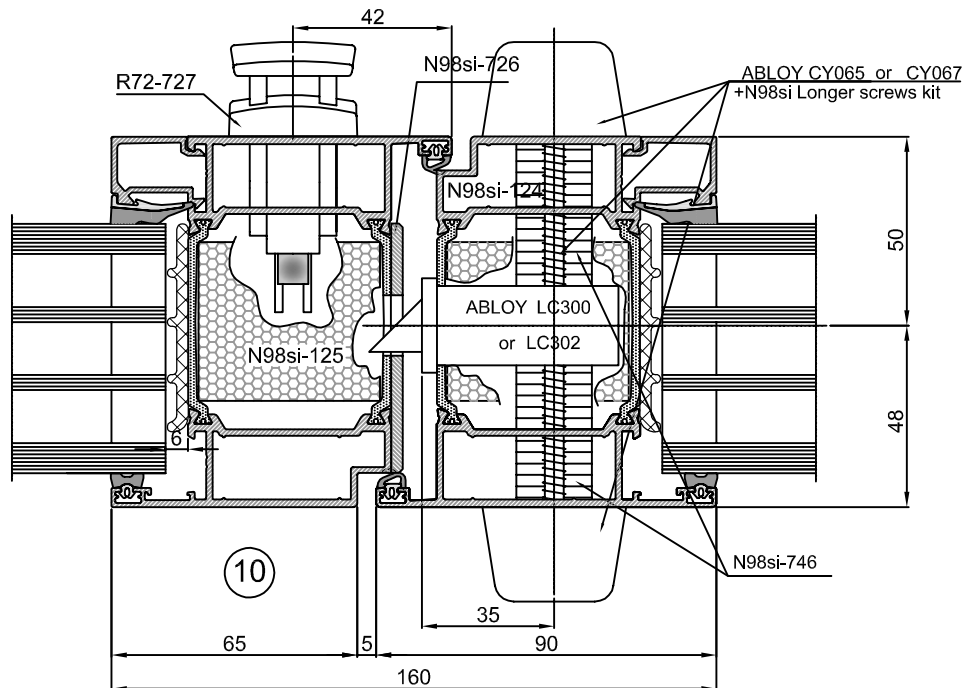
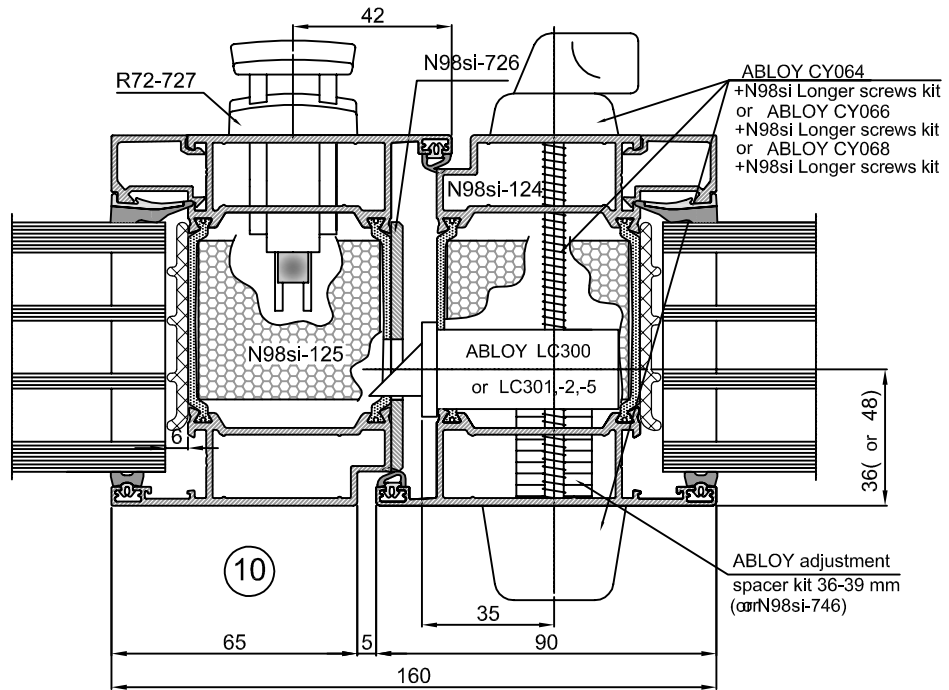
**NOKIAN
PROFILES**

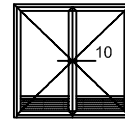


Outwards opening door

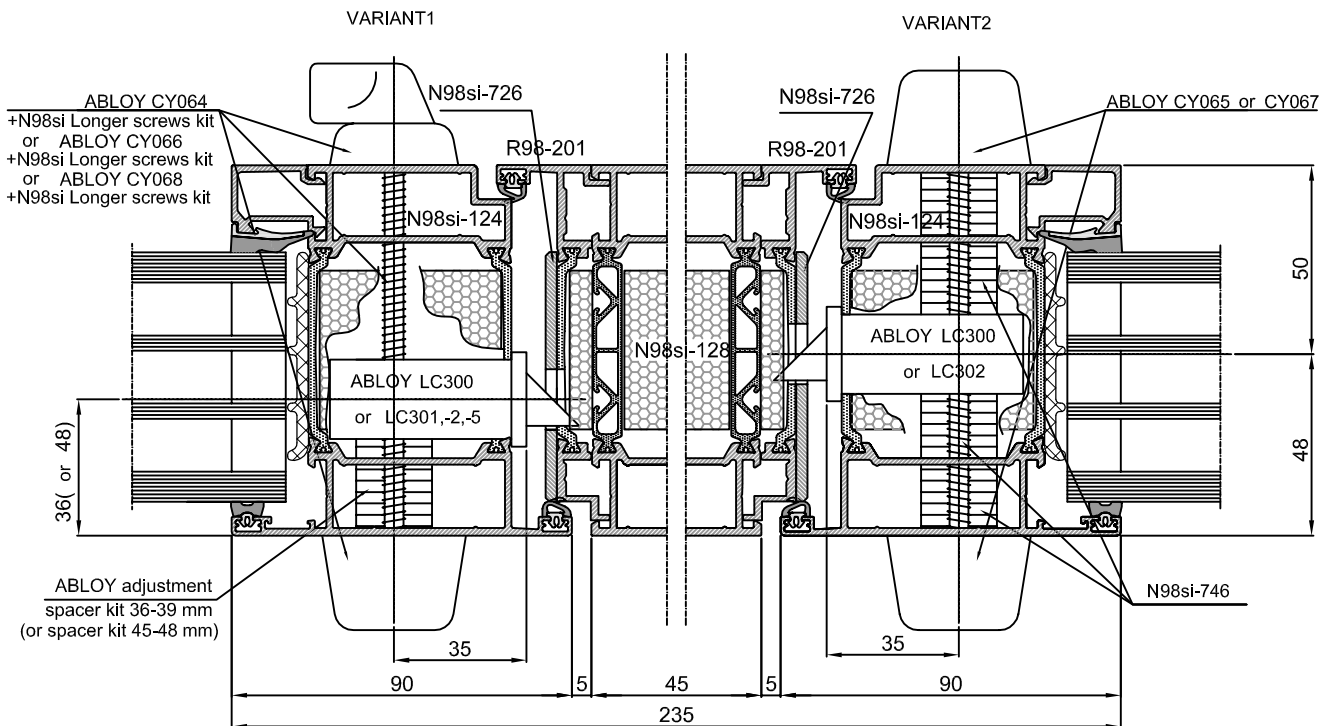


Automatical and operating locks



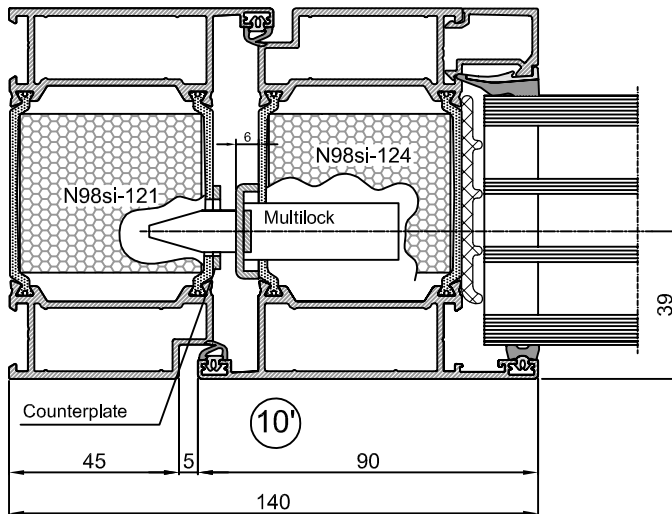
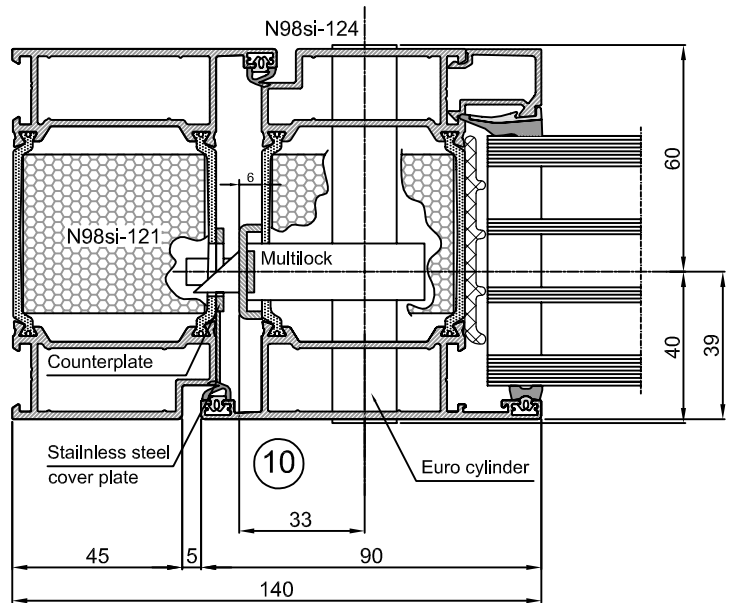


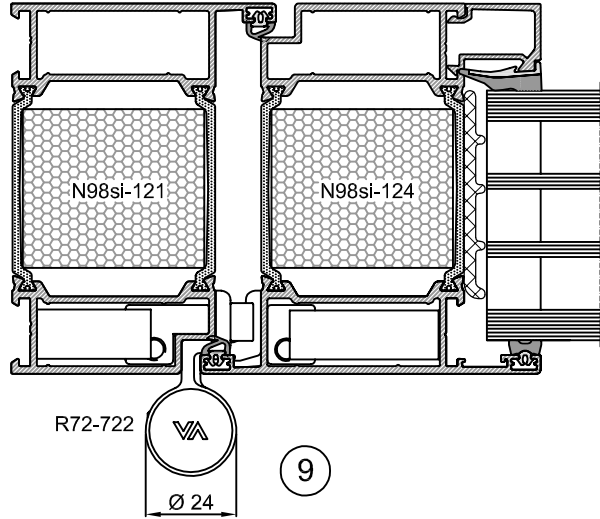
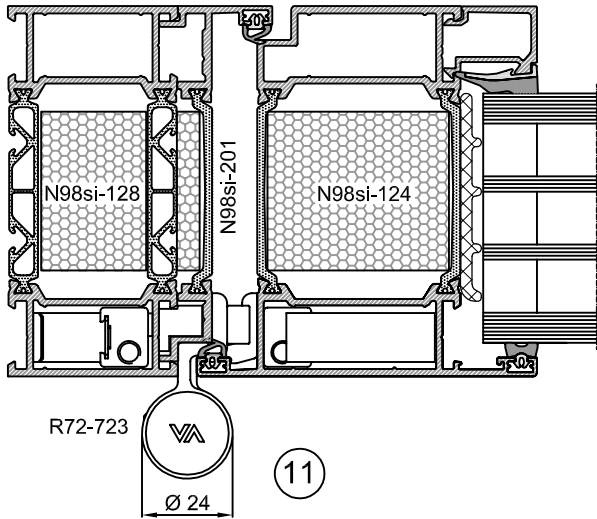
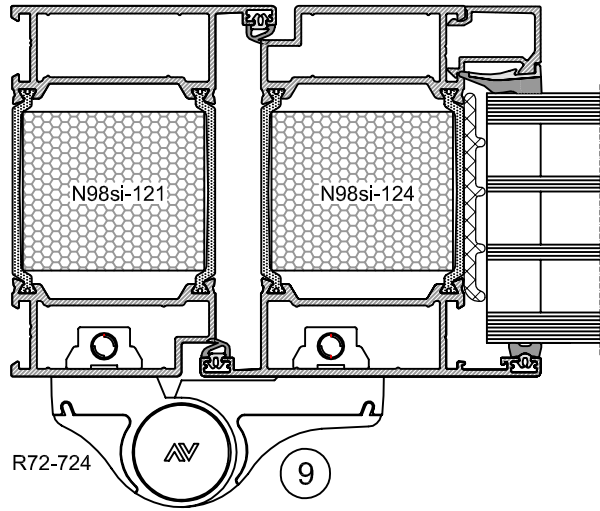
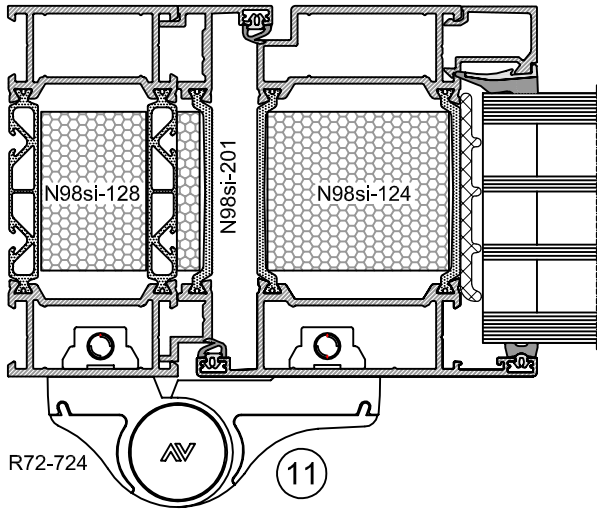
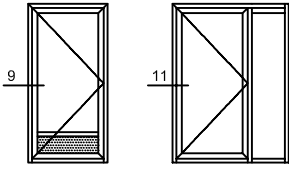
Automatic and operating locks



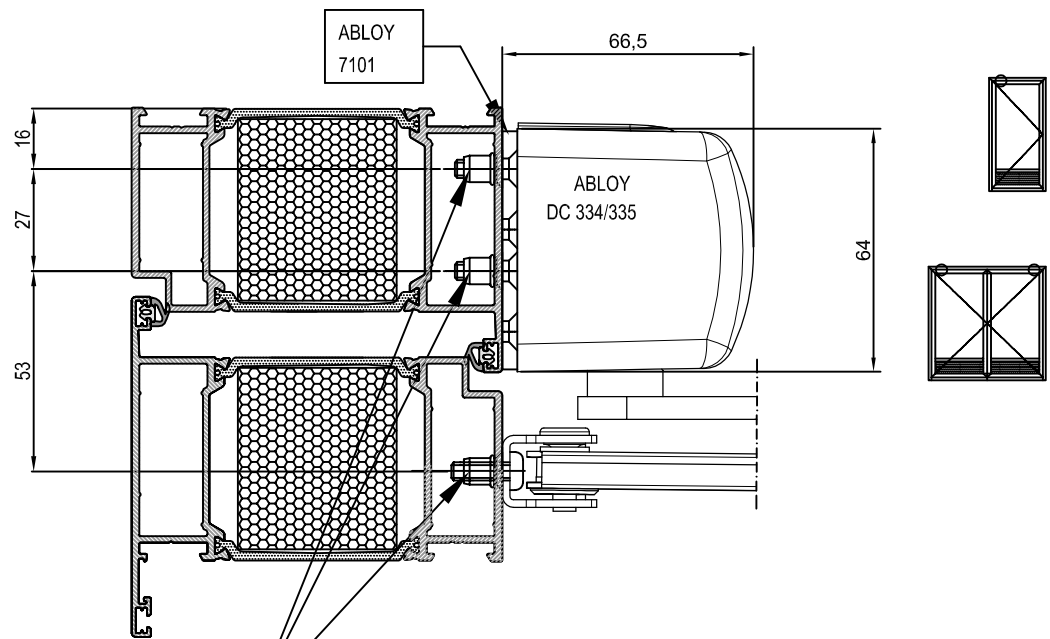
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01.06.2015

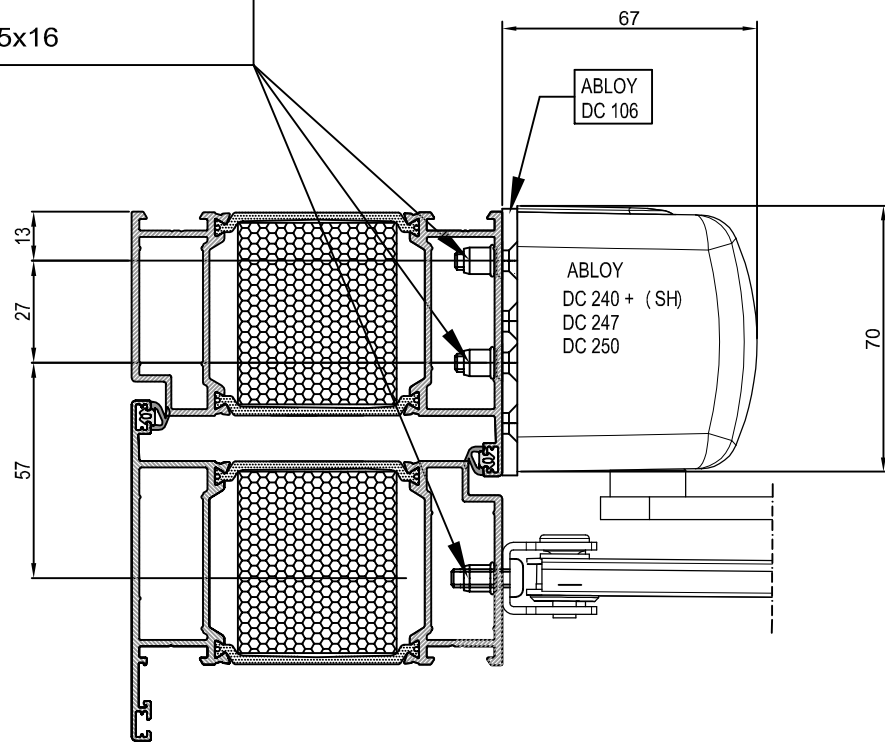




01.06.2015



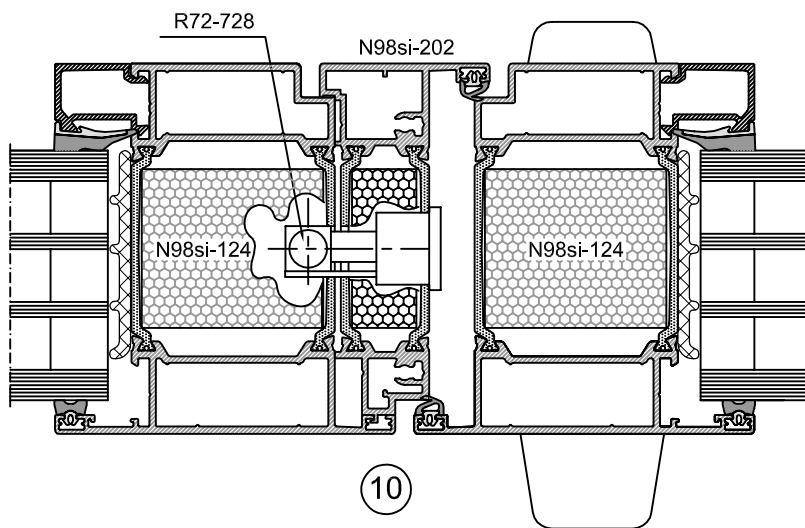
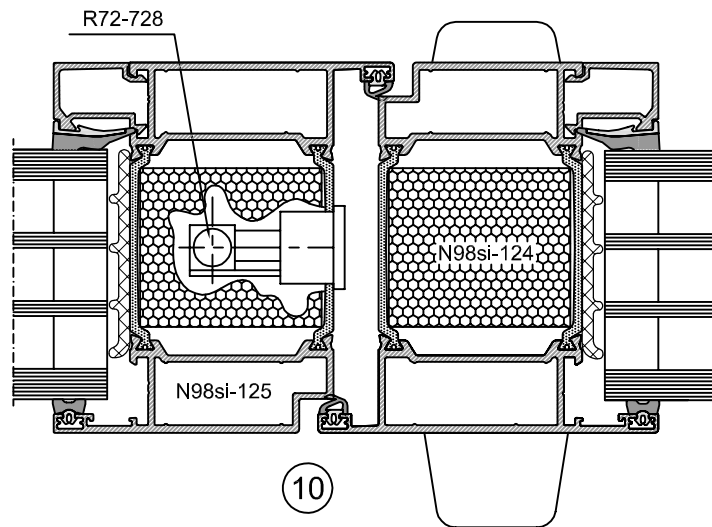
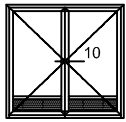
R72-721 (RIVET NUT M5)
 HOLE Ø7,1
 SCREW M5x16



