30 lat doświadczeń od 1989 r.

MORAD
SYSTEMY ALUMINIOWE

BE–25

SYSTEMY ALUMINIOWYCH ZABUDÓW BALKONOWYCH

/ ALUMINIUM ENCLOSURE BALCONY SYSTEMS

KATALOG TECHNICZNY
TECHNICAL CATALOGUE

MORAD®
SYSTEMY ALUMINIOWE

09.2020

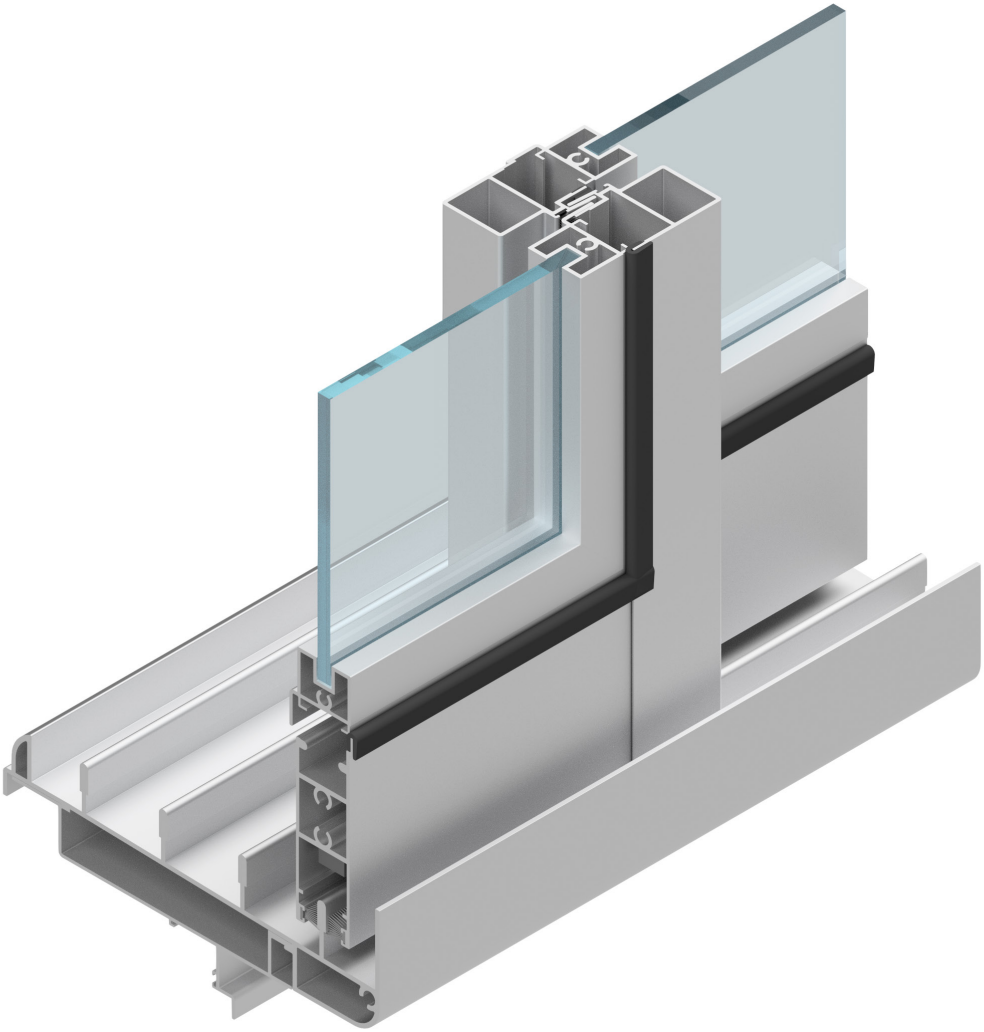
BE-25

- BALKONY
- TARASY

- BALCONIES
- TERRACES

Szklana zabudowa zewnętrzna

External glass enclosure



Spis treści
Contents

I Opis techniczny.....3
II Zestawienie profili.....7
III Przekroje profili.....11
IV Akcesoria.....23
V Przekroje konstrukcji.....31
VI Obróbka profili.....75
VII Instrukcja montażu.....109
Montaż skrzydła wewnętrznego.....111
Montaż poprzeczki skrzydła wewnętrznego.....112
Montaż BE0517 i BE0518 w skrzydle wewnętrznym.....113
Montaż ramy skrzydła zewnętrznego.....114
Montaż uchwytu.....118
Montaż zasuwnicy.....119
Połączenie skrzydła wewnętrznego z ramą skrzydła zewnętrznego.....120
Złożenie skrzydła nieotwieralnego.....122
Montaż dolnej części zabudowy balkonu.....124
Montaż ramy zabudowy balkonu.....125
Montaż ramy zabudowy tarasu.....127
Montaż górnej prowadnicy- BE1010.....128
Montaż profilu zamykającego- BE2007.....129
Montaż rur do odwodnienia.....130
Mocowanie szkła w dolnej części zabudowy balkonu.....131
Montaż skrzydeł.....133
Montaż trzpieni blokujących.....134
Montaż wspornika poręczy do profilu BE1001.....135
Montaż wspornika do poręczy 13068.....136
Montaż wspornika do poręczy 45037.....137
Montaż wspornika do poręczy 13041.....138
Montaż zaślepki poręczy.....139
Montaż klipsa lameli.....140
Montaż podpory lameli pod kątem 15 st.....141
Montaż profilu kotwiącego- BE1003.....142
Montaż prowadnicy dolnej/progu- BE1014.....143
Montaż górnego profilu ramy- BE1002.....144

I Technical description.....3
II Profiles overview.....7
III Profiles sections.....11
IV Accessories.....23
V Constructions sections.....31
VI Profiles working.....75
VII Assembly instructions.....107
Assembling the internal sash.....111
Assembling the transom of the internal sash.....112
Assembling the BE0517 i BE0518 in the internal sash....113
Assembling the external sash frame.....114
Assembling the handle.....118
Assembling the rail to the handle.....119
Connection of the internal sash with the frame of external sash.....120
Assembling of a non- opening sash.....122
Assembling the lower part of the balcony.....124
Assembling the balcony frame.....125
Assembling the terrace frame.....127
Assembling the top guide bar- BE1010.....128
Assembling the closing profile- BE2007.....129
Mounting of the tubes for drainage.....130
Fixing the glass in the lower part of the balcony.....131
Installation of the sashes.....133
Mounting of the indexing plungers.....134
Mounting of the handrail support to the BE1001 profile.135
Mounting of the support to handrail 13068.....136
Mounting of the support to handrail 45037.....137
Mounting of the support to handrail 13041.....138
Mounting of the end cap of handrail.....139
Mounting of the lamella clip.....140
Mounting of the bracket to handrail angle 15 deg.....141
Mounting of the anchoring profile- BE1003.....142
Mounting of the bottom guide bar/threshold- BE1014....143
Mounting of the top frame profile- BE1002.....144

MORAD®
SYSTEMY ALUMINIOWE

System BE-25

I
Opis techniczny
Technical description

Opis systemu

Zastosowanie

BE-25 jest nowoczesnym systemem aluminiowym zaprojektowanym do wykonywania zewnętrznych zabudów tarasów oraz balkonów. System dedykowany jest do zabudowywania przestrzeni niewymagających ogrzewania. Konstrukcje idealnie sprawdzą się w przypadku realizacji całych obiektów, jak i pojedynczych pomieszczeń.

System BE-25 można wykorzystać jako dodatkową ochronę mieszkania przed hałasem, wiatrem, a nawet deszczem. Ponadto każda zabudowa wyposażona jest w trzpienie blokujące, które można otworzyć jedynie od wewnętrznej strony. Gwarantuje to ochronę przed włamaniem oraz samoczynnym przesuwaniem się skrzydeł pod wpływem wiatru.

Konstrukcja

System BE-25 pozwala na zabudowanie całej przestrzeni tarasu oraz balkonu, a zastosowana obróbka blacharska zapewnia estetyczny wygląd całej zabudowy. Charakterystyczną cechą systemu jest możliwość przesuwania skrzydeł w obu kierunkach po czterotorowej prowadnicy i ustawianie ich „jeden za drugim”, dzięki czemu otrzymujemy maksymalną przestrzeń otwartą. Szczelność konstrukcji zapewniają odpowiednio zaprojektowane profile pionowe skrzydeł okiennych, które umożliwiają zahaczanie o siebie sąsiadujących okien podczas ich rozsuwania. Doszczelnienie systemu oraz ochronę przed warunkami atmosferycznymi zapewniają użyte uszczelki. Ponadto konstrukcje wyposażone są w efektywny system odprowadzania wody poza zabudowę.

W przypadku wykonywania zabudowy balkonu system BE-25 składa się z dolnej części stałej oraz górnej części przesuwnej. Zastosowanie takiej konfiguracji zwiększa komfort oraz bezpieczeństwo osób korzystających z przestrzeni balkonu. Dodatkowo dla skrzydeł o wysokości poniżej 1600 mm istnieje możliwość połączenia skrzydła przesuwnego ze skrzydłem rozwiernym, co w przypadku zabudowy balkony pozwoli na swobodne mycie szyb bez konieczności wychylania się na zewnątrz.

Szklenie

W skrzydłach okiennych istnieje możliwość zastosowania szkła hartowanego o grubości 6 mm lub laminowanego 33.1. W dolnej części zabudowy balkonu stosowane jest natomiast szkło laminowane 44.2.

Wykończenie powierzchni

Powierzchnie profili powinny być zabezpieczone przed korozją poprzez anodowanie (możliwość w specjalnych kolorach) lub powlekane poliestrowymi lakierami proszkowymi w kolorach RAL oraz metalizowanych. Dostępne są również inne powłoki: drewnopodobne i ozdobne. Profile malowane lub anodowane są zgodnie z wymogami Stowarzyszenia Wykonawców Obróbki Powierzchni Aluminiowych QUALICOAT i QUALIANOD.

SYSTEM DESCRIPTION

Application

BE-25 is a modern aluminium system designed for external terraces and balconies. The system is dedicated to building spaces that do not require heating. The constructions are ideally suited for the implementation of whole objects as well as individual rooms.

The BE-25 system can be used as an additional protection of the apartment against noise, wind and even rain. The structure is also equipped with blocking pins that can only be opened from the inside. It guarantees the protection against burglary and self- acting movements of the sashes caused by the wind.

Construction

The BE-25 system allows for the entire terrace and balcony to be built, and the applied flashing ensures an aesthetic appearance of the entire building. A characteristic feature of the system is the ability to move the sashes in both directions along the four-track guide bar and set them one by one, so that we get the maximum open space. The tightness of the structure is ensured by appropriately designed vertical profiles of window sashes, which allow neighboring windows to be hooked together when they are being moved apart. Additional sealing of the system and protection against weather conditions are provided by the gaskets used. In addition, the constructions are also equipped with an effective system for draining outside buildings.

In the case of balcony construction, the BE-25 system consists of a lower fixed part and upper sliding part. The use of such a configuration increases the comfort and safety of people using the balcony space. In addition, for sashes with a height of less than 1600 mm, it is possible to connect the sliding sash with the opening sash, which in the case of balcony construction allows for hassle-free cleaning of windows without the need to lean outsider.

Glazing

In the window sashes, it is possible to use tempered glass with a thickness of 6 mm or laminated glass 33.1. In the lower part of the balcony, laminated glass 44.2 is used.

Surface finish

Profiles surfaces should be protected against corrosion by anodizing (possibile also in special colors) or by coating with polyester powder lacquer in RAL color or metallized. There are also other coatings available: wood similar and decorative. Painted and anodized profiles comply with the standards of association QUALICOAT and QUALIANOD.

Notatki
Notes

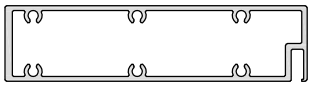
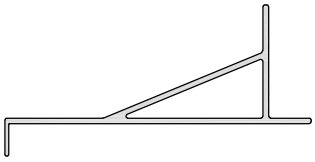
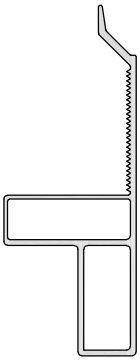
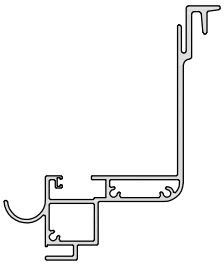
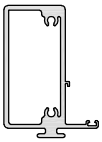
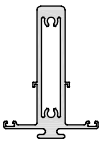
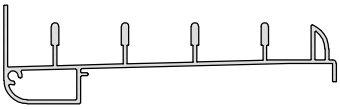
MORAD®
SYSTEMY ALUMINIOWE

System BE-25

II
Zestawienie profili
Profiles overview

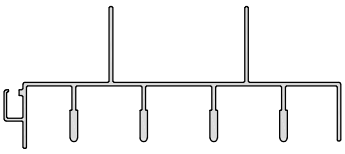
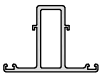
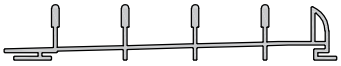
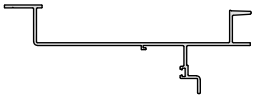
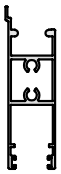
Zestawienie profili
Profiles overview

Długość profili - 6,0 m
Profiles length - 6,0 m

Artykuł Item	Przekrój Section	Waga Weight [kg/m]	Opis Description	Pow. anodow. Anodizing area [dm²/m]	Pow. malow. Painting area [dm²/m]
BE1001		3,388	Pionowy profil ramy Vertical frame profile	95,3	43,3
BE1002		2,605	Górny profil ramy Top frame profile	63,5	45,3
BE1003		3,495	Profil kotwiący Anchoring profile	90,0	57,1
BE1004		2,668	Profil dolny Bottom frame profile	85,8	65,0
BE1005		1,738	Słupek boczny Side mullion	48,0	27,0
BE1006		1,648	Słupek centralny Central mullion	44,8	28,7
BE1009		2,507	Prowadnica dolna/ poręcz Bottom guide bar/ handrail	83,6	68,7

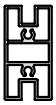
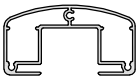
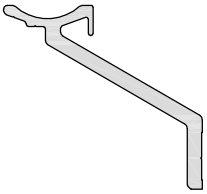
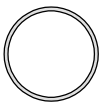
Zestawienie profili
Profiles overview

Długość profili - 6,0 m
Profiles length - 6,0 m

Artykuł Item	Przekrój Section	Waga Weight [kg/m]	Opis Description	Pow. anodow. Anodizing area [dm²/m]	Pow. malow. Painting area [dm²/m]
BE1010		2,778	Prowadnica górna Top guide bar	91,7	91,7
BE1011		0,842	Ceownik 80x40x3 C- bar 80x40x3	31,4	31,4
BE1012		0,773	Poprzeczka balustradowa Balustrade transom	29,6	20,3
BE1013		0,239	Profil podkładki ustalającej Profile of the retaining washer	8,9	-
BE1014		2,211	Prowadnica dolna/ próg Bottom guide bar/ threshold	72,4	68,6
BE1015		0,181	Klips szyny szklenia Clip for glazing rail	10,3	10,3
BE1016		0,906	Profil pod poręczą Profile under the handrail	44,3	44,3
BE2001		1,065	Poziomy profil skrzydła zewnętrznego Horizontal profile of the external sash	50,0	36,2
BE2002		0,622	Pionowy profil skrzydła zewnętrznego Vertical profile of the external sash	30,8	22,0
BE2003		0,571	Pionowy profil skrzydła zewnętrznego Vertical profile of the external sash	28,8	20,0
BE2004		1,039	Pionowy profil skrzydła zewnętrznego ze wzmocnieniem Vertical profile of the external sash with reinforcement	45,7	27,2

Zestawienie profili
Profiles overview

Długość profili - 6,0 m
Profiles length - 6,0 m

Artykuł Item	Przekrój Section	Waga Weight [kg/m]	Opis Description	Pow. anodow. Anodizing area [dm²/m]	Pow. malow. Painting area [dm²/m]
BE2005		0,987	Pionowy profil skrzydła zewnętrznego ze wzmocnieniem Vertical profile of the external sash with reinforcement	44,9	26,4
BE2006		0,579	Profil skrzydła wewnętrznego Profile of the internal sash	28,6	16,9
BE2007		0,538	Profil zamykający Closing profile	27,0	27,0
BE2008		1,029	Poprzeczka skrzydła wewnętrznego Transom of the internal sash	48,0	18,6
13041		1,214	Poręcz aluminiowa eliptyczna Aluminium eliptic handrail	56,5	29,6
13068		1,221	Poręcz aluminiowa prostokątna Rectangular aluminium handrail	42,7	25,3
13077		3,530	Profil wspornika poręczy Profile of the handrail support	38,7	38,7
45037		0,814	Poręcz aluminiowa okrągła Φ50 mm Aluminium round handrail Φ50 mm	30,2	15,7
ME.150		1,637	Profil lameli Lamella profile	74,2	31,3

MORAD®
SYSTEMY ALUMINIOWE

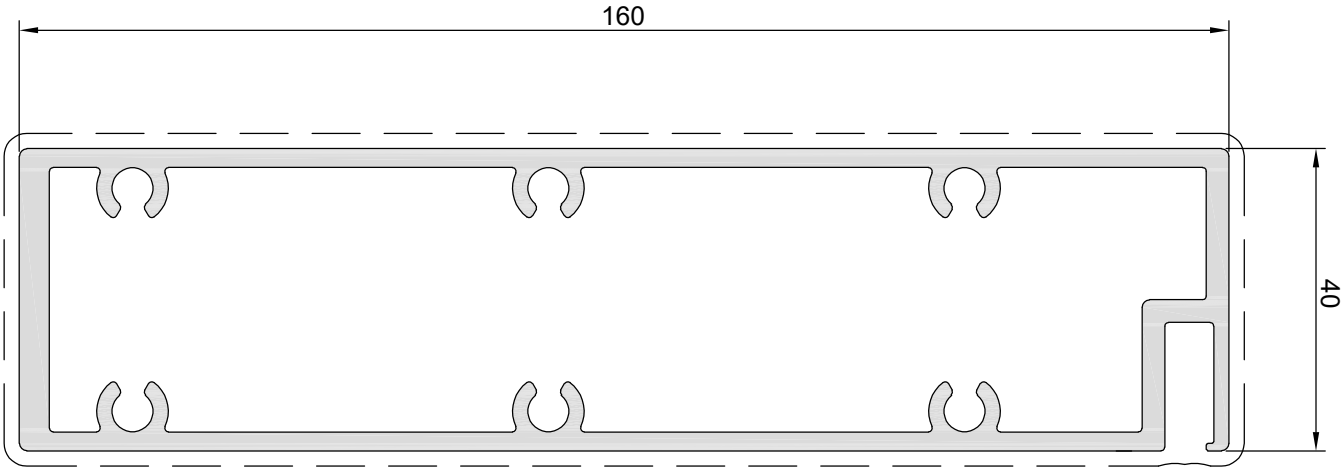
System BE-25

III
Przekroje profili
Profiles sections

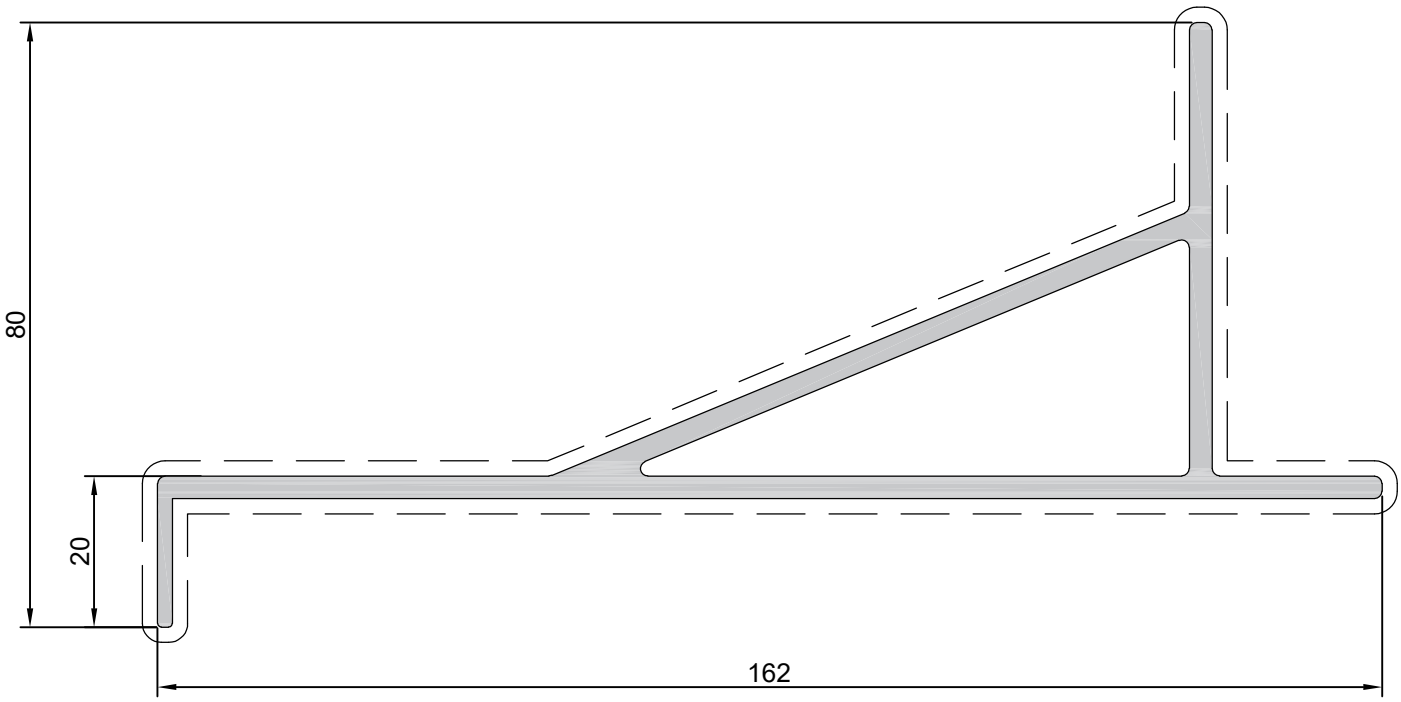
Profile ramy
Frame profile

Skala
Scale
1:1

BE1001



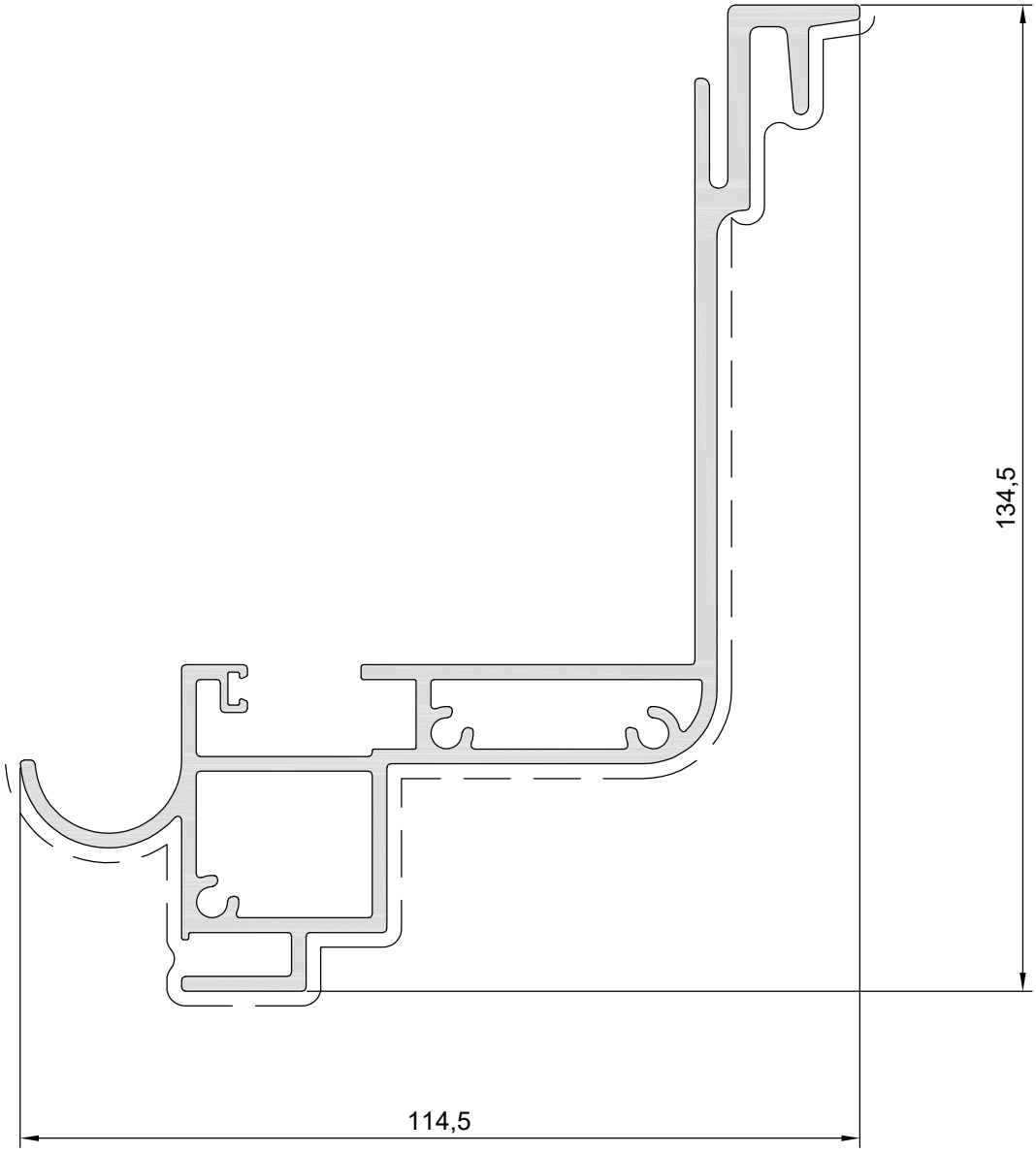
BE1002



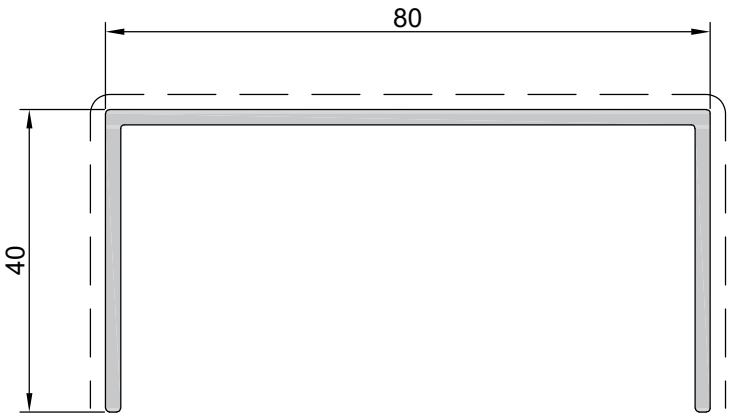
Profile ramy
Frame profile

Skala
Scale
1:1

BE1004



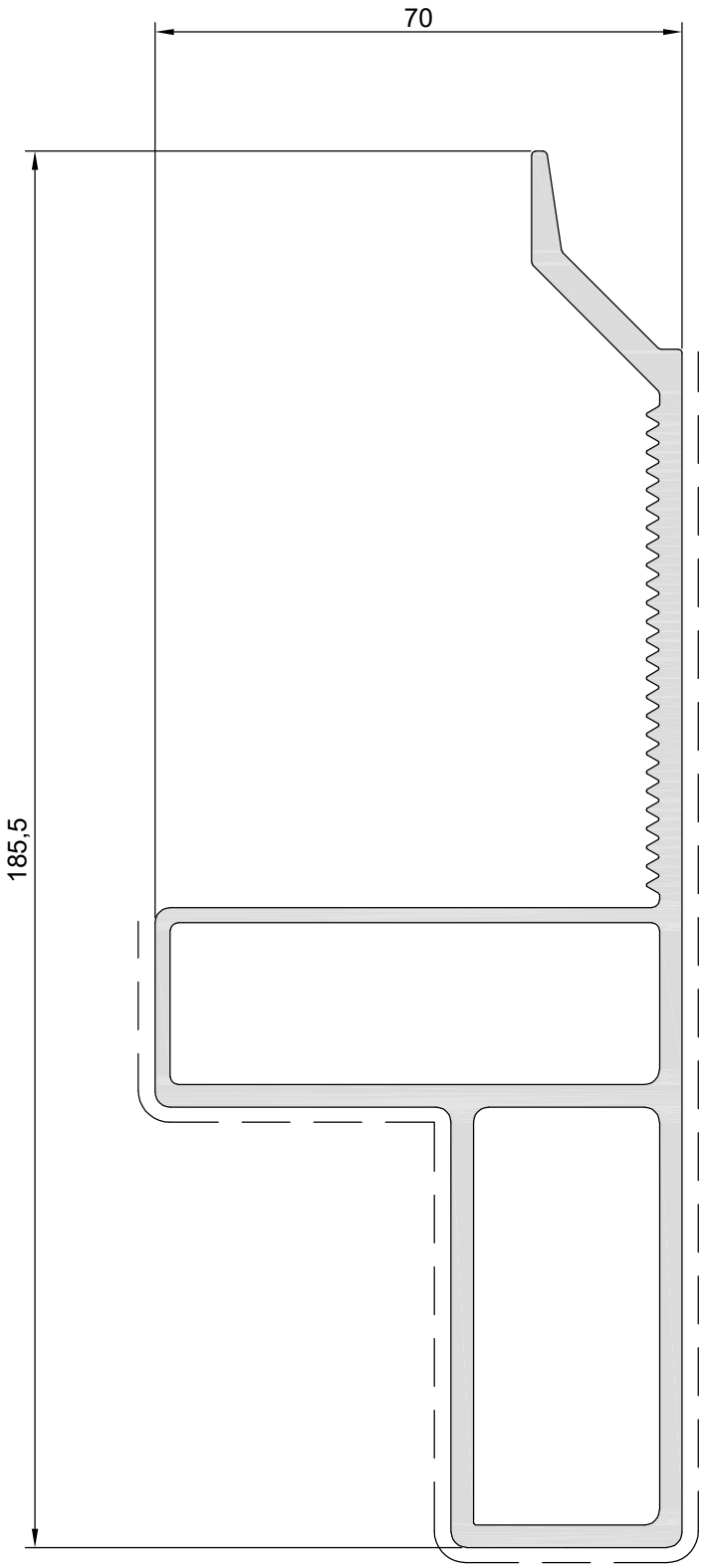
BE1011



Profil kotwiący
Anchoring profile

Skala
Scale
1:1

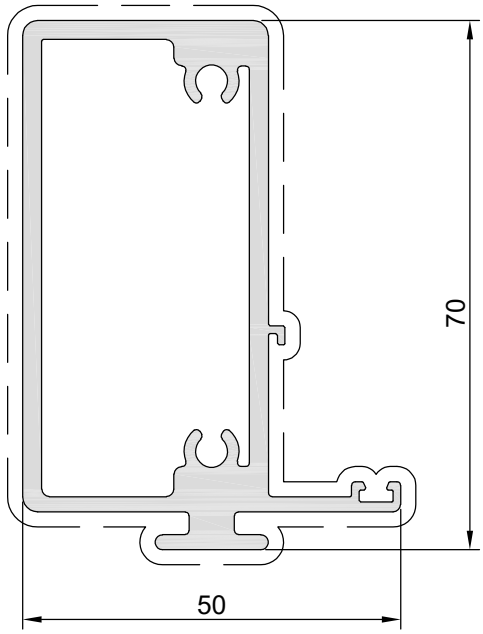
BE1003



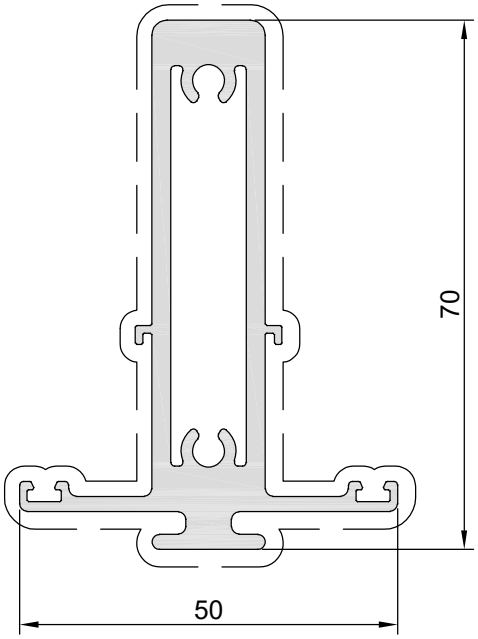
Słupki / poprzeczki
Mullions / transoms

Skala
Scale
1:1

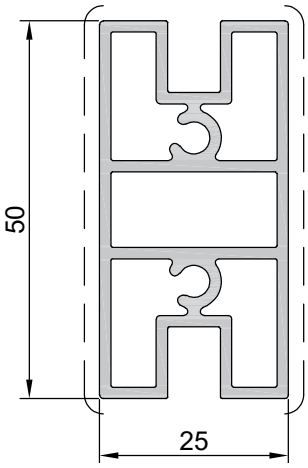
BE1005



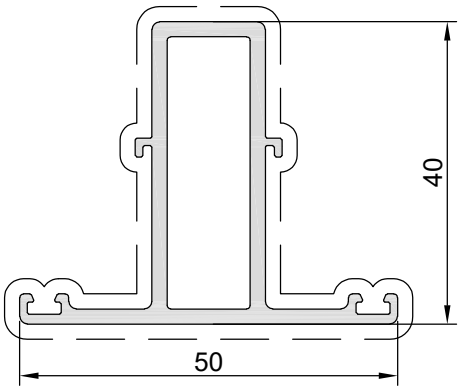
BE1006



BE2008

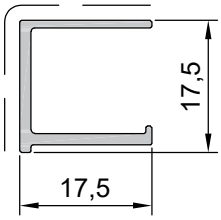


BE1012



Szyny szklenia
Glazing rails

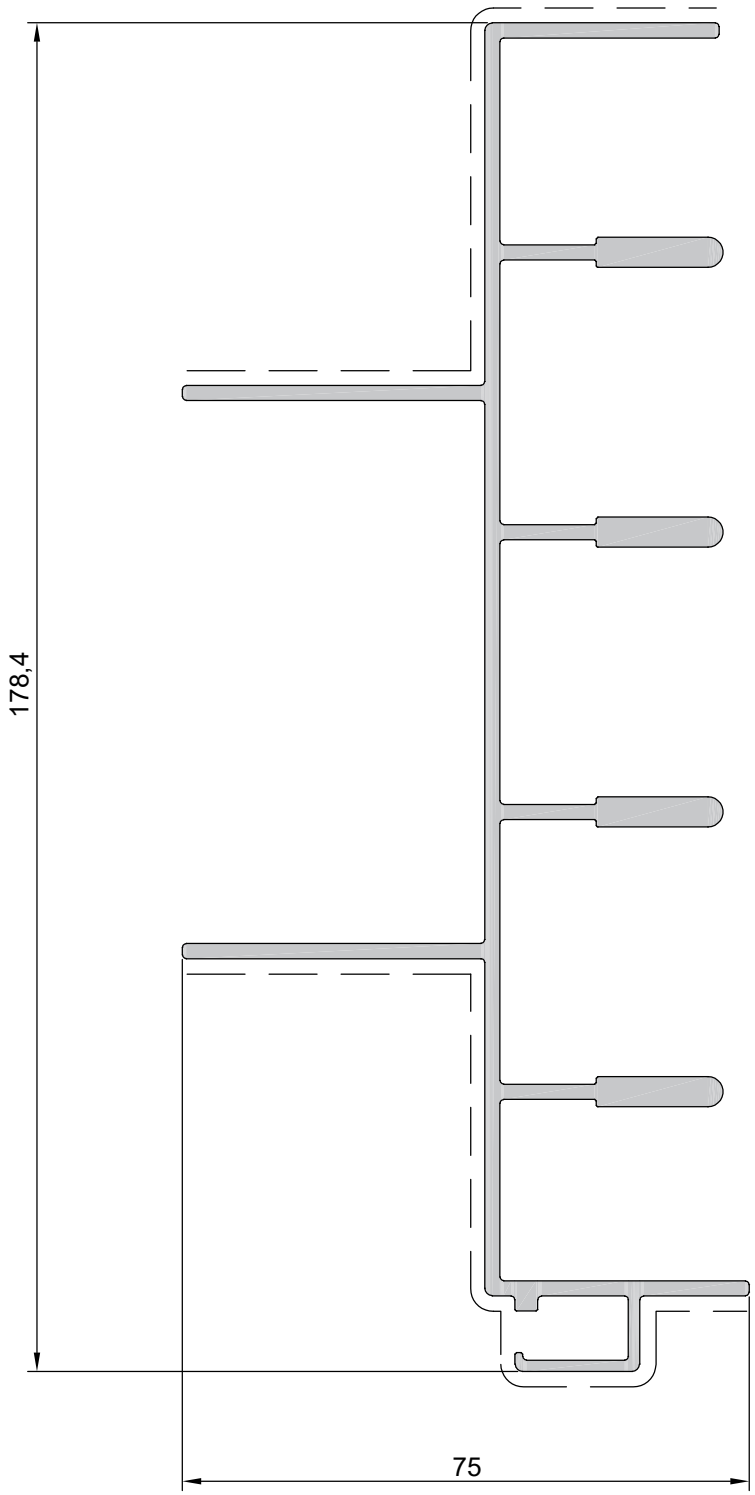
BE1015



Prowadnica górna
Top guide bar

Skala
Scale
1:1

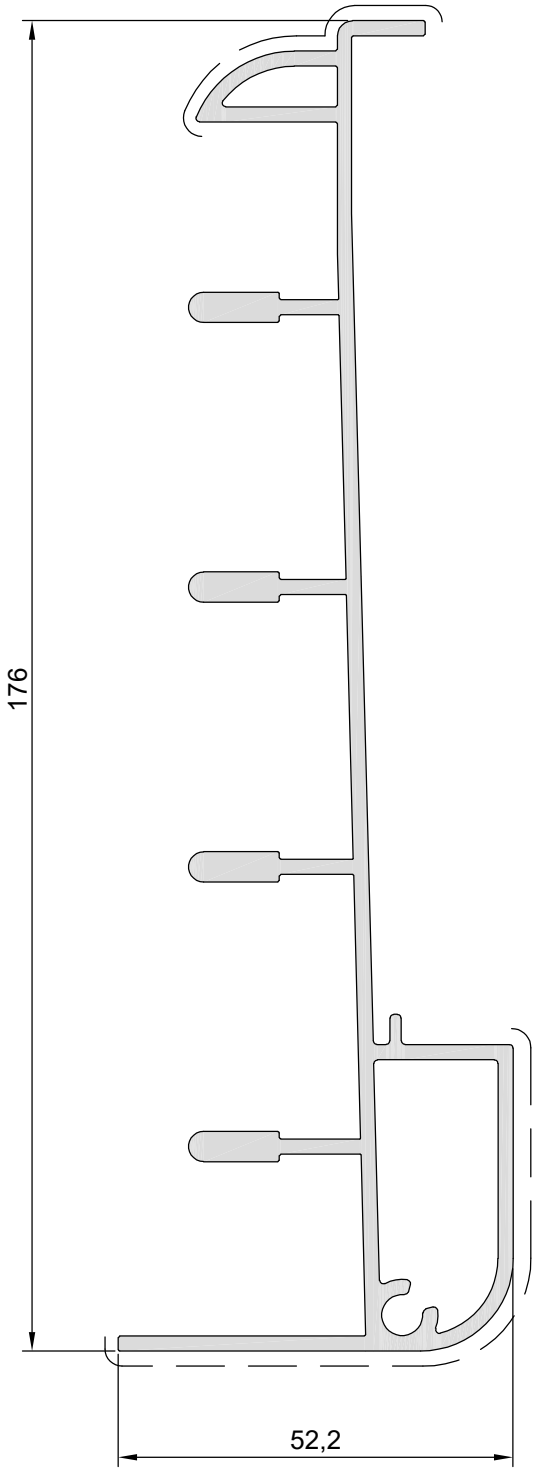
BE1010



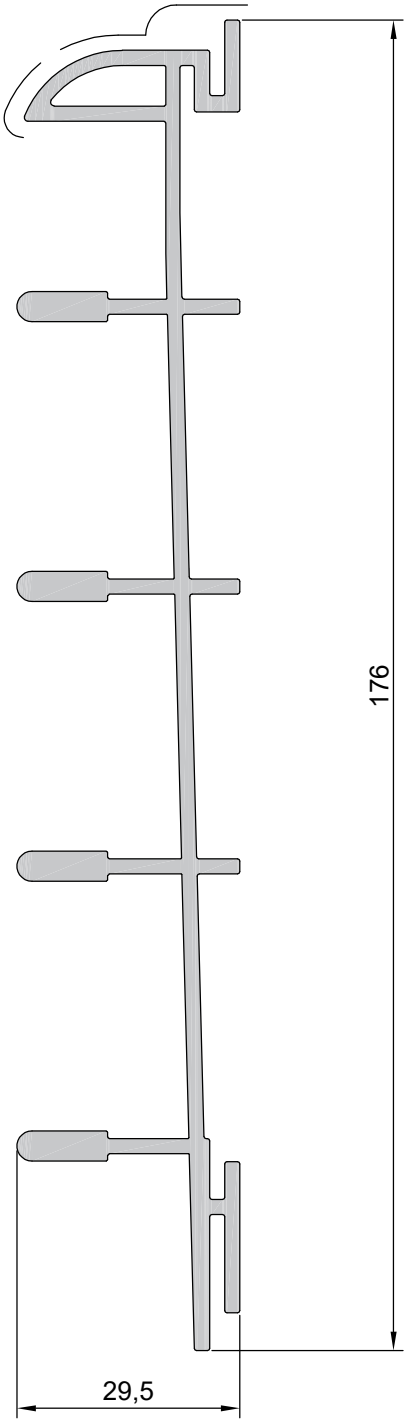
Prowadnice dolne
Bottom guide bar

Skala
Scale
1:1

BE1009



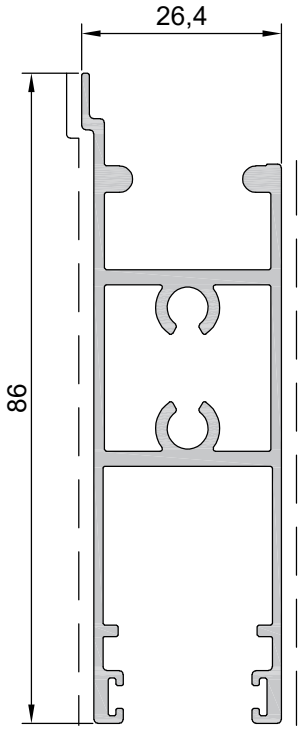
BE1014



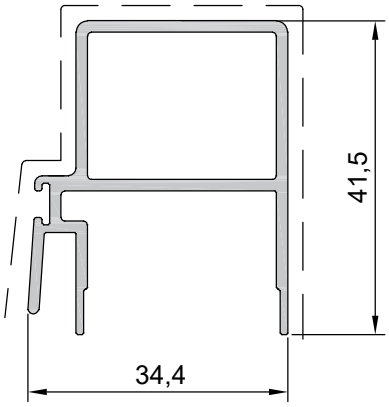
Profile skrzydła zewnętrznego
External sash profiles

Skala
Scale
1:1

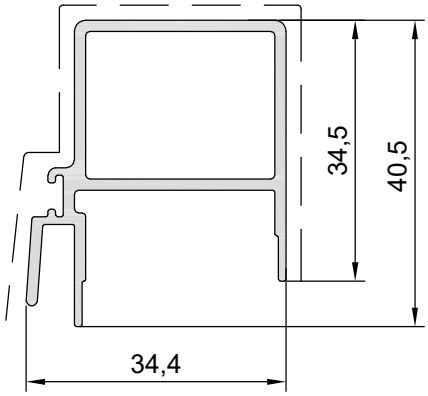
BE2001



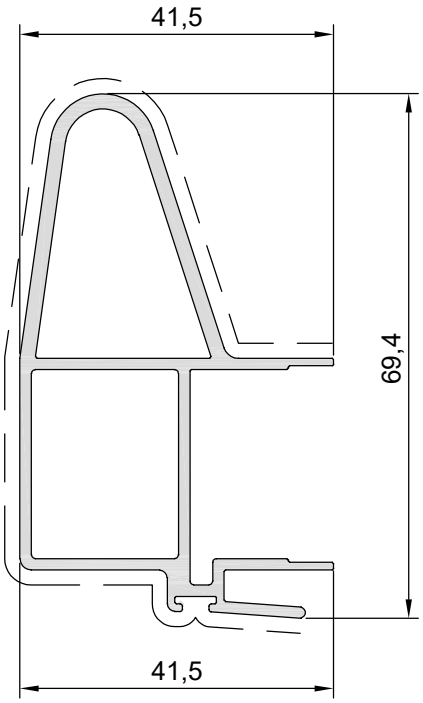
BE2002



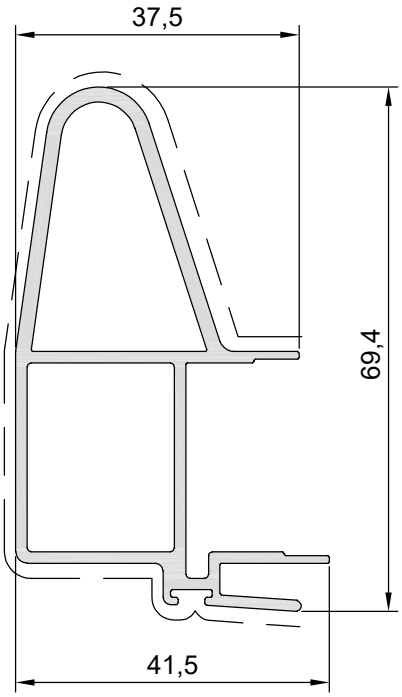
BE2003



BE2004



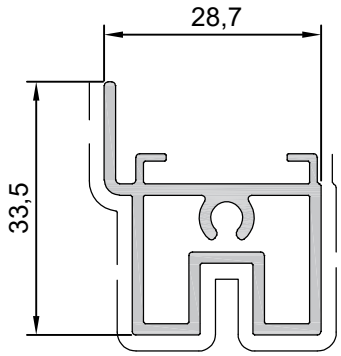
BE2005



Profil skrzydła wewnętrznego
Internal sash profiles

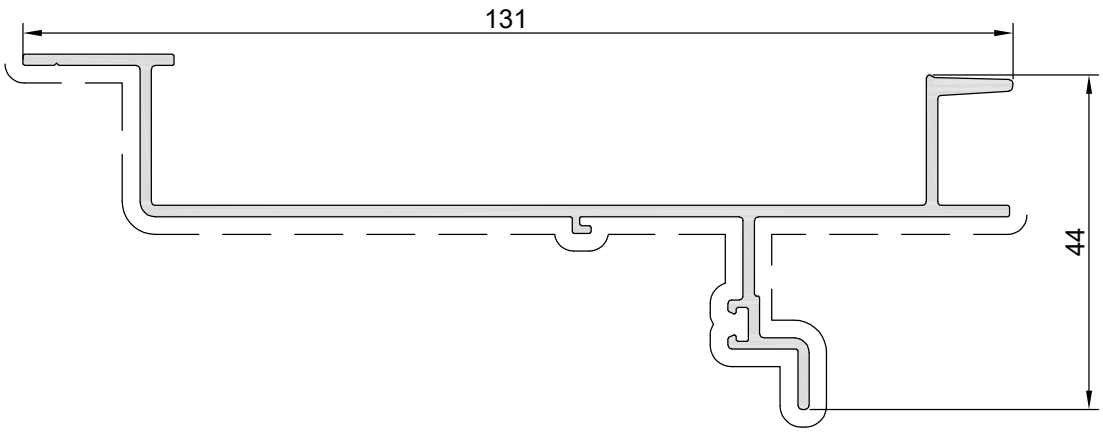
Skala
Scale
1:1

BE2006

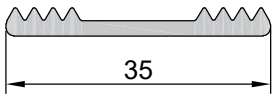


Profile dodatkowe
Additional profiles

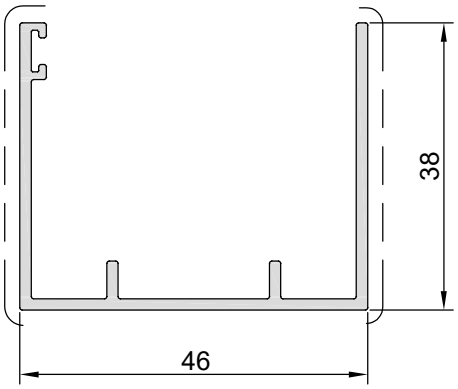
BE1016



BE1013



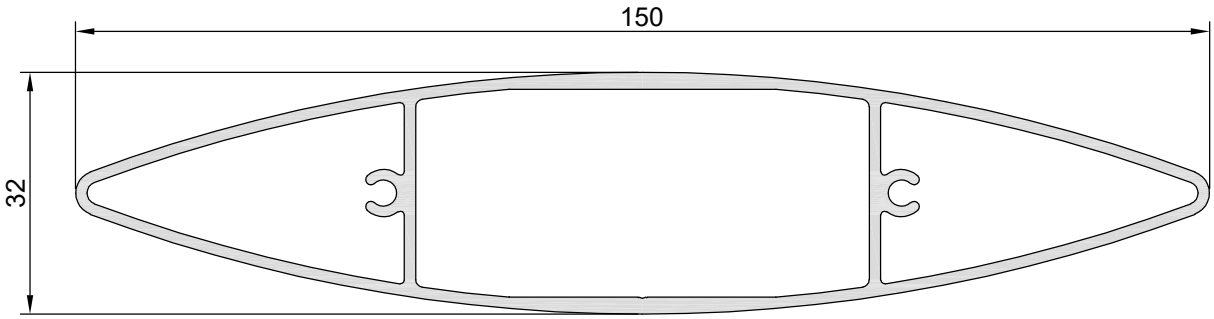
BE2007



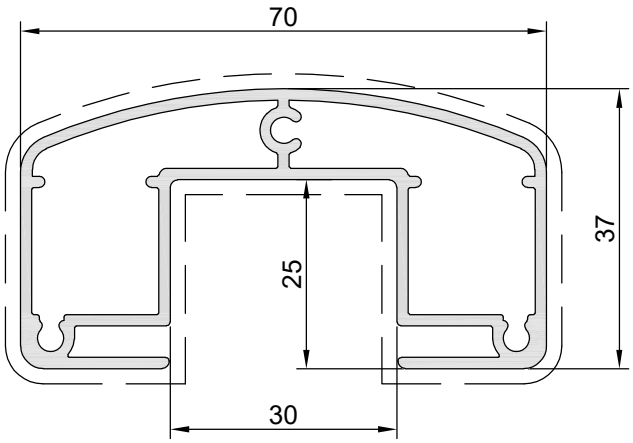
Profile dodatkowe
Additional profiles

Skala
Scale
1:1

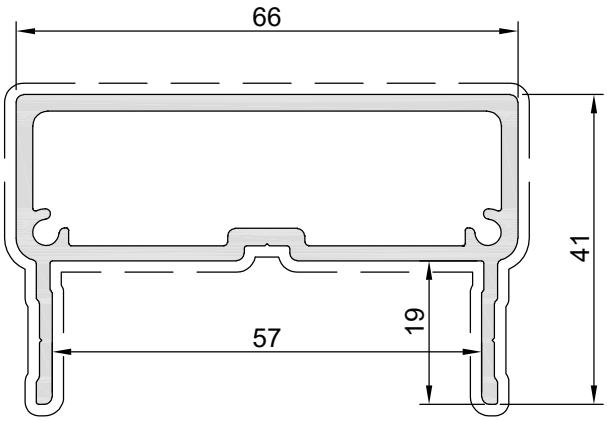
ME.150



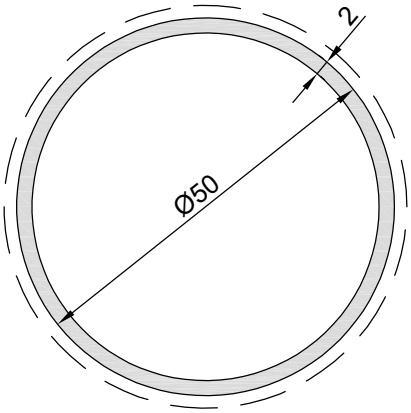
13041



13068



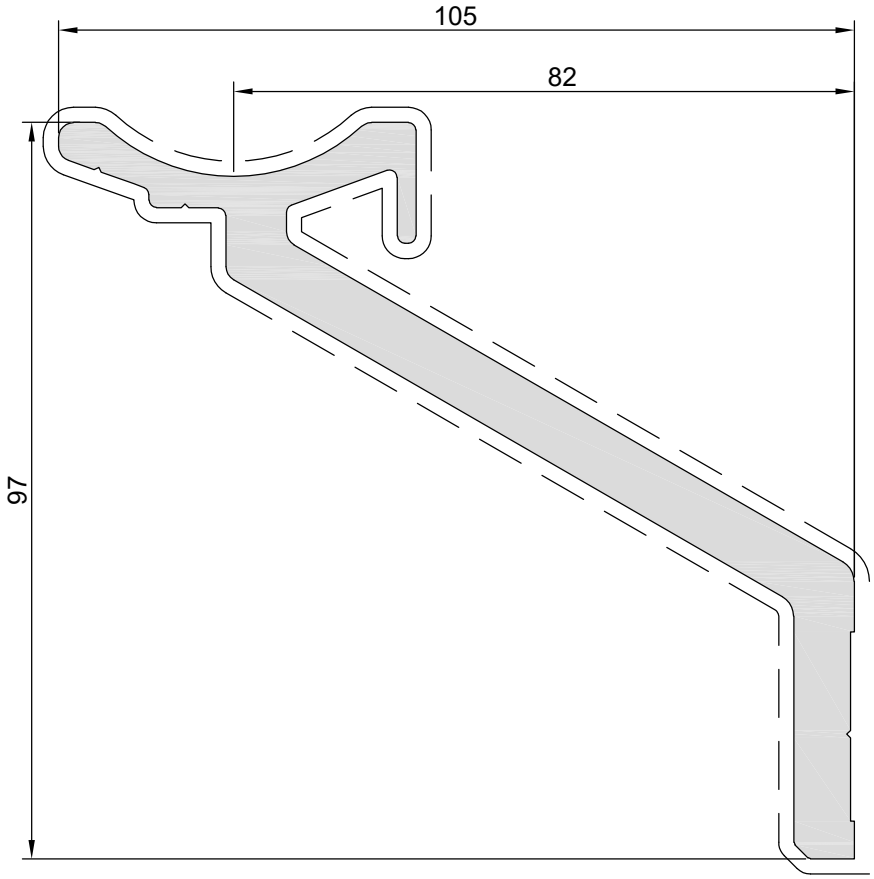
45037



Profile dodatkowe
Additional profiles

Skala
Scale
1:1

13077



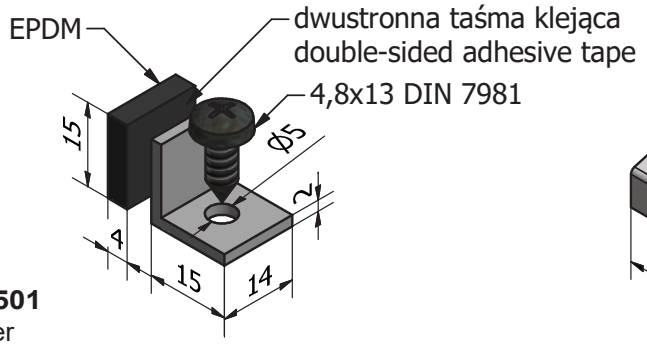
Notatki
Notes

MORAD®
SYSTEMY ALUMINIOWE

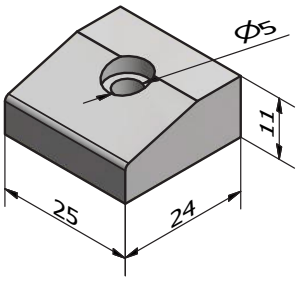
System BE-25

IV
Akcesoria
Accessories

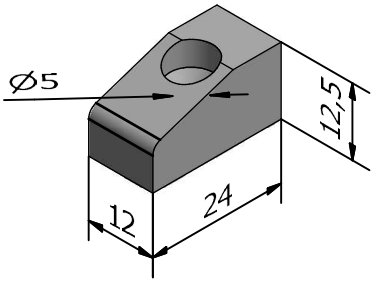
Akcesoria
Accessories



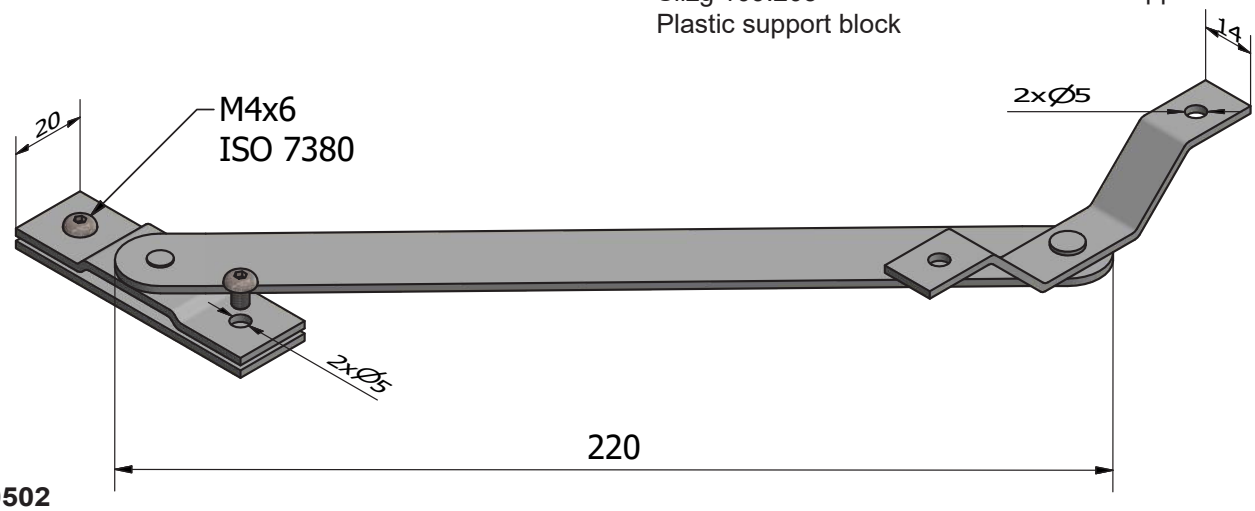
BE0501
Stoper
Rubber stopper



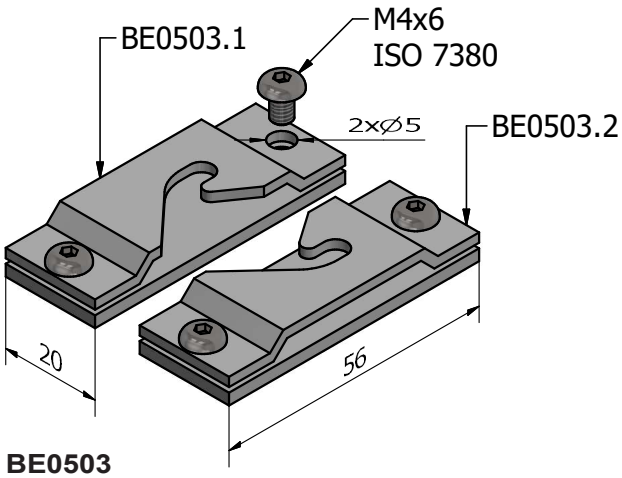
BE0511
Ślizg 109.203
Plastic support block



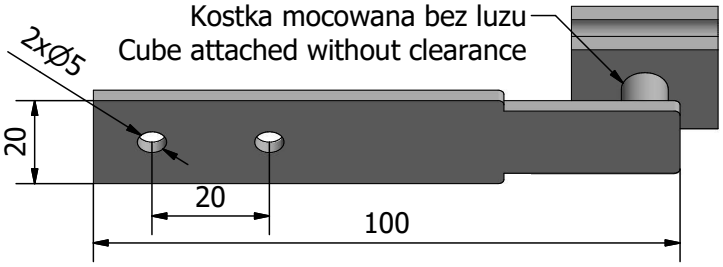
BE0520
Ślizg
Plastic support block



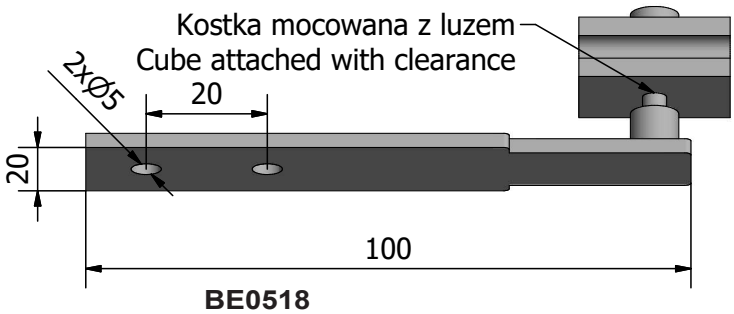
BE0502
Ramię prowadzące
Guide rail door



BE0503
Komplet odbiorników zamka
Set of receivers to lock
BE0503.1
Prawy odbiornik zamka
Right receivers to lock
BE0503.2
Lewy odbiornik zamka
Left receivers to lock

