12 R72 Termo

Thermally insulated door and window system

NOKIAN PROFILES

CONTENTS

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

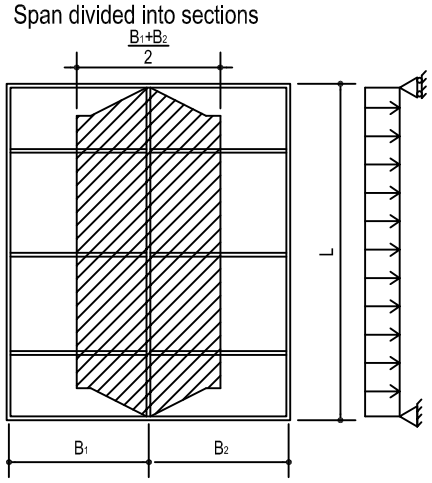
Ix [cm^4] Length of profile	R72-122	R72-123	R72-128	R72-131	R72-132	R72-133
1.0 m	15,51	15,57	15,30	13,77	13,79	13,00
1.5 m	22,80	22,55	21,64	20,01	19,98	17,93
2.0 m	28,62	27,75	26,09	24,50	24,61	21,15
2.5 m	32,87	31,35	29,05	27,54	27,83	23,18
3.0 m	35,90	33,83	31,03	29,59	30,05	24,50
3.5 m	38,07	35,56	32,38	31,01	31,60	25,38
4.0 m	39,65	36,79	33,34	32,01	32,71	25,99
4.5 m	40,83	37,70	34,03	32,74	33,53	26,43
5.0 m	41,72	38,38	34,55	33,29	34,14	26,76
5.5 m	42,41	38,91	34,94	33,71	34,61	27,01
6.0 m	42,95	39,31	35,25	34,03	34,98	27,20
6.6 m	43,46	39,69	35,54	34,34	35,32	27,37
Wx[cm^3]	11,2	10,8	10,3	8,4	8,8	7,8
Iy [cm^4]	22,6	16,5	12,3	6,3	10,2	3,3
Wy[cm^3]	5,3	4,3	5,5	2,9	3,9	2,6

Ix [cm^4] Length of profile	R72-143	R72-144	R72-147	R72-148
1.0 m	98,22	100,96	112,69	114,87
1.5 m	121,66	127,01	139,05	143,47
2.0 m	139,83	147,93	160,61	167,52
2.5 m	152,78	163,24	176,63	185,78
3.0 m	161,85	174,18	188,19	199,18
3.5 m	168,28	182,03	196,56	209,00
4.0 m	172,93	187,76	202,69	216,26
4.5 m	176,36	192,02	207,28	221,72
5.0 m	178,95	195,25	210,77	225,89
5.5 m	180,94	197,75	213,47	229,14
6.0 m	182,51	199,72	215,60	231,71
6.6 m	183,97	201,57	217,61	234,13
Wx[cm^3]	27,9	32,3	33,9	38,3
Iy [cm^4]	12,9	16,5	31,9	37,8
Wy[cm^3]	3,9	4,7	7,9	8,9

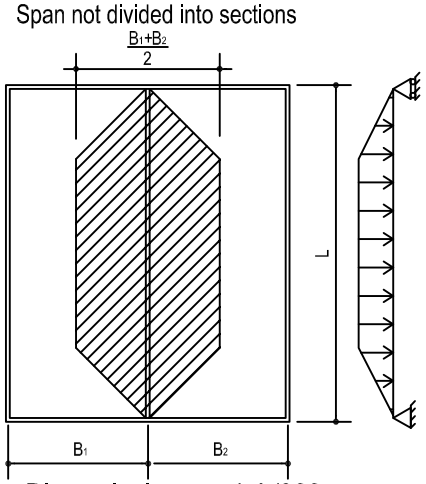
VERTICAL FRAME

WIND LOAD

Span divided into sections



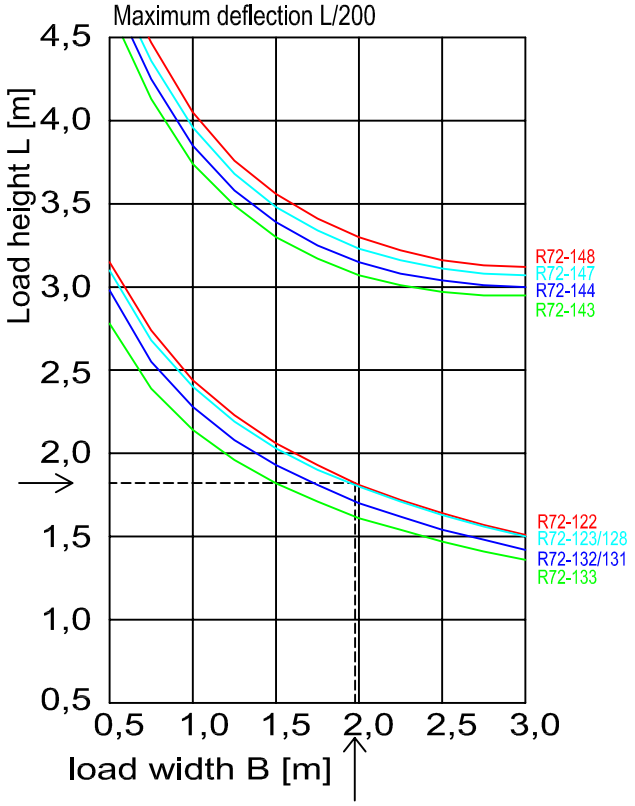
Span not divided into sections



Dimensioning graph L/200

Wind load q = 0,6 kN/m²
Tension < 100 N/mm²

Maximum deflection L/200



Design example

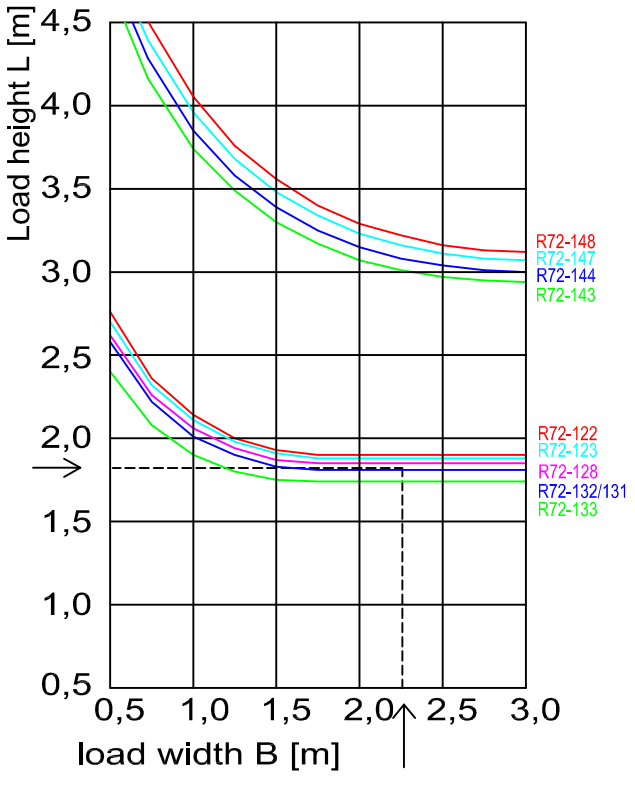
WIND LOAD:
Industrial area, terrain class III
Structure height 10 m
-->wind load q = 0,6 kN/m²
B_1 = 2,5 m, B_2 =2,5 m, L = 1,8 m
Load width --> $\frac{B_1+B_2}{2}$ =2,25 m

Dimensioning graph of vertical frame (L/200)
--> Vertical frame R72-132

Dimensioning graph L/300

Wind load q = 0,6 kN/m²
Tension < 100 N/mm²

Maximum deflection L/300



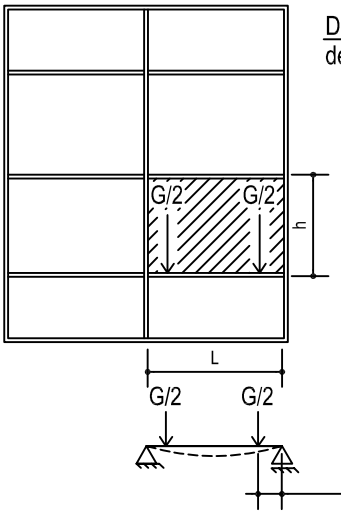
Design example

WIND LOAD:
Industrial area, terrain class III
Structure height 10 m
-->wind load q = 0,6 kN/m²
B_1 = 2,5 m, B_2 =2,5 m, L = 1,8 m
Load width --> $\frac{B_1+B_2}{2}$ =2,25 m

Dimensioning graph of vertical frame (L/300)
--> Vertical frame R72-122

HORIZONTAL FRAME

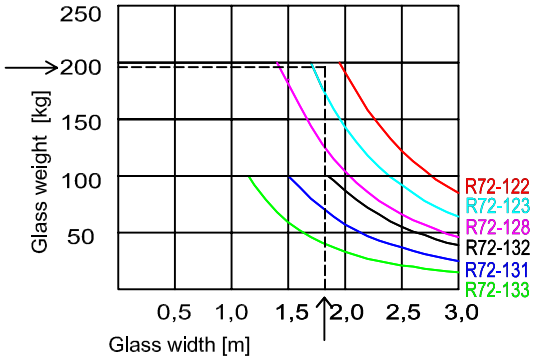
WEIGHT OF GLASS



Deflection

deflection of horizontal profile < 3 mm

Profile	kg
R72-131	100
R72-132	100
R72-133	100
R72-122	200
R72-123	200
R72-128	200



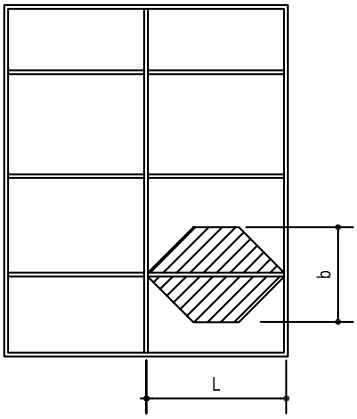
Design example

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
R72-122 max. glass weight
--> 200 kg > 197 kg ok

Glass package weights

Type	kg/m²
2K-4	20
2K-5	25
2K-6	30
3K-4	30
3K-5	38
3K-6	45

WIND LOAD

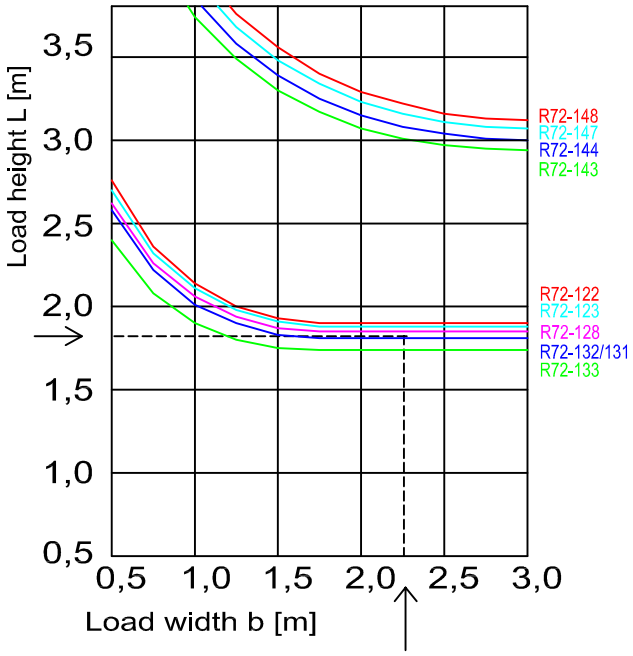


Design example

-->wind load q = 0,6 kN/m²
L = 1,8 m, b = 2,25 m
Dimensioning graph of horizontal frame (wind load)
--> Horizontal frame R72-122

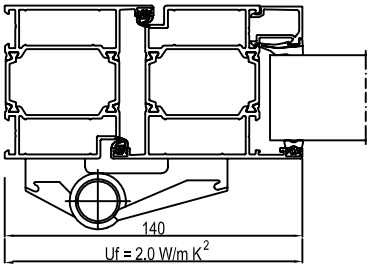
Dimensioning graph L/300

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

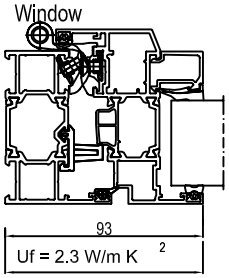


U-values

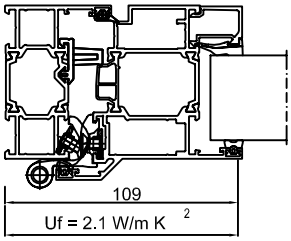
Door



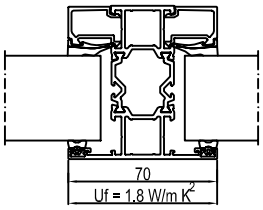
Window



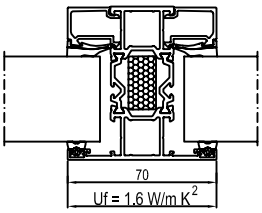
Outwards opening window



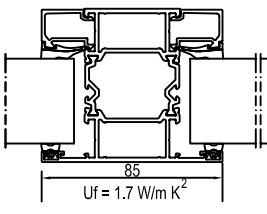
R72-132



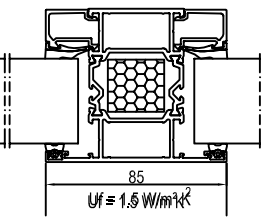
R72-132 Termo +



R72-122

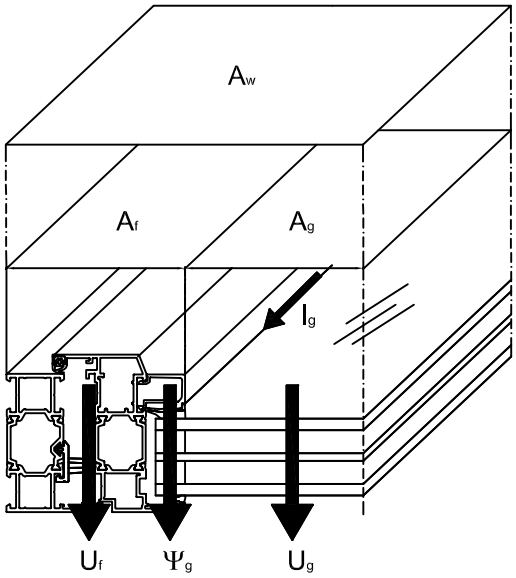


R72-122 Termo +



Average thermal transmittance

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



A_f =area of the frame [m^2]

A_g = light opening area [m^2]

$A_w = A_f + A_g$ [m^2]

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

U_f = thermal transmittance of the frame [W/m^2K]

U_g = thermal transmittance of the light opening [W/m^2K]

Ψ_g = linear thermal transmittance [W/m K]

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/m^2K

A_f = 0.53 [m^2]

A_g = 1.84 [m^2]

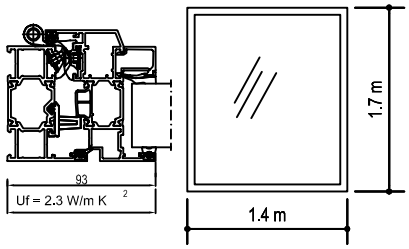
A_w = 2.37 [m^2]

l_g = 5.56 [m]

U_f = 2.3 [W/m^2K]

U_g = 1.0 [W/m^2K]

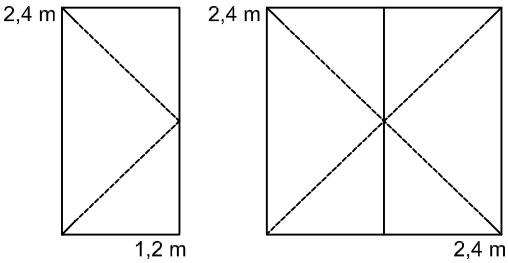
Ψ_g = 0.08 [W/mK]



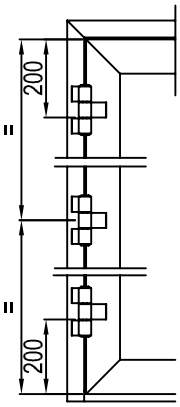
$$U_w = \frac{1.84 \times 1.0 + 0.53 \times 2.3 + 5.56 \times 0.06}{2.37} = 1.4 \text{ W/m}^2\text{K}$$

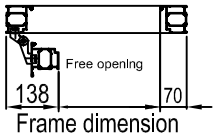
U_f values are defined by the HotBox method according to the standard prEN 12412-2

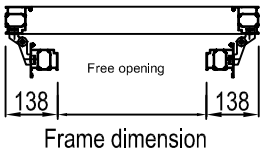
Doors size and weight
Strip width



Standard hinge

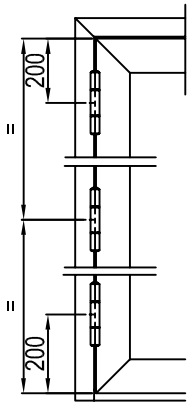


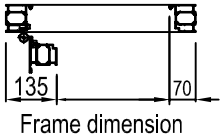


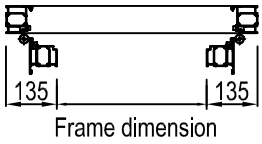


max. 120 kg

Pipe hinge



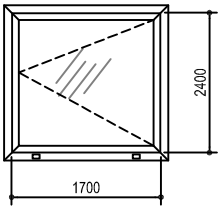




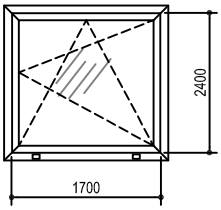
max. 100 kg

Windows size and weight

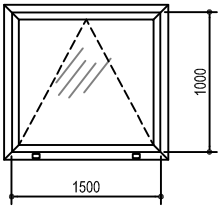
External dimensions of the sash



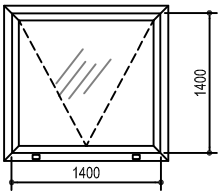
max. 100 kg



max. 150 kg

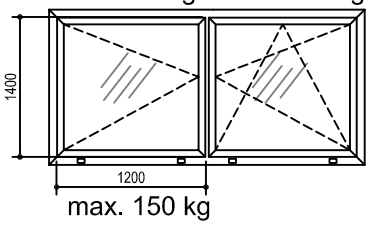


max. 70 kg

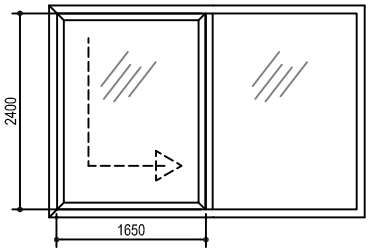


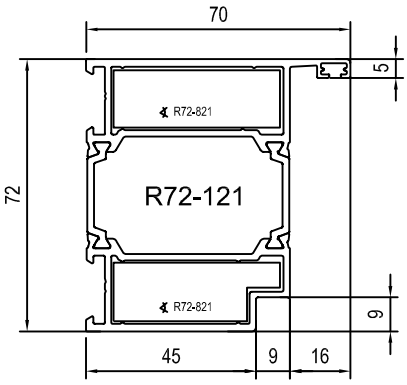
max. 70 kg

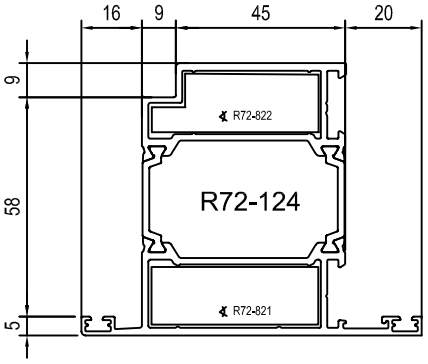
max. 90 kg max. 150 kg

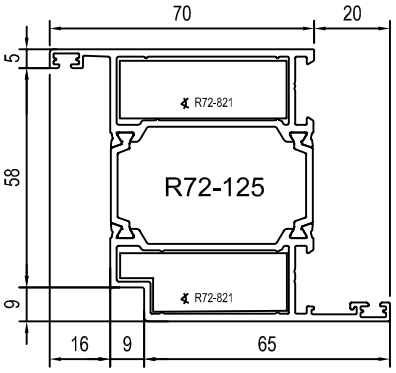


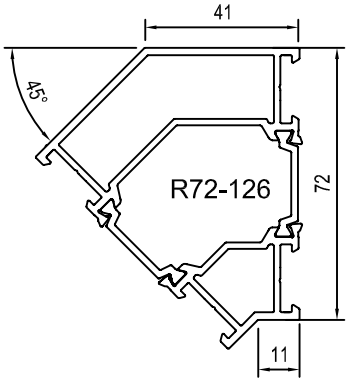
max. 150 kg

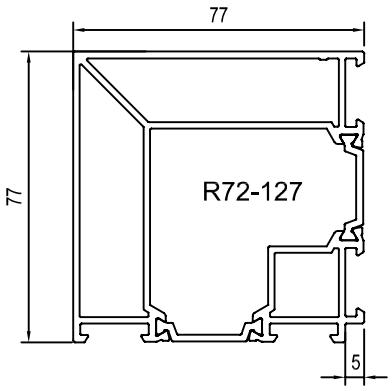




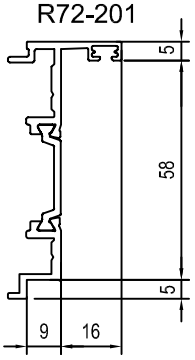








R72-201



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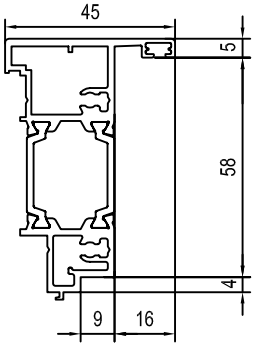

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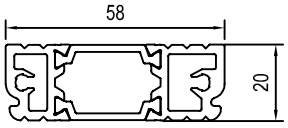
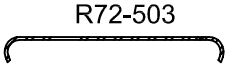
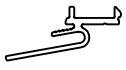


R72-503 Stainless steel surface



R72-523 External steel mounting

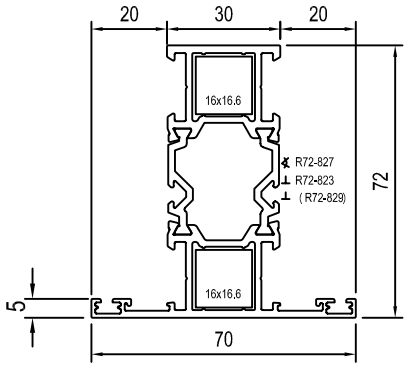


R72-505 Brush seal profile

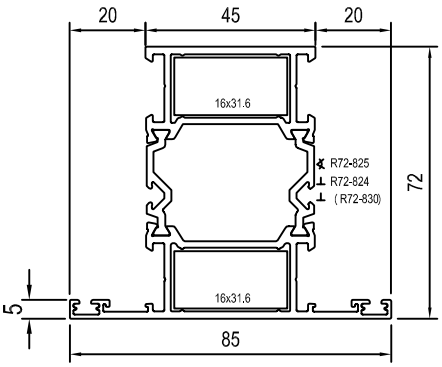
R72-510 Liukuikkunan apurofiili

R72-524 Drip

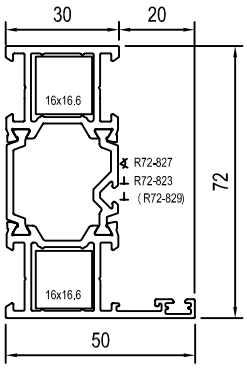
R72-132



R72-122



R72-131



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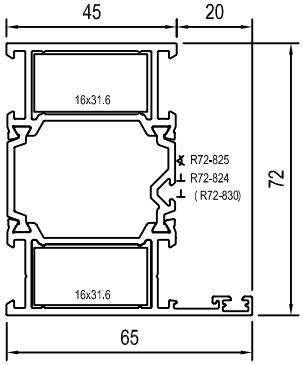
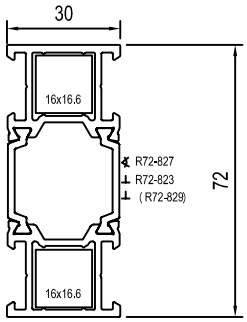
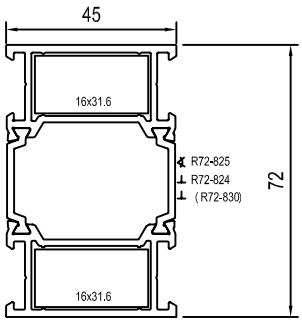