All OUTERN doors should be equipped with opening breaking door closers

More information can be found from Abloy catalogue for metal doors

01.06.2015



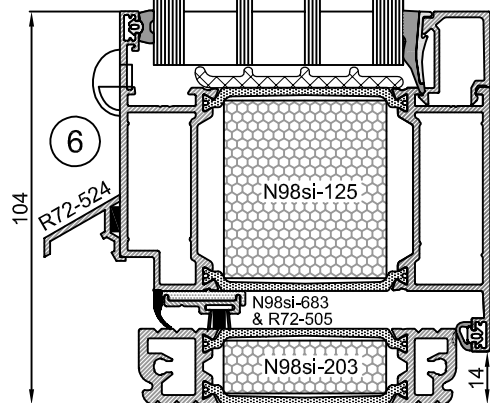
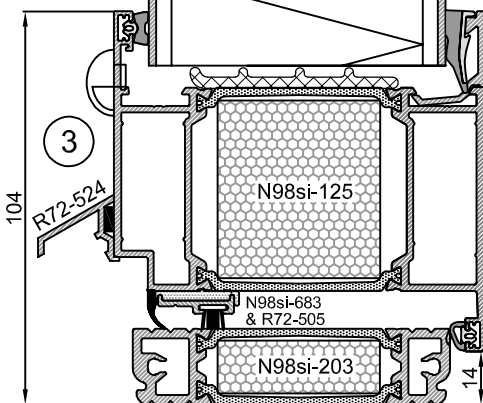
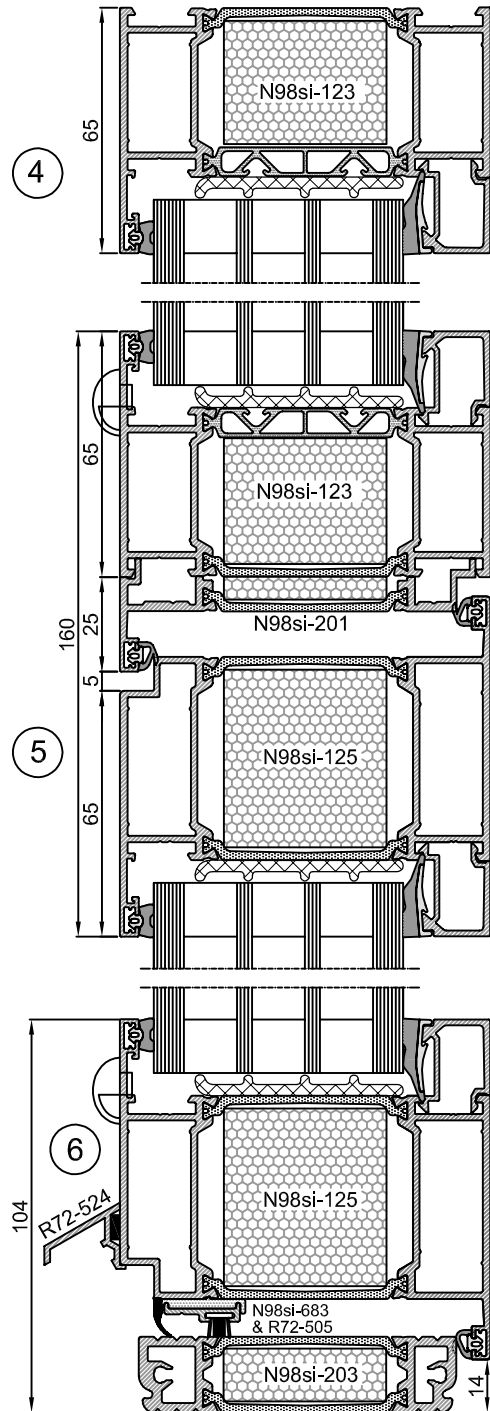
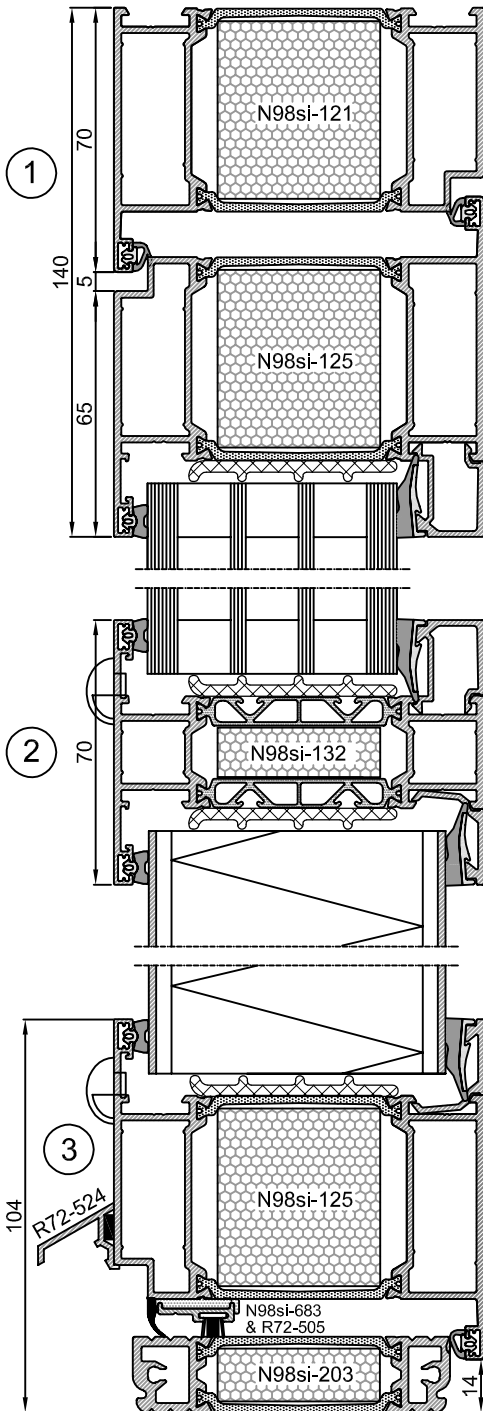
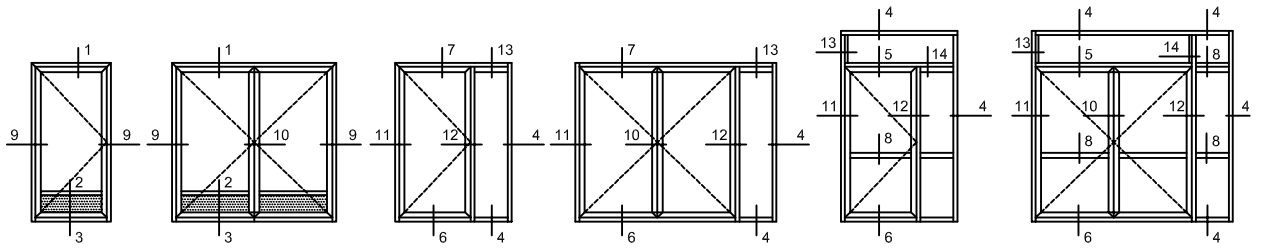
01.06.2015

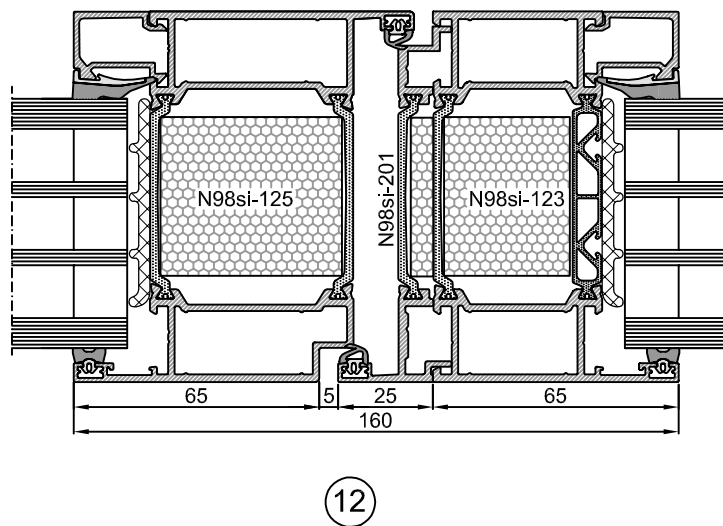
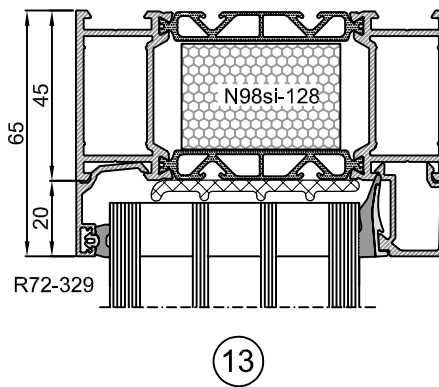
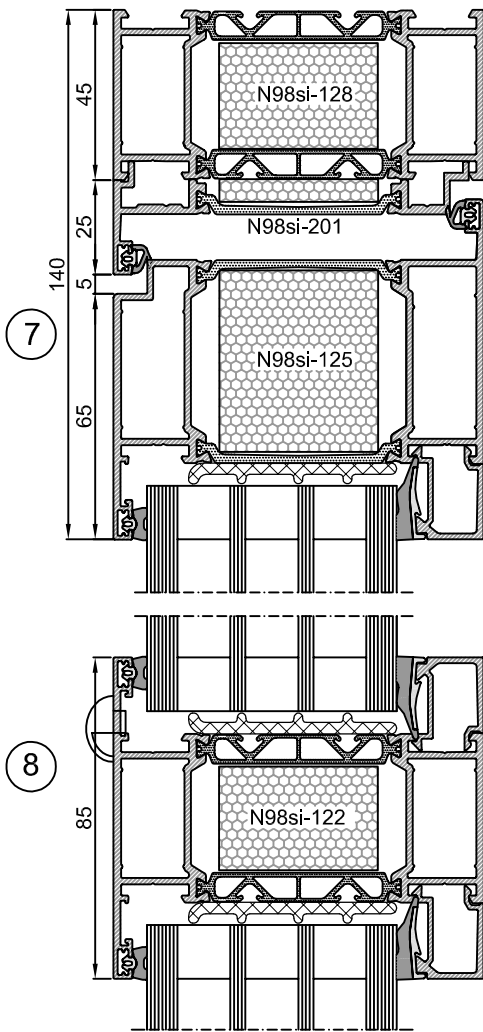
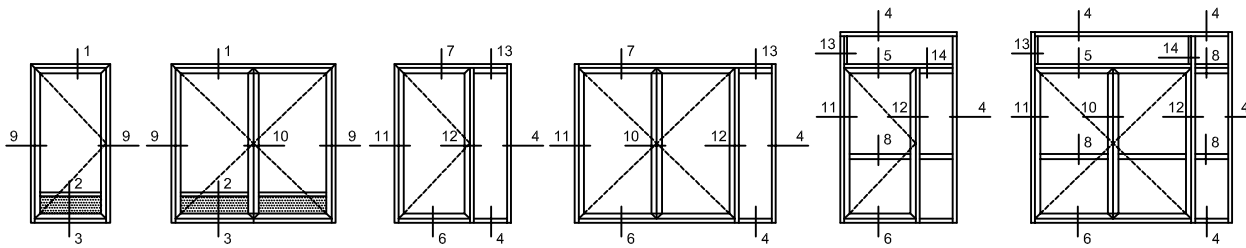
N98si 4.10

NOKIAN
PROFILES

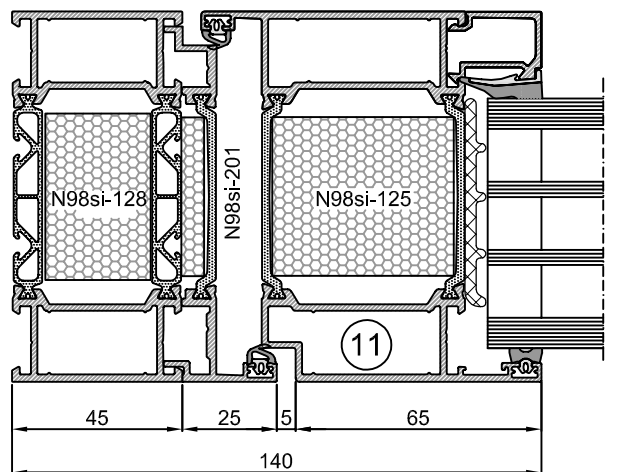
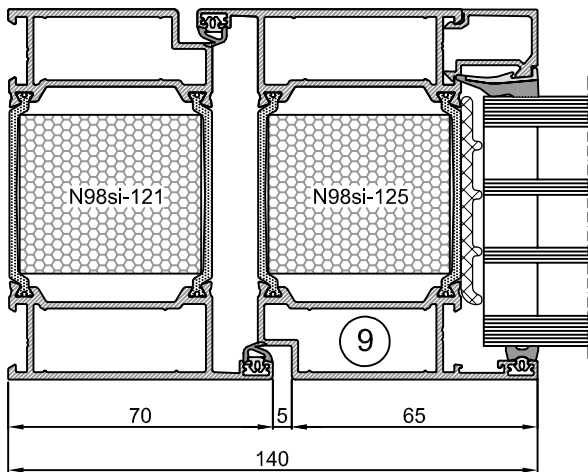
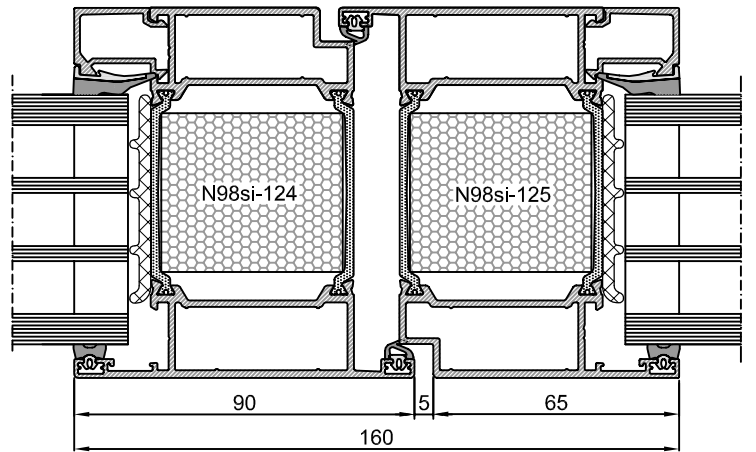
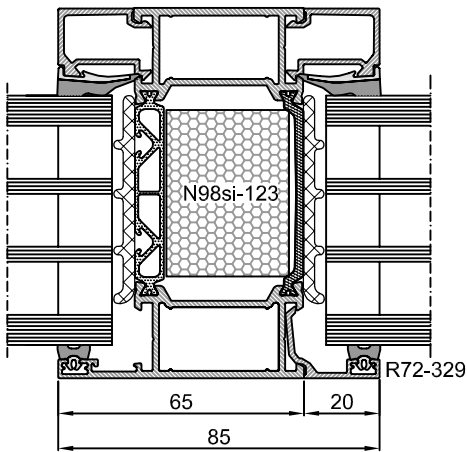
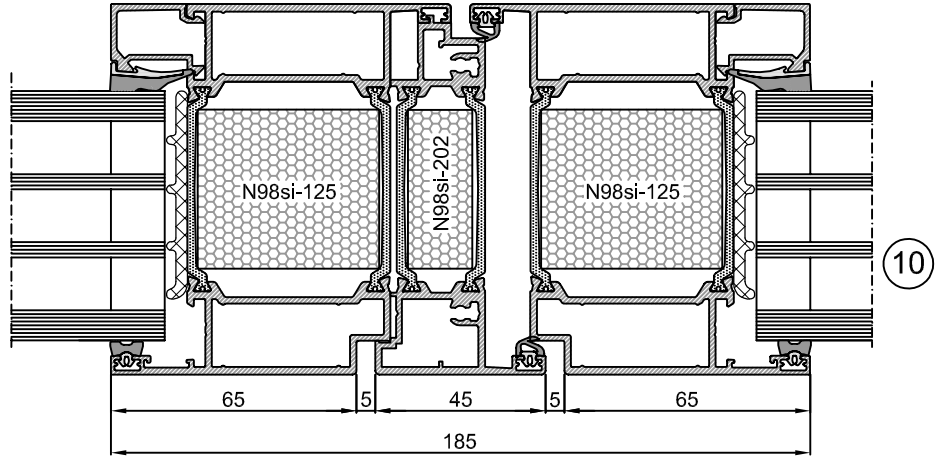
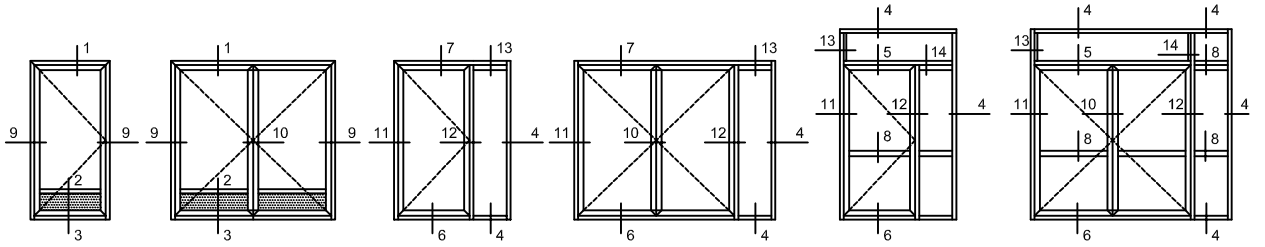


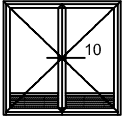
Outwards opening door



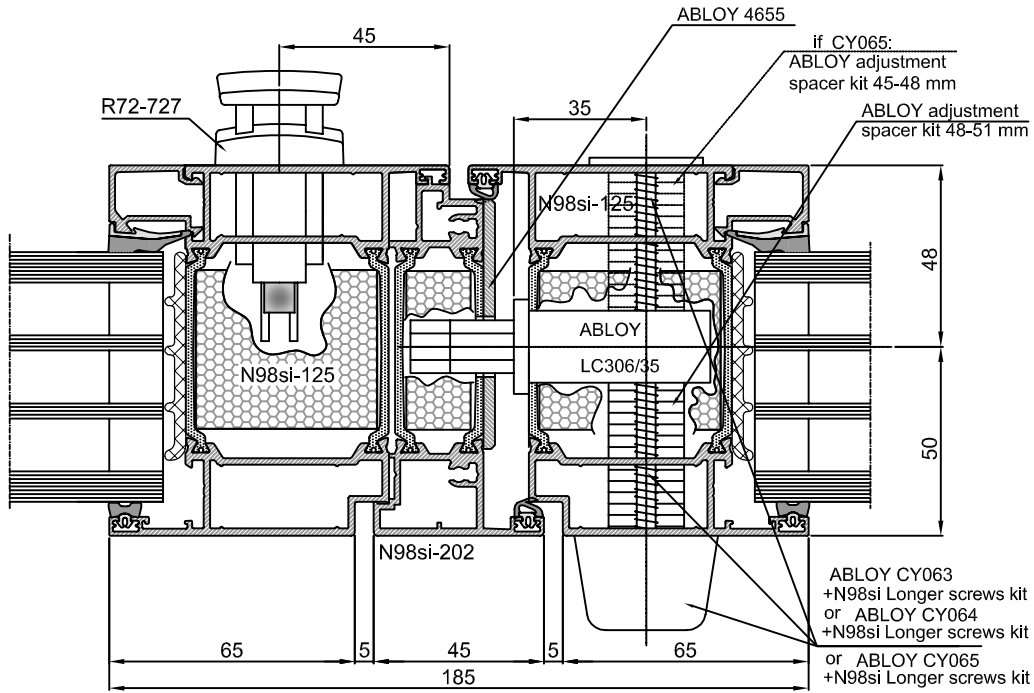


01.06.2015

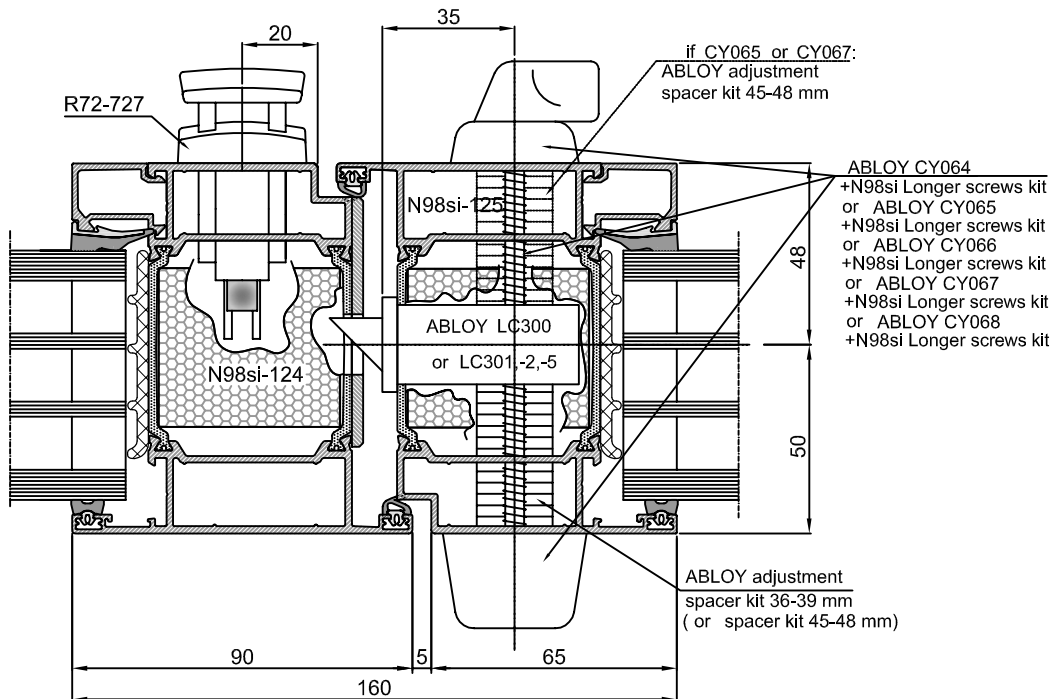




Mechanical safety lock



Automatic and operating locks



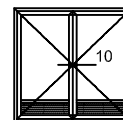
01.06.2015

N98si 4.14

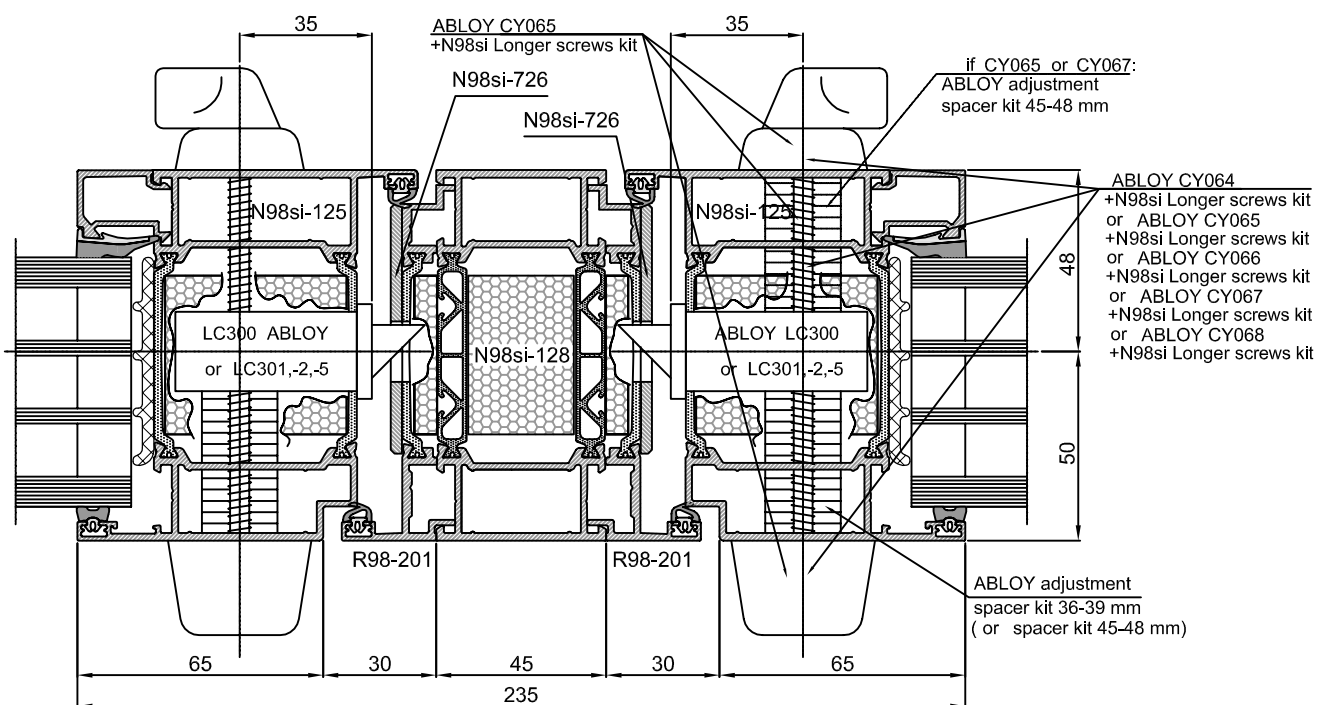
**NOKIAN
PROFILES**



Inwards opening door

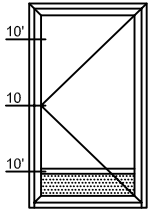


Automatic and operating locks

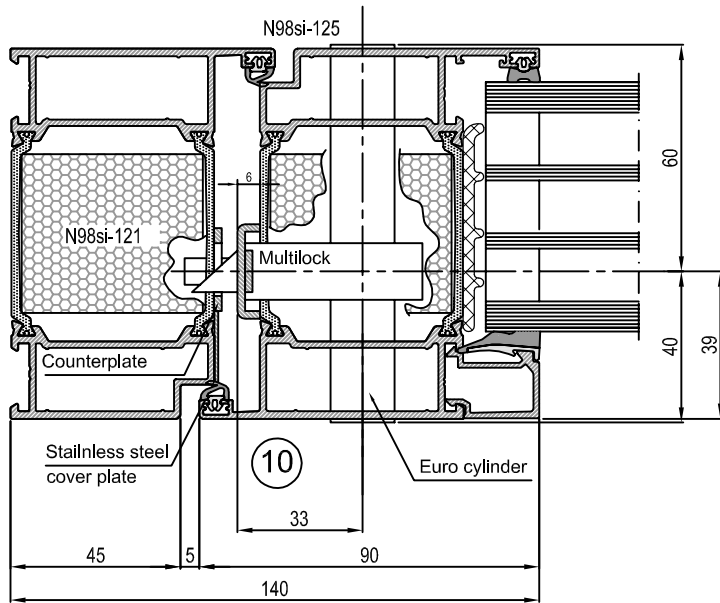


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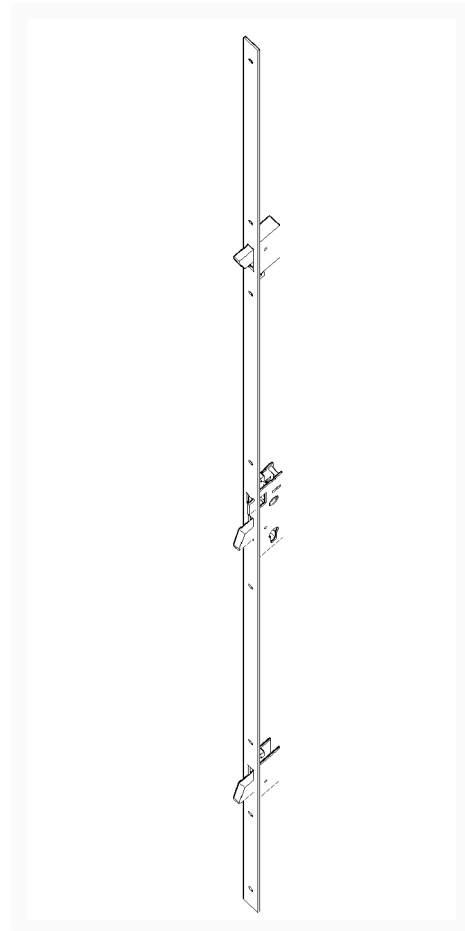
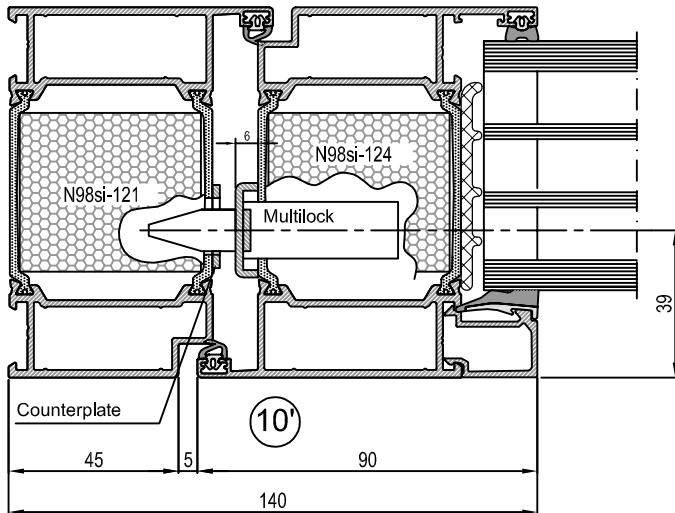
Multipoint lock