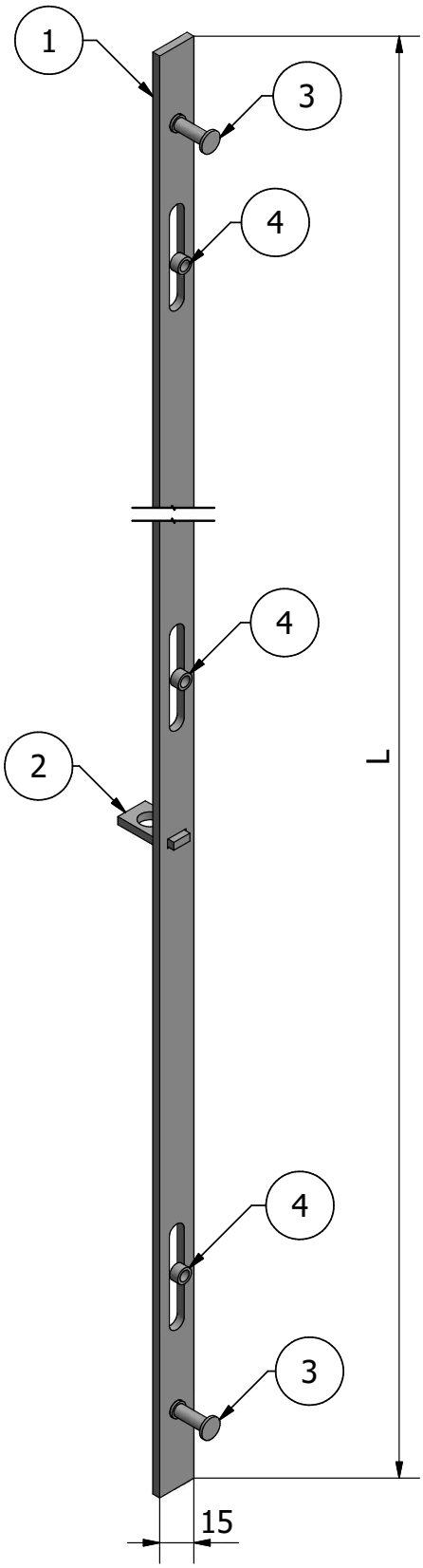


BE0517
Kostka prowadząca dolna
Bottom sliding cube

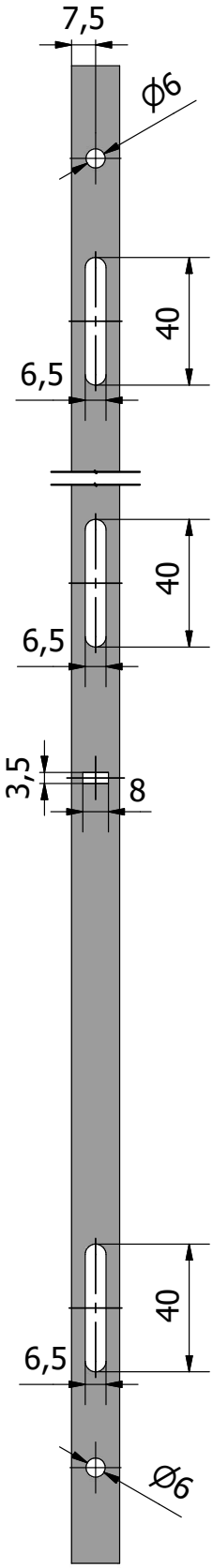


BE0518
Kostka prowadząca górna
Top sliding cube

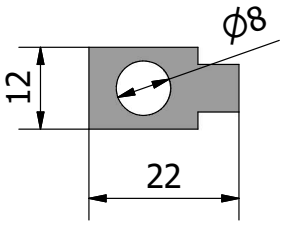
Akcesoria
Accessories



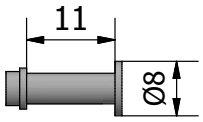
① BE504.1
Listwa
Bar



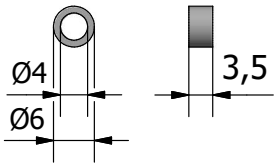
② BE504.2Ø
Blaszka
Metal strip



③ BE0504.3
Bolec
Pin



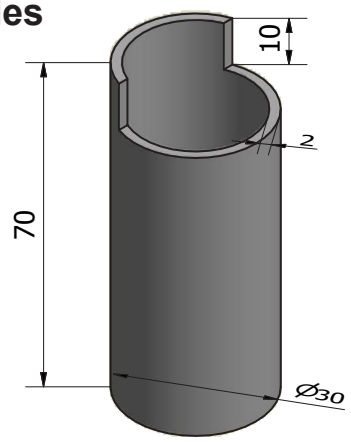
④ BE0504.4
Tuleja
Bushing



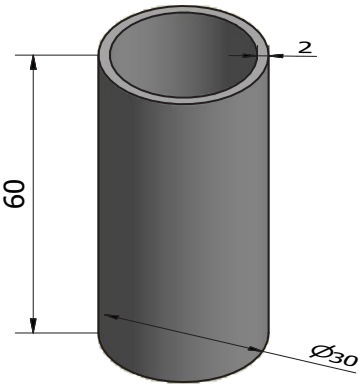
L = Wysokość skrzydła - 340 mm
L = Sash height - 340 mm

BE0504
Zasuwnica
Steel rail to handle

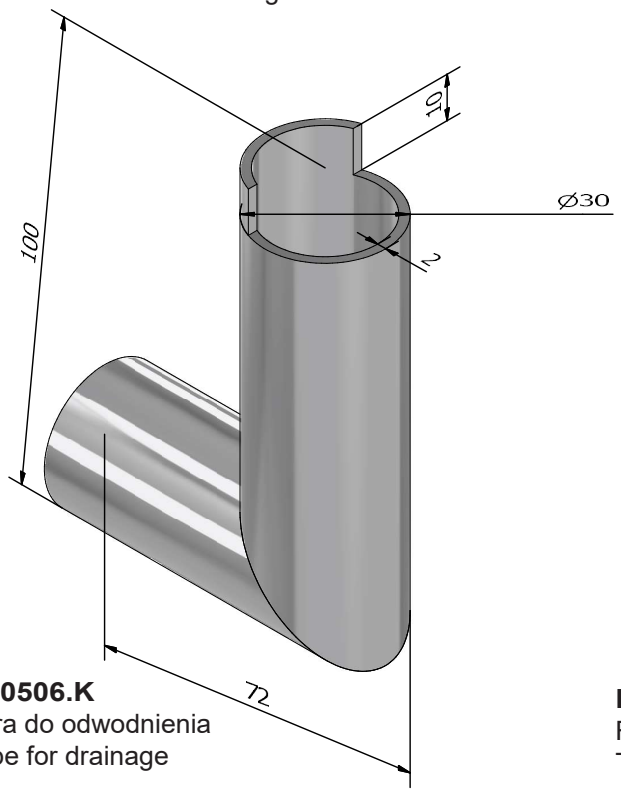
Akcesoria
Accessories



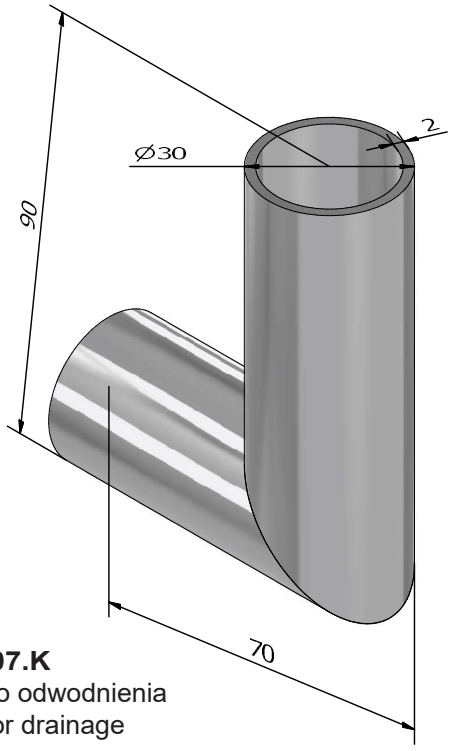
BE0506
Rura do odwodnienia
Tube for drainage



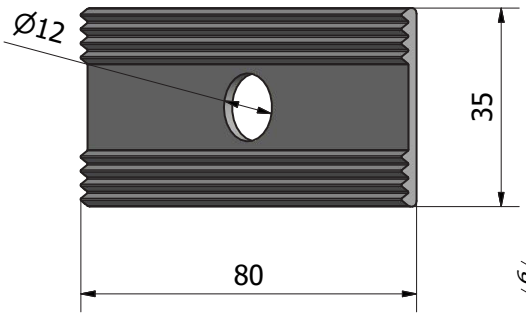
BE0507
Rura do odwodnienia
Tube for drainage



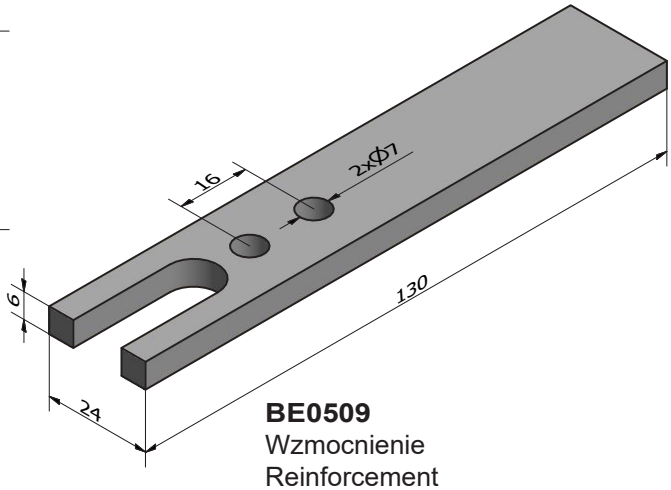
BE0506.K
Rura do odwodnienia
Tube for drainage



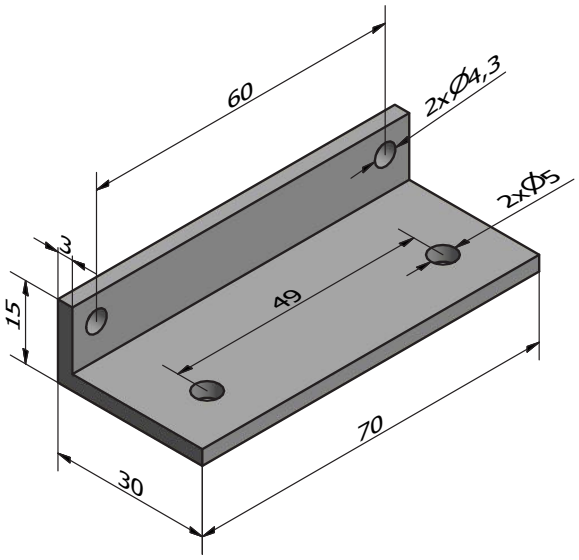
BE0507.K
Rura do odwodnienia
Tube for drainage



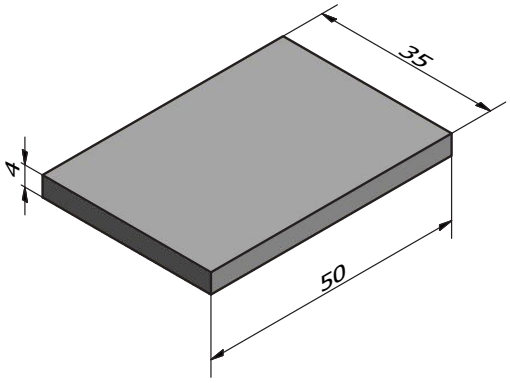
BE0508
Podkładka zębata
Toothed washer



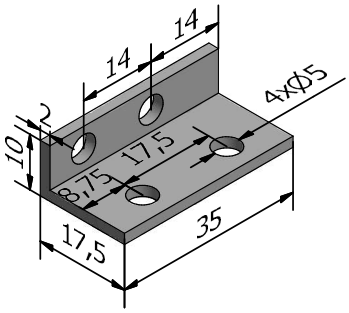
BE0509
Wzmocnienie
Reinforcement



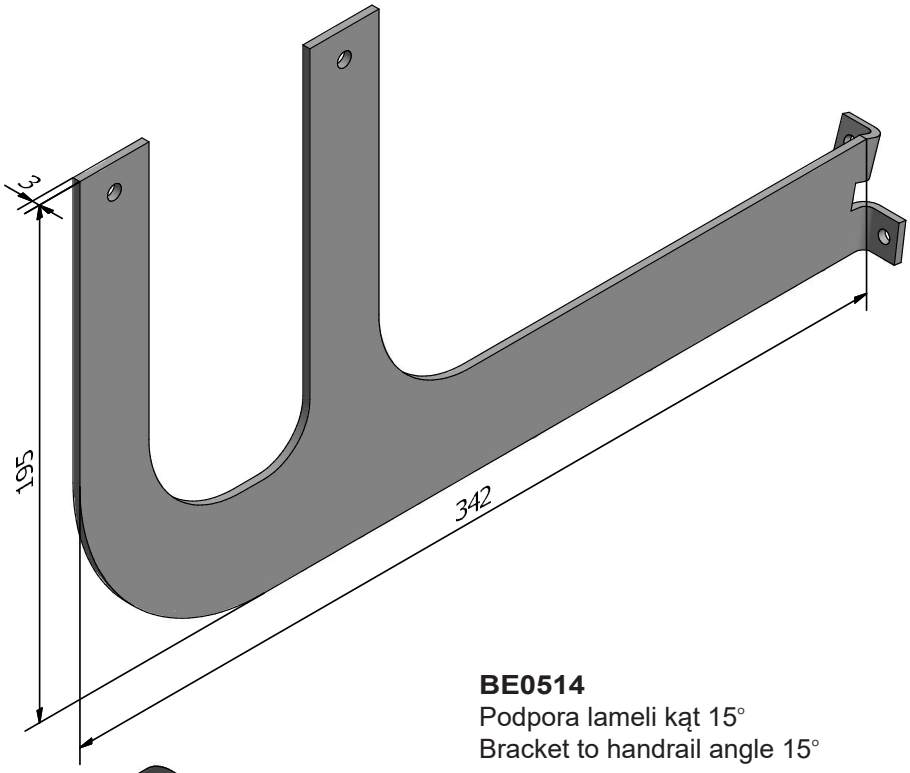
BE0510
Kątownik 30x15x3
Bracket 30x15x3



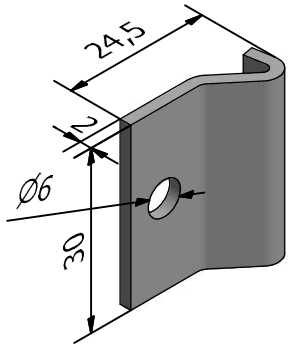
BE0512
Płytka mocująca poręcz 13041 do wspornika BE0513
Plate fixing handrail 13041 to support BE0513



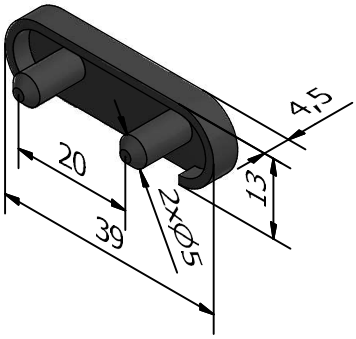
BE0515
Kątownik do montażu poprzeczki
Bracketfor mounting the crossbar



BE0514
Podpora lameli kąt 15°
Bracket to handrail angle 15°

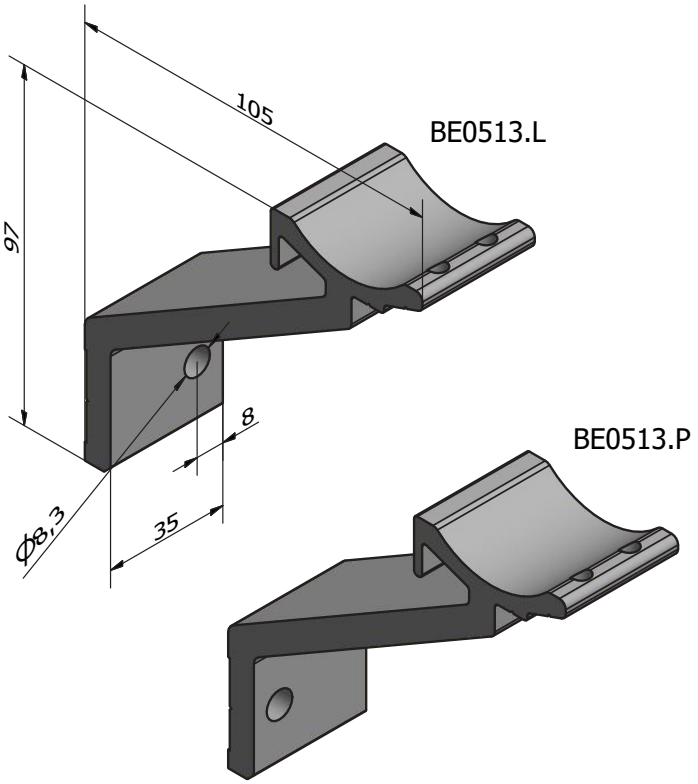


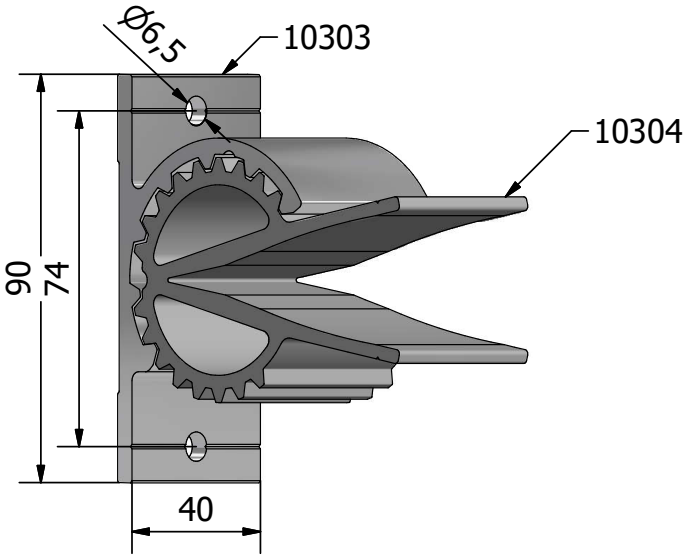
BE0514.1
Blaszka do podpory lameli
Steel bracket handrail



ZOW
Zaślepka otworu wodnego
Drain plug

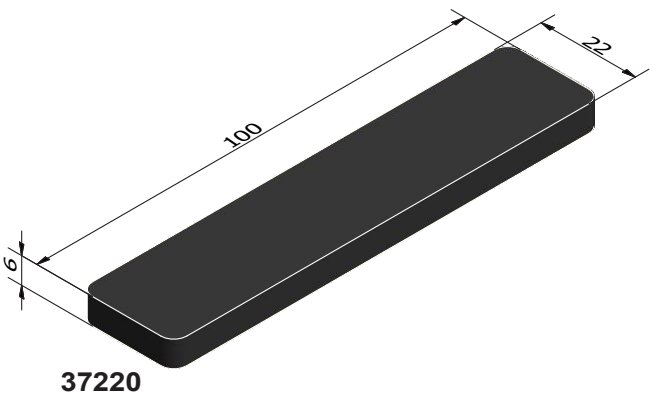
Akcesoria
Accessories



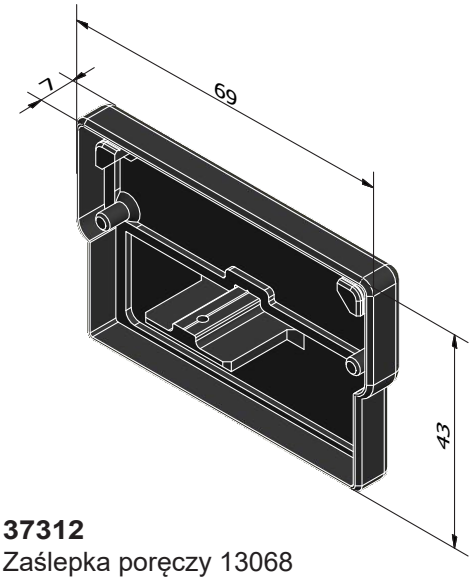


10303, 10304
Klips do montażu lameli ME.150
Clip for mounting lamella ME.150

BE0513
Komplet wsporników poręczy
Set of handrail supports

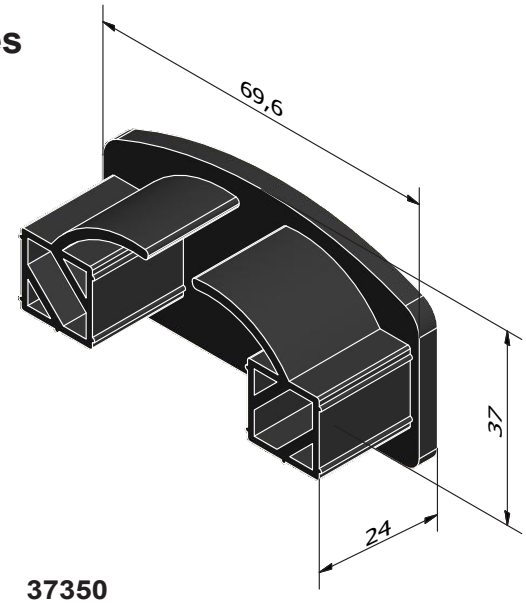


37220
Podkładka szklarska
Glazing support



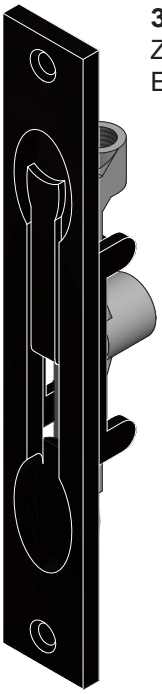
37312
Zaślepka poręczy 13068
End cap for handrail 13068

Akcesoria
Accessories

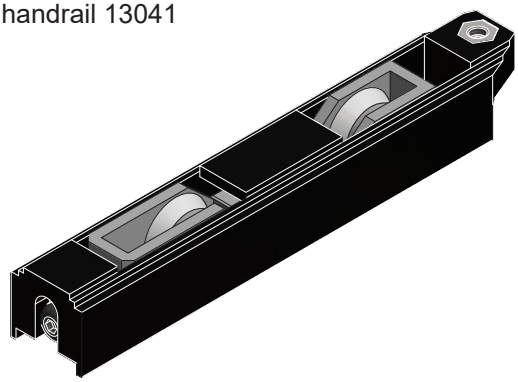


37350
Zaślepka poręczy 13041
End cap for handrail 13041

37253
Zaślepka poręczy 45037
End cap for handrail 45037

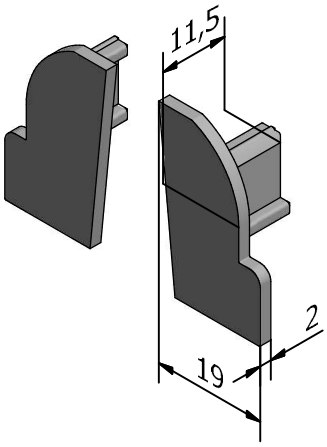


4113.2
Uchwyt uchylny
Tilting handle



A6667*
Wózek
Roller with wheels

GN 822.6-6-M10-C
Trzpień ustalający
Locking bolt

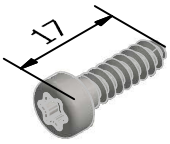


BE0519
Komplet zaślpek szyny BE1009
BE1009 end cap

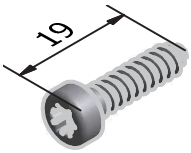
* Możliwość regulacji wysokości za pomocą klucza imbusowego
* Height adjustable with a Allen key

Wkręty
Screws

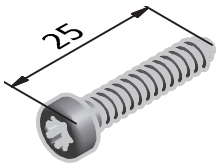
33569
4,8x13
TORX DIN 7981



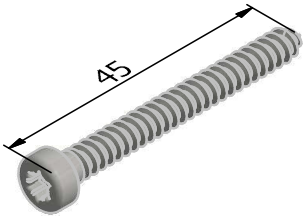
33570
4,8x17
TORX DIN 7981



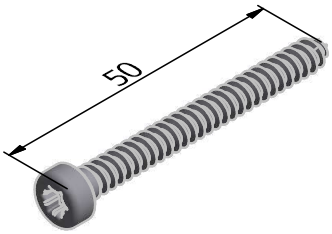
33571
4,8x19
TORX DIN 7981



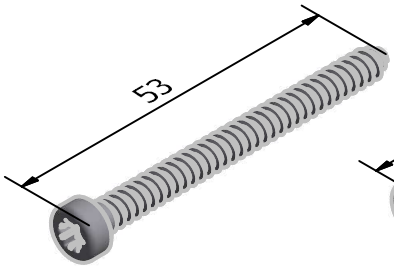
33572
4,8x25
TORX DIN 7981



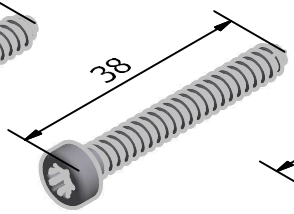
33573
4,8x45
TORX DIN 7981



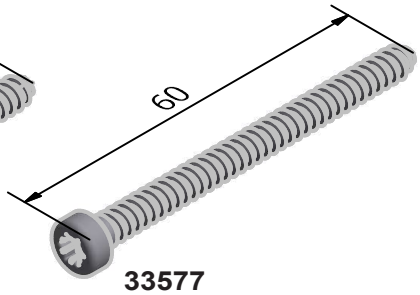
33574
4,8x50
TORX DIN 7981



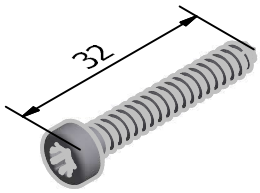
33575
4,8x53
TORX DIN 7981



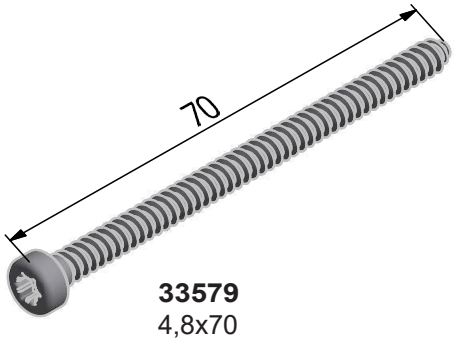
33576
4,8x38
TORX DIN 7981



33577
4,8x60
TORX DIN 7981



33578
4,8x32
TORX DIN 7981



33579
4,8x70
TORX DIN 7981

Uszczelki
Gaskets

32178
Uszczelka zewnętrzna
Outside gasket

32194
Uszczelka wewnętrzna
Inside gasket
3/4 mm

32197
Uszczelka wewnętrzna
Inside gasket
7/8 mm

32603
Uszczelka typu U
U- type gasket

32101
Uszczelka szczotkowa
Brush gasket
8/9 mm

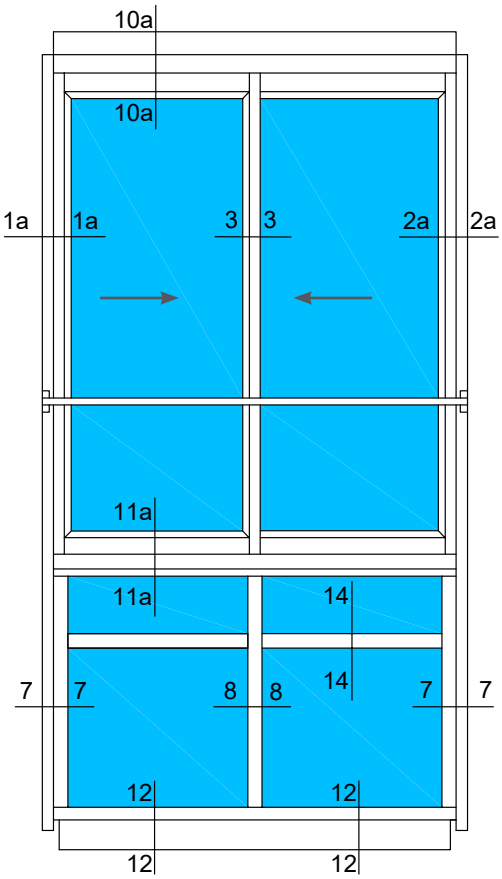
18105
Uszczelka szczotkowa
Brush gasket
11 mm

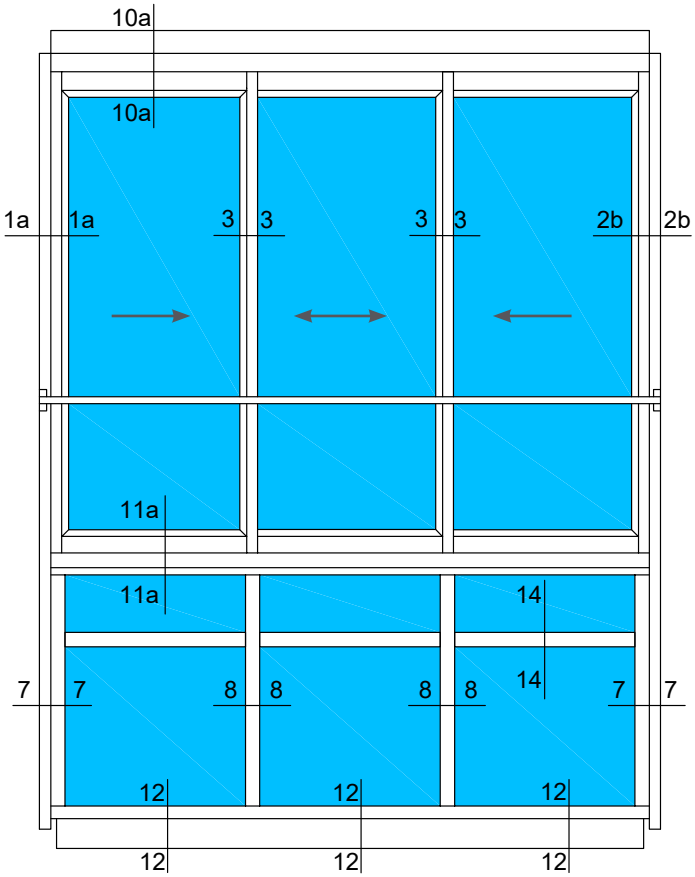
MORAD®
SYSTEMY ALUMINIOWE

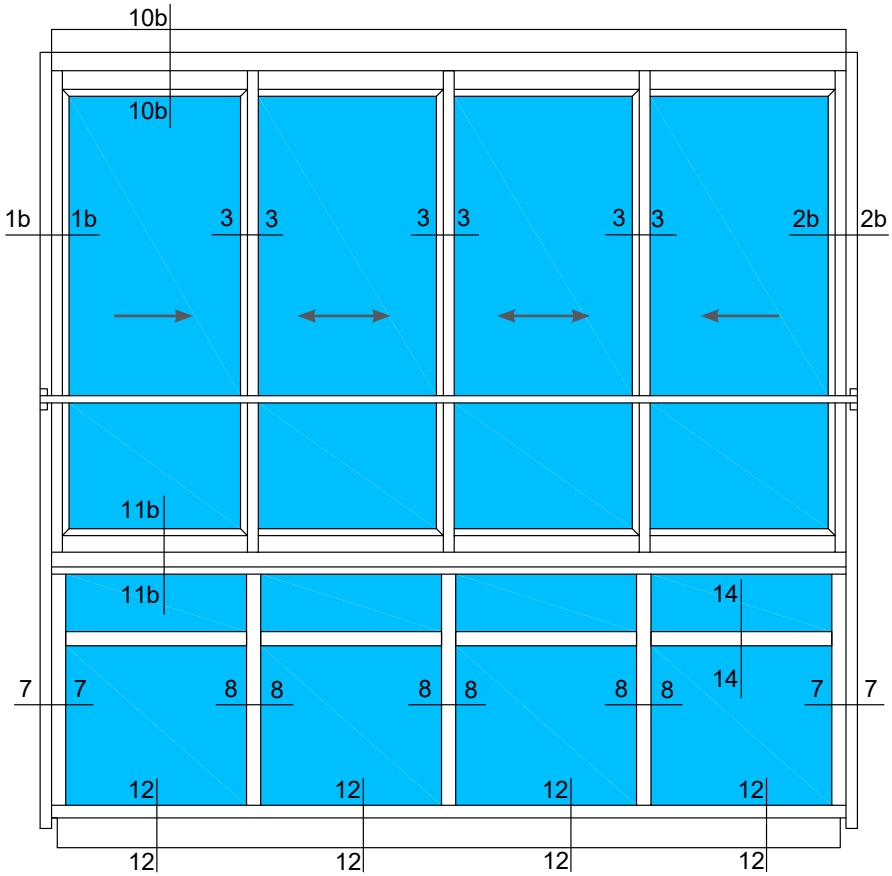
System BE-25

V
Przekroje konstrukcji
Constructions sections

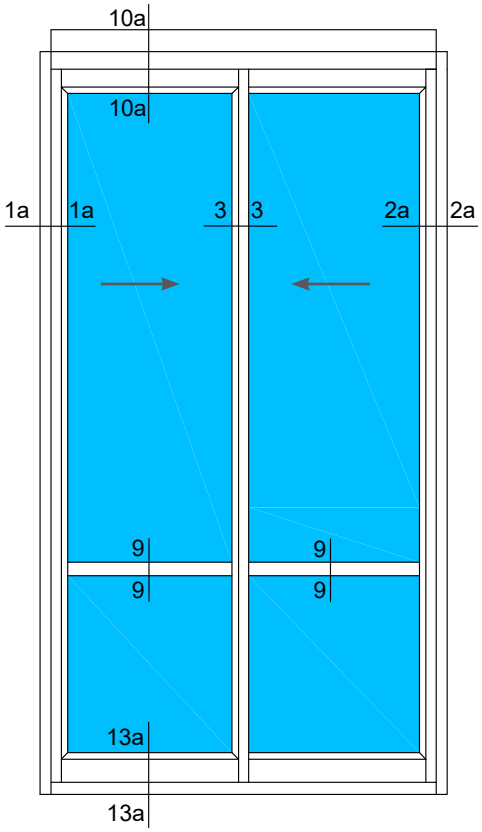
Przykładowe konstrukcje zabudowy balkonów
Example constructions for balconies

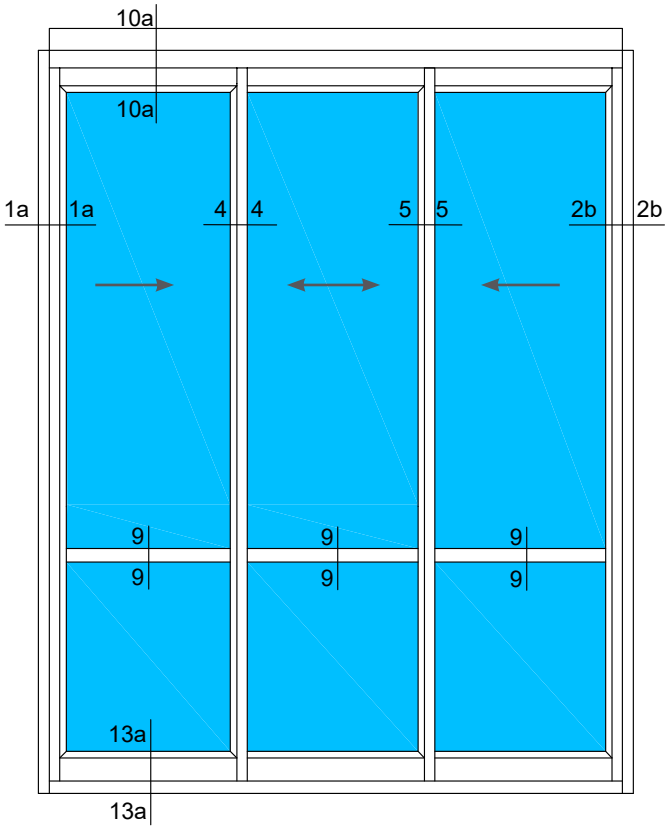


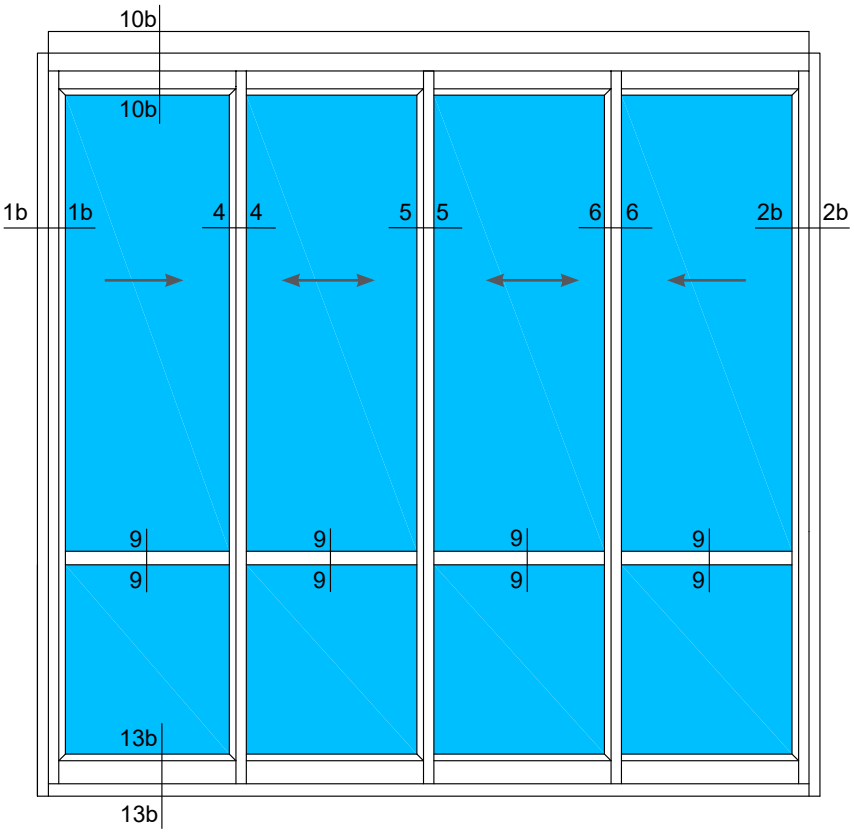




Przykładowe konstrukcje zabudowy tarasów
Example constructions for terraces

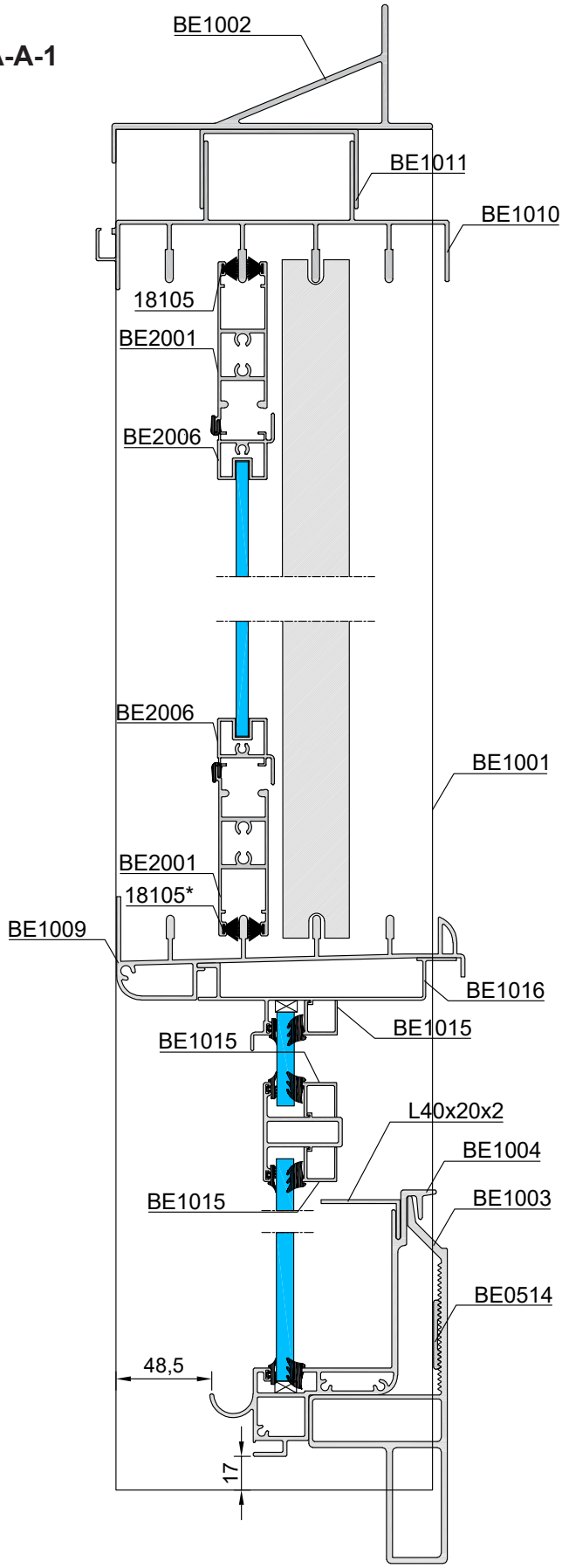


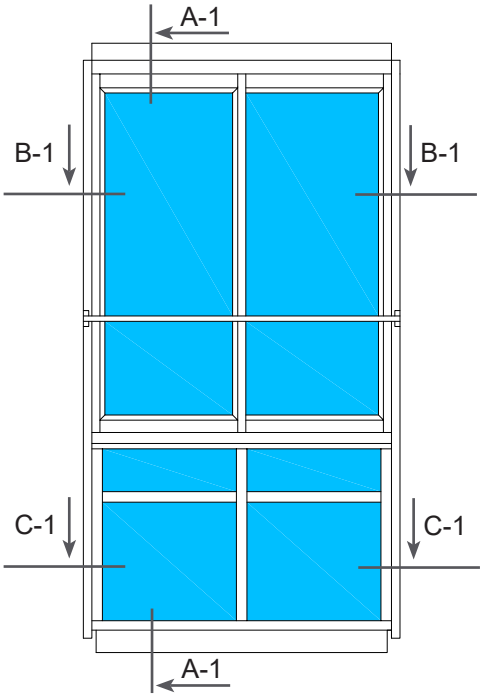




Przekrój pionowy 2-skrzydłowej zabudowy balkonu
Vertical section of a 2-sash construction for balcony

A-A-1

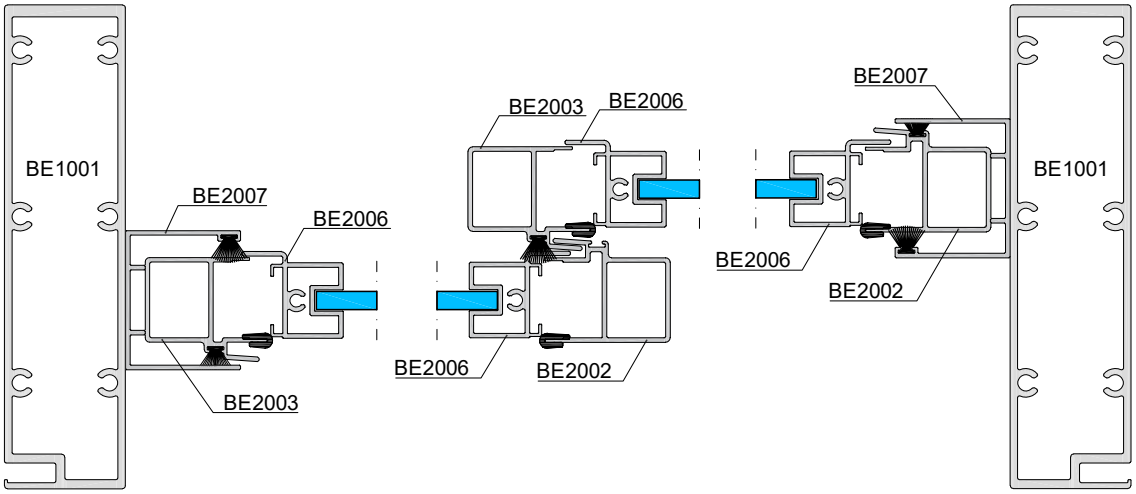




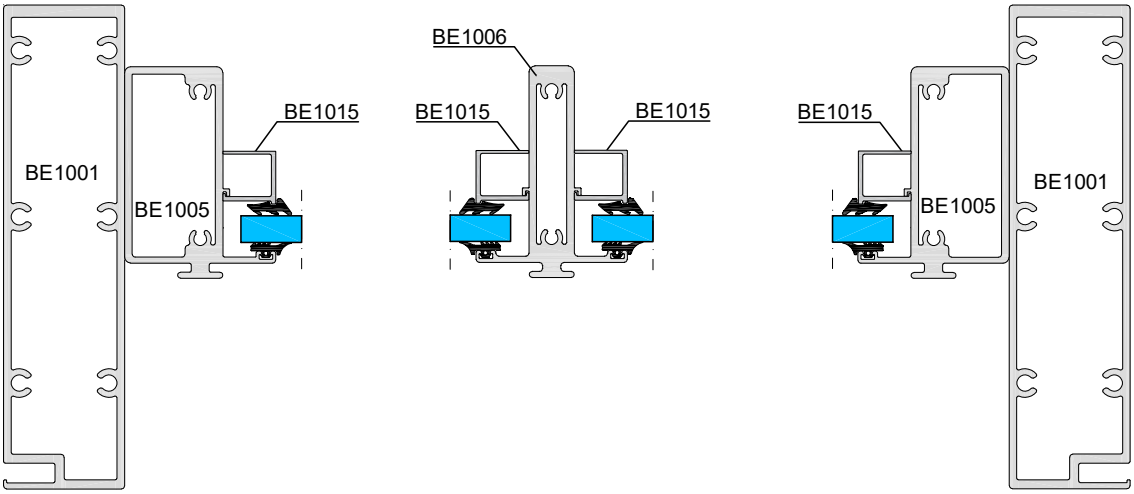
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Przekrój poziomy 2-skrzydłowej zabudowy balkonu
Horizontal section of a 2-sash construction for balcony

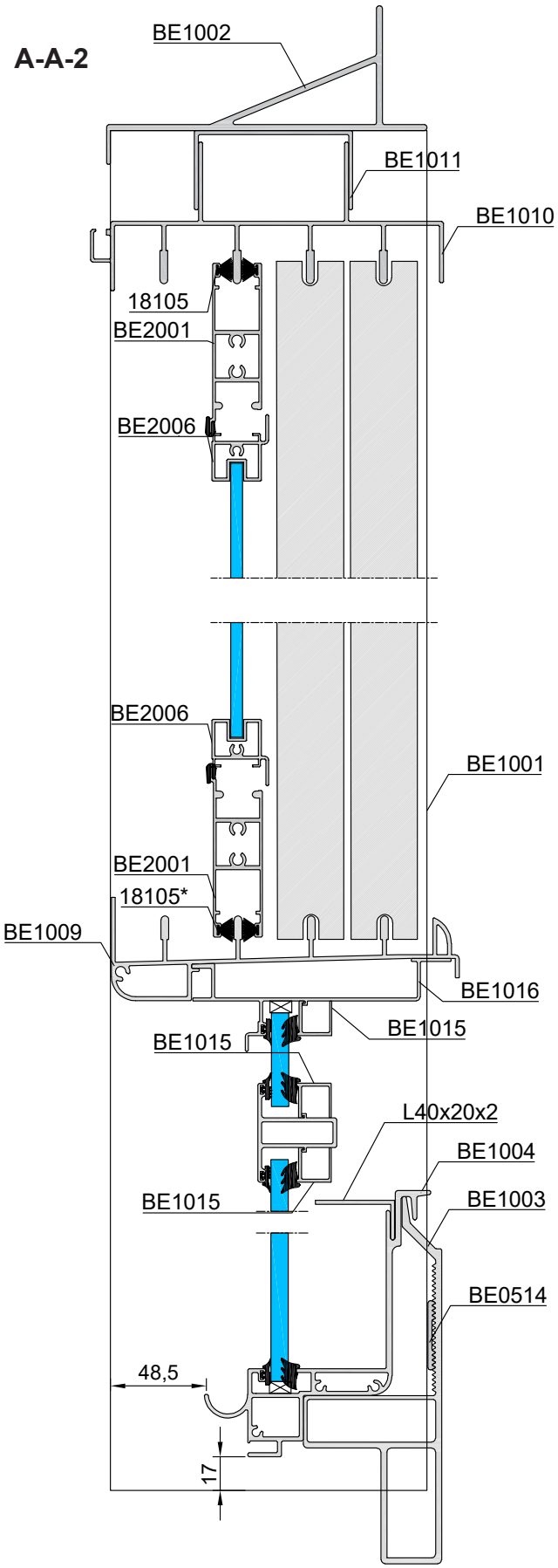
B-B-1

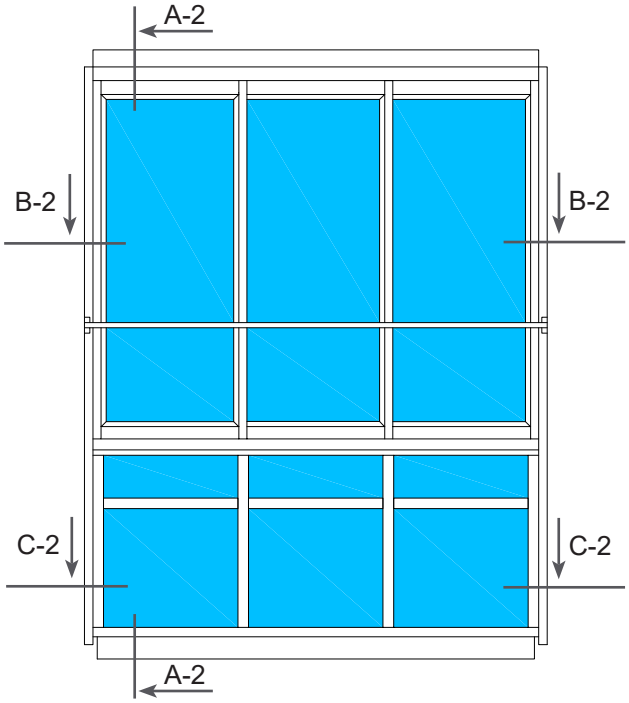


C-C-1



Przekrój pionowy 3-skrzydłowej zabudowy balkonu
Vertical section of a 3-sash construction for balcony

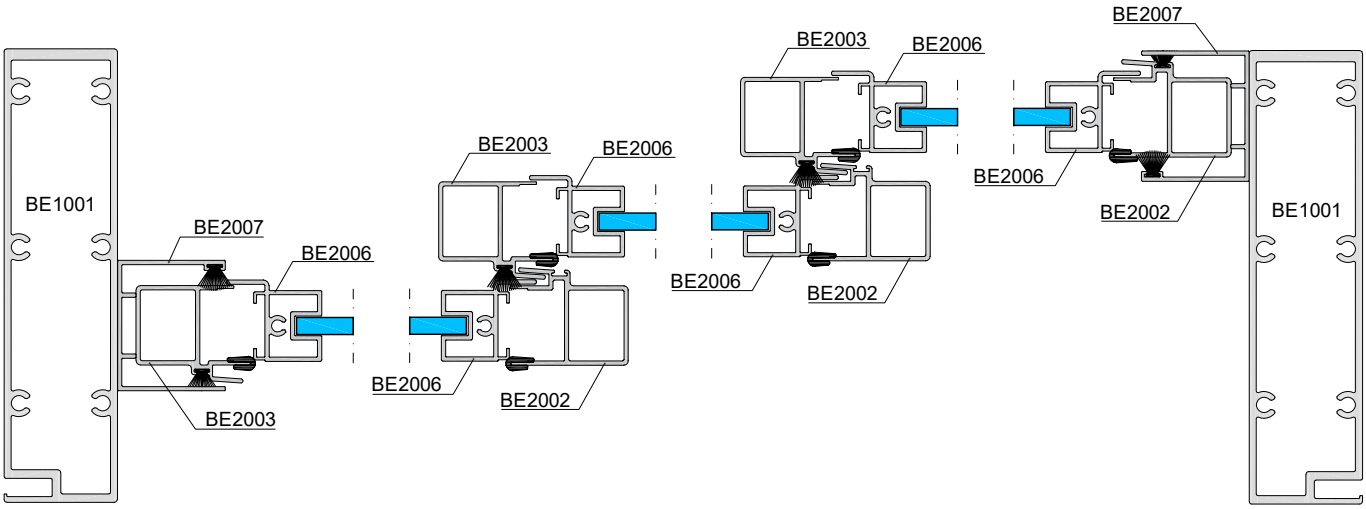




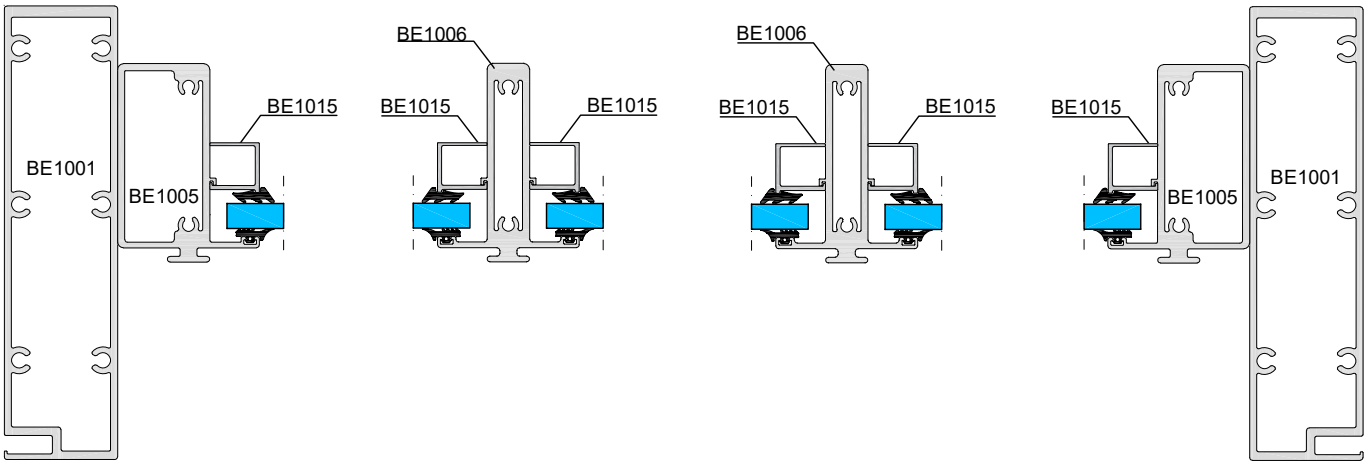
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Przekrój poziomy 3-skrzydłowej zabudowy balkonu
Horizontal section of a 3-sash construction for balcony

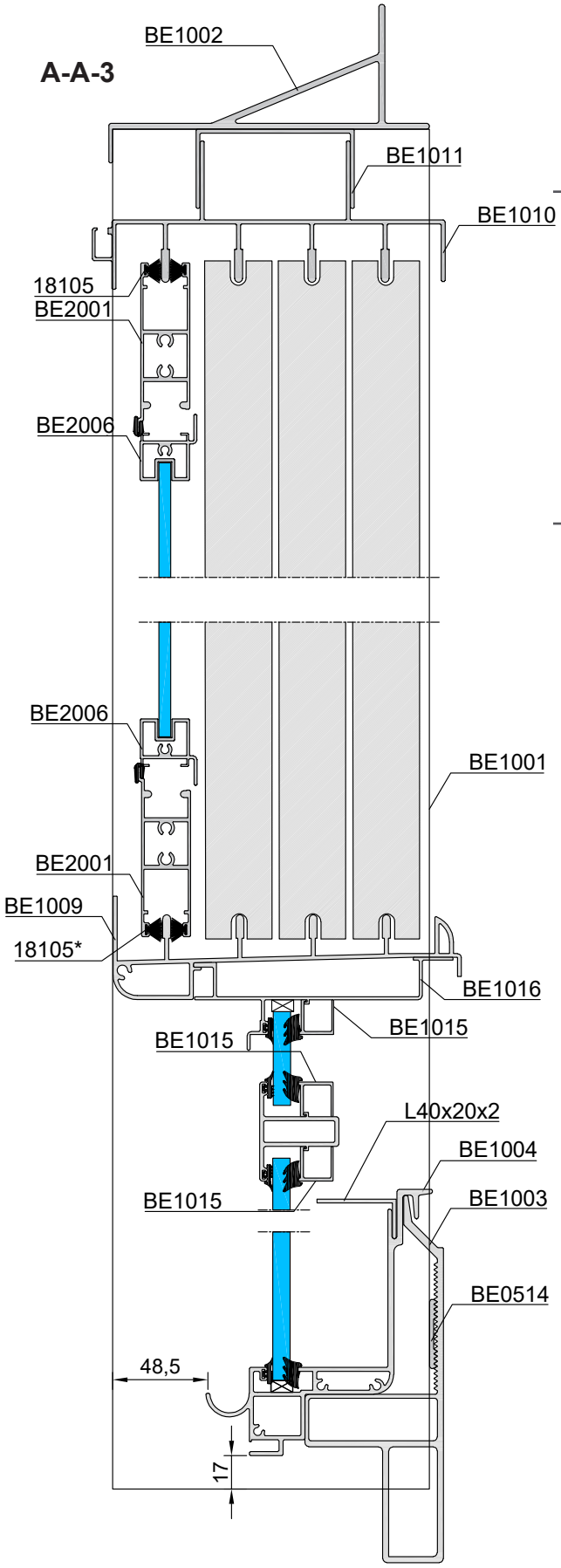
B-B-2

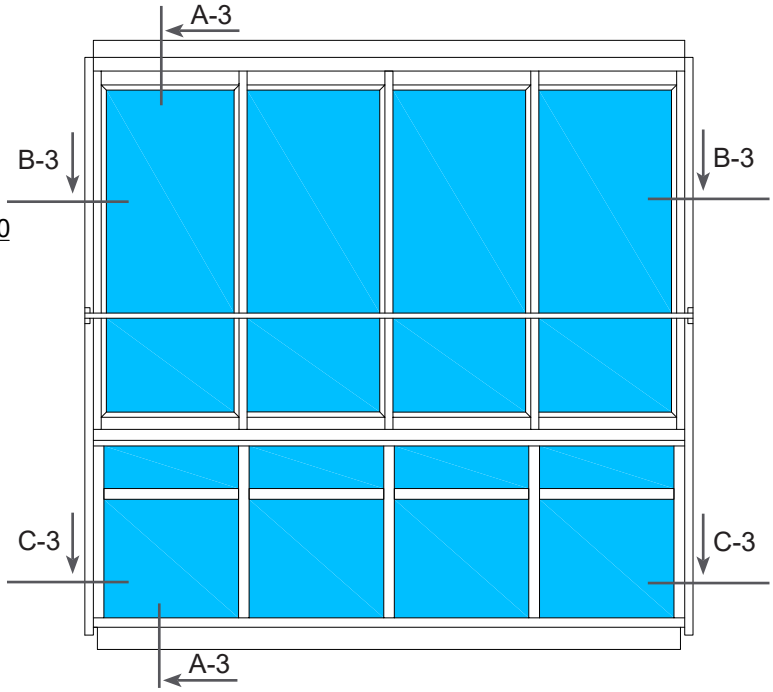


C-C-2



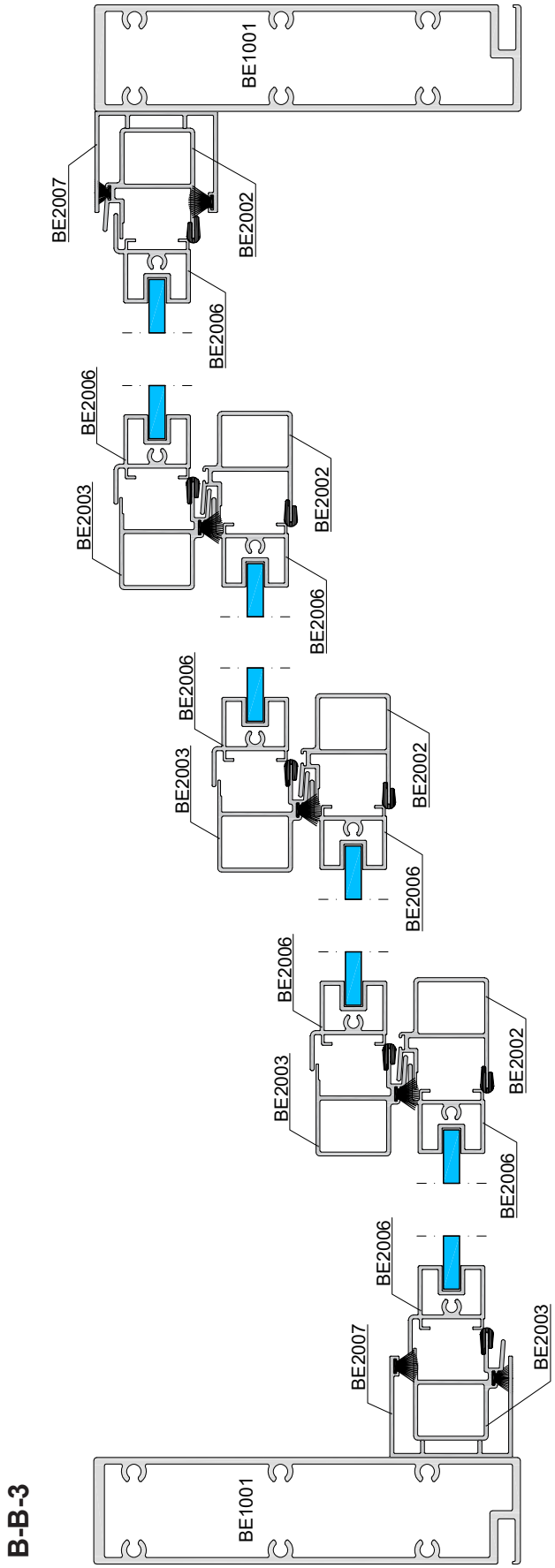
Przekrój pionowy 4-skrzydłowej zabudowy balkonu
Vertical section of a 4-sash construction for balcony