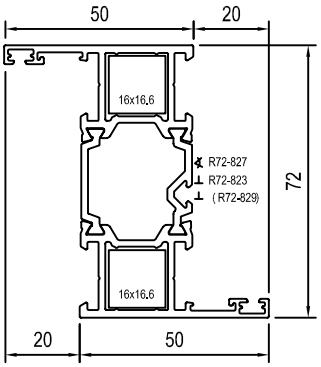
R72-133



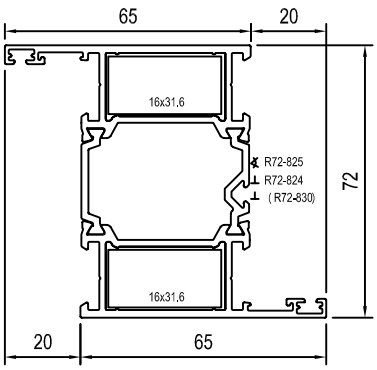
R72-128



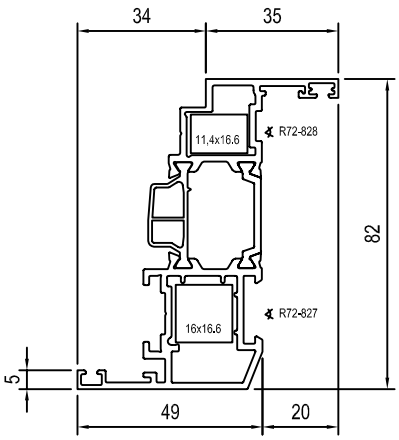
R72-139



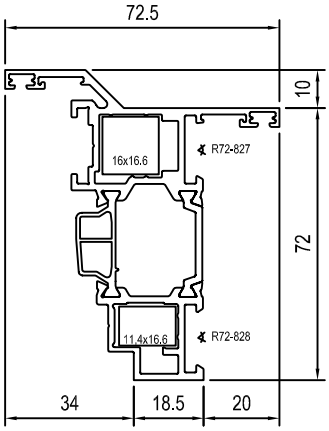
R72-129



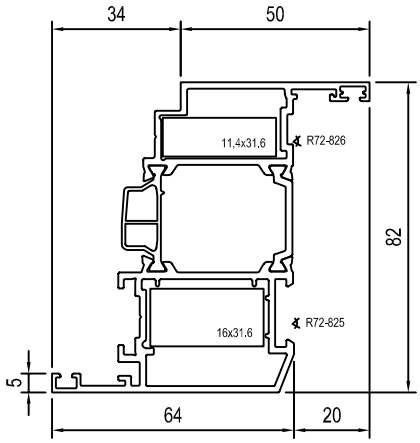
R72-135



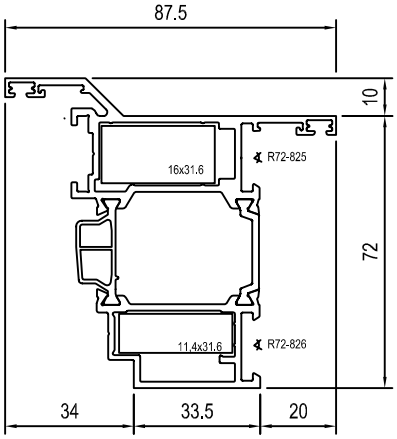
R72-138



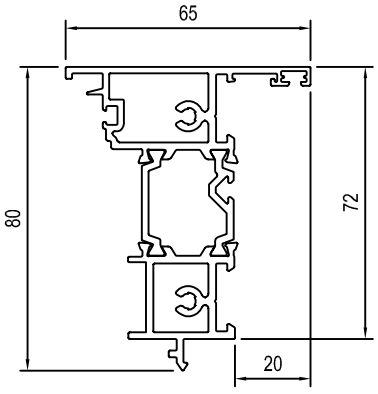
R72-136



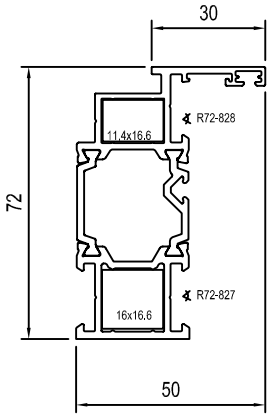
R72-137



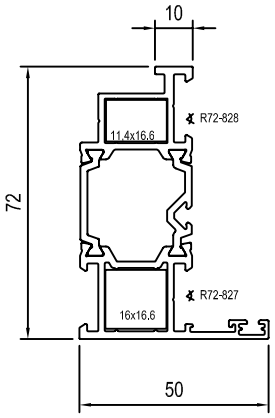
R72-204

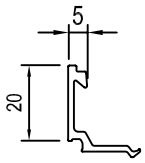


R72-222

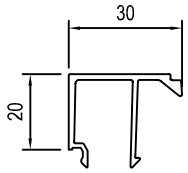


R72-223

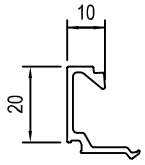




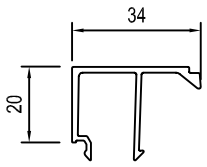
R72-320



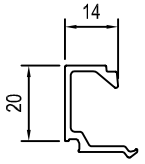
R72-326



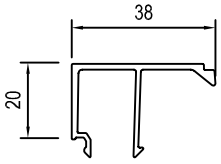
R72-321



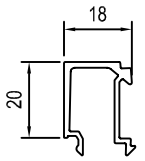
R72-327



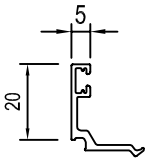
R72-322



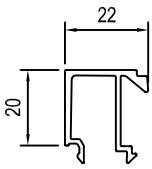
R72-328



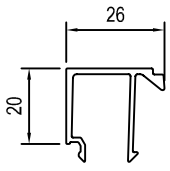
R72-323



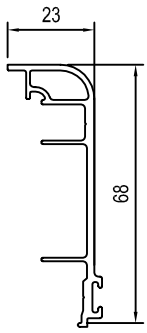
R72-329



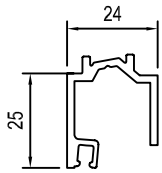
R72-324



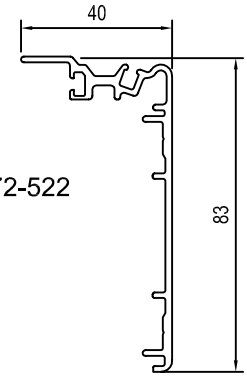
R72-325



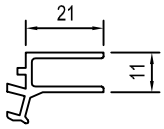
R72-525



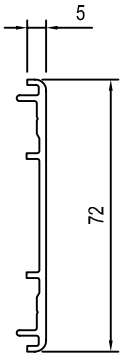
R72-506



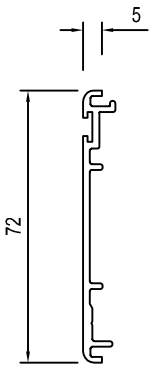
R72-522



R72-509

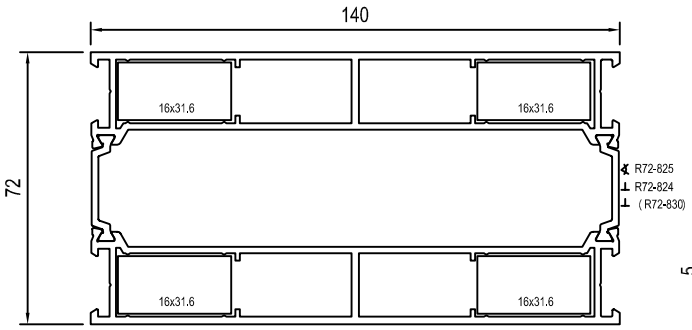


R72-205

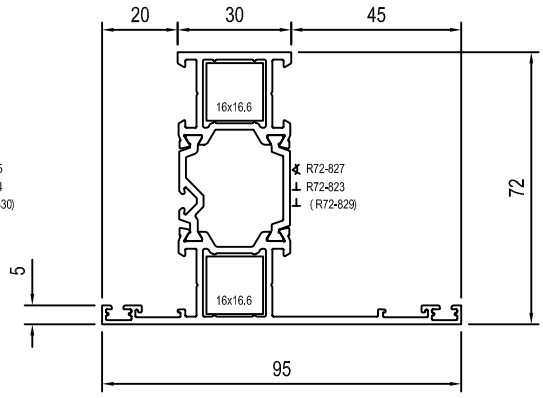


R72-206

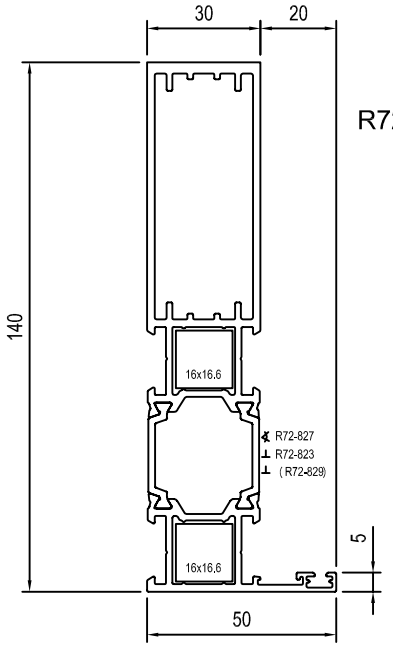
R72-140



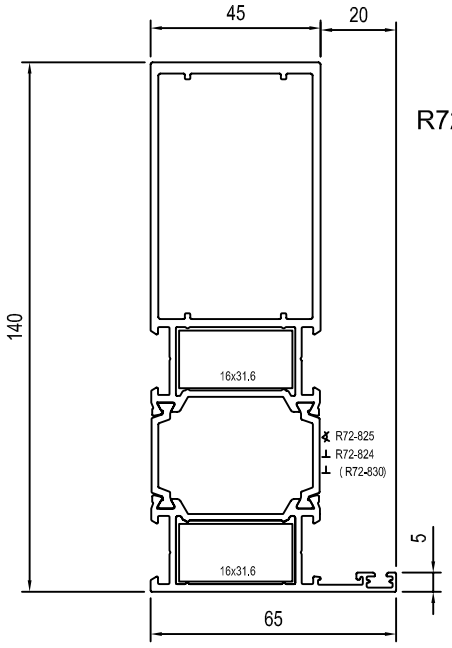
R72-142



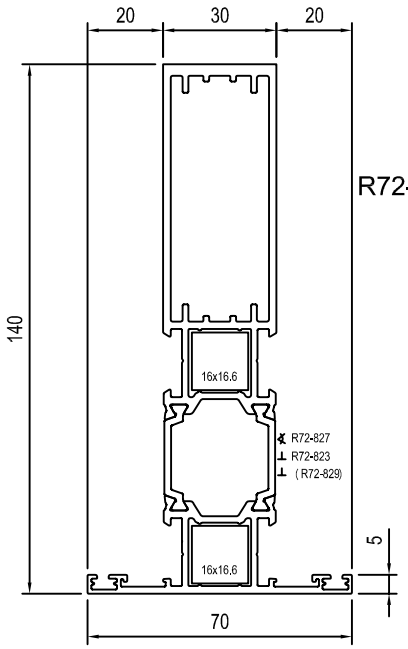
R72-143



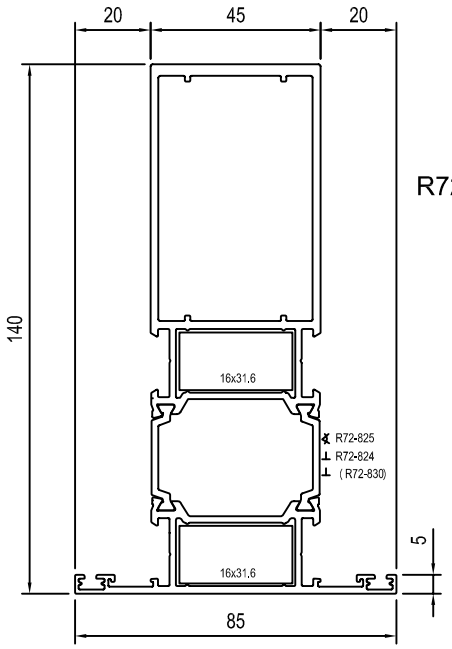
R72-147



R72-144



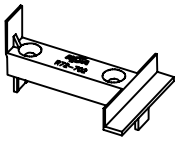
R72-148



R72-701

Double-leaf door sealing piece

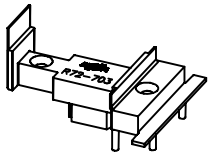
R72-124/125



R72-702

Double-leaf door sealing piece

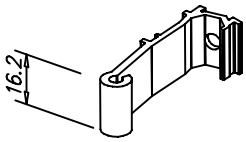
R72-202



R72-703

Pair window sealing piece

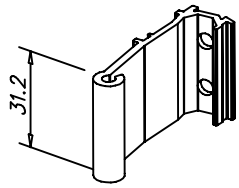
R72-204



R72-823

T-joint piece

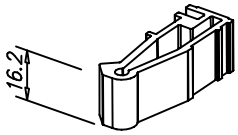
R72-131
R72-132
R72-133
R72-139



R72-824

Large T-joint piece II

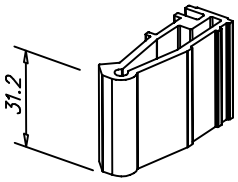
R72-122
R72-123
R72-128
R72-129



R72-829

T-joint piece II

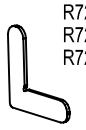
R72-131
R72-132
R72-133
R72-139



R72-830

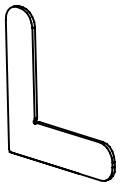
Large T-joint piece II

R72-122
R72-123
R72-128
R72-129



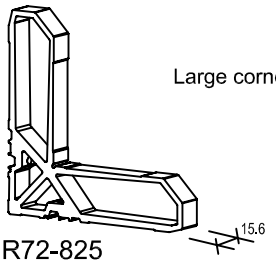
R72-801

Small corner plate



R72-802

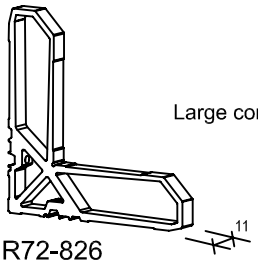
Large corner plate



R72-825

Large corner piece 15,6 mm

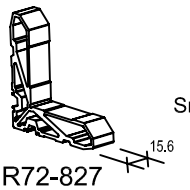
R72-122
R72-123
R72-128
R72-129
R72-136
R72-137



R72-826

Large corner piece 11 mm

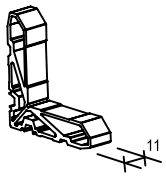
R72-136
R72-137



R72-827

Small corner piece 15,6 mm

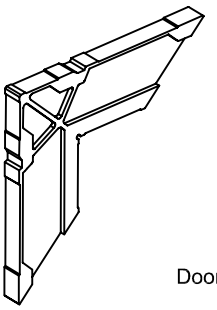
R72-131
R72-132
R72-133
R72-135
R72-138
R72-139



R72-828

Small corner piece 11 mm

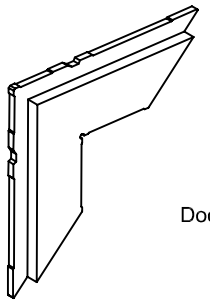
R72-135
R72-138



R72-821

Door leaf & framecorner piece

R72-121
R72-125



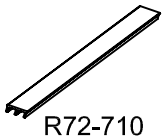
R72-822

Door leaf corner piece

R72-121
R72-124

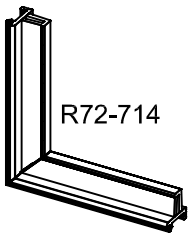
R72-708

Ventilation plug



R72-710

Glass bearing piece L=200 mm

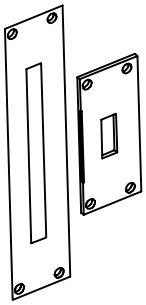


R72-714

Gasget corner piece (655)

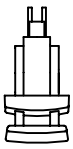
R72-725

Edge bolt lead-through



R72-726

Lock counterplate



R72-727

Lever bolt

R72-728

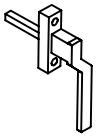
Edge bolt

R72-401

Slider

R72-729

Outwards opening window mechanism



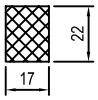
R72-730

Outwards opening window handle

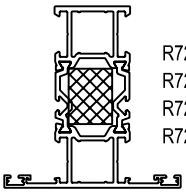
Seals

614		Brush seal
651		Rebate seal
652		Glazing seal
653		Glazing seal
656		Retrofit seal
655		Main seal window
657		Rebate seal
660		Sliding door gasget
661		Brush seal
N98si-683		Treshold gasket

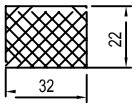
Termo+ extra insulation



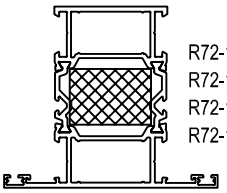
R72-715
L=2m



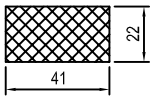
R72-131
R72-132
R72-133
R72-135



R72-716
L=2m



R72-122
R72-123
R72-128
R72-129



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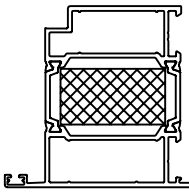
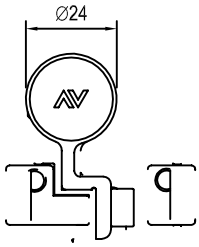
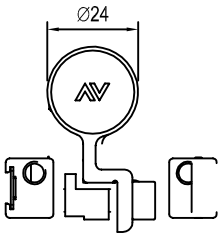


R72-121
R72-124
R72-125

Door hinges

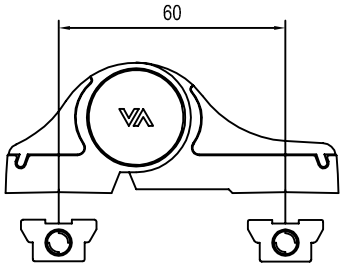


R72-722



R72-723

Frame with swivel profile R72-201

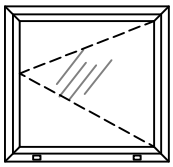


R72-724

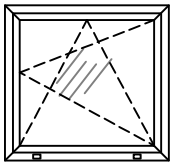
External dimensions of the sash

Window ironmongery packs

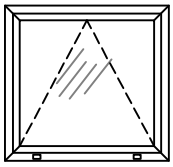
Side-hinged	W (450-1700)	H (400-2400)
R72-901	450-1200	400-1400
R72-902	1201-1400	1401-2400
R72-903	1401-1700	1401-2400



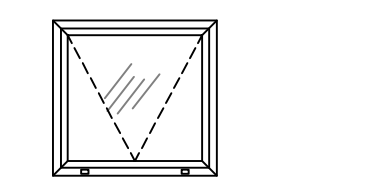
Side/bottom-hinged	W (495-1700)	H (600-2400)
R72-905	495-1200	600-1400
R72-906	1201-1700	1401-2400



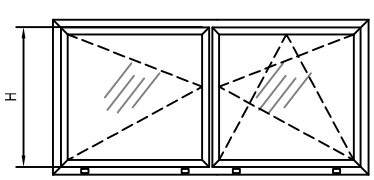
Bottom-hinged	W (450-1500)	H (450-1000)
R72-907	450-900	450-1000
R72-908	901-1500	450-1000



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

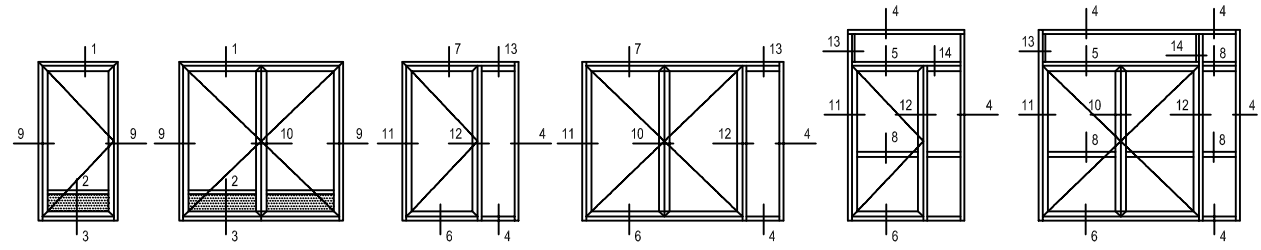


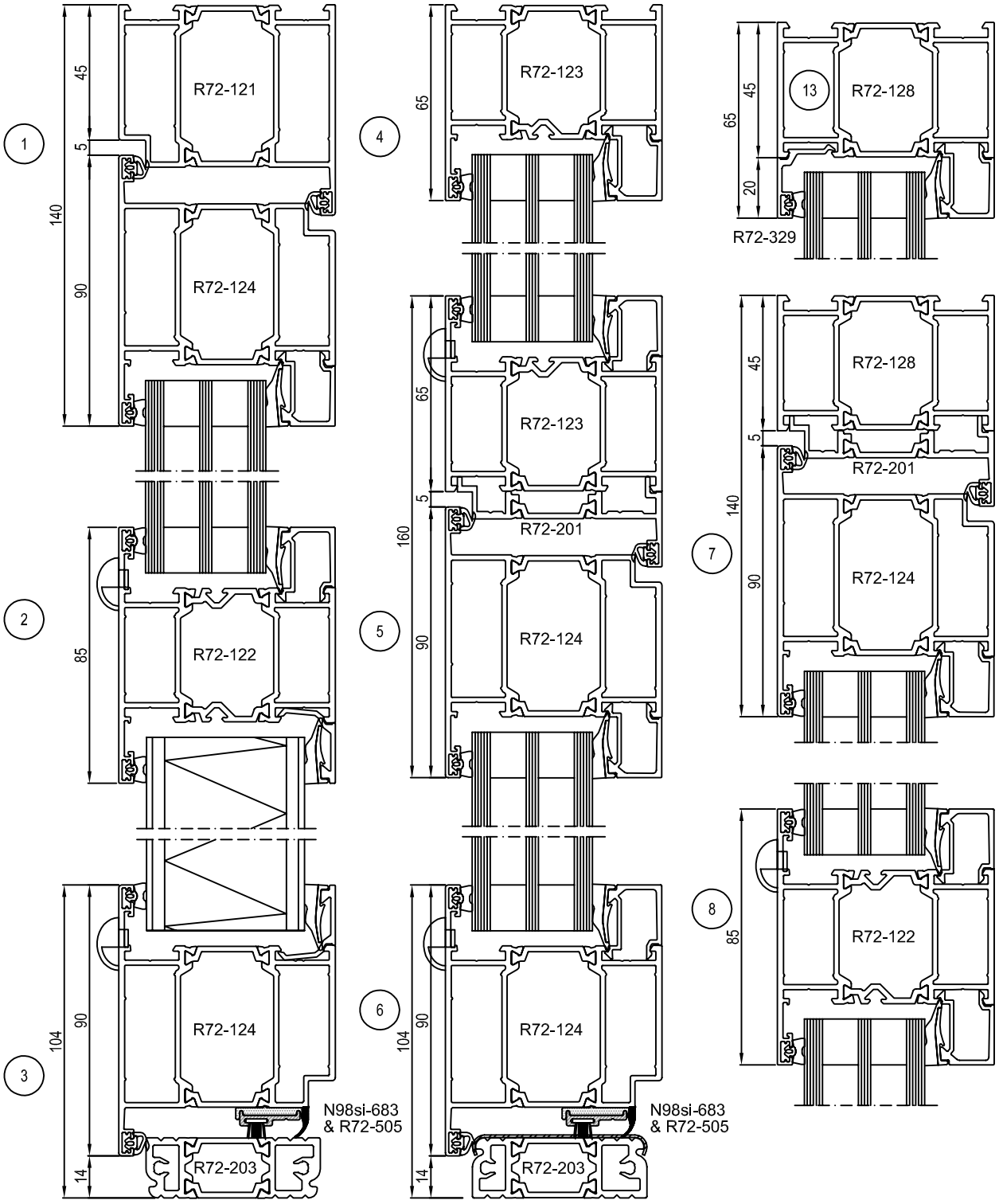
Pair window	W (495-1200)	H (600-1400)
R72-913	495-1200	600-1400



Slide window	W (900-1650)	H (1401-2400)

On special request

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R72-121
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140
90
R72-124
2
R72-122
85
3
R72-124
104
90
14
R72-203
N98si-683
& R72-505
4
R72-123
65
5
160
90
R72-201
R72-124
6
R72-124
104
90
14
R72-203
N98si-683
& R72-505
13
R72-128
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45
20
R72-329
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R72-128
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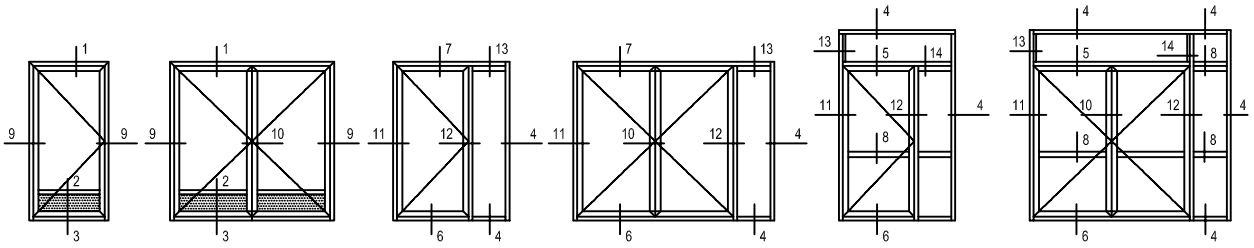
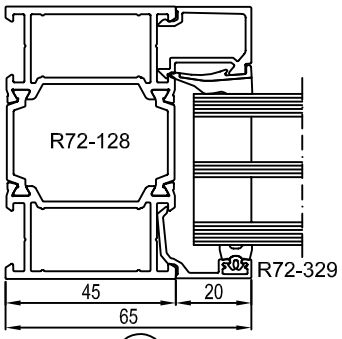
R72-201
140
90
R72-124
8
R72-122
85





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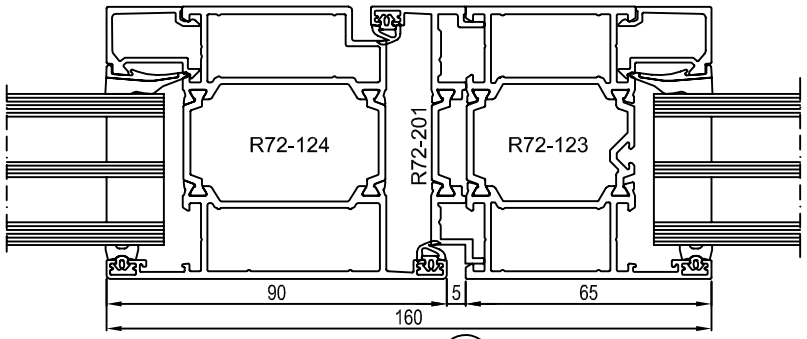

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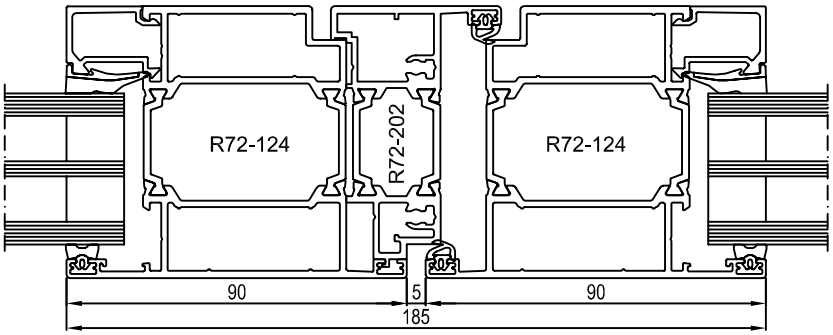

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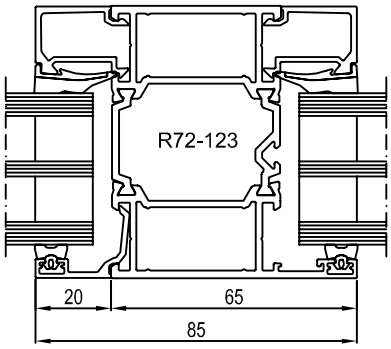
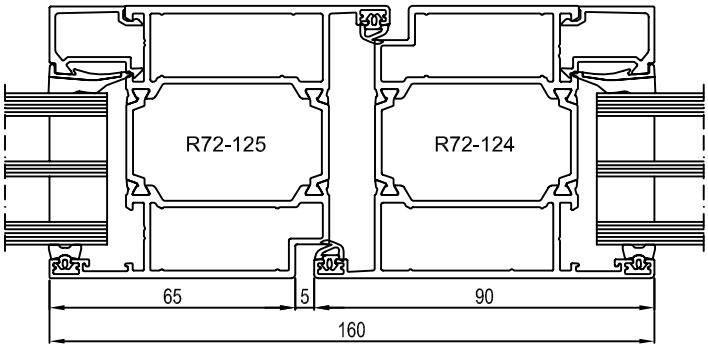