Middle locking point



Edge locking point

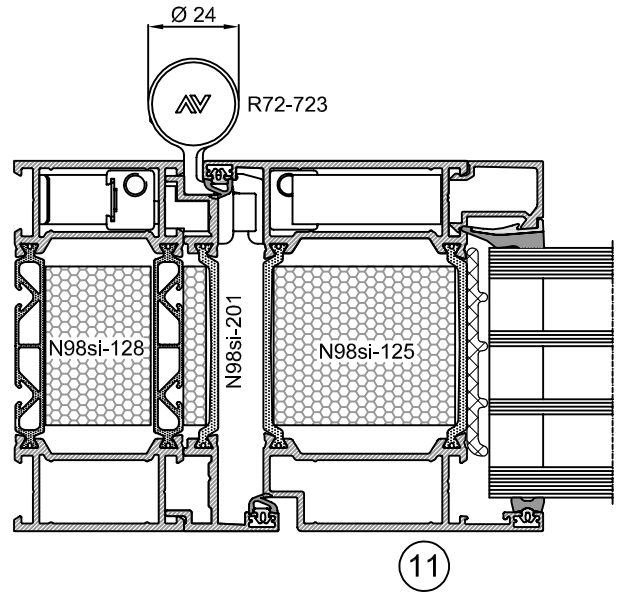
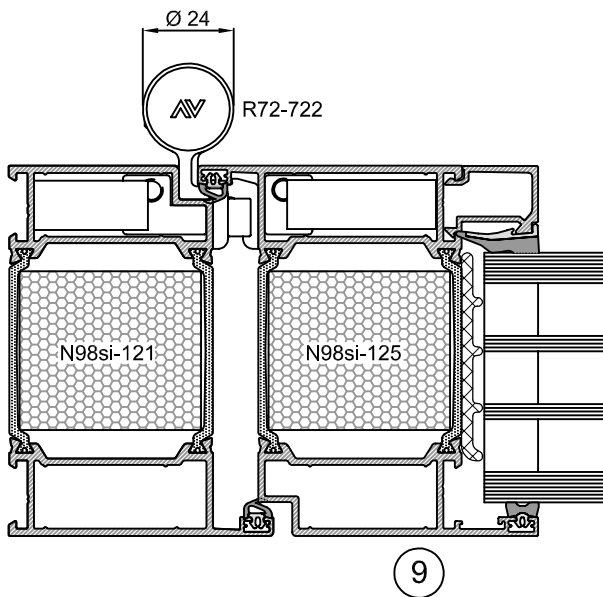
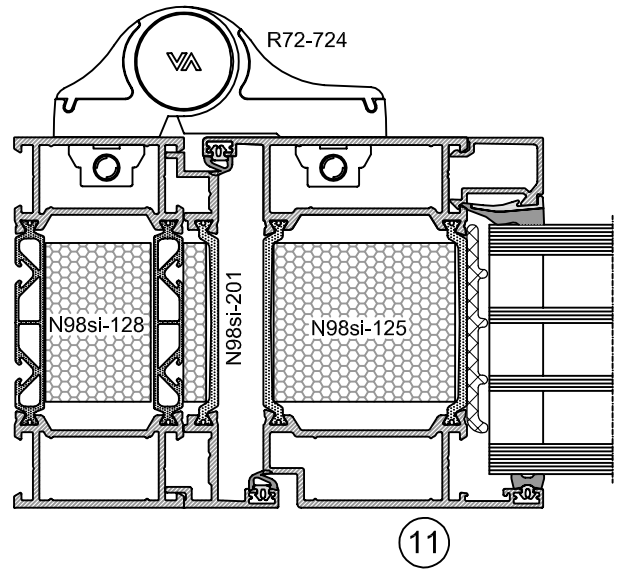
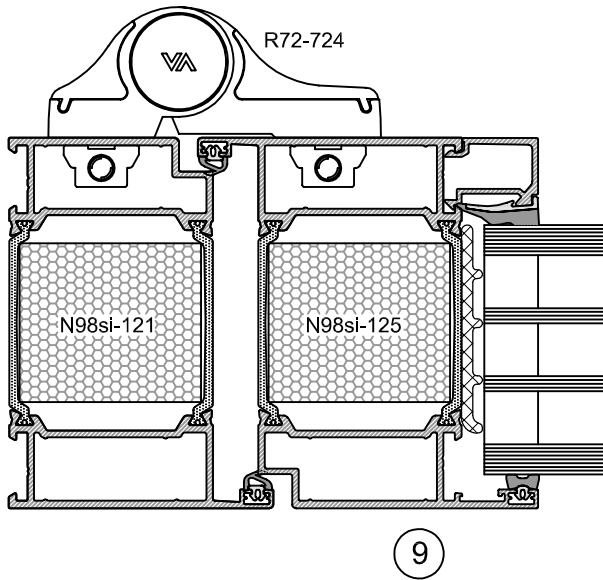
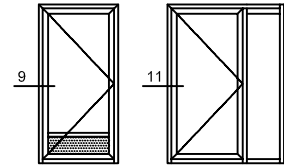


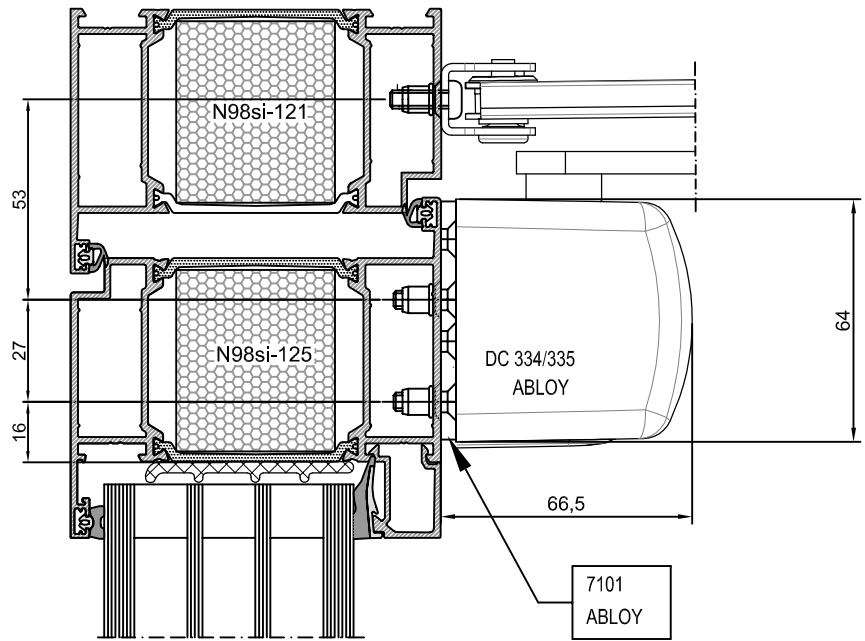
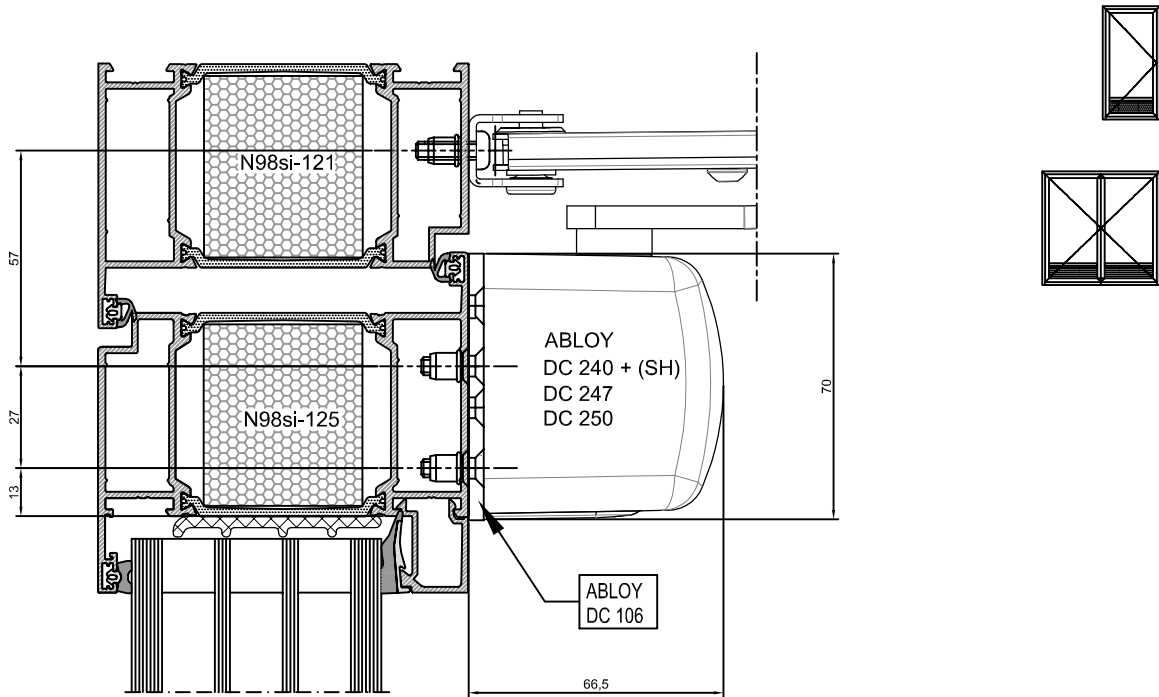
01.06.2015

N98si 4.16

NOKIAN
PROFILES

Inwards opening door



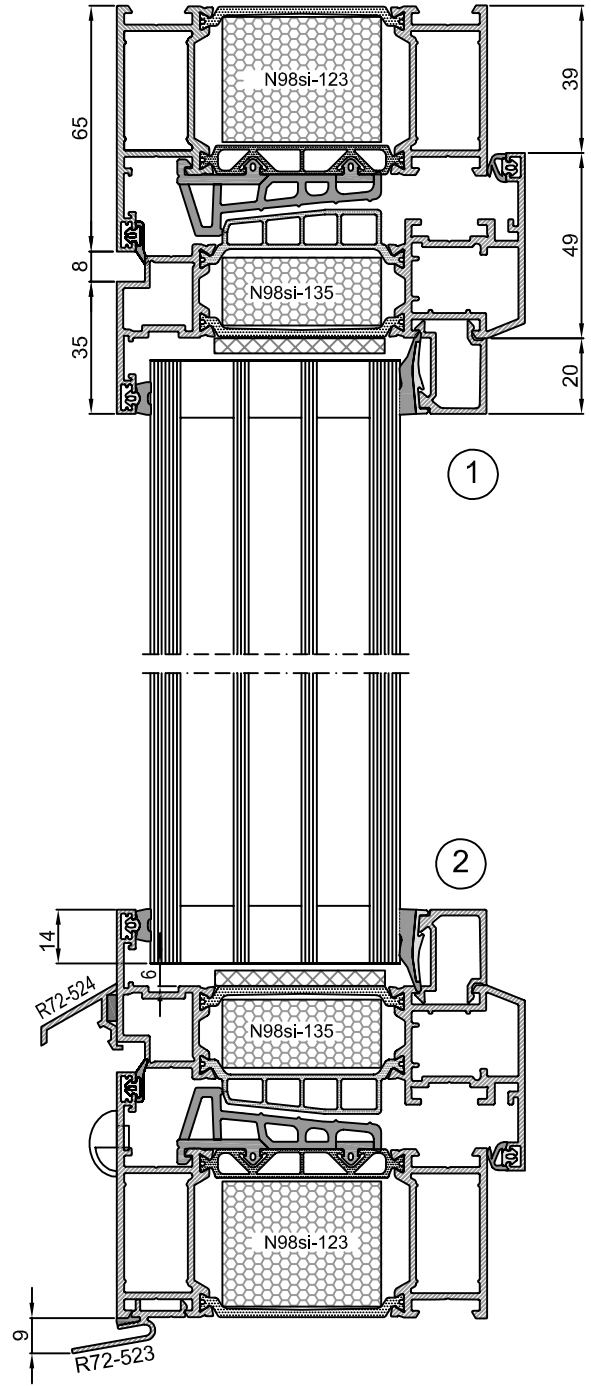
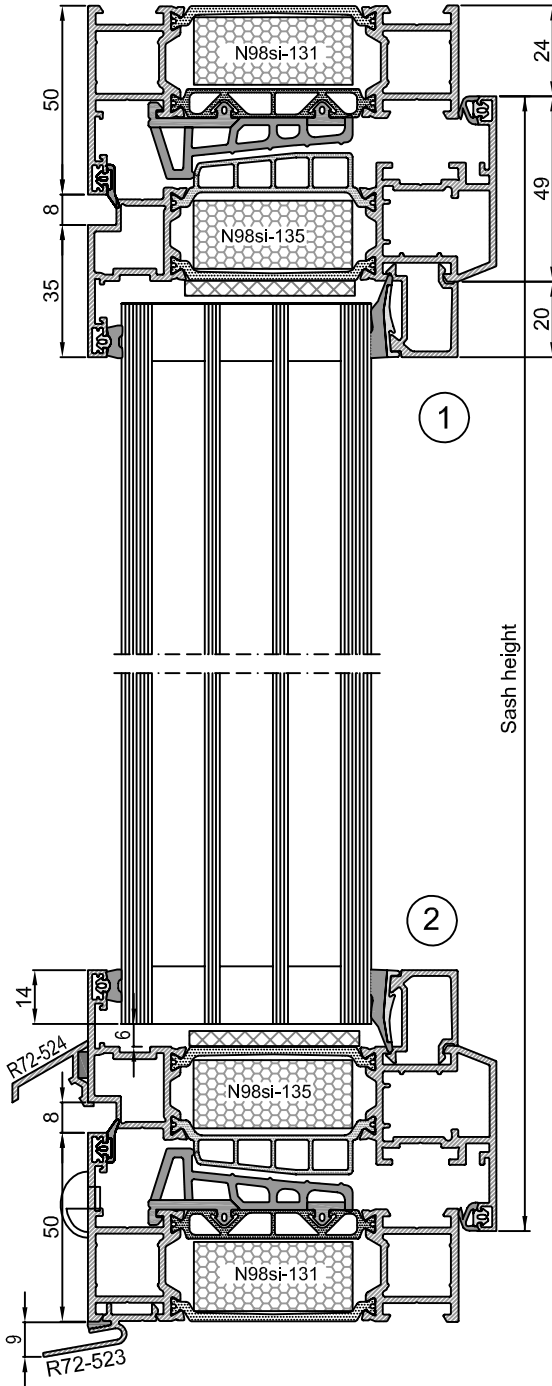
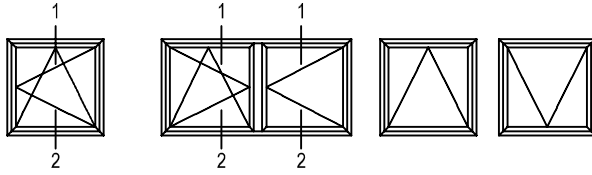


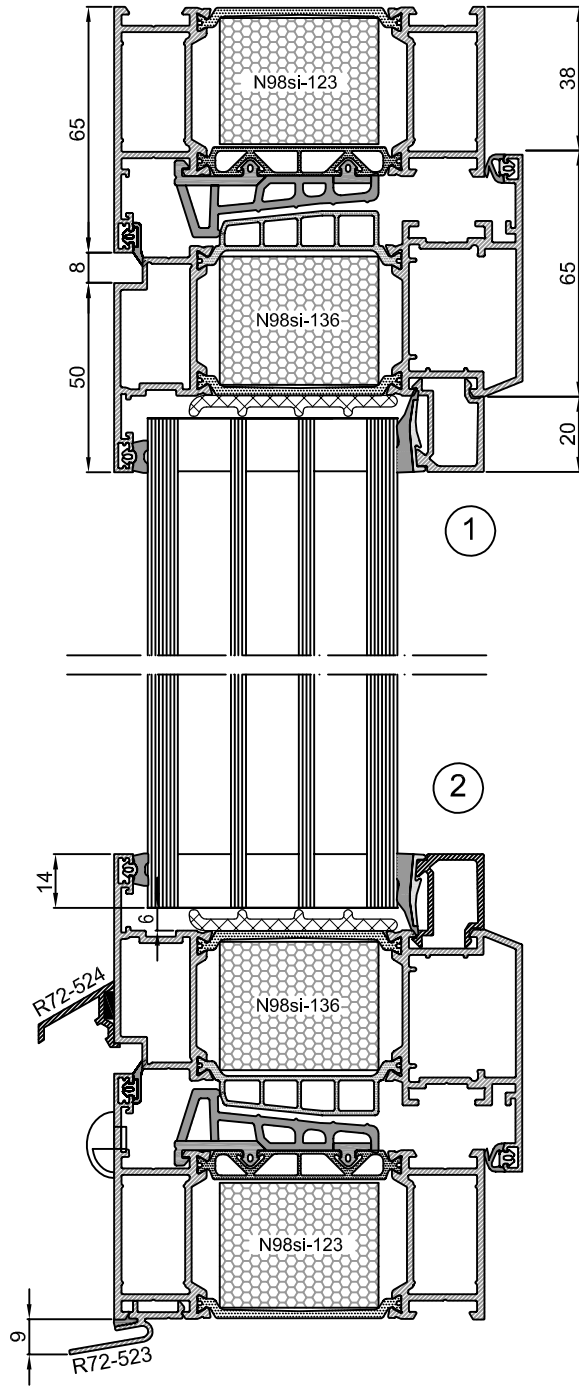
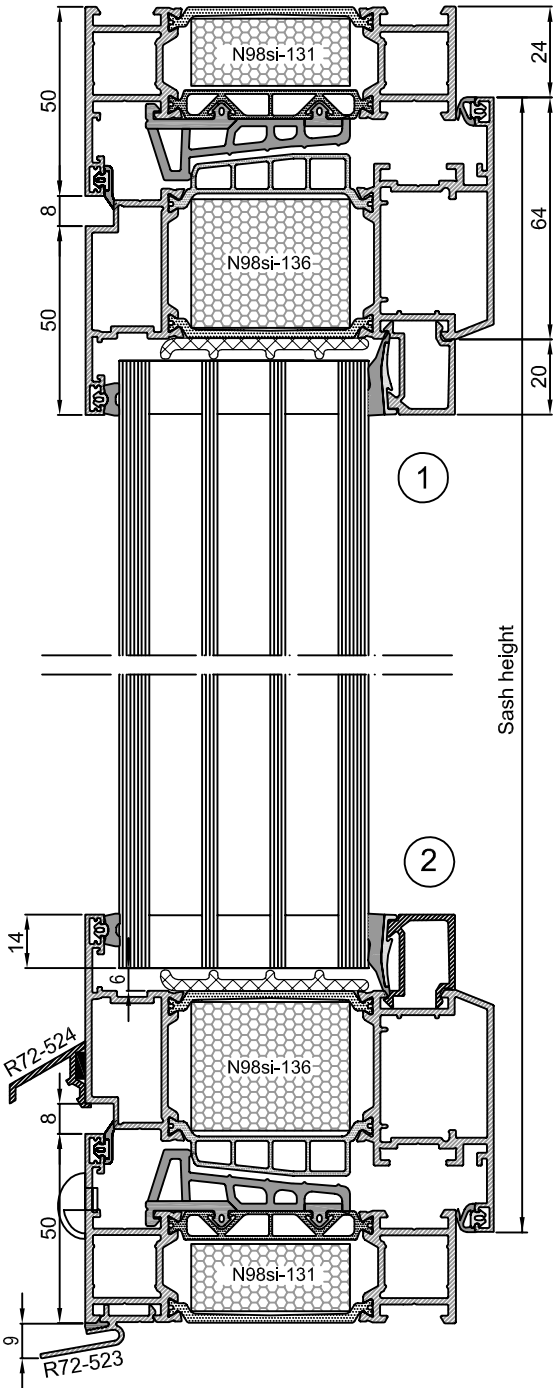
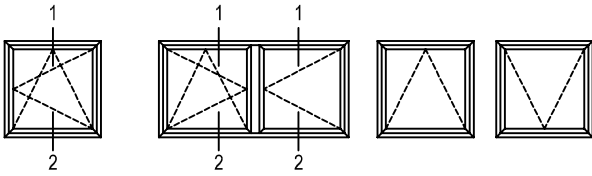
01.06.2015

N98si 4.18

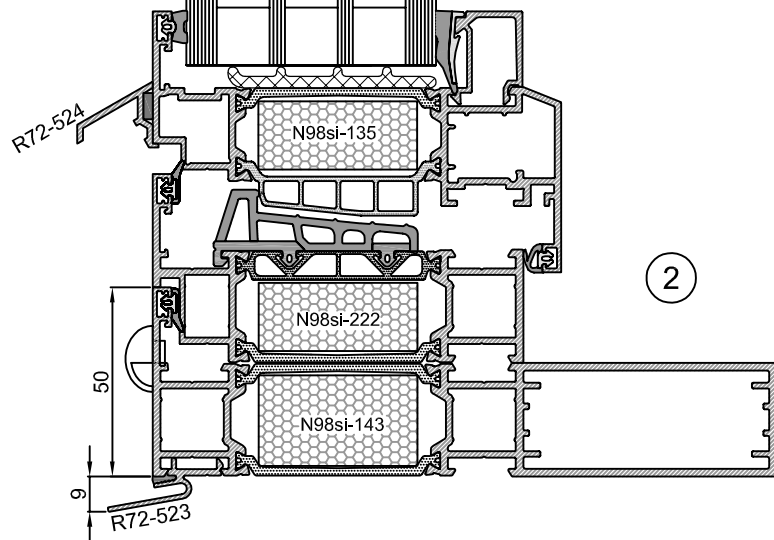
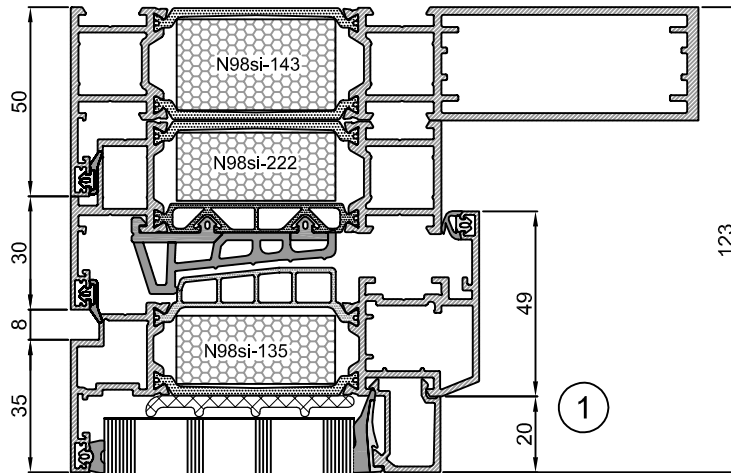
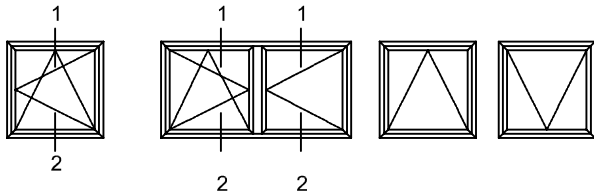