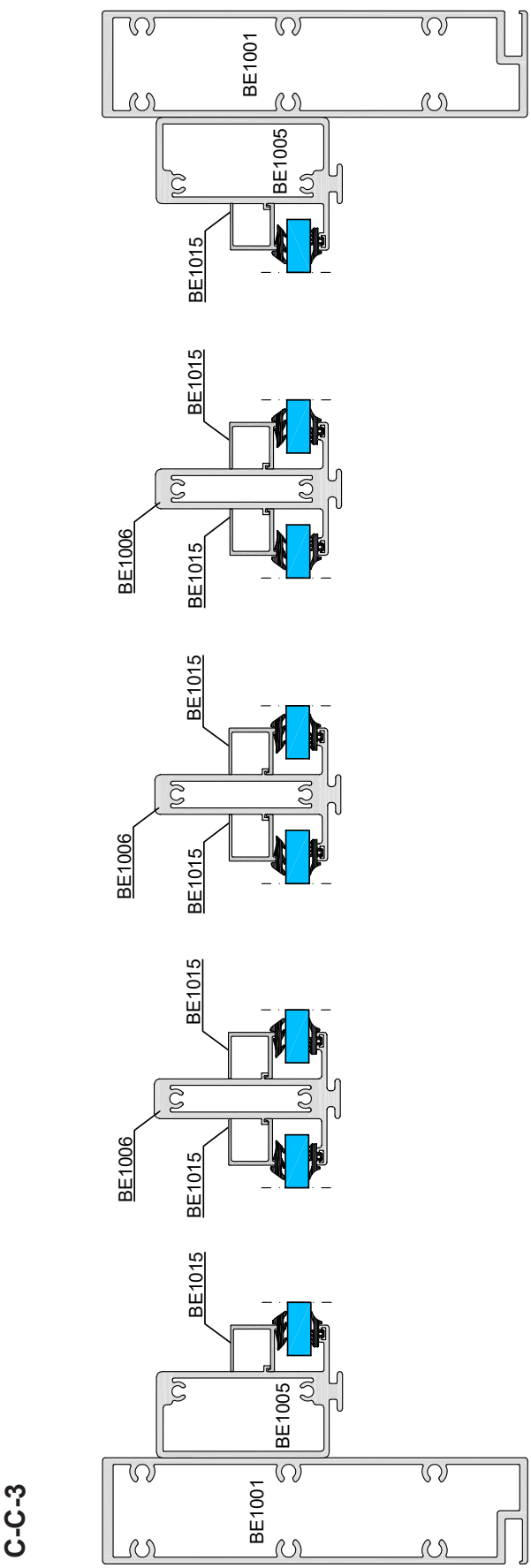




* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

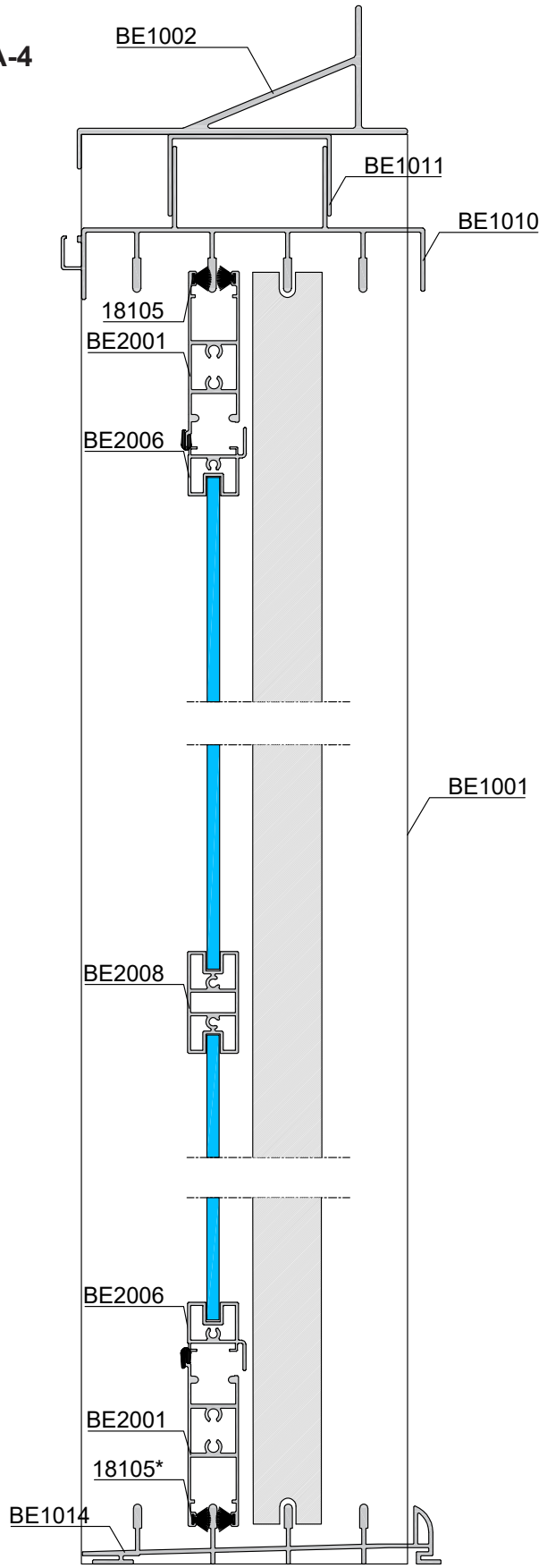
Przekrój poziomy 4-skrzydłowej zabudowy balkonu
Horizontal section of a 4-sash construction for balcony

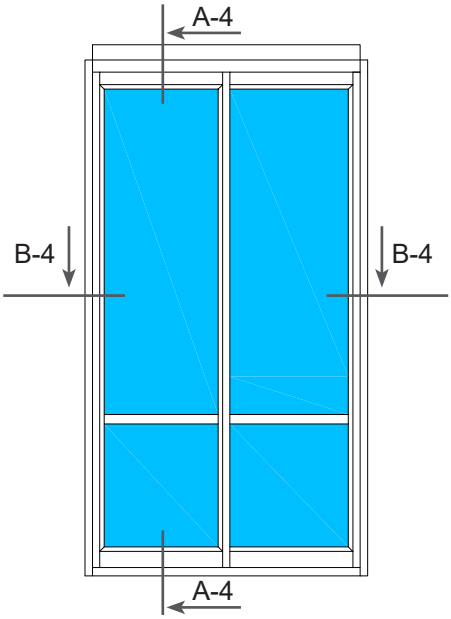




Przekrój pionowy 2-skrzydłowej zabudowy tarasu
Vertical section of a 2-sash construction for terrace

A-A-4

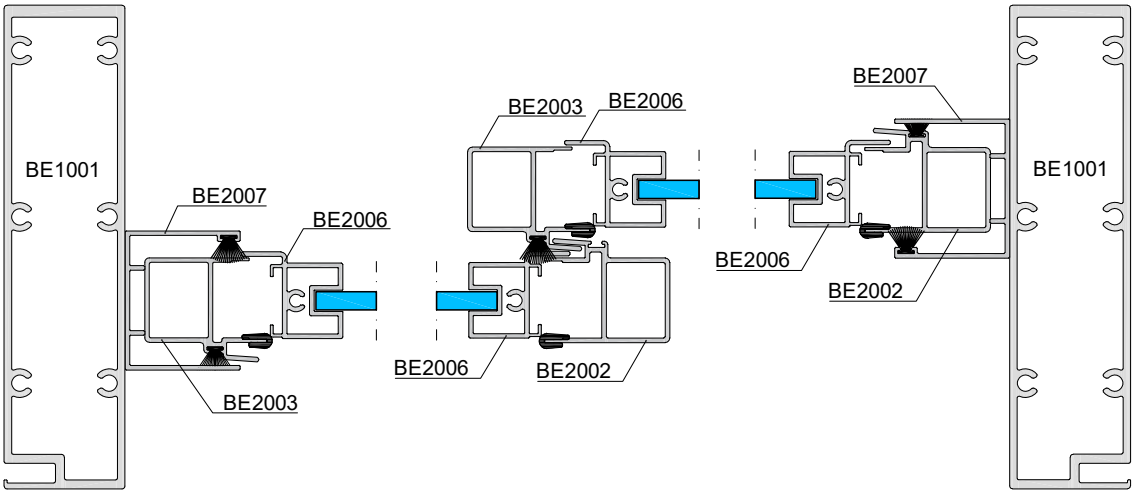




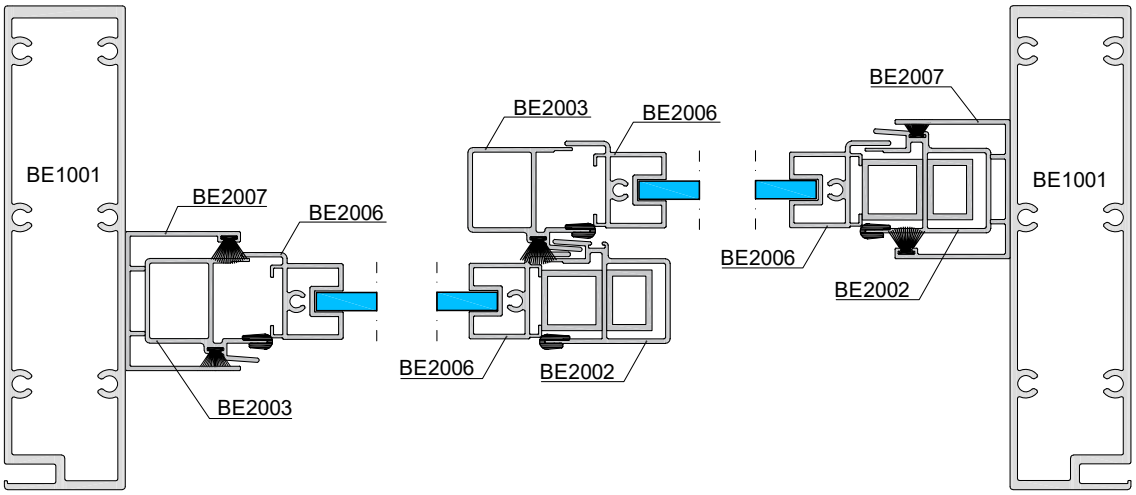
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Przekrój poziomy 2-skrzydłowej zabudowy tarasu
Horizontal section of a 2-sash construction for terrace

B-B-4

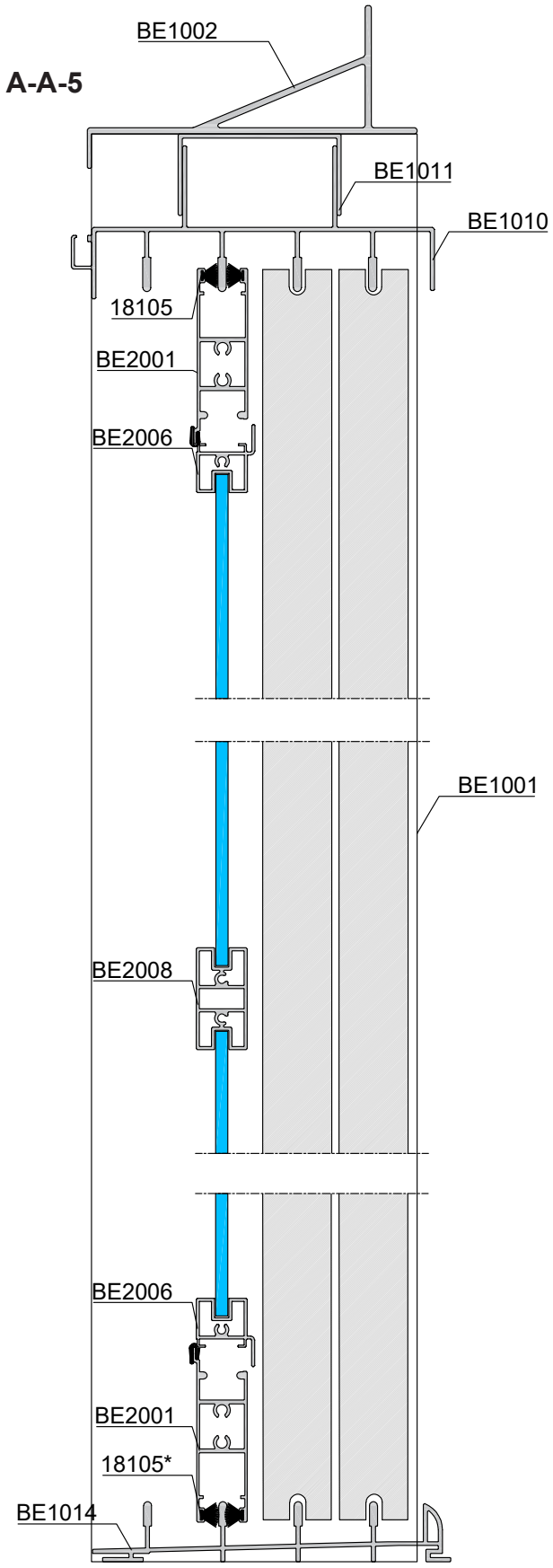


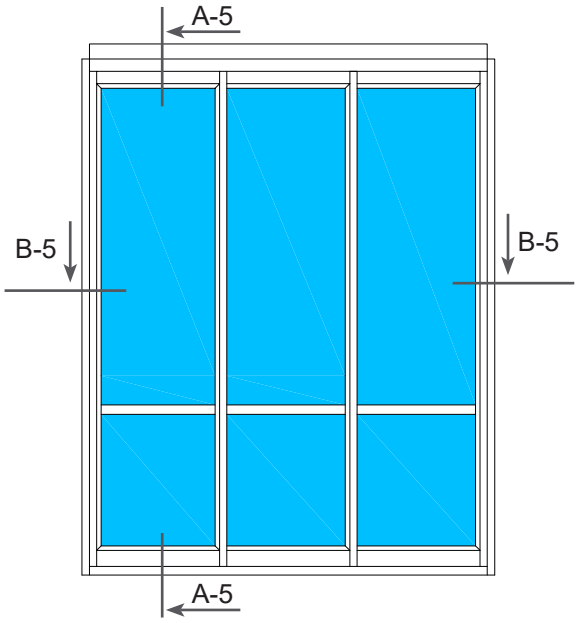
B-B-4 *



* Wzmocnienie profili BE2002 i BE2004 stosowane jest dla skrzydeł okiennych o wysokości powyżej 1600 mm
* Reinforcement of BE2002 and BE2004 profiles is used for sashes with a height of more than 1600 mm

Przekrój pionowy 3-skrzydłowej zabudowy tarasu
Vertical section of a 3-sash construction for terrace

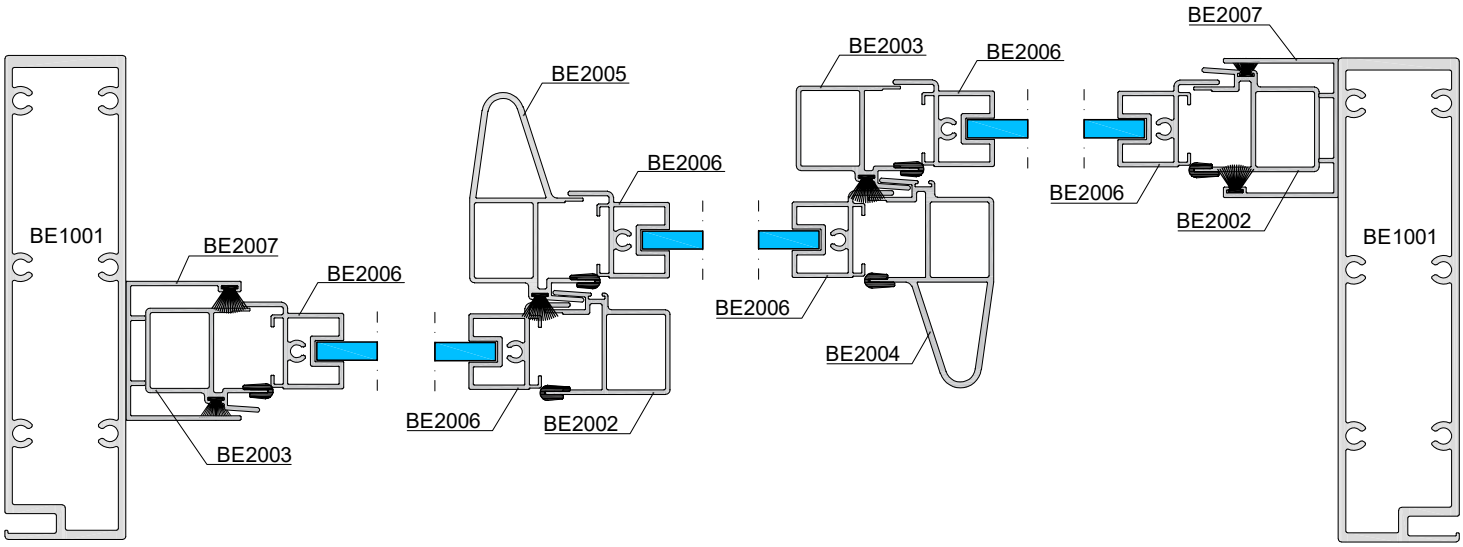




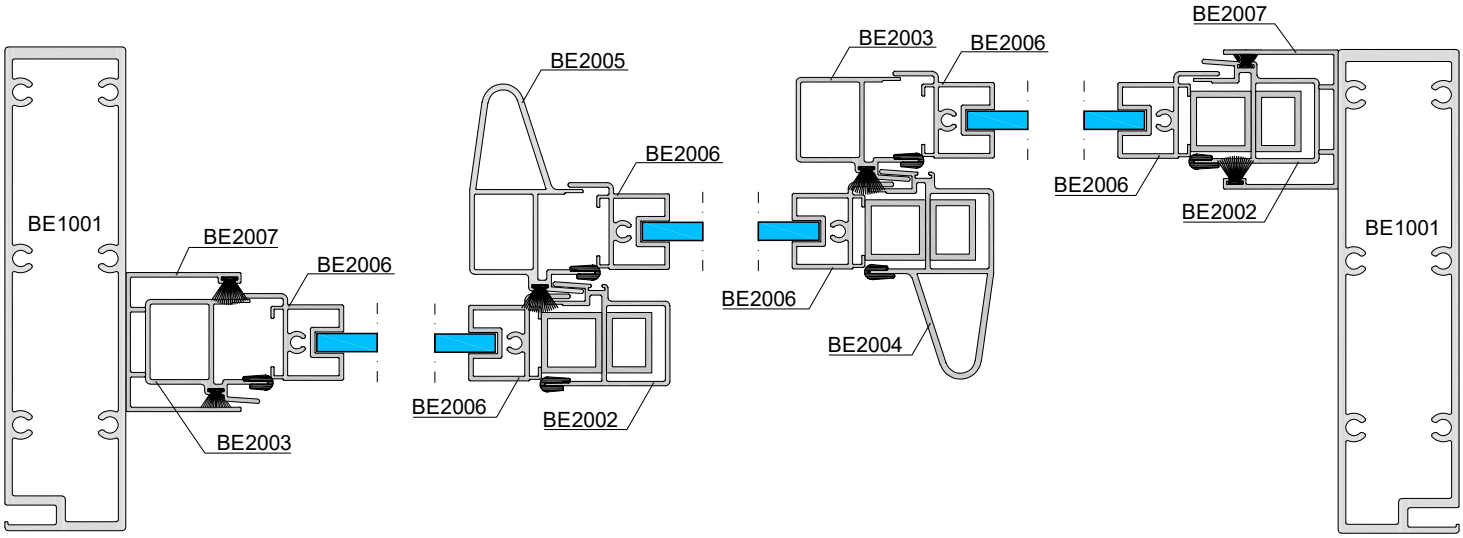
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Przekrój poziomy 3-skrzydłowej zabudowy tarasu
Horizontal section of a 3-sash construction for terrace

B-B-5

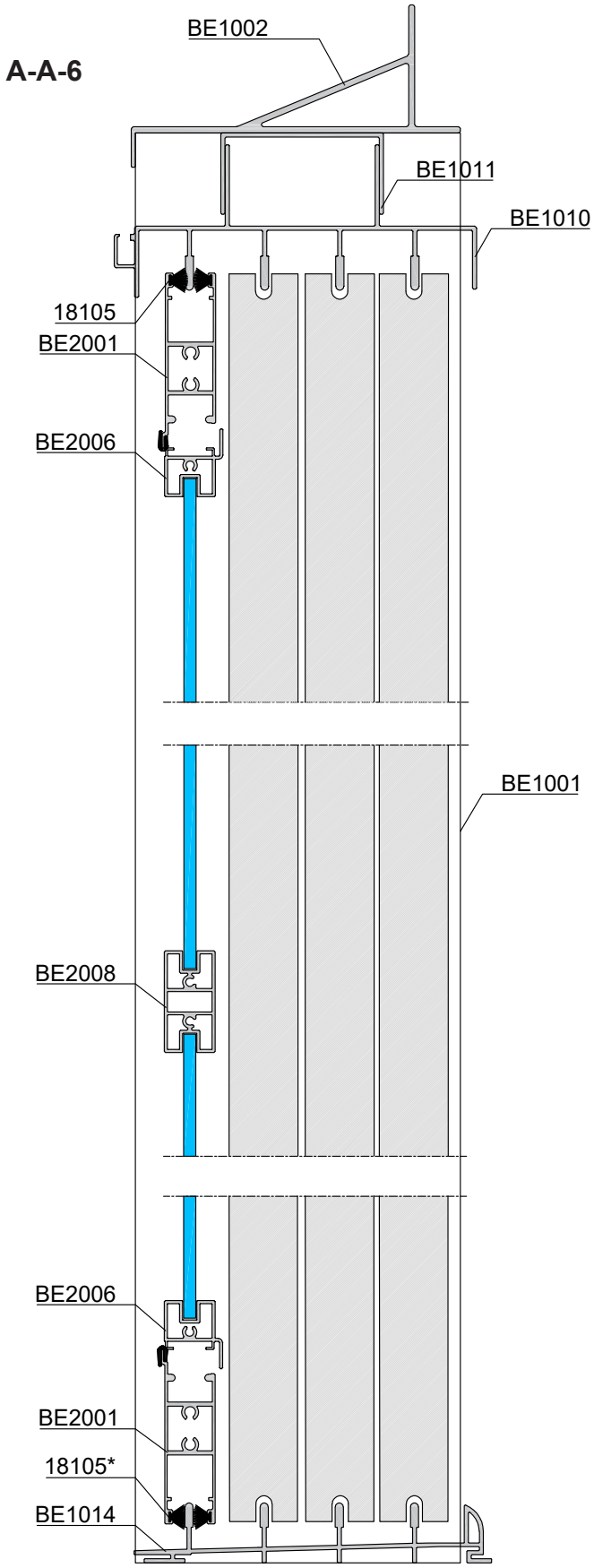


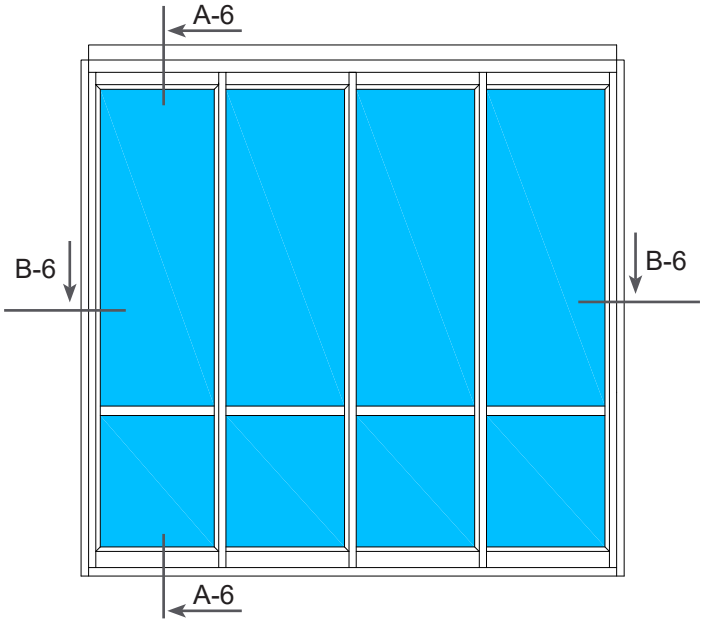
B-B-5 *



* Wzmocnienie profili BE2002 i BE2004 stosowane jest dla skrzydeł okiennych o wysokości powyżej 1600 mm
* Reinforcement of BE2002 and BE2004 profiles is used for sashes with a height of more than 1600 mm

Przekrój pionowy 4-skrzydłowej zabudowy tarasu
Vertical section of a 4-sash construction for terrace

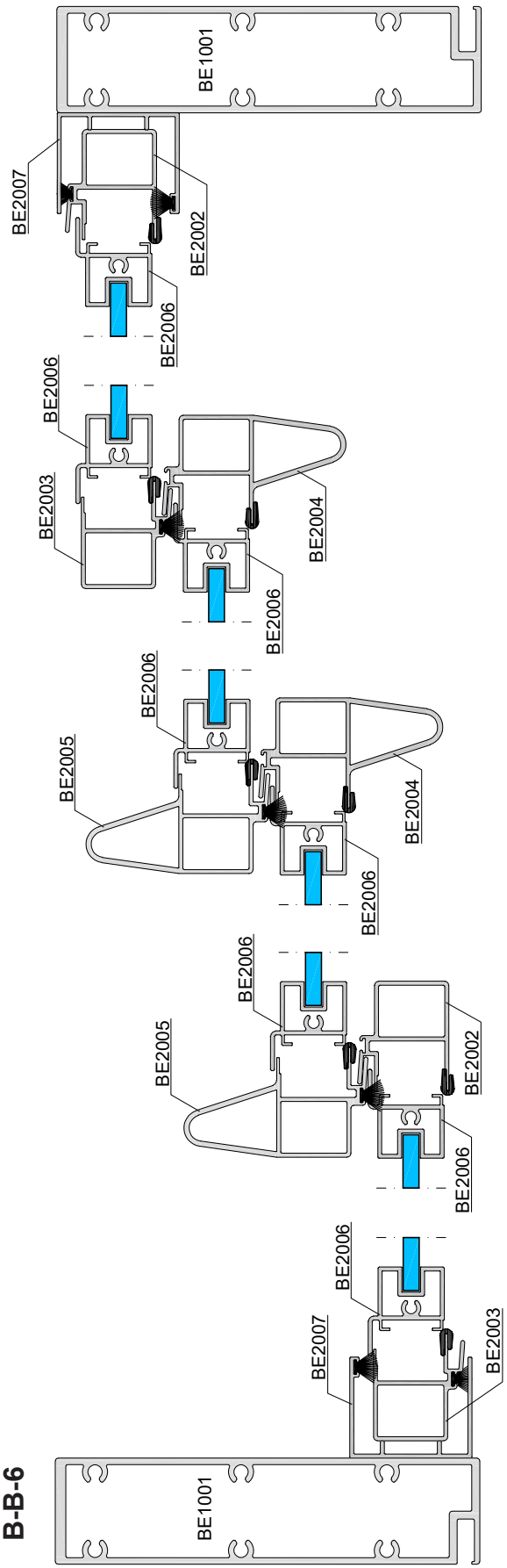




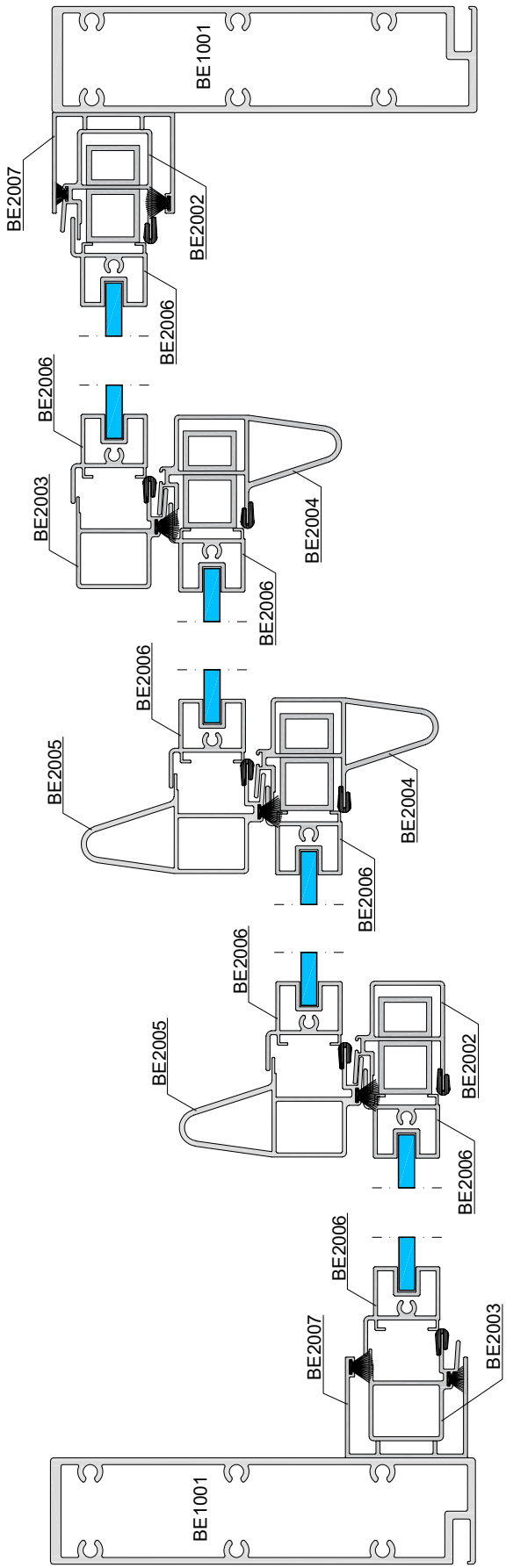
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Przekrój poziomy 4-skrzydłowej zabudowy tarasu
Horizontal section of a 4-sash construction for terrace

B-B-6



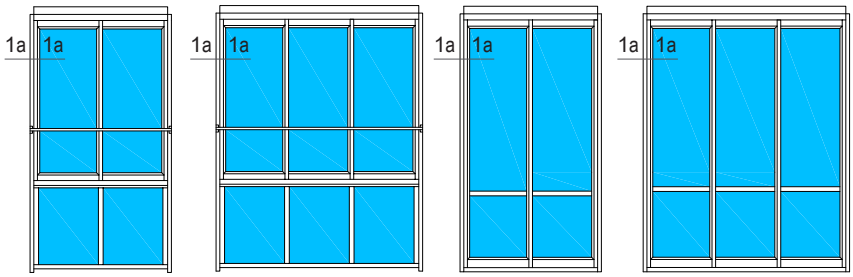
B-B-6 *



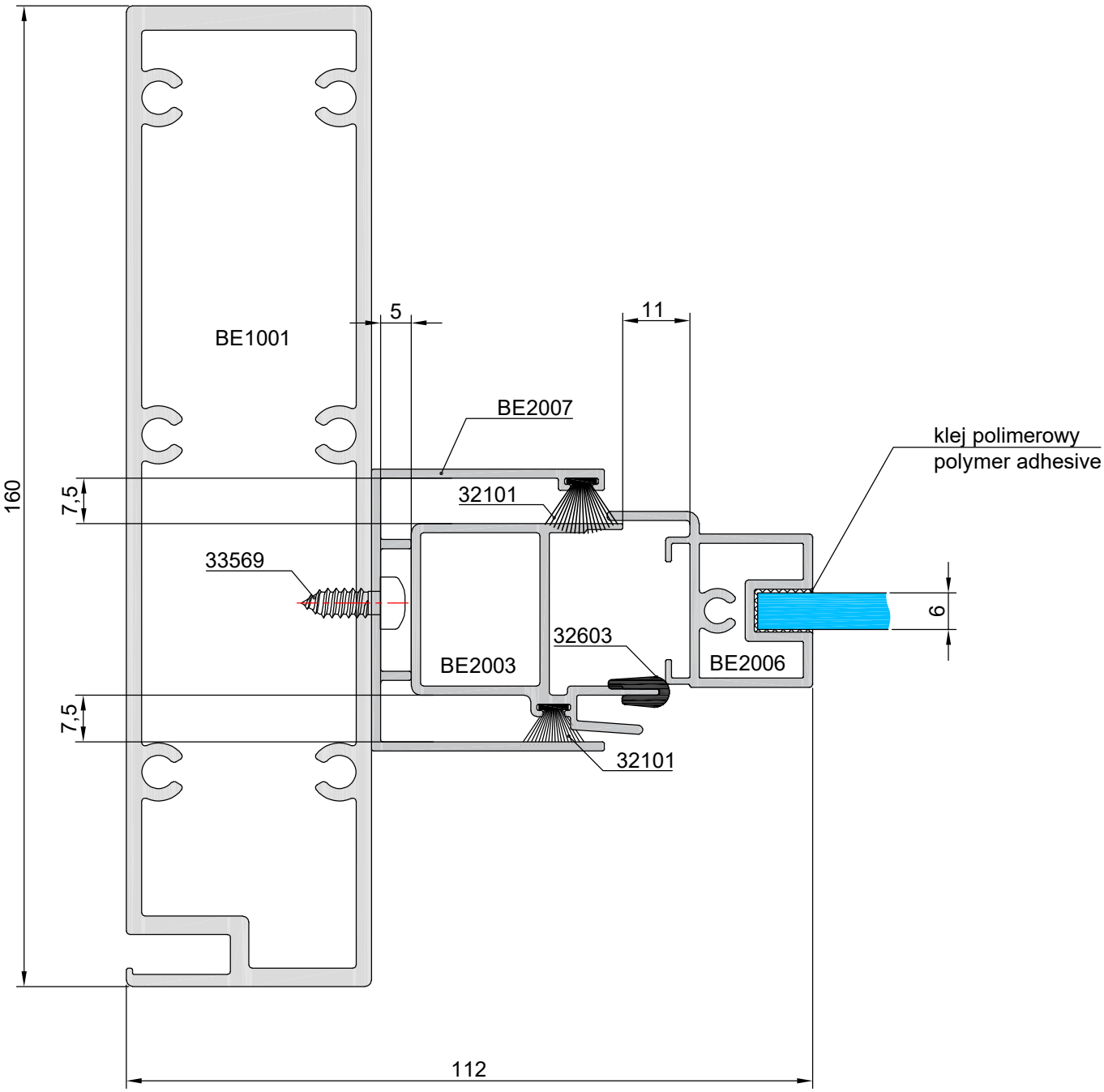
* Wzmocnienie profili BE2002 i BE2004 stosowane jest dla skrzydeł okiennych o wysokości powyżej 1600 mm

* Reinforcement of BE2002 and BE2004 profiles is used for sashes with a height of more than 1600 mm

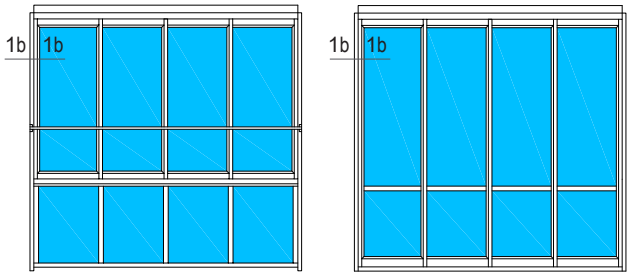
Skala
Scale
1:1



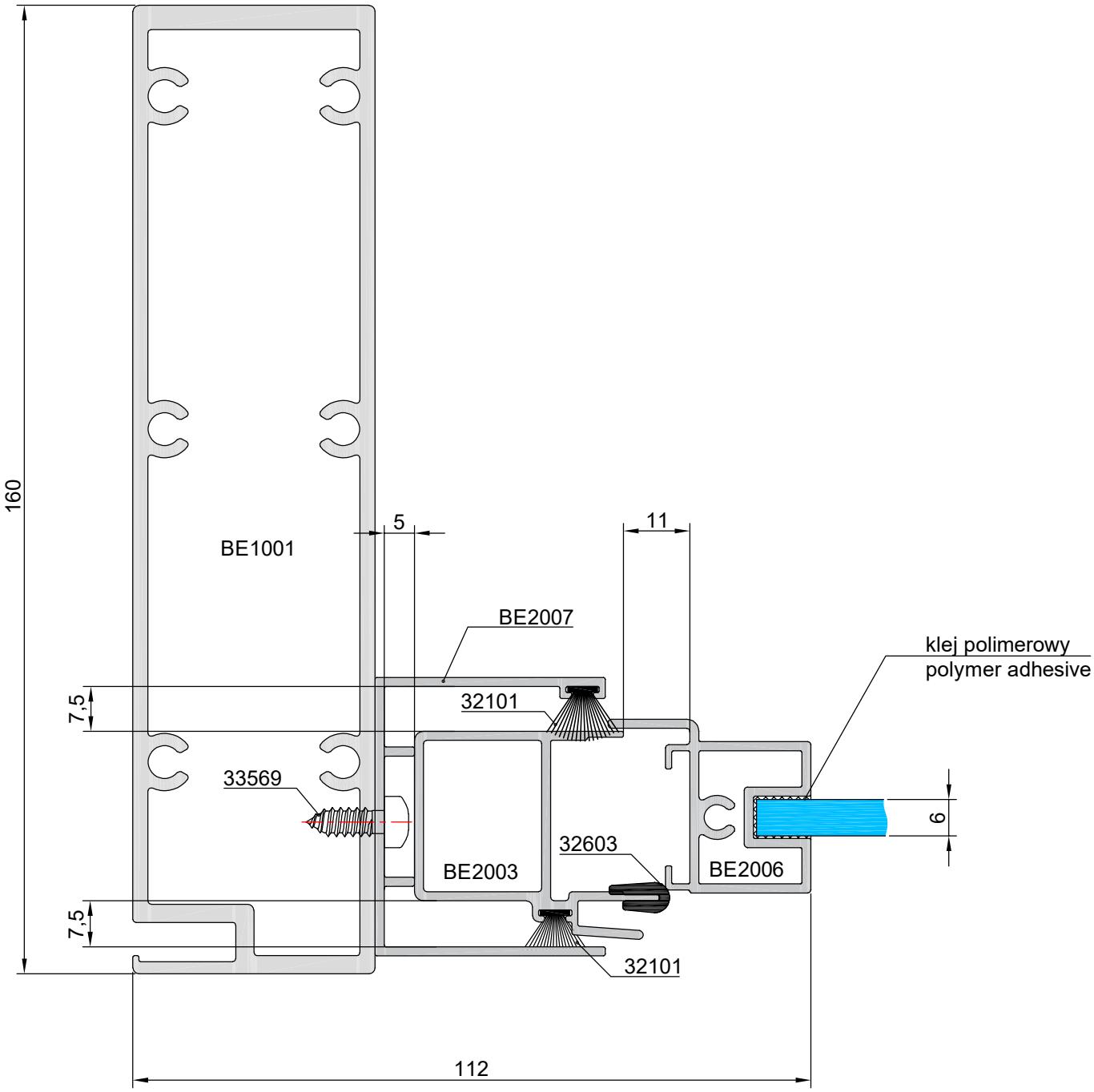
1-1-a



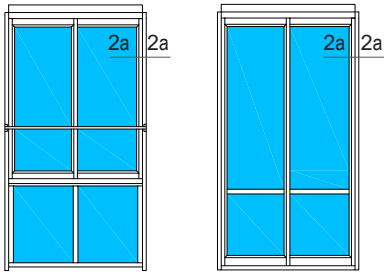
Skala
Scale
1:1



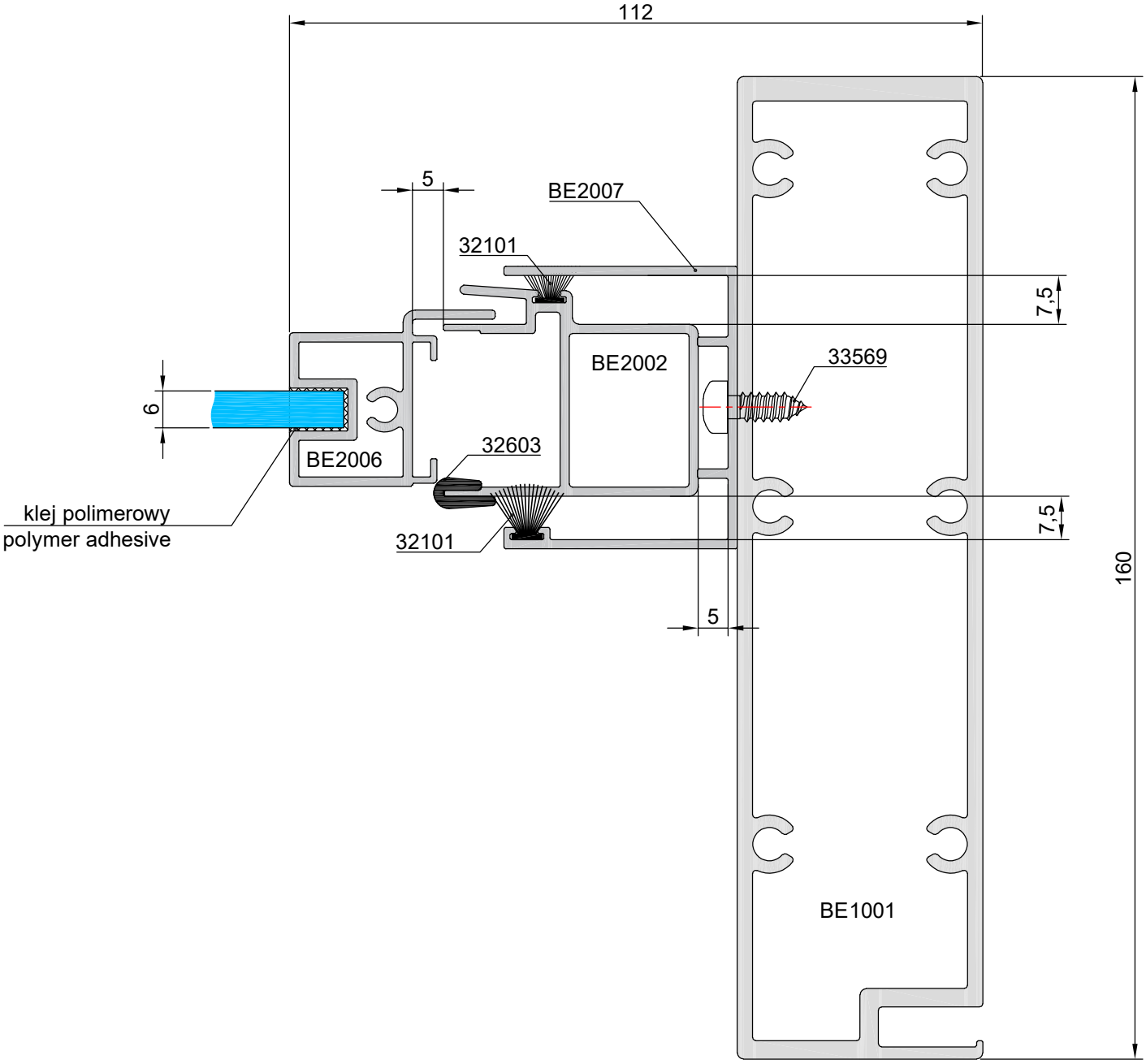
1-1-b



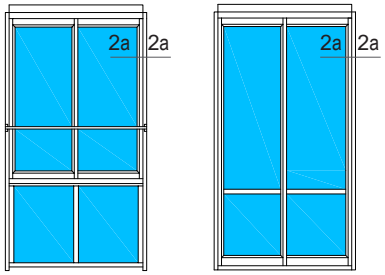
Skala
Scale
1:1



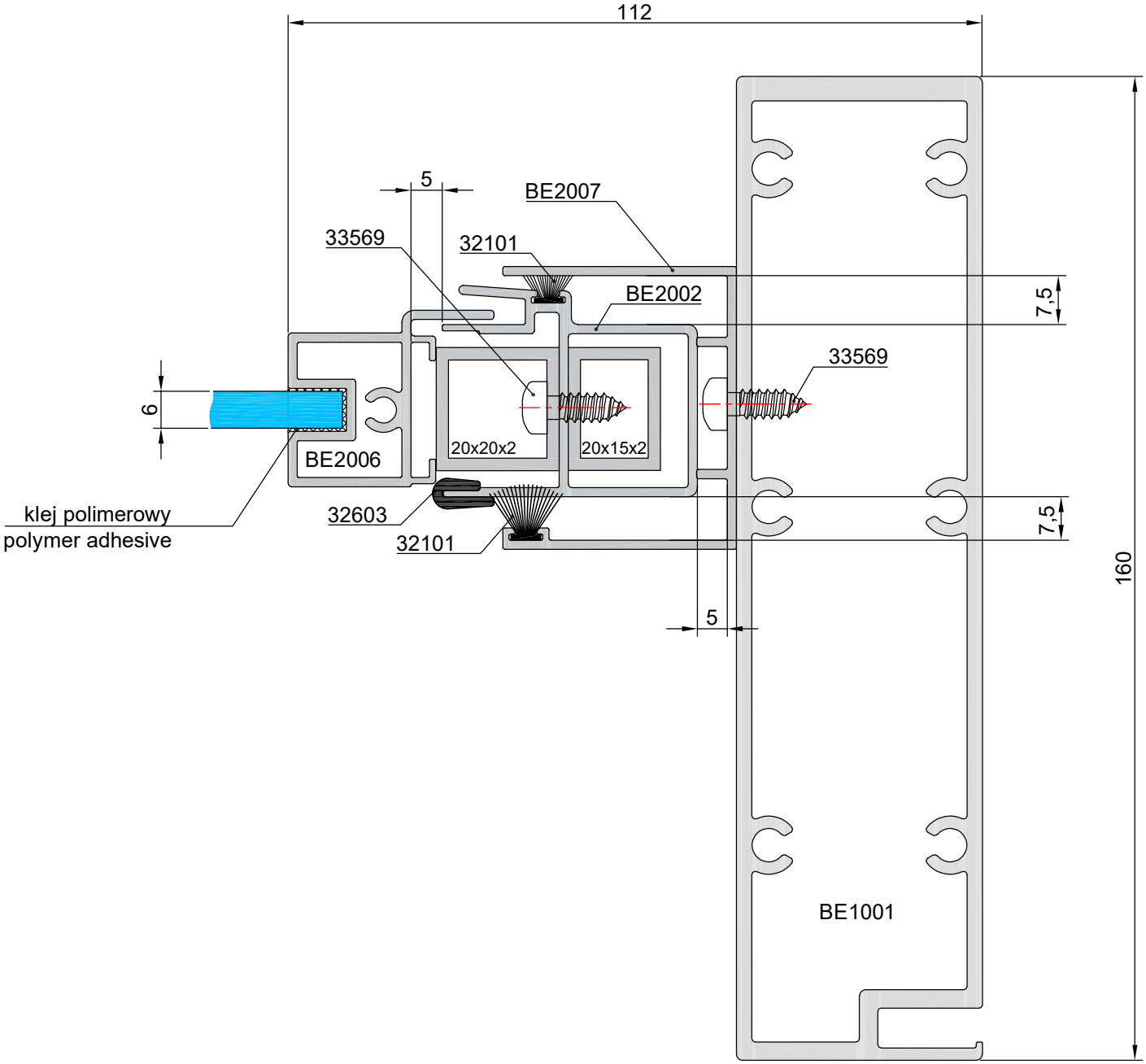
2-2-a



Skala
Scale
1:1

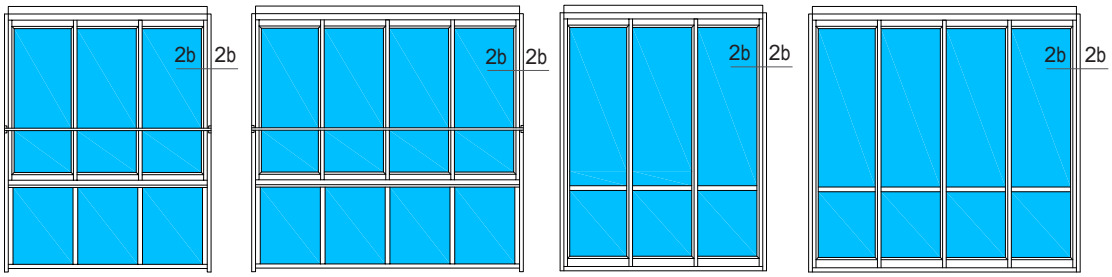


2-2-a*

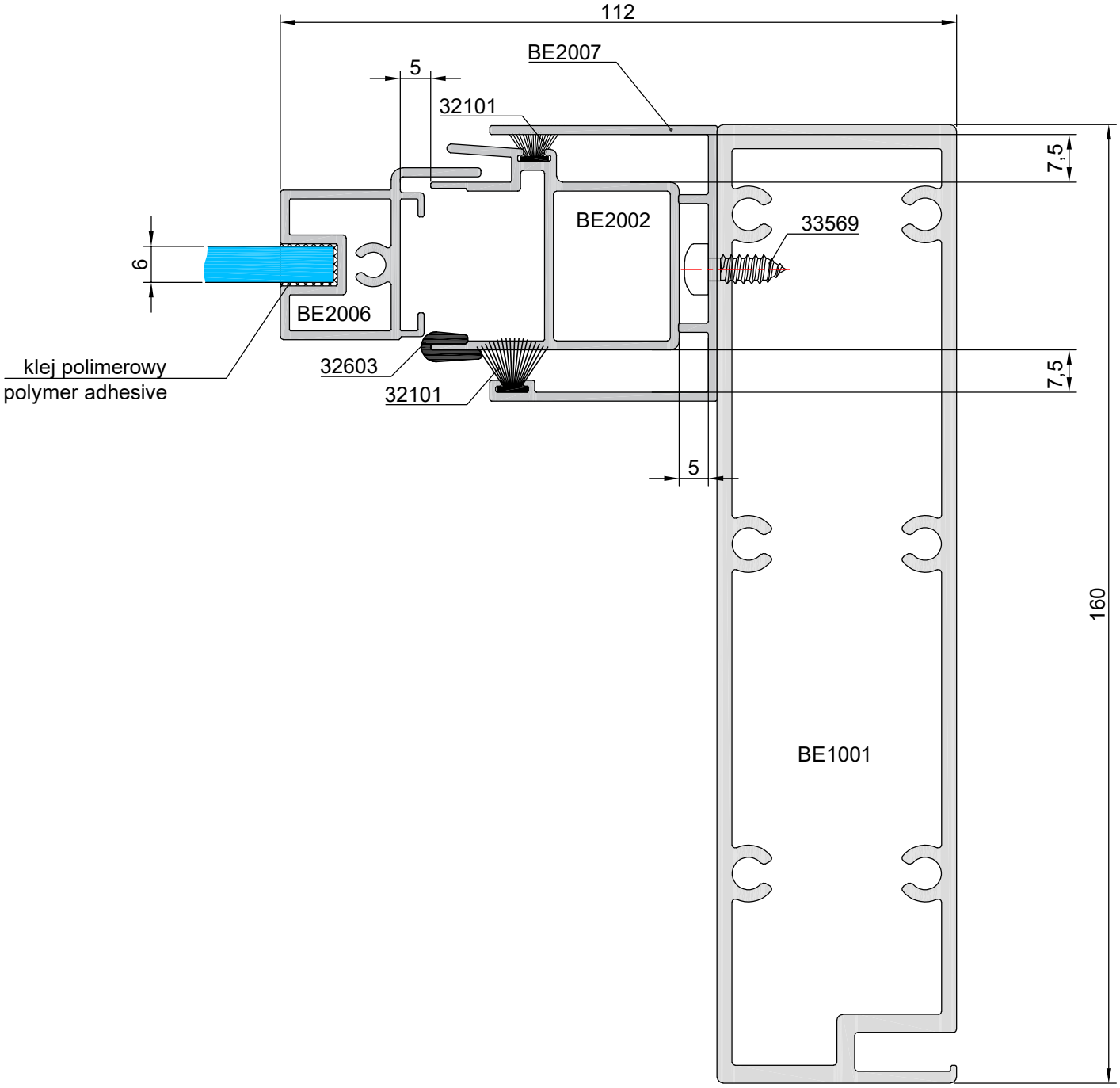


* Wzmocnienie profilu BE2002 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2002 profile is used for window sash with a height of more than 1600 mm

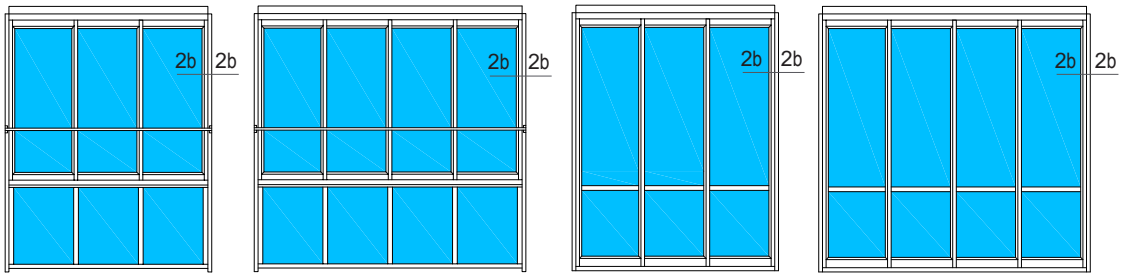
Skala
Scale
1:1



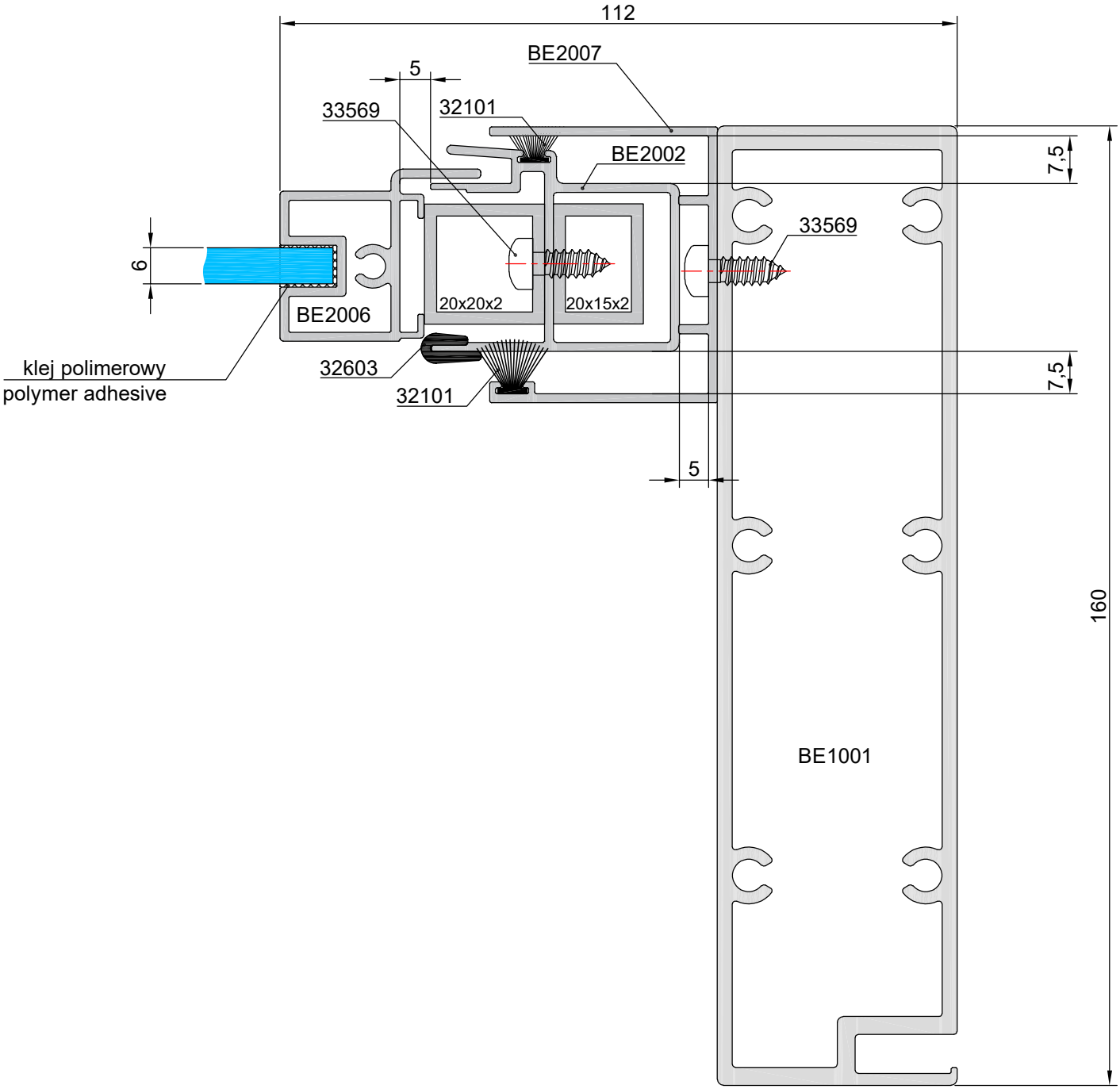
2-2-b



Skala
Scale
1:1

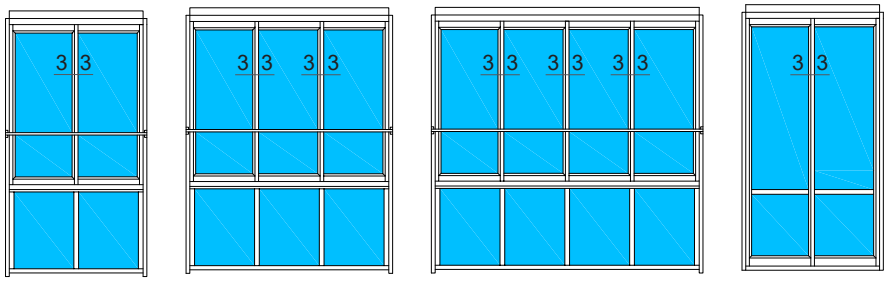


2-2-b*

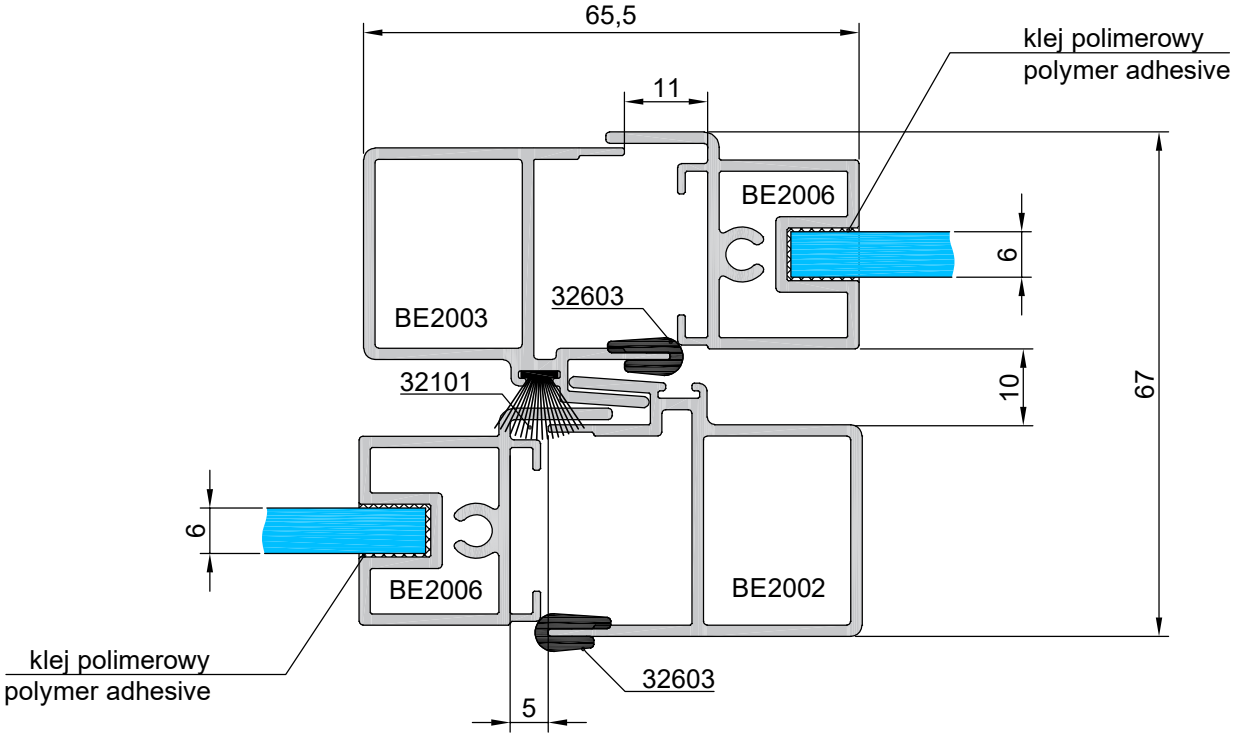


* Wzmocnienie profilu BE2002 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2002 profile is used for window sash with a height of more than 1600 mm