R72-329

14



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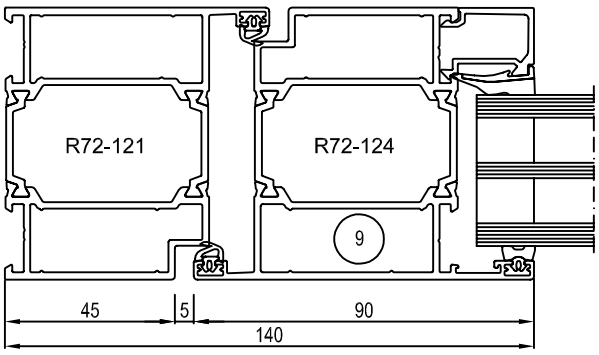
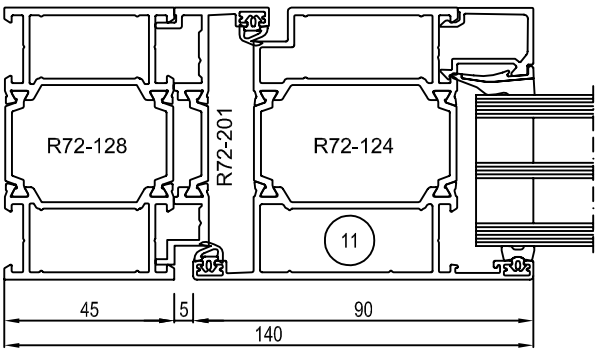
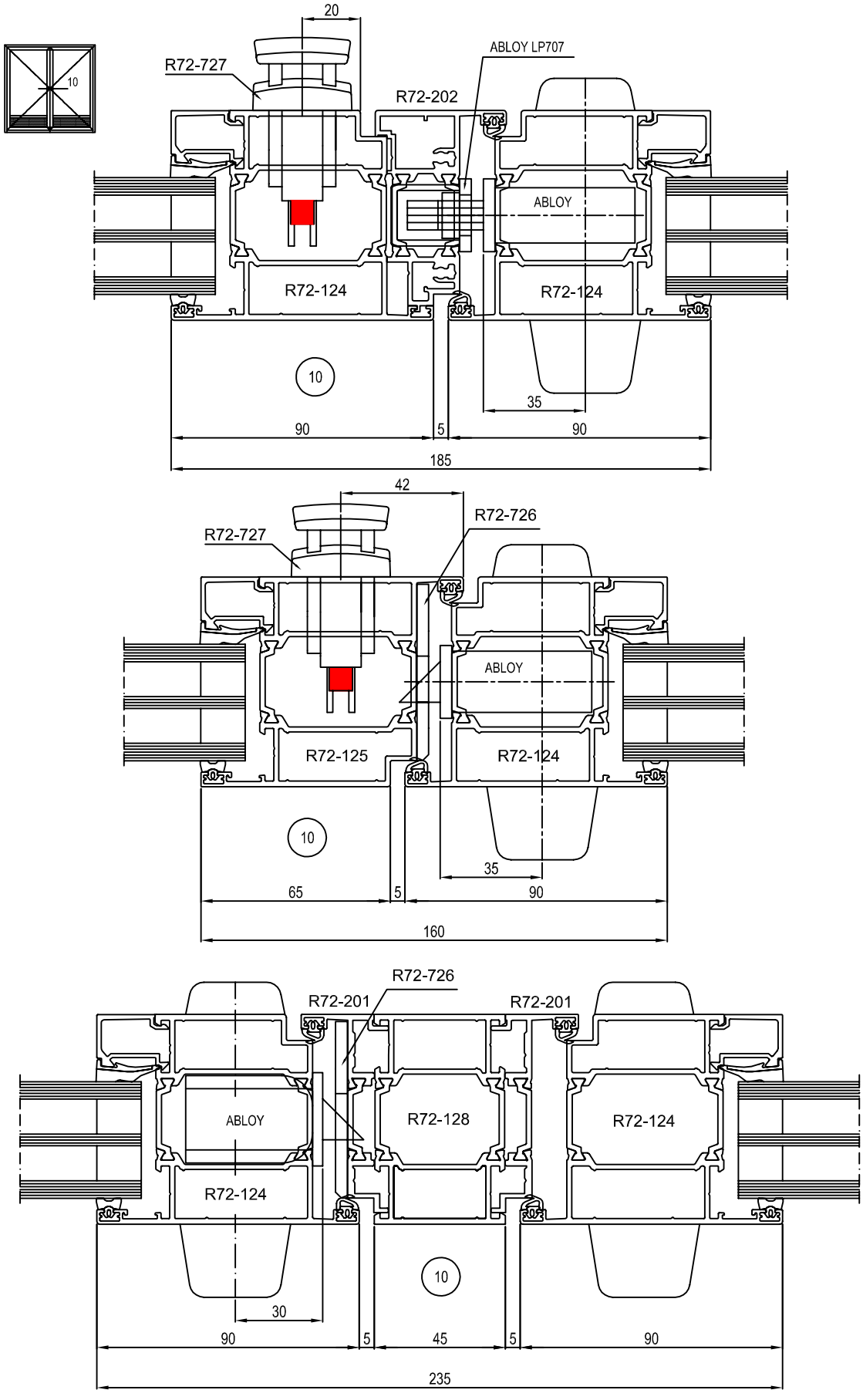






R72

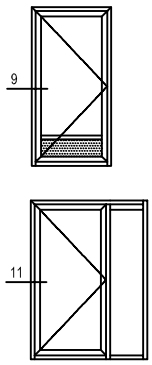
NOKIAN PROFILES

01.03.2015

12

Otwards opening door

4.3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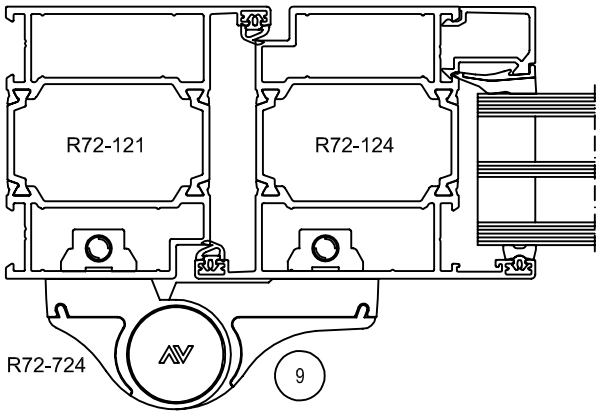
R72-121
R72-124
R72-724
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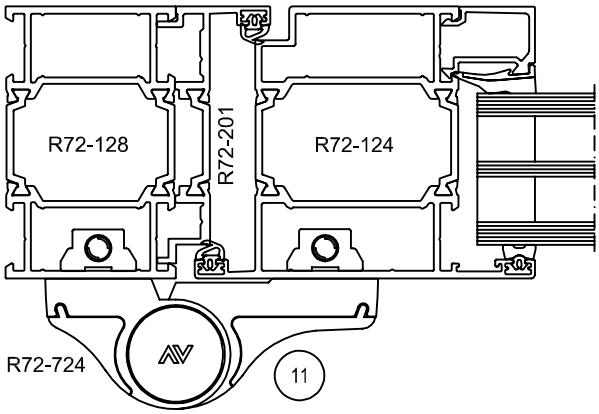
R72-128
R72-201
R72-124
R72-724
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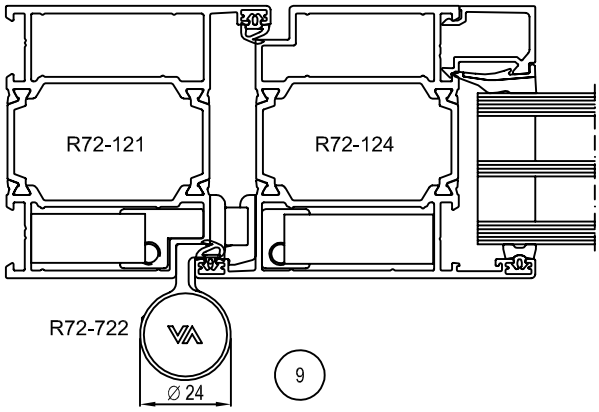
R72-121
R72-124
R72-722
Ø 24
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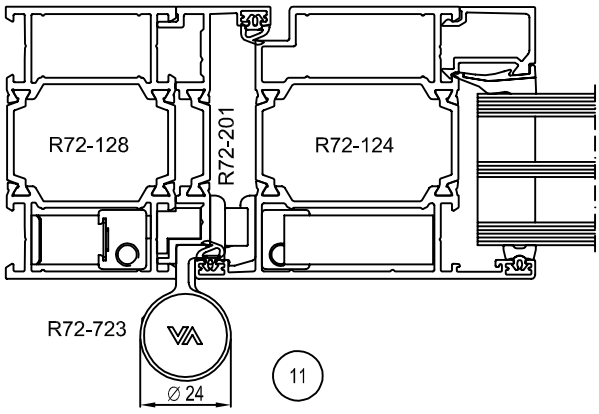
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R72-201
R72-124
R72-723
Ø 24
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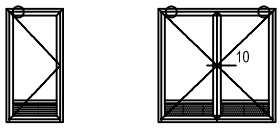
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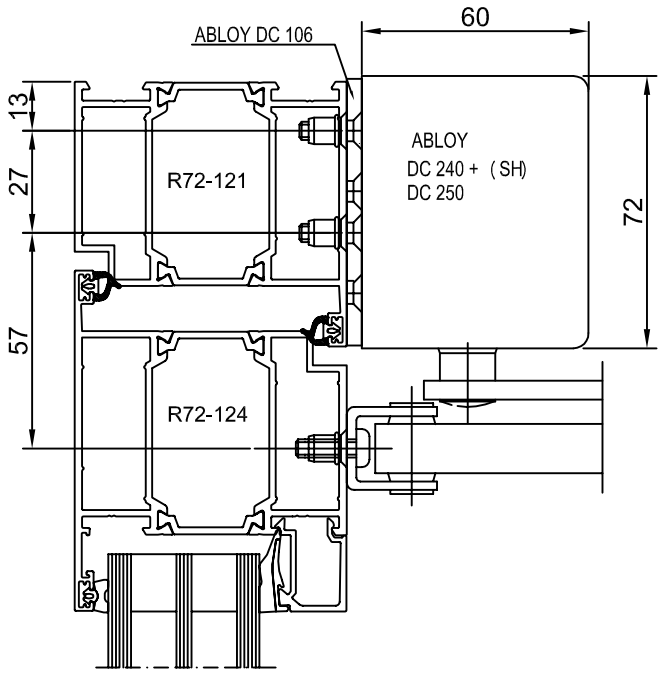
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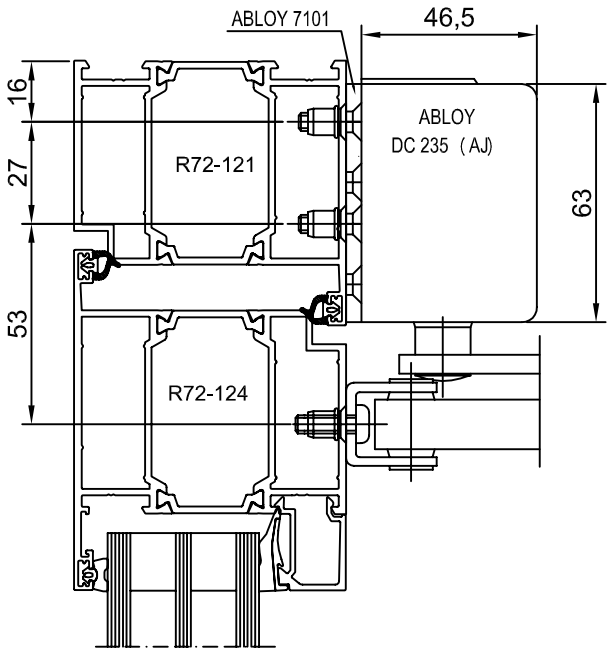
R72-121
R72-124
ABLOY
DC 240 + (SH)
DC 250
72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R72-124
ABLOY
DC 235 (AJ)
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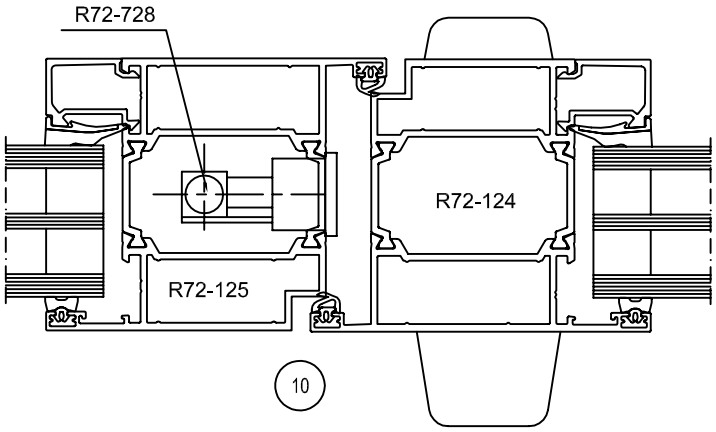
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R72-125
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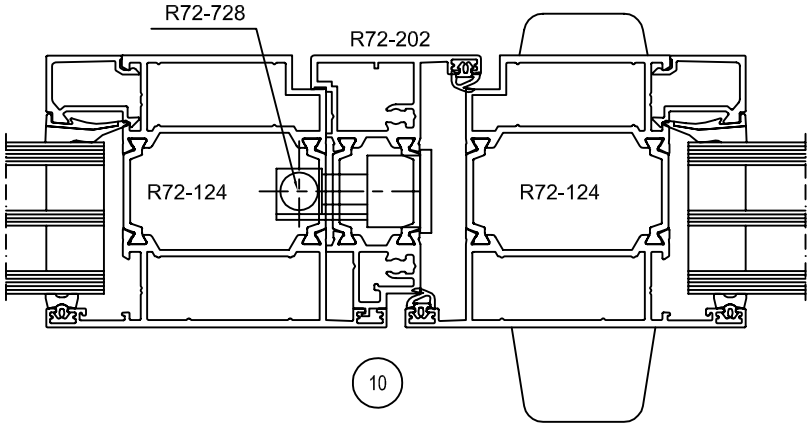
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R72-202
R72-124
R72-124
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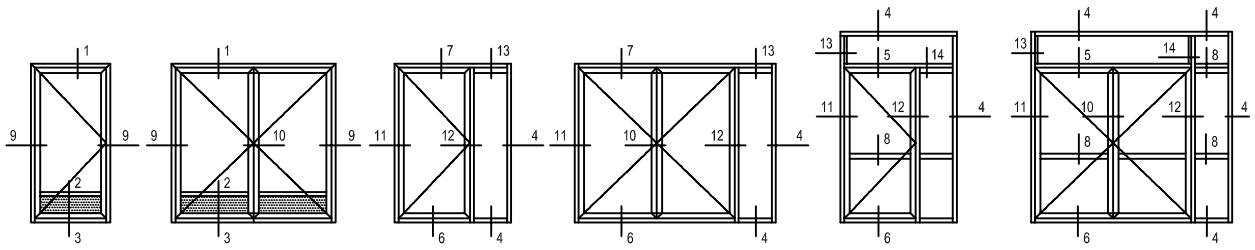

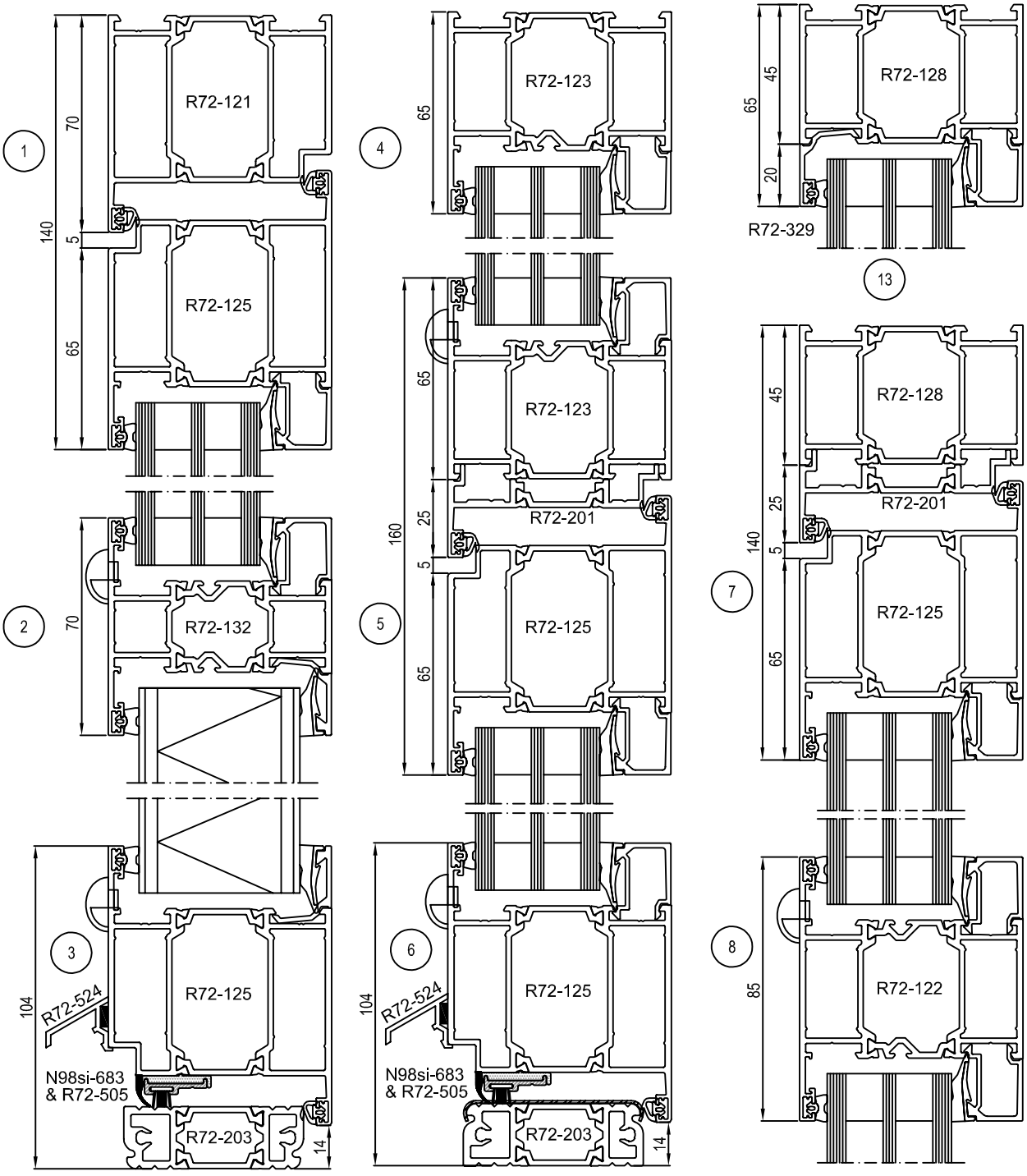
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& R72-505
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R72-123
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R72-123
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R72-125
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6
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R72-524
R72-125
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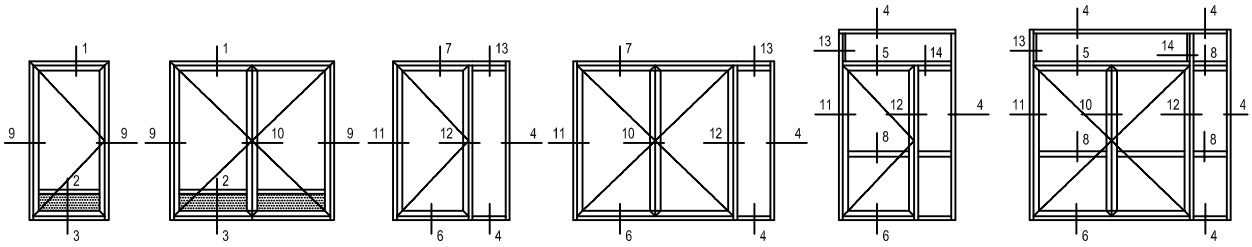
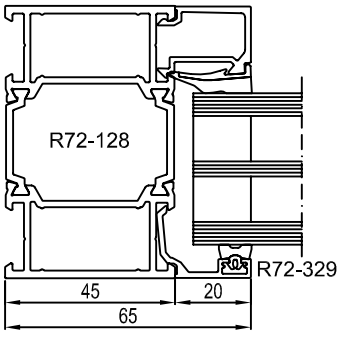
R72-122

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R72-329
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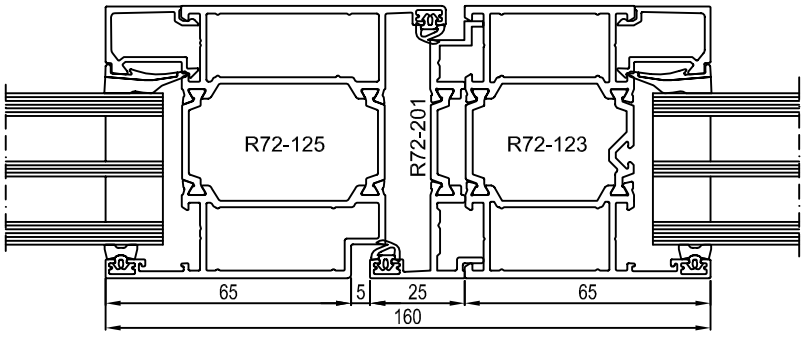
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R72-201
R72-123
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160