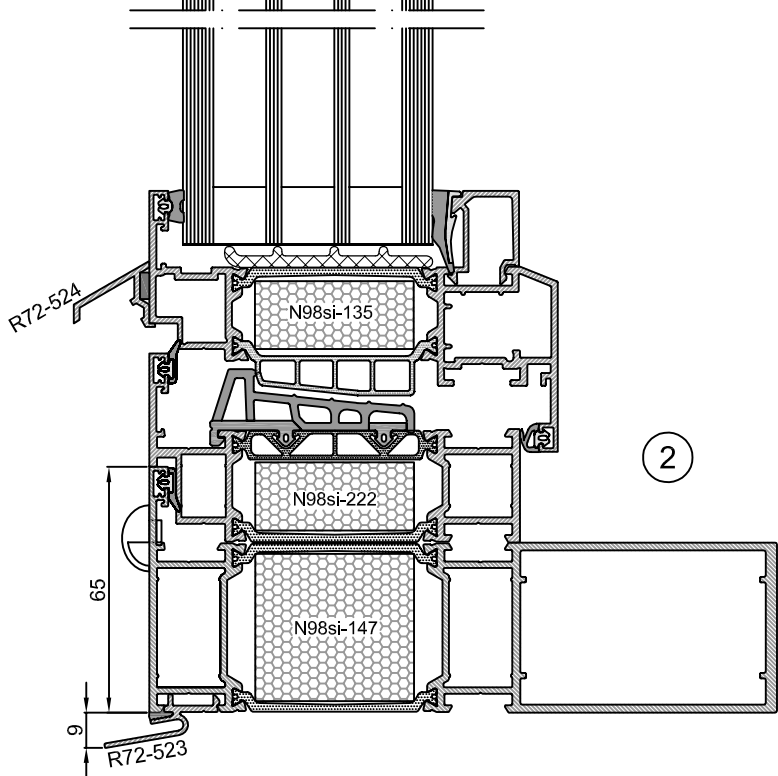
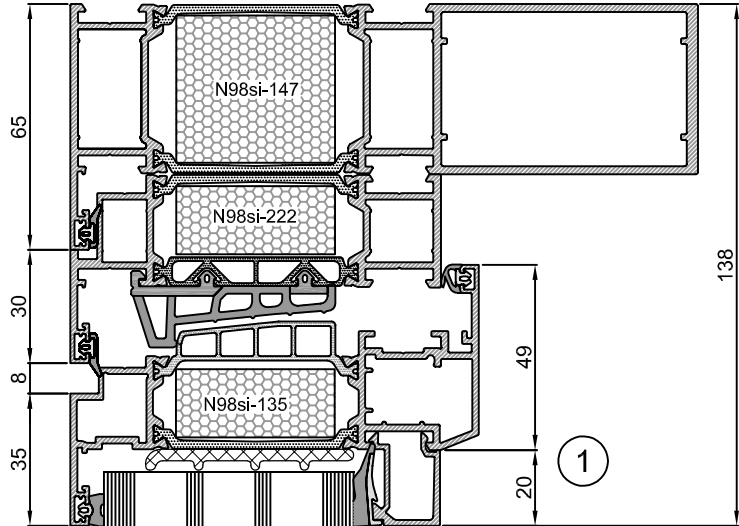
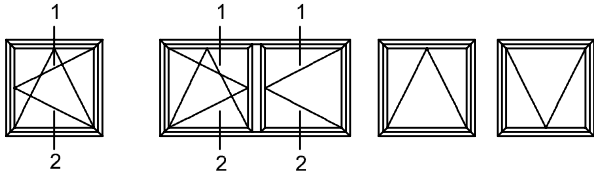
Inwards opening door



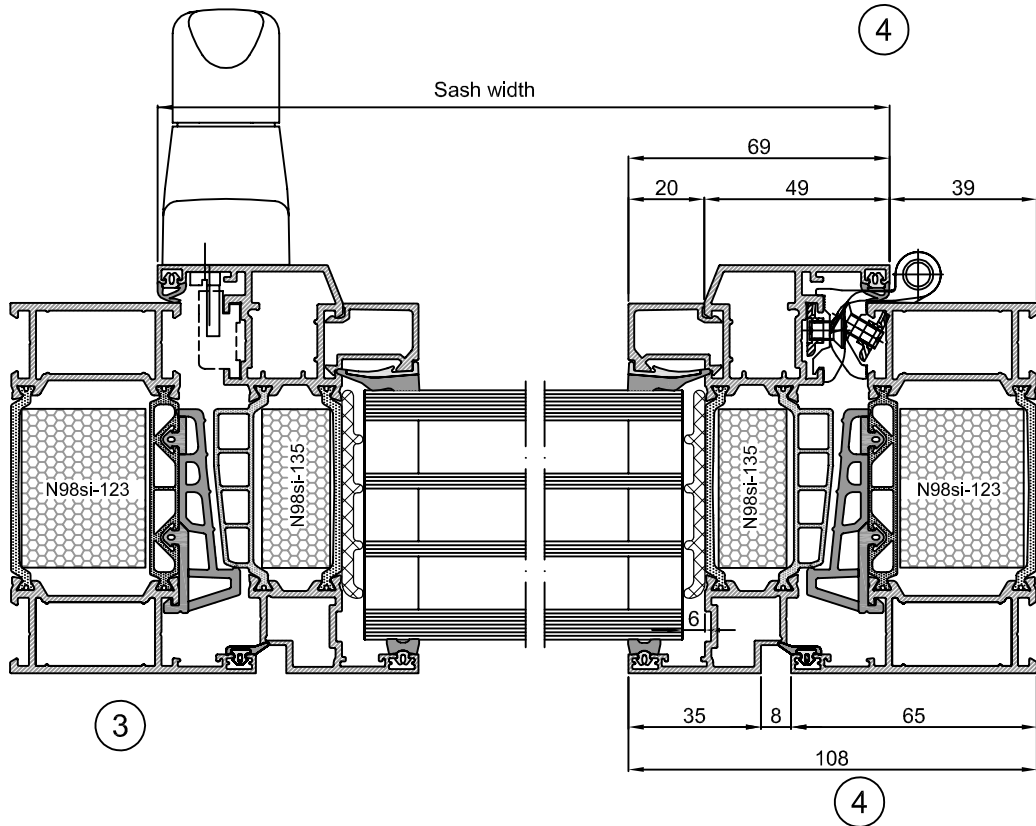
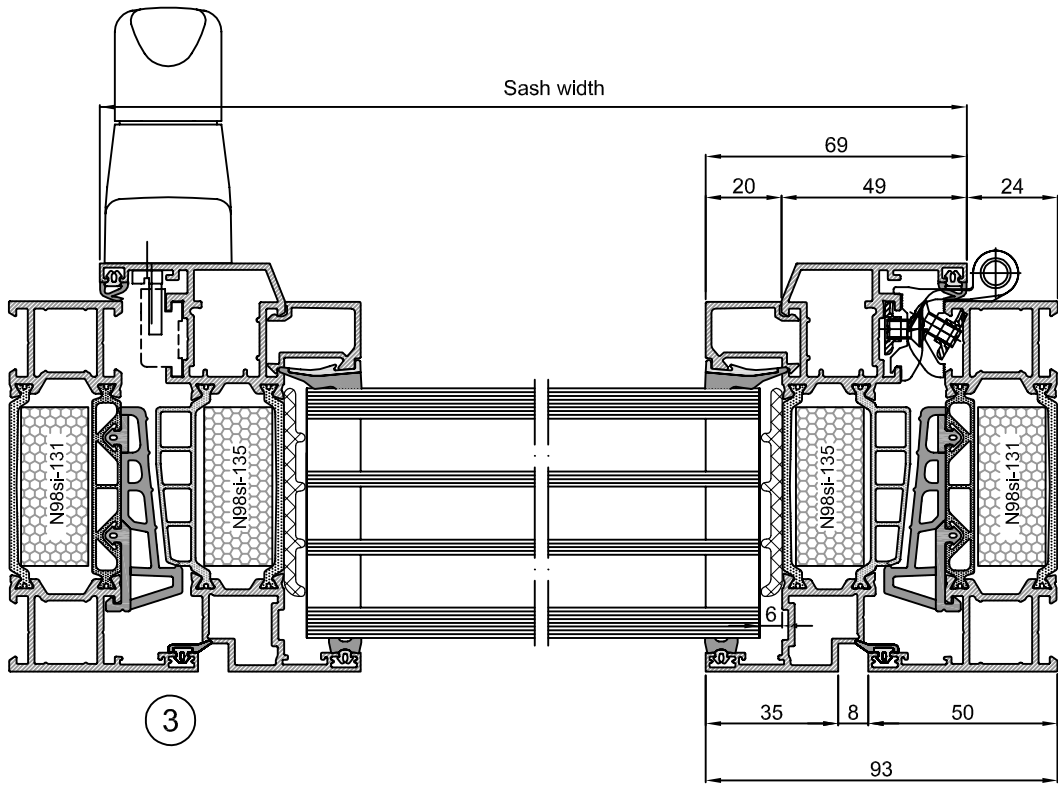
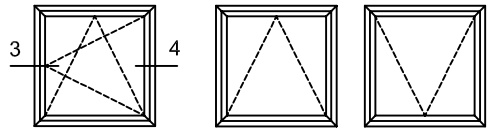


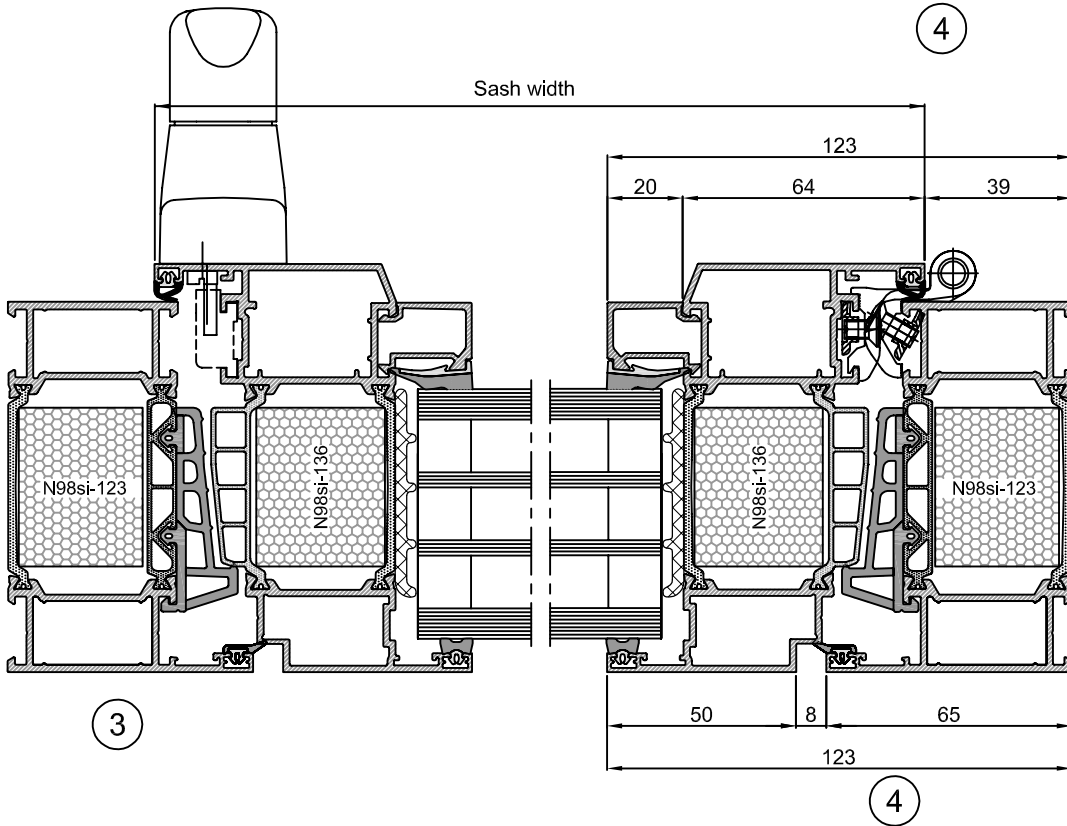
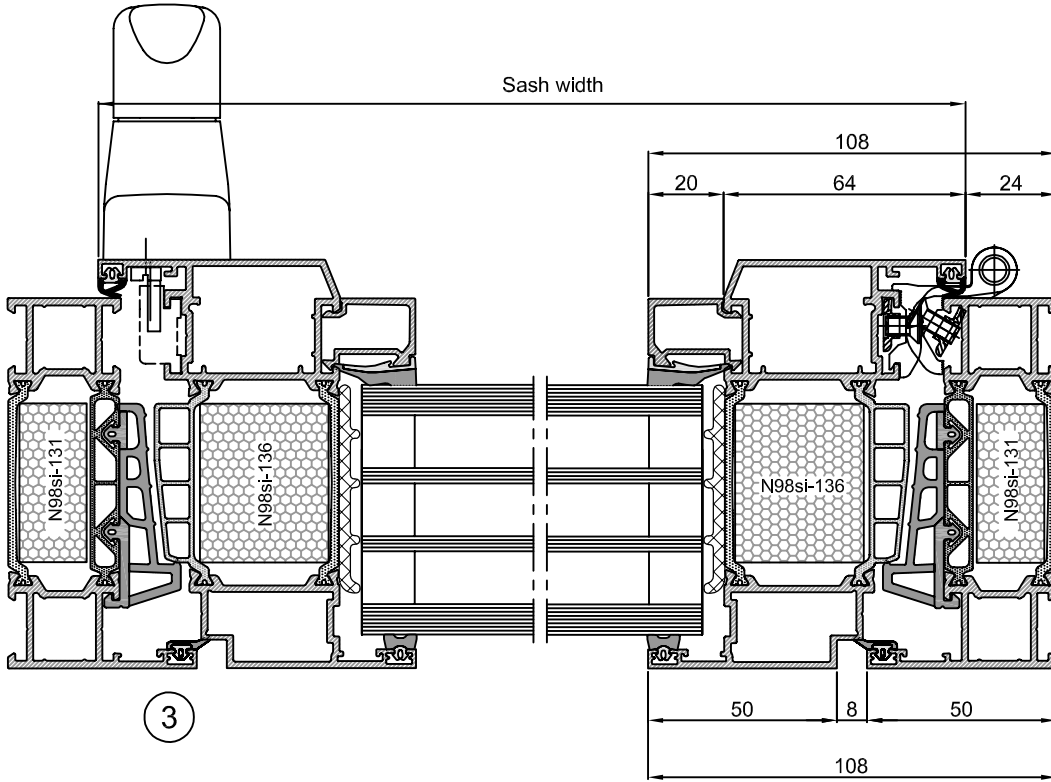
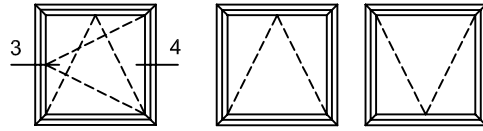
01.06.2015





01.06.2015





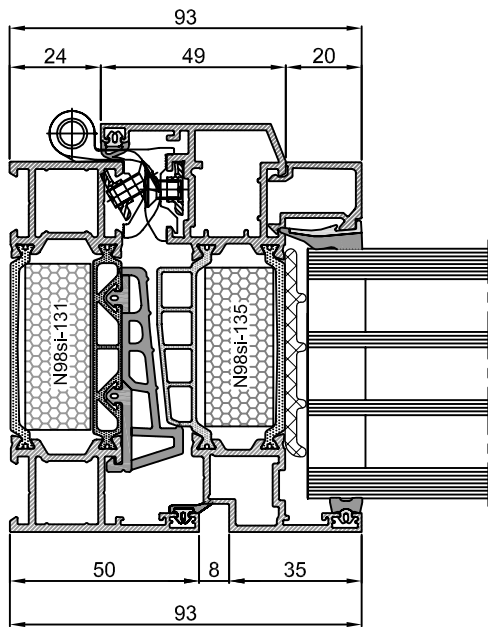
01.06.2015

N98si 5.6

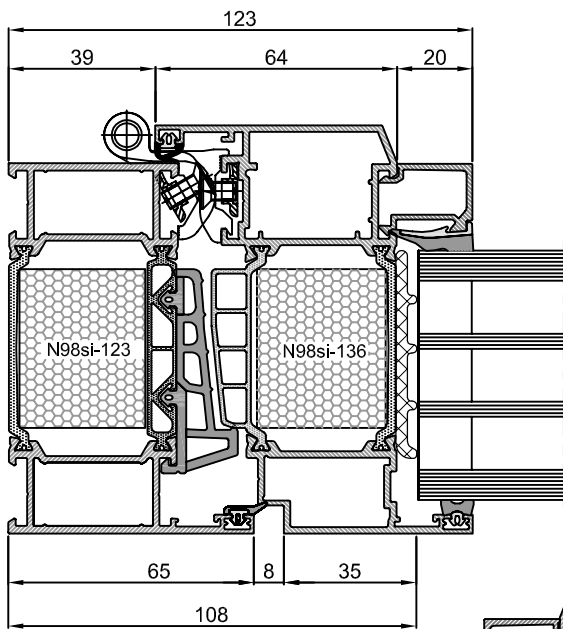
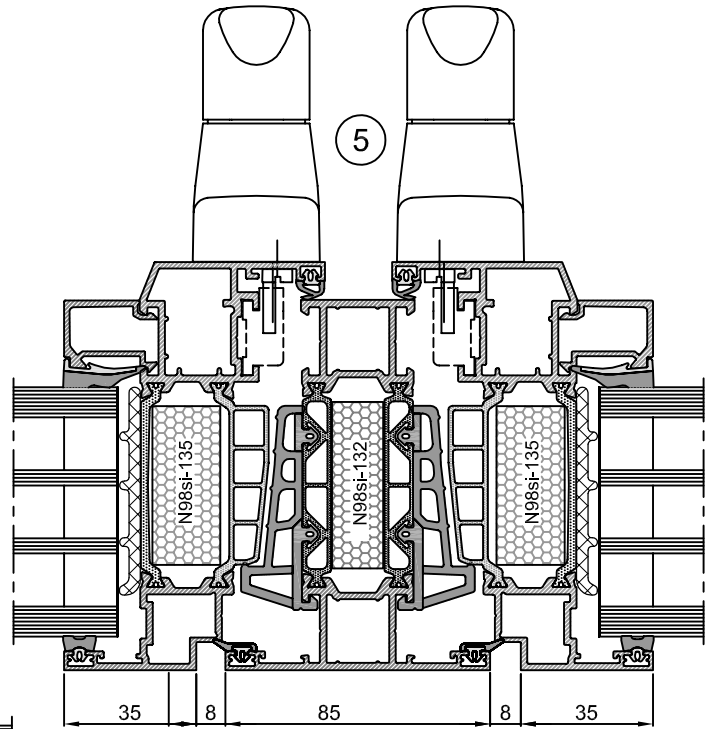
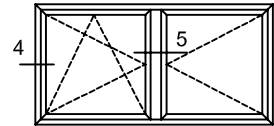
**NOKIAN
PROFILES**



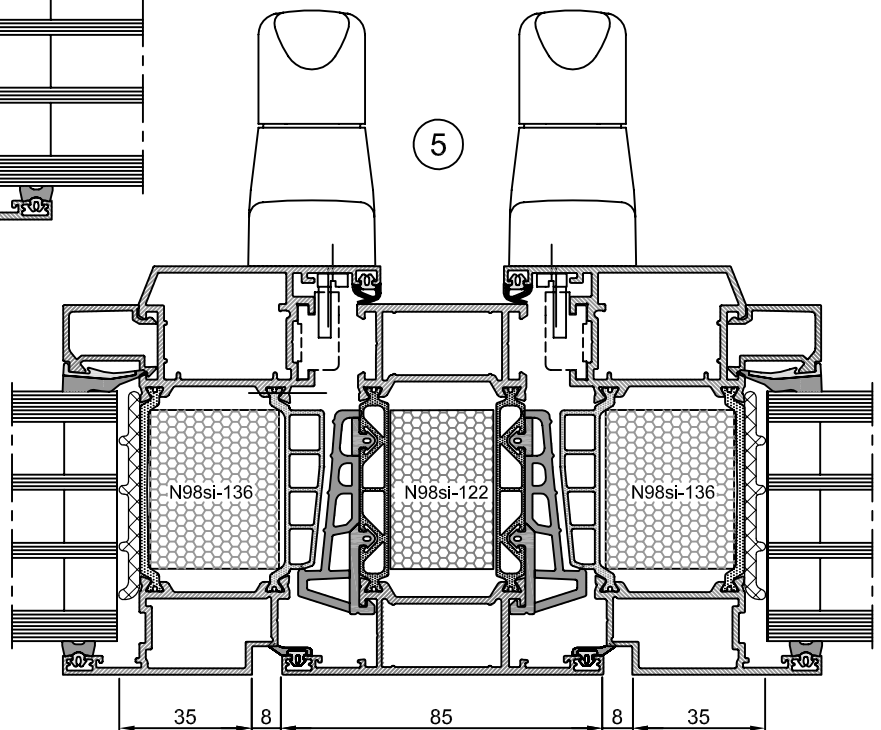
Window, horizontal sections

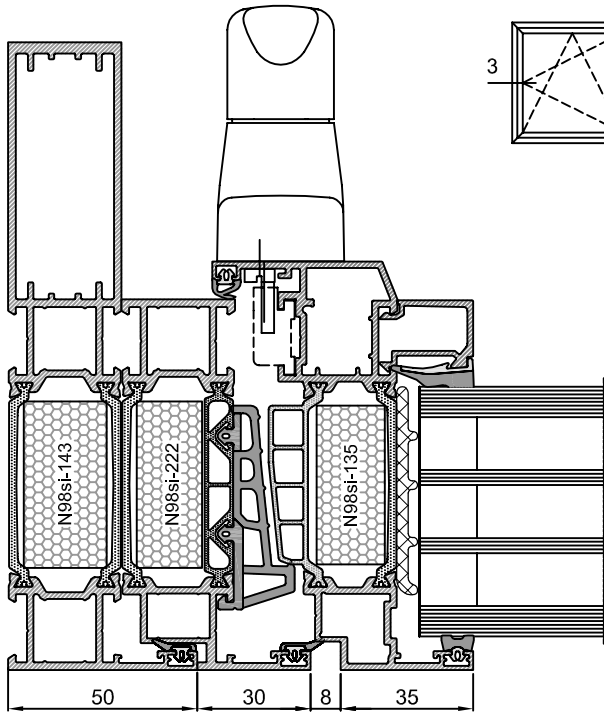


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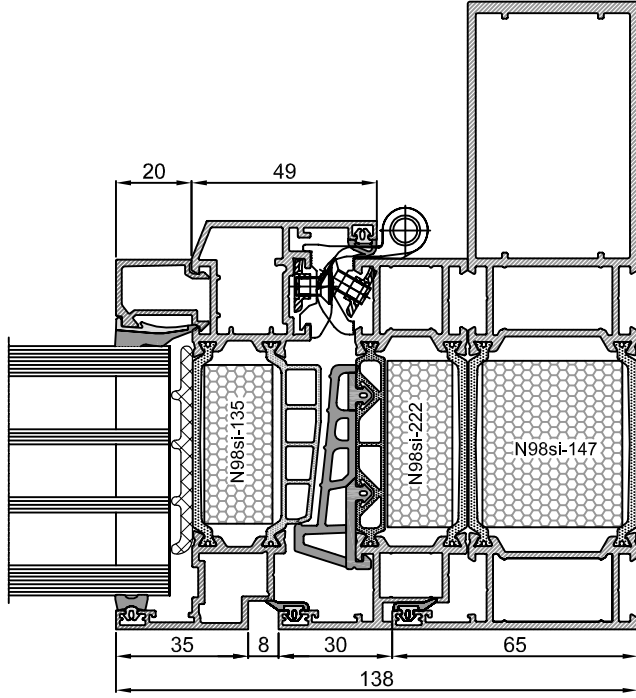
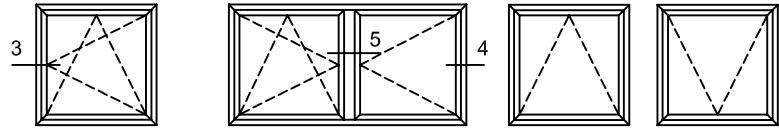