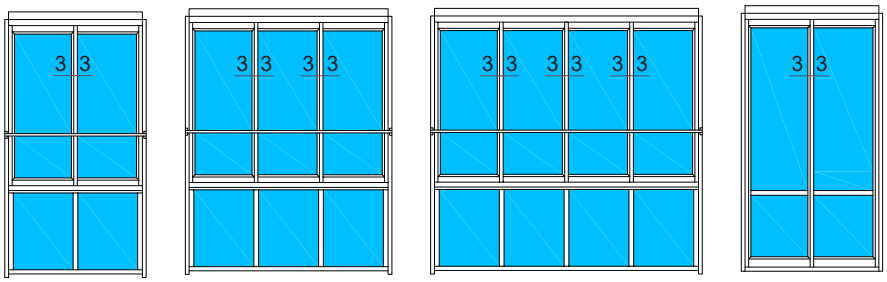
Skala
Scale
1:1



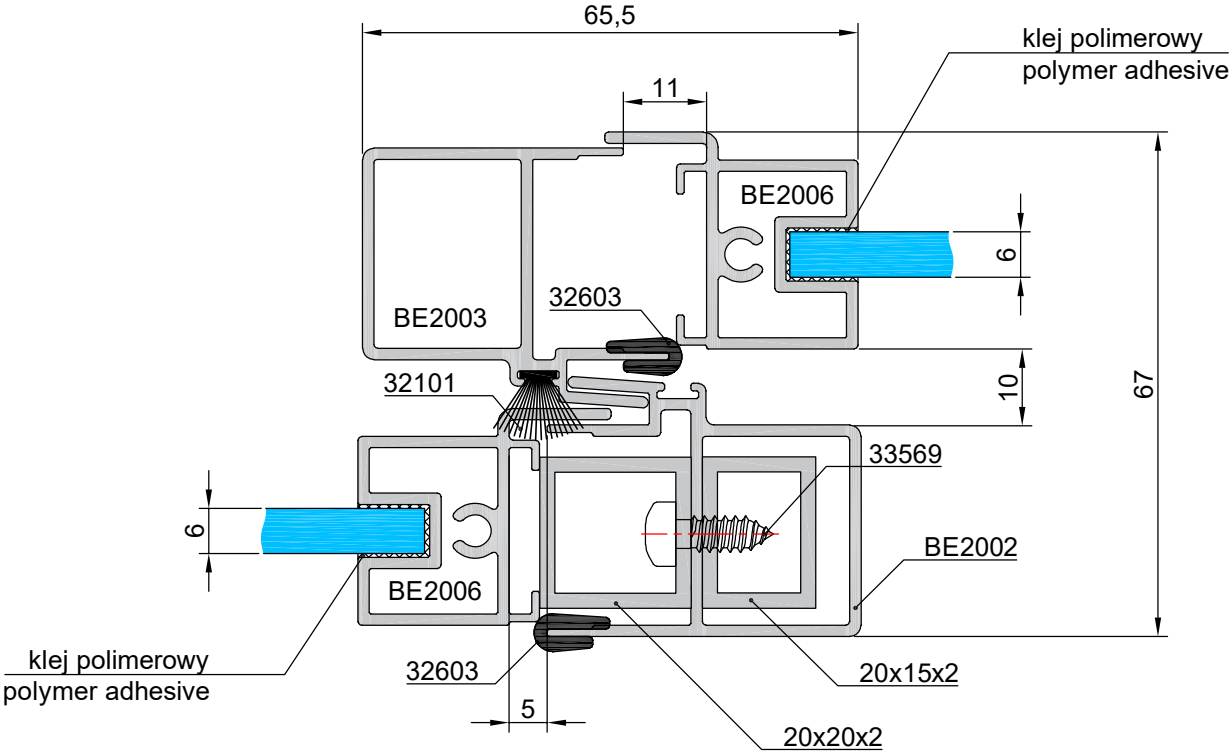
3-3



Skala
Scale
1:1

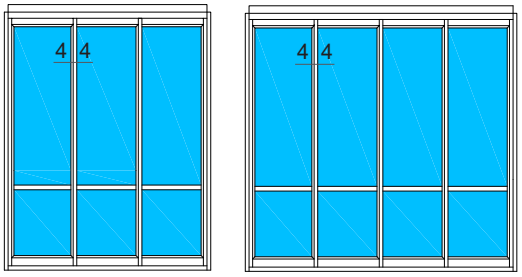


3-3*

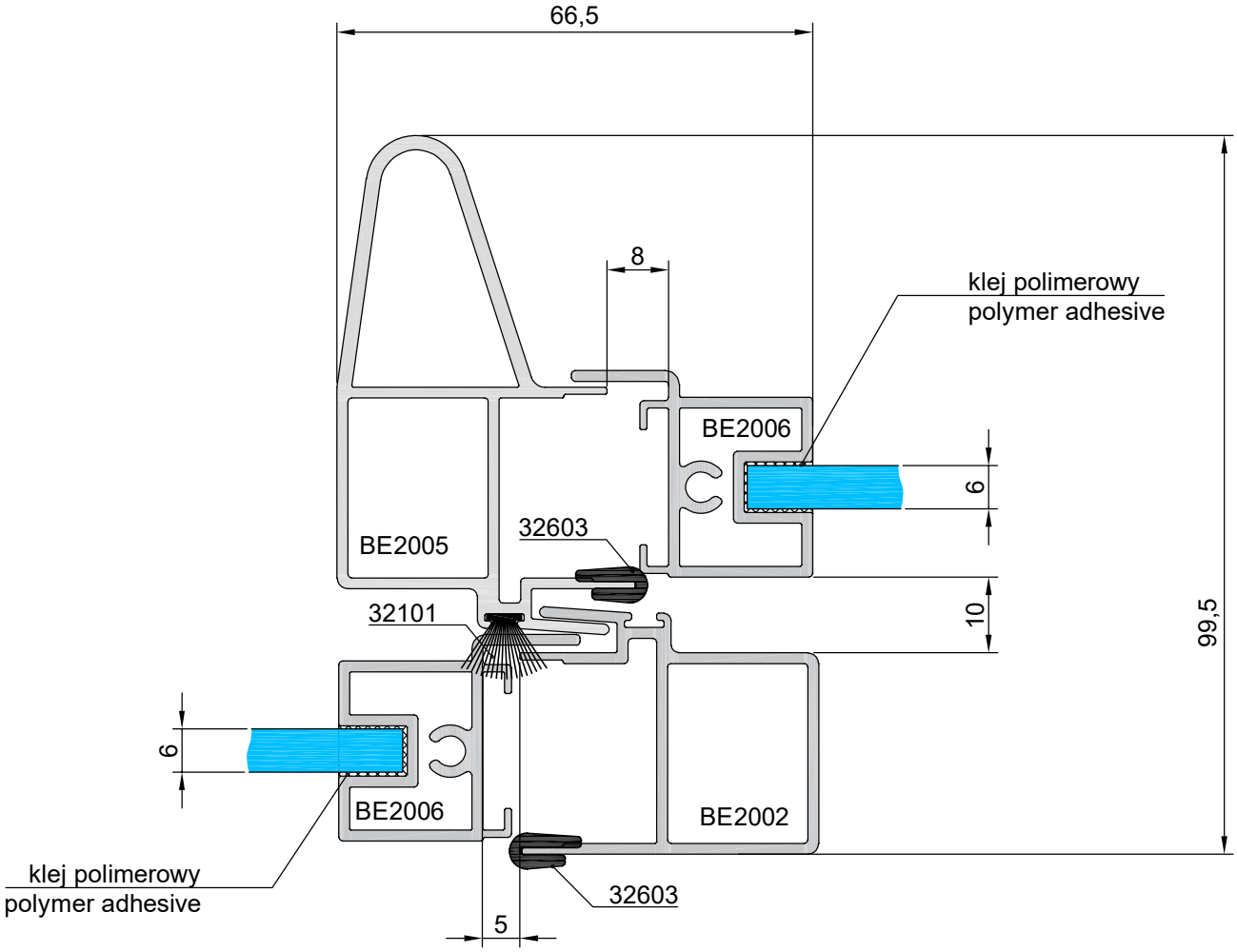


* Wzmocnienie profilu BE2002 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2002 profile is used for window sash with a height of more than 1600 mm

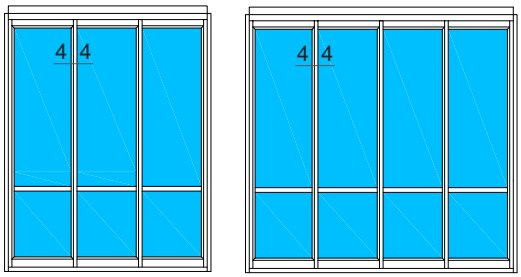
Skala
Scale
1:1



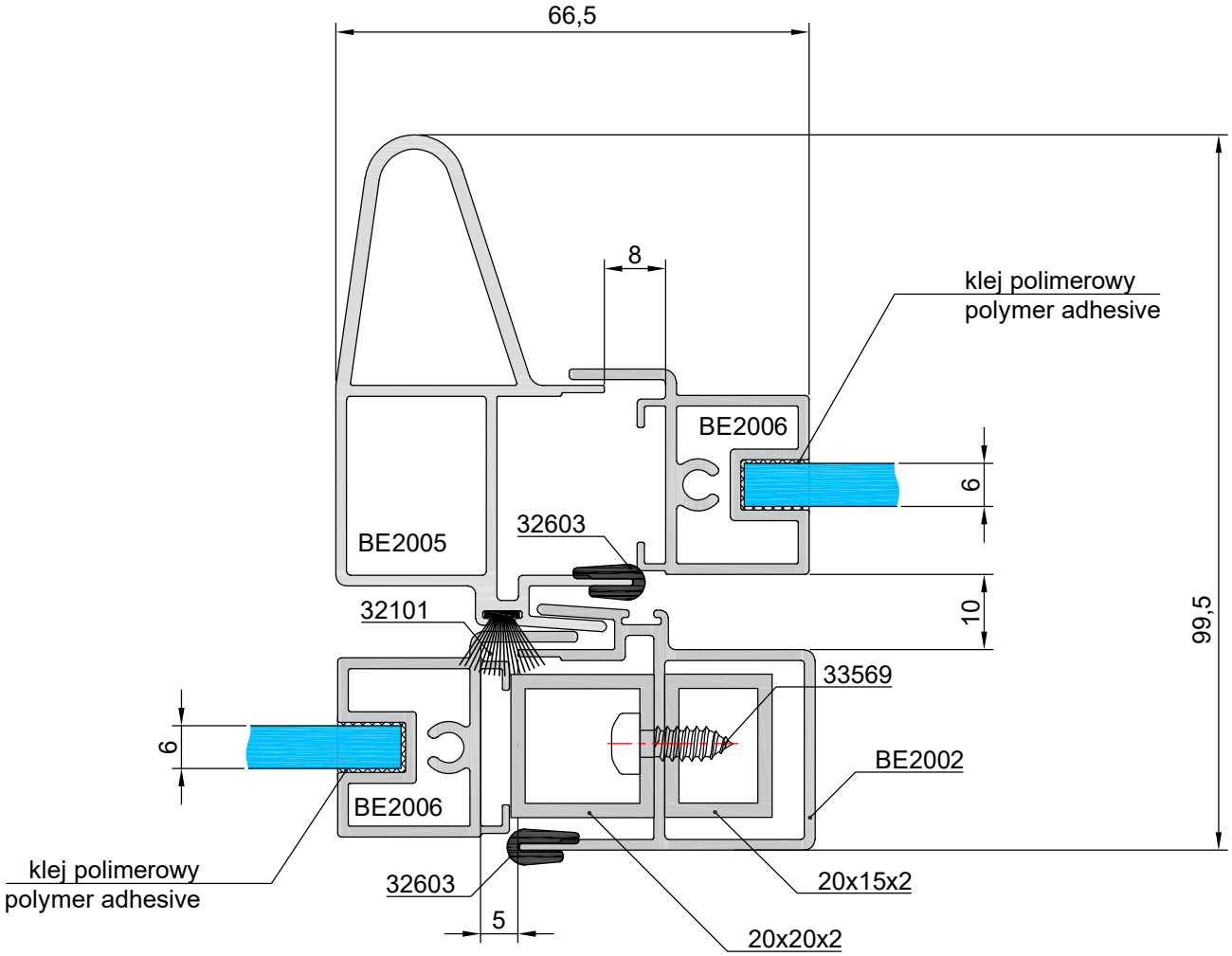
4-4



Skala
Scale
1:1

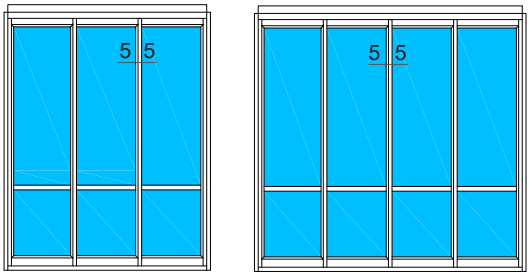


4-4*

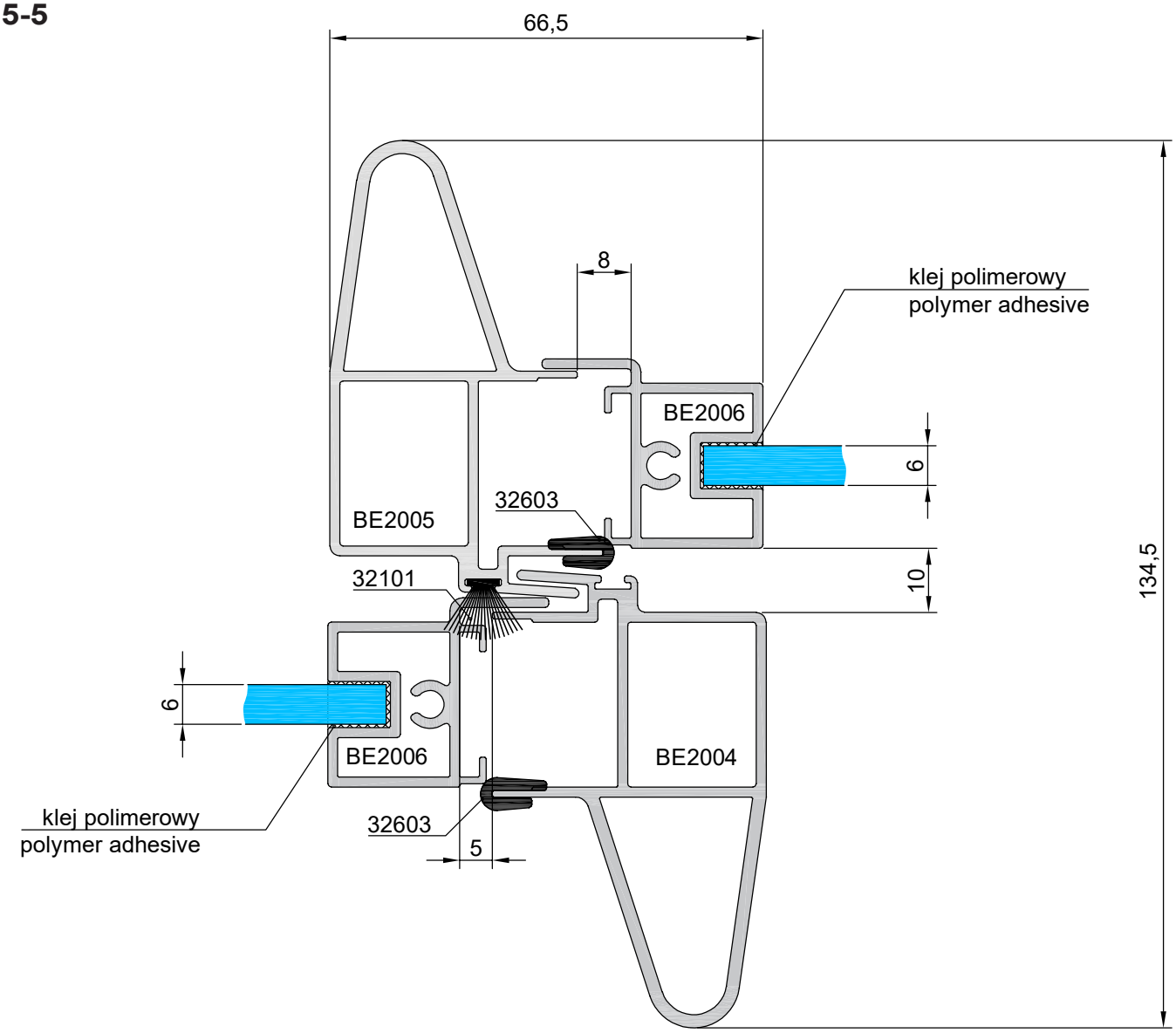


* Wzmocnienie profilu BE2002 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2002 profile is used for window sash with a height of more than 1600 mm

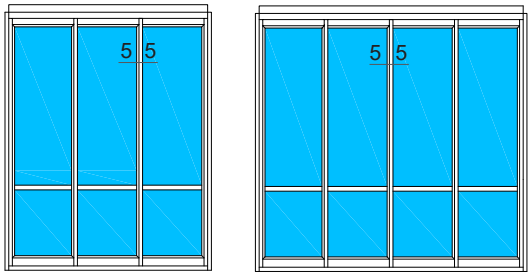
Skala
Scale
1:1



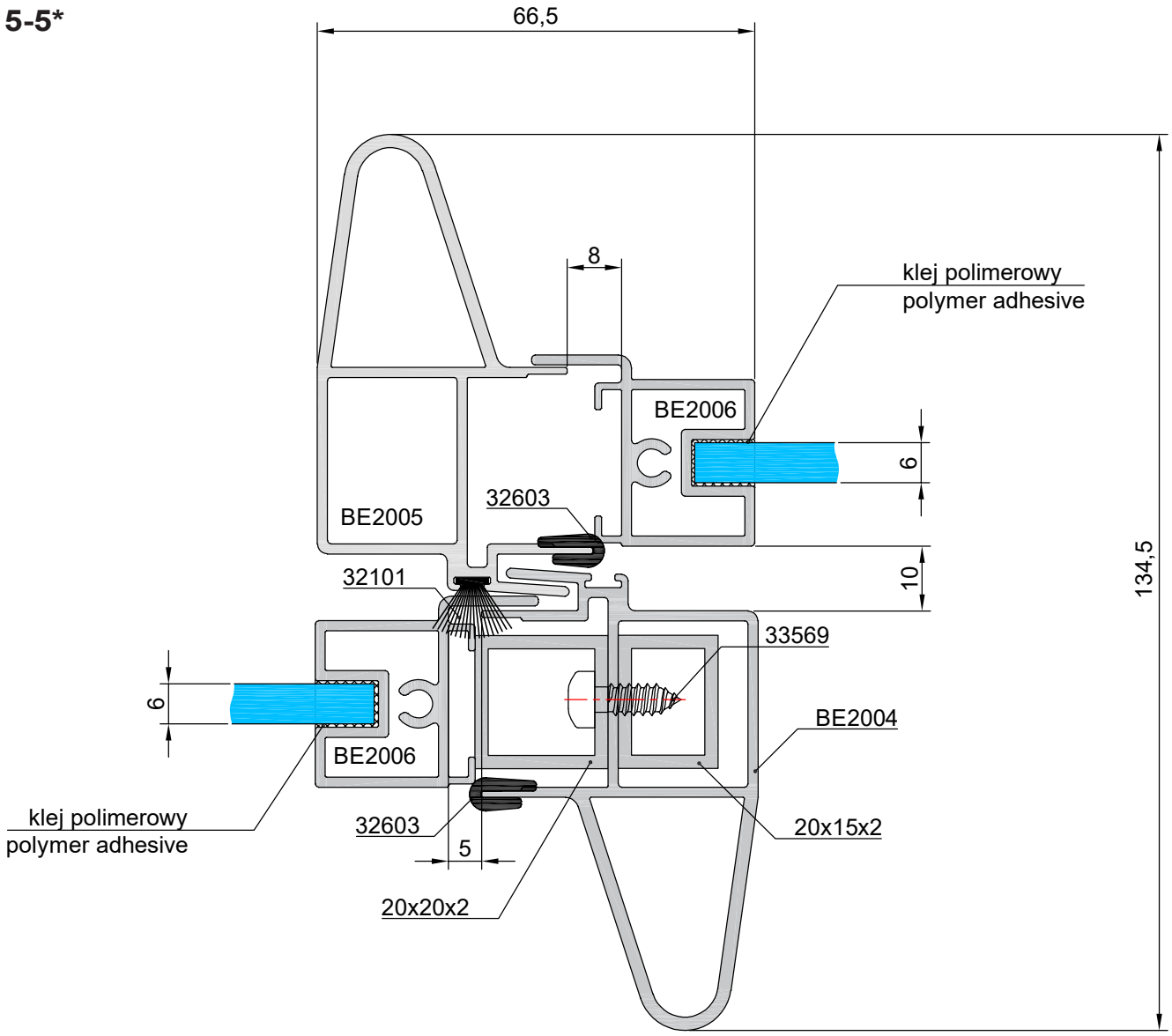
5-5



Skala
Scale
1:1

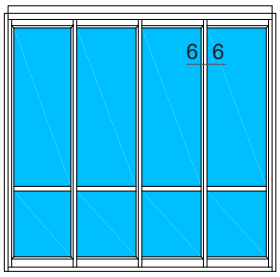


5-5*

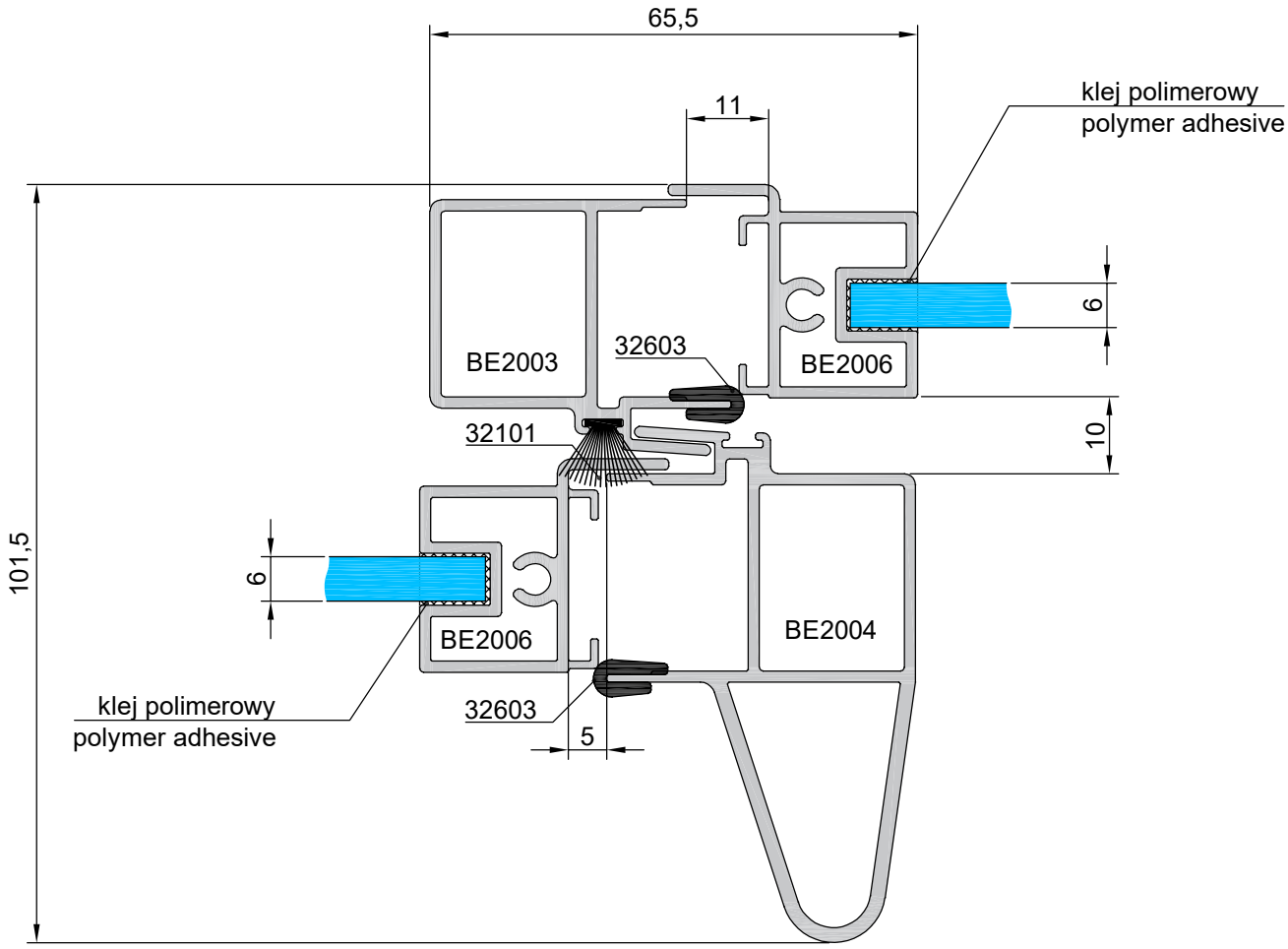


* Wzmocnienie profilu BE2004 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2004 profile is used for window sash with a height of more than 1600 mm

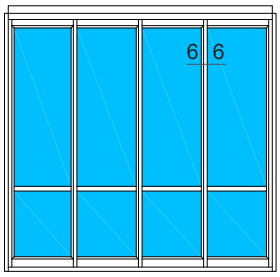
Skala
Scale
1:1



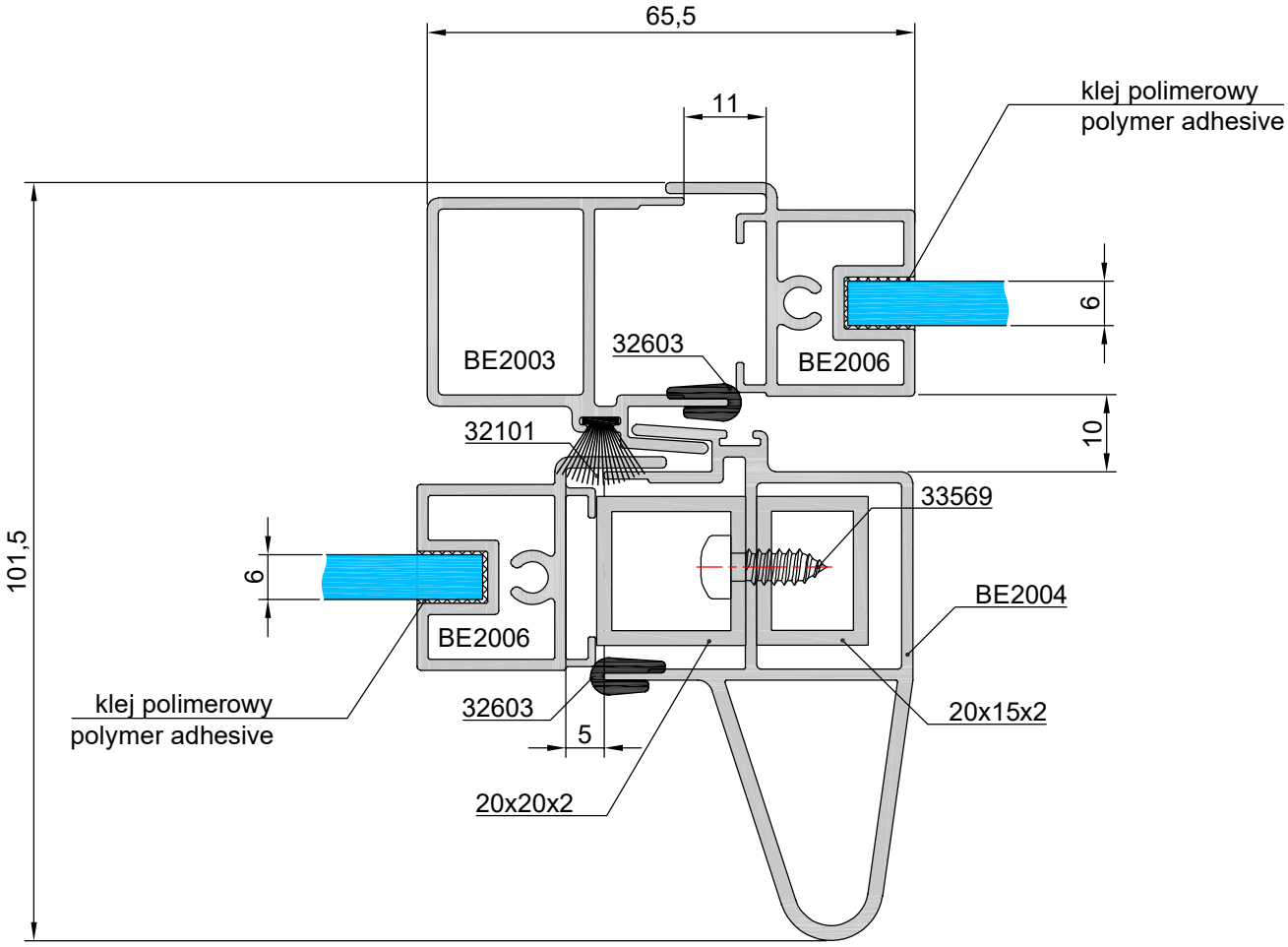
6-6



Skala
Scale
1:1

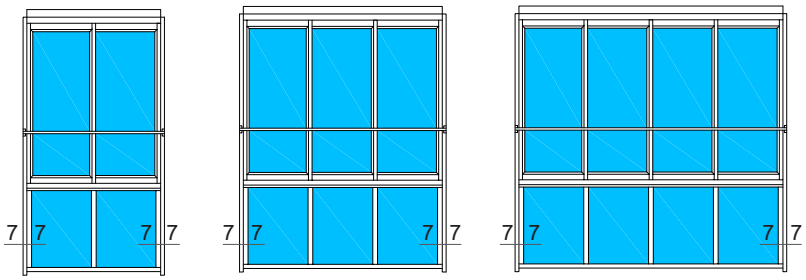


6-6*

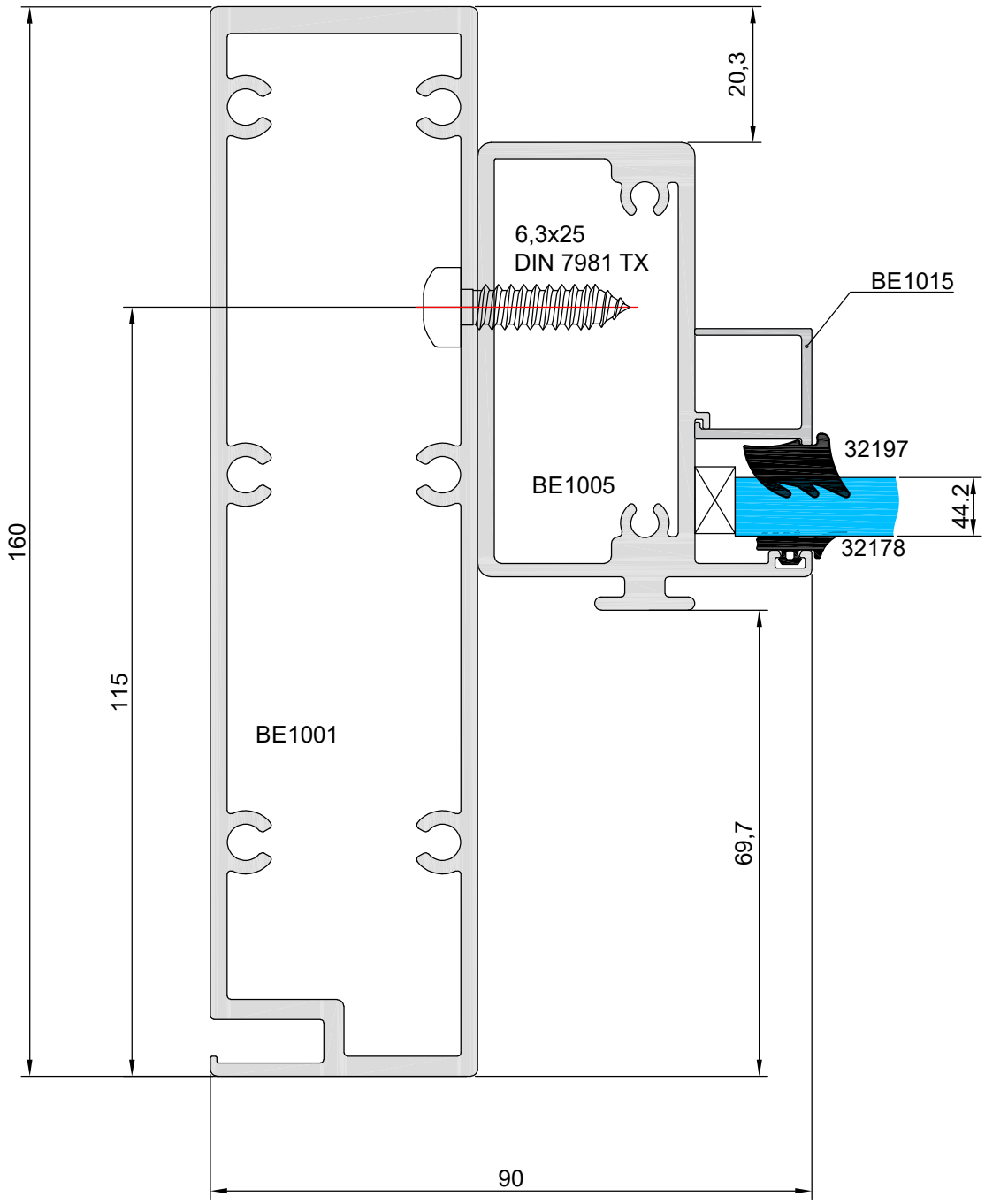


* Wzmocnienie profilu BE2004 stosowane jest dla skrzydła okiennego o wysokości powyżej 1600 mm
* Reinforcement of BE2004 profile is used for window sash with a height of more than 1600 mm

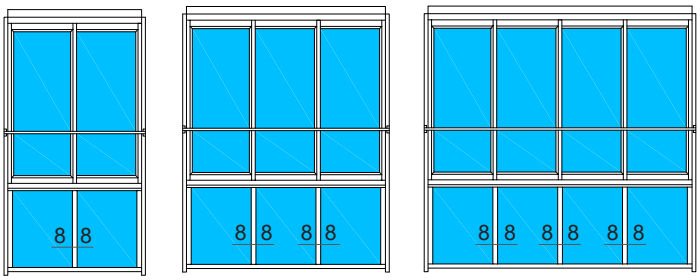
Skala
Scale
1:1



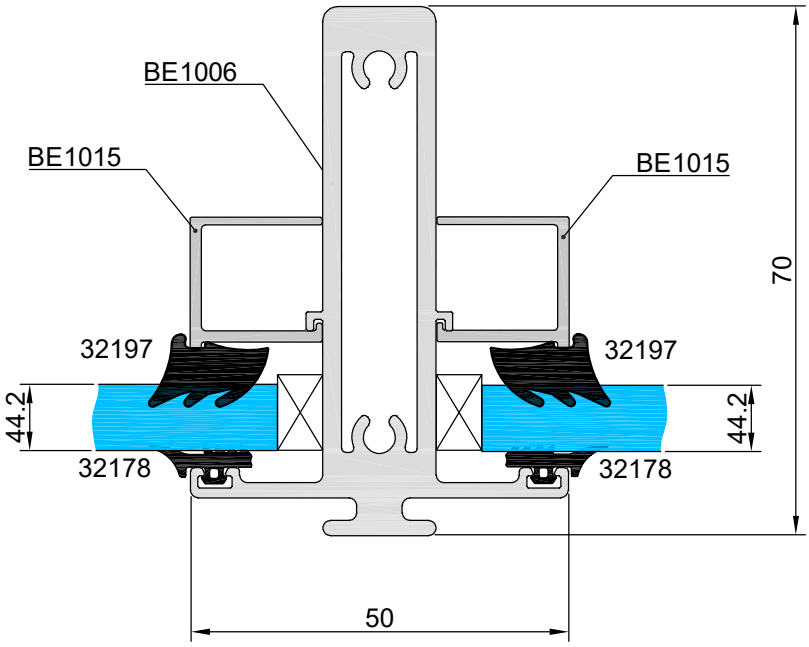
7-7



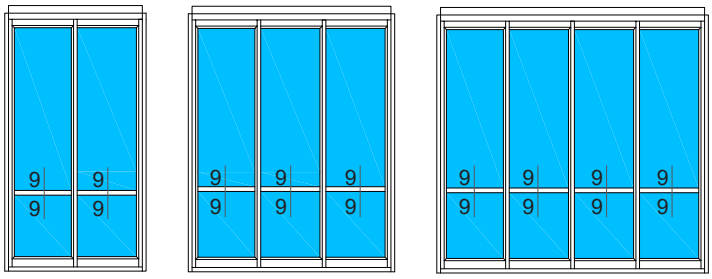
Skala
Scale
1:1



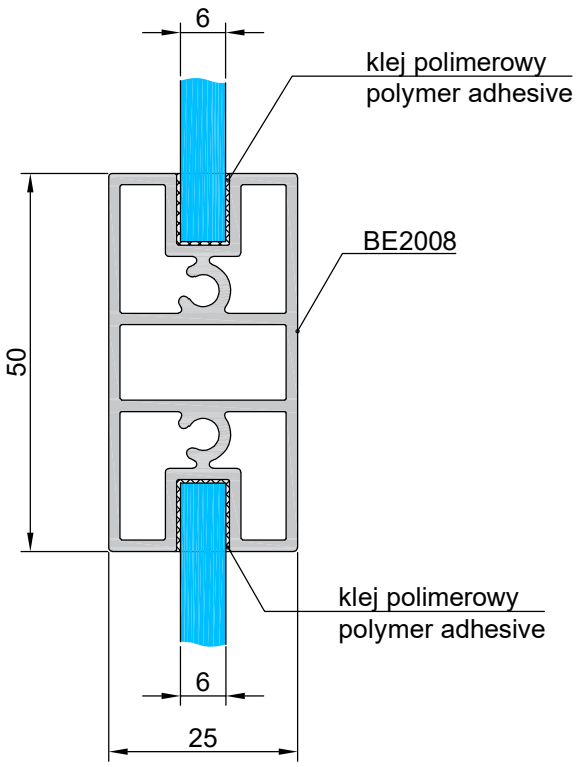
8-8



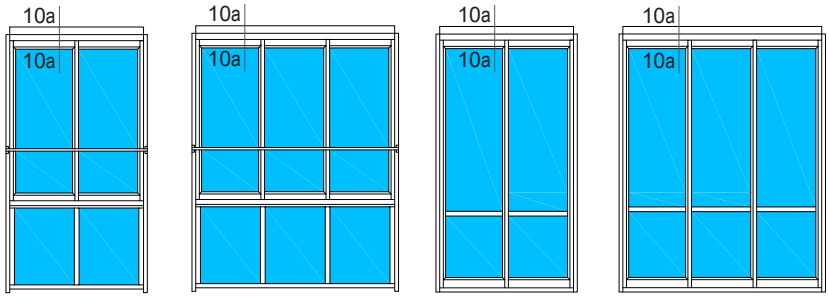
Skala
Scale
1:1



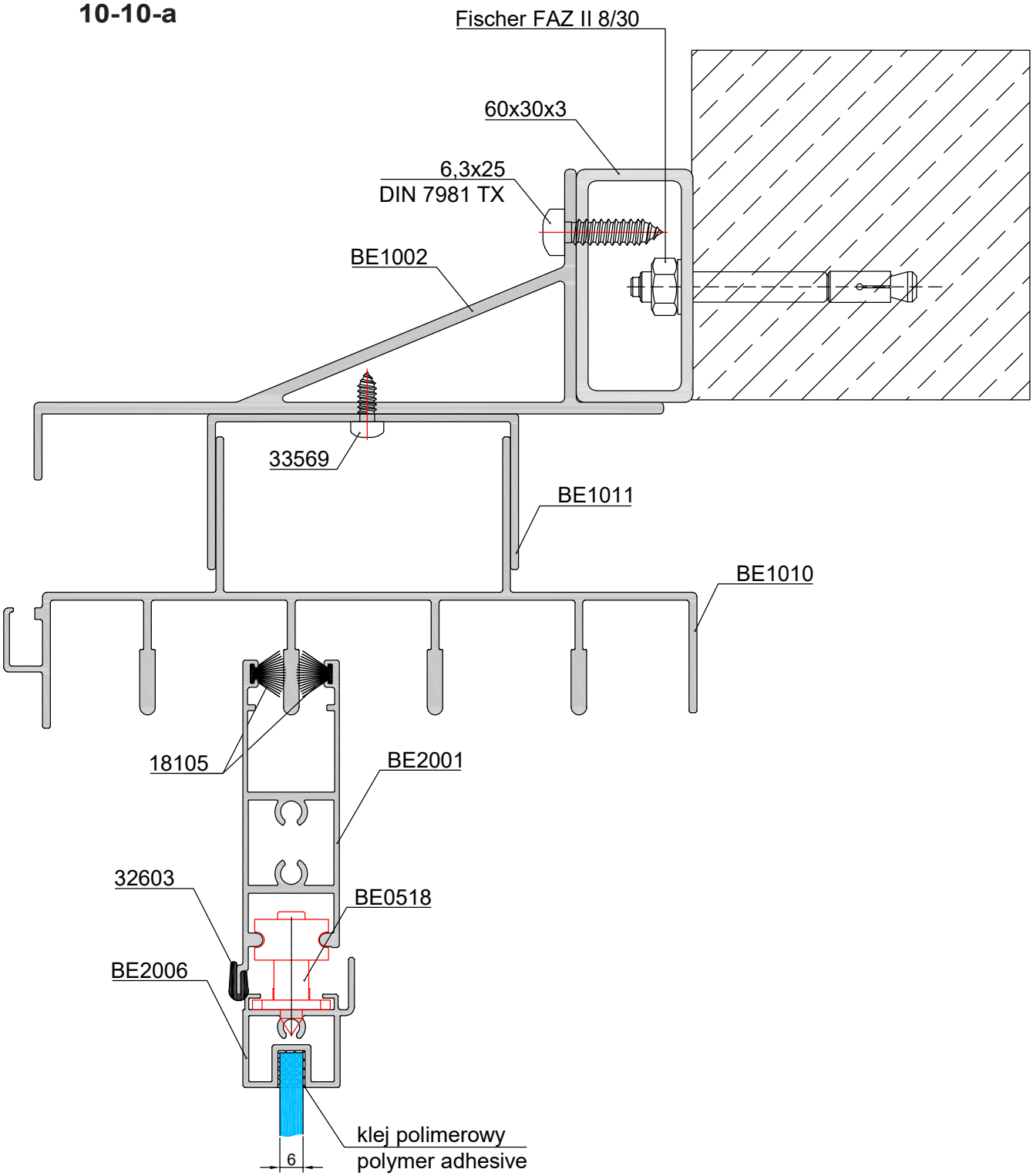
9-9



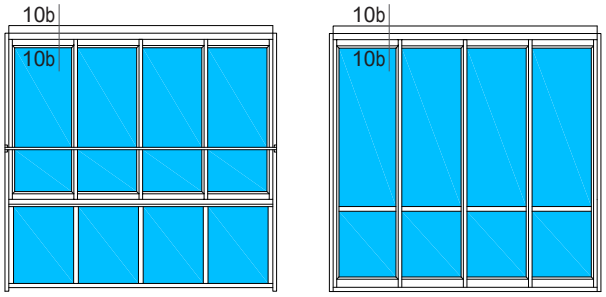
Skala
Scale
1:1.5



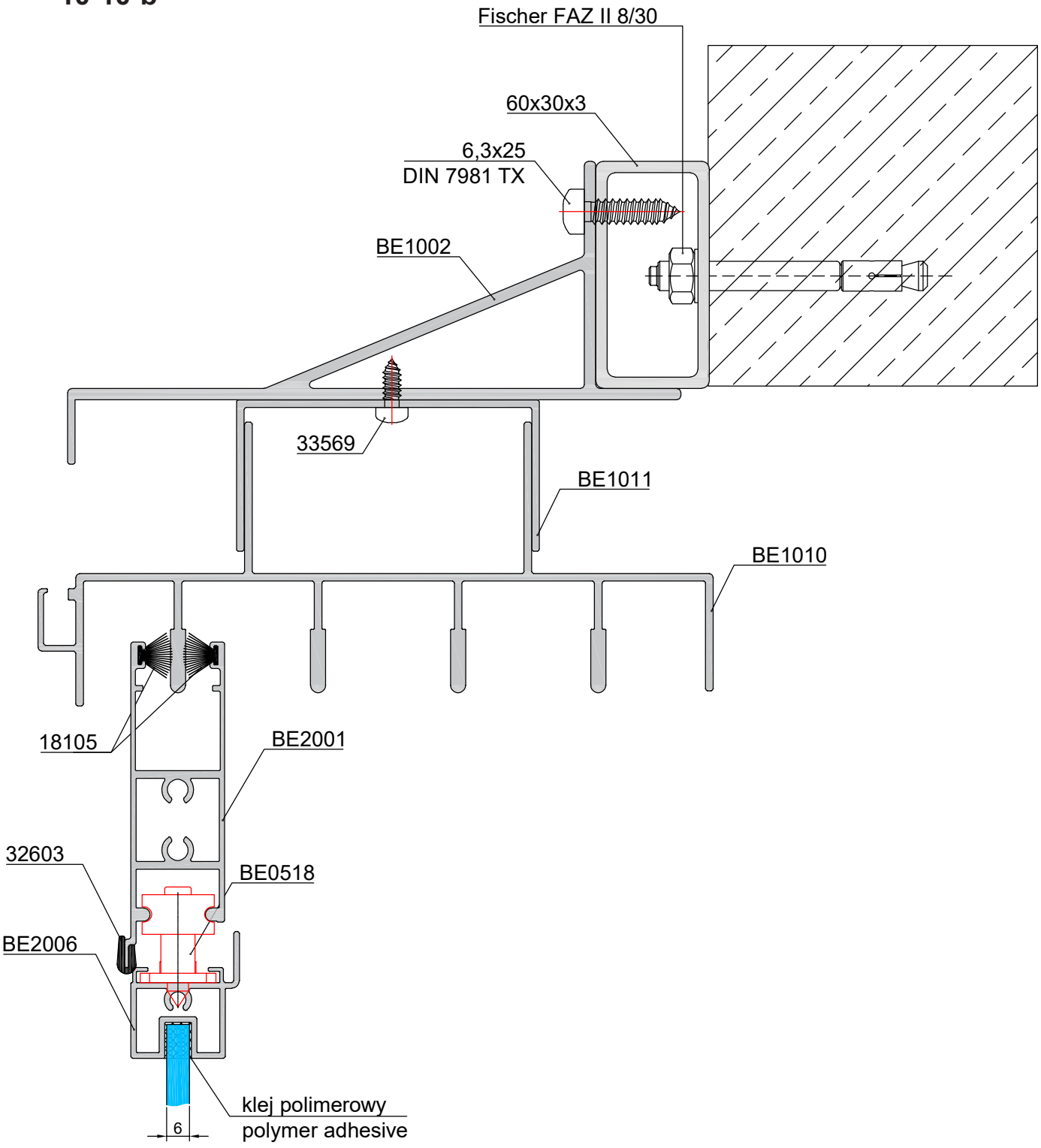
10-10-a



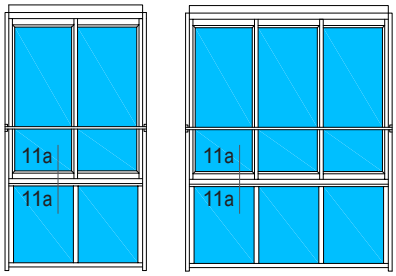
Skala
Scale
1:1.5



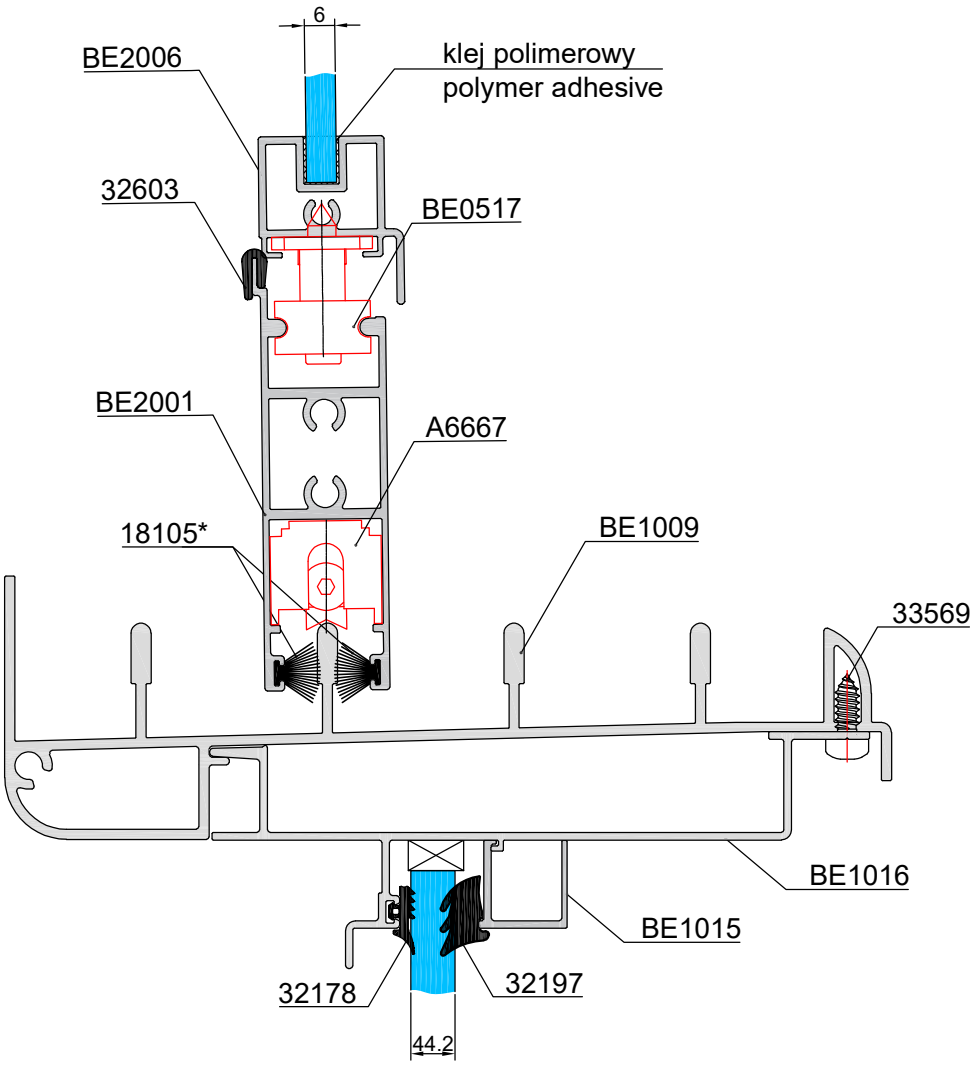
10-10-b



Skala
Scale
1:1.5



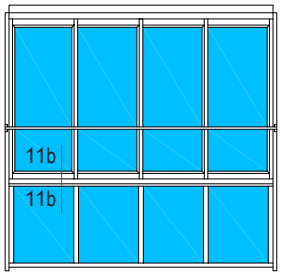
11-11-a



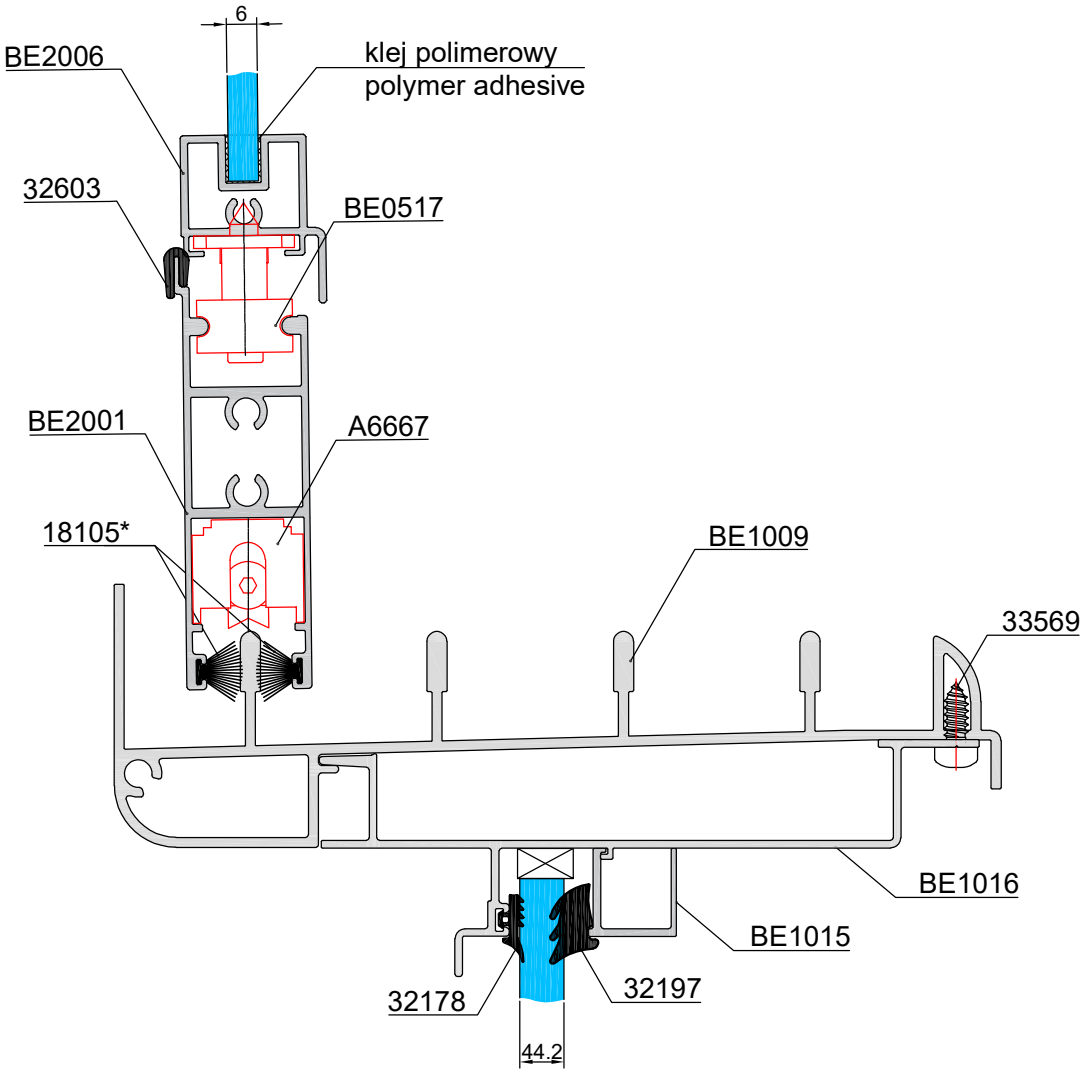
Uwaga: Możliwość regulacji wysokości wózka za pomocą klucza imbusowego
Note: Roller height adjustable with a Allen key

* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Skala
Scale
1:1.5



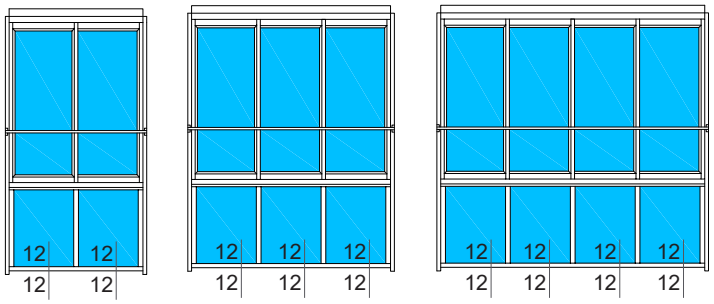
11-11-b



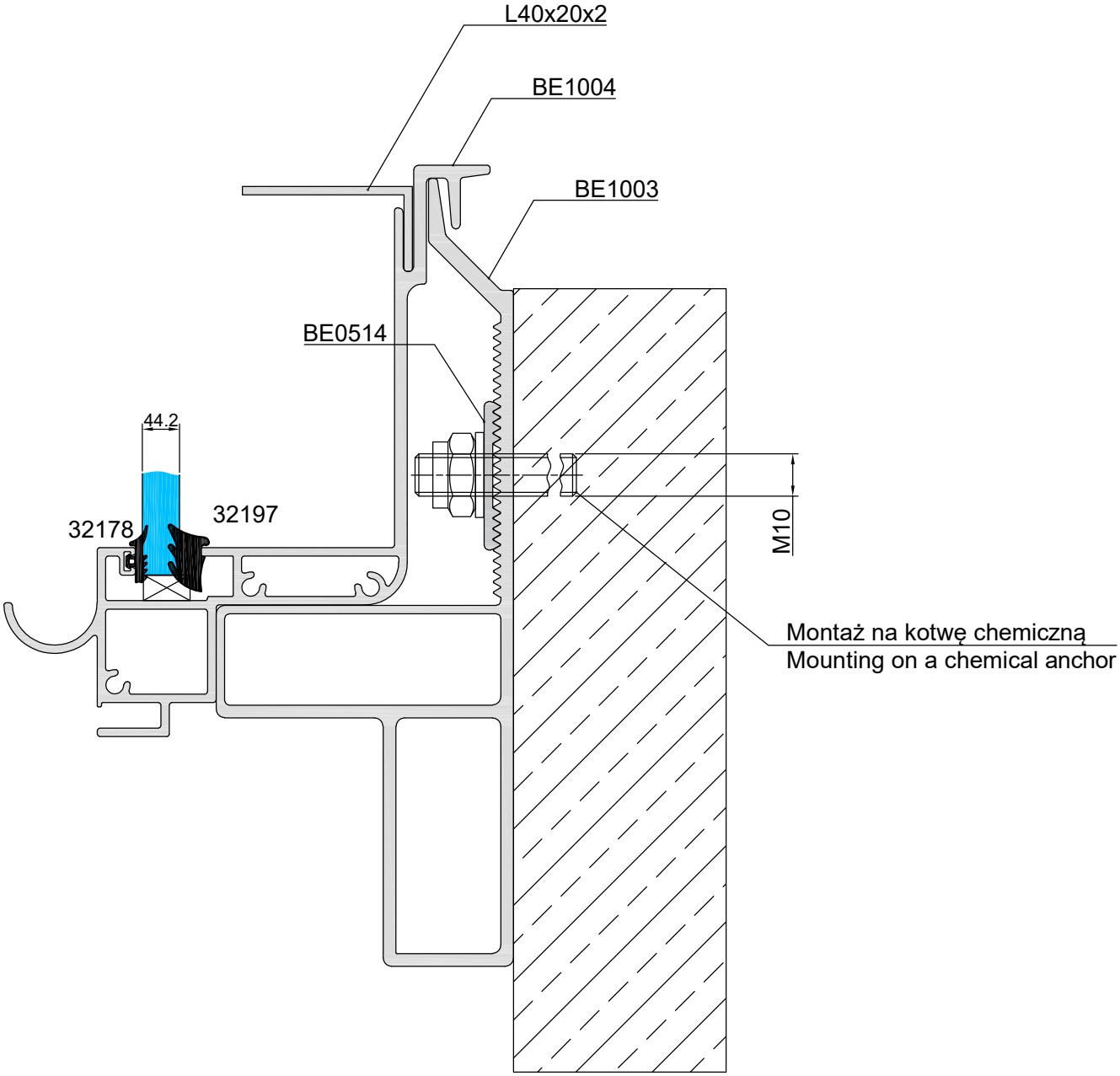
Uwaga: Możliwość regulacji wysokości wózka za pomocą klucza imbusowego
Note: Roller height adjustable with a Allen key

* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

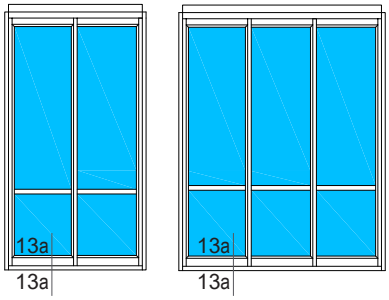
Skala
Scale
1:1.5



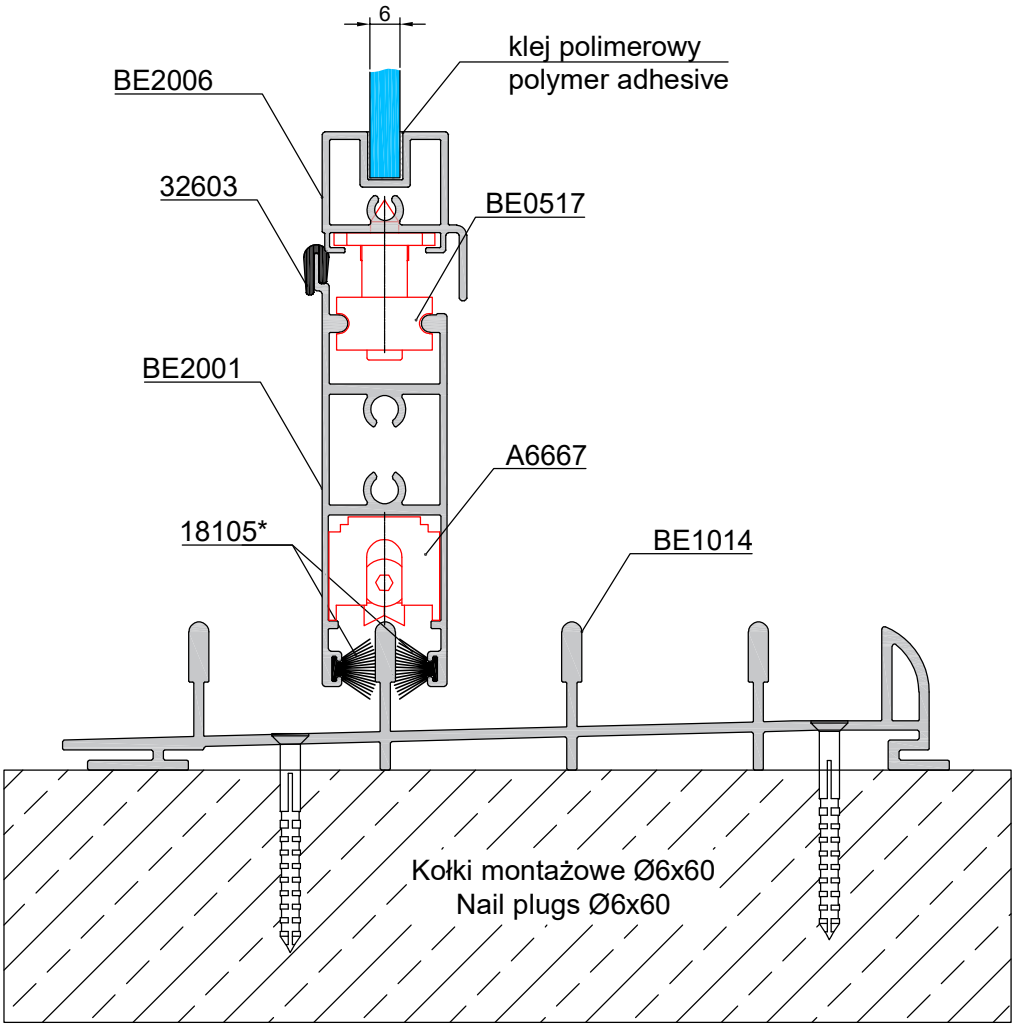
12-12



Skala
Scale
1:1.5



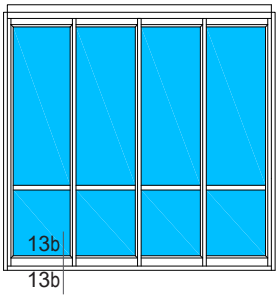
13-13-a



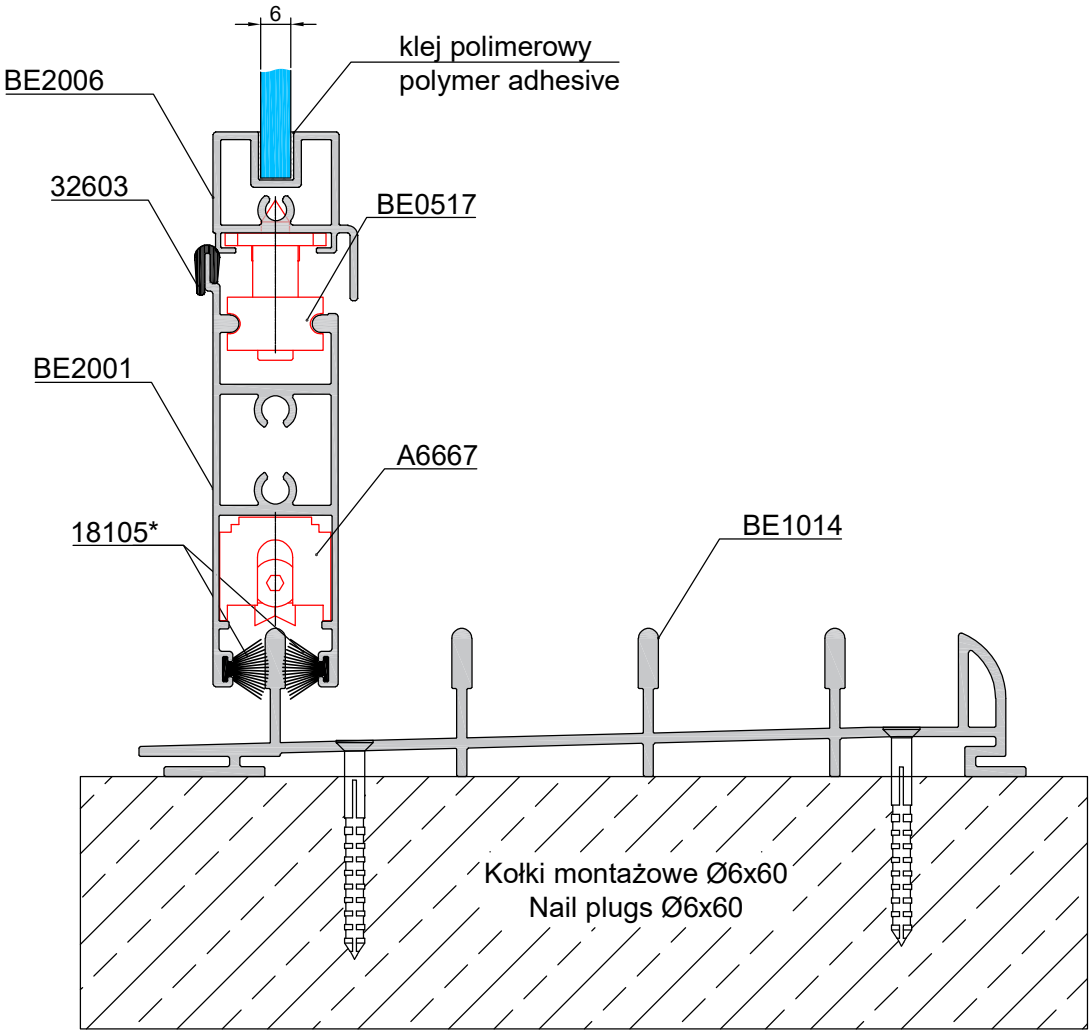
Uwaga: Możliwość regulacji wysokości wózka za pomocą klucza imbusowego
Note: Roller height adjustable with a Allen key

* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Skala
Scale
1:1.5



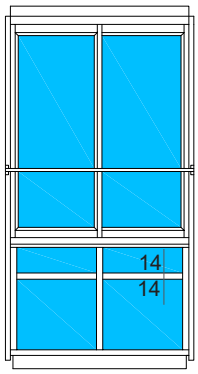
13-13-b



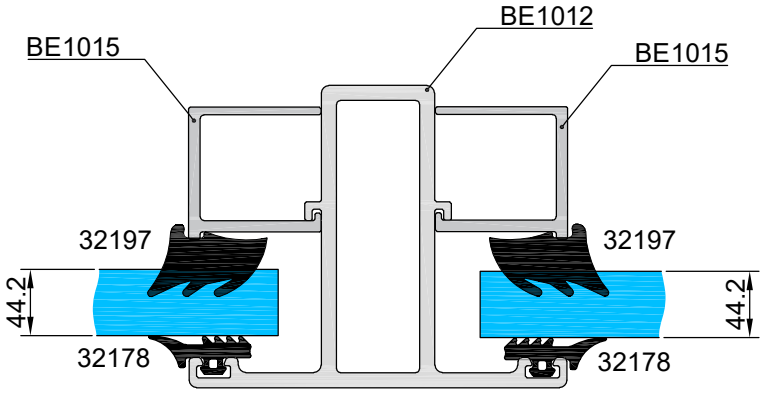
Uwaga: Możliwość regulacji wysokości wózka za pomocą klucza imbusowego
Note: Roller height adjustable with a Allen key

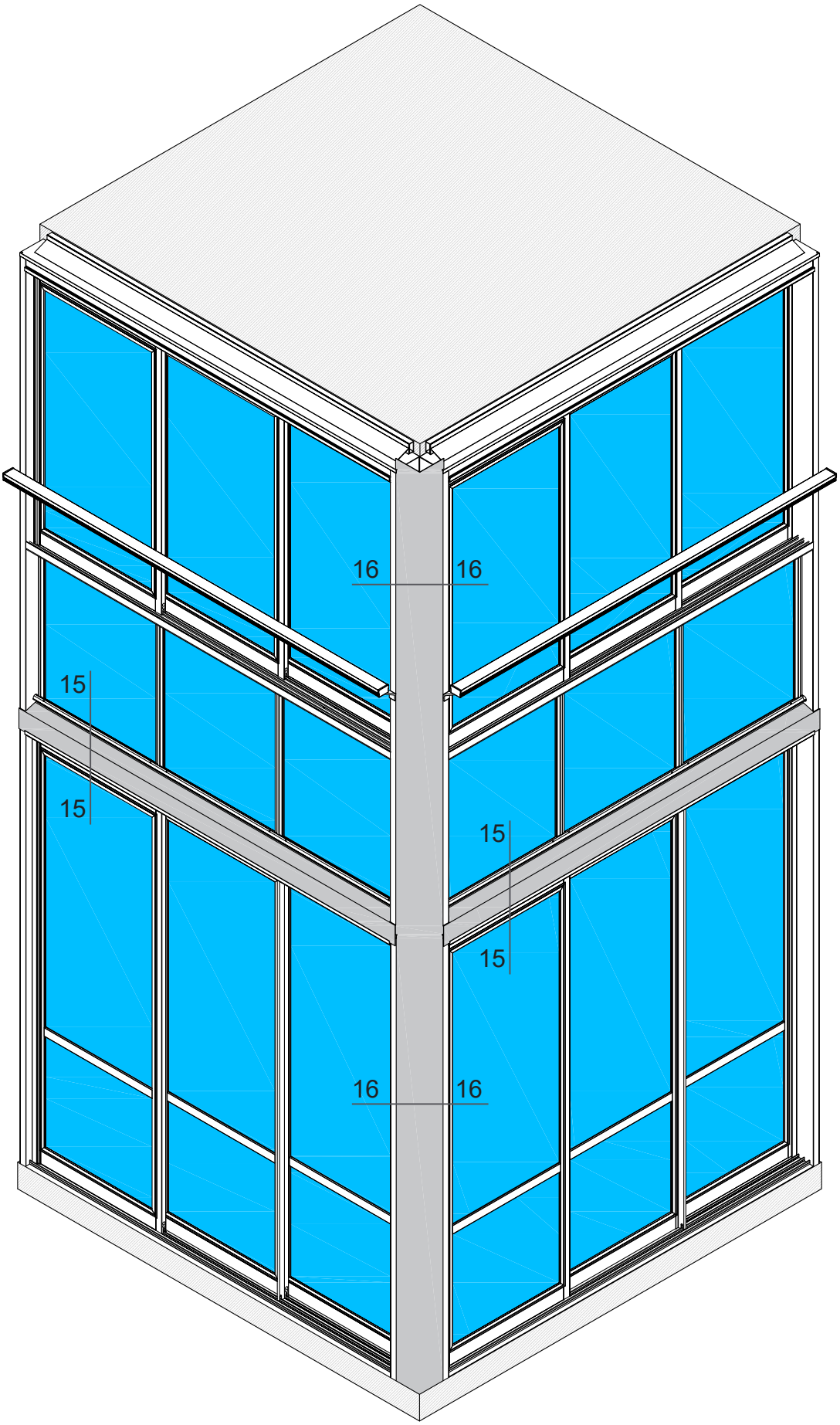
* Możliwość zastosowania jedynie uszczelki zewnętrznej
* Only the outer seal can be used

Skala
Scale
1:1



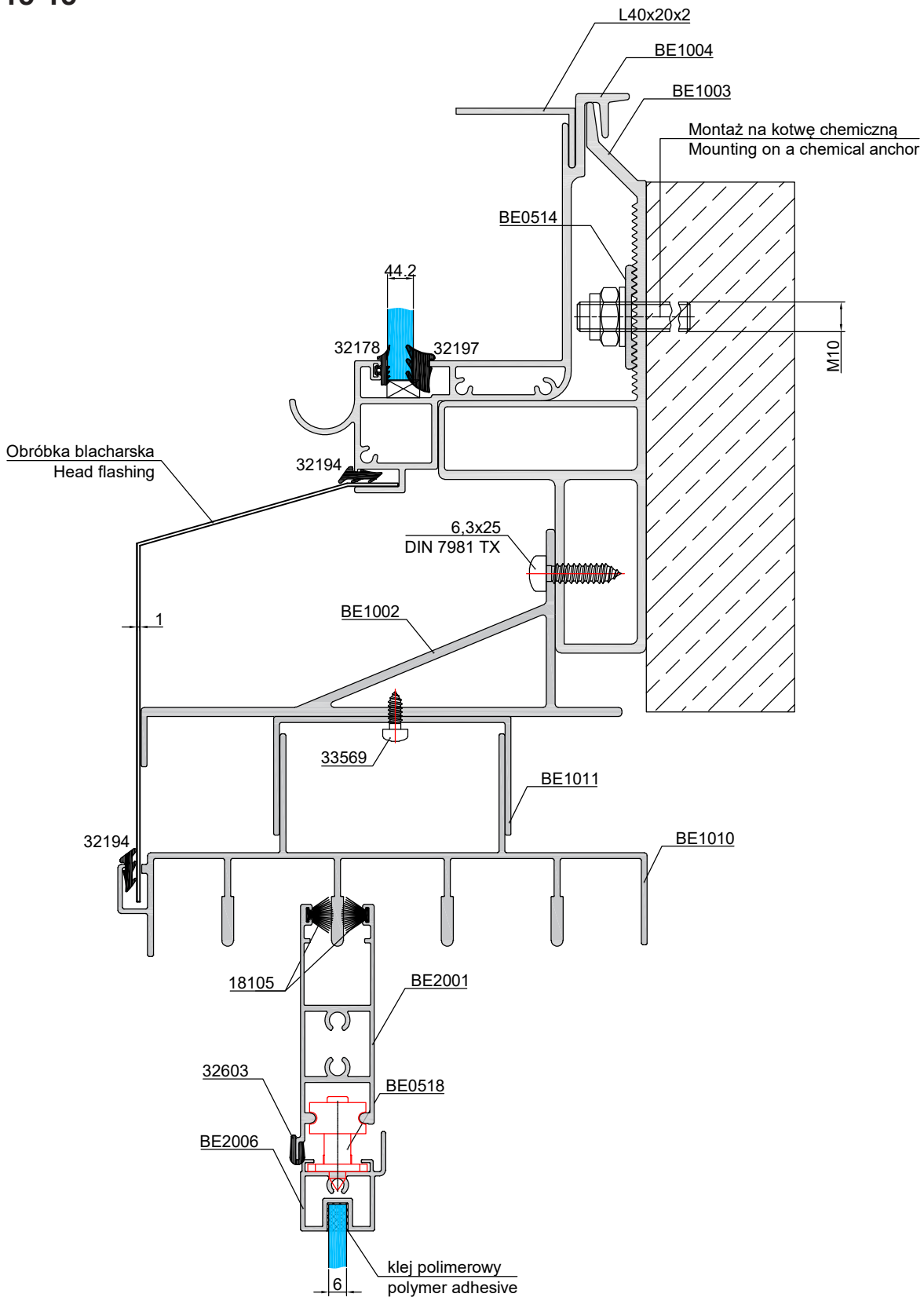
14-14




16
16
15
15
15
15
16
16

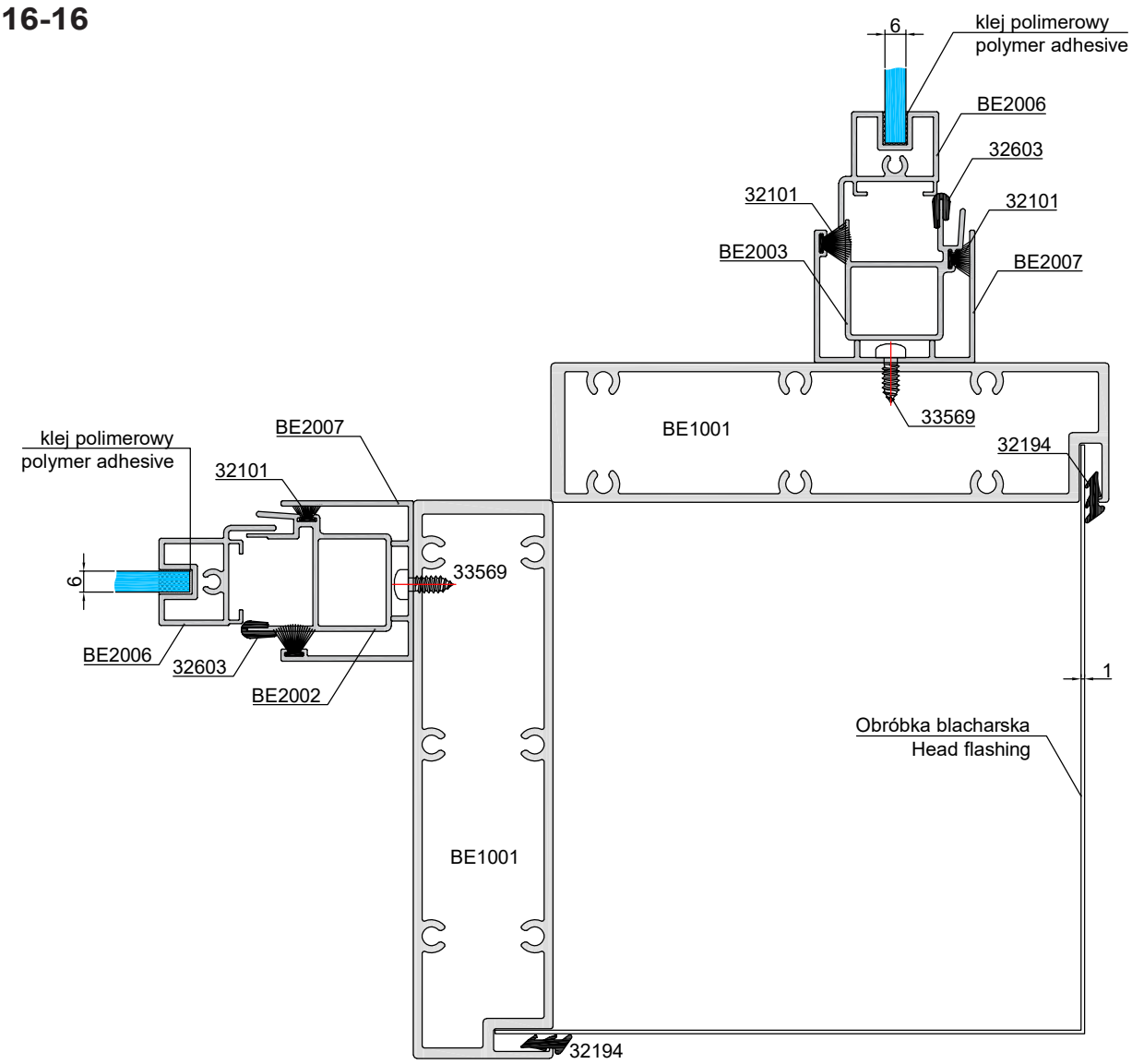
Skala
Scale
1:2

15-15



Skala
Scale
1:2

16-16



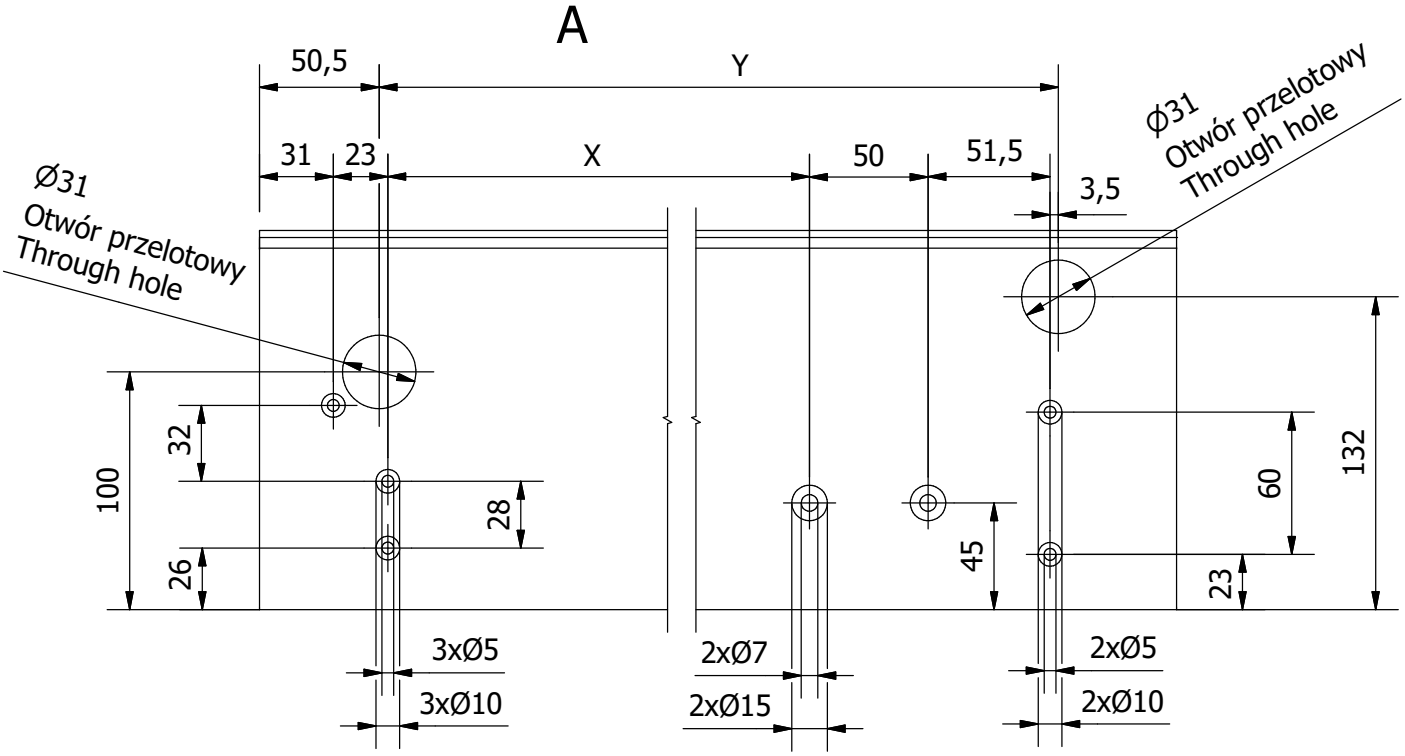
Notatki
Notes

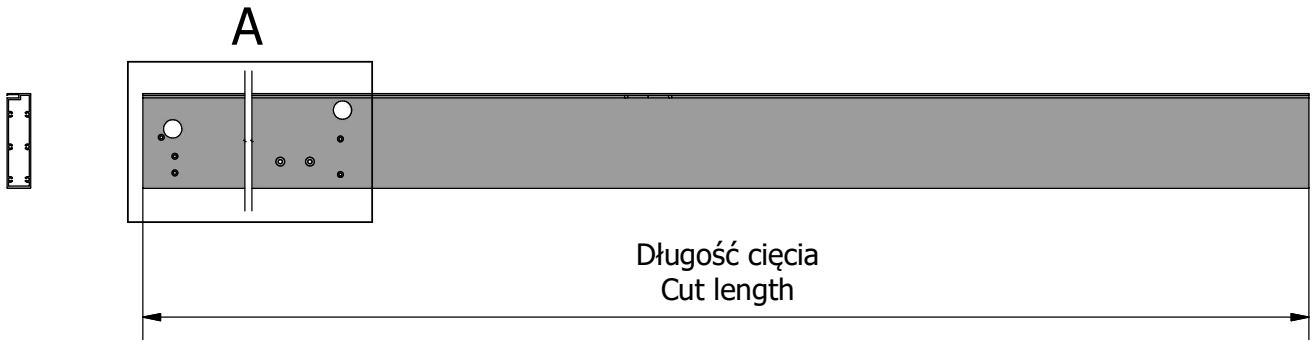
MORAD®
SYSTEMY ALUMINIOWE

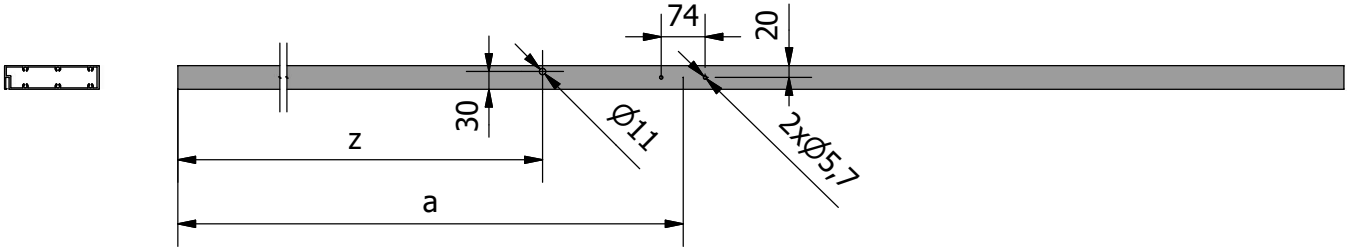
System BE-25

VI
Obróbka profili
Profiles working

Obróbka profilu BE1001 - Prawa strona z drenażem
Working of the BE1001 profile - Right side with dreinage

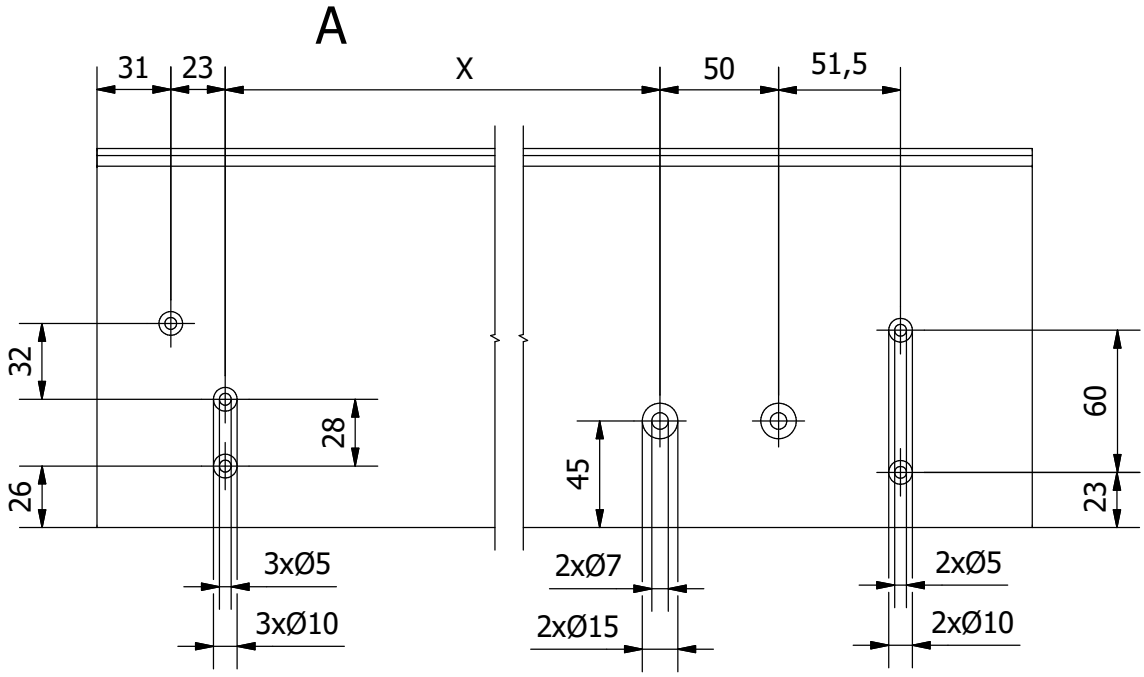


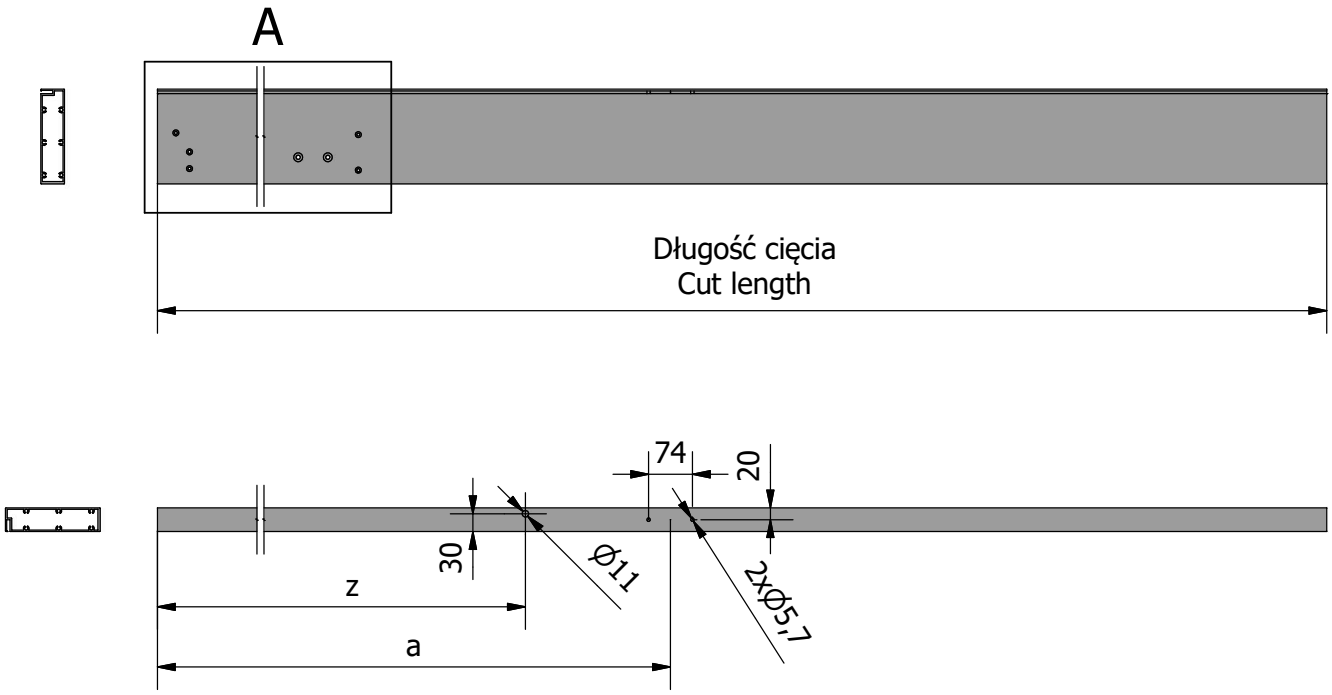




X= Wysokość słupka balustrady / The height of the railing post - 80,5
Y= Wysokość słupka balustrady / The height of the railing post + 28
z: Wysokość zamocowania poręczy / Handrail mounting height (Obrabiać w przypadku montażu poręczy / Working in the case of a handrail installation)
a: Wysokość zamocowania lameli / The height of the lamella (Obrabiać w przypadku montażu lameli / Working in the case of a lamella installation)

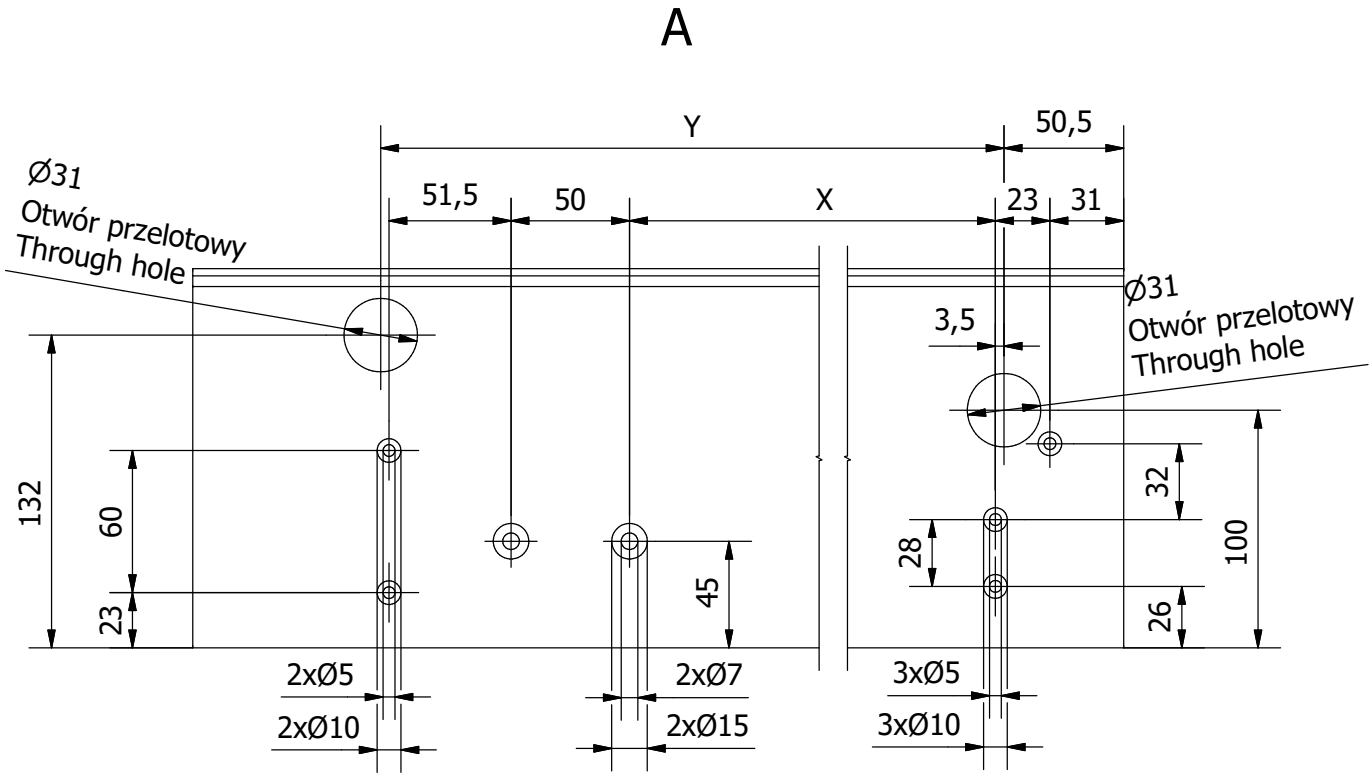
Obróbka profilu BE1001 - Prawa strona bez drenażu
Working of the BE1001 profile - Right side without dreinage

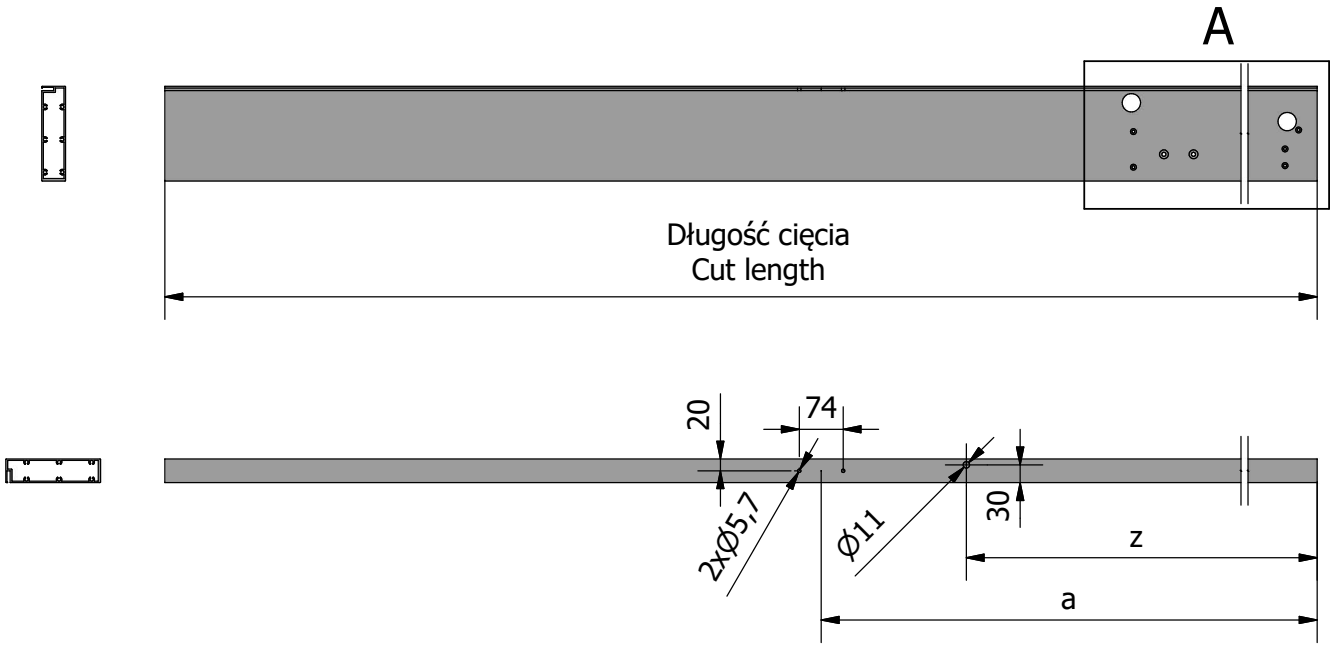




X= Wysokość słupka balustrady / The height of the railing post - 80,5
z: Wysokość zamocowania poręczy / Handrail mounting height (Obrabiać w przypadku montażu poręczy / Working in the case of a handrail installation)
a: Wysokość zamocowania lameli / The height of the lamella (Obrabiać w przypadku montażu lameli / Working in the case of a lamella installation)

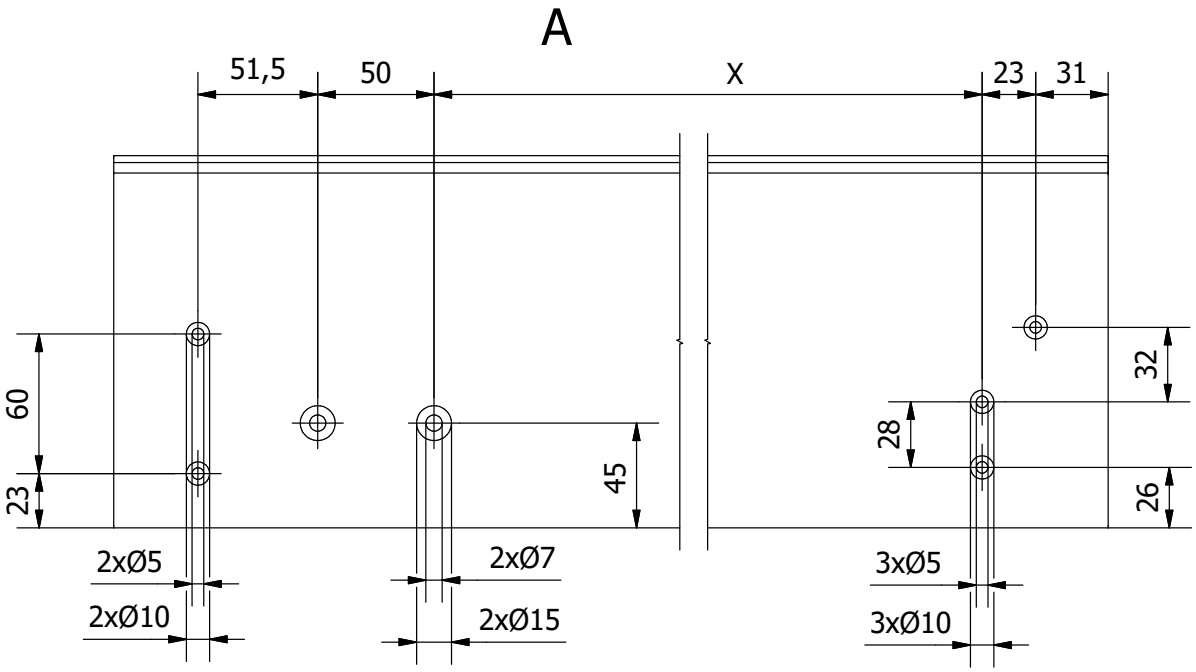
Obróbka profilu BE1001 - Lewa strona z drenażem
Working of the BE1001 profile - Left side with dreinage

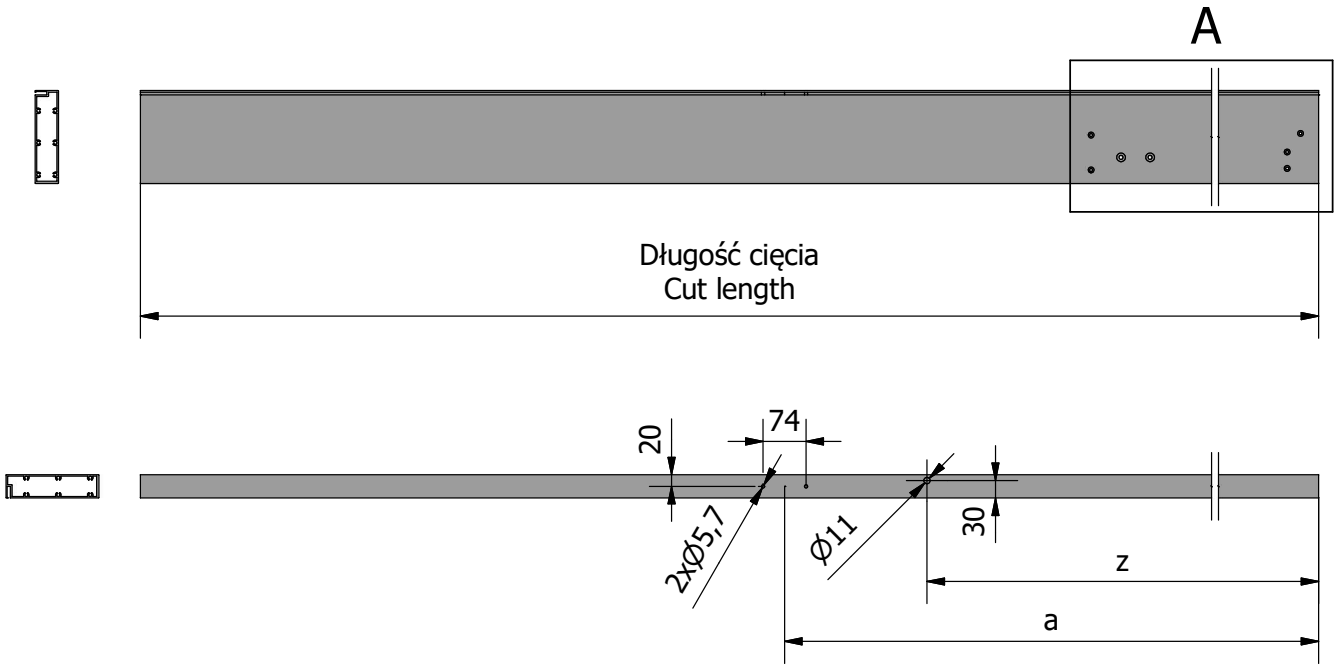




X= Wysokość słupka balustrady / The height of the railing post - 80,5
Y= Wysokość słupka balustrady / The height of the railing post + 28
z: Wysokość zamocowania poręczy / Handrail mounting height (Obrabiać w przypadku montażu poręczy / Working in the case of a handrail installation)
a: Wysokość zamocowania lameli / The height of the lamella (Obrabiać w przypadku montażu lameli / Working in the case of a lamella installation)

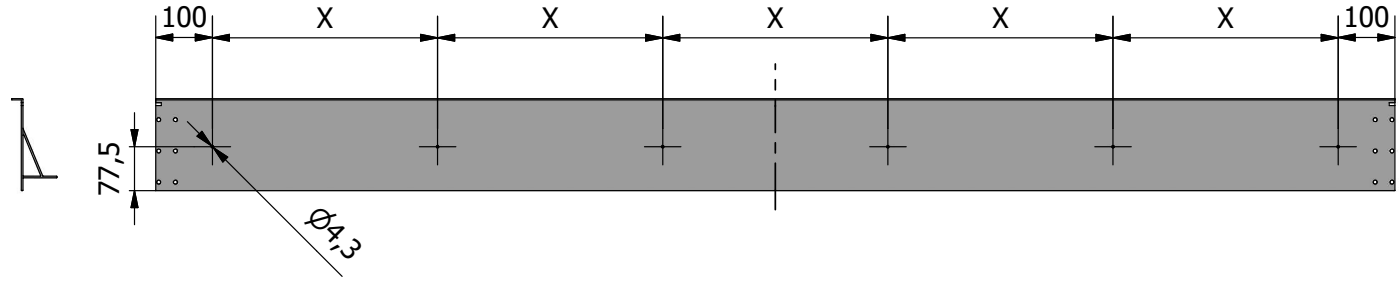
Obróbka profilu BE1001 - Lewa strona bez drenażu
Working of the BE1001 profile - Left side without dreinage

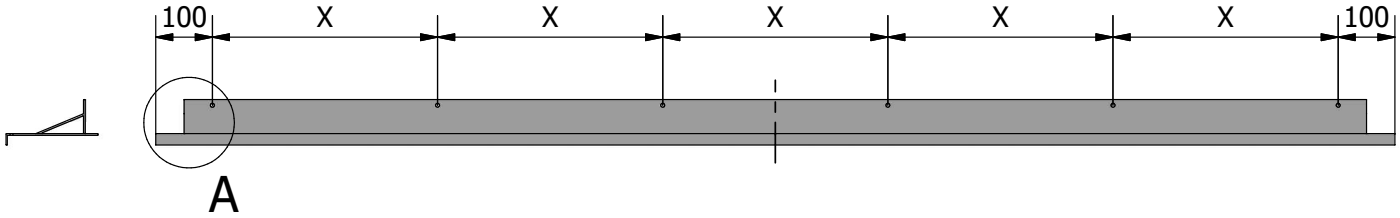


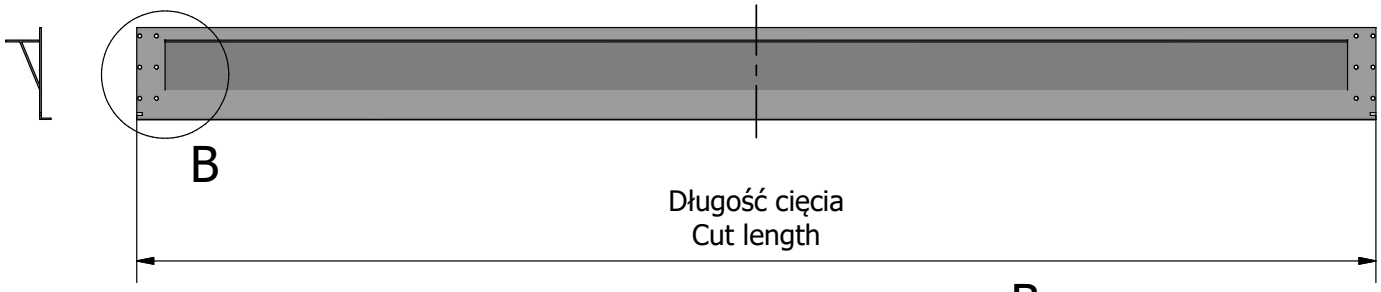


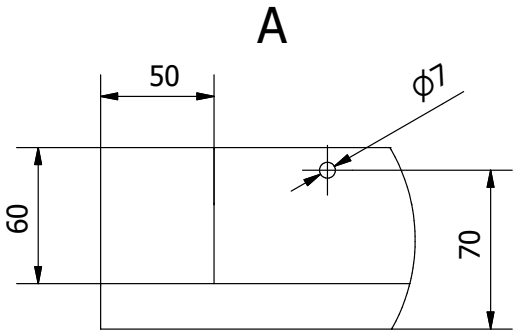
X= Wysokość słupka balustrady / The height of the railing post - 80,5
z: Wysokość zamocowania poręczy / Handrail mounting height (Obrabiać w przypadku montażu poręczy / Working in the case of a handrail installation)
a: Wysokość zamocowania lameli / The height of the lamella (Obrabiać w przypadku montażu lameli / Working in the case of a lamella installation)

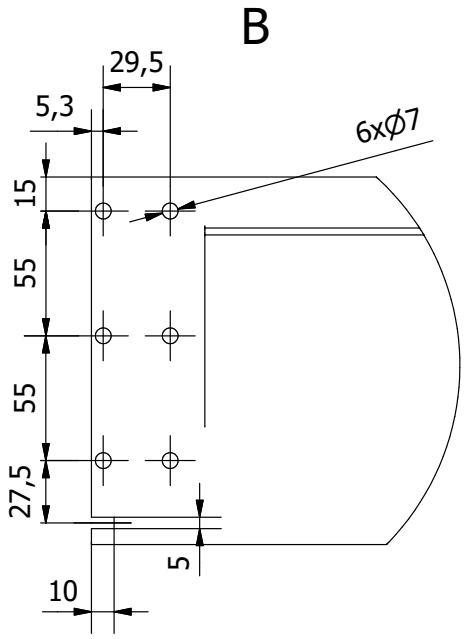
Obróbka profilu BE1002
Working of the BE1002 profile





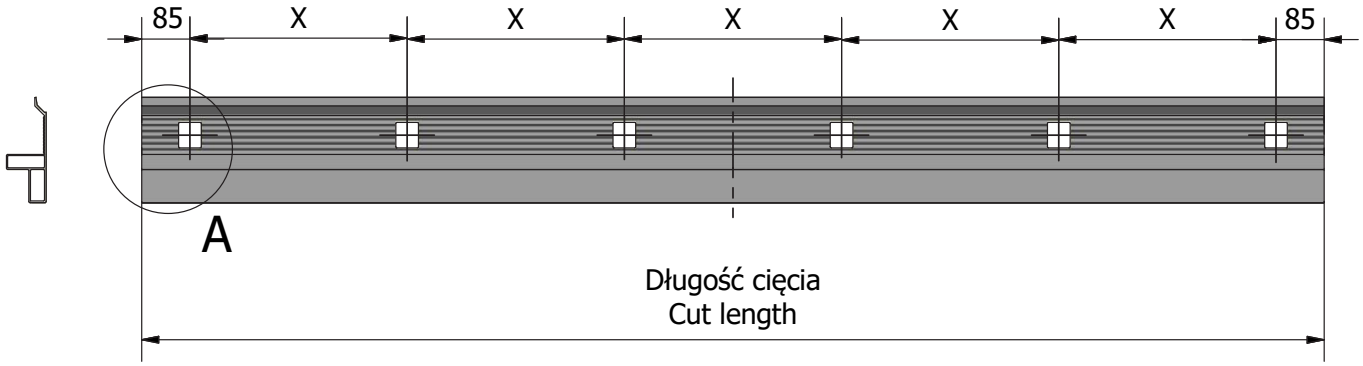


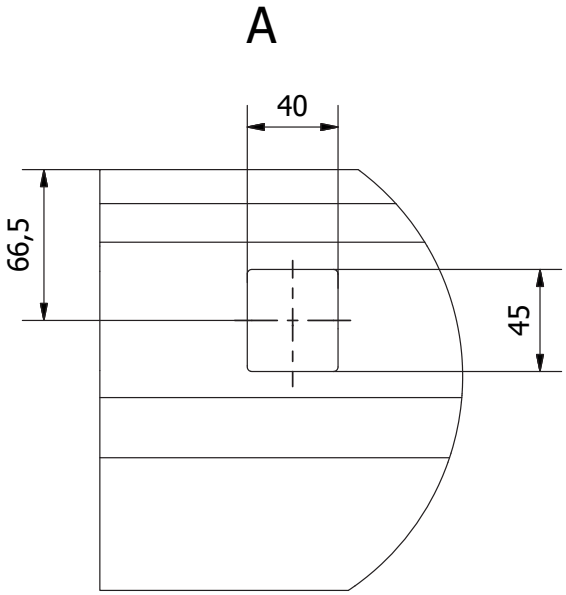




Długość profilu Profile length	Ilość otworów (X) Number of holes (X)
< 1500	4
1500-2500	6
2500-3500	8
3500-4500	10
> 4500	12

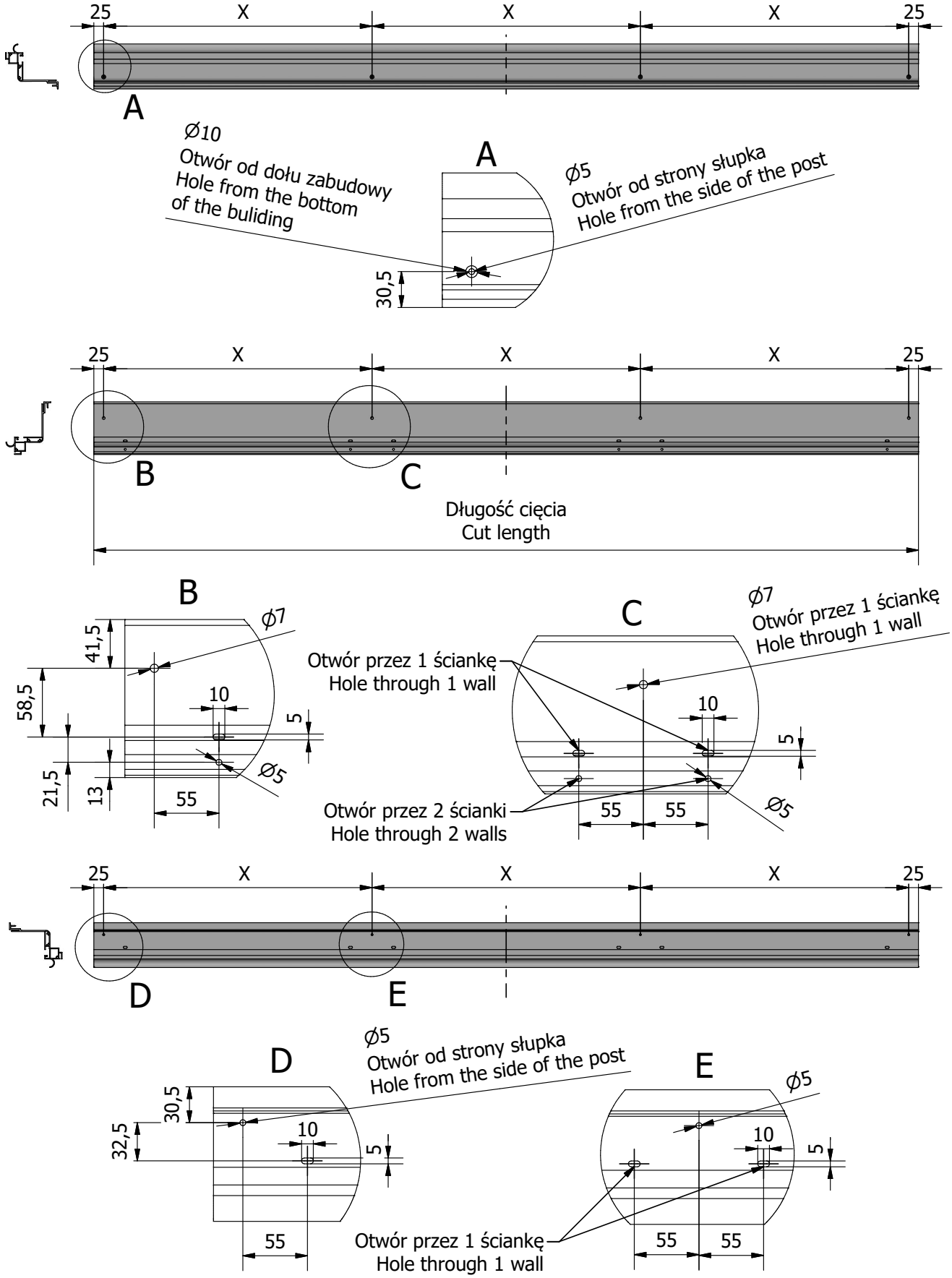
Obróbka profilu BE1003
Working of the BE1003 profile





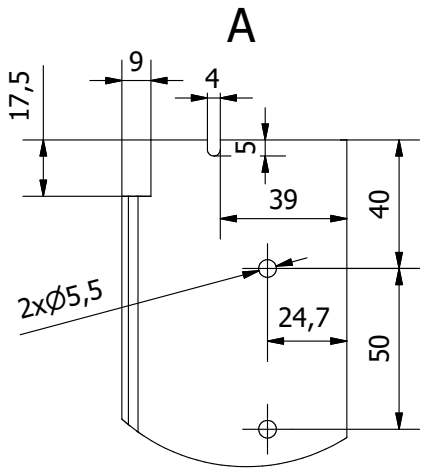
Długość profilu Profile length	Ilość otworów (X) Number of holes (X)
< 2000	4
2000-4000	6
> 4000	8

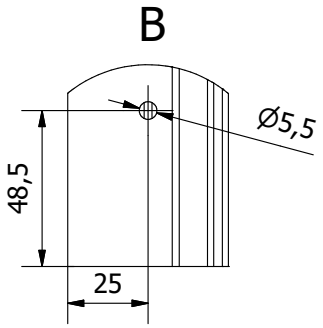
Obróbka profilu BE1004
Working of the BE1004 profile

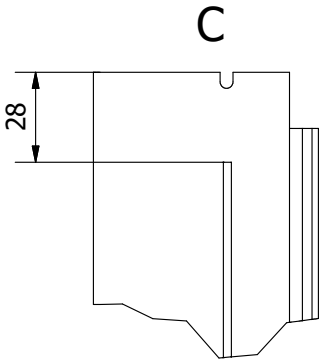


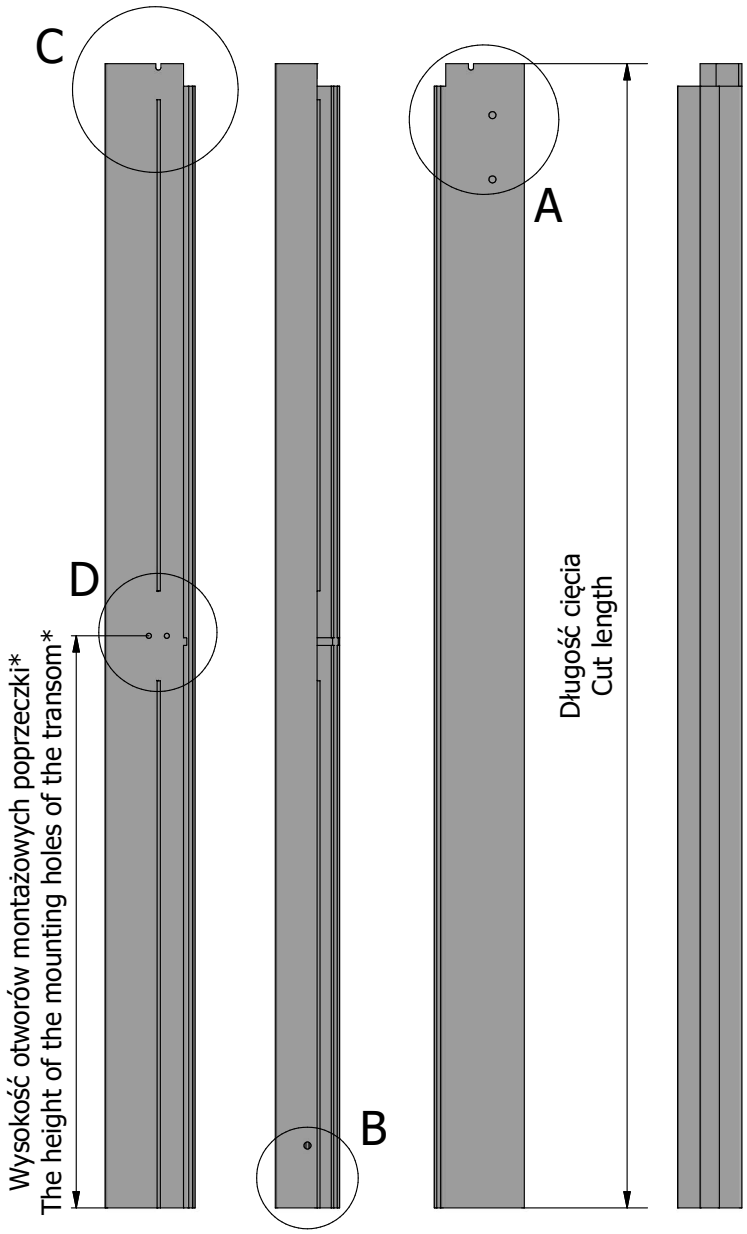
Uwaga: Ilość otworów (X) zgodna z rozstawem słupków
Note: Number of holes (X) according to the spacing of posts

Obróbka profilu BE1005 - Prawa strona
Working of the BE1005 profile - Right side



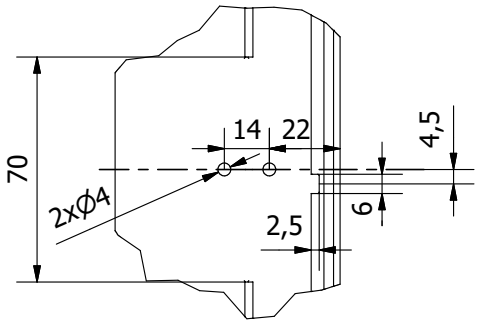


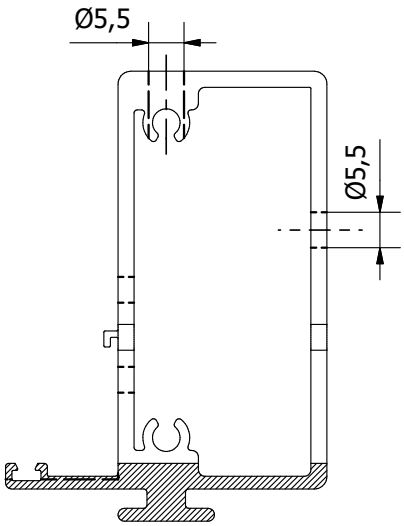


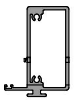


D

Obróbka pod poprzeczkę*
Working for transom*

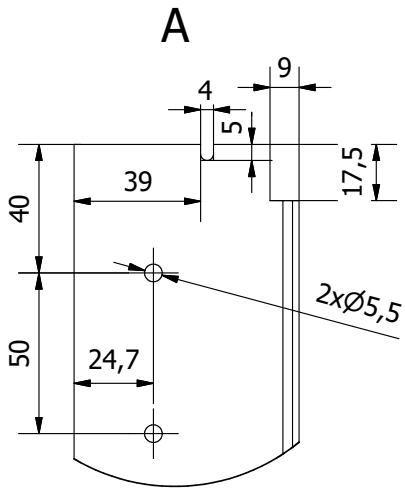


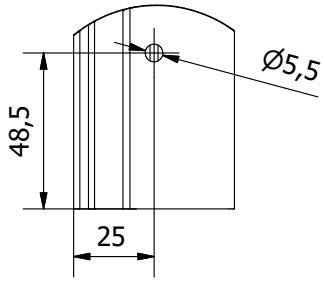


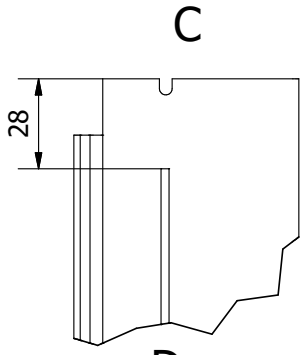


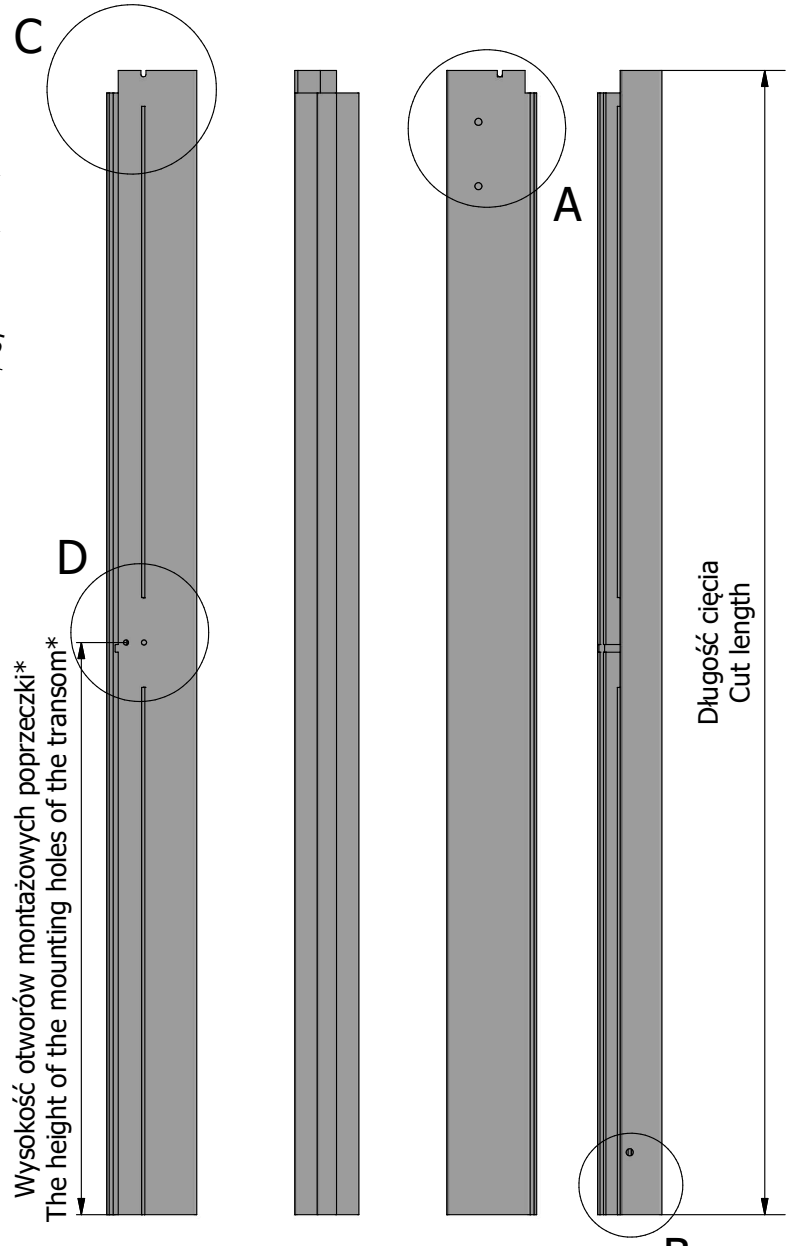
* Obrabiać tylko w przypadku montażu poprzeczki
* Working only when installing the transom