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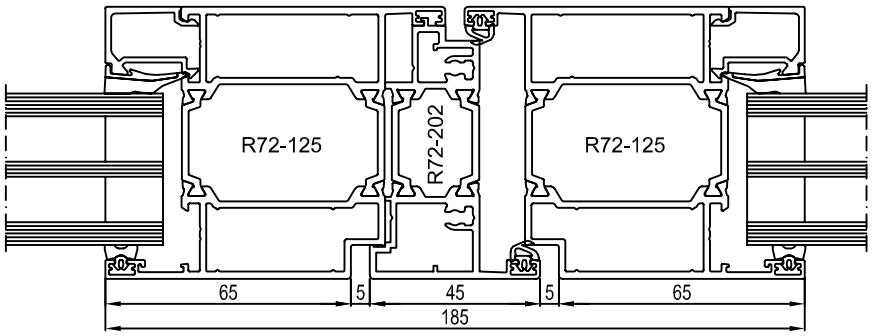
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R72-202
R72-125
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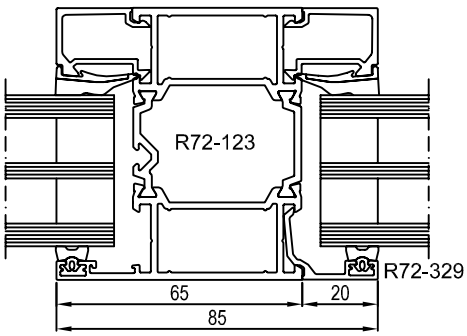
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R72-329
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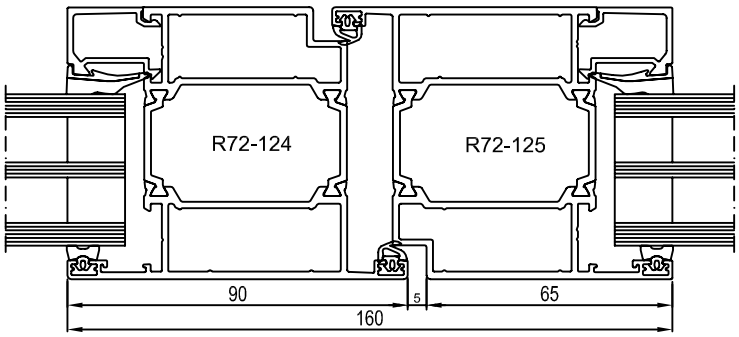
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R72-125
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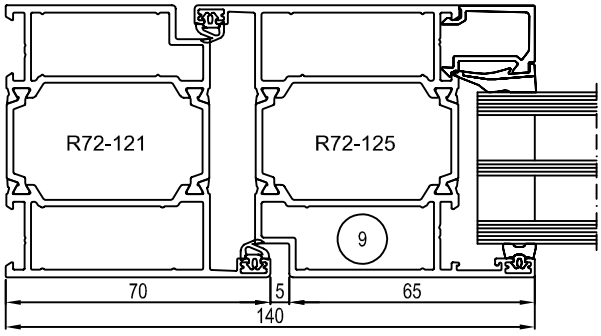
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R72-125
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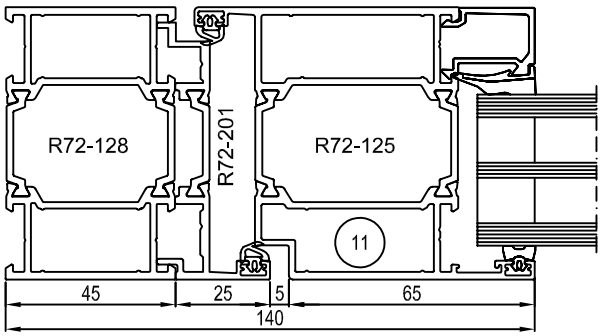
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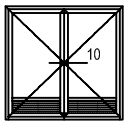
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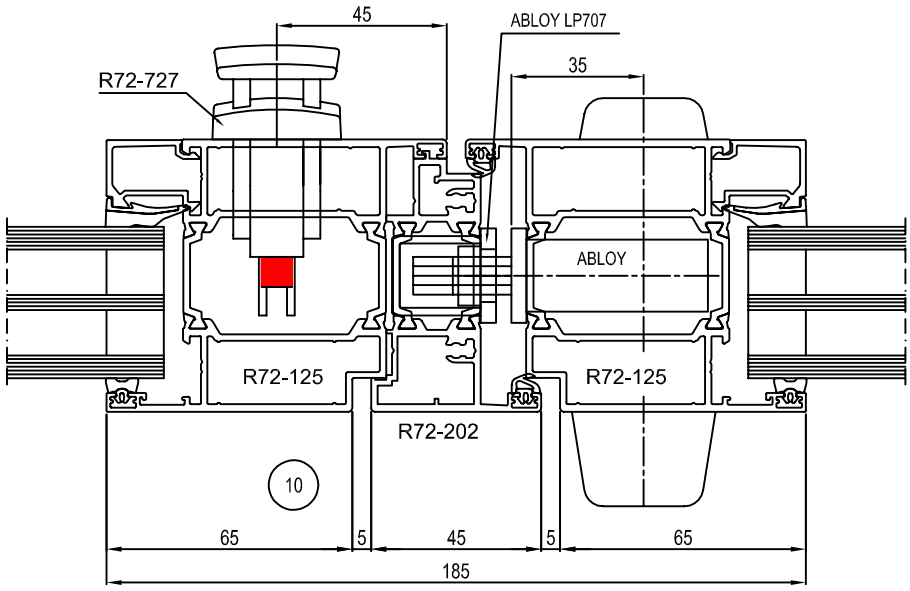
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ABLOY LP707
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R72-727
ABLOY
R72-125
R72-125
R72-202
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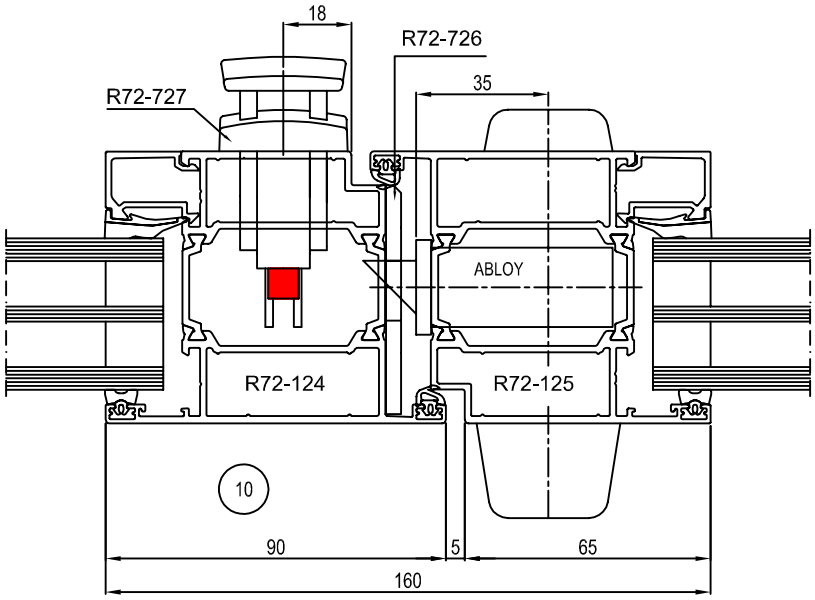
185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R72-727
ABLOY
R72-124
R72-125
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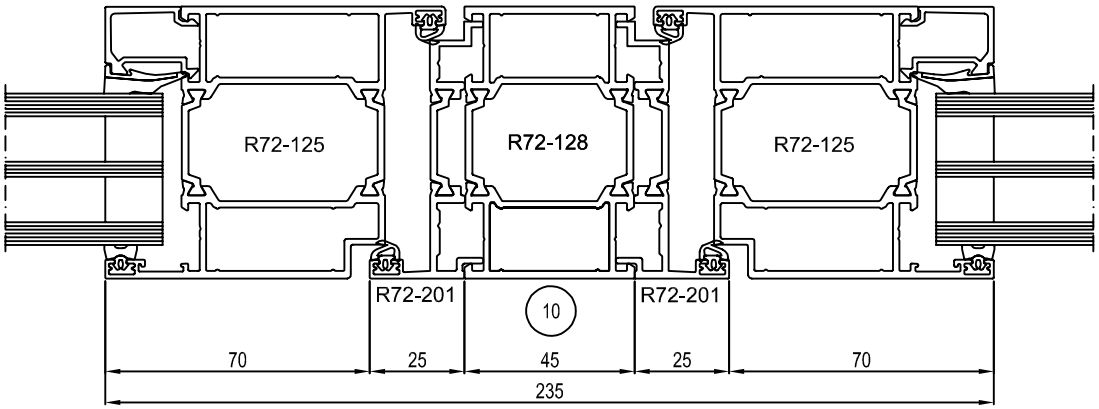
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R72-128
R72-125
R72-201
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R72-201
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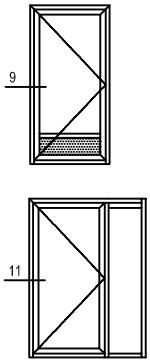
235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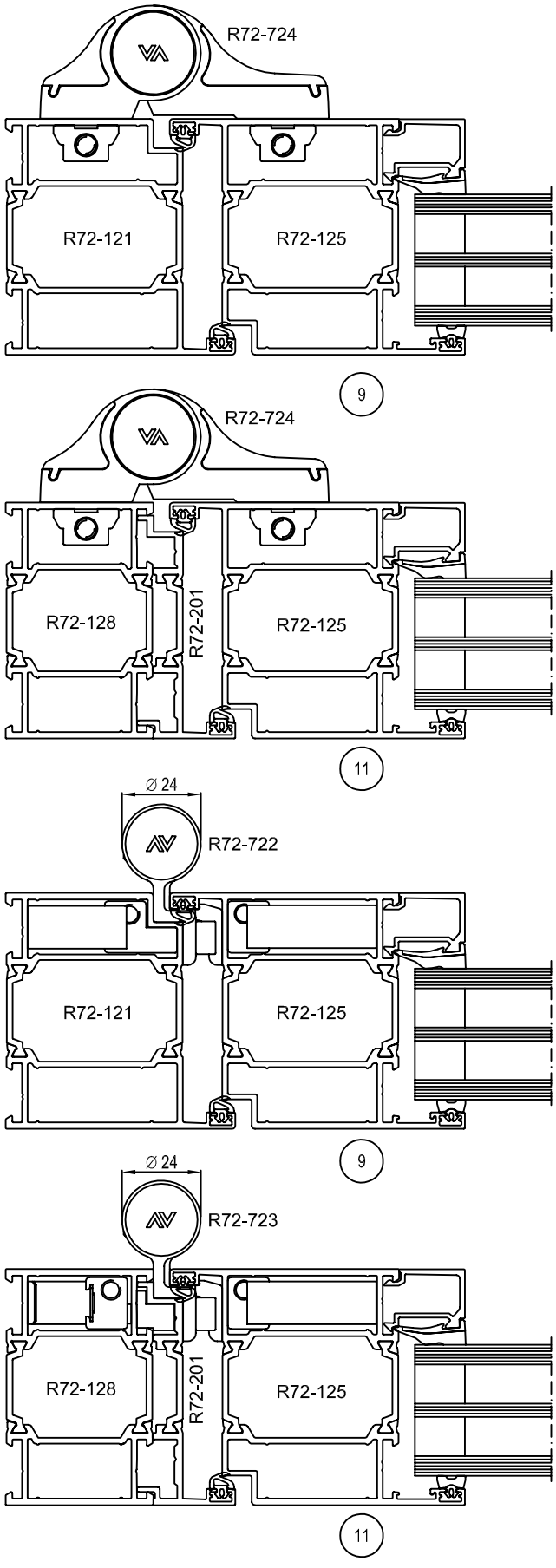
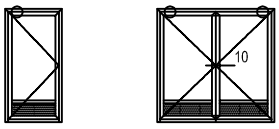

R72-724
R72-121
R72-125
9
R72-724
R72-128
R72-201
R72-125
11
Ø 24
R72-722
R72-121
R72-125
9
Ø 24
R72-723
R72-128
R72-201
R72-125
11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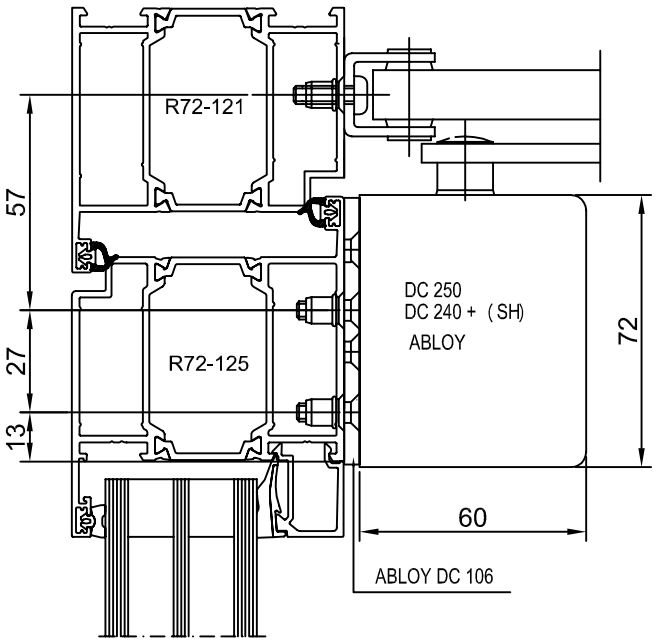
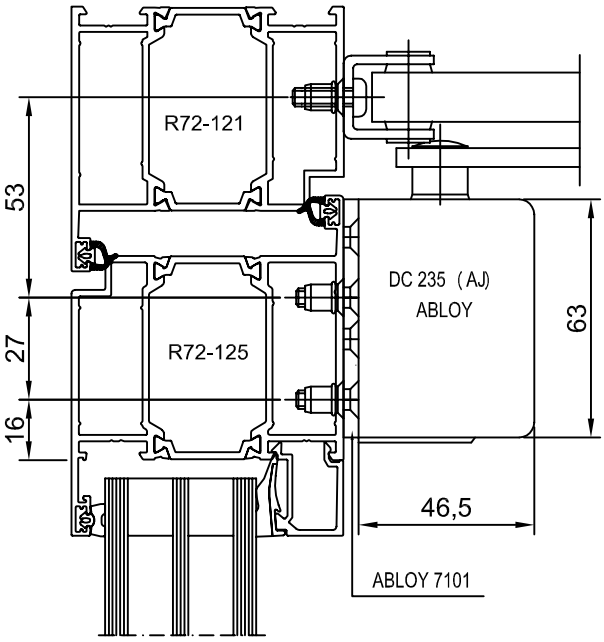
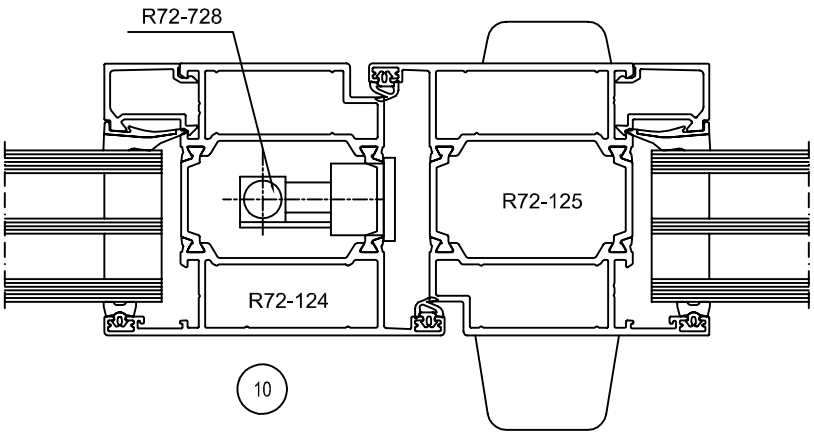
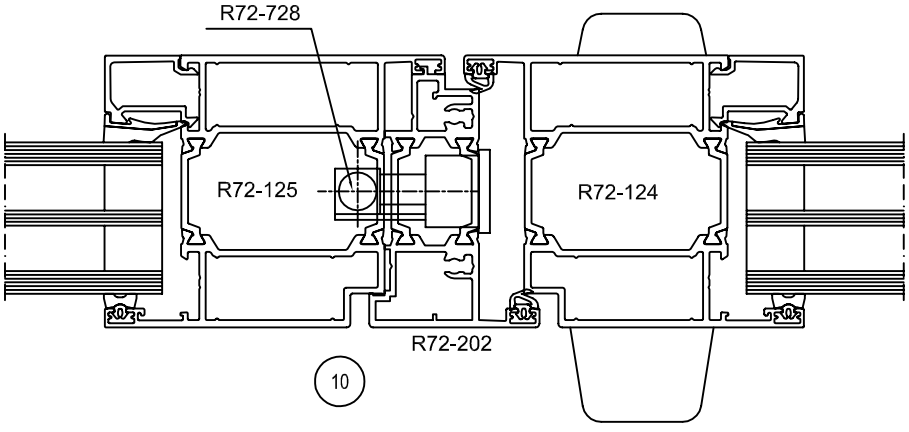

R72-121
R72-125
57
27
13
DC 250
DC 240 + (SH)
ABLOY
72
60
ABLOY DC 106


R72-121
R72-125
53
27
16
DC 235 (AJ)
ABLOY
63
46,5
ABLOY 7101


R72-728
R72-125
R72-124
10


R72-728
R72-125
R72-124
R72-202
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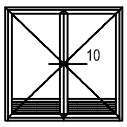
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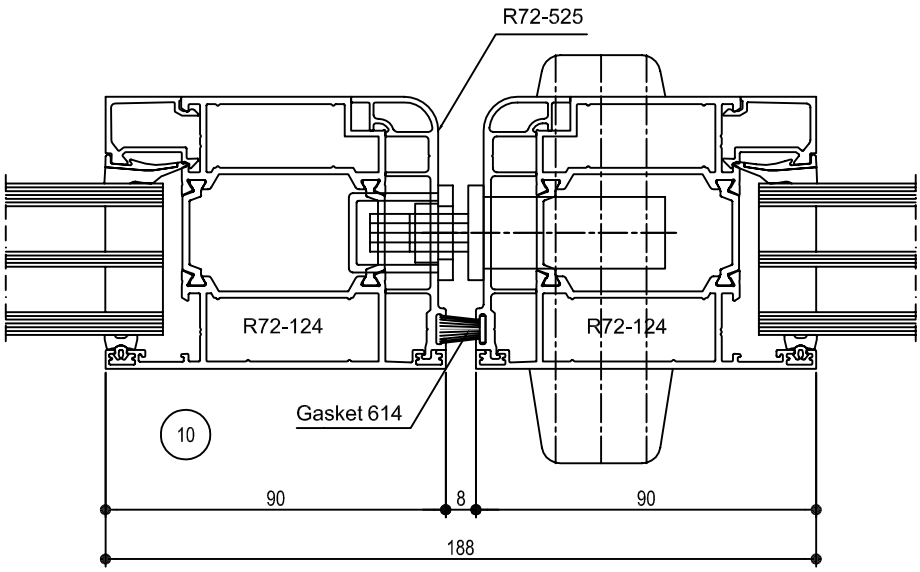
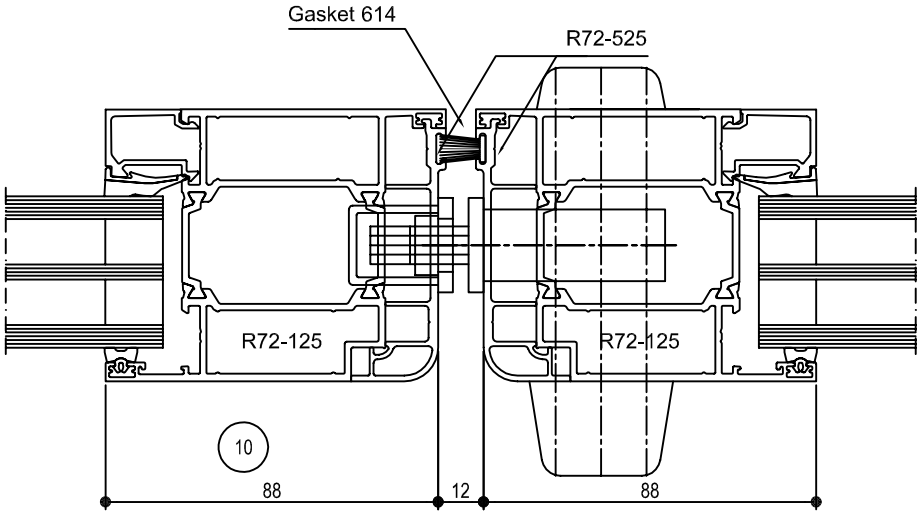
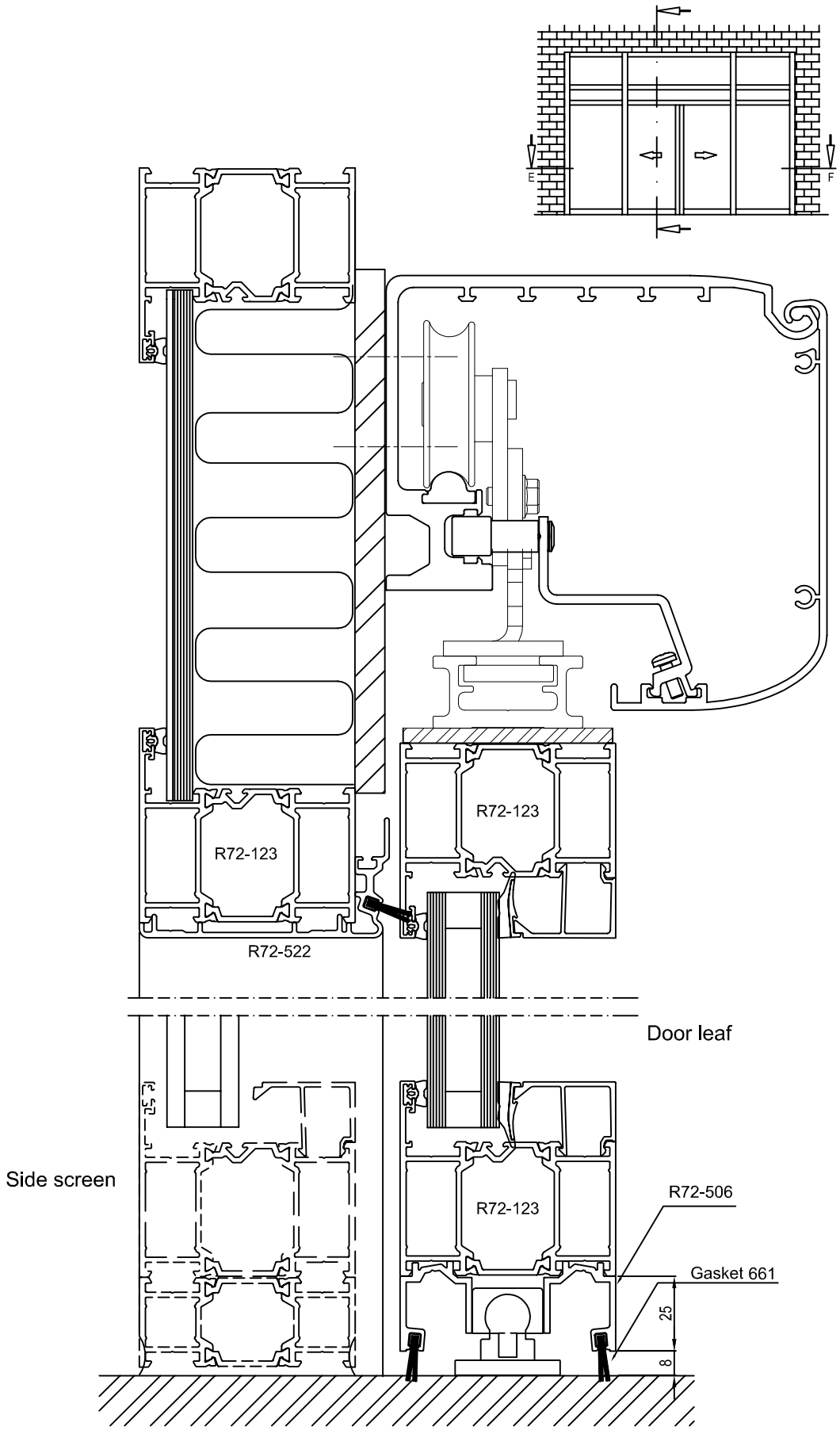
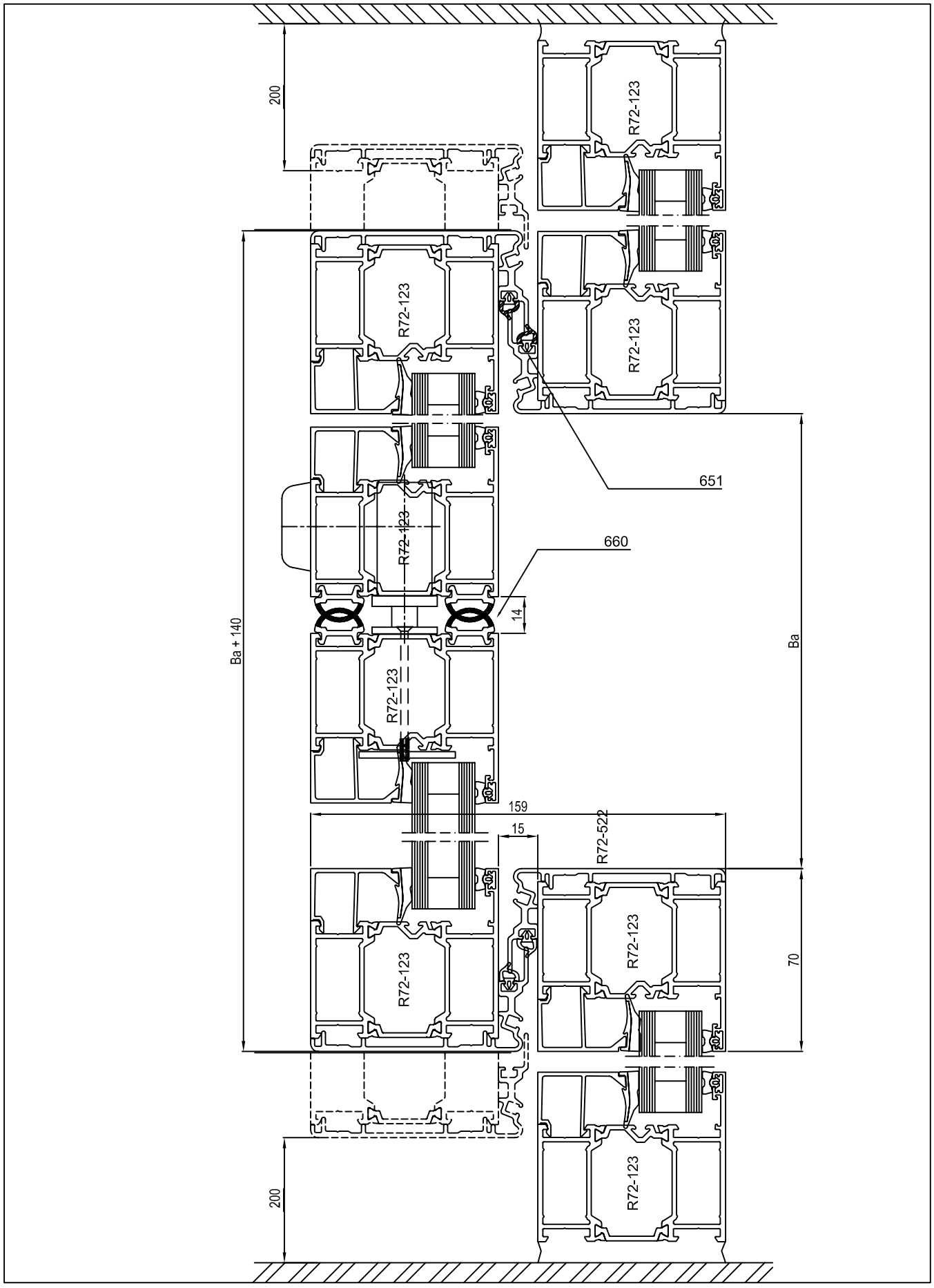
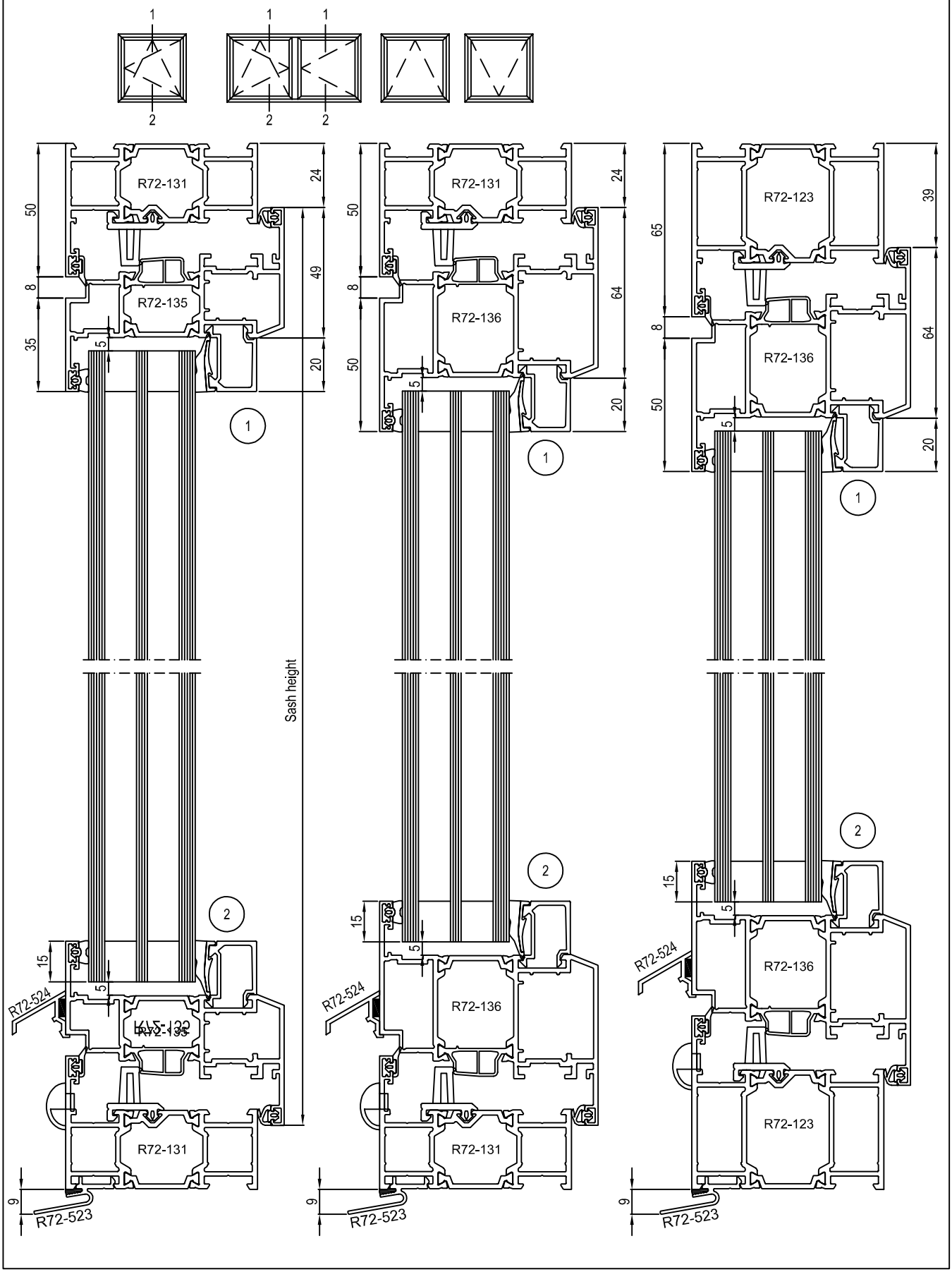
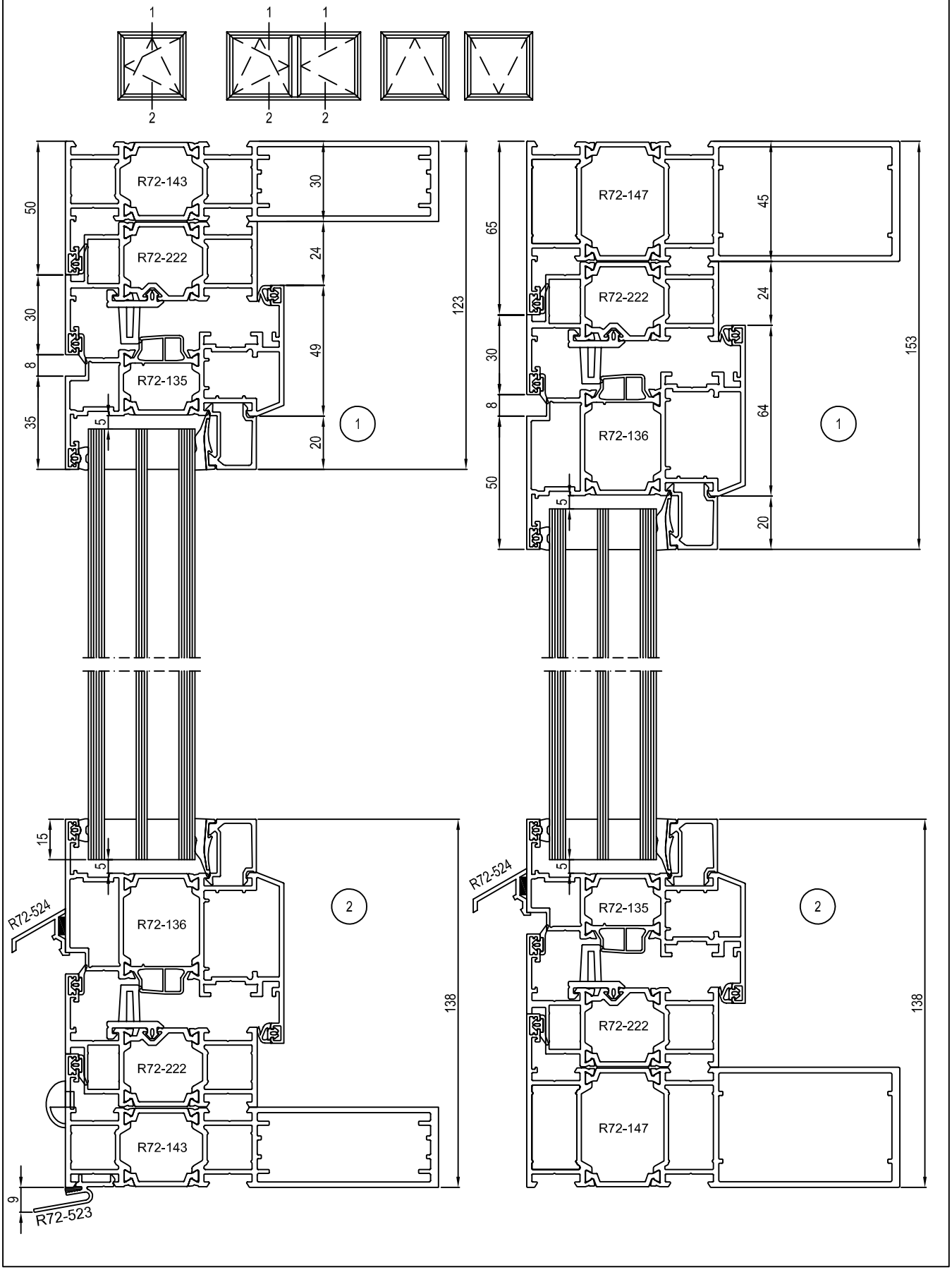