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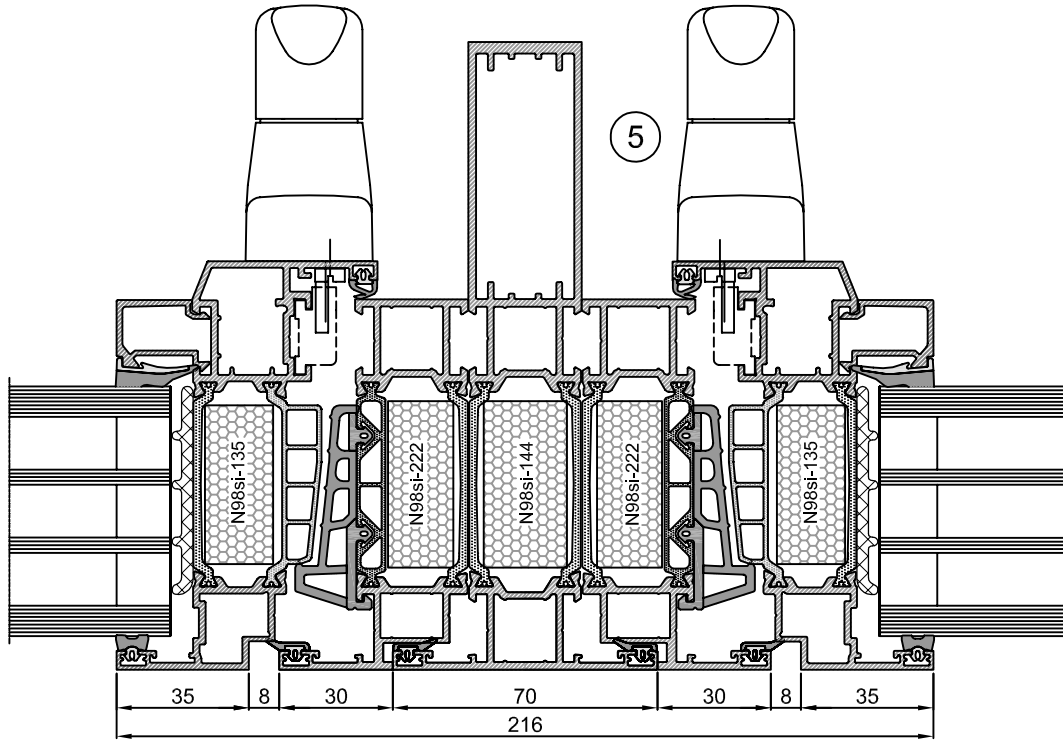




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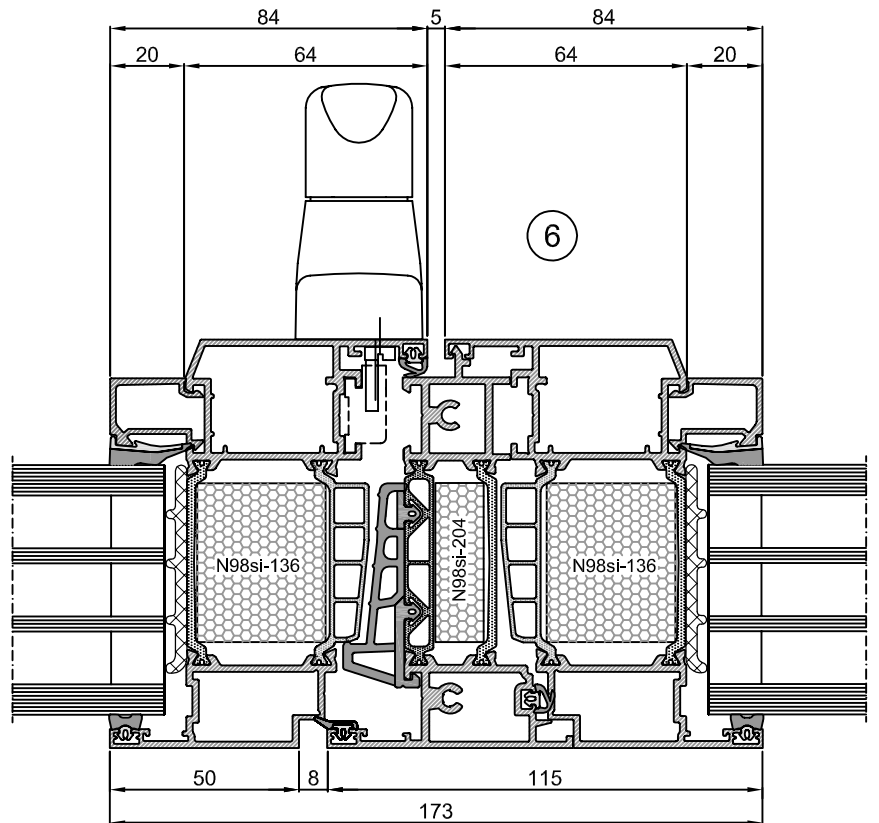
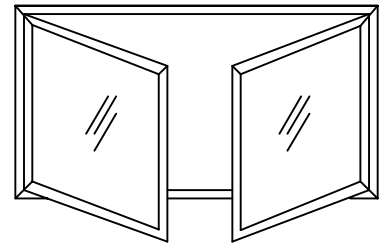
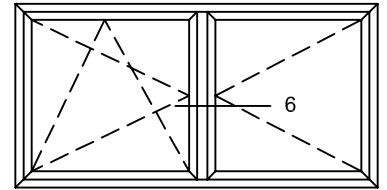
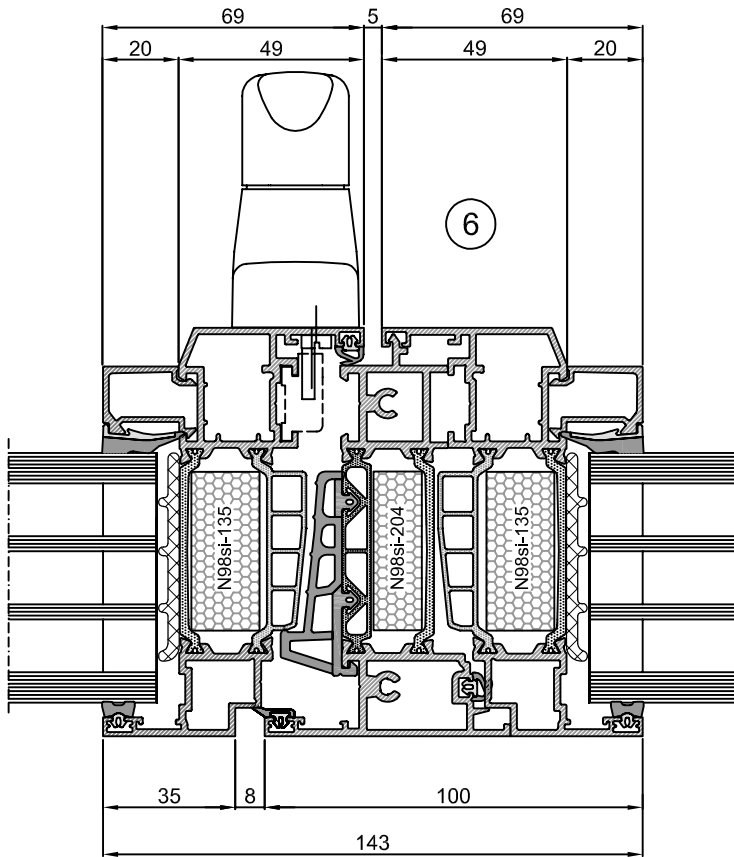


4



5

01.06.2015

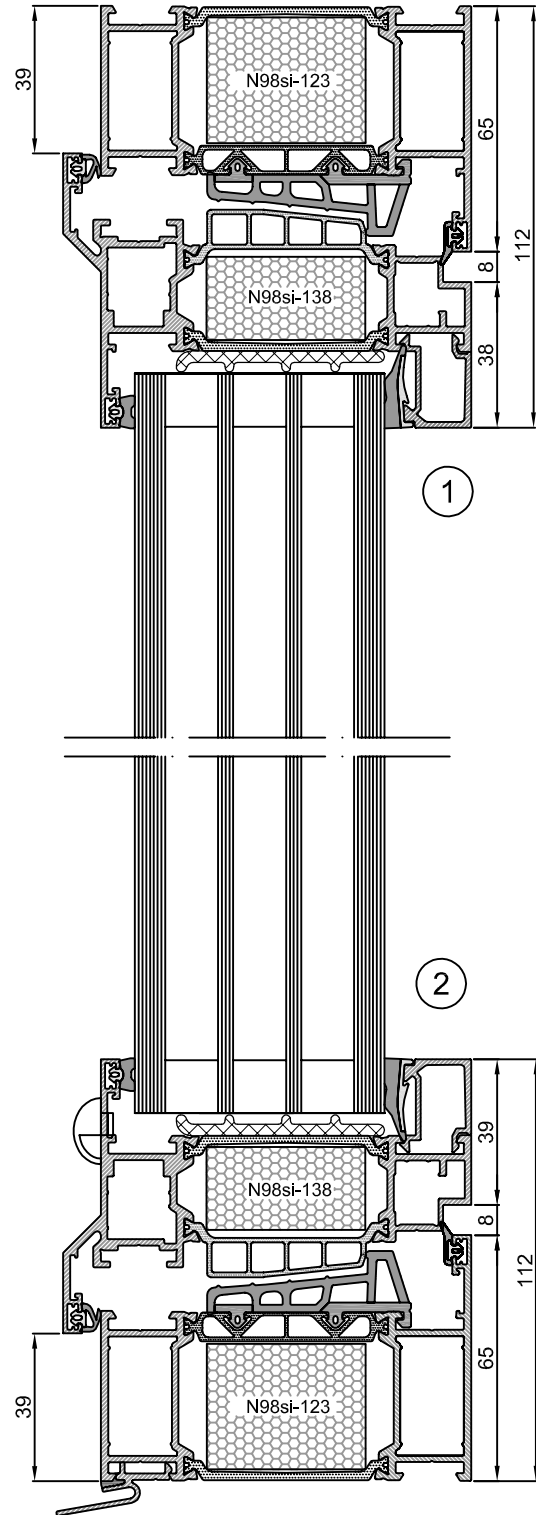
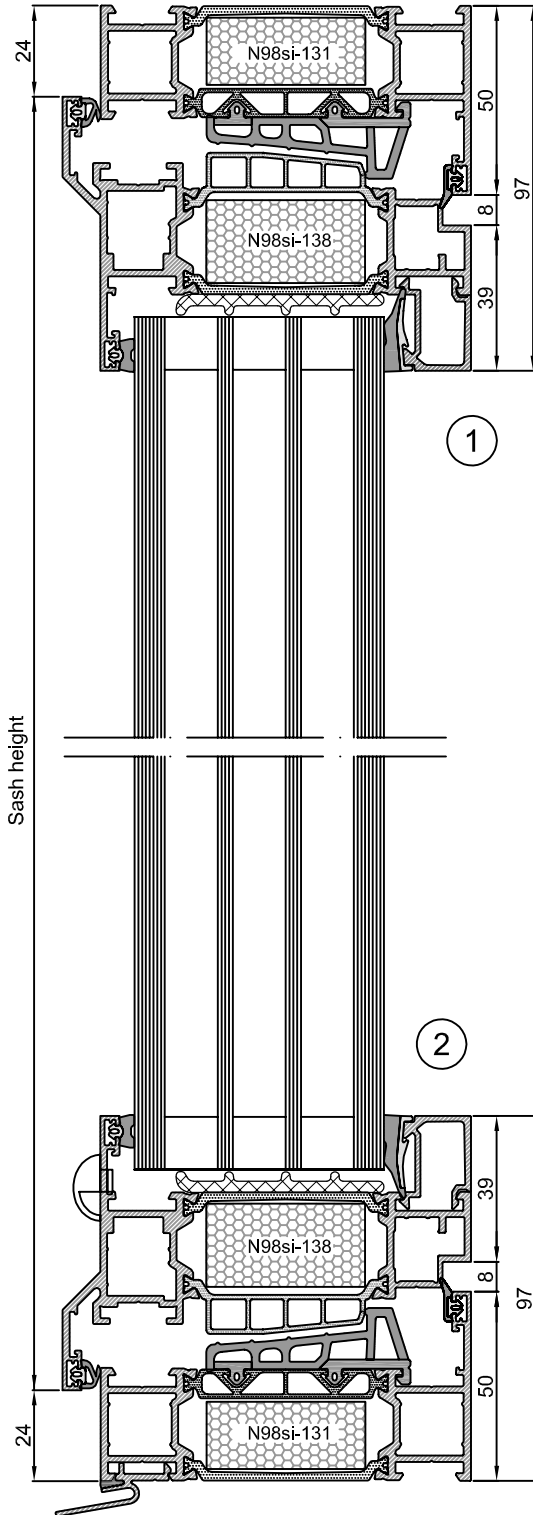
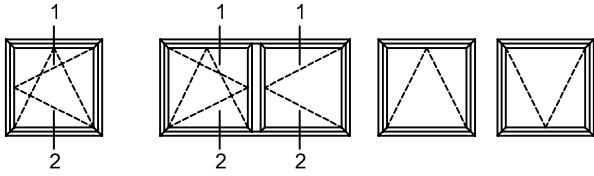


Pair window, no intermediate sash



N98si 5.9

01.06.2015

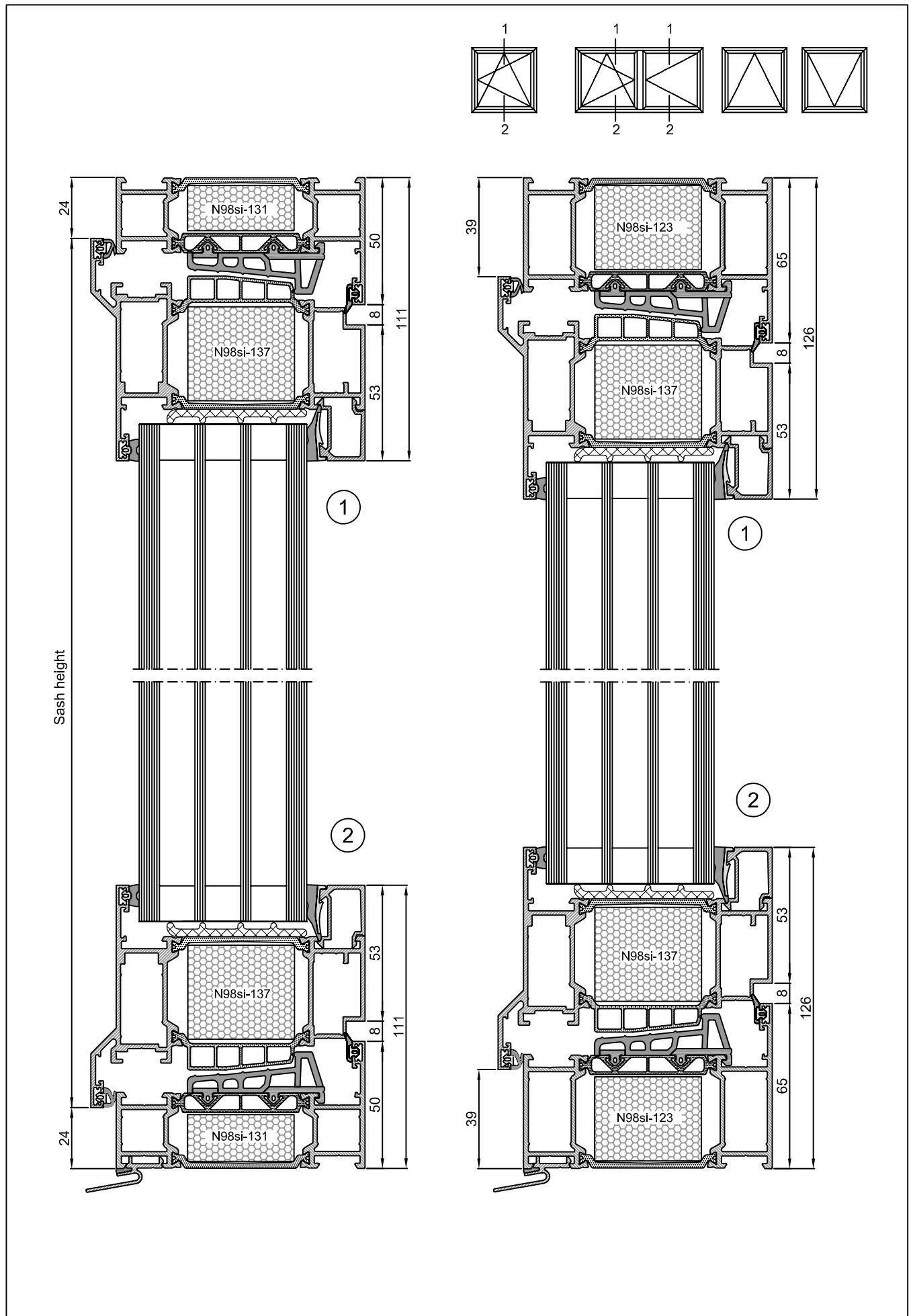


01.06.2015

N98si 5.10



Outwards opening window, vertical sections

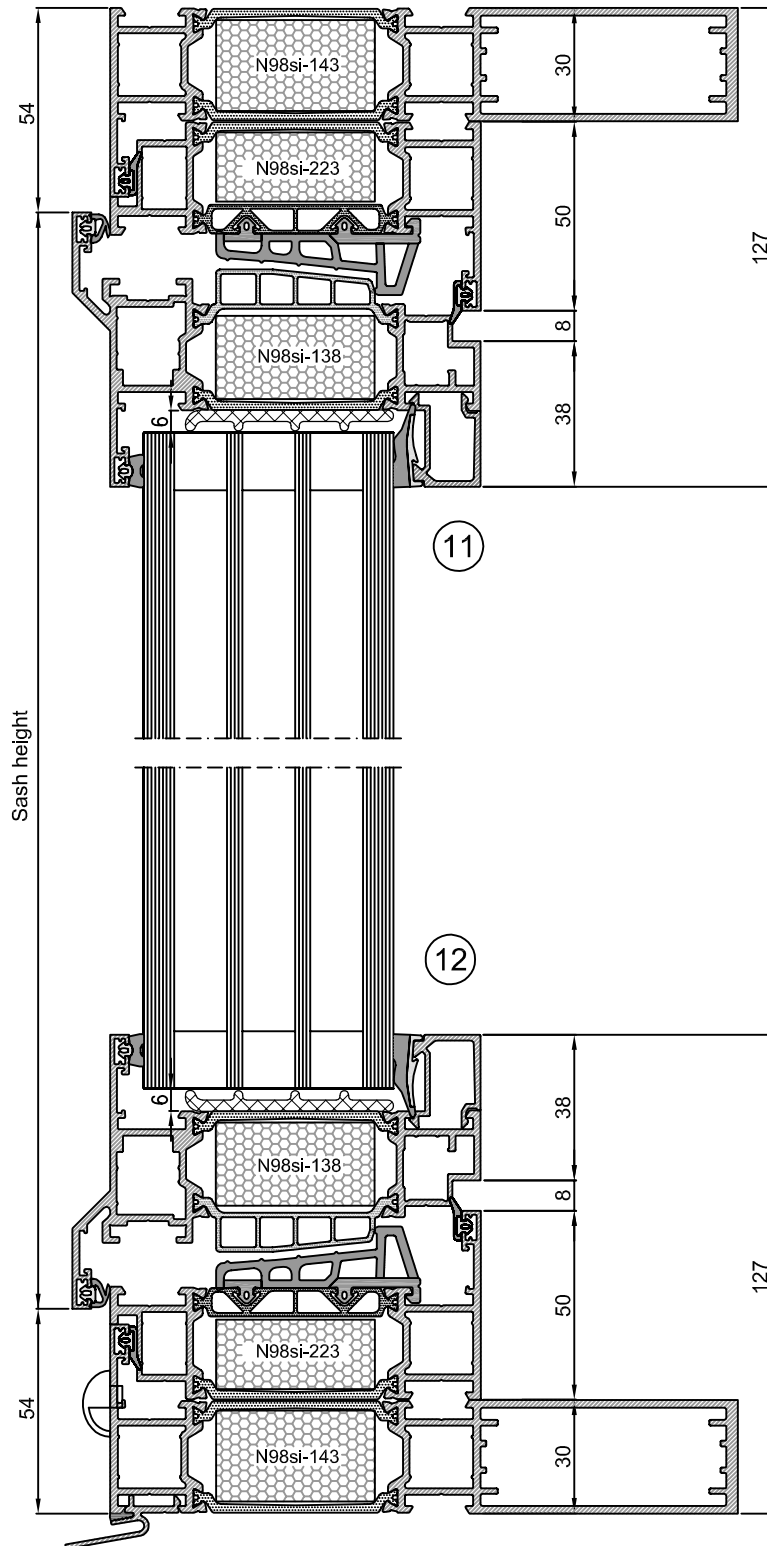
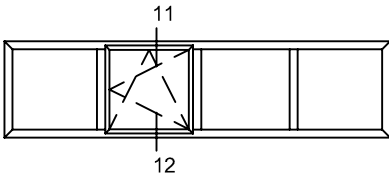


Outwards opening window,
vertical sections

NOKIAN
PROFILES

N98si 5.11

01.06.2015



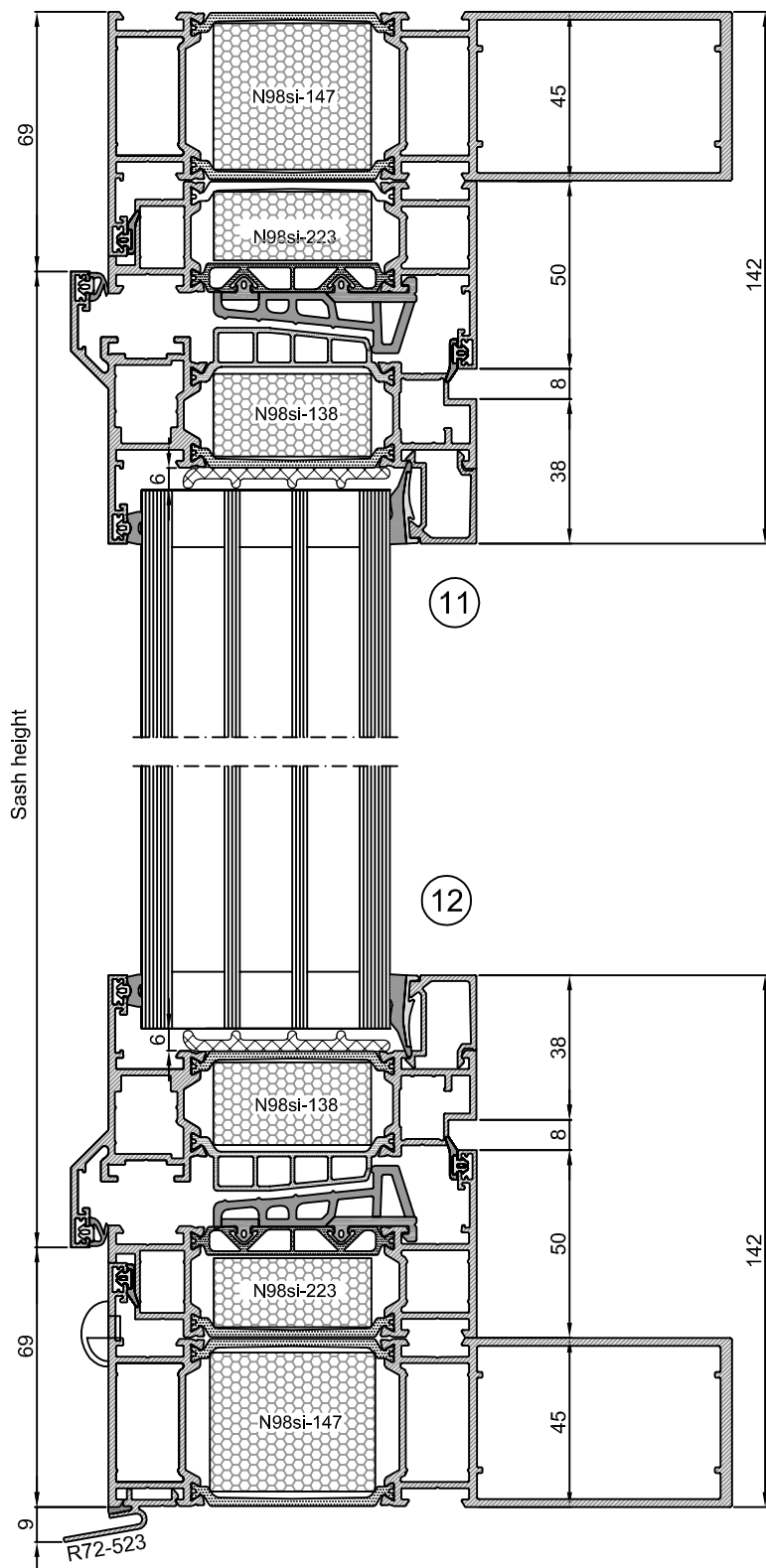
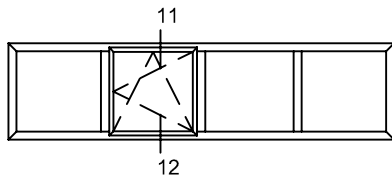
01.04.2016