Obróbka profilu BE1005 - Lewa strona
Working of the BE1005 profile - Left side

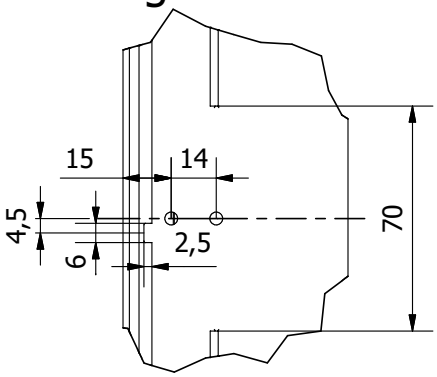


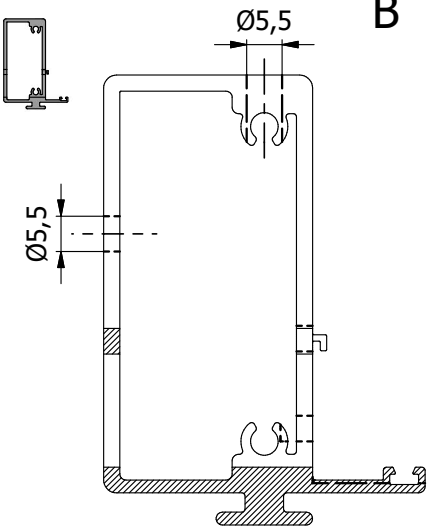






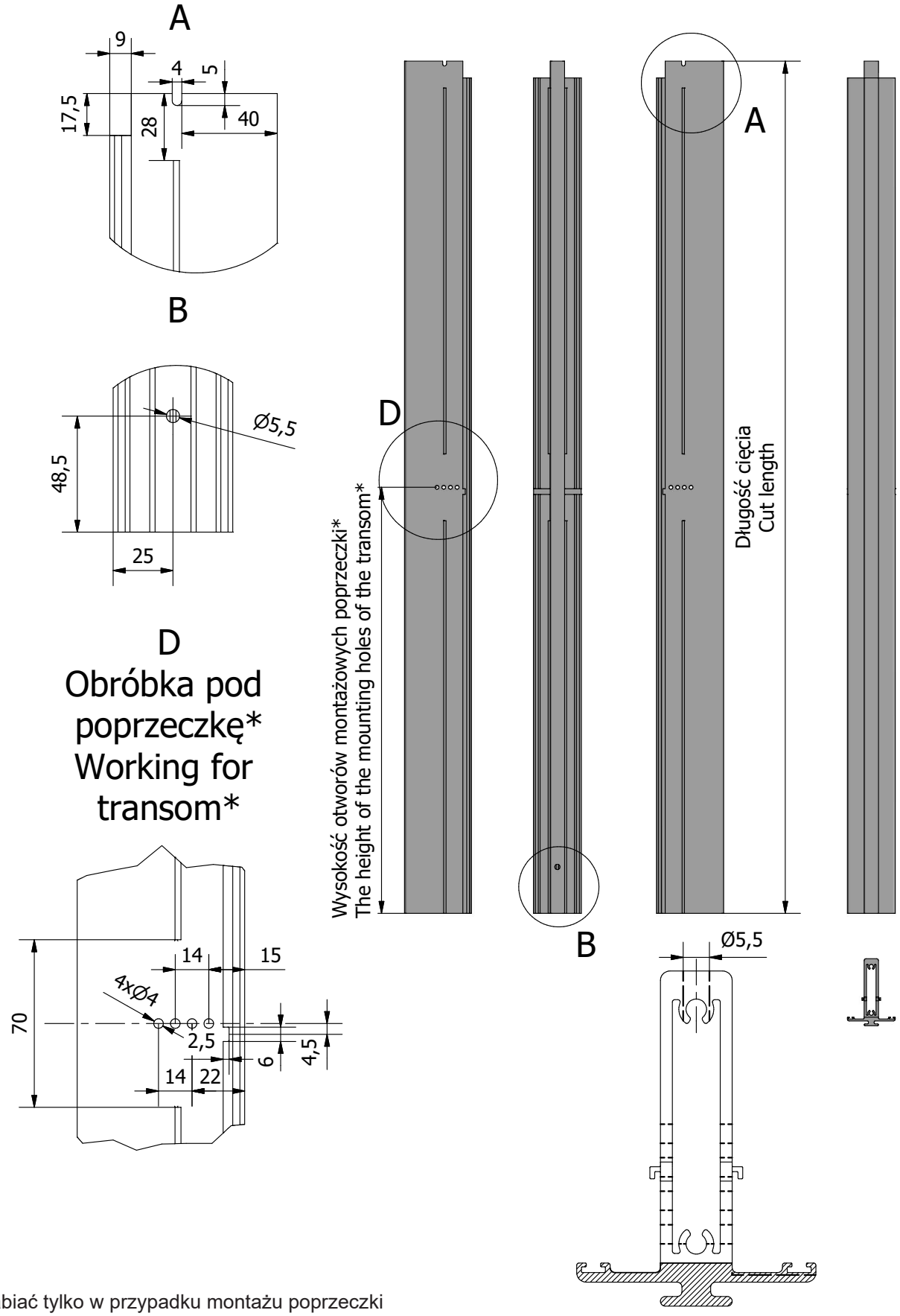
Obróbka pod poprzeczkę*
Working for transom*





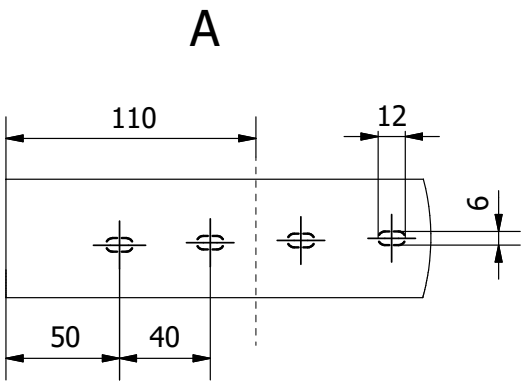
* Obrabiać tylko w przypadku montażu poprzeczki
* Working only when installing the transom

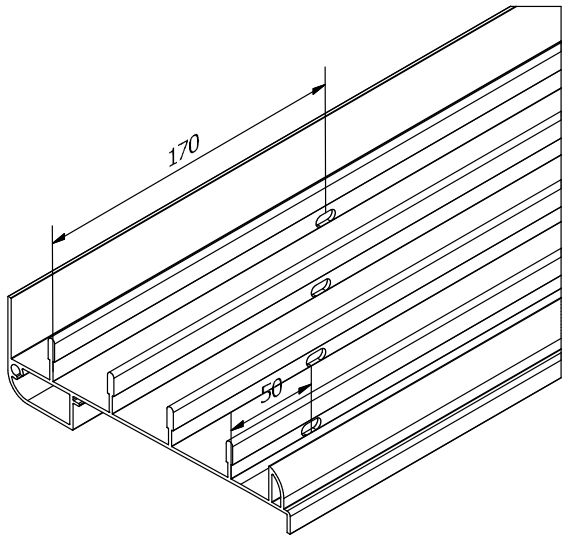
Obróbka profilu BE1006
Working of the BE1006 profile

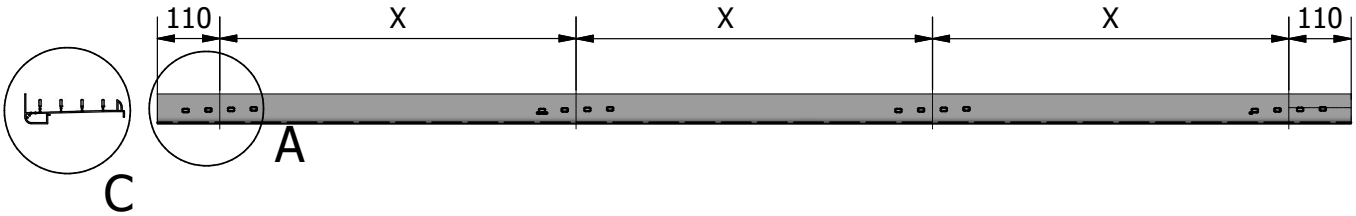


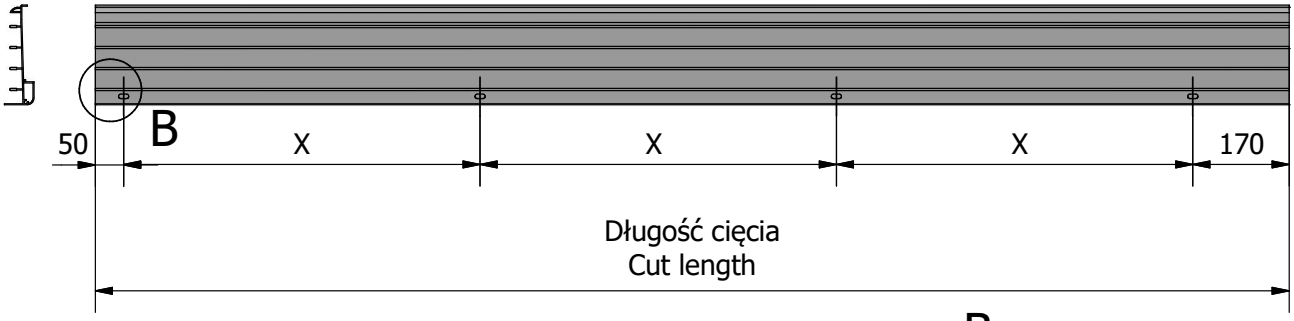
* Obrabiać tylko w przypadku montażu poprzeczki
* Working only when installing the transom

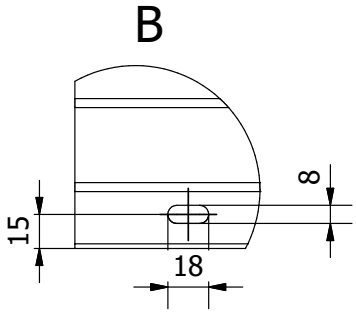
Obróbka profilu BE1009
Working of the BE1009 profile

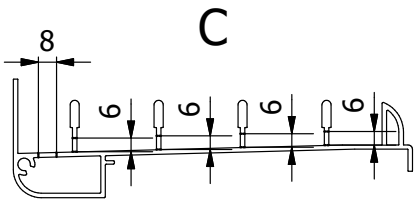






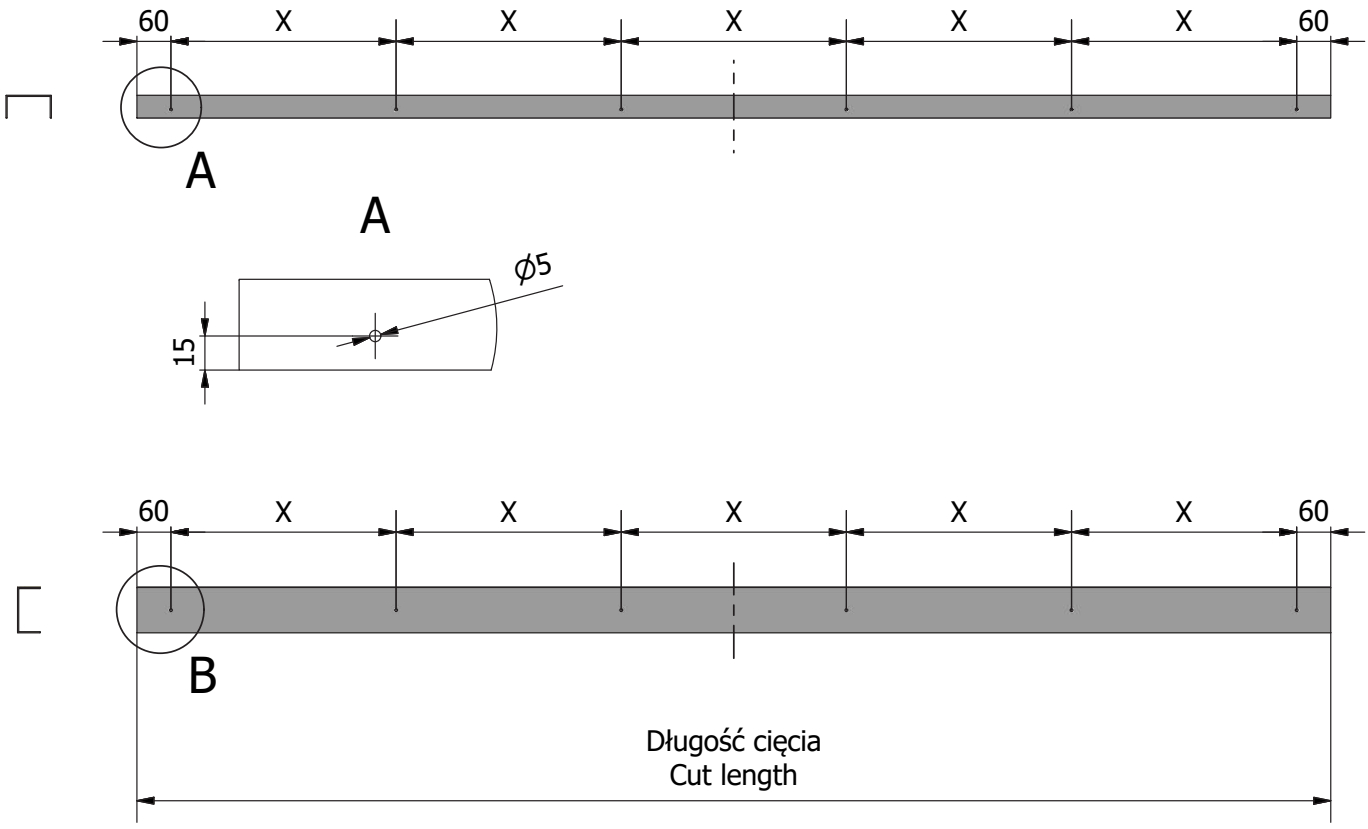


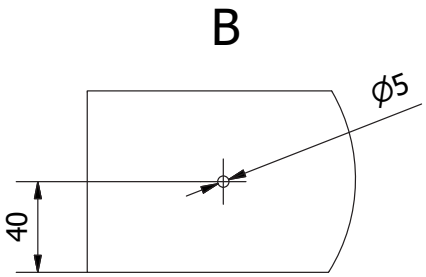




Długość profilu Profile length	Ilość otworów (X) Number of holes (X)
< 1500	4
1500-2500	6
2500-3500	8
3500-4500	10
> 4500	12

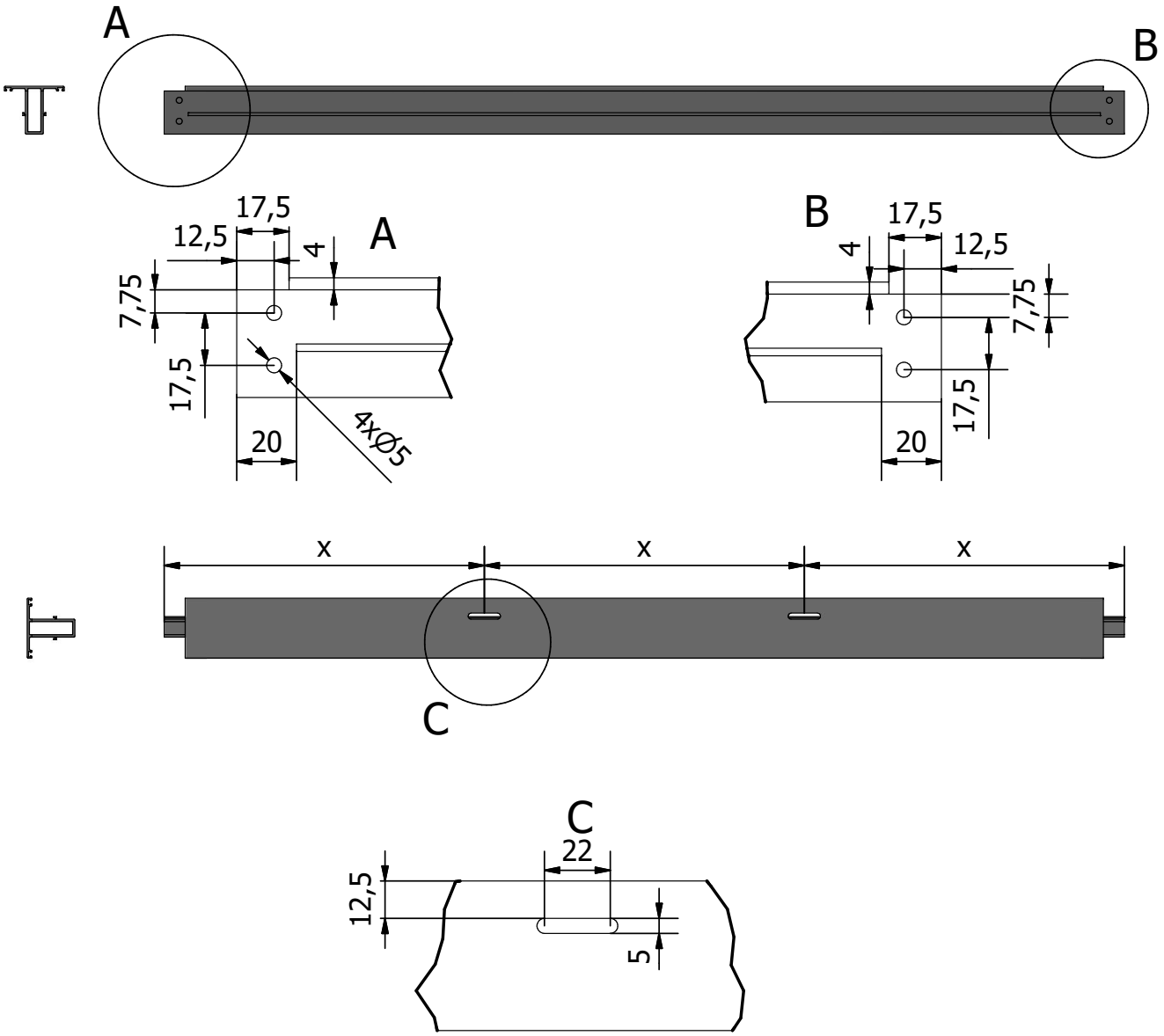
Obróbka profilu BE1011
Working of the BE1011 profile





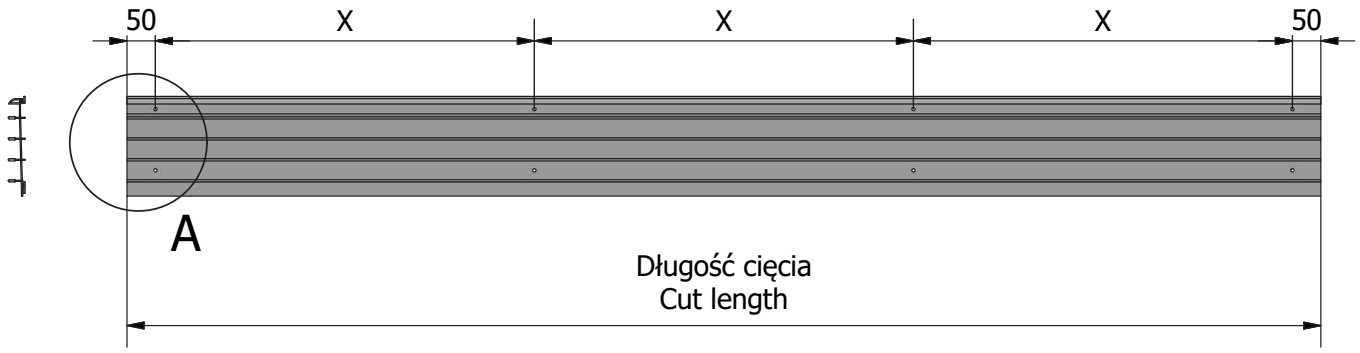
Uwaga: Otworowanie (X) zgodne z obróbką w profilu BE1002
Note: Working for holes (X) according to processing in profile BE1002

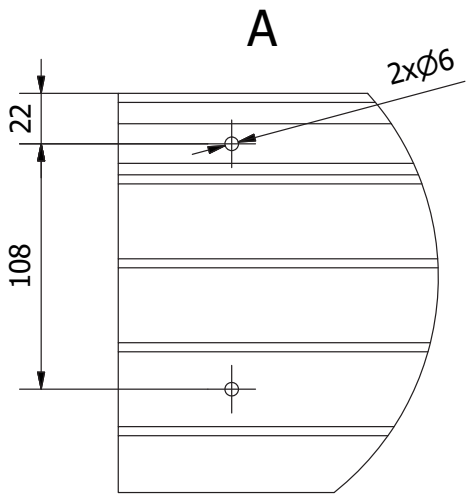
Obróbka profilu BE1012
Working of the BE1012 profile



Uwaga: Niezależnie od długości wykonać 2 otwory odwadniające
Note: Make 2 drainage holes regardless of the length

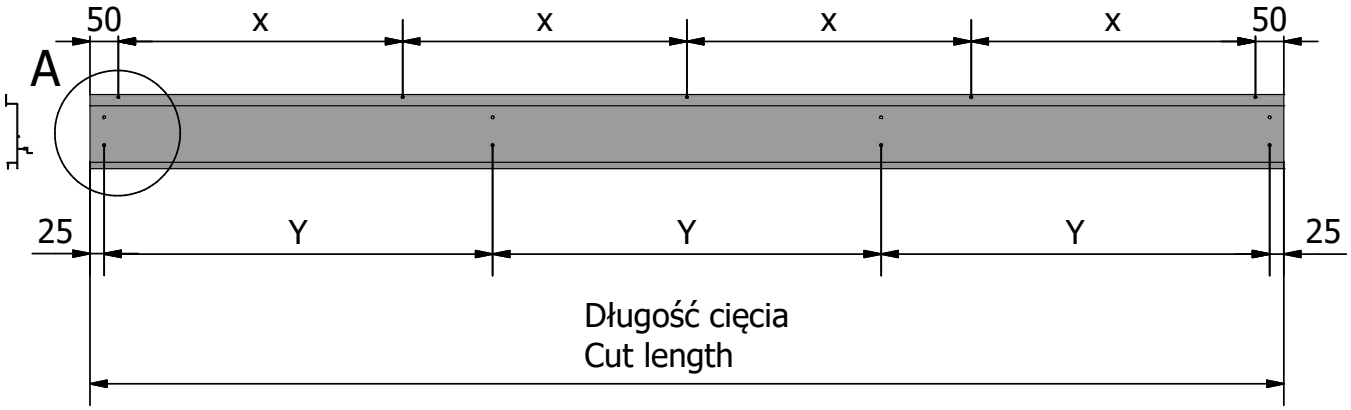
Obróbka profilu BE1014
Working of the BE1014 profile

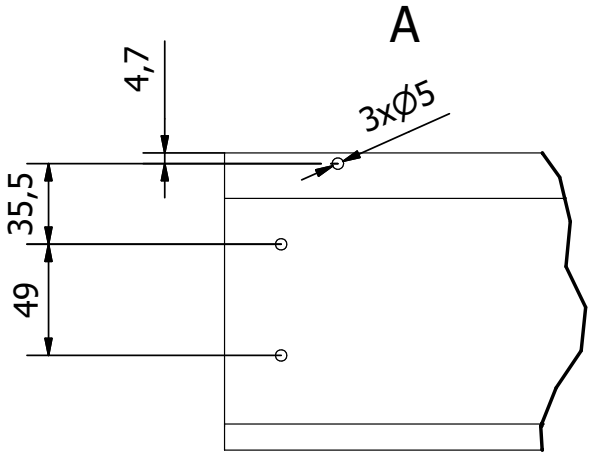




Długość profilu Profile length	Ilość otworów (X) Number of holes (X)
< 2000	4
2000-4000	6
> 4000	8

Obróbka profilu BE1016
Working of the BE1016 profile

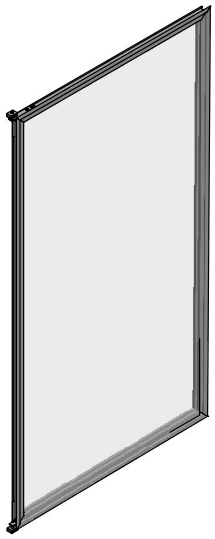


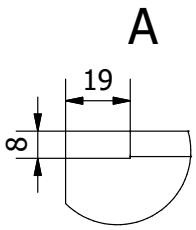


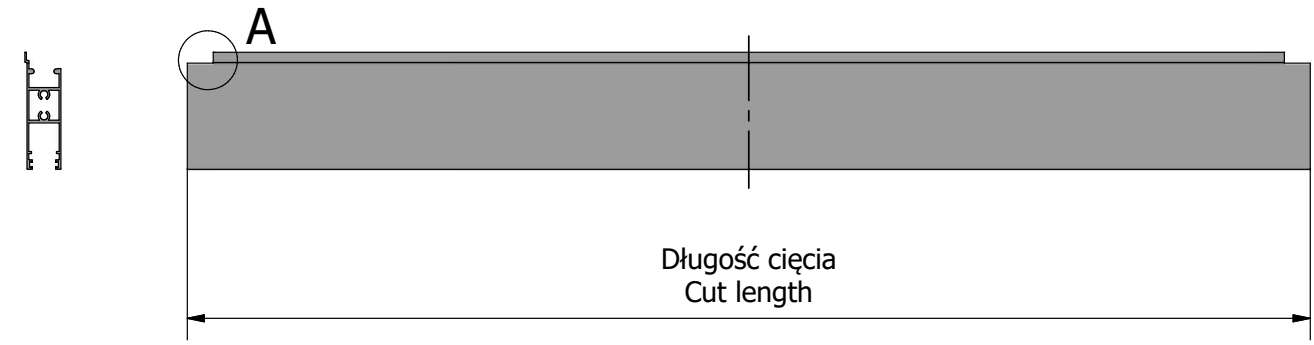
Długość profilu Profile length	Ilość otworów (X) Number of holes (X)
< 1500	4
1500-2500	6
2500-3500	8
3500-4500	10
> 4500	12

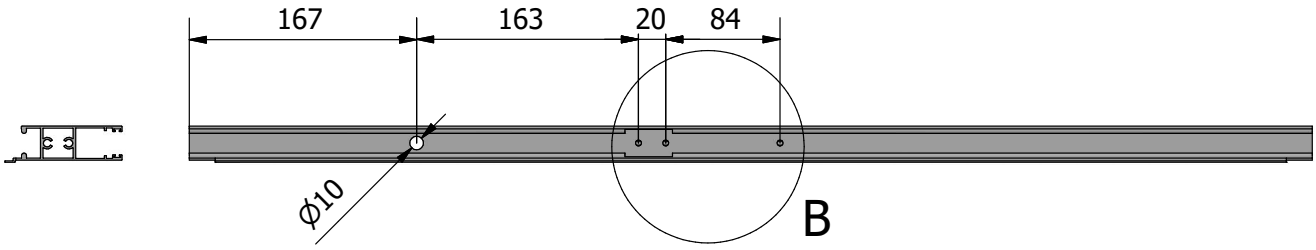
Uwaga: Ilość otwórów (Y) zależna od ilości słupków
Note: The number of holes (Y) depends on the number of posts

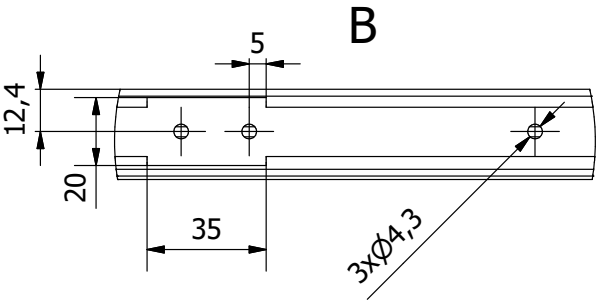
Obróbka profilu BE2001 - Profil górny
Working of the BE2001 profile - Top profile



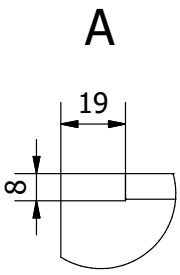


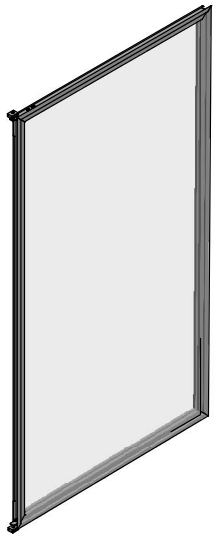


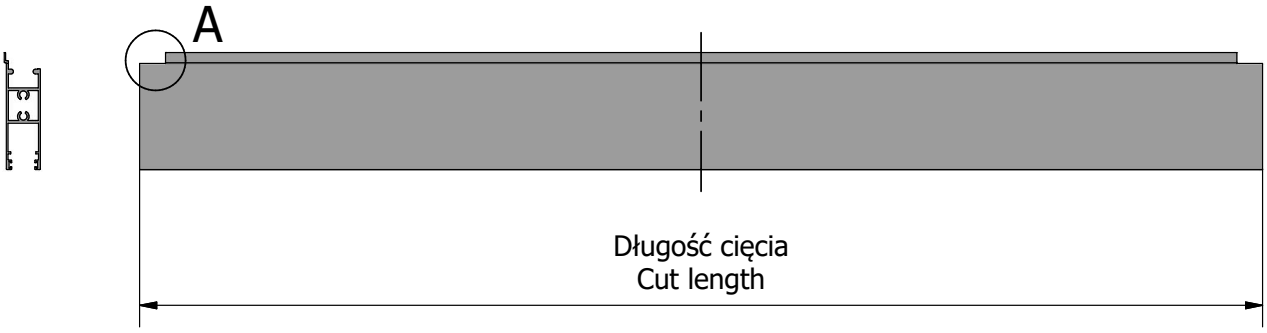


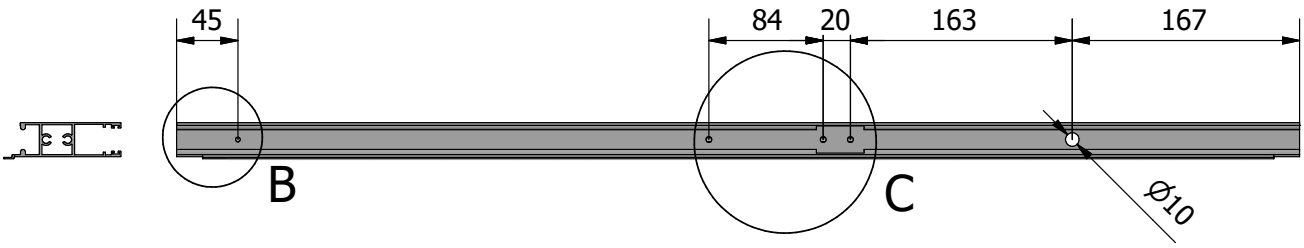


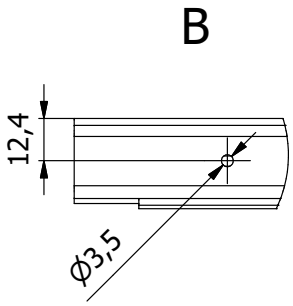
Obróbka profilu BE2001 - Profil dolny
Working of the BE2001 profile - Bottom profile

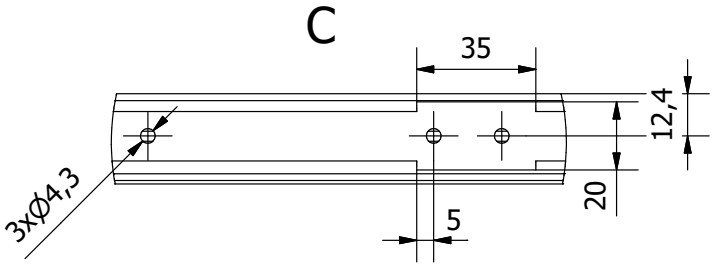




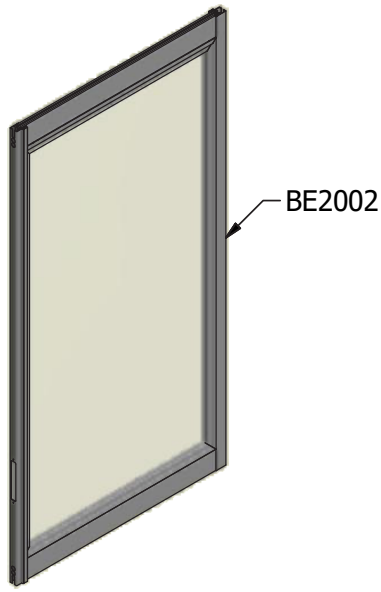


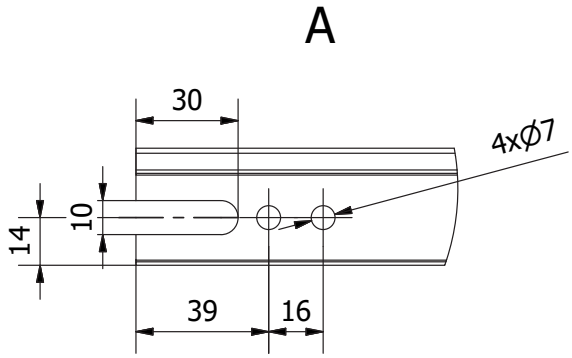


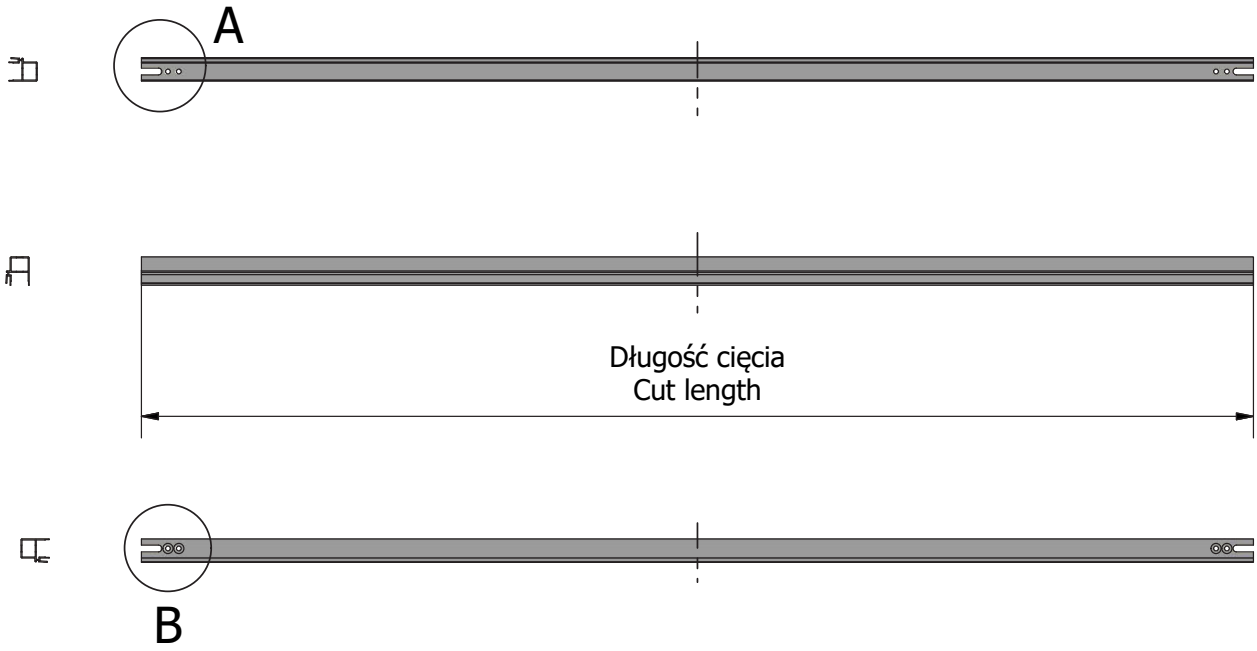


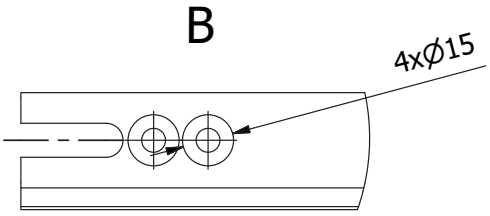


Obróbka profilu BE2002 zabudowy balkonu
Working of the BE2002 profile of the balcony

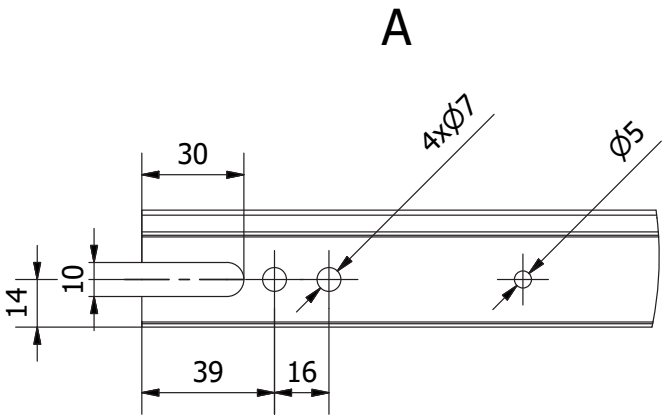


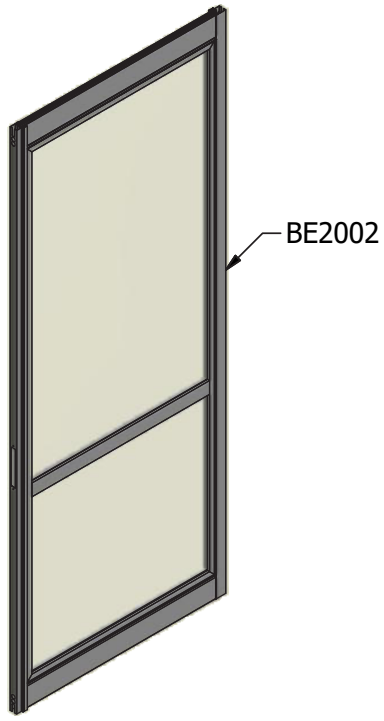


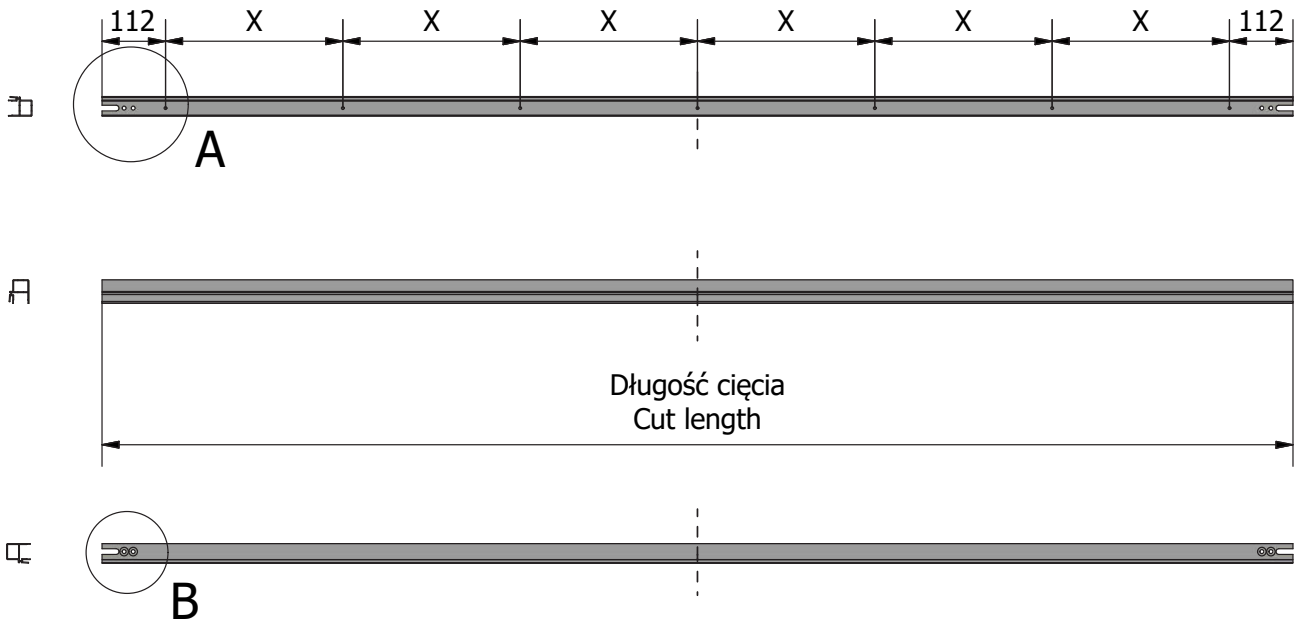


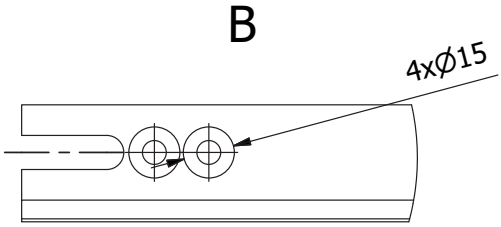


Obróbka profilu BE2002 zabudowy tarasu
Working of the BE2002 profile of the terrace



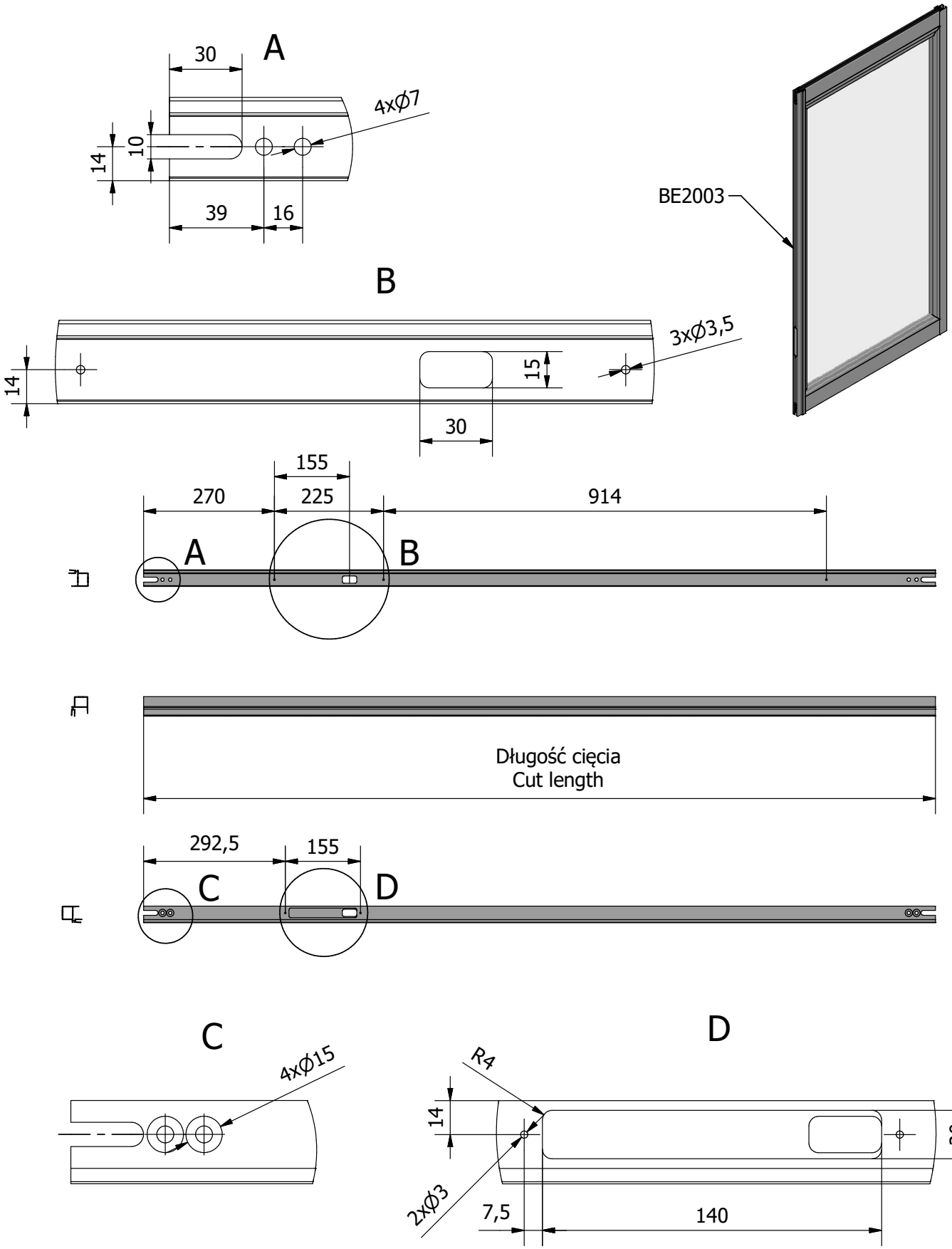




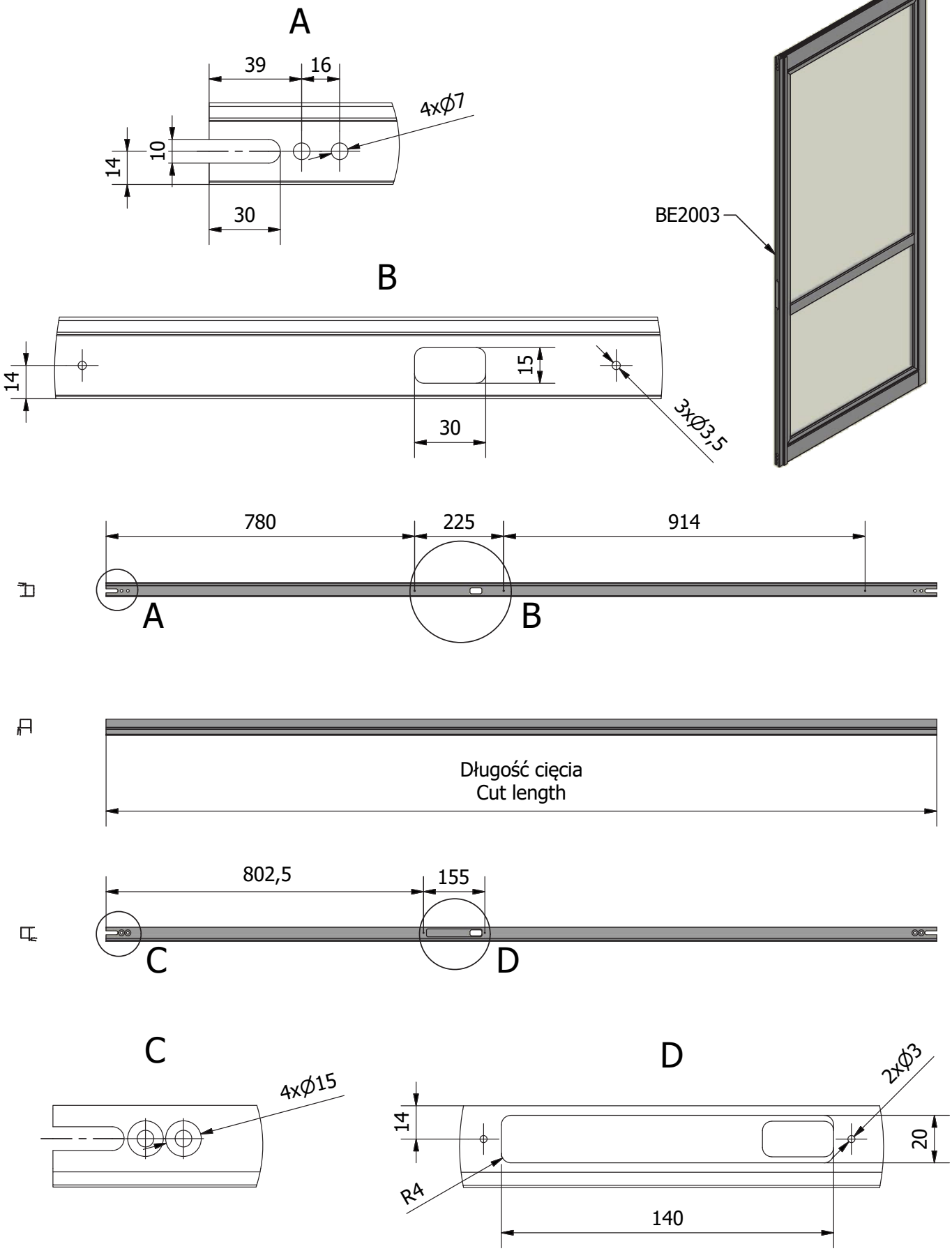


Długość profilu Profile length	Ilość otworów (X) number of holes (X)
< 2100	6
2100-2600	7
> 2600	8

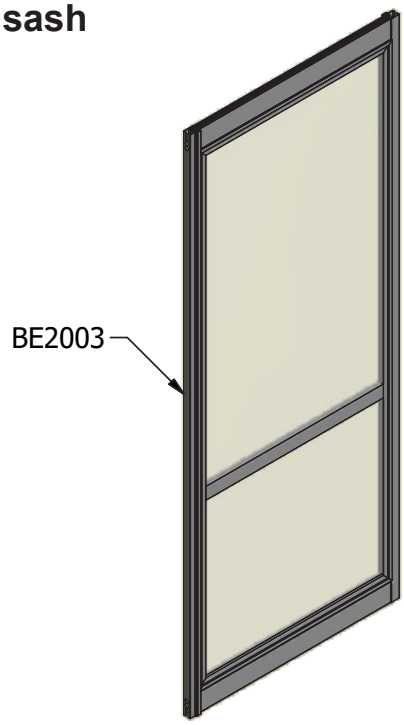
Obróbka profilu BE2003 zabudowy balkonu
Working of the BE2003 profile of the balcony

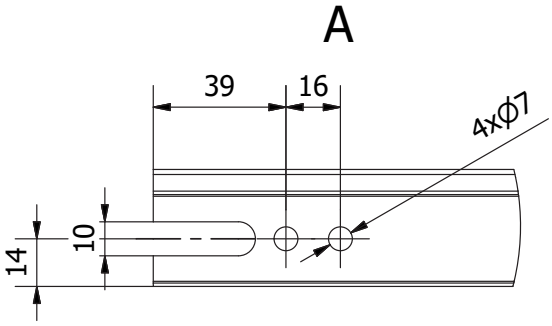


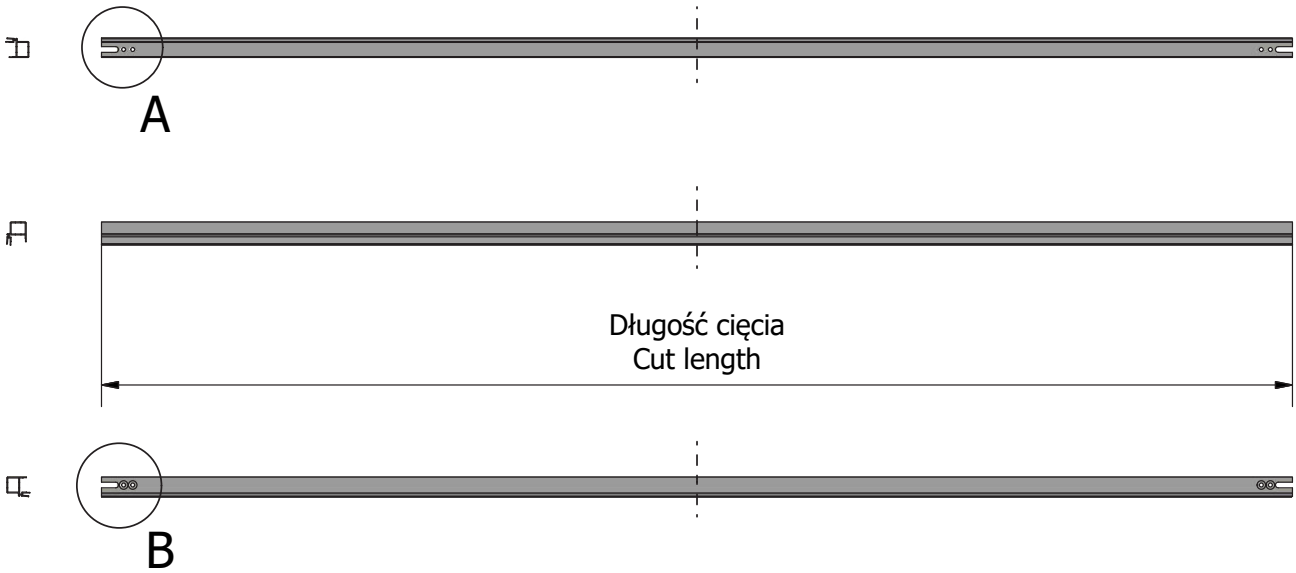
Obróbka profilu BE2003 zabudowy tarasu
Working of the BE2003 profile of the terrace

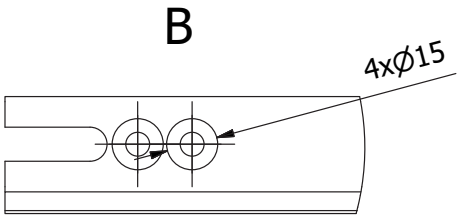


Obróbka profilu BE2003 skrzydła nieotwieralnego
Working of the BE2003 profile of the non-opening sash

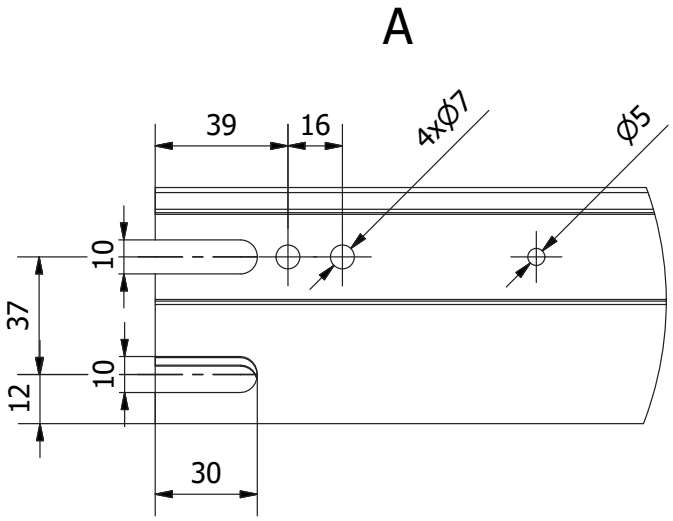


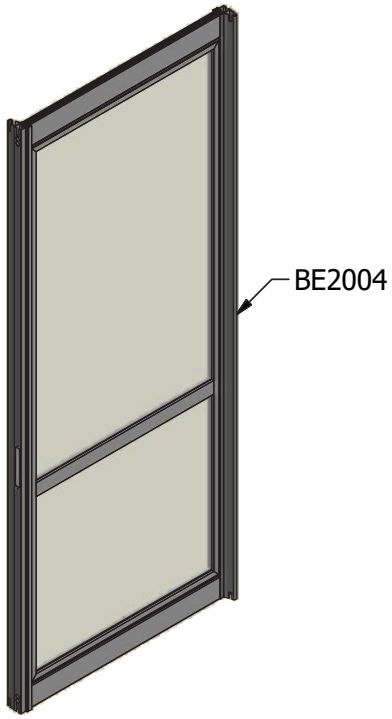


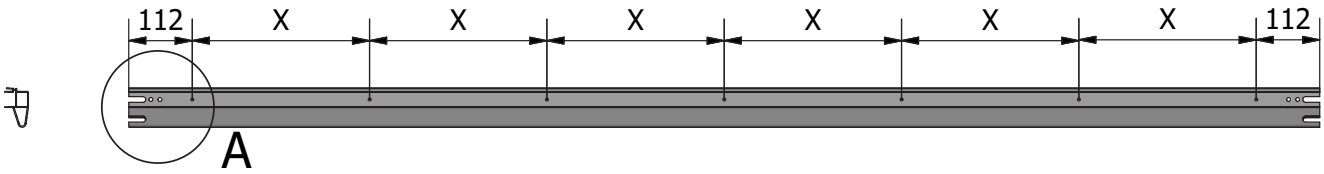


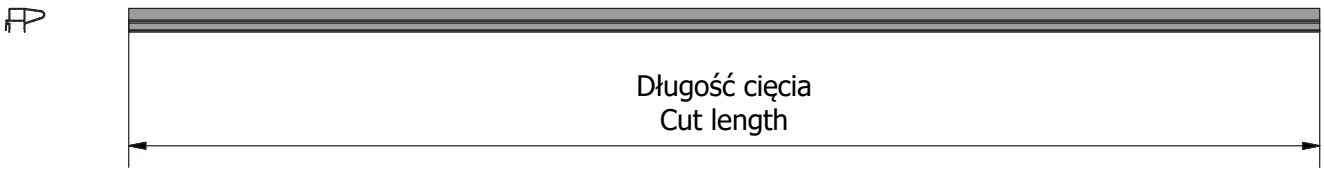


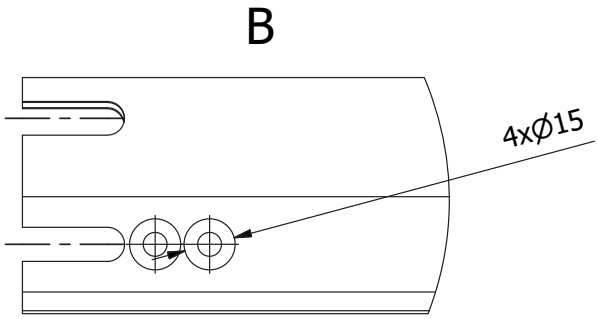
Obróbka profilu BE2004
Working of the BE2004 profile