R72-525
R72-124
R72-124
Gasket 614
10
90
8
90
188


Gasket 614
R72-525
R72-125
R72-125
10
88
12
88


E
F
R72-123
R72-123
R72-522
Door leaf
Side screen
R72-123
R72-506
Gasket 661
25
8

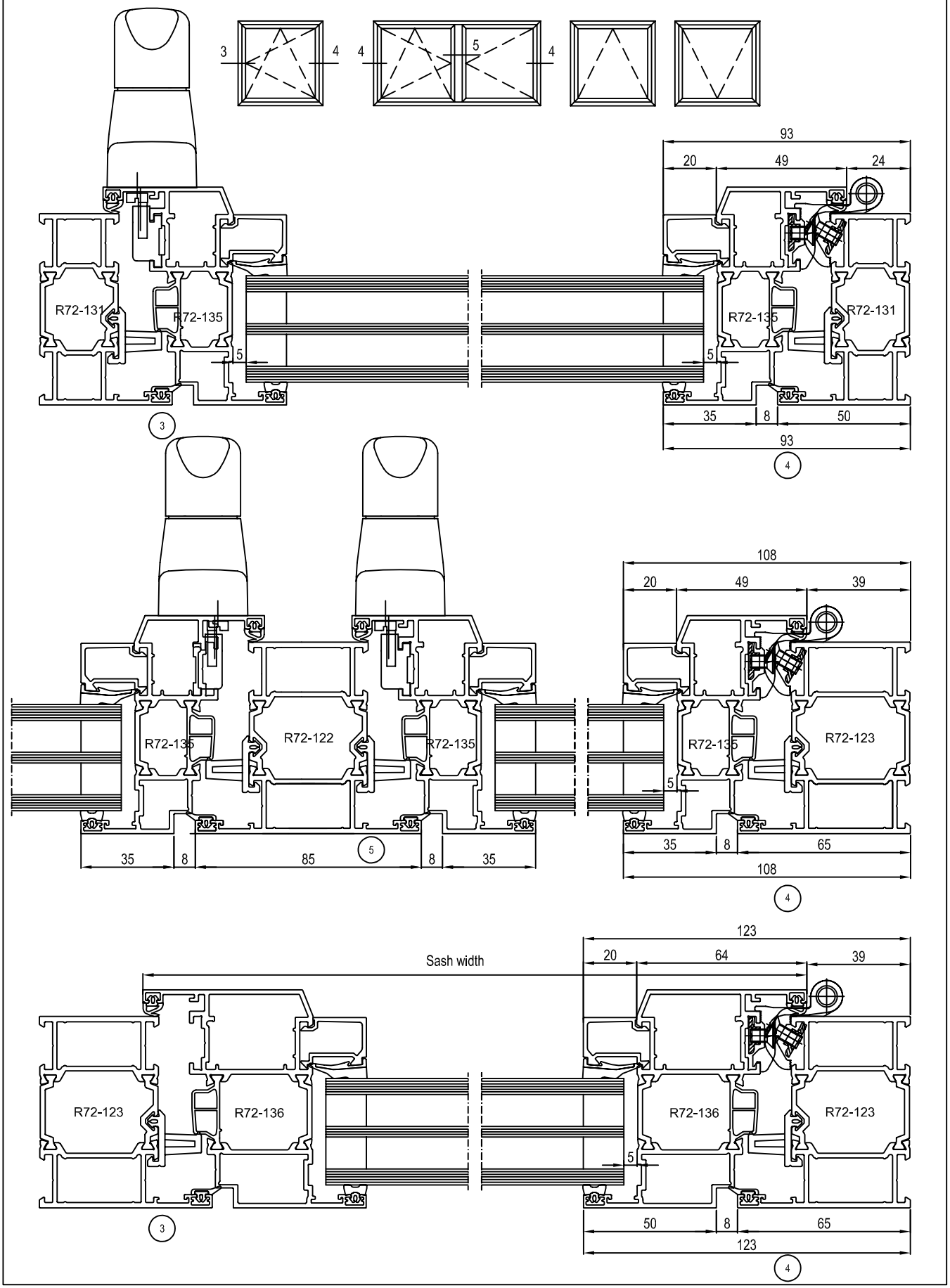

200
R72-123
R72-123
R72-123
651
660
R72-123
14
Ba + 140
Ba
R72-123
159
15
R72-522
R72-123
R72-123
70
200
R72-123

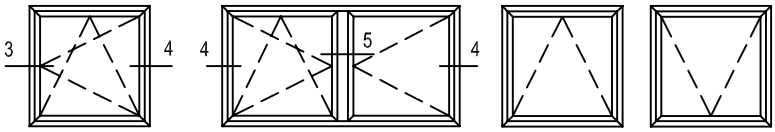

R72-131
R72-135
R72-136
R72-123
R72-524
R72-523
Sash height

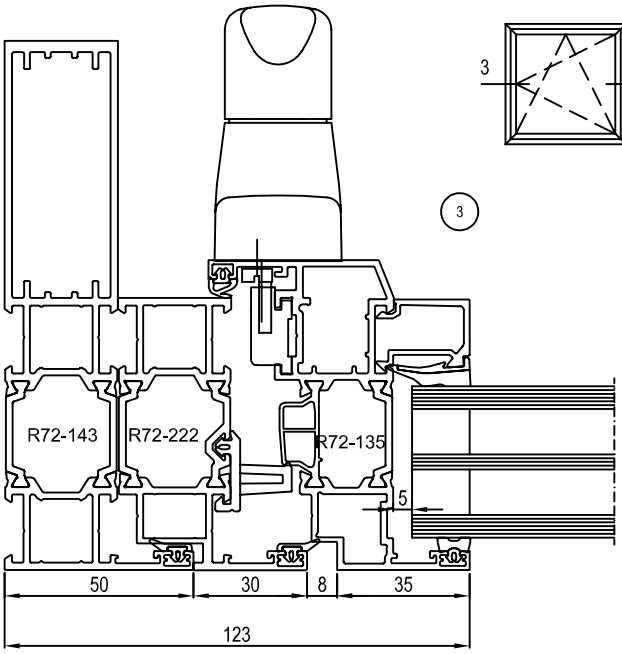


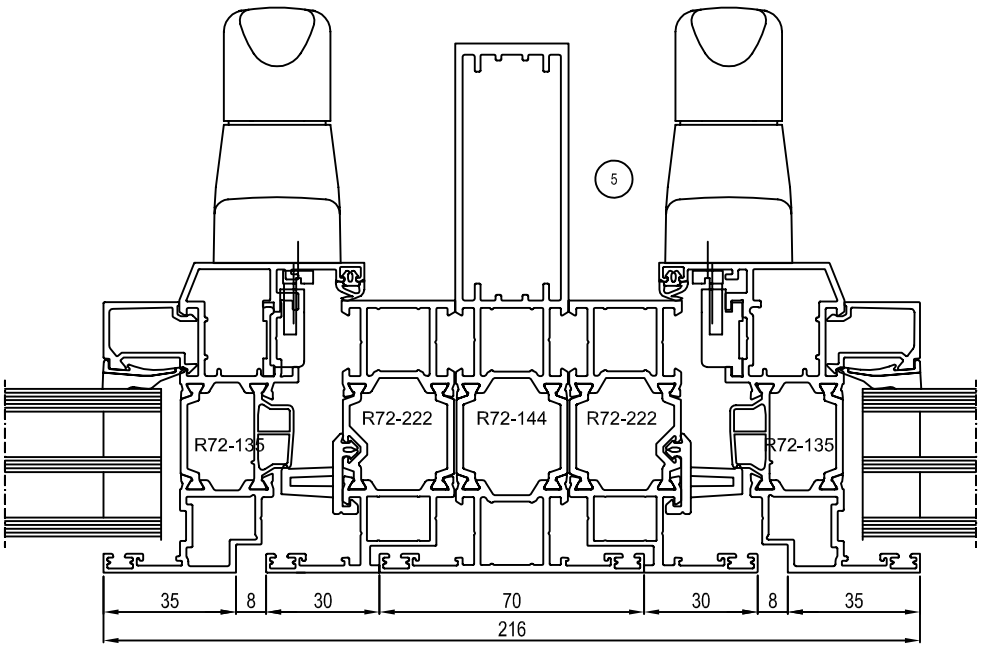
R72

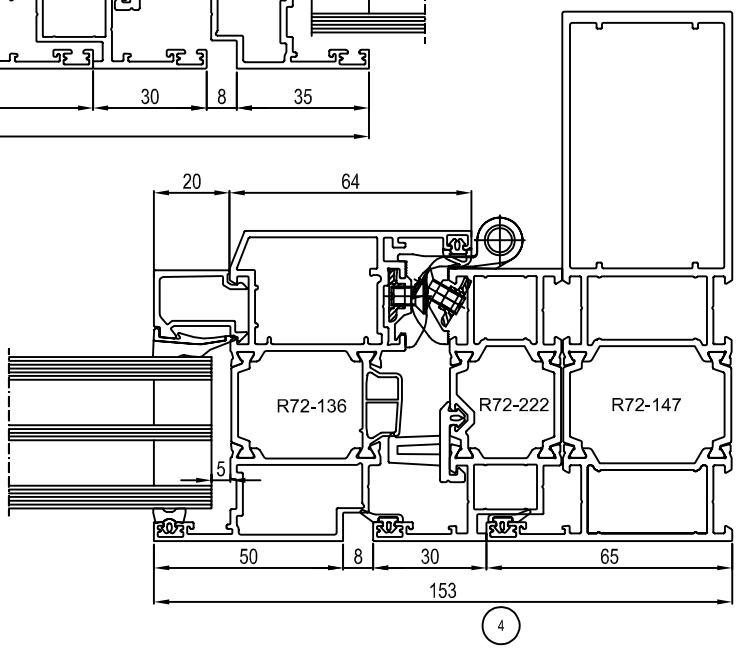
Window, vertical sections

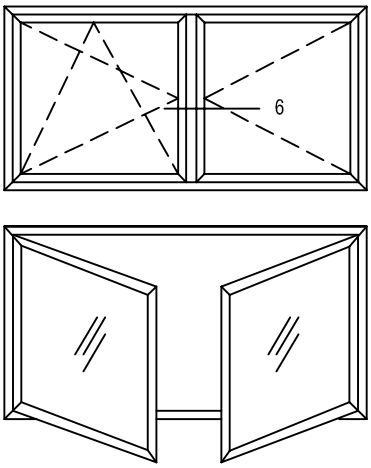

3
4
4
5
4
93
20
49
24
R72-131
R72-135
5
R72-135
R72-131
5
35
8
50
93
3
4
108
20
49
39
R72-135
R72-122
R72-135
R72-135
R72-123
5
35
8
85
8
35
35
8
65
108
5
4
123
Sash width
20
64
39
R72-123
R72-136
R72-136
R72-123
5
50
8
65
123
3
4


3
4
4
5
4


3
R72-143
R72-222
R72-135
5
50
30
8
35
123


5
R72-135
R72-222
R72-144
R72-222
R72-135
35
8
30
70
30
8
35
216


20
64
R72-136
R72-222
R72-147
5
50
8
30
65
153
4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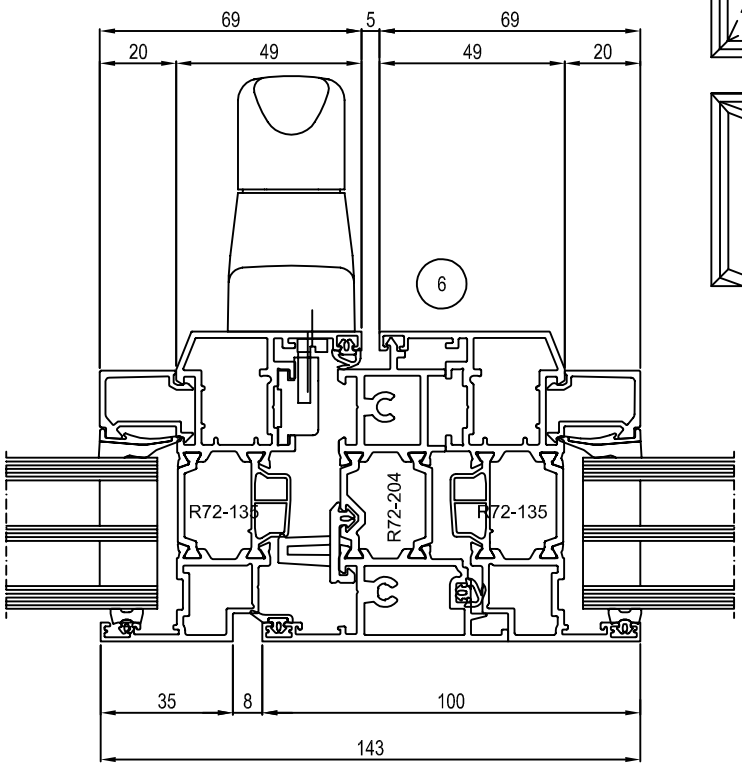
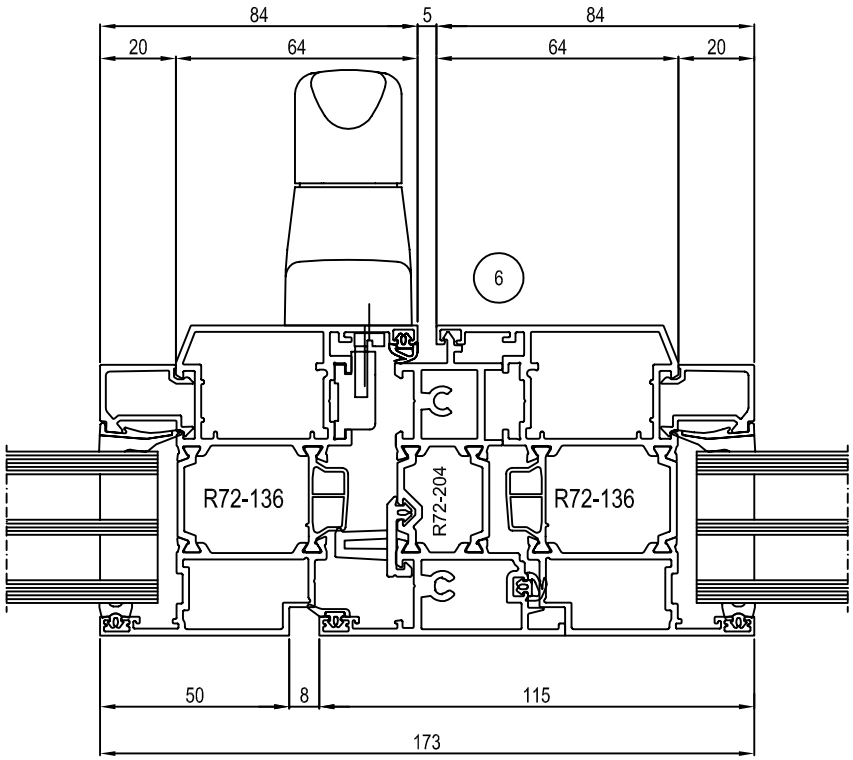
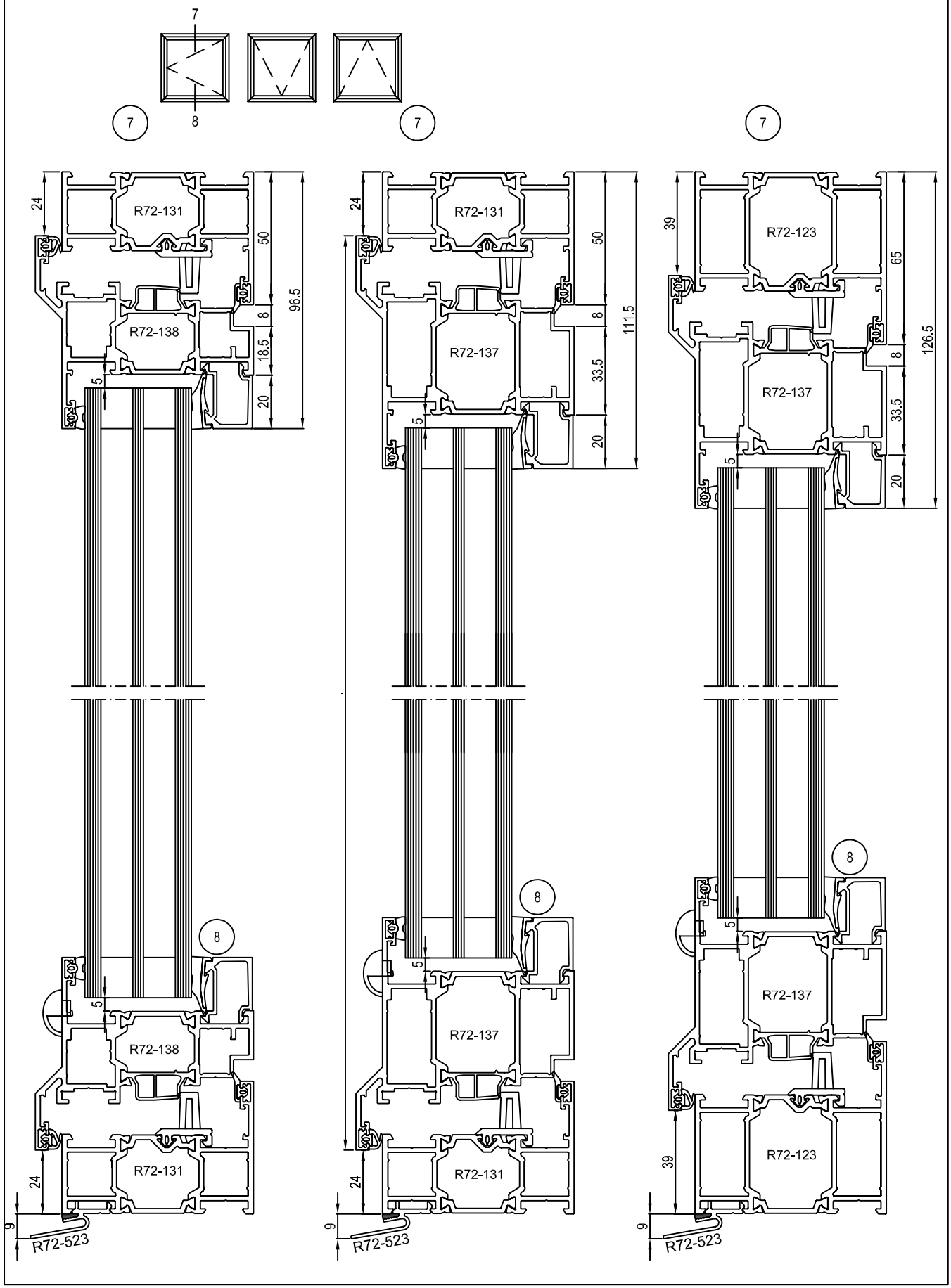
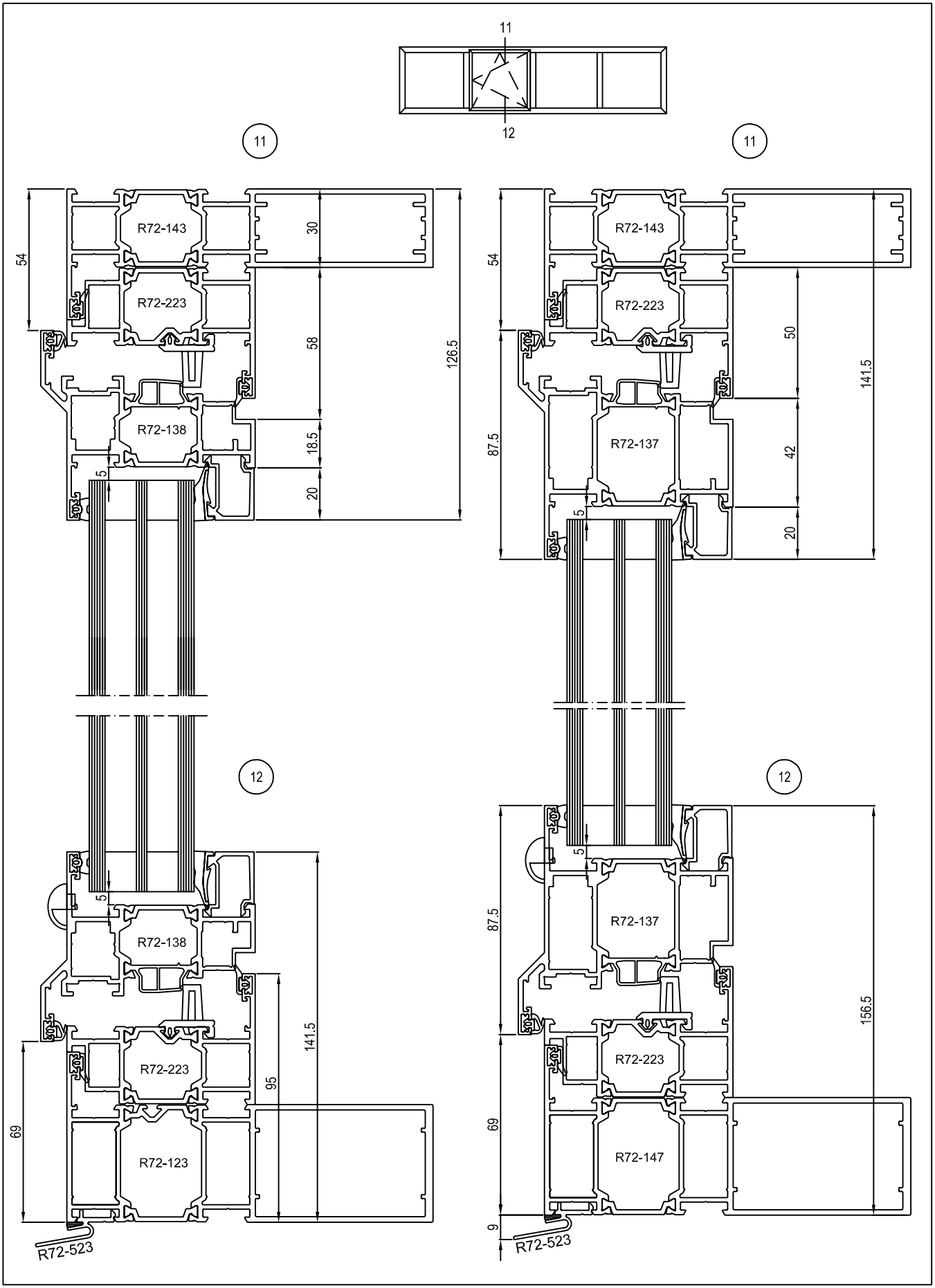
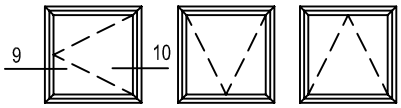
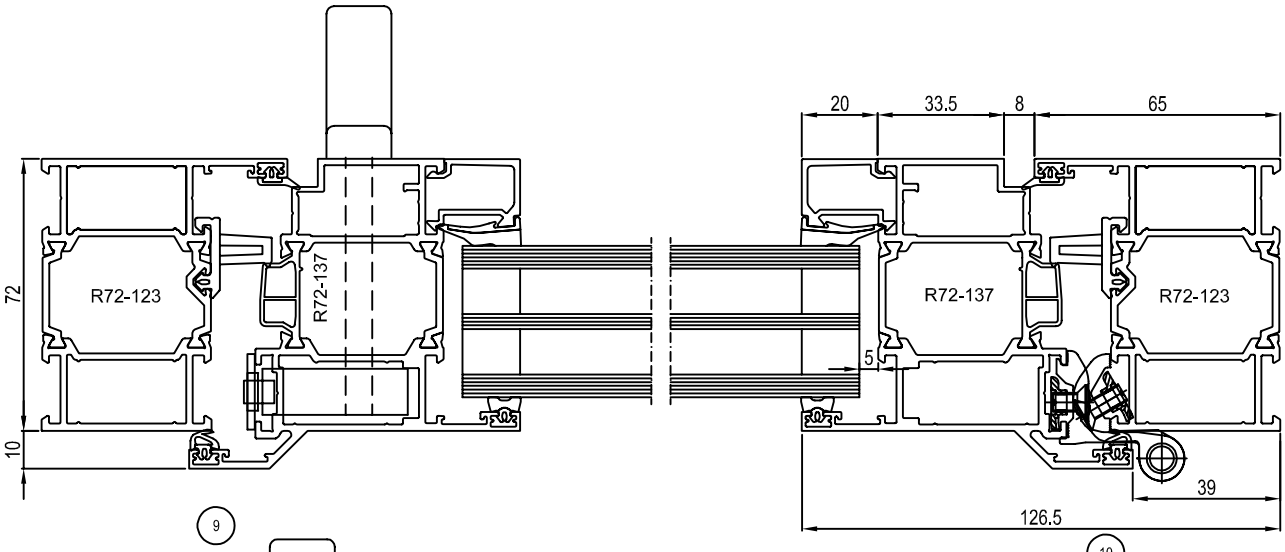