N98si 5.12

**NOKIAN
PROFILES**



Outwards opening window, vertical sections

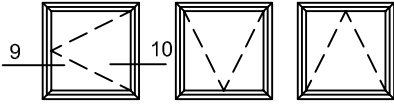


Outwards opening window,
vertical sections

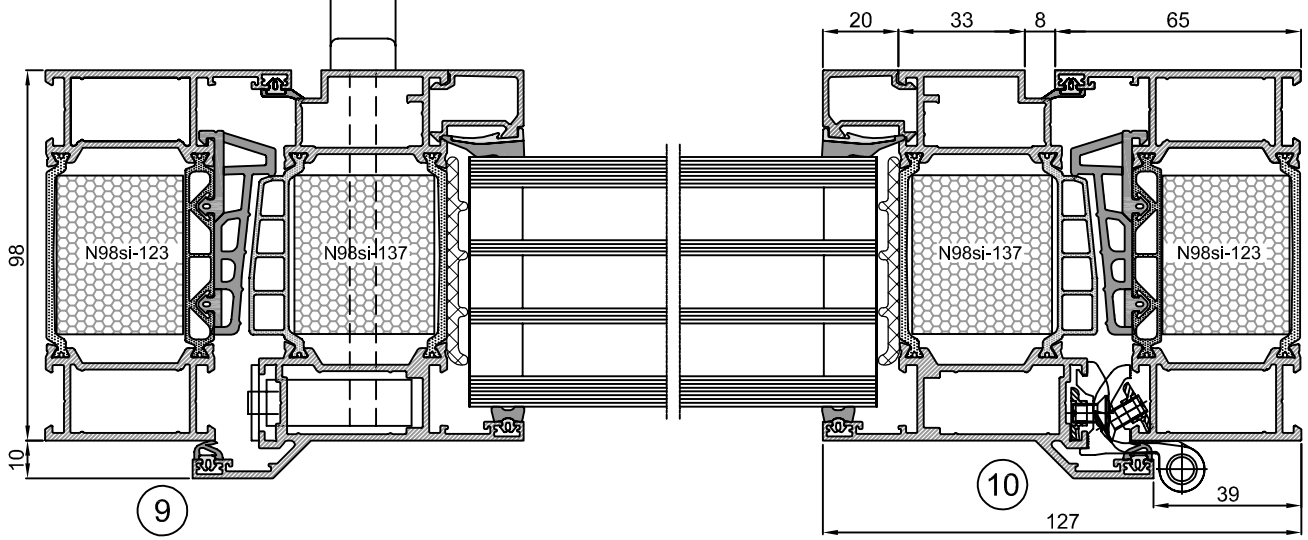
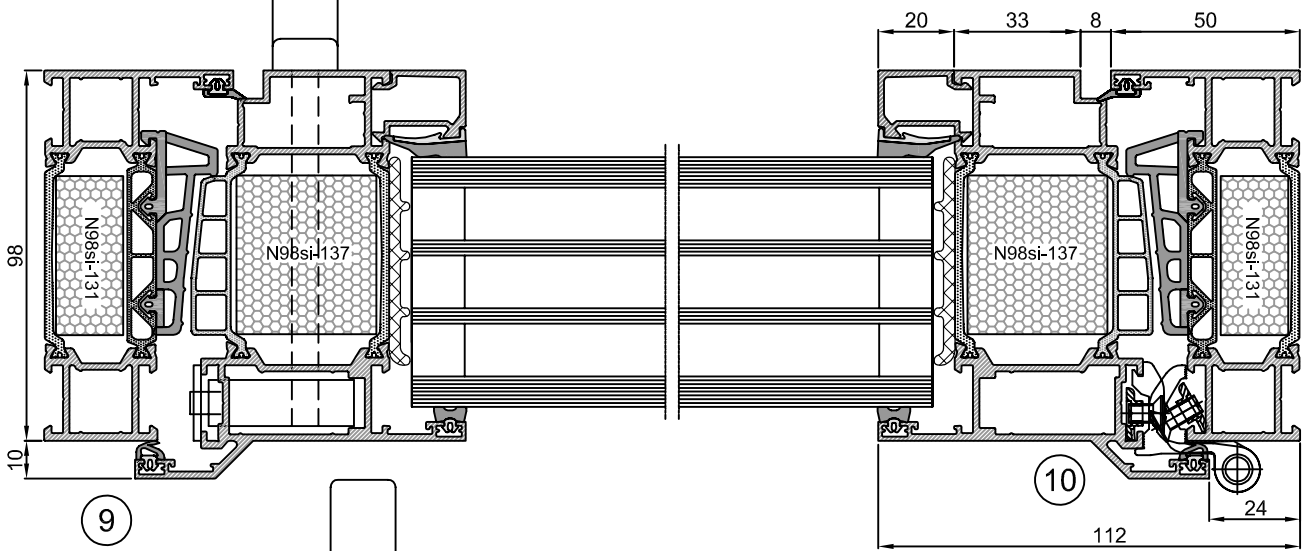
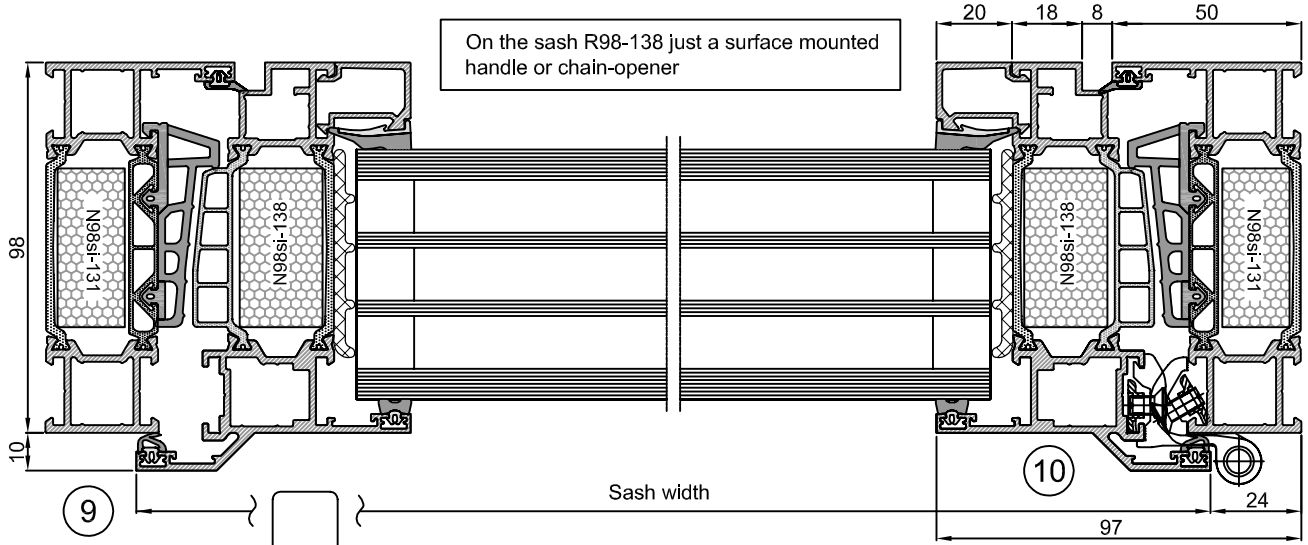
NOKIAN
PROFILES

N98si 5.13

01.04.2016



On the sash R98-138 just a surface mounted handle or chain-opener

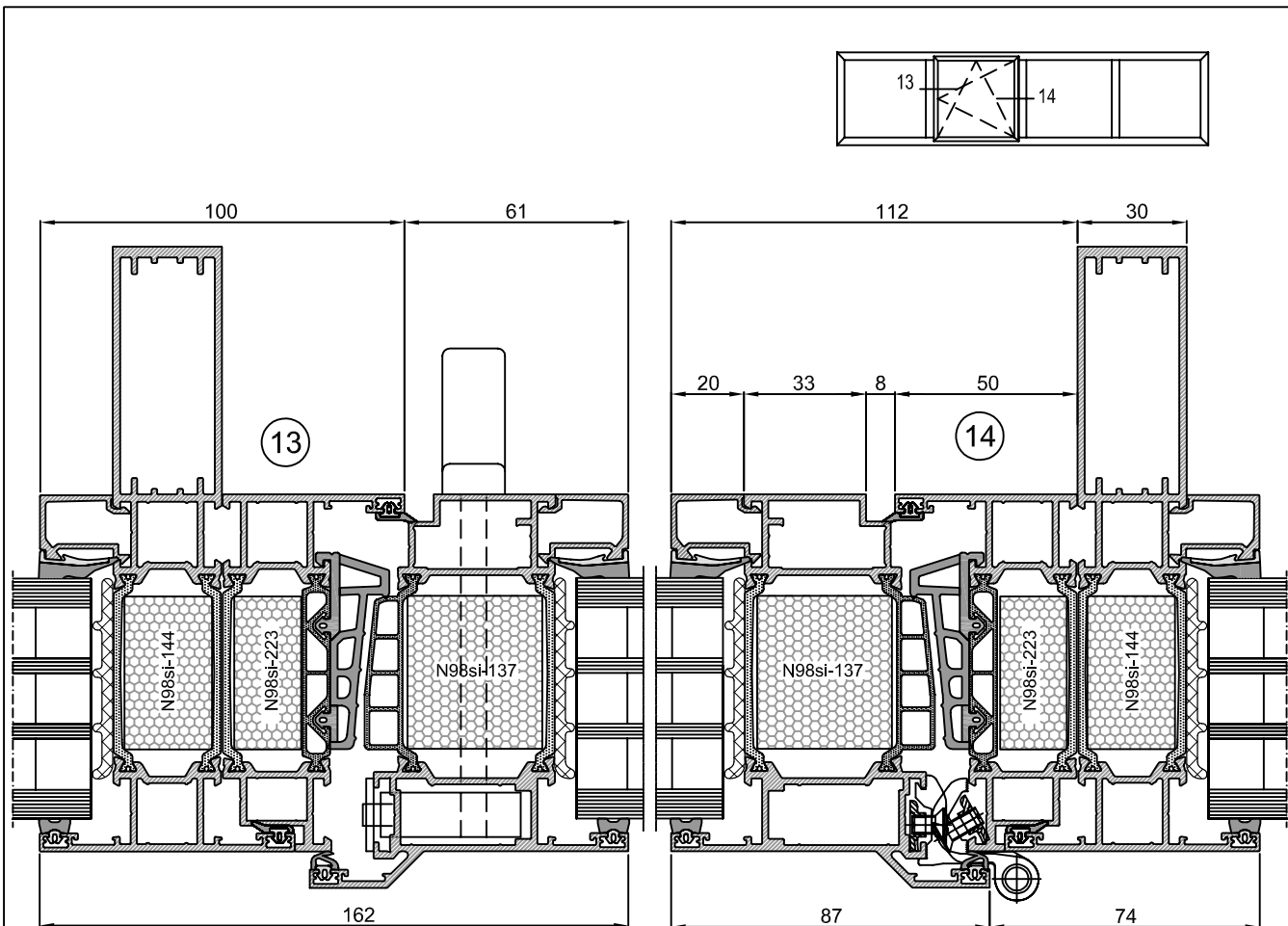


01.04.2016

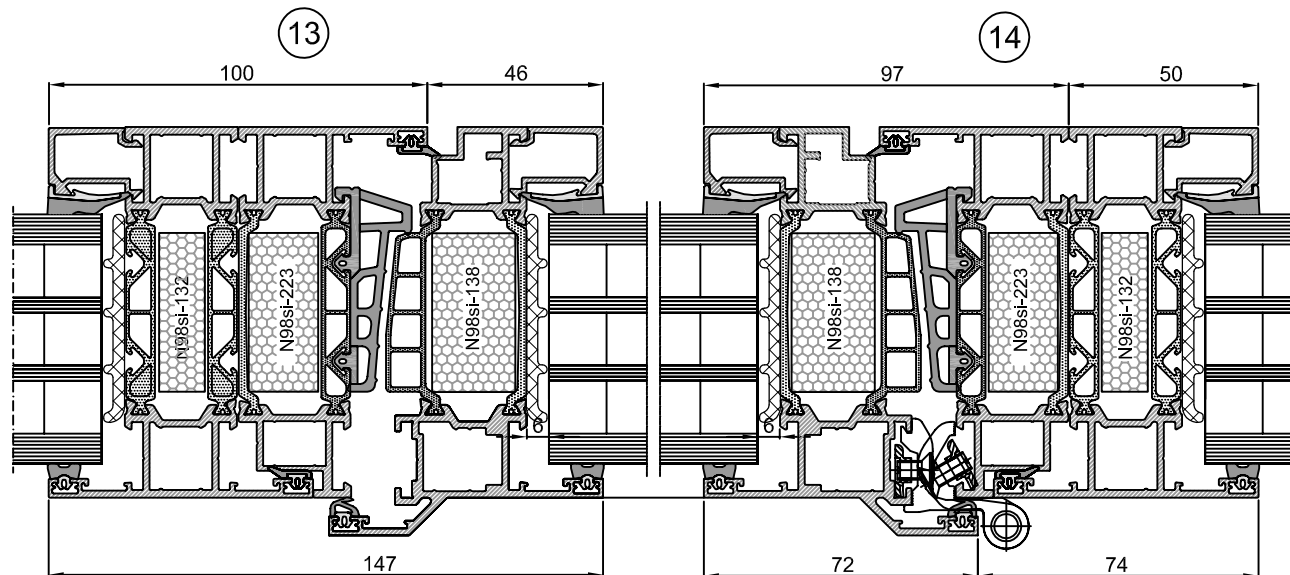
N98si 5.14



Outwards opening window,
horizontal sections



On the sash R98-138 only a surface mounted handle or chain-opener

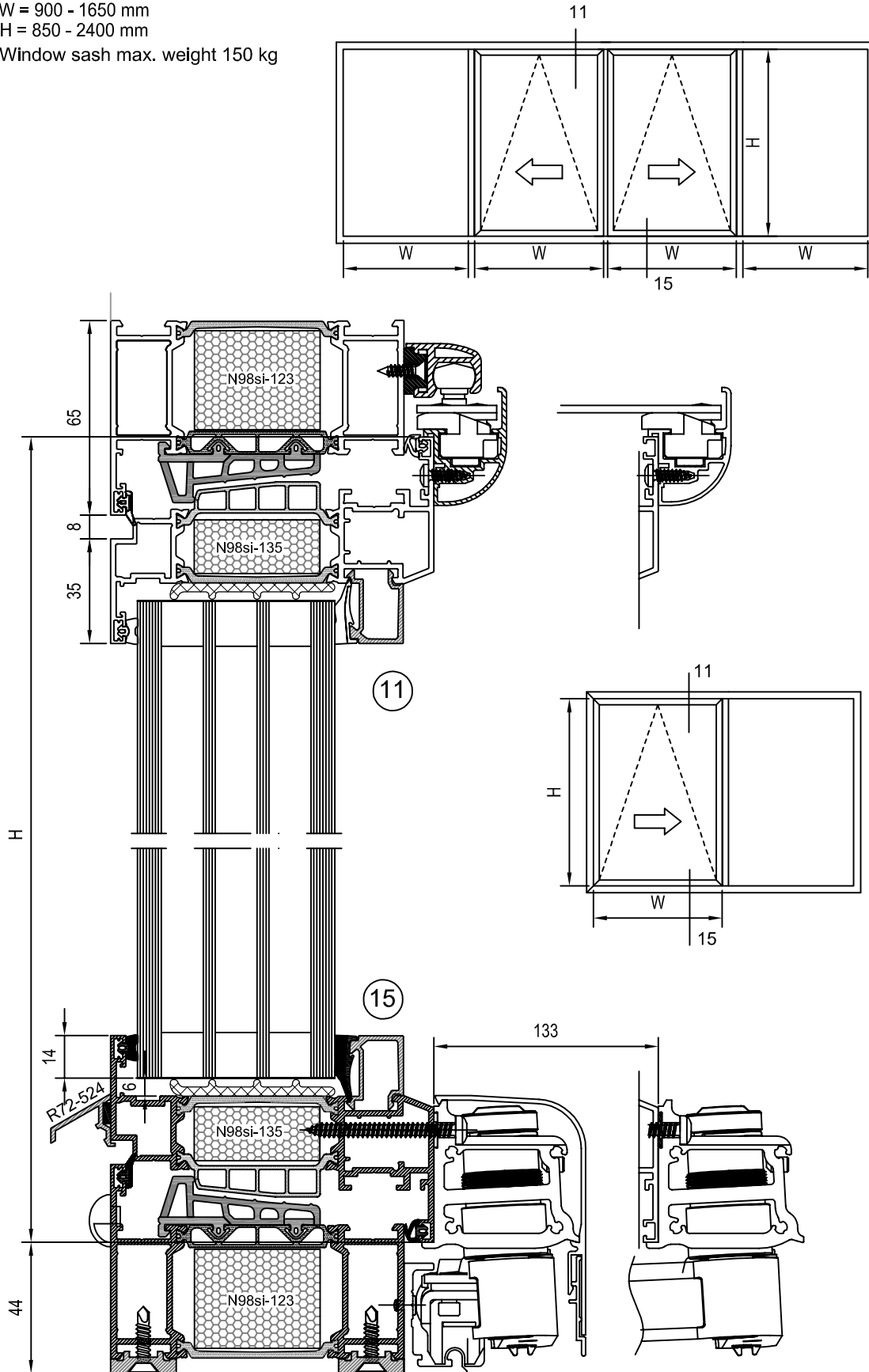


SASH MAX. DIMENSIONS

W = 900 - 1650 mm

H = 850 - 2400 mm

Window sash max. weight 150 kg

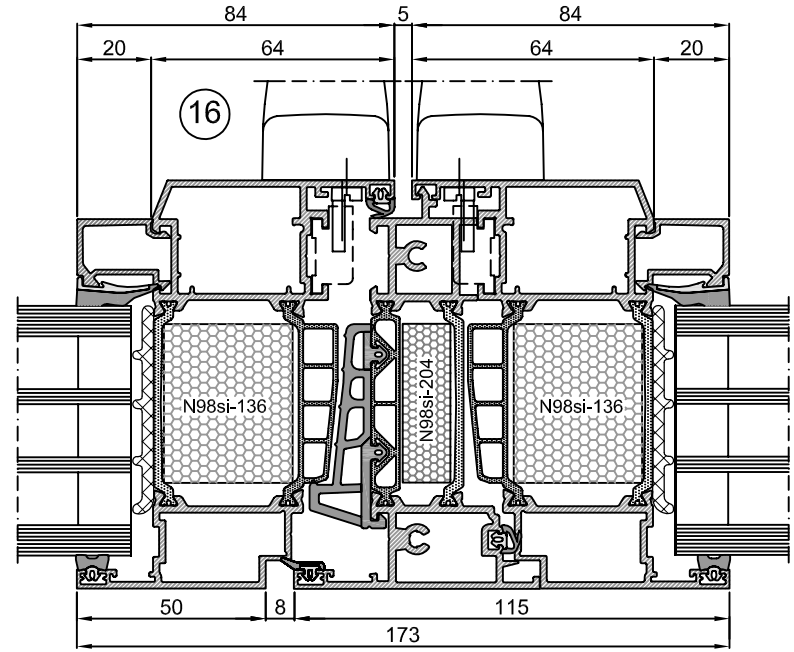
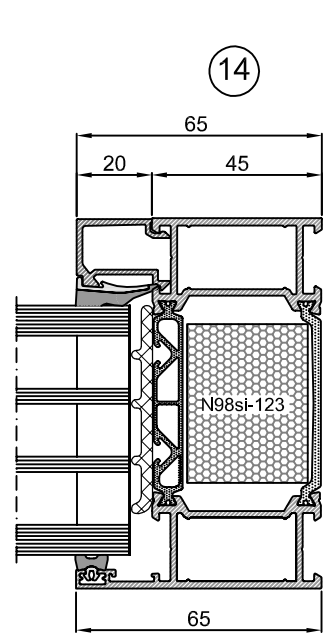
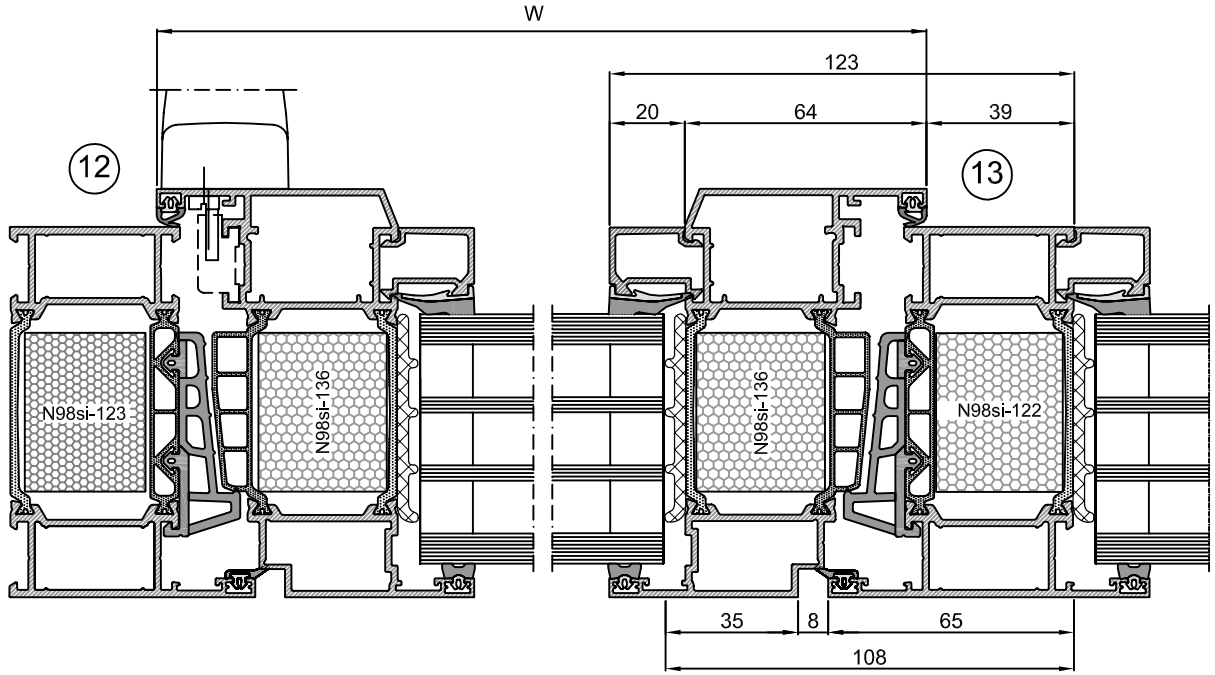
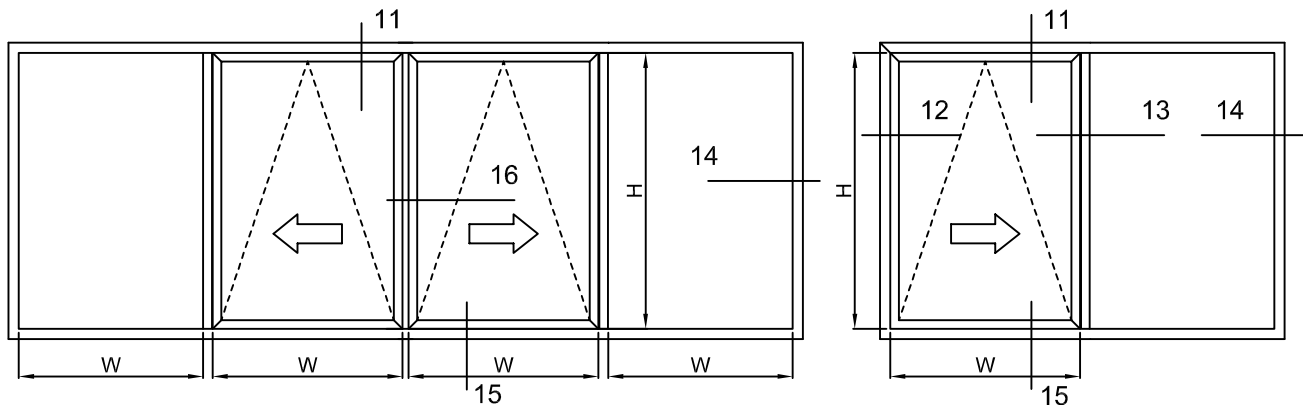