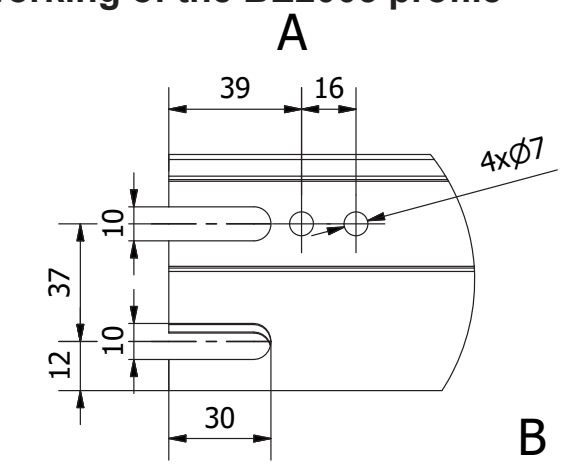


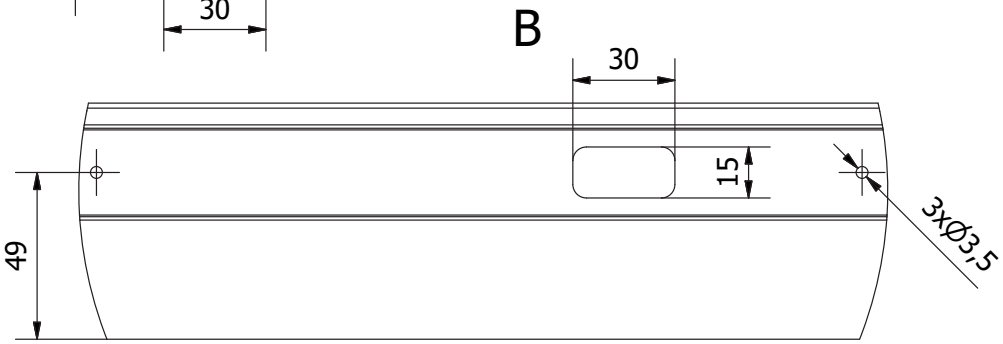


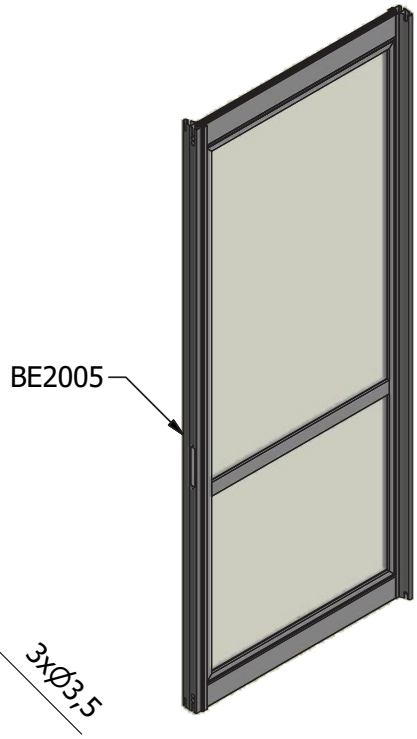


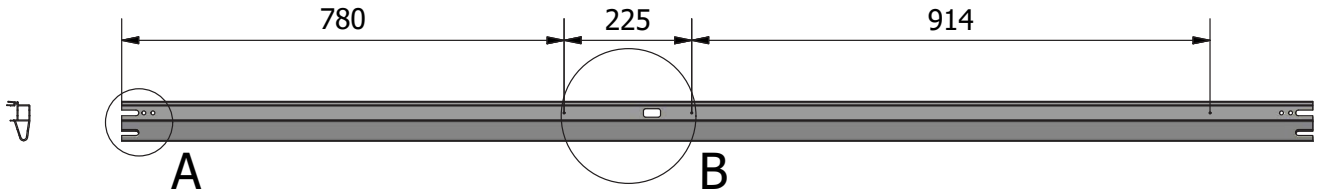
Długość profilu Profile length	Ilość otworów (X) number of holes
< 2100	6
2100-2600	7
> 2600	8

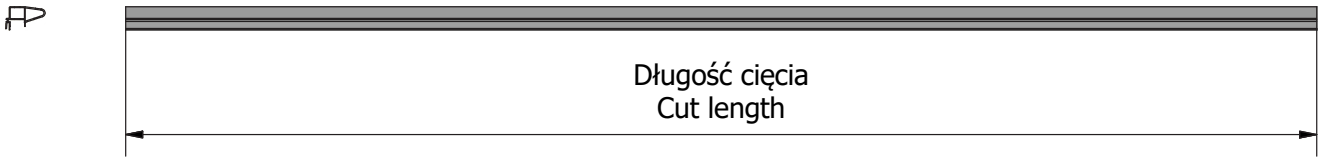
Obróbka profilu BE2005
Working of the BE2005 profile

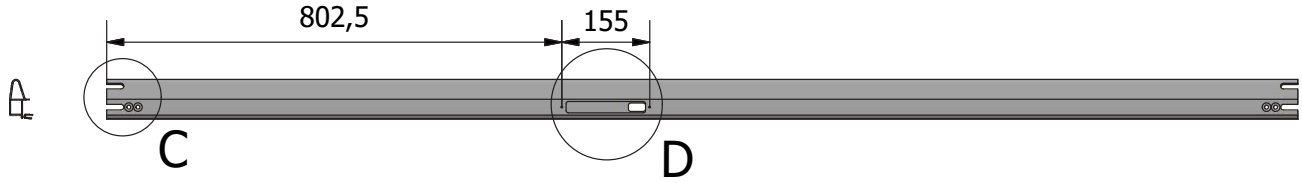


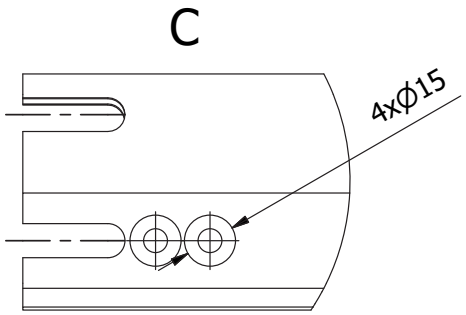


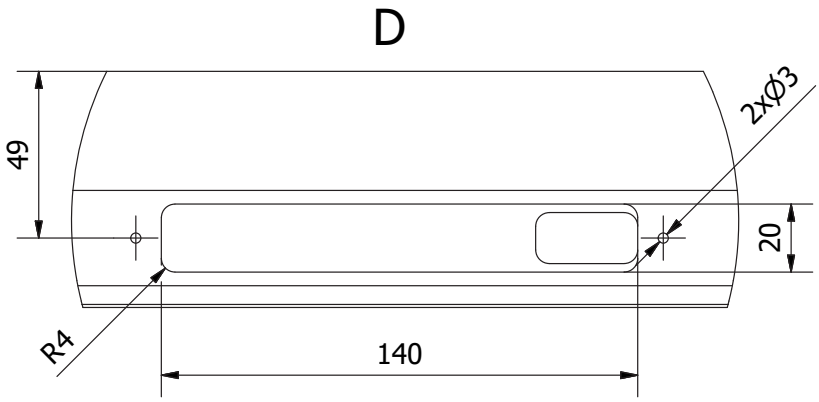




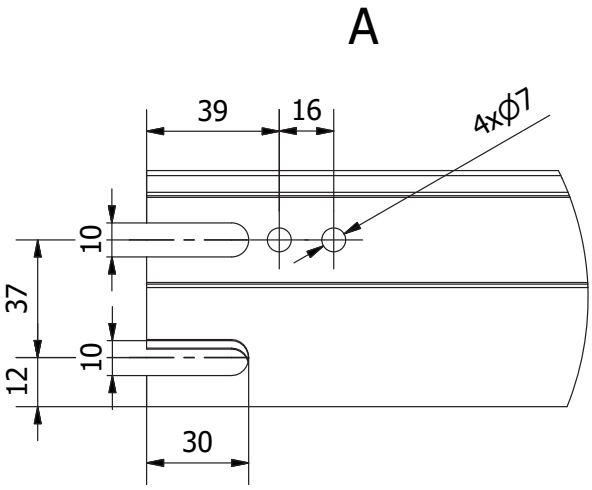


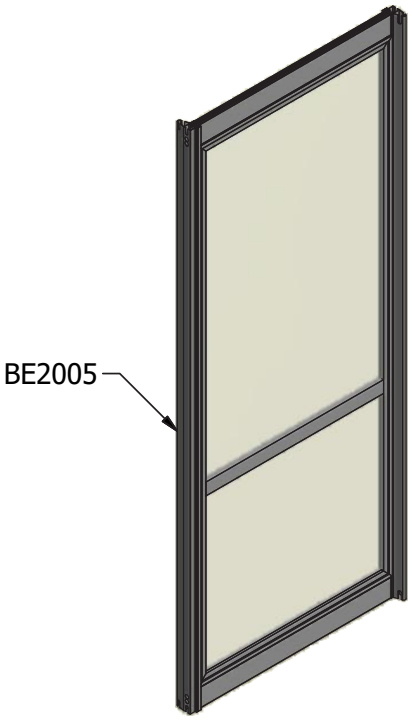


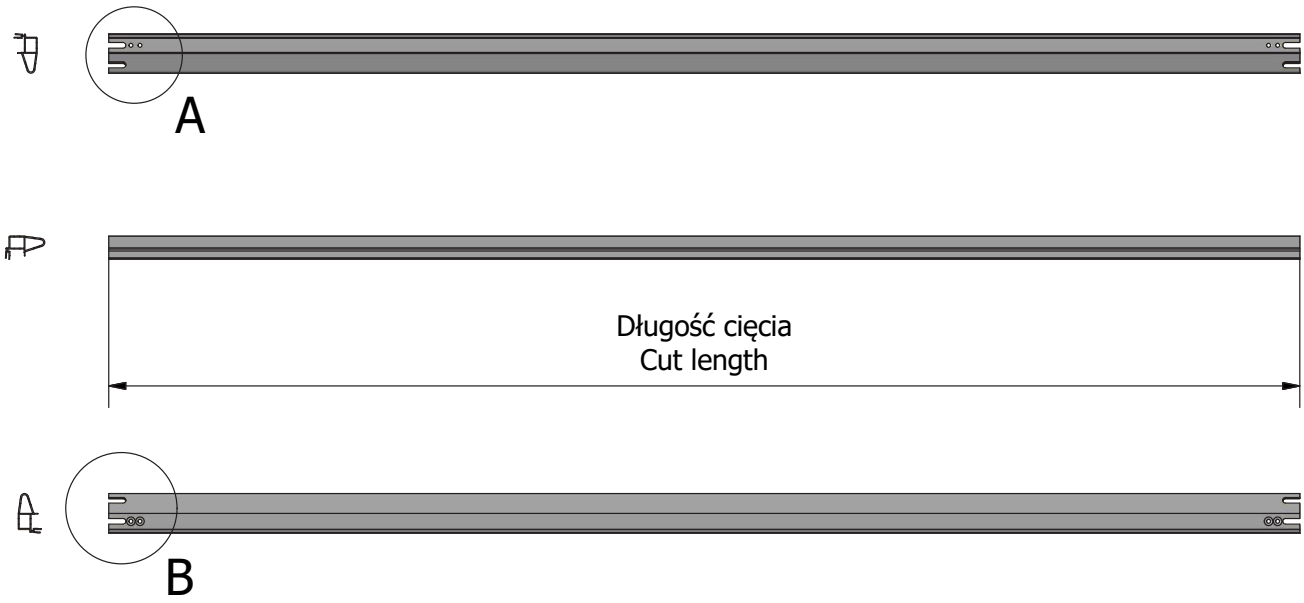


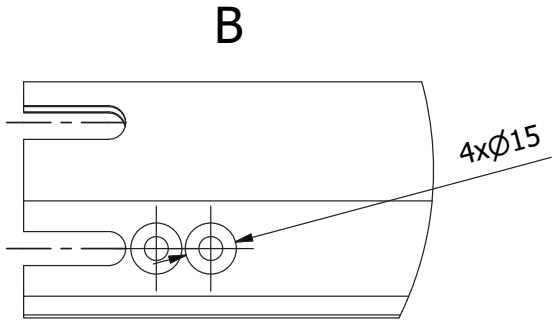


Obróbka profilu BE2005 skrzydła nieotwieralnego
Working of the BE2005 profile of the non-opening sash

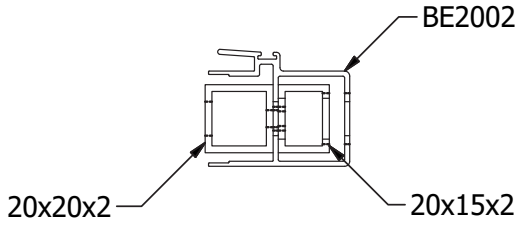




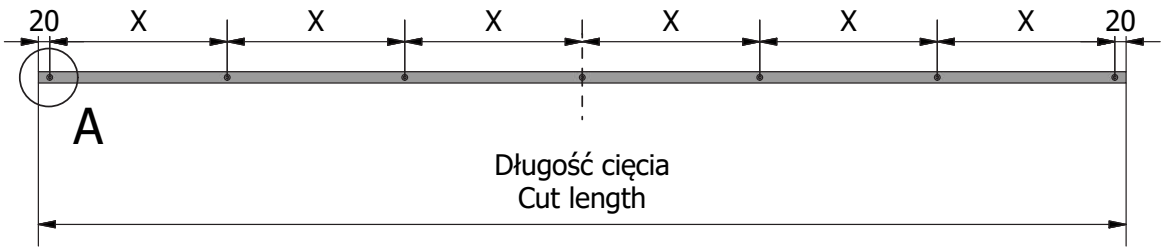


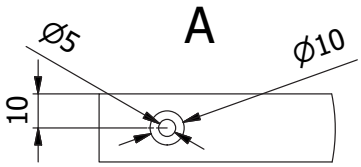


Obróbka wzmocnień profili BE2002 i BE2004 zabudowy tarasu
Working of the BE2002 and BE2004 profile reinforcements of the terrace

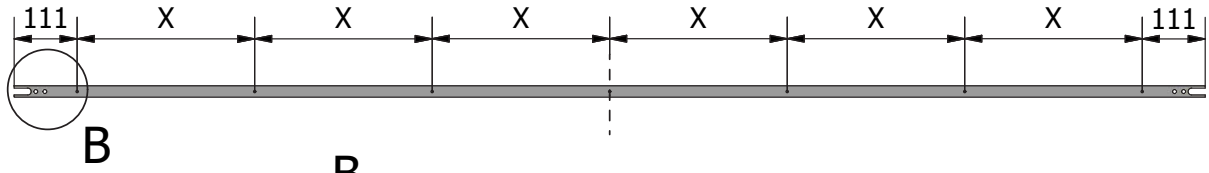


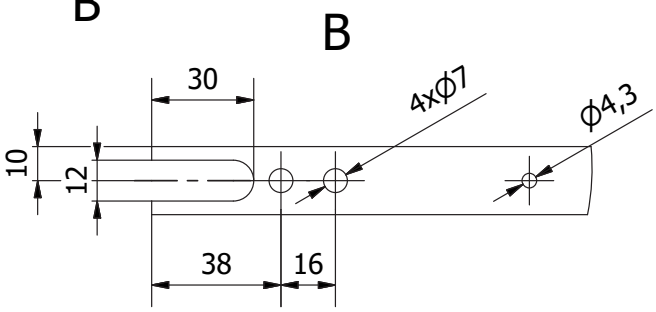
20x20x2



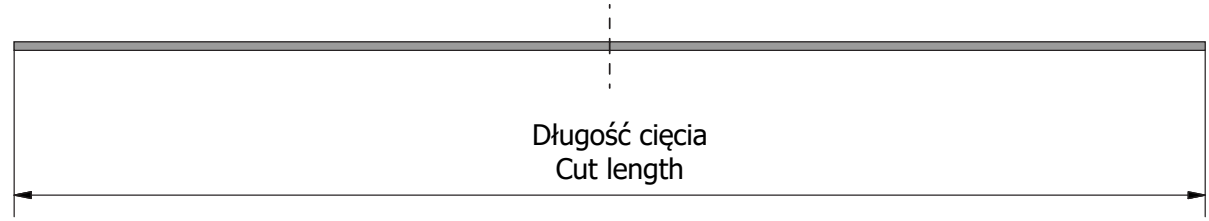


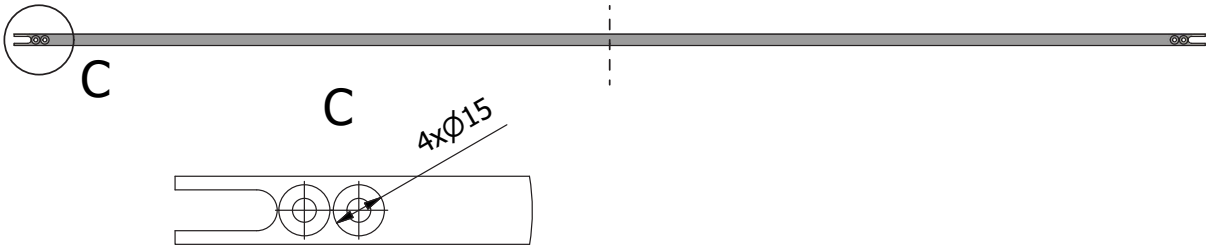
20x15x2



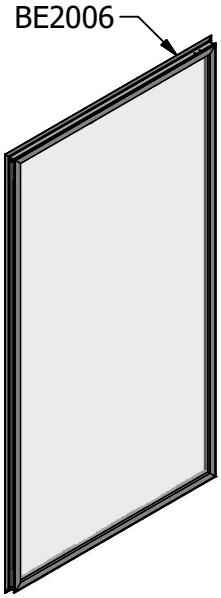


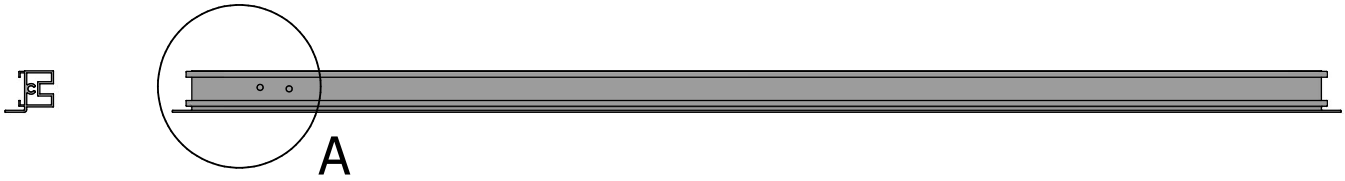
Długość profilu Profile length	Ilość otworów (X) number of holes
< 2100	6
2100-2600	7
> 2600	8

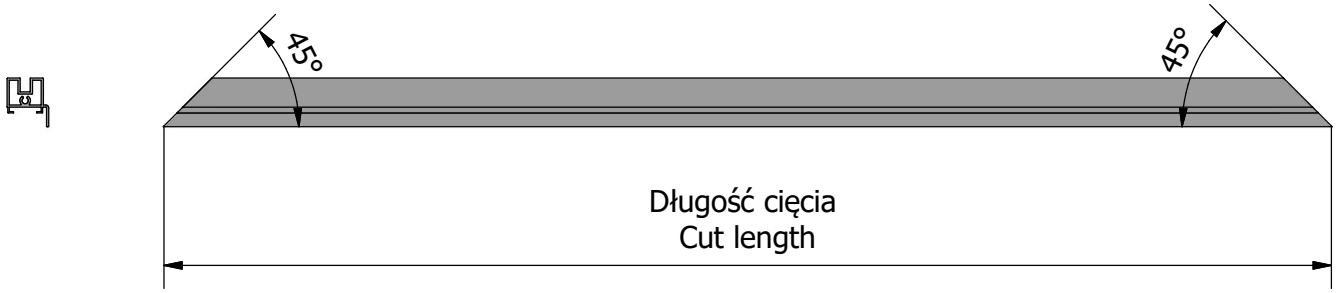


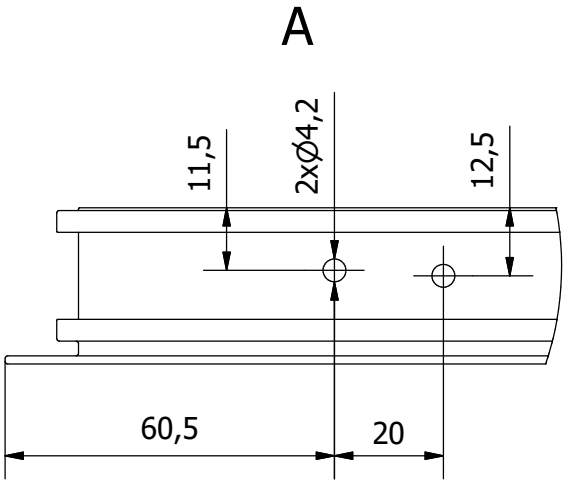


Obróbka profilu BE2006 - Profil górny
Working of the BE2006 profile - Top profile

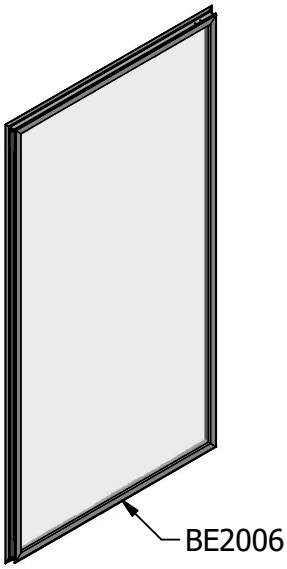


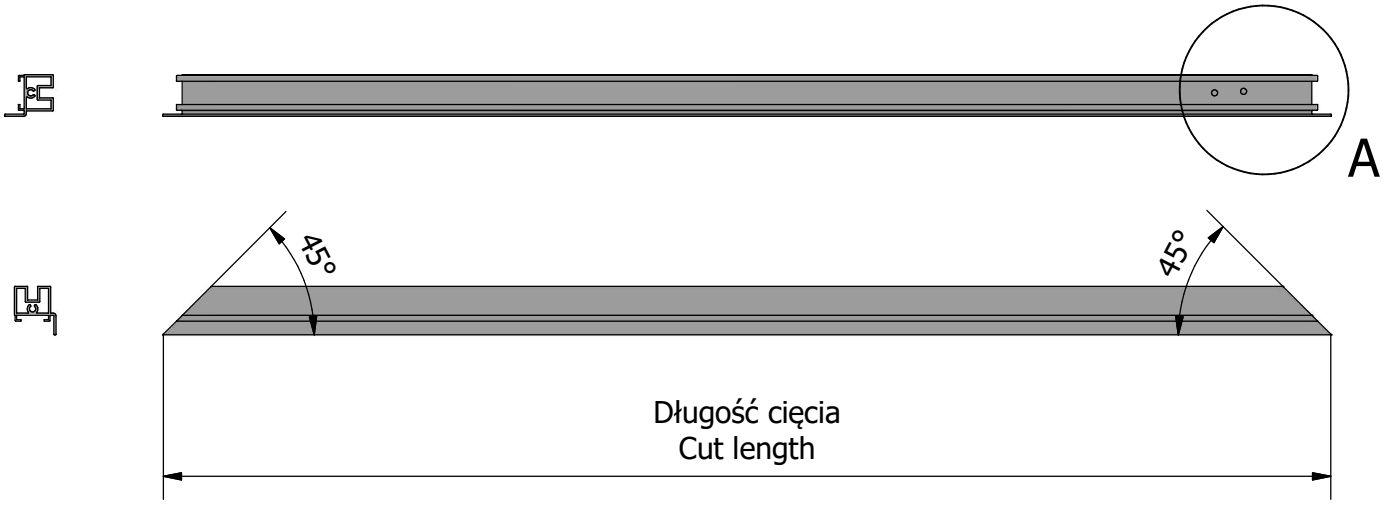


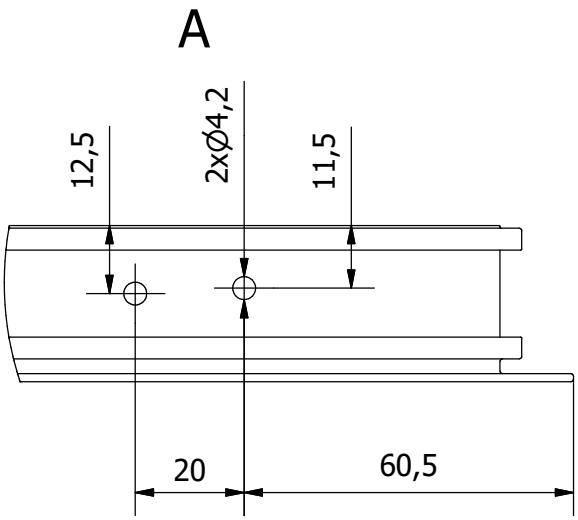




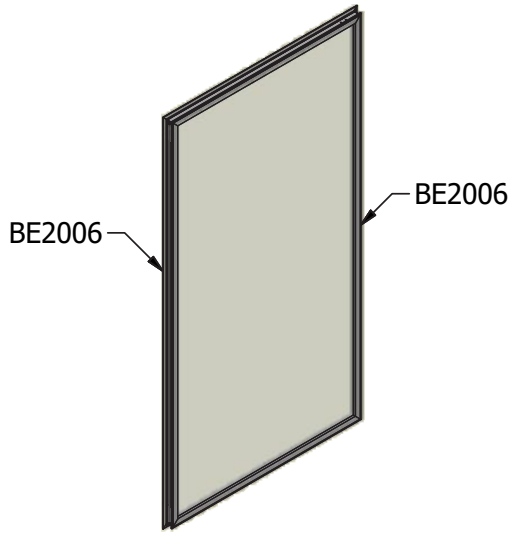
Obróbka profilu BE2006 - Profil dolny
Working of the BE2006 profile - Bottom profile

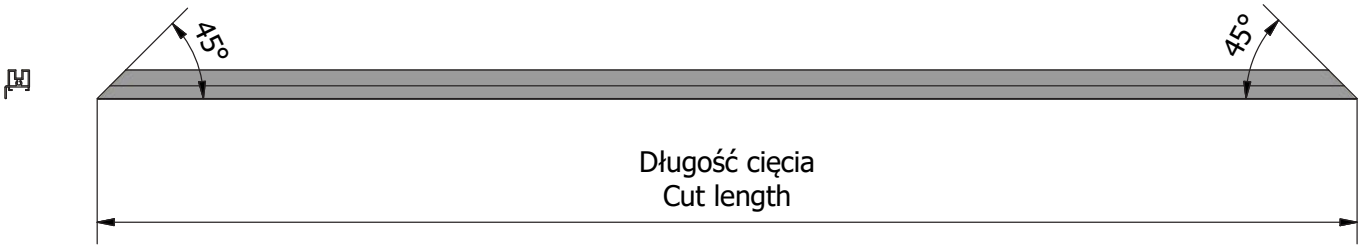


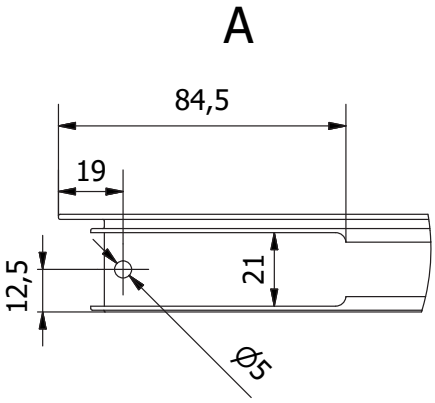




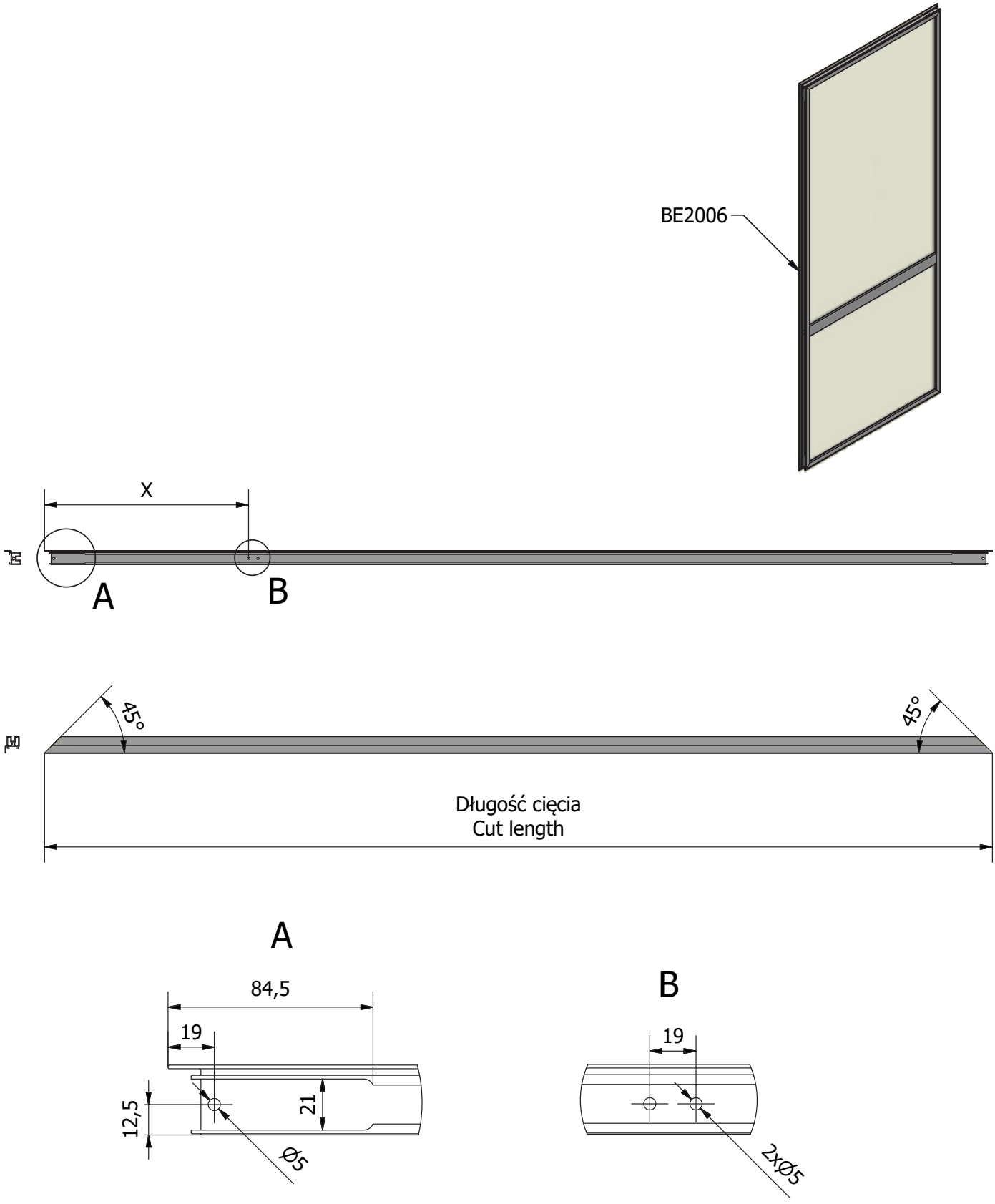
Obróbka profilu BE2006 zabudowy balkonu - Profil boczny
Working of the BE2006 profile of the balcony - Side profile



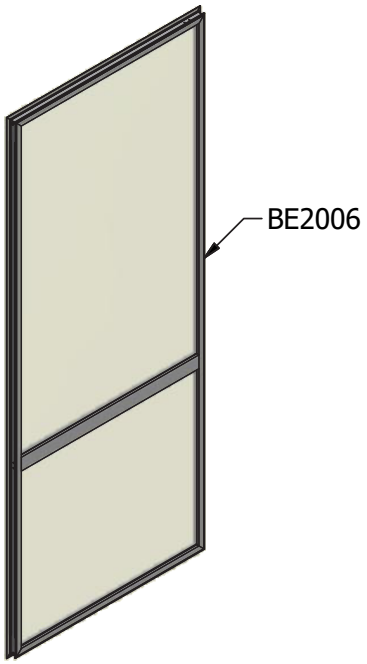


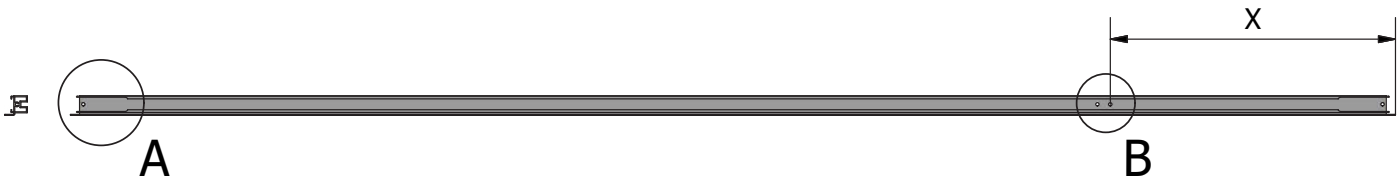


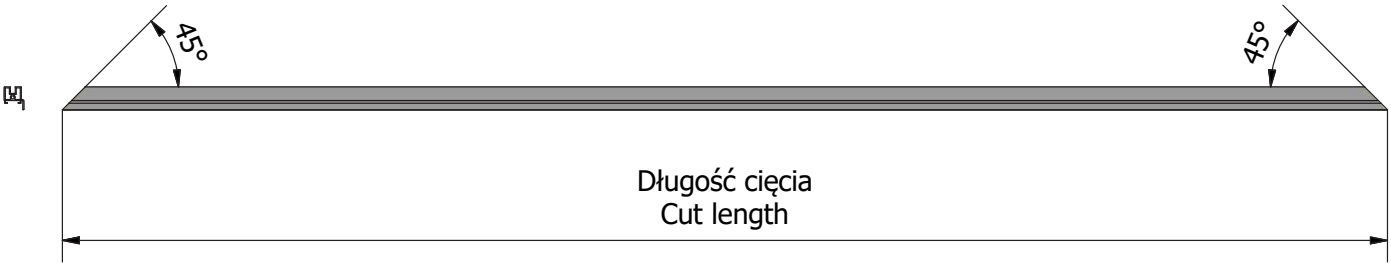
Obróbka profilu BE2006 zabudowy tarasu - Profil boczny
Working of the BE2006 profile of the terrace - Side profile

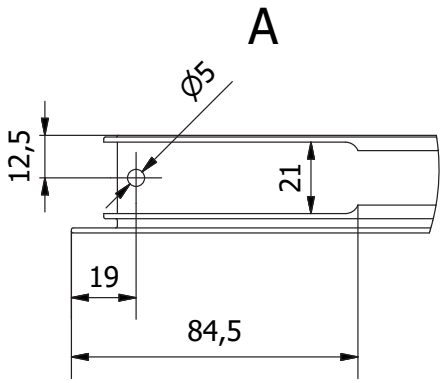


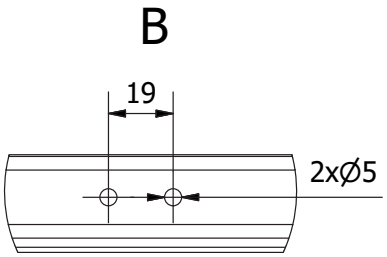
Obróbka profilu BE2006 zabudowy tarasu - Profil boczny
Working of the BE2006 profile of the terrace - Side profile



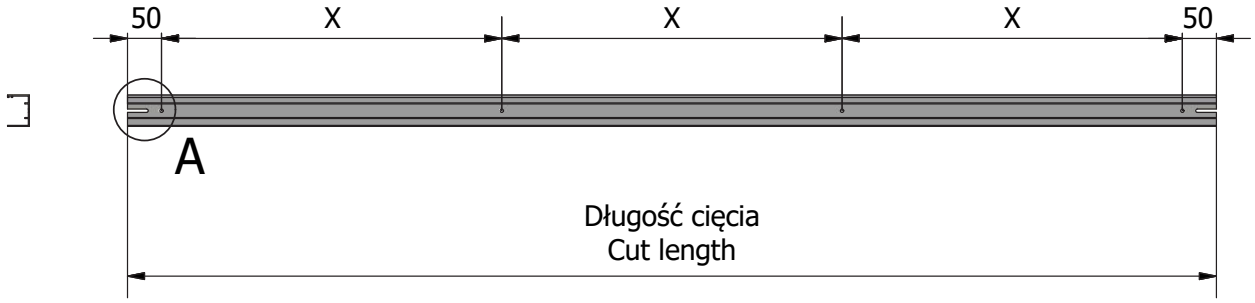


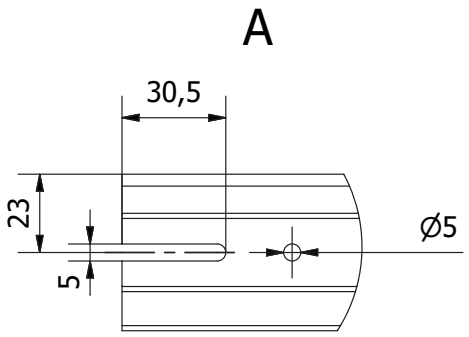






Obróbka profilu BE2007
Working of the BE2007 profile





Uwaga: Niezależnie od długości wykonać 4 otwory
Note: Make 4 holes regardless of the length

Notatki
Notes

MORAD®
SYSTEMY ALUMINIOWE

System BE-25

VII
Instrukcja montażu
Assembly instructions

Zasady montażu i konserwacji

Warunkiem prawidłowego funkcjonowania systemu BE-25 jest jego odpowiedni montaż. Przystępując do montażu zabudowy należy ściśle przestrzegać określonych przez Systemodawcę zasad.

Szczególną uwagę należy zwrócić na podłoże, do którego mocowane są konstrukcje. W przypadku zabudowy balkonowej ciężar konstrukcji spoczywa na profilu kotwiącym (BE1003), natomiast w przypadku zabudowy tarasowej na prowadnicy dolnej - BE1014. Profil górny BE1002 spełnia jedynie funkcję stabilizacyjną całego systemu.

Do montażu należy używać elementów kotwiących, które posiadają odpowiednie, zgodne z obowiązującymi przepisami dokumenty dopuszczające je do obrotu i stosowania. Długości i średnice złączy rozporowych należy dostosować do przenoszonych obciążeń oraz rodzaju podłoża.

Dla ułatwienia instalacji zabudowy w trakcie jej osadzania należy zdjąć skrzydła okienne. Dopiero po właściwym ustawieniu i wypoziomowaniu prowadnic można wstawić skrzydła okienne.

Po instalacji zabudowy należy sprawdzić prawidłowość jej działania. Przesuwanie skrzydeł okiennych, a także ich otwieranie i zamykanie powinno odbywać się bez żadnych oporów.

W przypadku stwierdzenia jakichkolwiek uszkodzeń powłoki ochronno-dekoracyjnej należy dokonać poprawek malarskich. Po montażu należy również oczyścić zabudowę od zanieczyszczeń pochodzących z prac budowlanych.

Dla zachowania atrakcyjnego wyglądu zabudowy oraz jej prawidłowego działania należy pamiętać o regularnym czyszczeniu oraz konserwacji systemu. Dużą uwagę należy zwracać na czystość prowadnic oraz znajdujących się w nich otworów odwadniających. Do czyszczenia najlepiej używać czystej wody lub neutralnych detergentów bez dodatków szorujących, które mogłyby uszkodzić powłokę lakierniczą. Ruchome części okuć należy regularnie smarować białą wazeliną bez zawartości kwasów, tak aby lekko pracowały. Sprawdzać należy również położenie wszystkich uszczelek, czy równo przylegają do profili.

Assembly and conserwation rules

The proper functioning of the BE-25 system is its proper assembly. When starting to assemble buildings, it is necessary to strictly follow the principles set out by the System Manufacturer.

Particular attention should be paid to the ground to which the structures are attached. In the case of balcony construction, the weight of the structure rests on the anchoring profile (BE1003), while in the case of terrace installation on the bottom guide bar - BE1014. The top frame profile- BE1002 has only the stabilizing function of the entire system.

For installation, anchor elements should be used that have appropriate, in accordance with applicable regulations, documents allowing them to be traded and used. The lengths and diameters of the nail plugs should be adapted to the loads to be carried and the type of foundation.

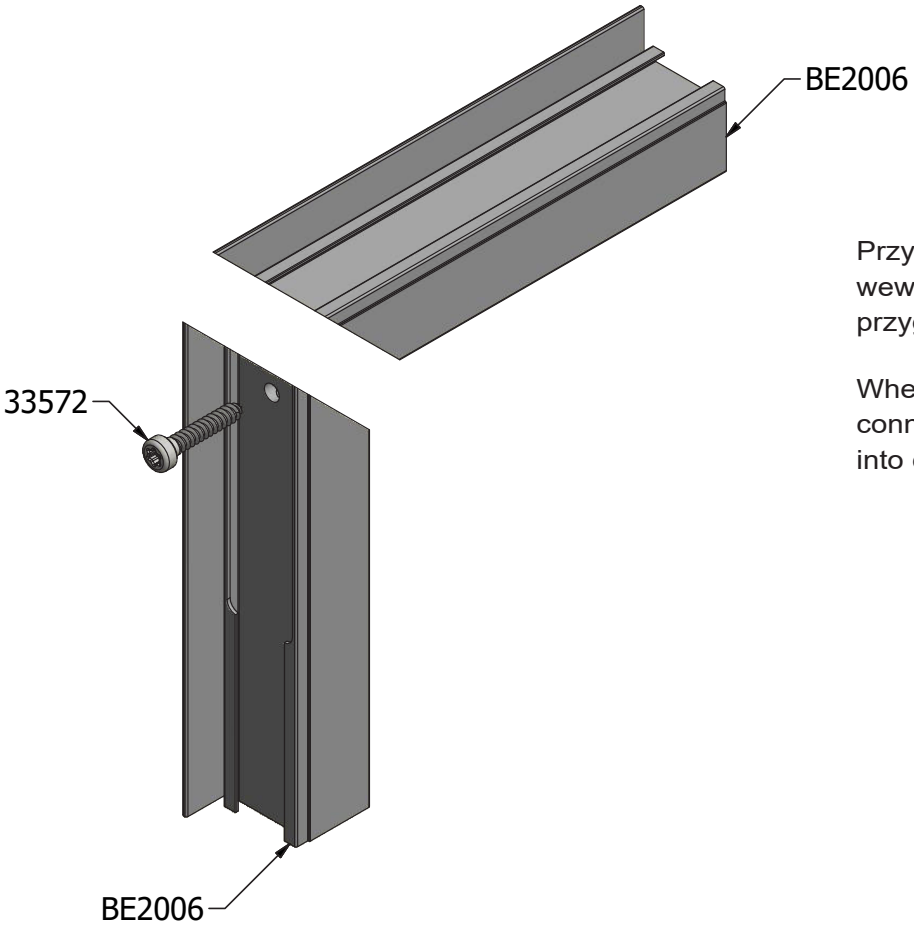
To facilitate the installation of the construction, the window sashes should be removed. It is only after the right setting and leveling of the guide bars that window sashes can be insertem.

After installation of the construction, its proper operation should be checked. Moving window sashes, as well as opening and closing them, should be done without any resistance.

In the case of any damage to the protective and decorative coating, painting corrections should be made. After installation, the construction should also be cleaned of dirt from construction works.

In order to preserve the attractive appearance of the construction and its proper operation, it is necessary to remember about regular cleaning and maintenance of the system. A lot of attention should be paid to the cleanliness of the guide bars and the drainage holes in them. For cleaning it is best to use clean water or neutral detergents without scouring additives that could damage the paint coat. Movable parts of the fittings should be regularly lubricated with white petroleum jelly, so that they work slightly. The position of all gaskets should also be checked to see if they evenly adhere to the profiles.

Montaż skrzydła wewnętrznego
Assembling the internal sash

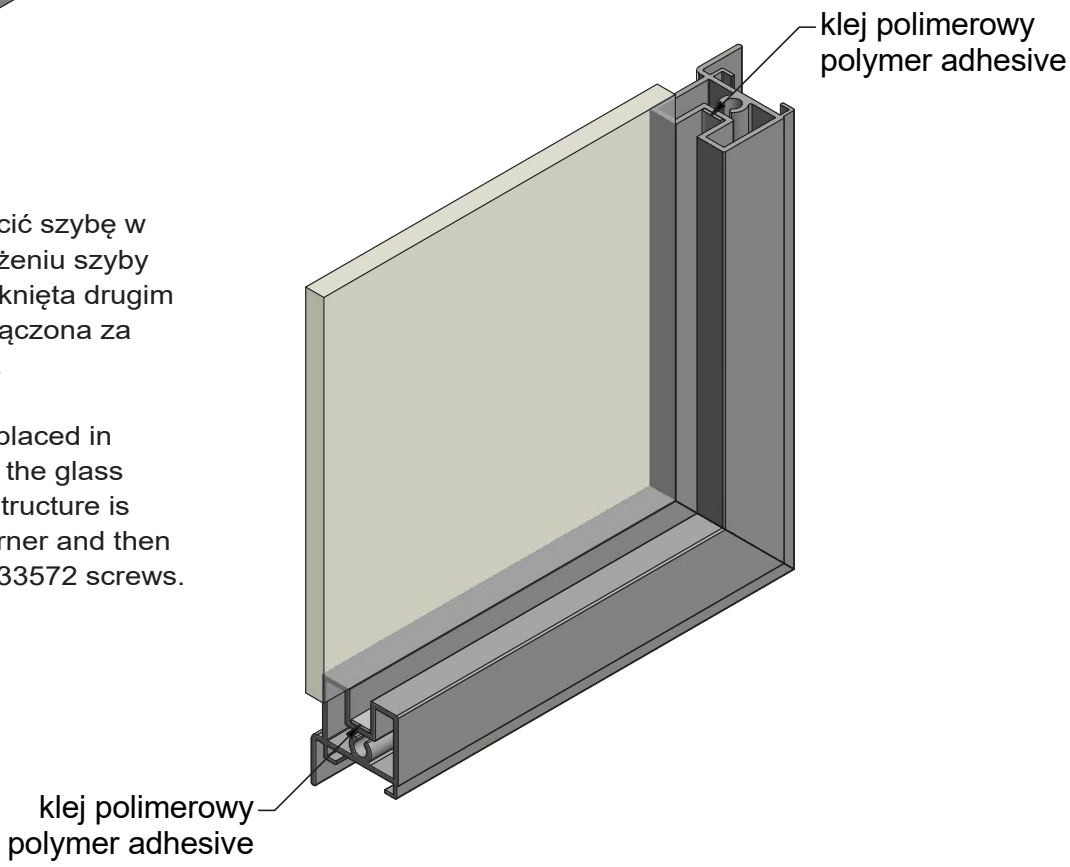


Przystępując do montażu skrzydła wewnętrznego należy połączyć przygotowane profile BE2006 w naroża.

When assembling the inner sash, connect the prepared BE2006 profiles into corners.

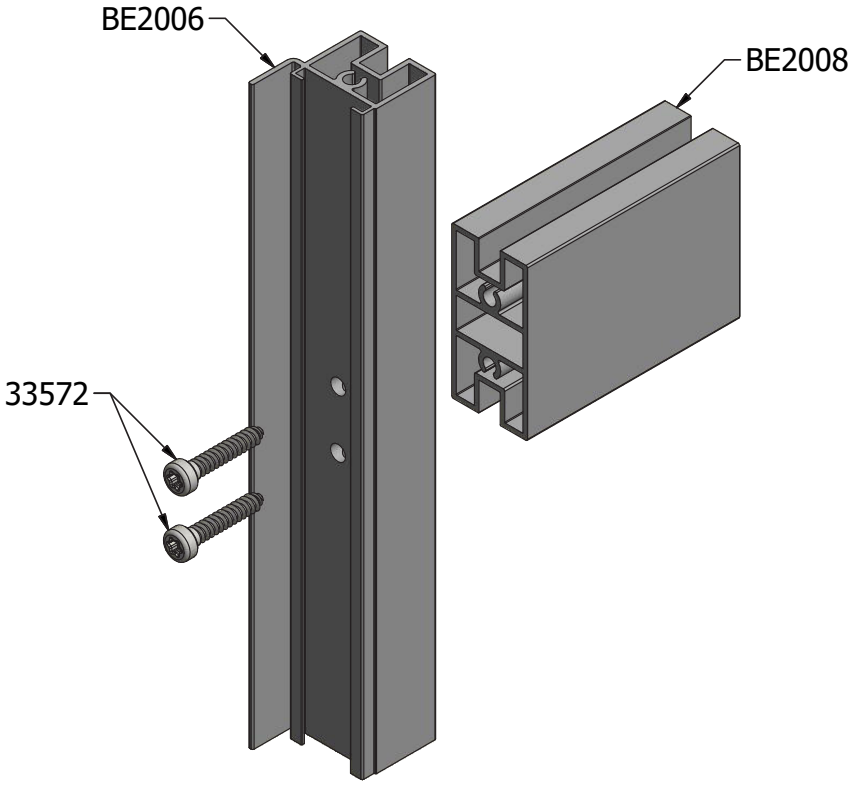
Następnie należy umieścić szybę w jednym z naroży. Po ułożeniu szyby konstrukcja zostaje zamknięta drugim narożem, a nastęnie połączona za pomocą wkrętów 33572.

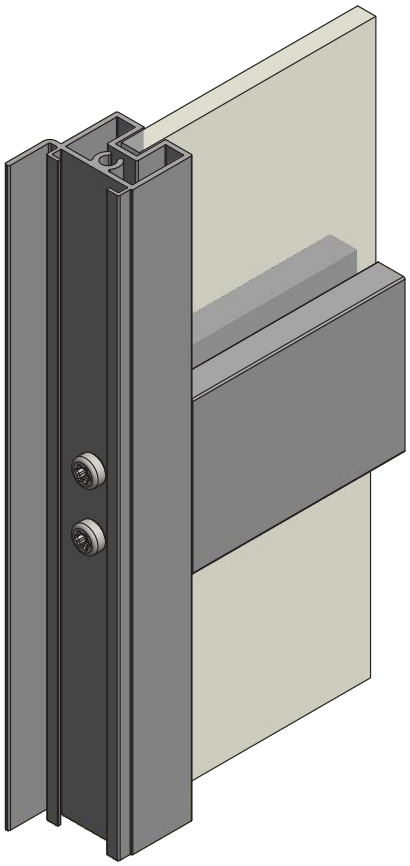
The glass shall then be placed in one of the corners. After the glass has been installed, the structure is closed with a second corner and then connected by means of 33572 screws.



Uwaga: Po montażu skrzydła wewnętrznego, konstrukcję należy odstawić do wyschnięcia na conajmniej 16h
Note: After assembling the internal sash, the structure should be allowed to dry for a last 16 hours

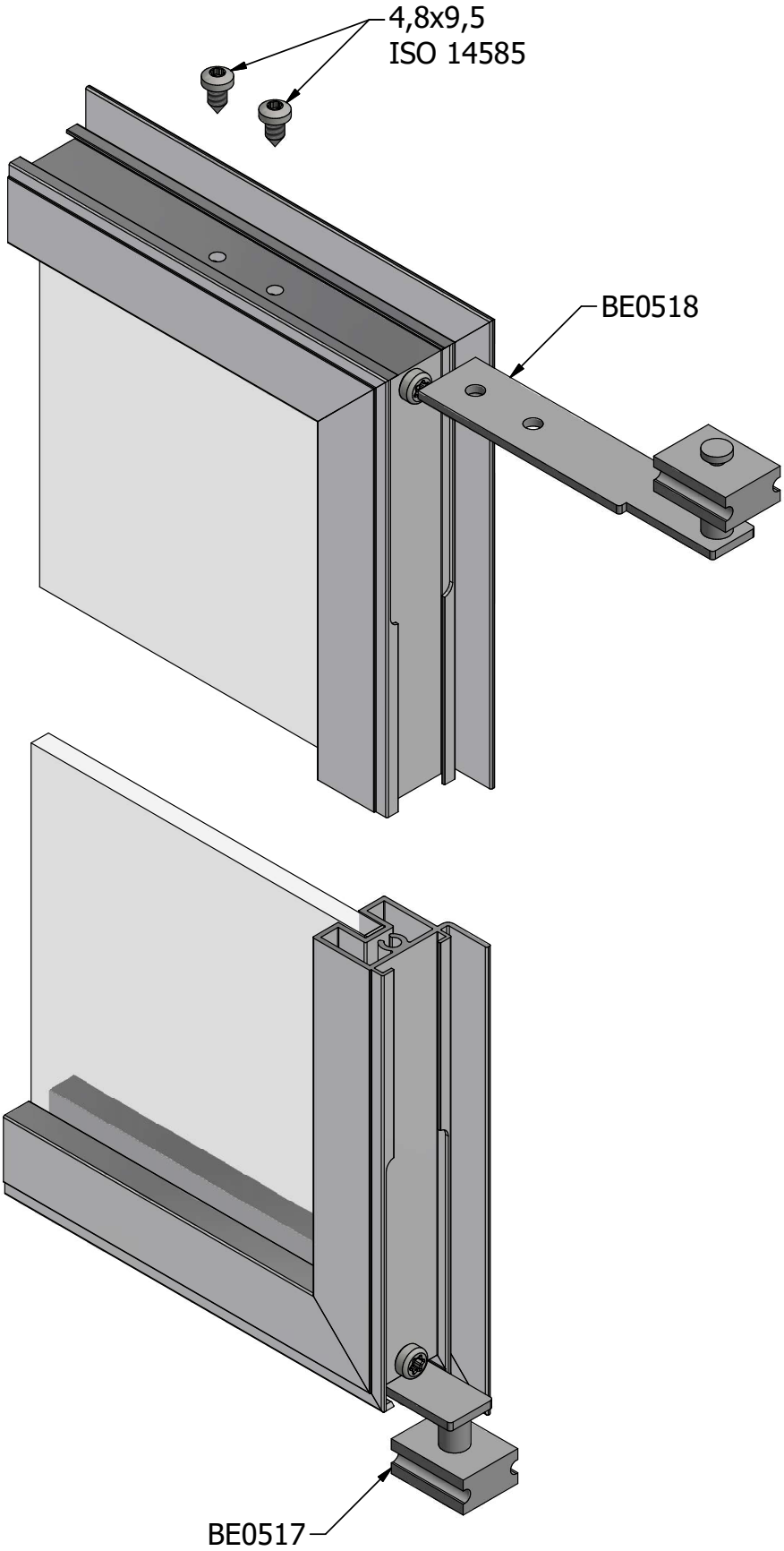
Montaż poprzeczki skrzydła wewnętrznego
Assembling the transom of the internal sash



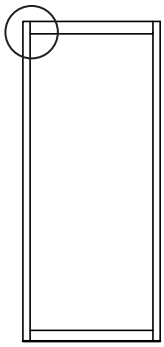


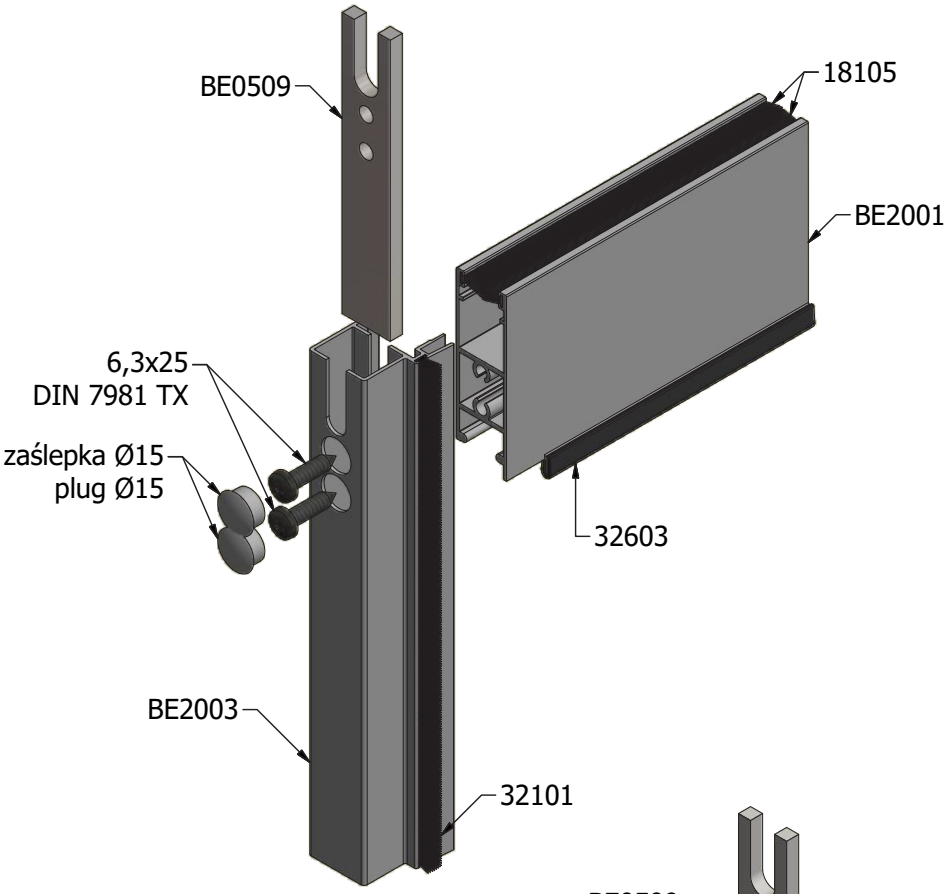
Uwaga: Do montażu szyb stosowany jest klej polimerowy
Note: A polymer adhesive is used for the installation of glass

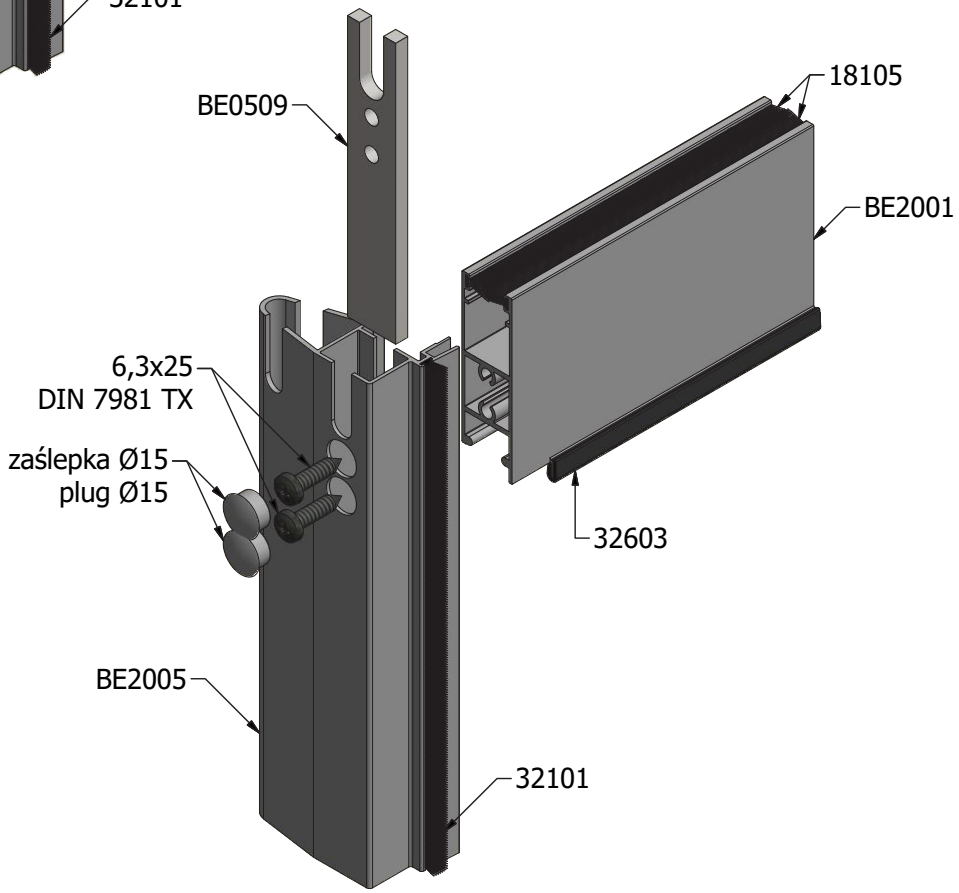
Montaż rolki prowadzącej (BE0517 i BE0518) w skrzydle wewnętrznym
Assembling the bracket with wheels (BE0517 i BE0518) in the internal sash



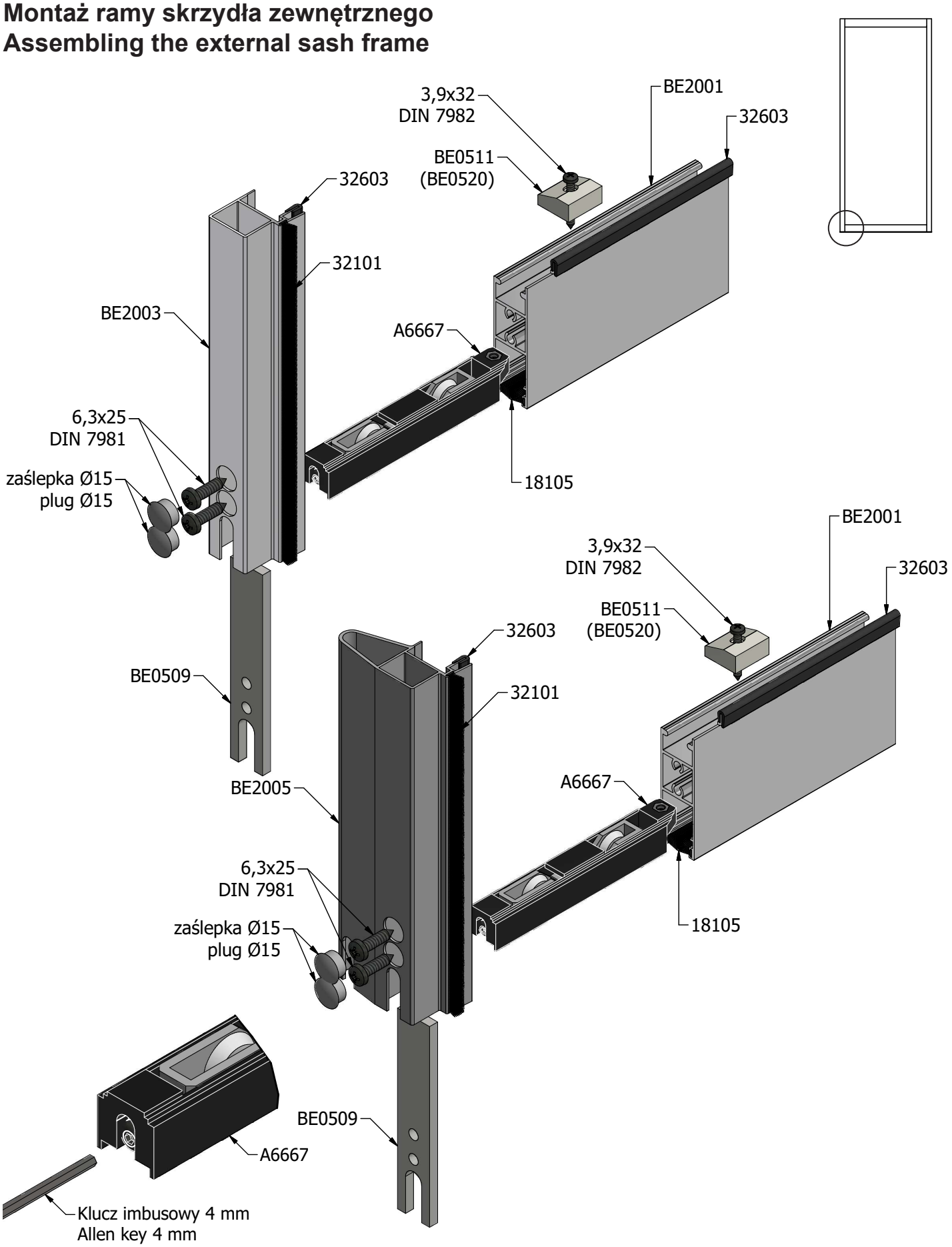
Montaż ramy skrzydła zewnętrznego
Assembling the external sash frame