69
5
69
20
49
49
20
6
R72-135
R72-204
R72-135
35
8
100
143

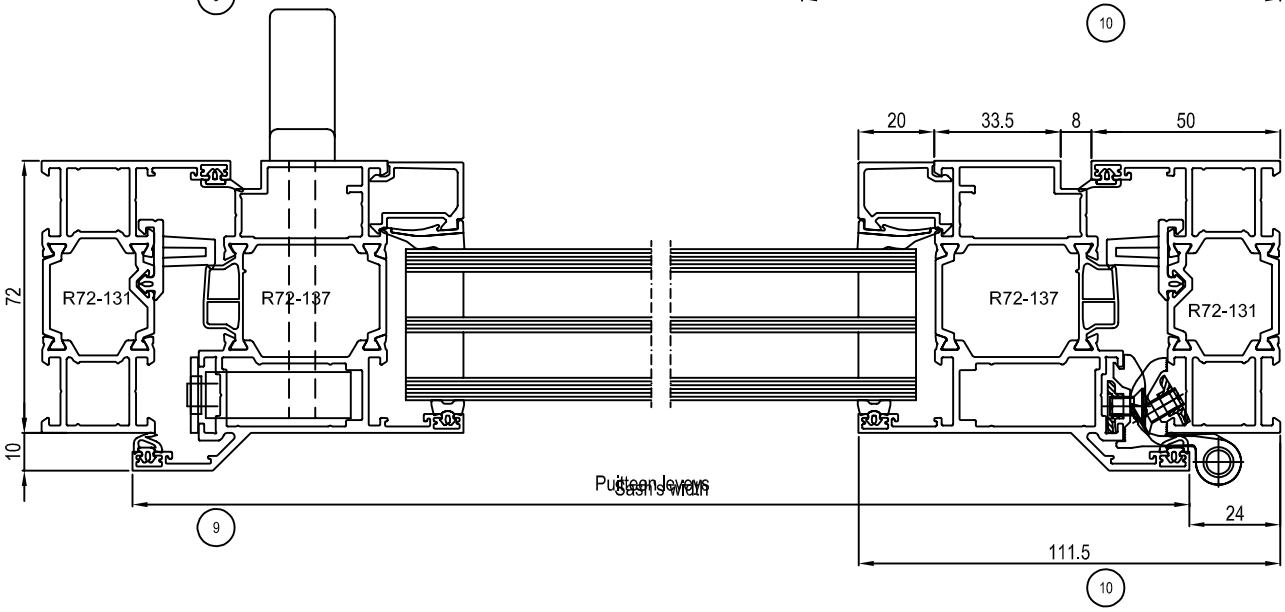

84
5
84
20
64
64
20
6
R72-136
R72-204
R72-136
50
8
115
173


7
8
7
7
7
R72-131
R72-138
R72-131
R72-523
R72-131
R72-137
R72-137
R72-131
R72-523
R72-123
R72-137
R72-137
R72-123
R72-523
24
50
8
18.5
20
96.5
5
9
8
33.5
111.5
39
65
126.5

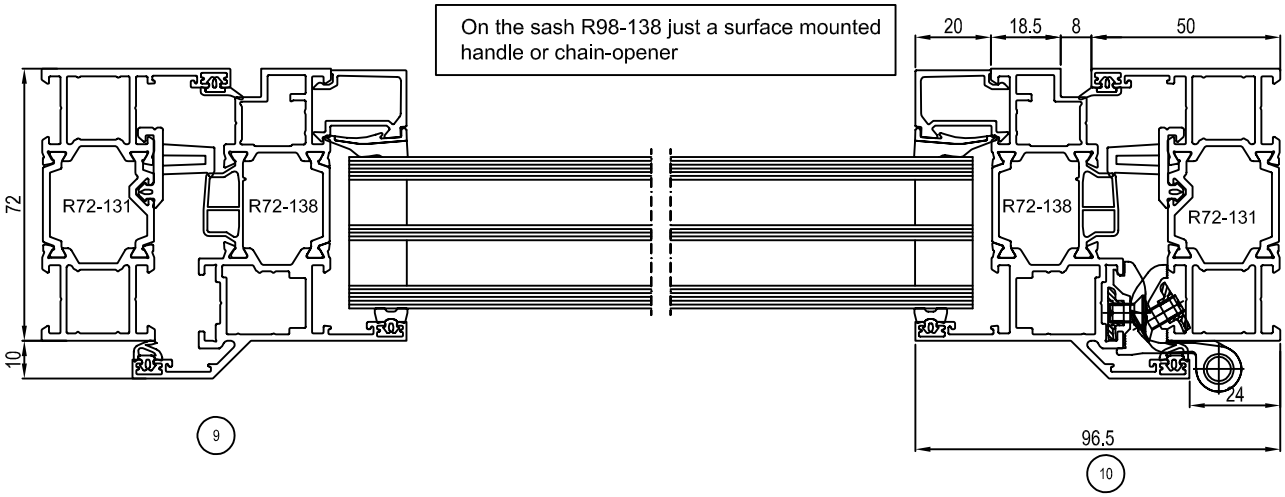

11
12
11
11
R72-143
R72-223
R72-138
R72-123
R72-523
R72-137
R72-147
54
30
58
18.5
20
126.5
87.5
50
42
141.5
156.5
69
95
9
5
12
12

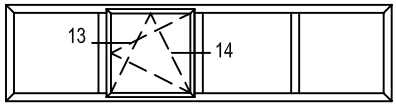


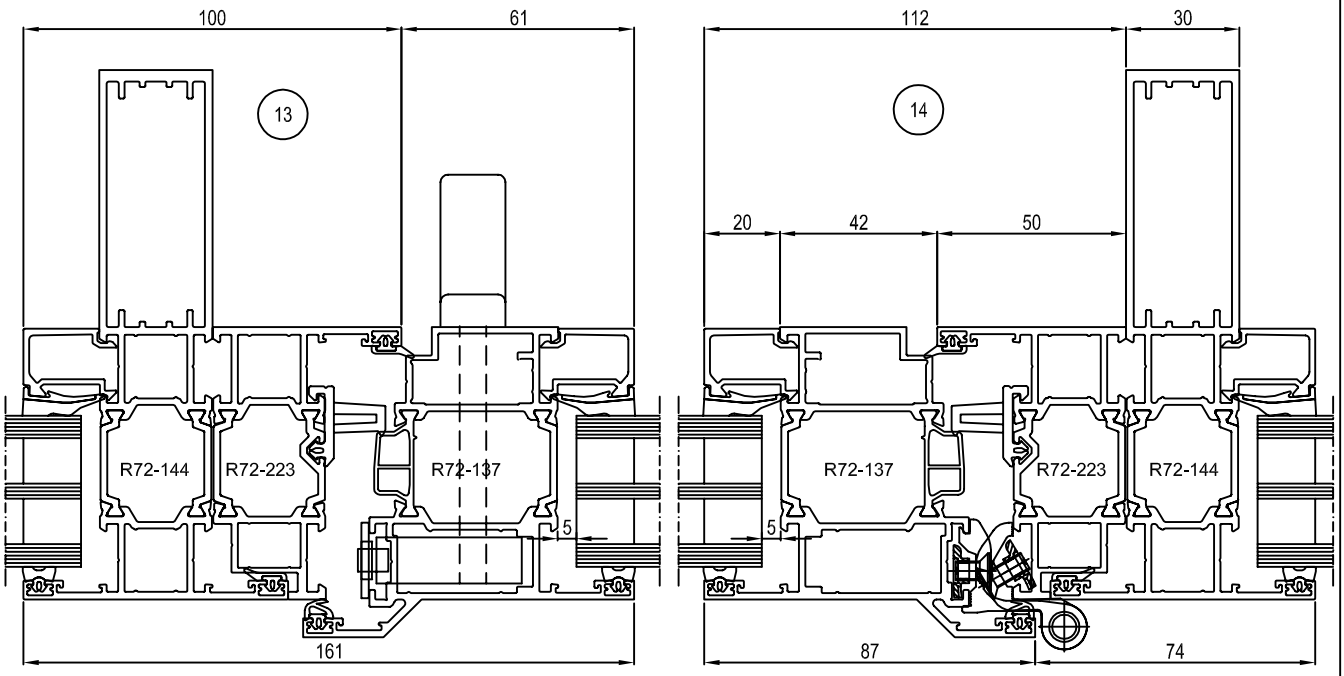




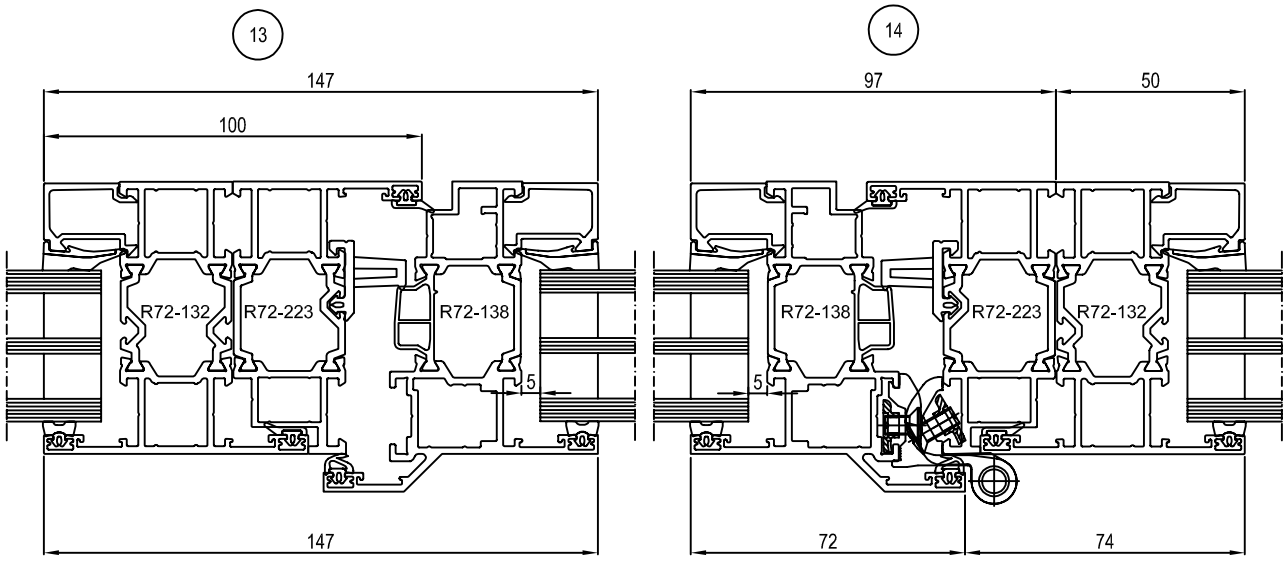
On the sash R98-138 just a surface mounted handle or chain-opener







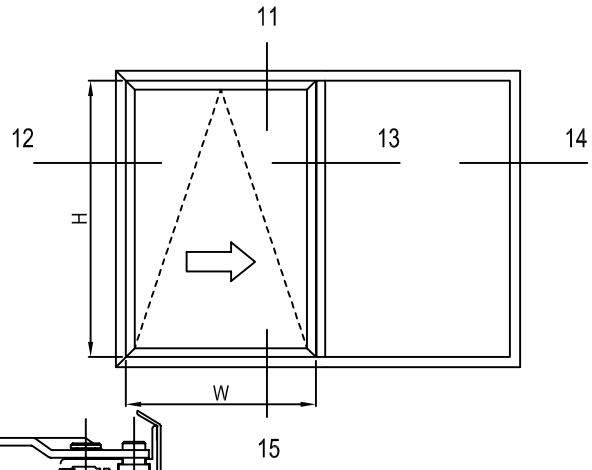
On the frame R72-138 just a surface mounted handle or chain-opener

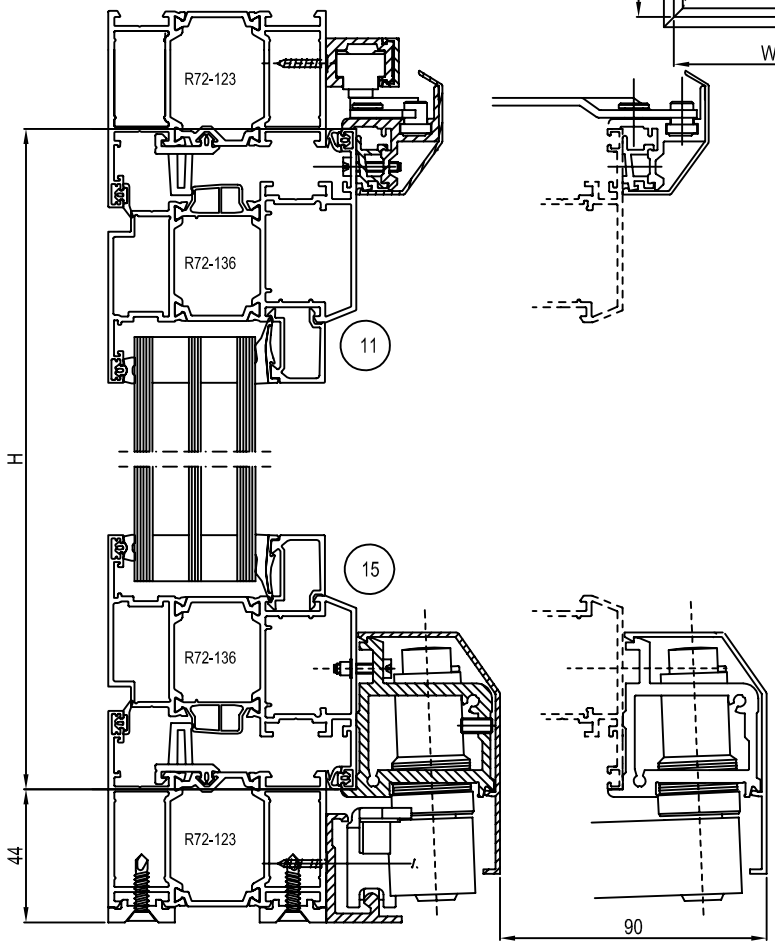


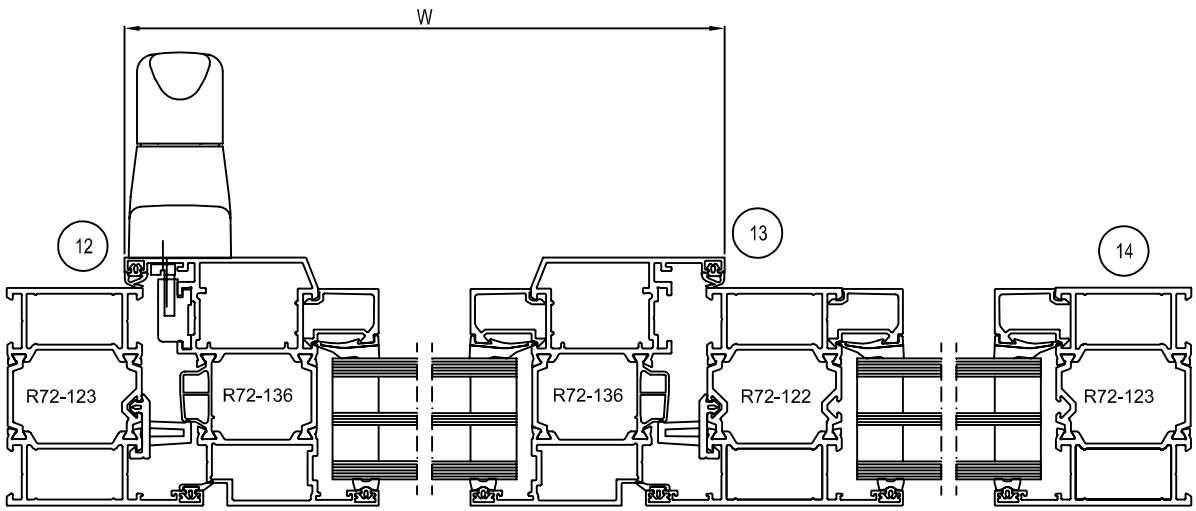
Max. dimensions of the sash

W = 900 - 1650 mm
H = 850 - 2400 mm

Max. weight of the window sash 150 kg



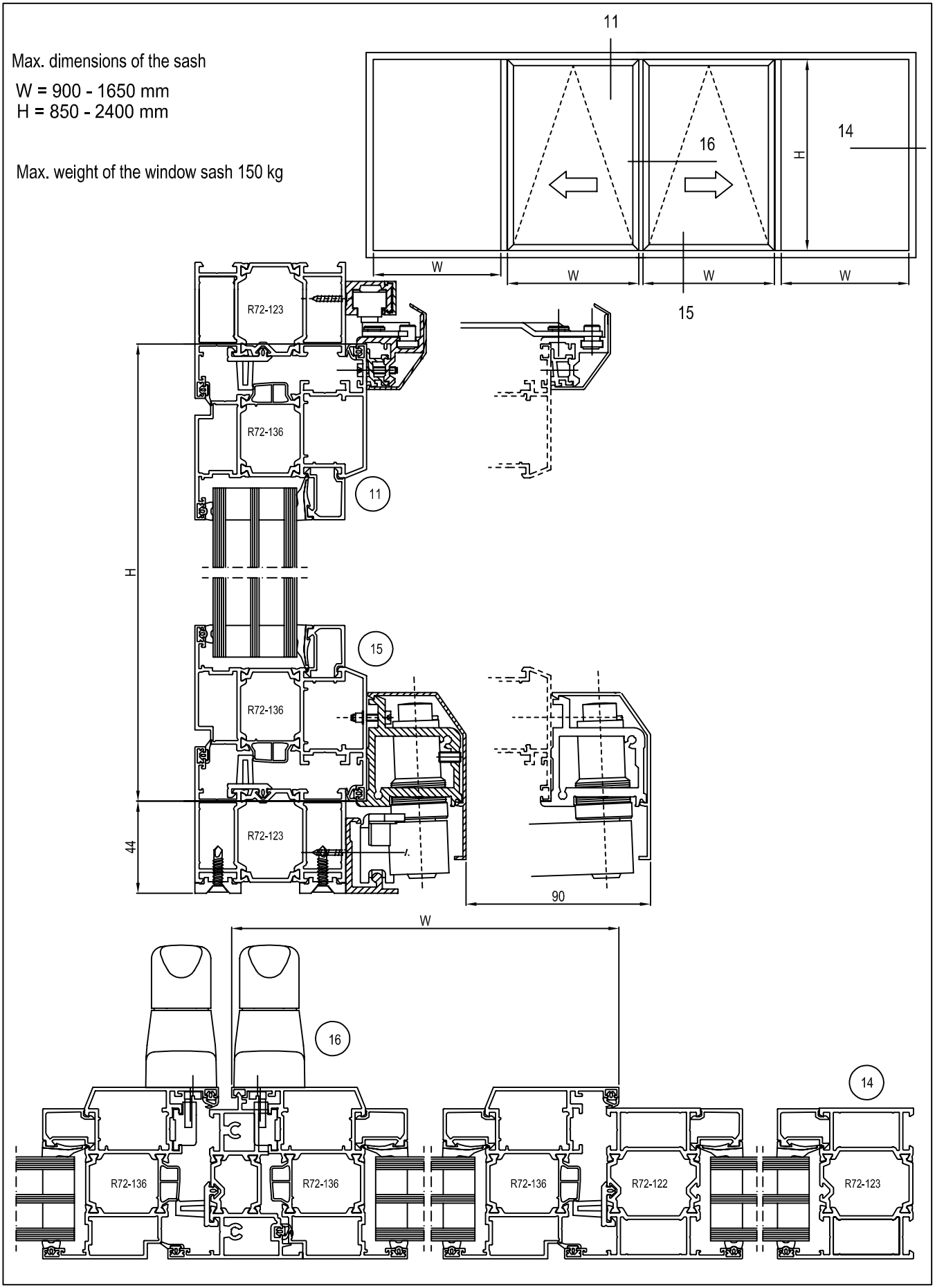




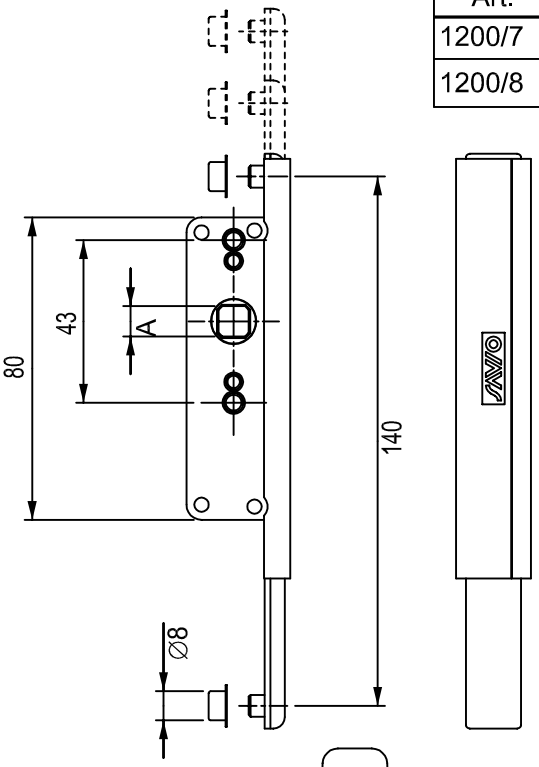
Max. dimensions of the sash

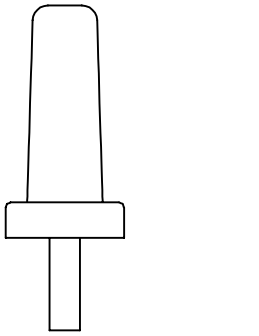
W = 900 - 1650 mm
H = 850 - 2400 mm

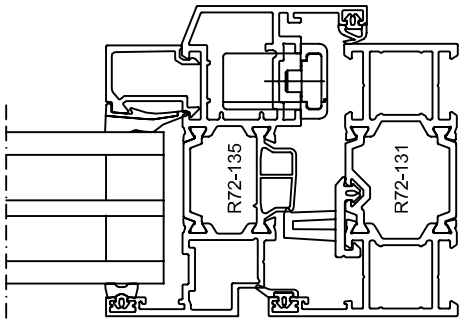
Max. weight of the window sash 150 kg

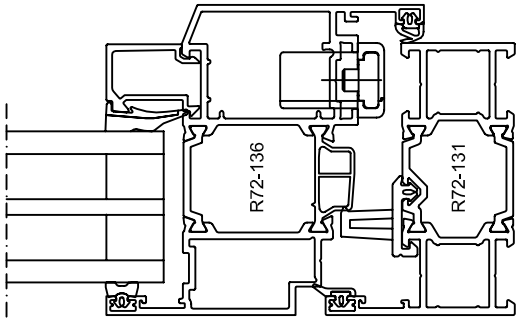


Art.	A
1200/7	⌀7
1200/8	⌀8



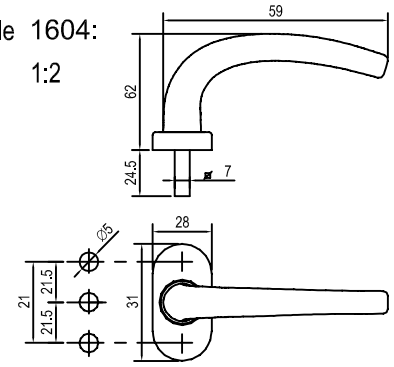




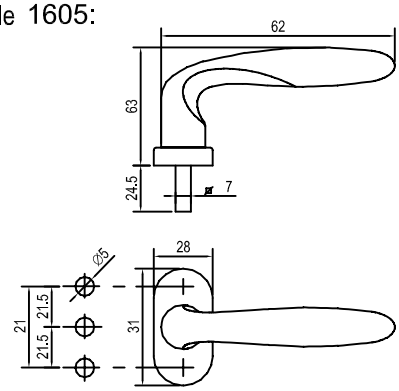


Handle 1604:

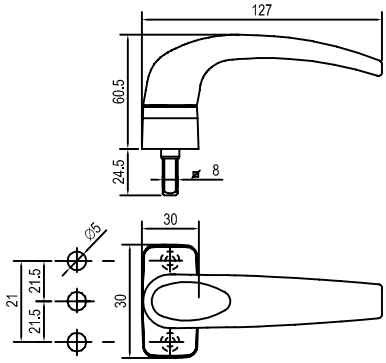
1:2



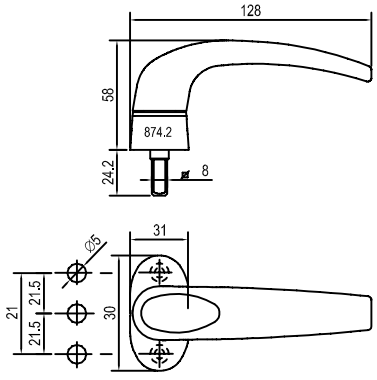
Handle 1605:



Handle 874.1:



Handles 874.2 & 874.21:



Most of the Primos window handles are suitable for the handle mechanism

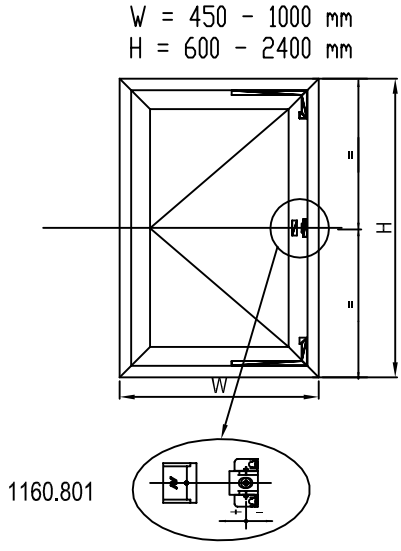
WINDOW SASH MAX. SIZE & WEIGHT:

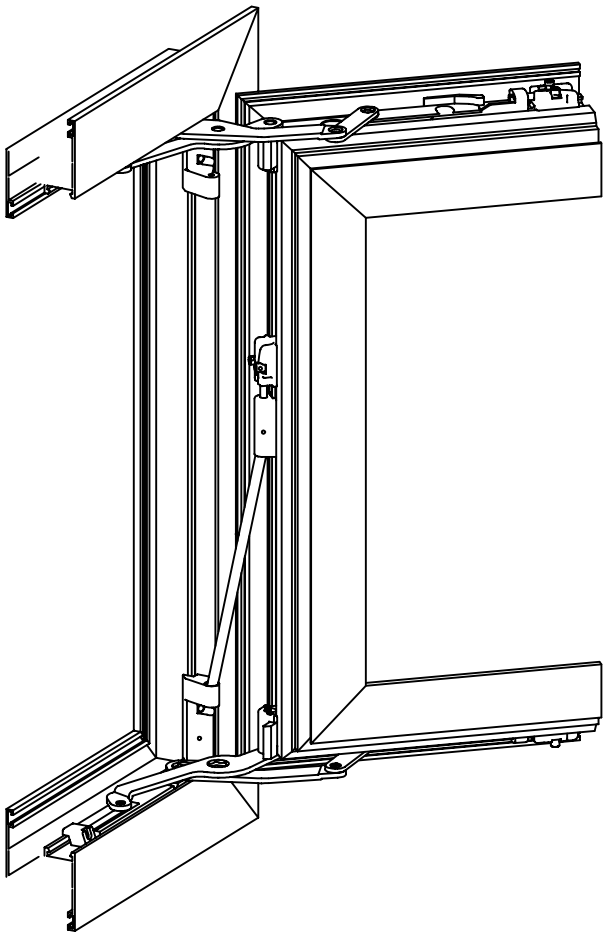
The Volvo concealed hinge can be used in side-hinged windows instead of conventional hinges, as long as the size and weight limits of the window sash given below are followed.