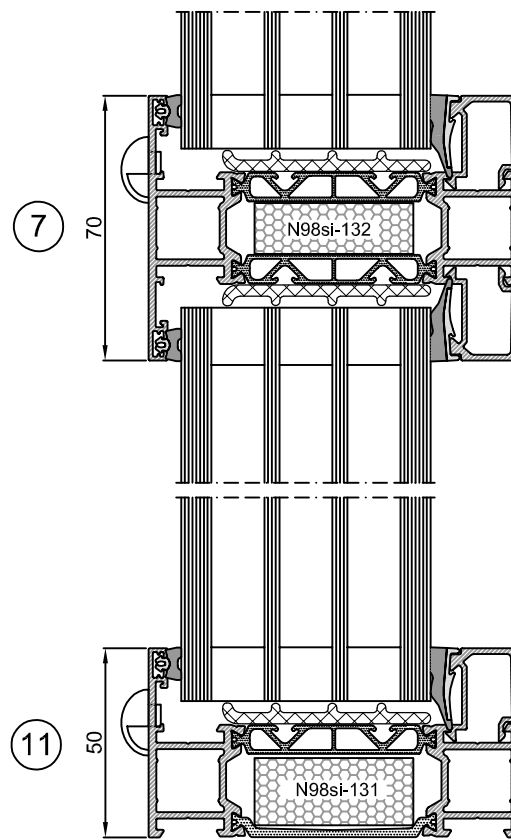
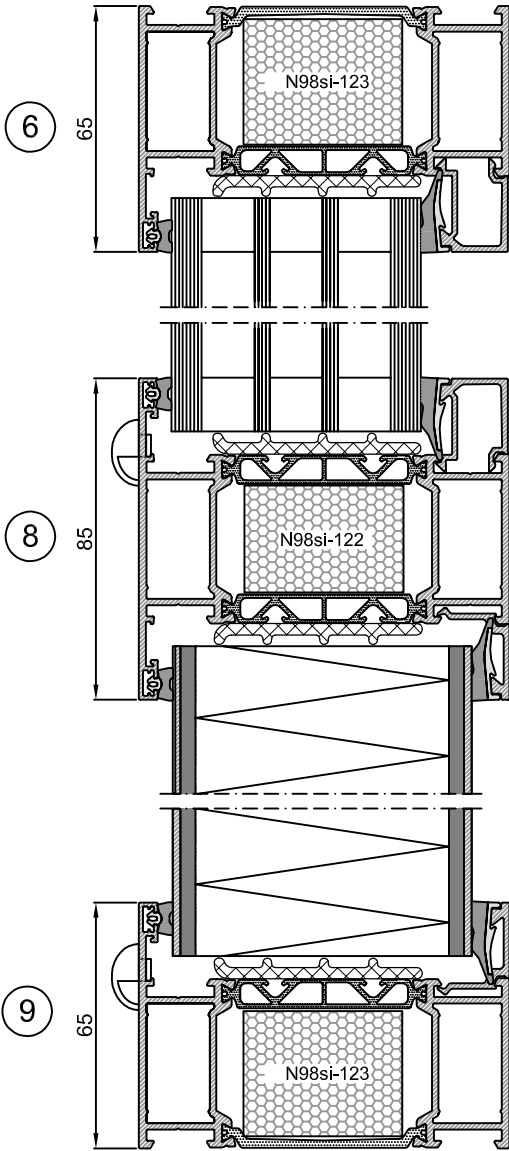
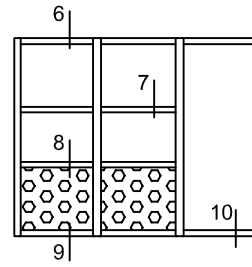
01.06.2015

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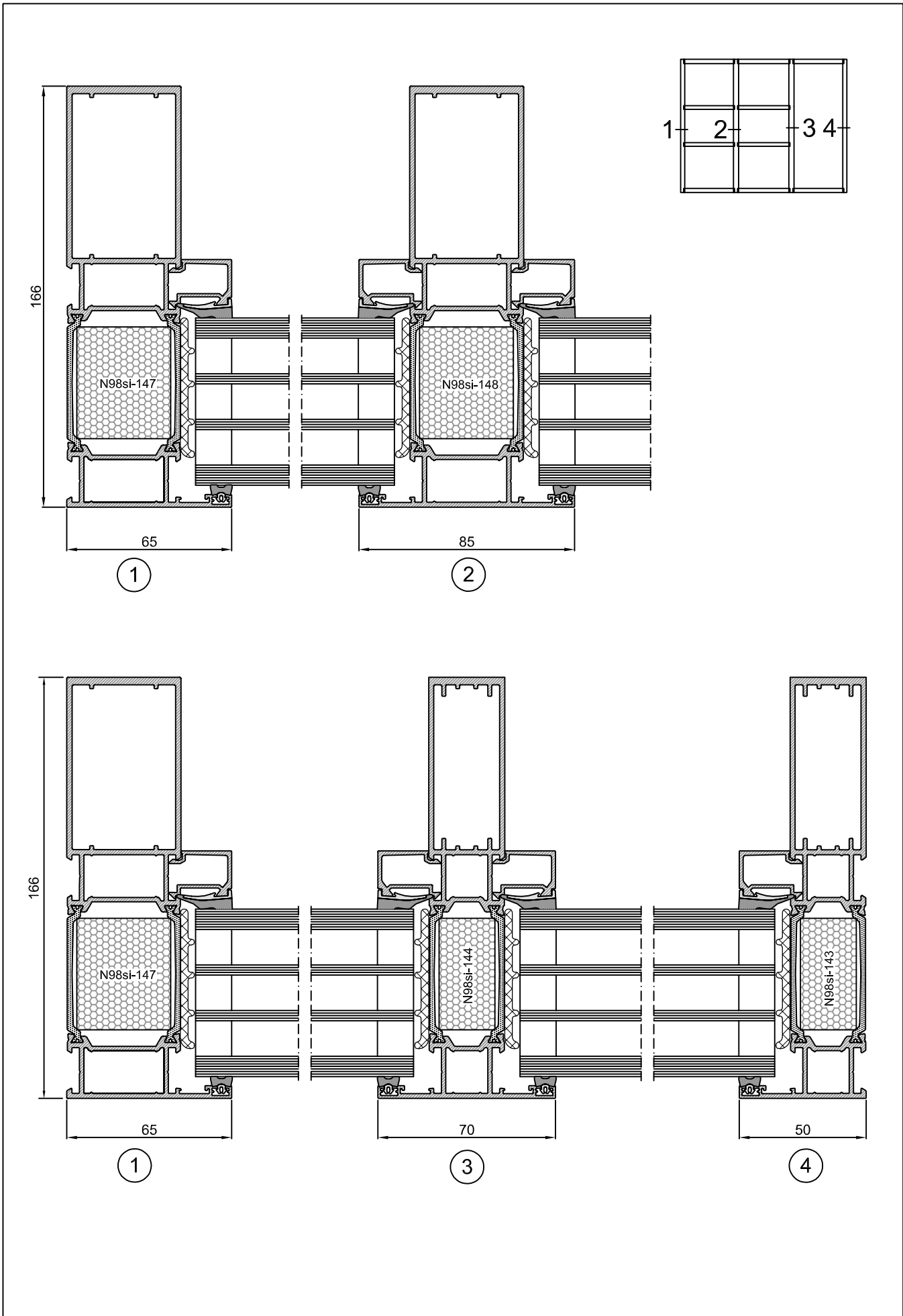
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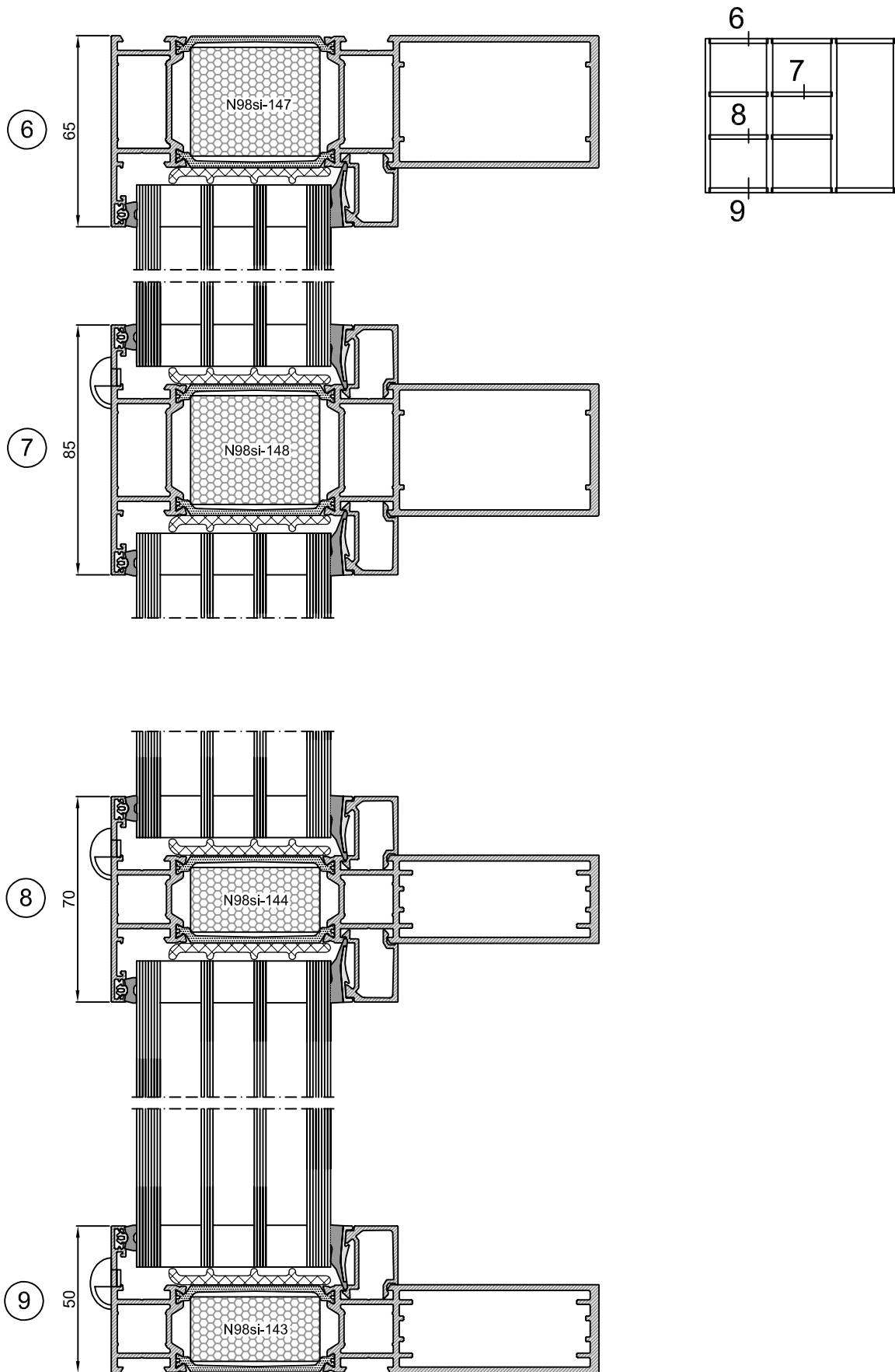
Sliding window





01.06.2015





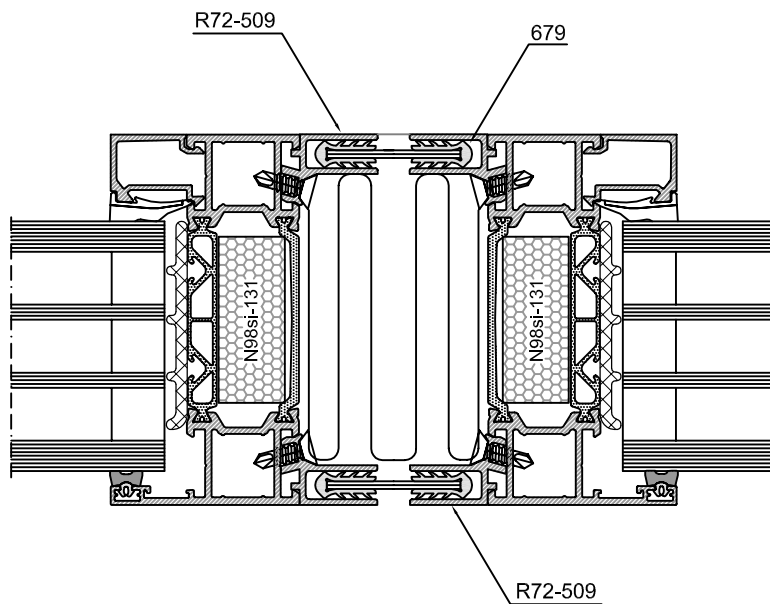
01.06.2015






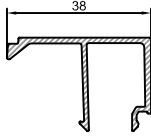









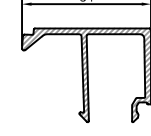









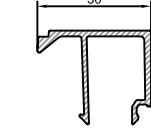









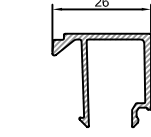









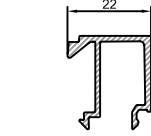









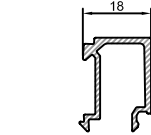









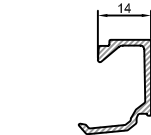









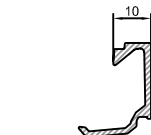









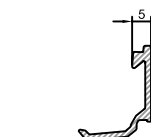




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Glass partition



Rabbit no:	External seal:	Glass/Solid part nominal thickness:	Retrofit seal:	Glazing bead:
1.	653 	 43  44  45 (+)	656 	 38 R72-328
	652 	 45  46  47 (+)		
2.	653 	 47  48  49(+)	656 	 34 R72-327
	652 	 49  50  51 (+)		
3.	653 	 51  52  53 (+)	656 	 30 R72-326
	652 	 53  54  55 (+)		
4.	653 	 55  56  57 (+)	656 	 26 R72-325
	652 	 57  58  59 (+)		
5.	653 	 59  60  61 (+)	656 	 22 R72-324
	652 	 61  62  63 (+)		
6.	653 	 63  64  65 (+)	656 	 18 R72-323
	652 	 65  66  67 (+)		
7.	653 	 68  69  70 (+)	656 	 14 R72-322
	652 	 70  71  72 (+)		
8.	653 	 72  73  74 (+)	656 	 10 R72-321
	652 	 74  75  76 (+)		
9.	653 	 76  77  78 (+)	656 	 5 R72-320
	652 	 78  79  80		

For some glass thicknesses there are several seal/glazing bead alternatives specified.
Marking (+) after the glass thickness means a recommended = (tighter) glazing alternative.

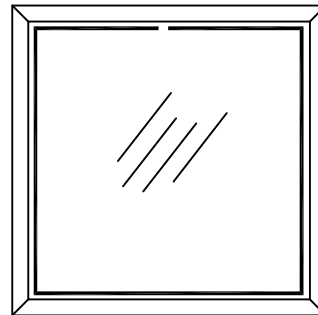
Measures of glass: light opening area + 28 mm

GLAZING INSTRUCTIONS

INSTALLING THE GLAZING SEALS

When starting the glazing, it must be ensured that the rabbets, glazing beads and glasses are clean. After this, fit the outer glazing seal no. 652 or 653 into the profile groove. After installing the glass and glazing beads, fit the glazing seal no. 656 in its position. Installation of the seals can be facilitated by applying silicone spray or some other suitable lubricant. When cutting the glazing seals, a shrinkage allowance of about 0.5% must be taken into account. Outside the seal is installed intact around the whole circle. Installation of the seal should be started from top centre. The inside retrofit seal is installed in the same way as the glazing beads. Horizontal beads through till the frame. Vertical beads between the horizontal ones.

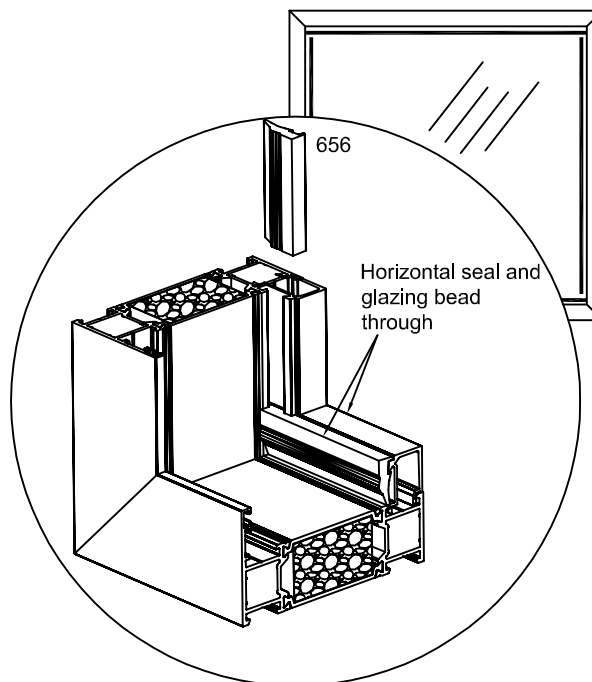
INSTALLING THE GLAZING SEAL 652 AND 653:



INSTALLING THE GLASS

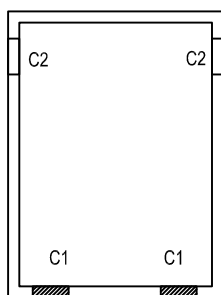
The meaning of padding is to support, centre and bear the sealed glass in the sash or frame in the intended manner, and to ensure that the window or door will stay in the correct form. There are two types of pads: -Bearing pads, which transfer the weight of the glass pane to the sash or frame. -Support pads, which prevent the glass pane from moving during use. The bearing pads must be made of rigid, durable plastics with the hardness of 70-90° Shore A, or other suitable material. Pads made of other materials must be of corresponding hardness. (Splitting or bellows pads are not allowed.) Temperature variations, to which the N98si structures may be subjected, must not have an adverse effect on the hardness of the pads. The length of the bearing pads must be 100 mm and the width 4 mm larger than the thickness of the glass pane. The thickness of the bearing pads shall be 5 mm. The length of the support pads may be between 50 and 100 mm, depending on the pane size, and width the same as with the bearing pads. The pads shall be located at 100 mm's distance from the pane corners (measured to the centre of the pad). The drawings show the locations of the pads in the most common window and door types. These glazing instructions are only general. We naturally cannot accept any liability for the actual glazing work, which is not under our supervision. These glazing instructions are valid only for vertical constructions.

INSTALLING THE GLAZING SEAL 656:

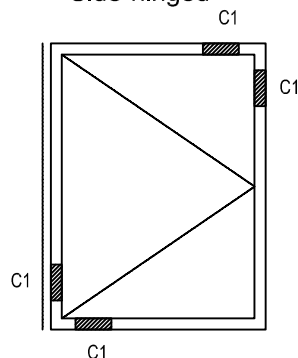


PAD LOCATIONS

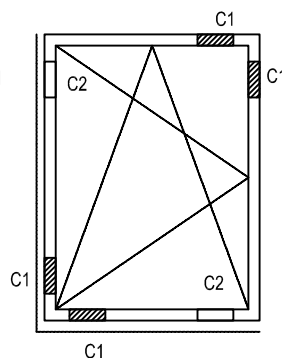
Fixed



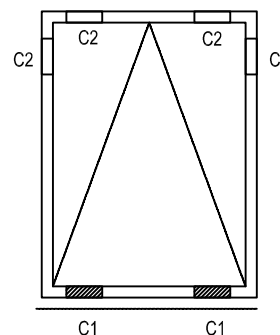
Side-hinged



Side-bottom-hinged

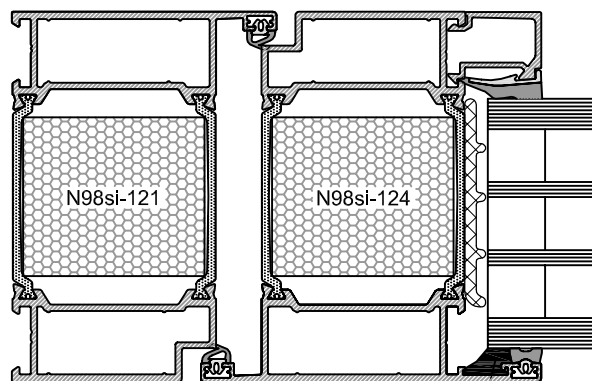


Bottom/top-hinged



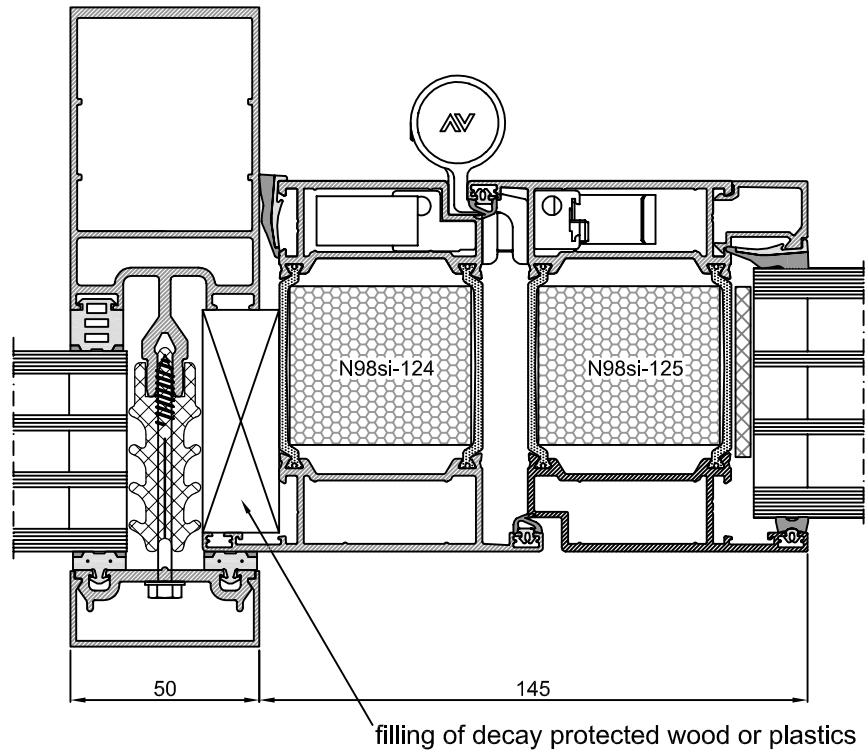
- C1 = Bearing pad
- C2 = Support pad

When door insulation performance is improved, in some situations may occur distortion of door leaf. The outer aluminum profile shrinks when temperature decreases, while the inner profile remains in its dimensions being in constant temperature. Distortion can be prevented by bonding the outer glass panel to profile. Thus, the glass prevents the shrinkage of profile. The glass is bonded according to the drawing below. The bonding must be done in temperature which will be the doors operating temperature.

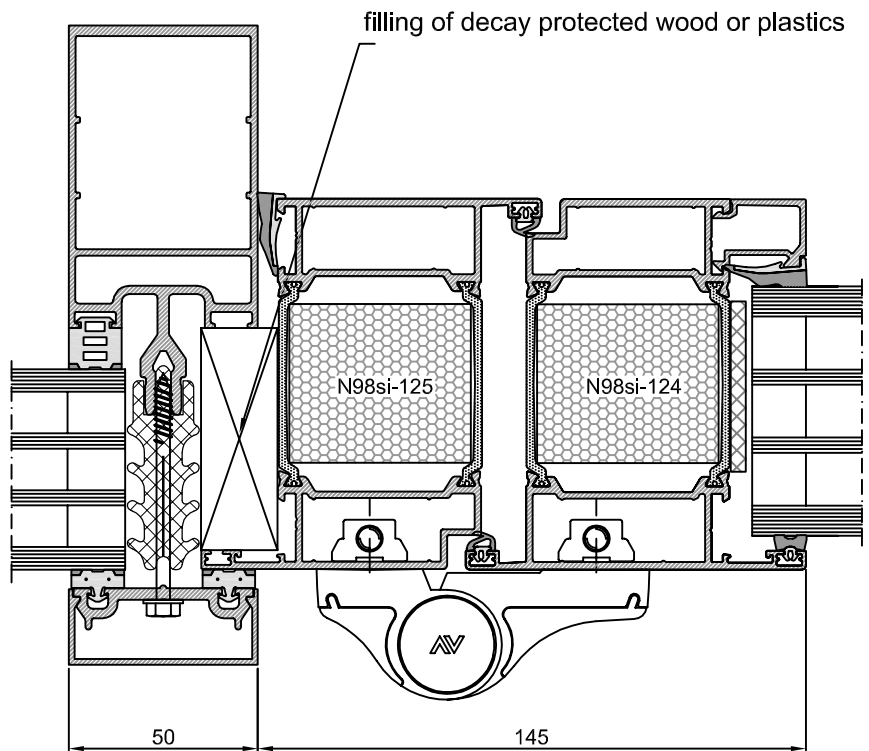


e.g. Sikasil WT-480

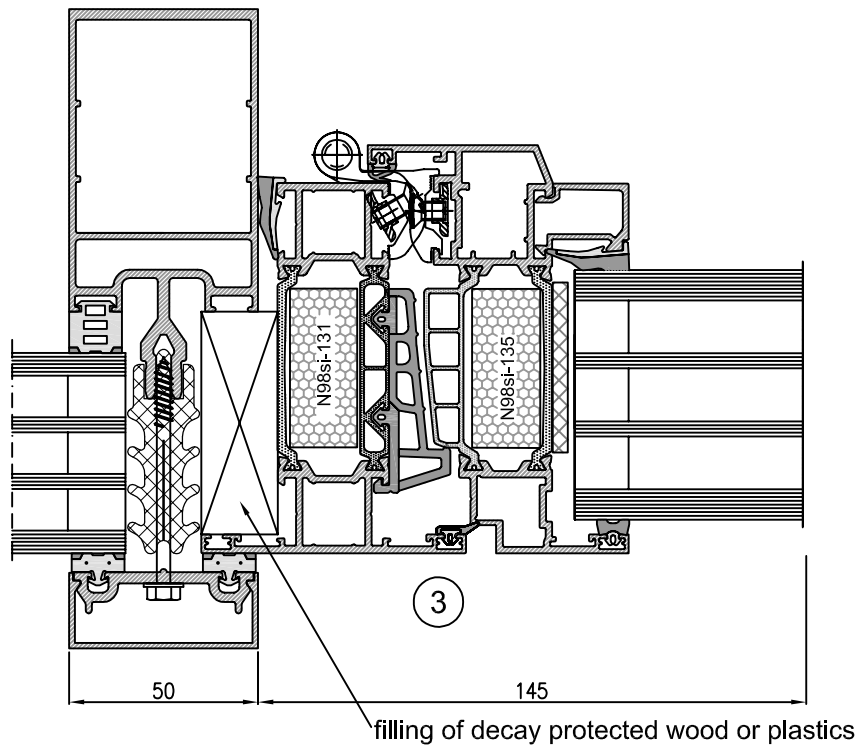
JOINT TO FRAME R54 (INWARDS OPENING DOOR)



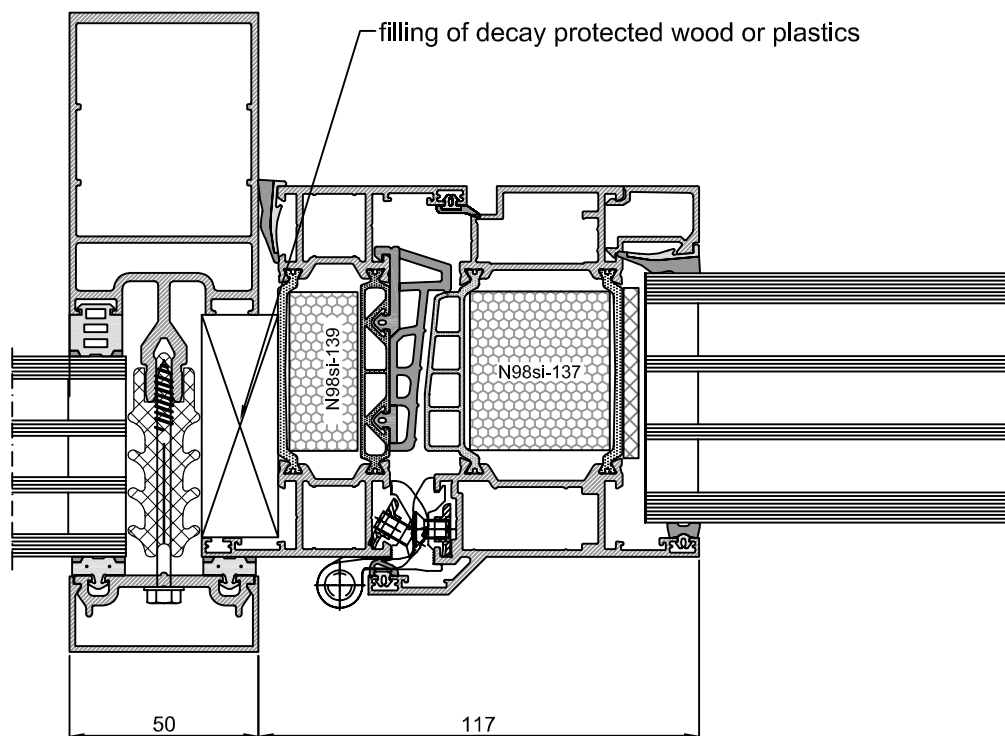
JOINT TO FRAME R54 (OUTWARDS OPENING DOOR)



JOINT TO FRAME N50si (INWARDS OPENING WINDOW)



JOINT TO FRAME N50si (OUTWARDS OPENING WINDOW)



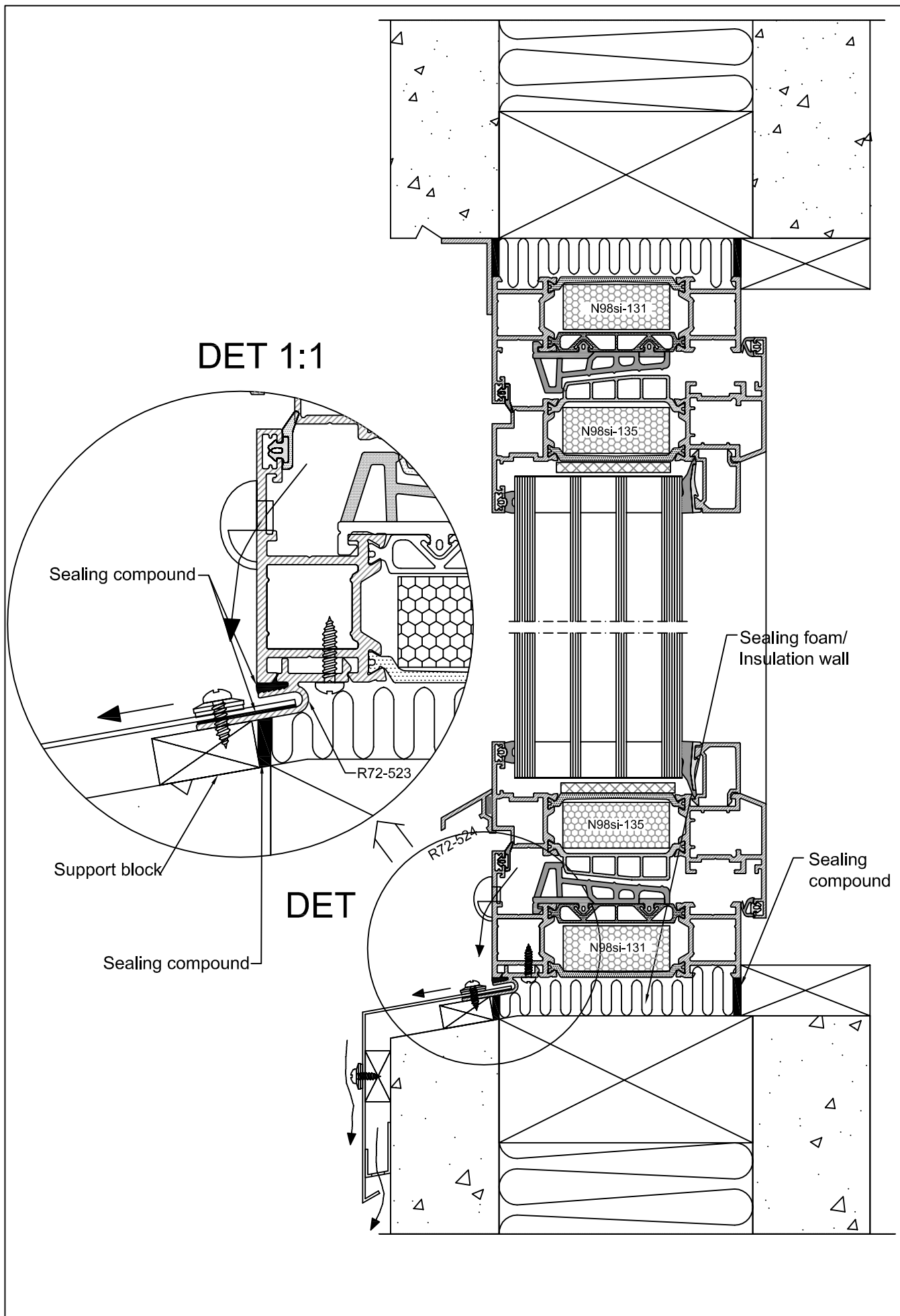
01.04.2016

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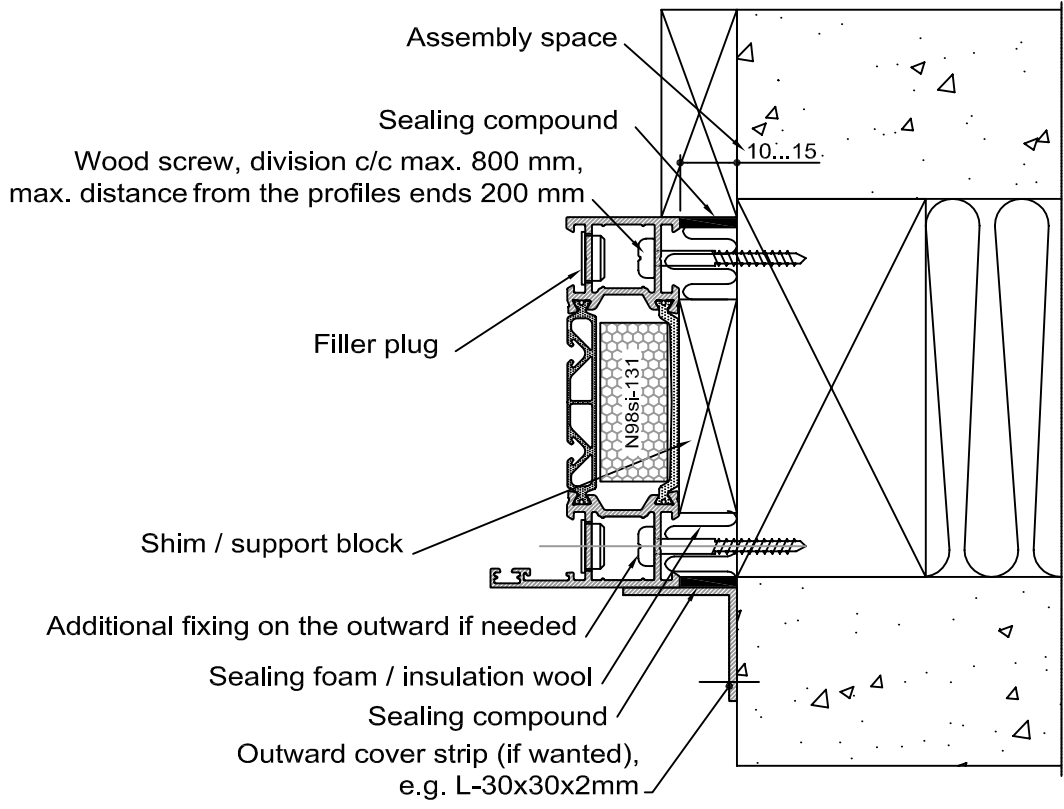


Window joints N98si/N50si

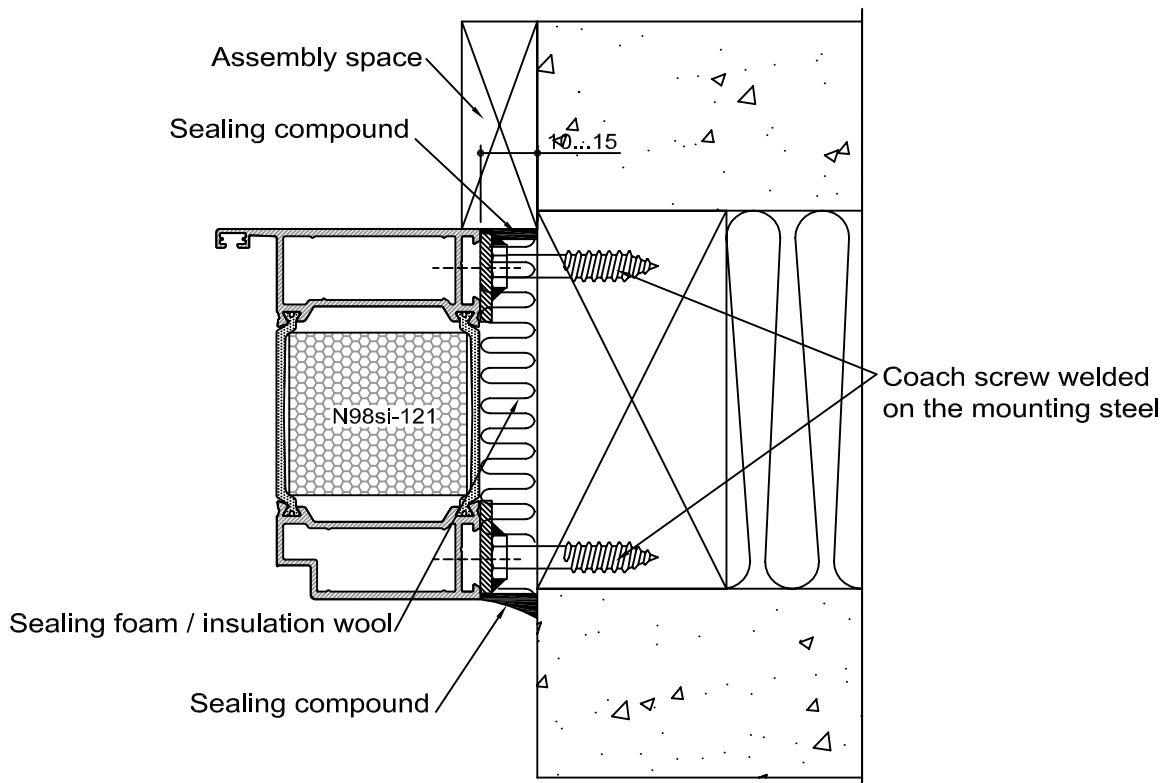


01.04.2016

ALTERNATIVE 1 / WOOD SCREW:

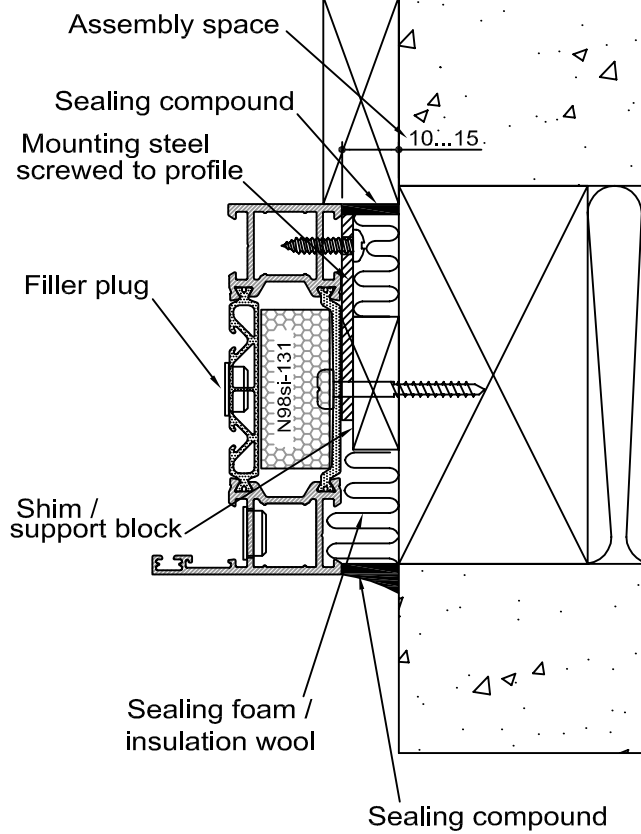


ALTERNATIVE 2 / COACH SCREW + WELDING:

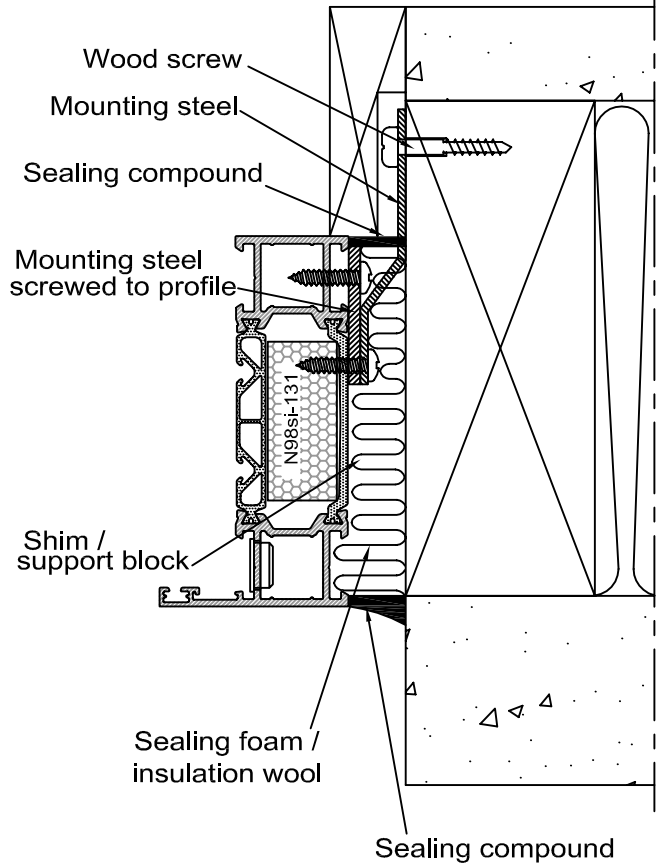


01.04.2016

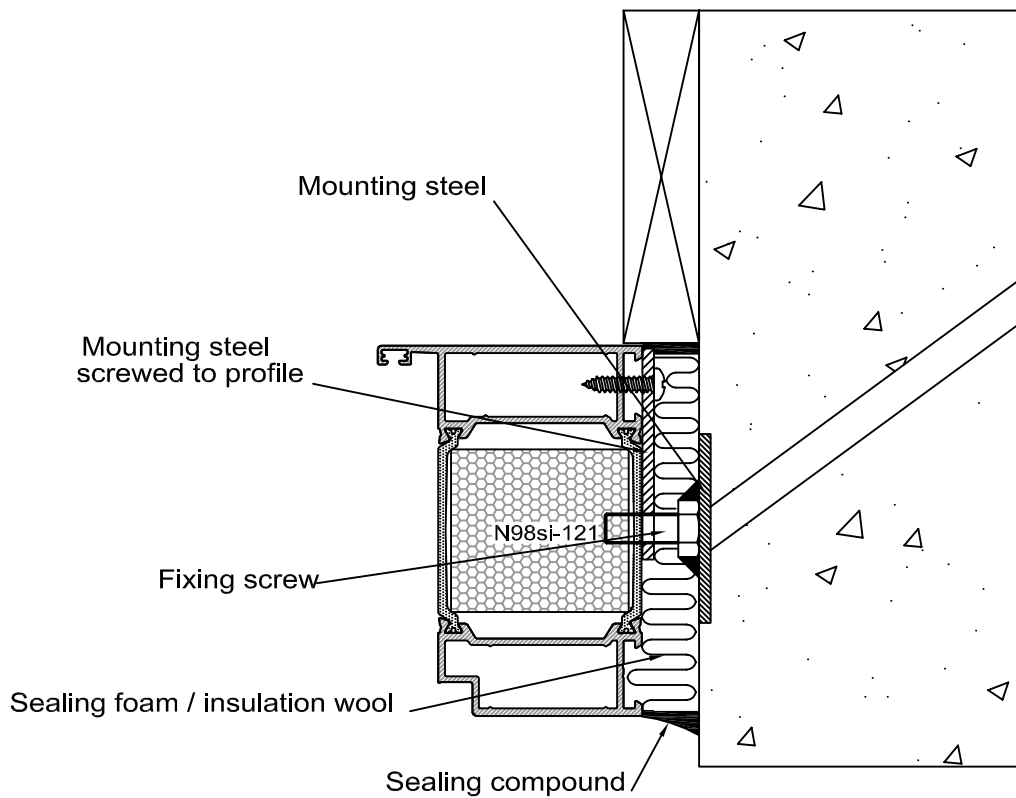
ALTERNATIVE 1: MOUNTING STEEL + SUPPORT BLOCK



ALTERNATIVE 2: MOUNTING STEEL



ALTERNATIVE 3: MOUNTING STEEL, ADJUSTING BOLT + WELDING



01.04.2016

SYSTEM: N98si Insulated door and window system

MATERIALS: Alloy EN AW-6060 (AlMgSi)
EN 573
EN 755

PROFILE DIMENSIONS:
EN 755
EN 12020

FINISHING: Anodizing
Definition of the oxide layers SFS-EN 12373-1
Layer thickness measurement SFS-EN ISO 2360
Sealing SFS-EN 12373-5

Powder coating using polyester-based powder
Layer thickness measurement SFS-EN ISO 2360
Grid raster test SFS-EN ISO 2409

QUALITY SYSTEM: According to the Lloyds Register Quality Assurance quality system ISO 9001.

**ENVIRONMENTAL
MANAGEMENT SYSTEM:**

According to the Lloyds Register Quality Assurance environmental management system ISO 14001.

Nokian Profiles Ltd building systems have been manufactured for 40 years. Our experience has shown that the expected service life of the material and finishing is 50 years when regularly and properly maintained.

Nokian Profiilit Oy
Building Systems