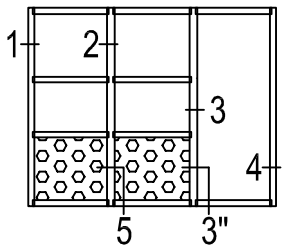
H \ W	300	400	500	600	700	800	900	1000
2400	●	41	31	24	20	15	11	9
2300	●	43	32	25	21	15	11	9
2200	●	45	34	27	21	15	11	9
2100	●	48	36	28	21	15	11	9
2000	●	●	38	30	21	15	11	9
1900	●	●	40	30	21	15	11	9
1800	●	●	43	30	21	15	11	9
1700	●	●	45	30	21	15	11	9
1600	●	●	47	30	21	15	11	9
1500	●	●	47	30	21	15	11	9
1400	●	●	47	30	21	15	11	9
1300	●	●	47	31	21	15	11	9
1200	●	●	47	31	21	15	11	9
1100	●	●	48	31	21	15	11	8
1000	●	●	48	31	21	15	11	8
900	●	●	48	31	21	15	11	8
800	●	●	49	31	21	15	11	8
700	●	●	●	32	22	15	11	5
600	●	●	●	32	22	15	X	X
500	●	●	●	33	17	X	X	X

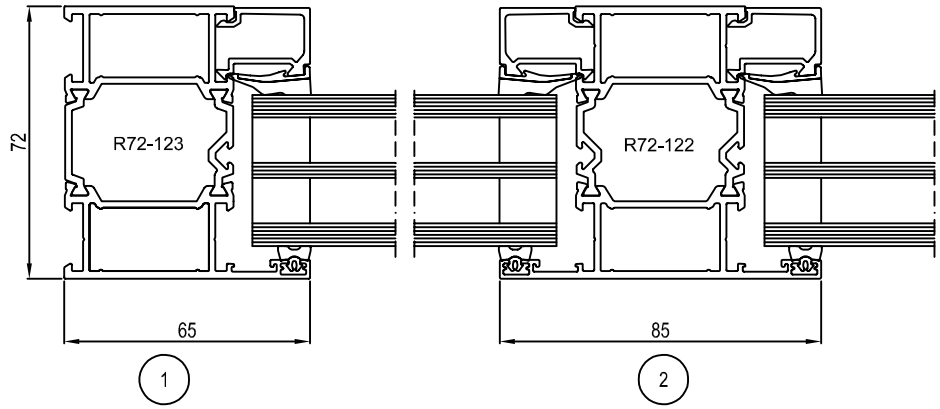
●	Max. glass thickness 50 mm
33	Max glass thickness marked on the pane (e.g. 33 mm)
X	Not possible

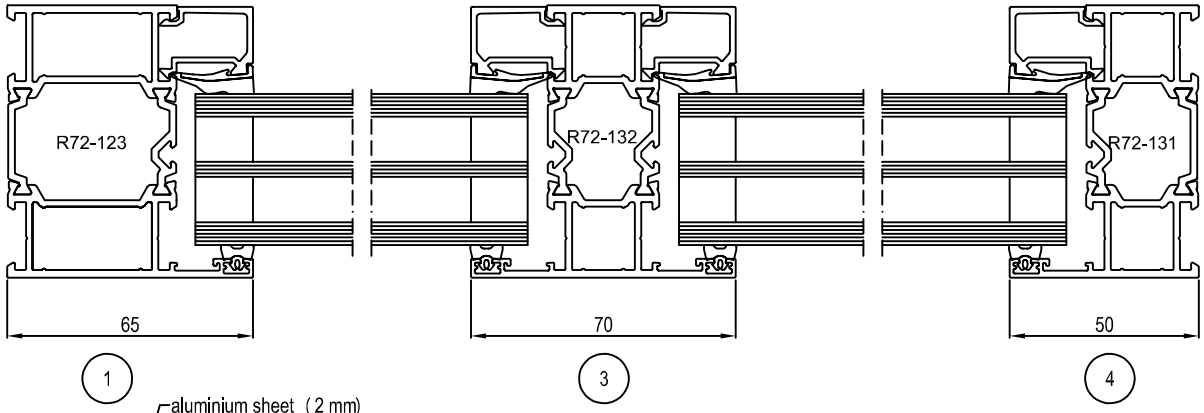
		Window sash height	
Code:	Accessory:	600-1400	1401-2400
1160	Volvo concealed hinge set	X	X
1160.801	Additional locking point		X

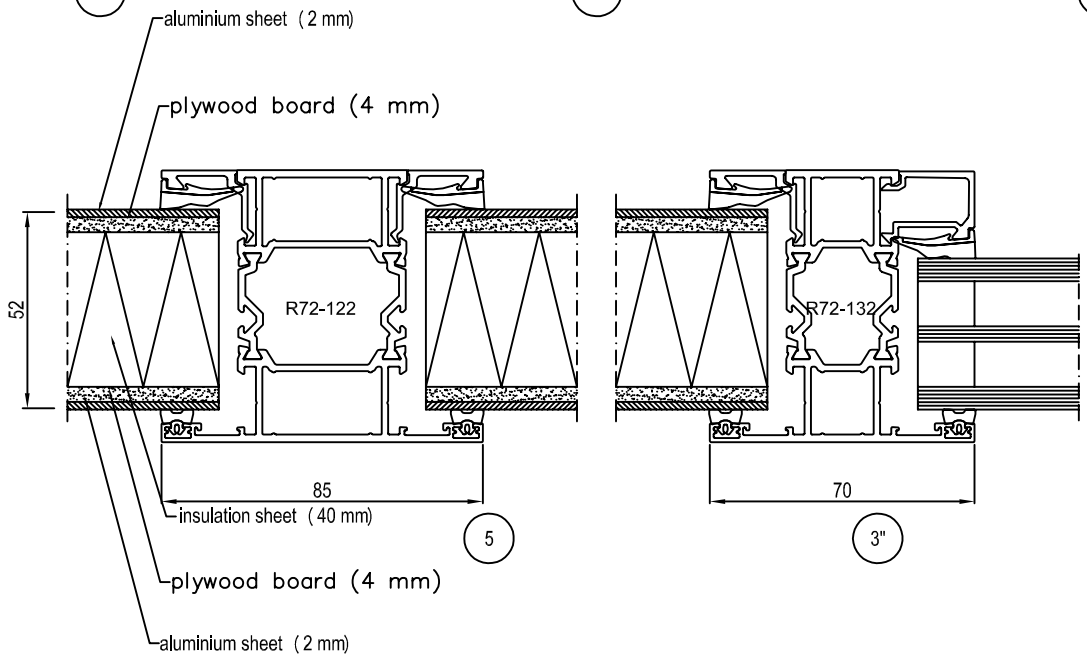


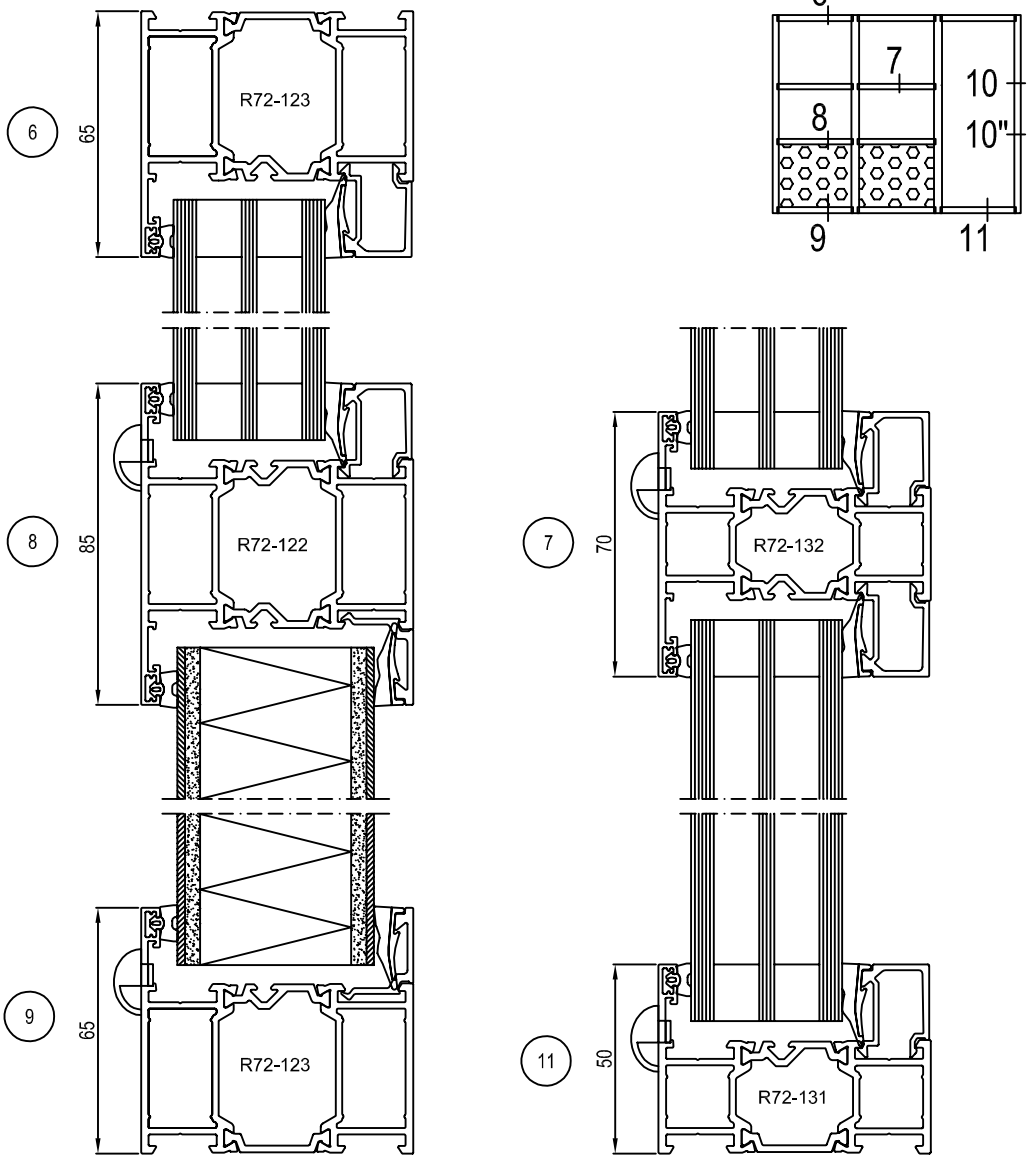



1
2
3
4
5
3"


72
R72-123
R72-122
65
85
1
2

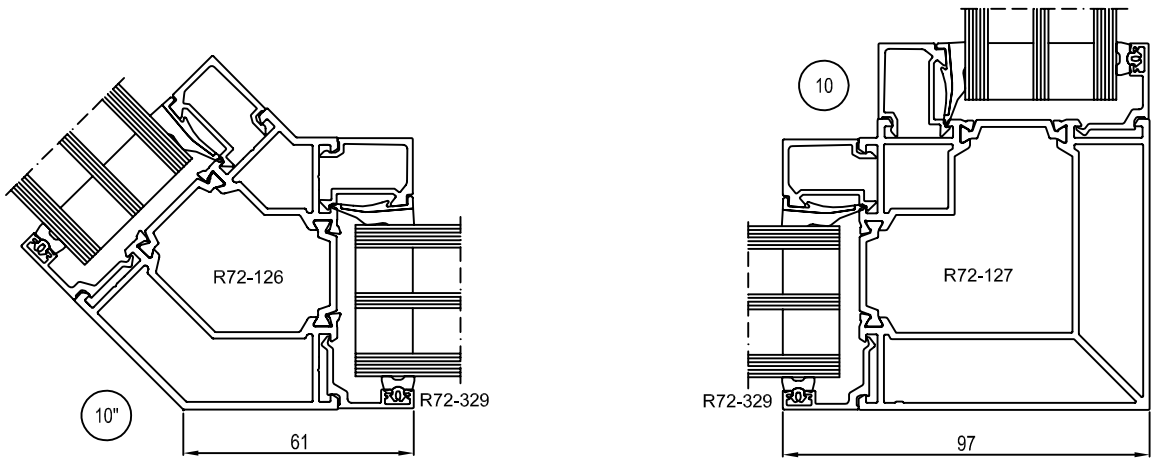

R72-123
R72-132
R72-131
65
70
50
1
3
4

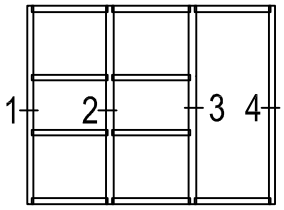

aluminium sheet (2 mm)
plywood board (4 mm)
52
R72-122
R72-132
85
70
insulation sheet (40 mm)
5
3"
plywood board (4 mm)
aluminium sheet (2 mm)

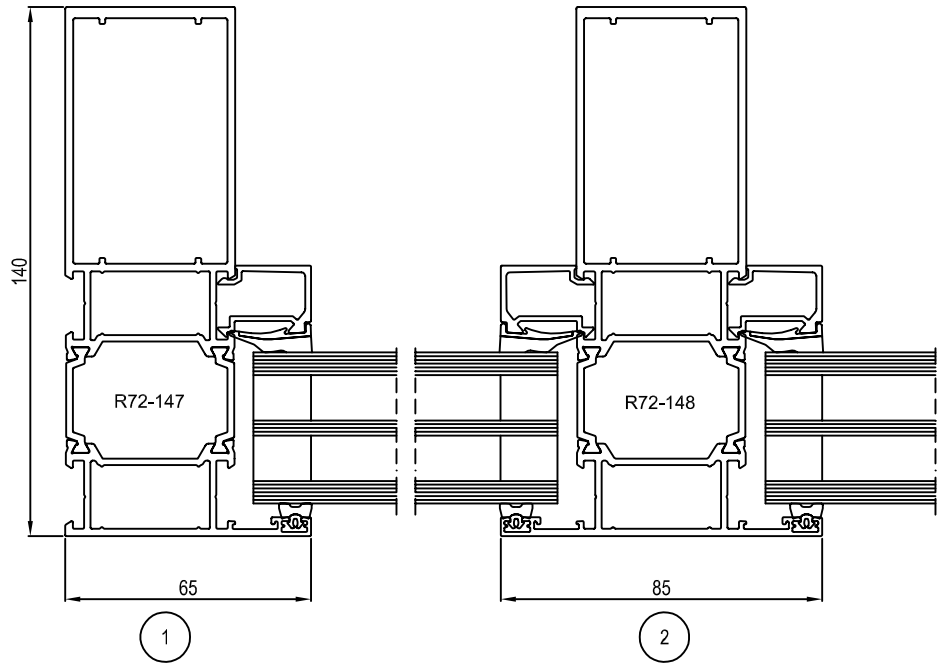


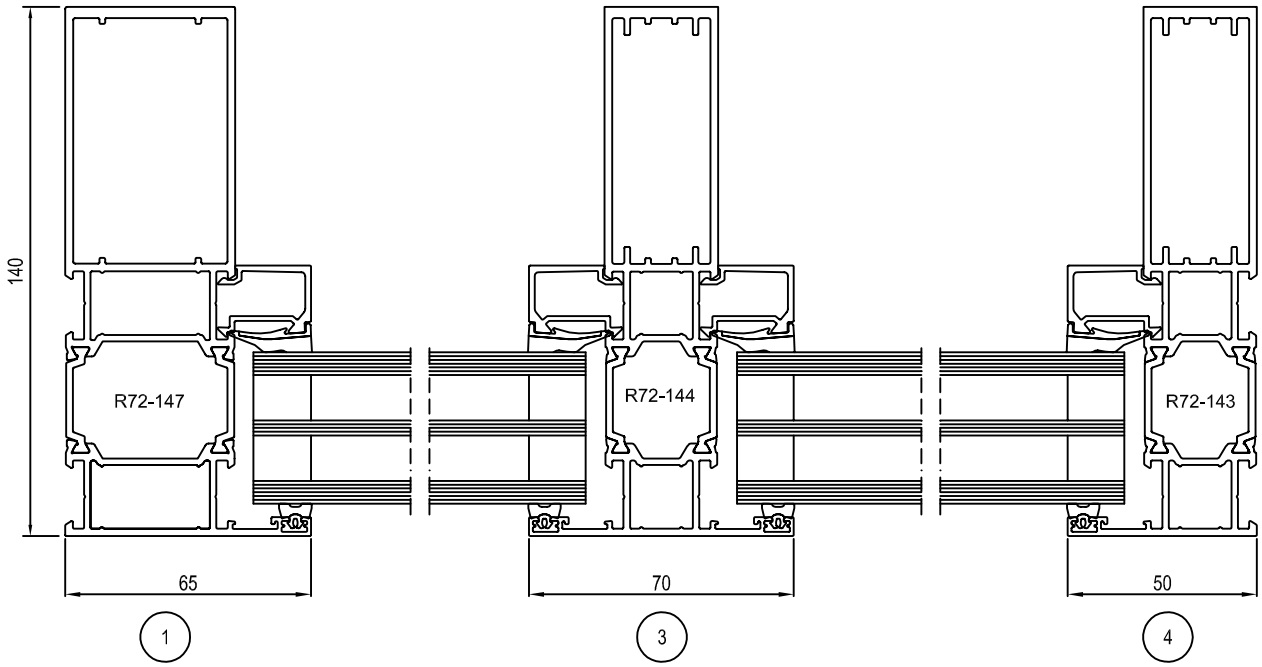
Angle section R72-126 135

Angle section R72-127 90









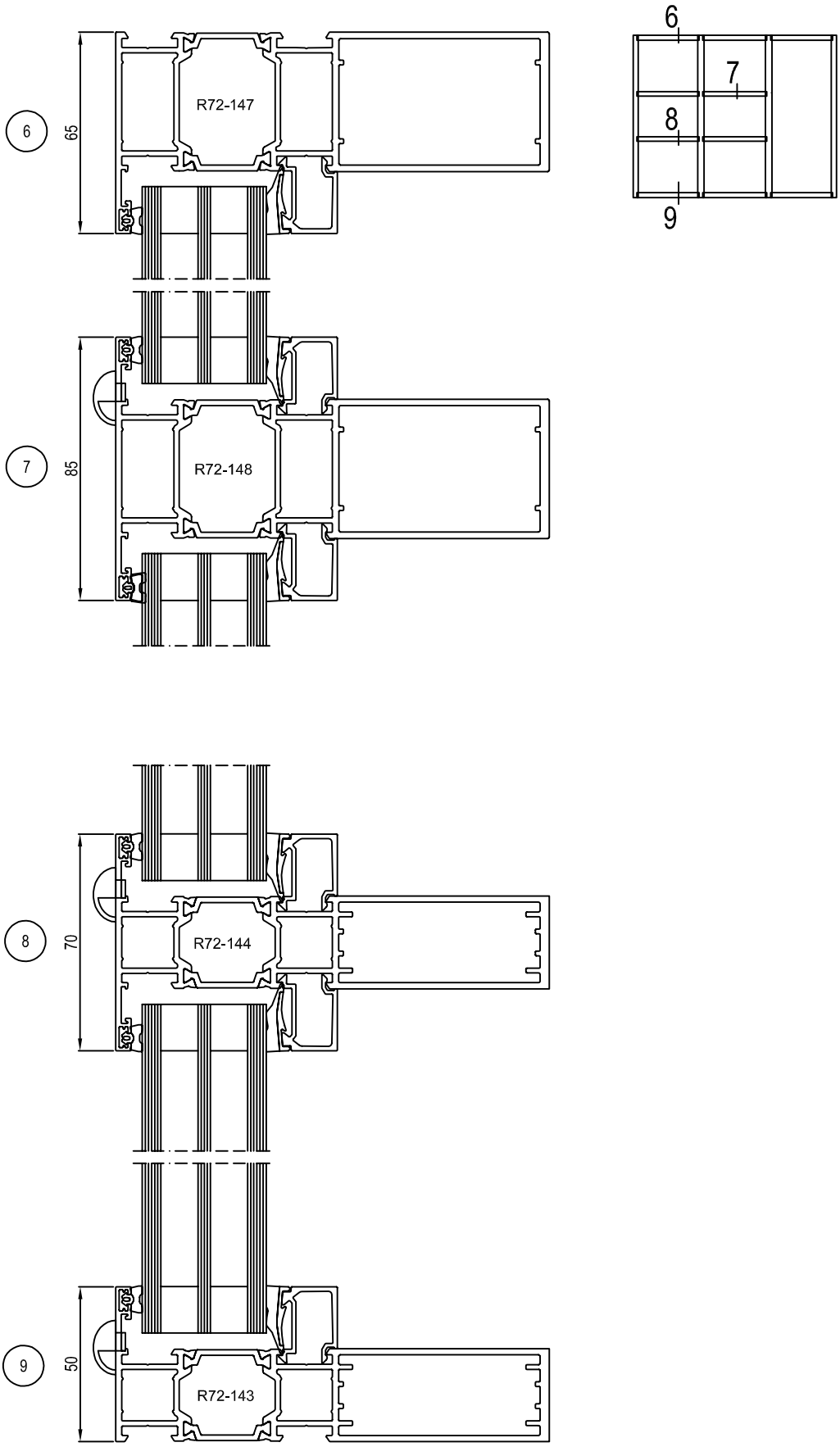
R72

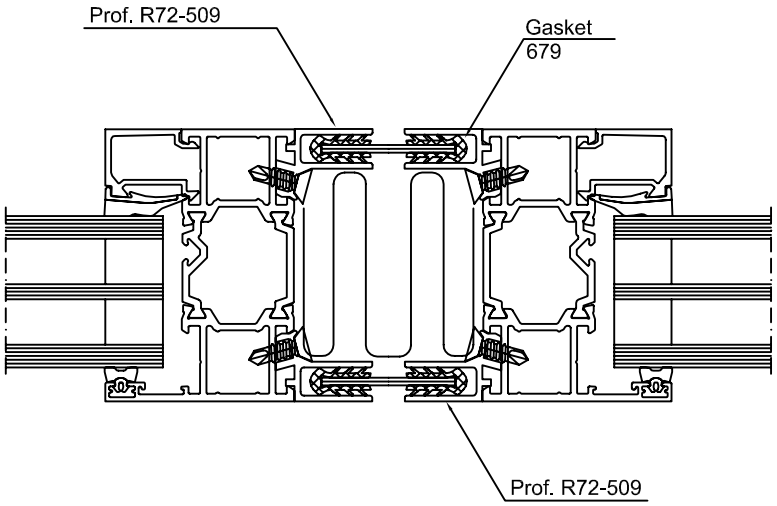
01.03.2015

12

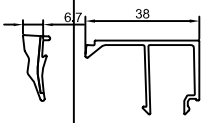
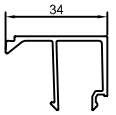
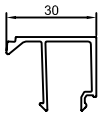
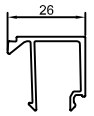
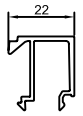
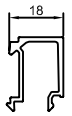
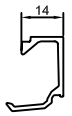
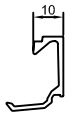
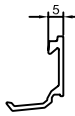
Glass partition

6.3


6
65
R72-147
7
85
R72-148
8
70
R72-144
9
50
R72-143
6
7
8
9



Max. movement ± 5mm

1.	653 	17 18 19 (+)	656 	R72-328
	652 	19 20 21 (+)		
2.	653 	21 22 23 (+)	656 	 R72-327
	652 	23 24 25 (+)		
3.	653 	25 26 27 (+)	656 	 R72-326
	652 	27 28 29 (+)		
4.	653 	29 30 31 (+)	656 	 R72-325
	652 	31 32 33 (+)		
5.	653 	33 34 35 (+)	656 	 R72-324
	652 	35 36 37 (+)		
6.	653 	37 38 39 (+)	656 	 R72-323
	652 	39 40 41 (+)		
7.	653 	41 42 43 (+)	656 	 R72-322
	652 	43 44 45 (+)		
8.	653 	45 46 47 (+)	656 	 R72-321
	652 	47 48 49 (+)		
9.	653 	50 51 52 (+)	656 	 R72-320
	652 	52 53 54		

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

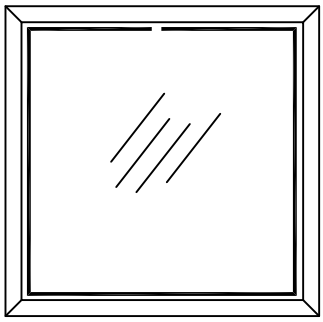
Measures of glass: light opening area + 30 mm

GLAZING INSTRUCTIONS

INSTALLING THE GLAZING SEALS

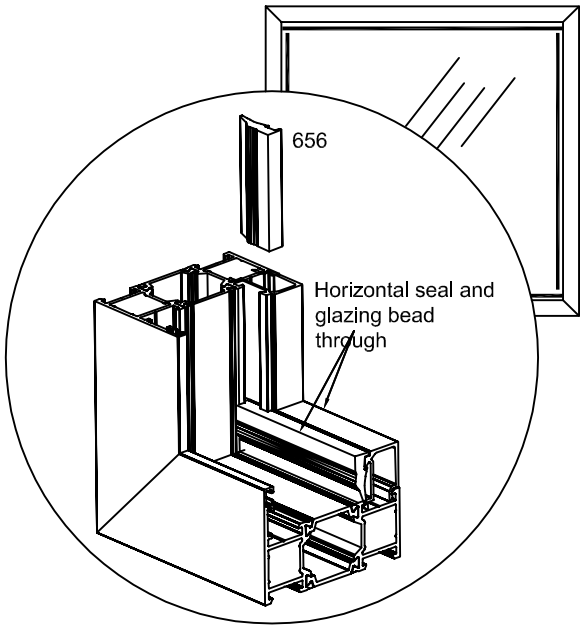
When starting the glazing, it must be ensured that the rabbets, glazing beads and glasses are clean. After this, fit the outer glazing seal no. 652 or 653 into the profile groove. After installing the glass and glazing beads, fit the glazing seal no. 656 in its position. Installation of the seals can 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:

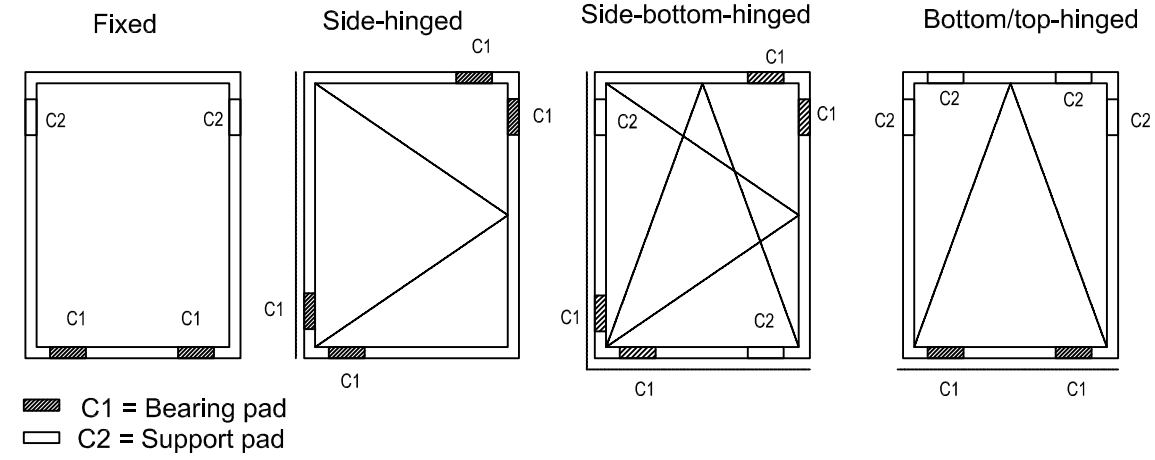


INSTALLING THE GLASS

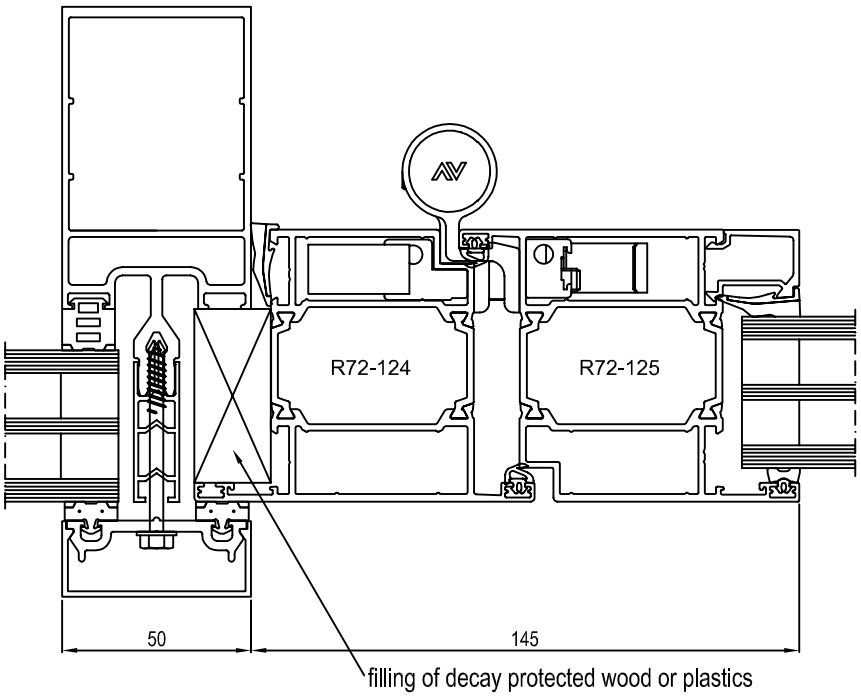
The meaning of padding is to support, centre and bear the sealed glass in the sash or frame in the intended manner, and to ensure that the window or door will stay in the correct form. There are two types of pads: -Bearing pads, which transfer the weight of the glass pane to the sash or frame. -Support 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 R72 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.



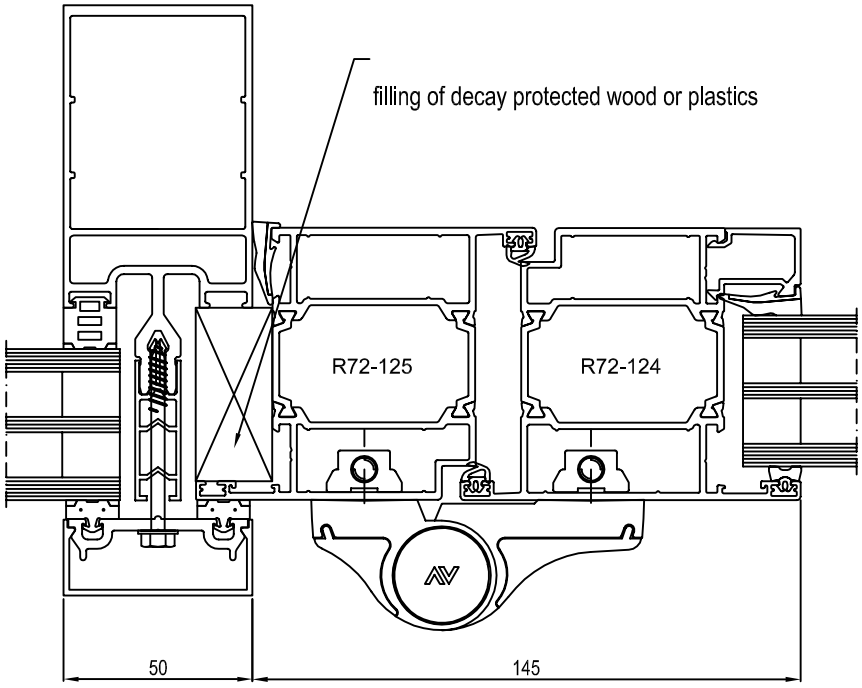
PAD LOCATIONS



Joint to frame R54 (inwards opening door)

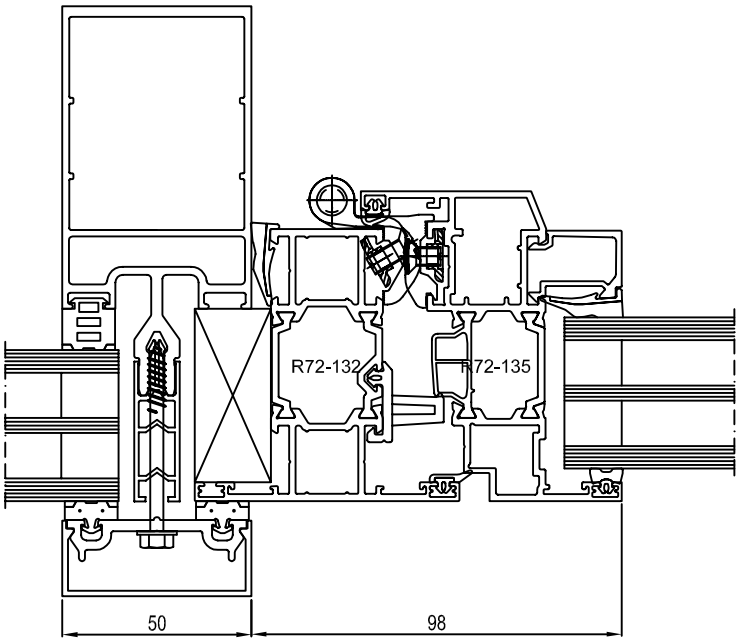


Joint to frame R54 (outwards opening door)



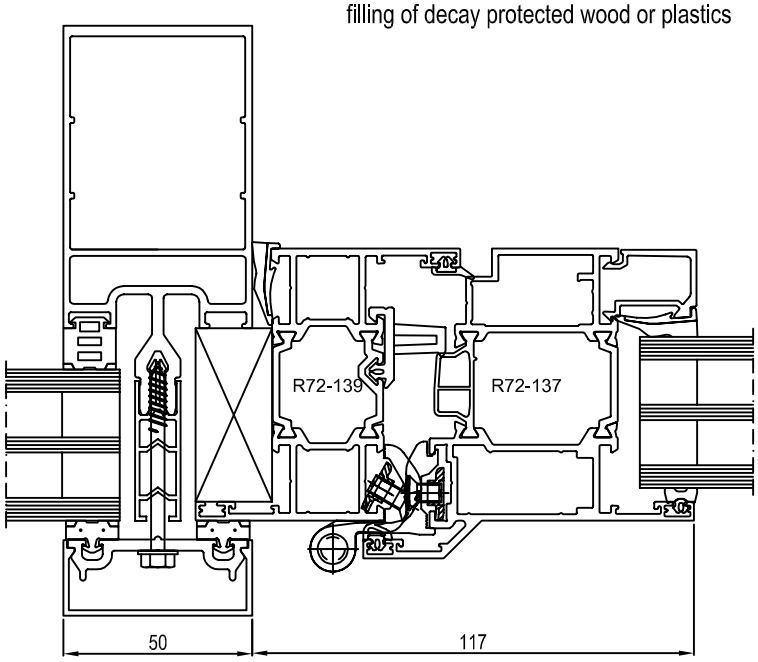
Joint to frame R54 (inwards opening window)

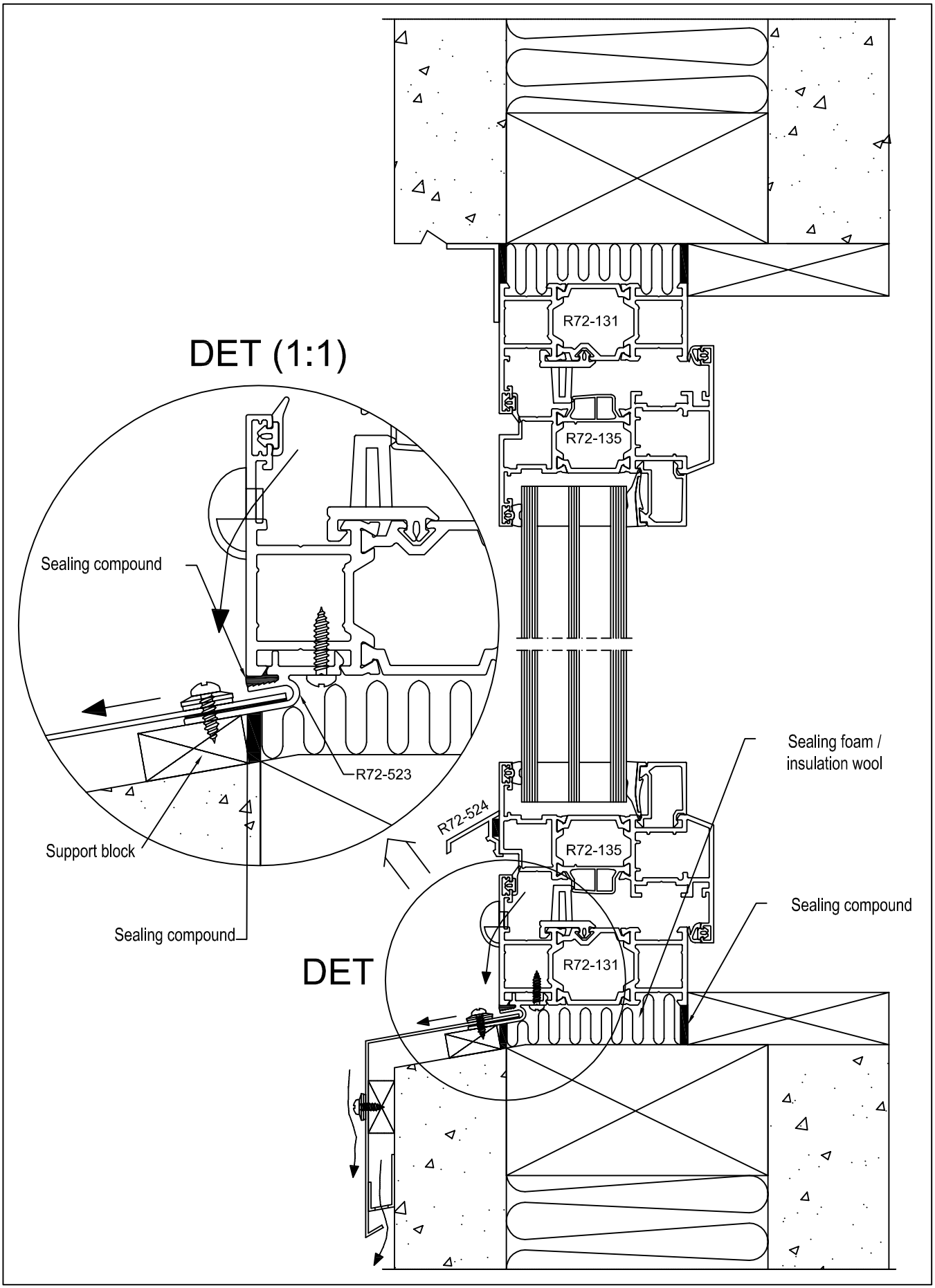
filling of decay protected wood or plastics



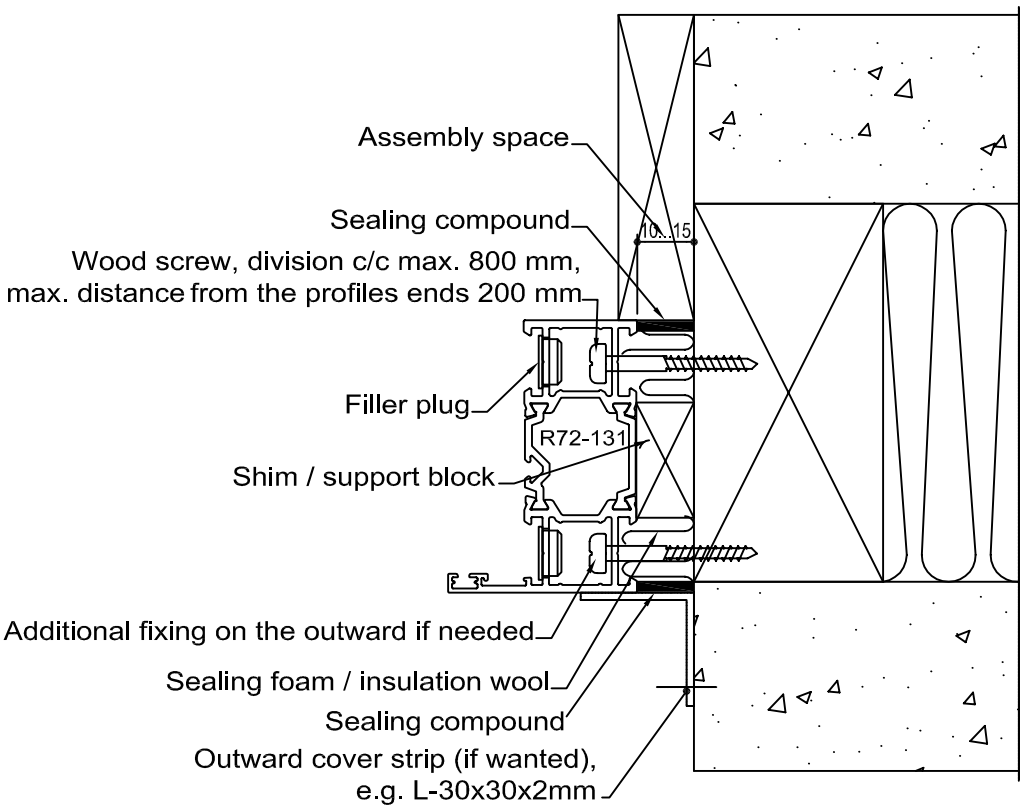
Joint to frame R54 (outwards opening window)

filling of decay protected wood or plastics

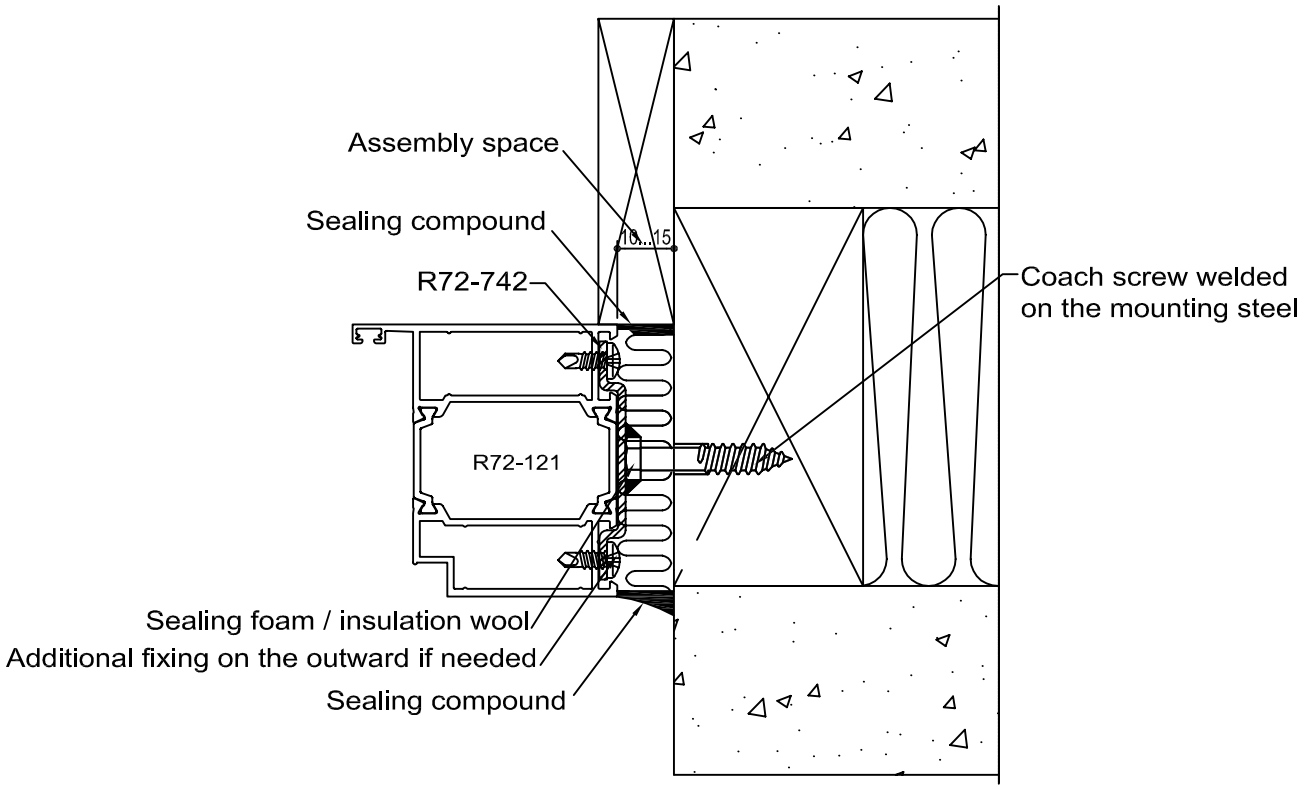



DET (1:1)
R72-131
R72-135
Sealing compound
R72-523
Support block
Sealing compound
R72-524
Sealing foam /
insulation wool
R72-135
Sealing compound
DET
R72-131

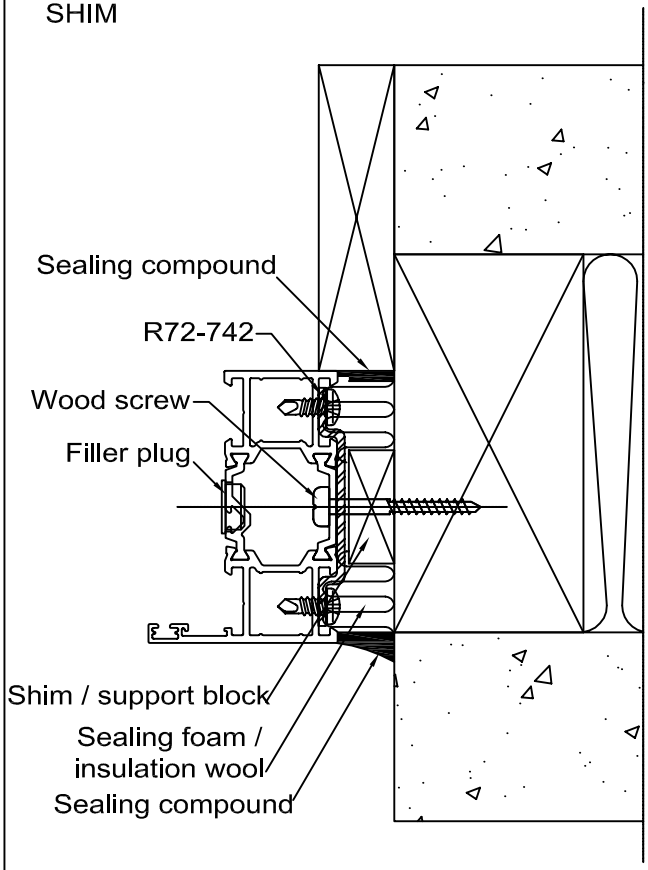
ALTERNATIVE 1 / WOOD SCREW:



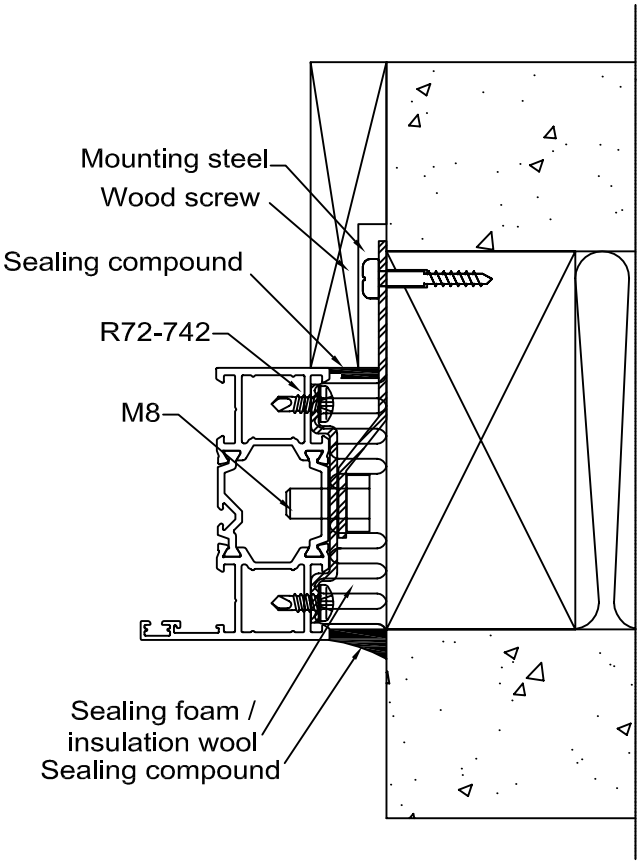
ALTERNATIVE 2 / COACH SCREW + WELDING:



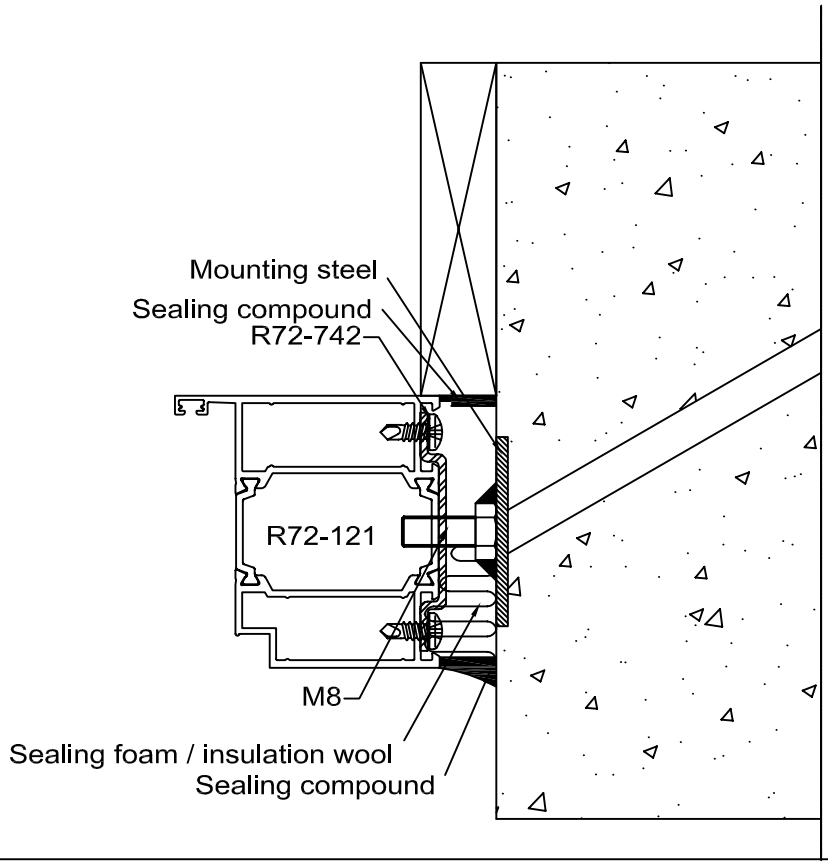
ALTERNATIVE 1: MOUNTING STEEL + SHIM



ALTERNATIVE 2: MOUNTING STEEL



ALTERNATIVE 3: MOUNTING STEEL, ADJUSTER BOLT + WELDING



SYSTEM: R72 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 Profiliilit Oy
Building Systems