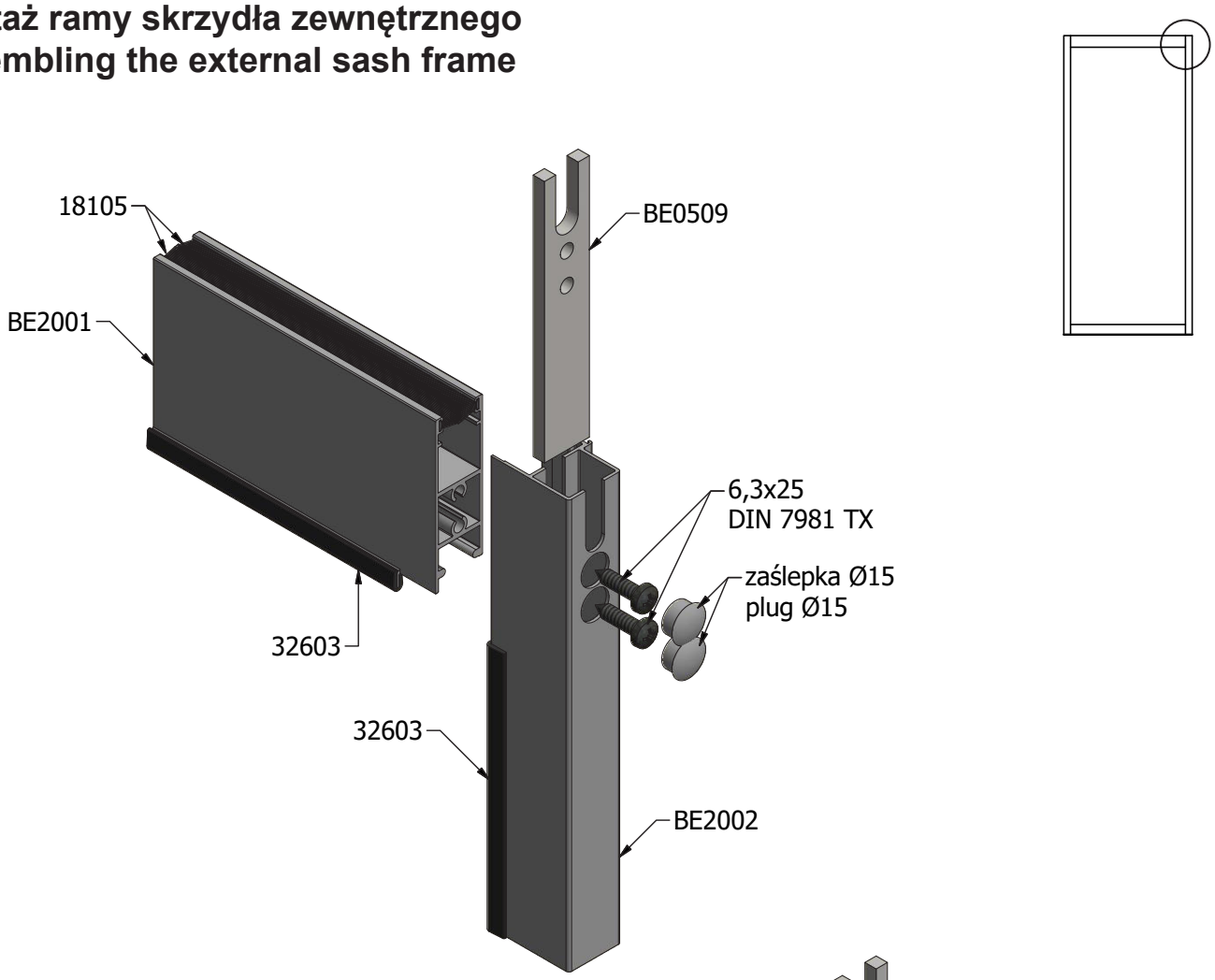


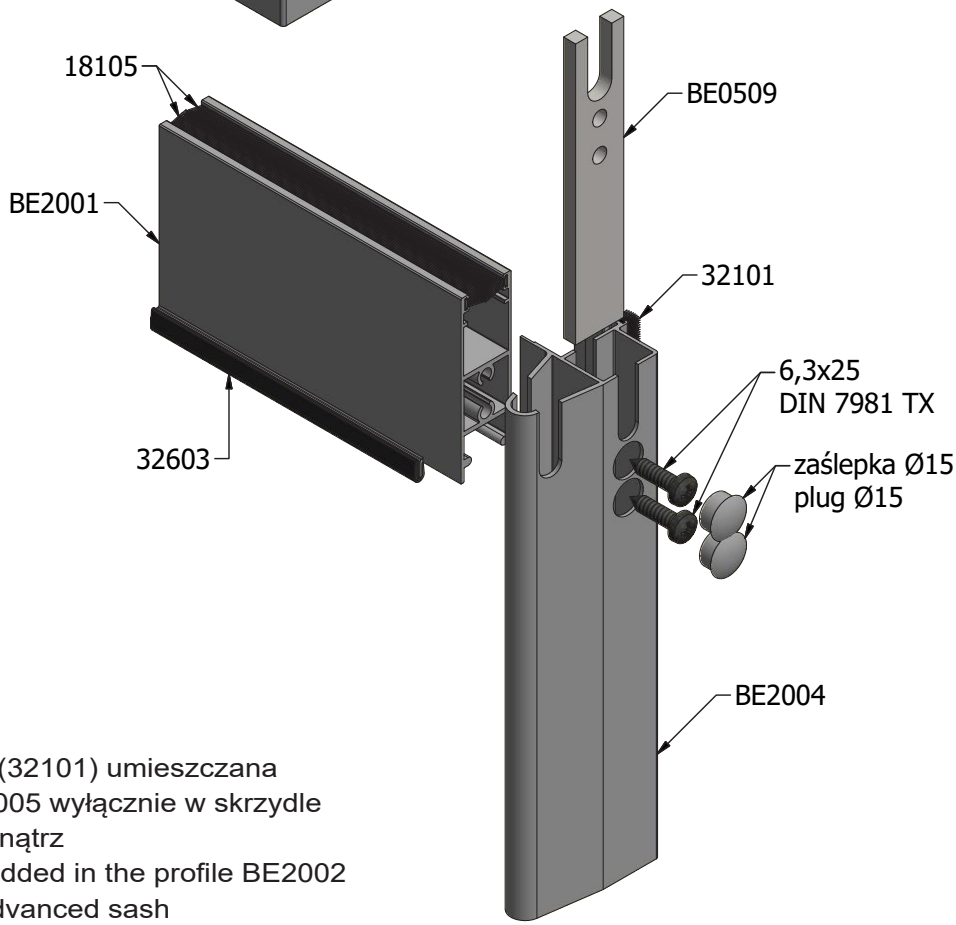
Montaż ramy skrzydła zewnętrznego
Assembling the external sash frame



Uwaga: Dokręcenie śruby powoduje unisienie skrzydła
Note: Tightening the screw raises the sash

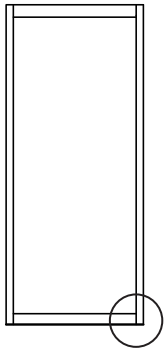
Montaż ramy skrzydła zewnętrznego
Assembling the external sash frame



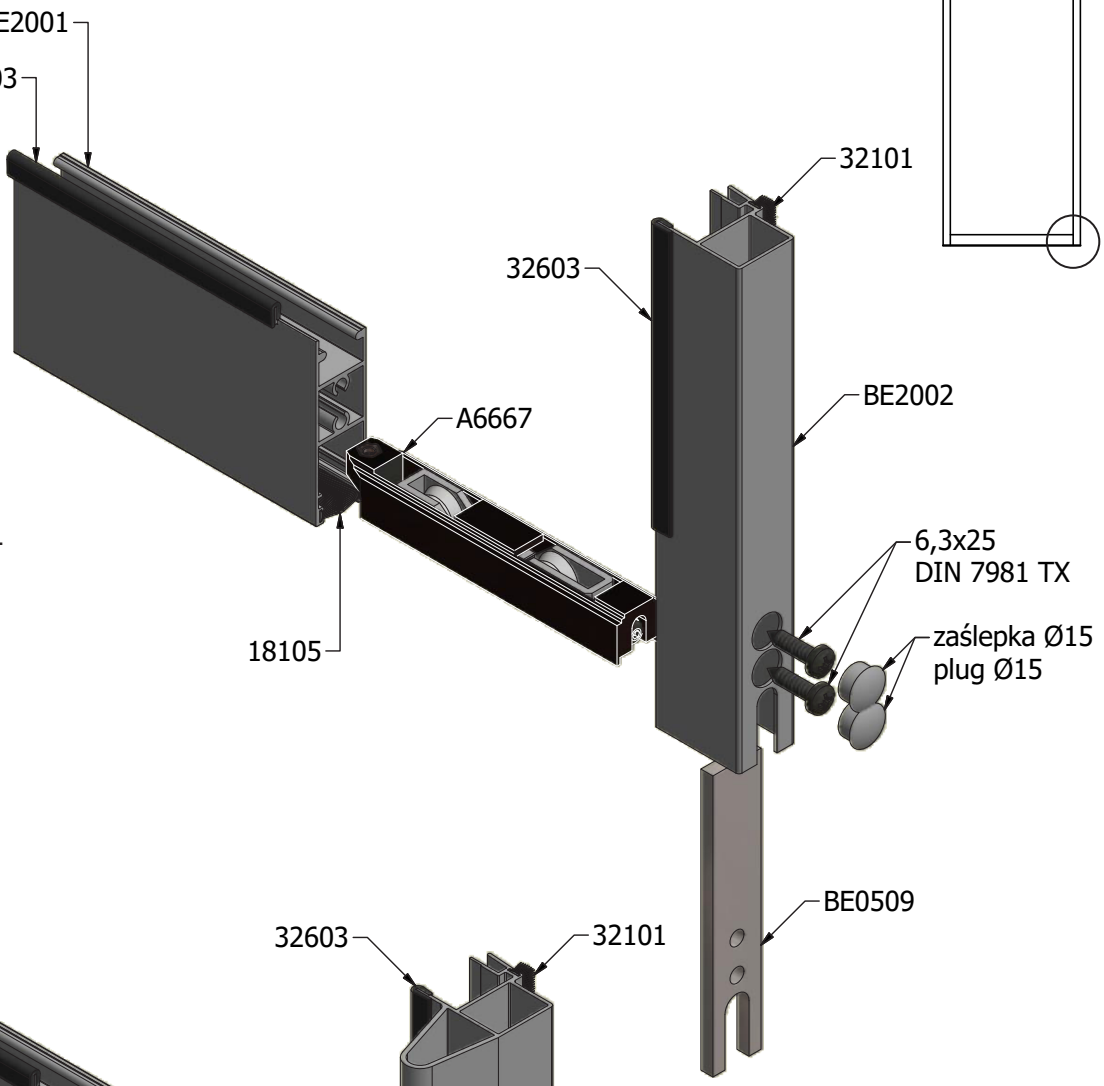


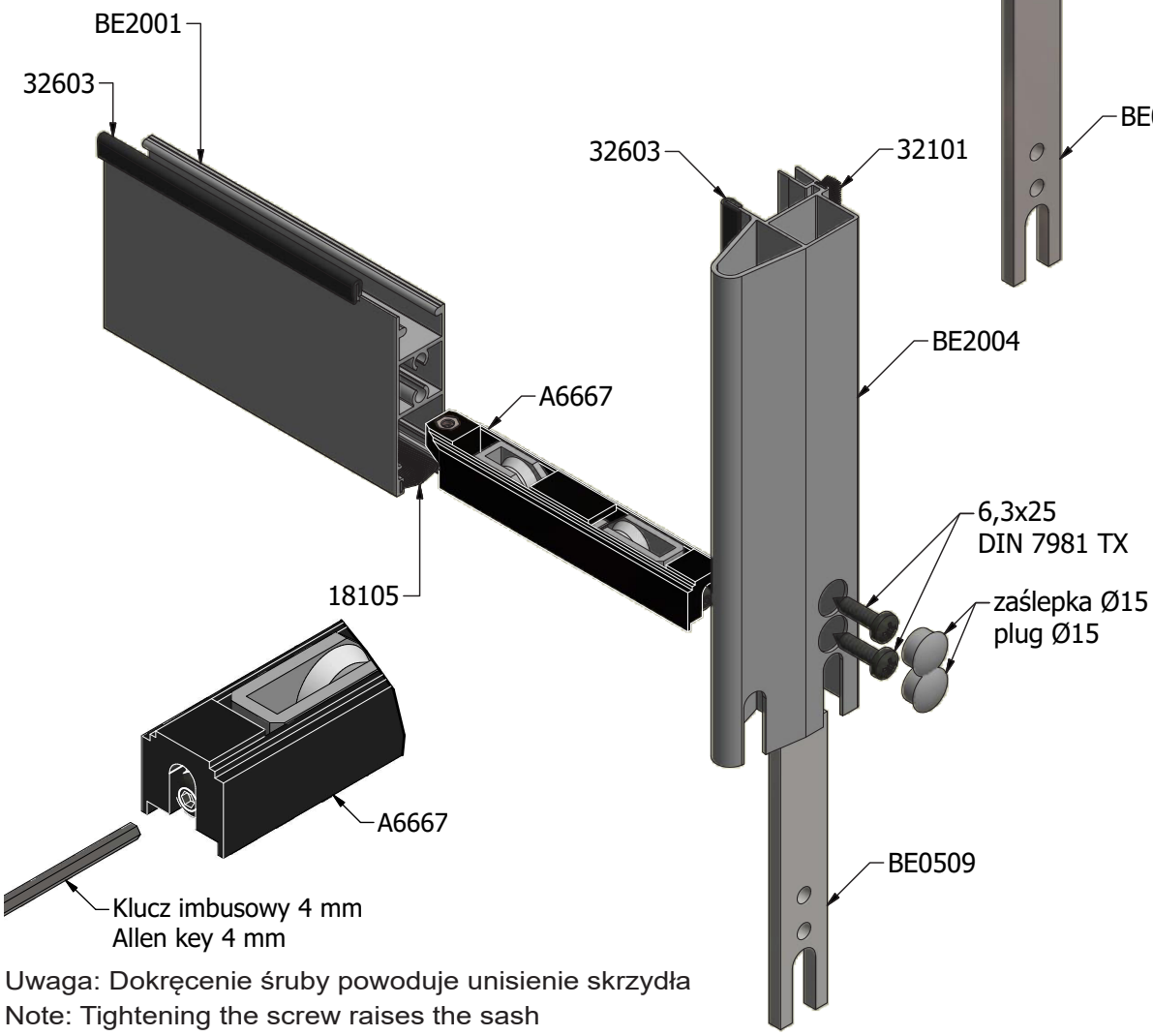
Uwaga: Uszczelka szczotkowa (32101) umieszczana jest w profilu BE2002 oraz BE2005 wyłącznie w skrzydle najbardziej wysuniętym do wewnątrz
Note: Brush gasket (32101) is added in the profile BE2002 and BE2005 only in the most-advanced sash

Montaż ramy skrzydła zewnętrznego
Assembling the external sash frame



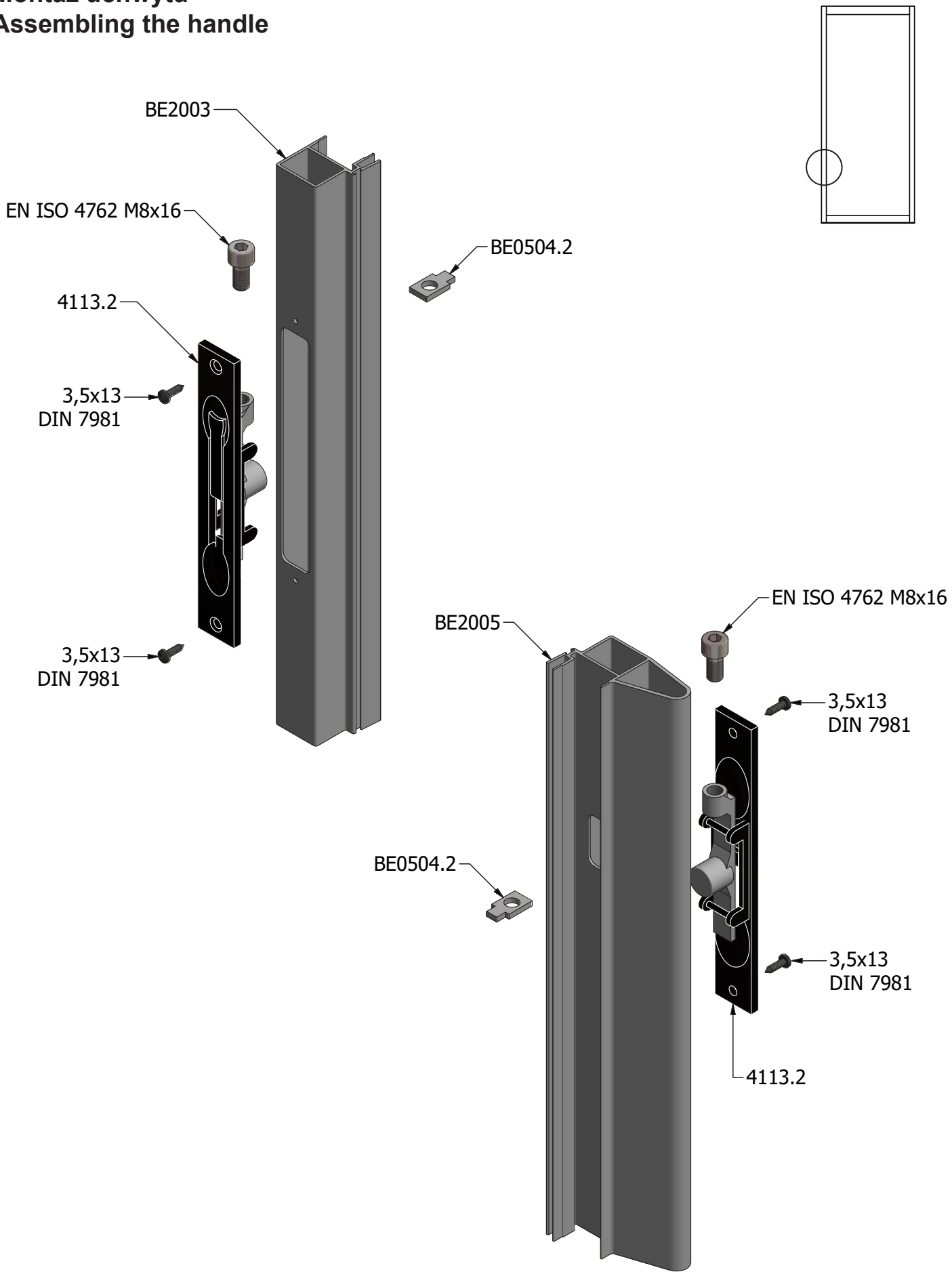
Uwaga: Uszczelka szczotkowa (32101) umieszczana jest w profilu BE2002 oraz BE2005 wyłącznie w skrzydle najbardziej wysuniętym do wewnątrz.
Note: Brush gasket (32101) is added in the profile BE2002 and BE2005 only in the most-advanced sash.





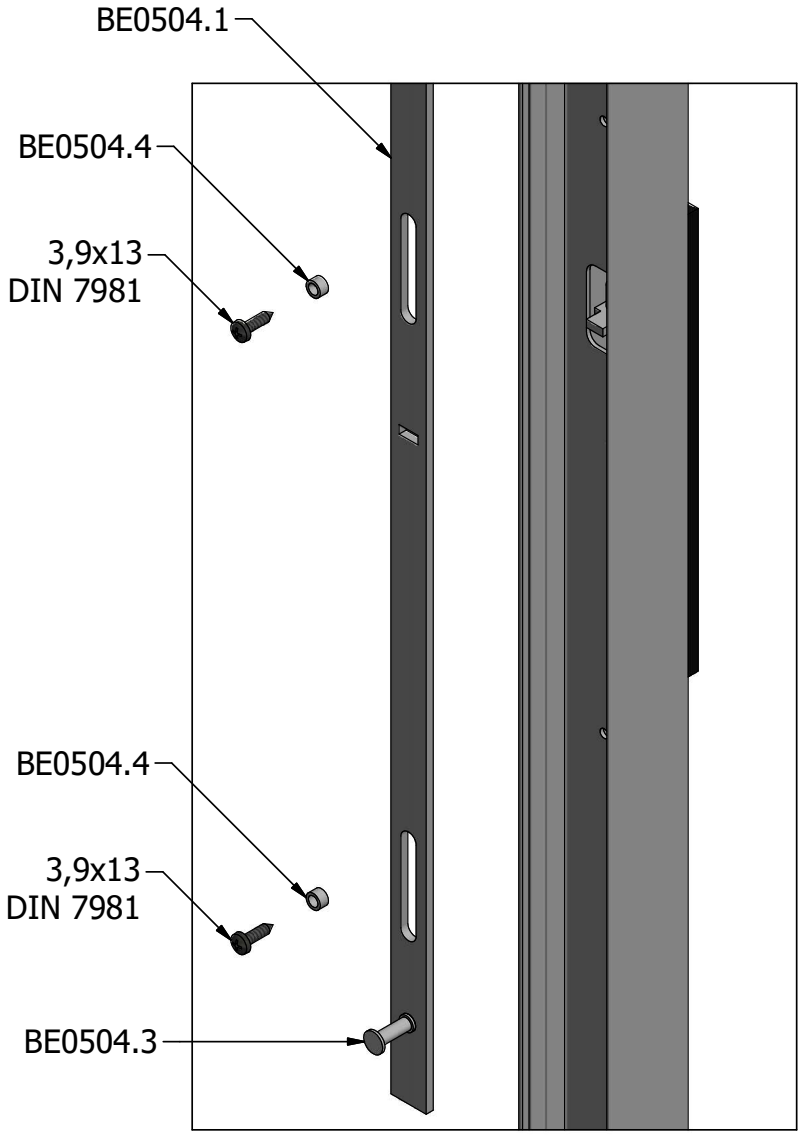
Uwaga: Dokręcenie śruby powoduje unisienie skrzydła
Note: Tightening the screw raises the sash

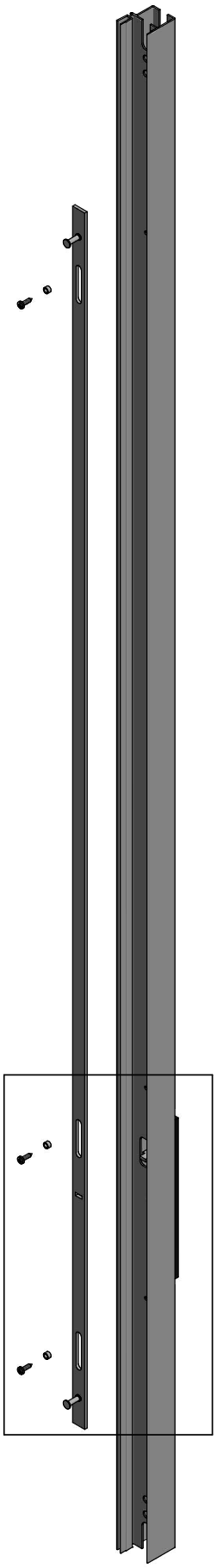
Montaż uchwytu
Assembling the handle



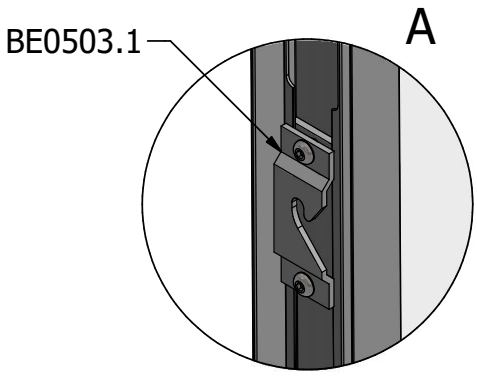
Montaż zasuwnicy
Assembling the rail to the handle

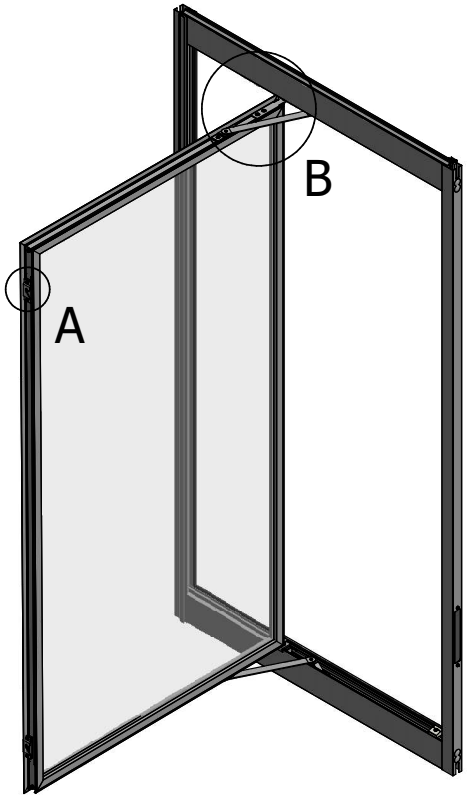
Długość zasuwnicy = Wysokość skrzydła - 340 mm
Rail to handle lenght = Sash height - 340 mm

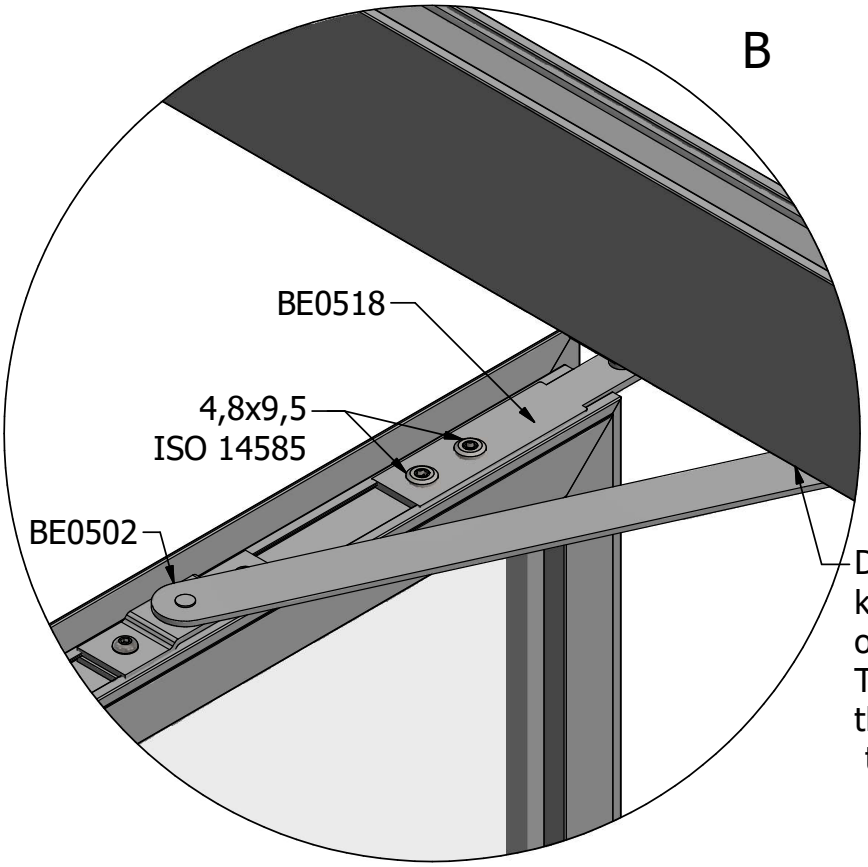




Połączenie skrzydła wewnętrznego z ramą skrzydła zewnętrznego
Connection of the internal sash with the frame of external sash

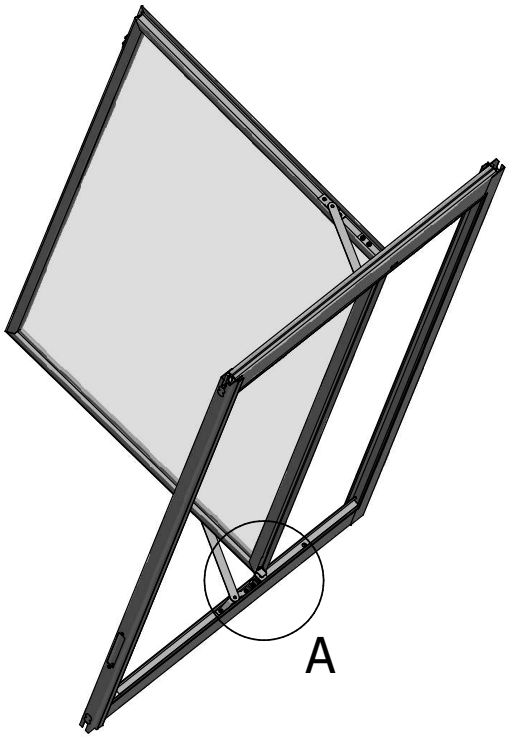


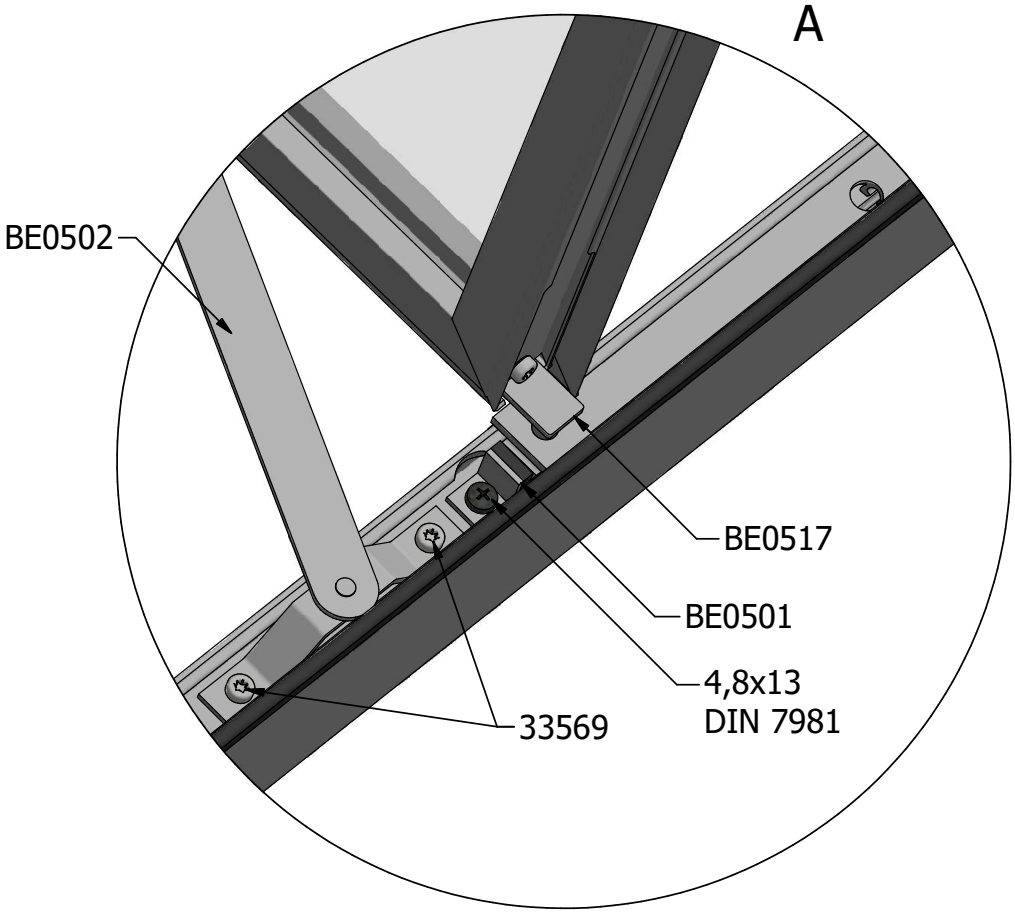




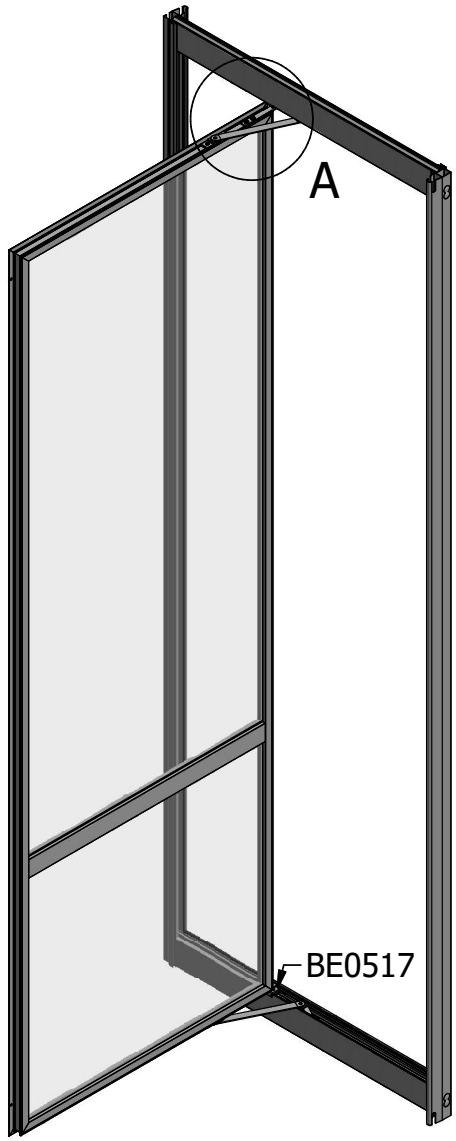
Dokręcić za pomocą długiego klucza imbusowego przez otwór od góry skrzydła
Tighten with the long Allen key through the hole from the top of the wing

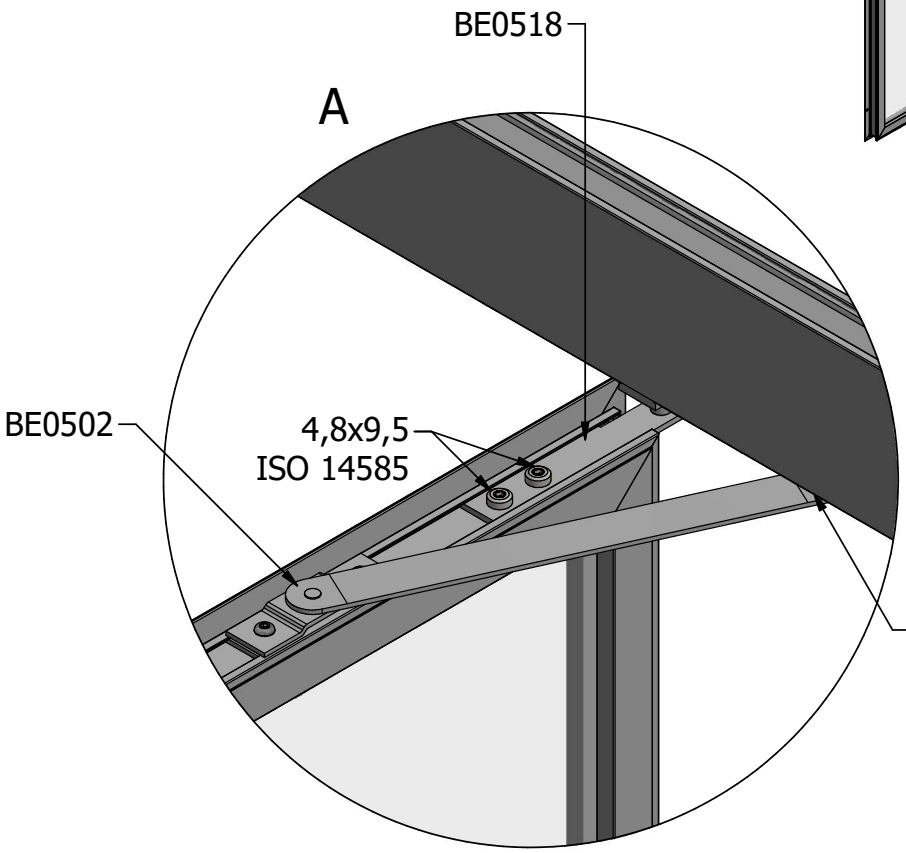
Połączenie skrzydła wewnętrznego z ramą skrzydła zewnętrznego
Connection of the internal sash with the frame of external sash





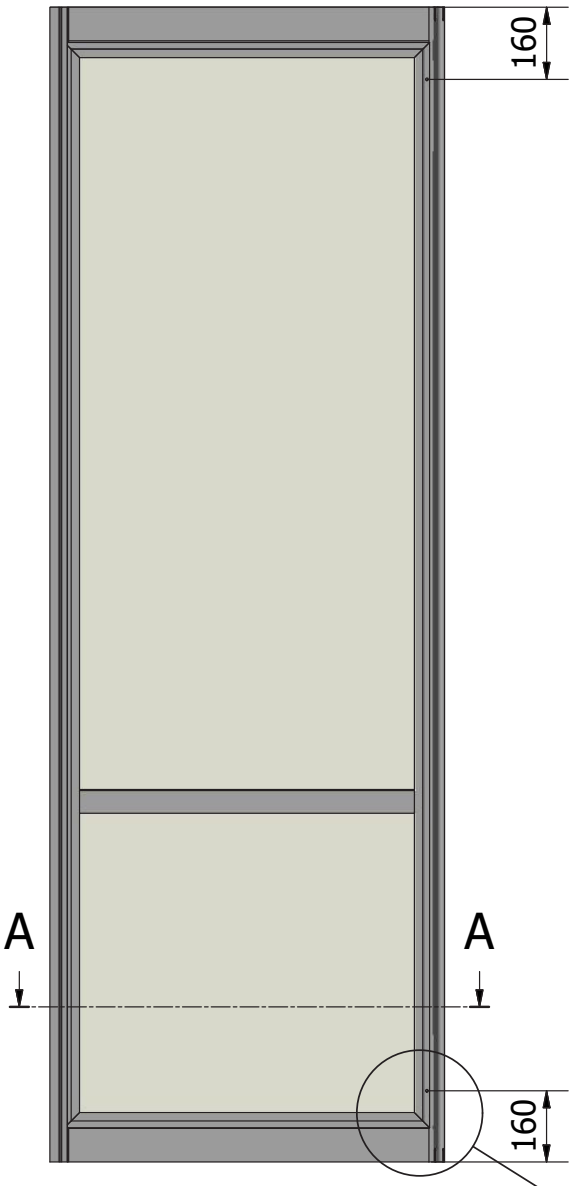
Złożenie skrzydła nieotwieralnego
Assembling of a non-opening sash

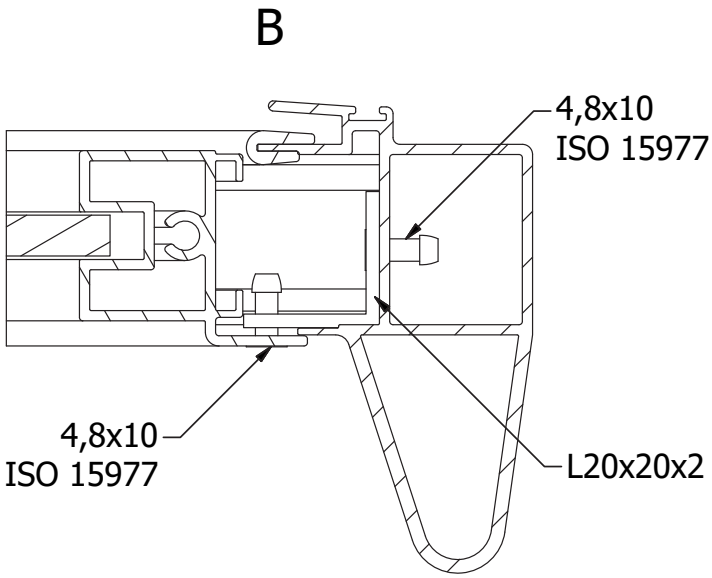




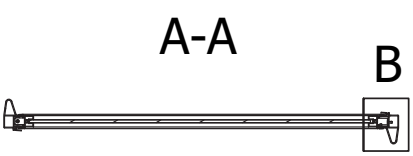
Dokręcić za pomocą długiego klucza imbusowego przez otwór od góry skrzydła
Tighten with the long Allen key through the hole from the top of the wing

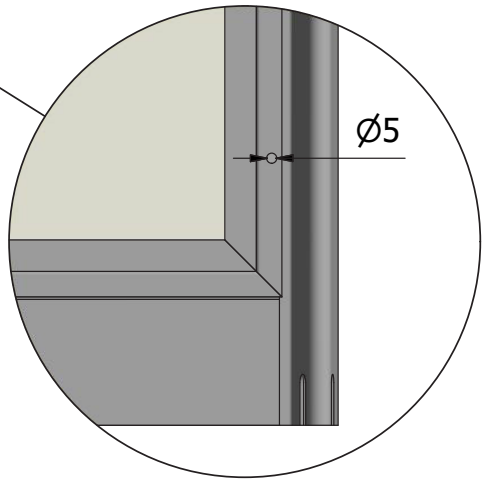
Złożenie skrzydła nieotwieralnego
Assembling of a non-opening sash



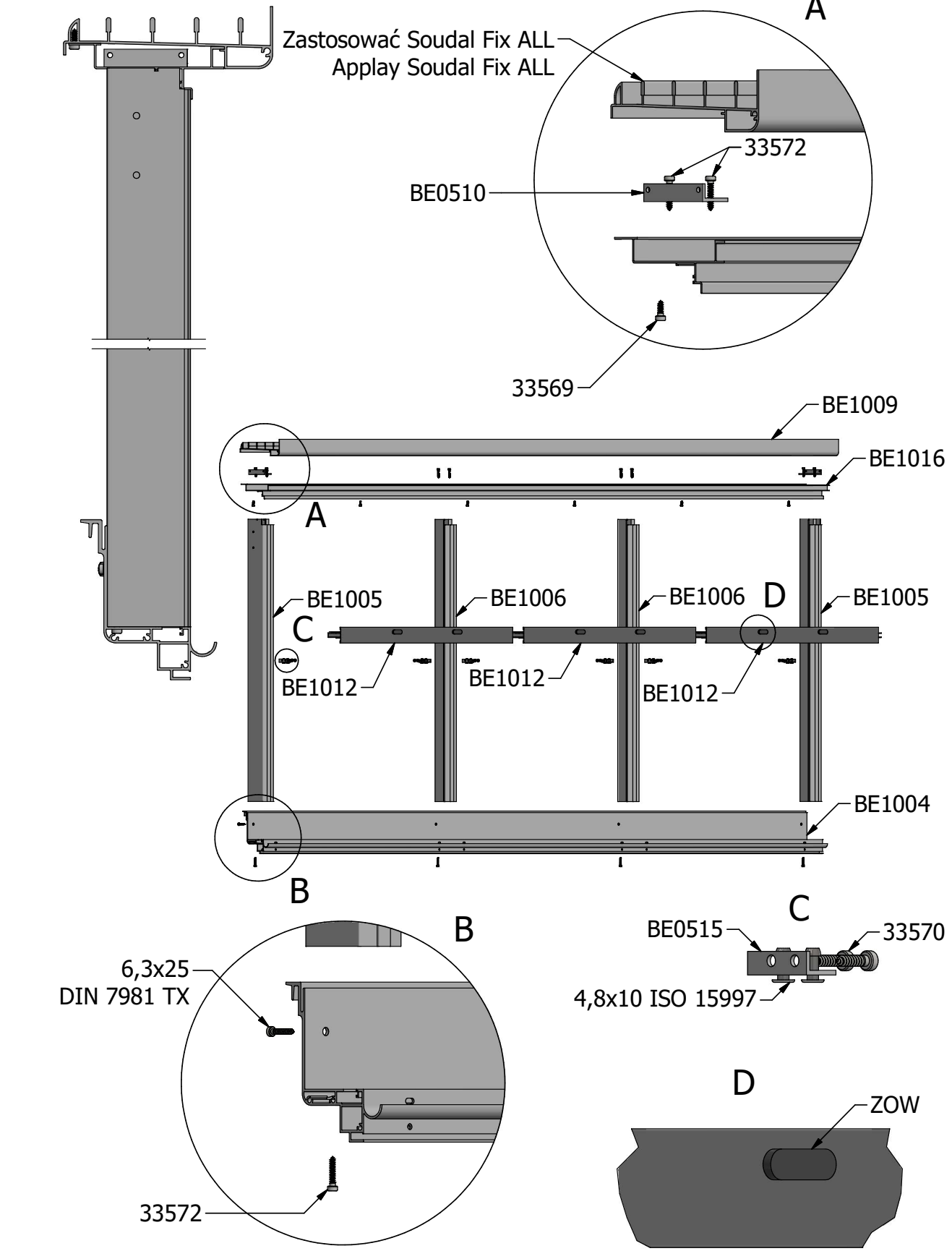


Uwaga: Zablokować możliwość otwierania skrzydła poprzez zaniotwanie
Note: Block the possibility of opening the sash by riveting



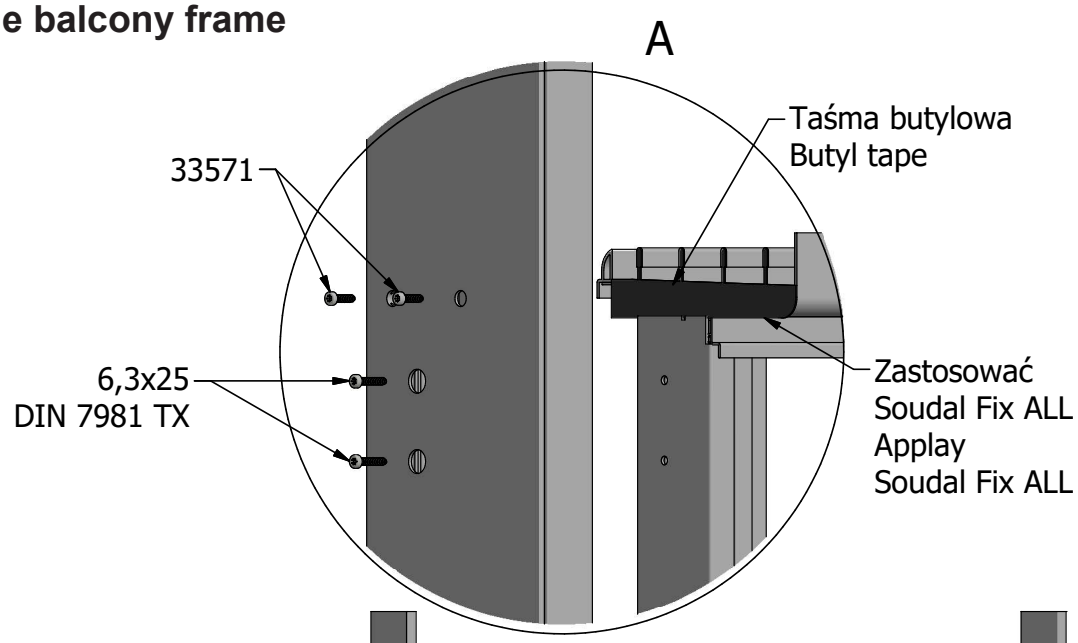


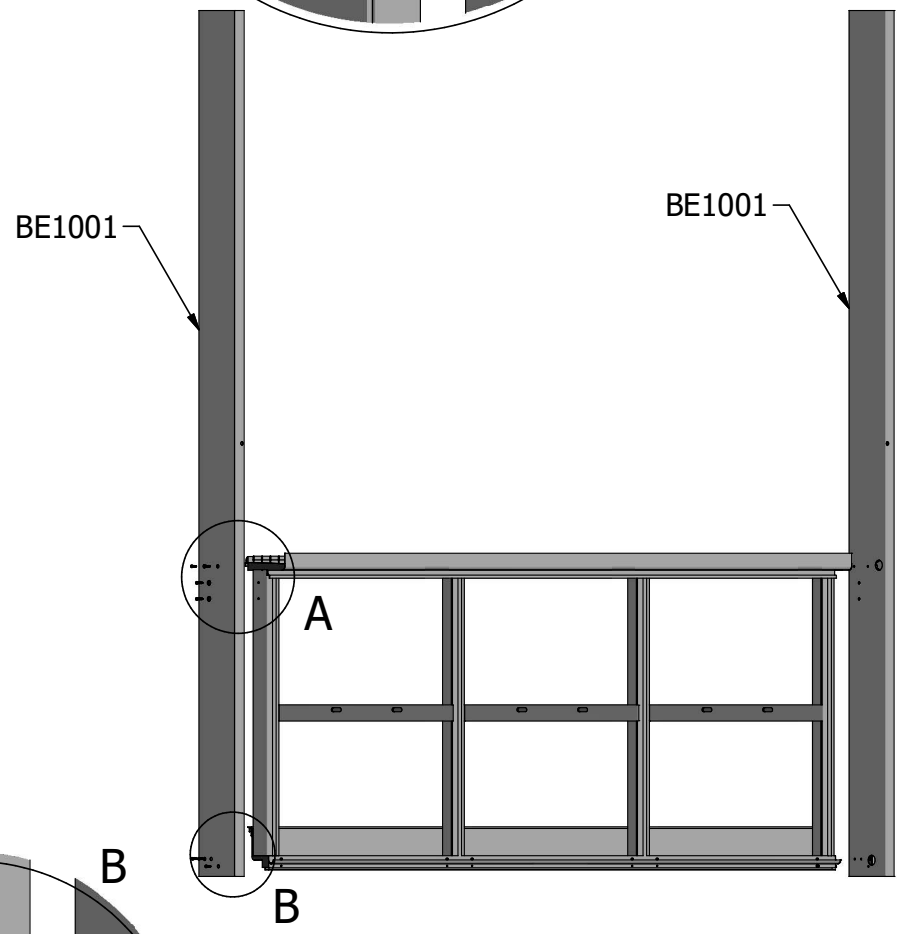
Montaż dolnej części zabudowy balkonu
Assembling the lower part of the balcony

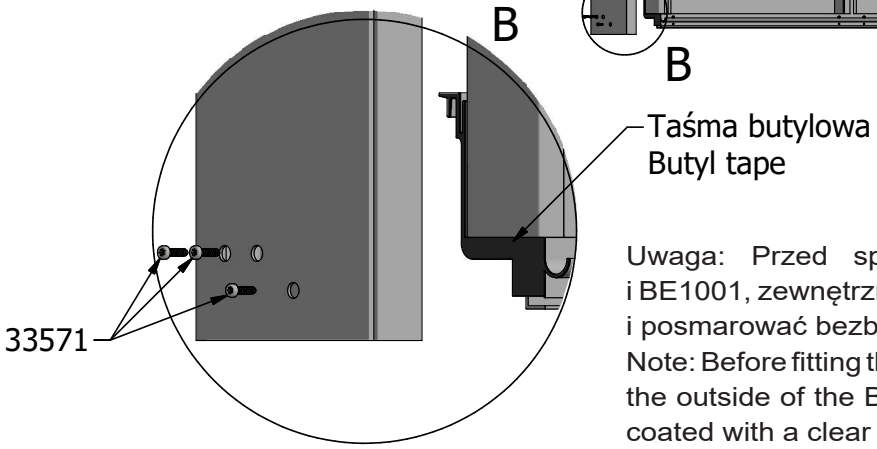


Uwaga: Po montażu dolnej części zabudowy balkonu, górne i dolne narożniki należy uszczelnić butylem
Note: After installation of the lower part of the balcony, upper and lower corners should be sealed with butyl tape

Montaż ramy zabudowy balkonu
Assembling the balcony frame



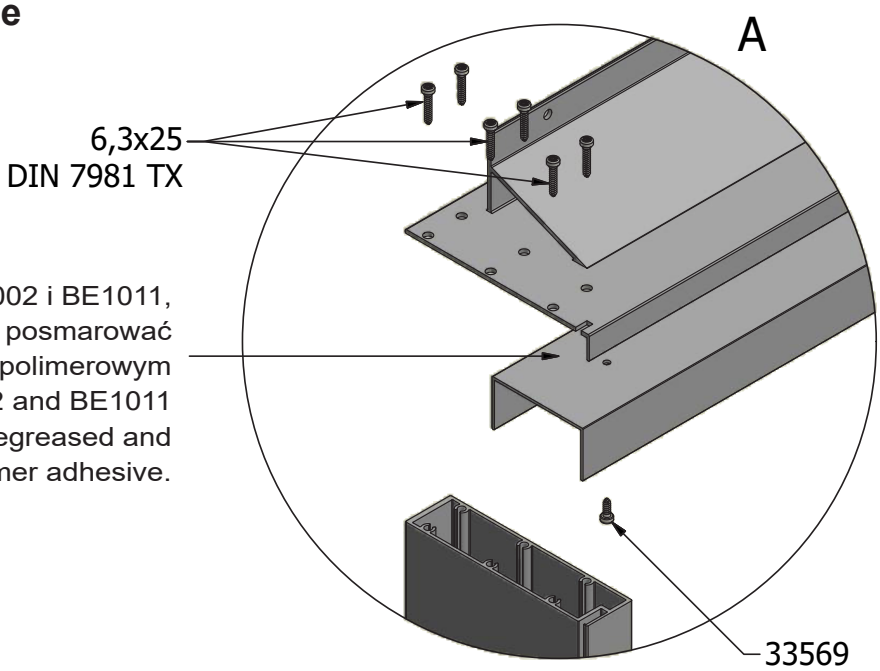




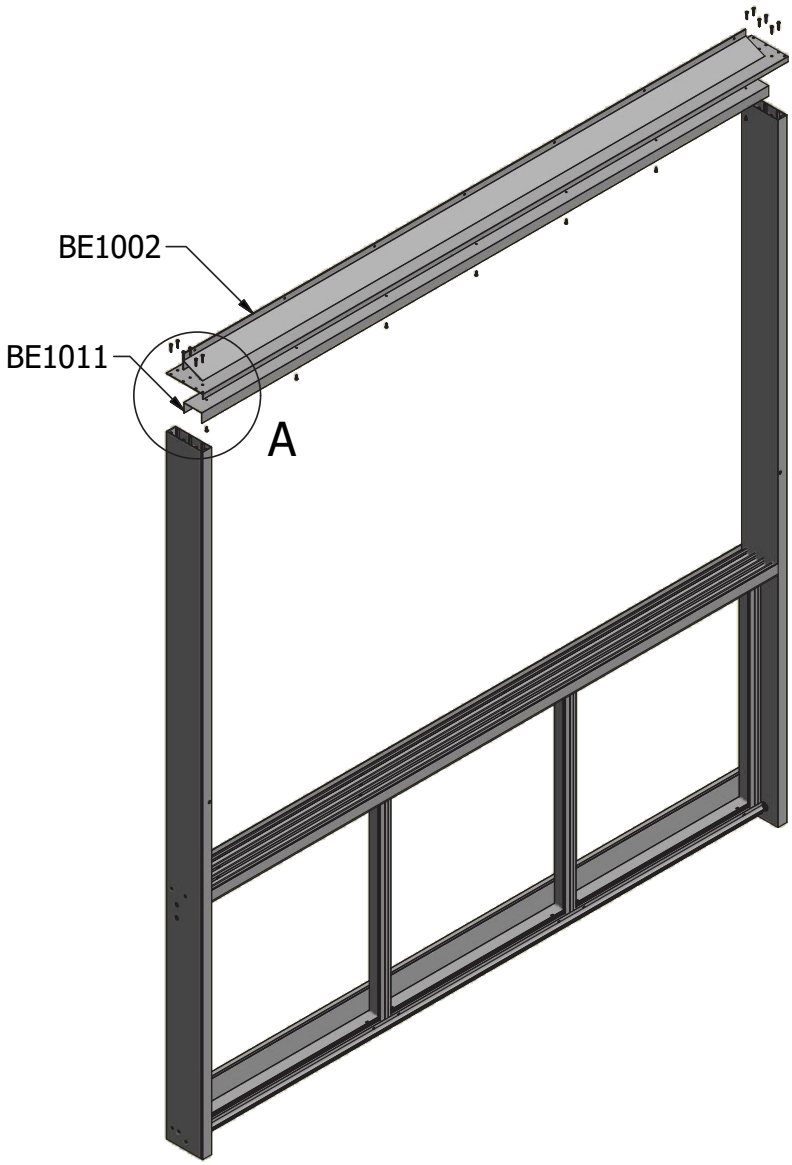
Uwaga: Przed spasowaniem otworów profili BE1005 i BE1001, zewnętrzną stronę profili BE1005 należy odtłuścić i posmarować bezbarwnym klejem polimerowym

Note: Before fitting the BE1005 and BE1001 profile openings, the outside of the BE1005 profiles must be degreased and coated with a clear polymer adhesive

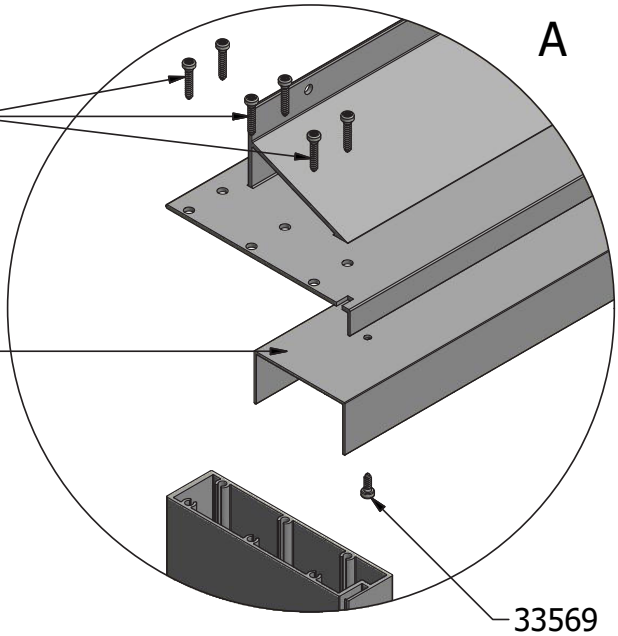
Montaż ramy zabudowy balkonu
Assembling the balcony frame



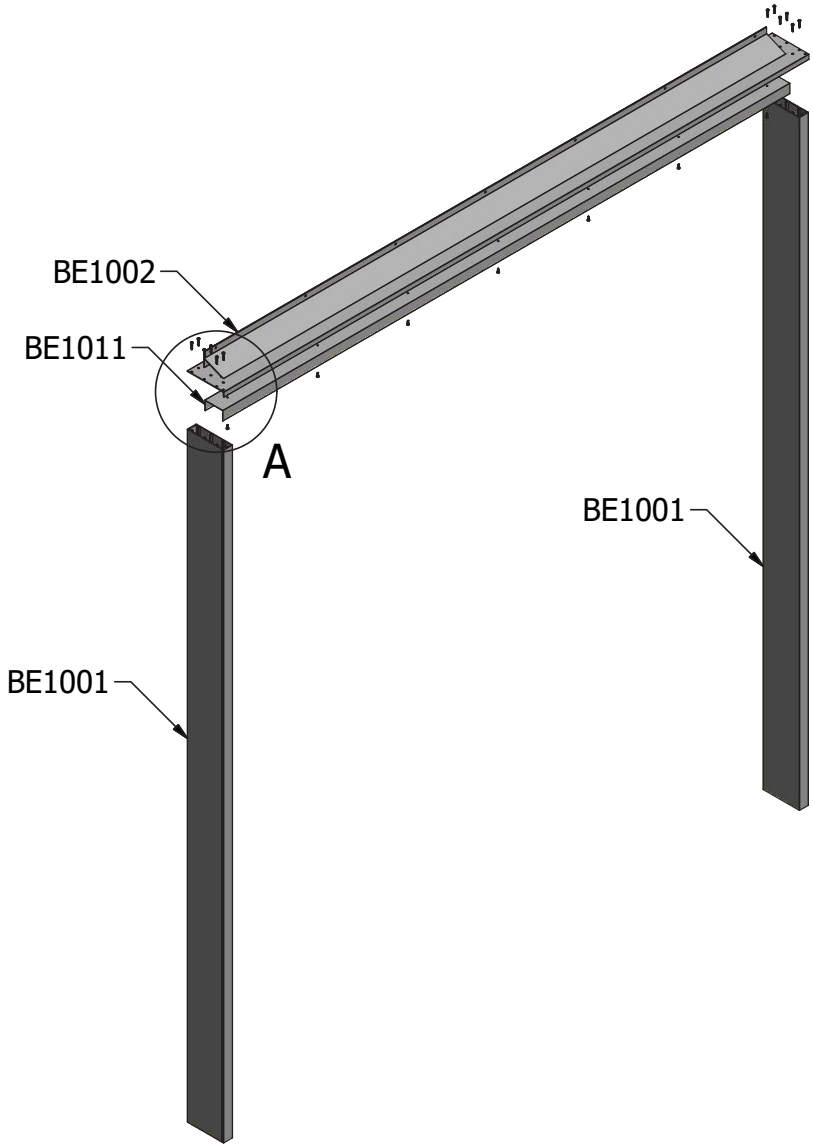
Uwaga: Przed połączeniem profili BE1002 i BE1011, profil BE1011 należy odtłuścić i posmarować bezbarwnym klejem polimerowym
Note: Before connecting the BE1002 and BE1011 profiles, the BE1011 profile must be degreased and coated with a clear polymer adhesive.



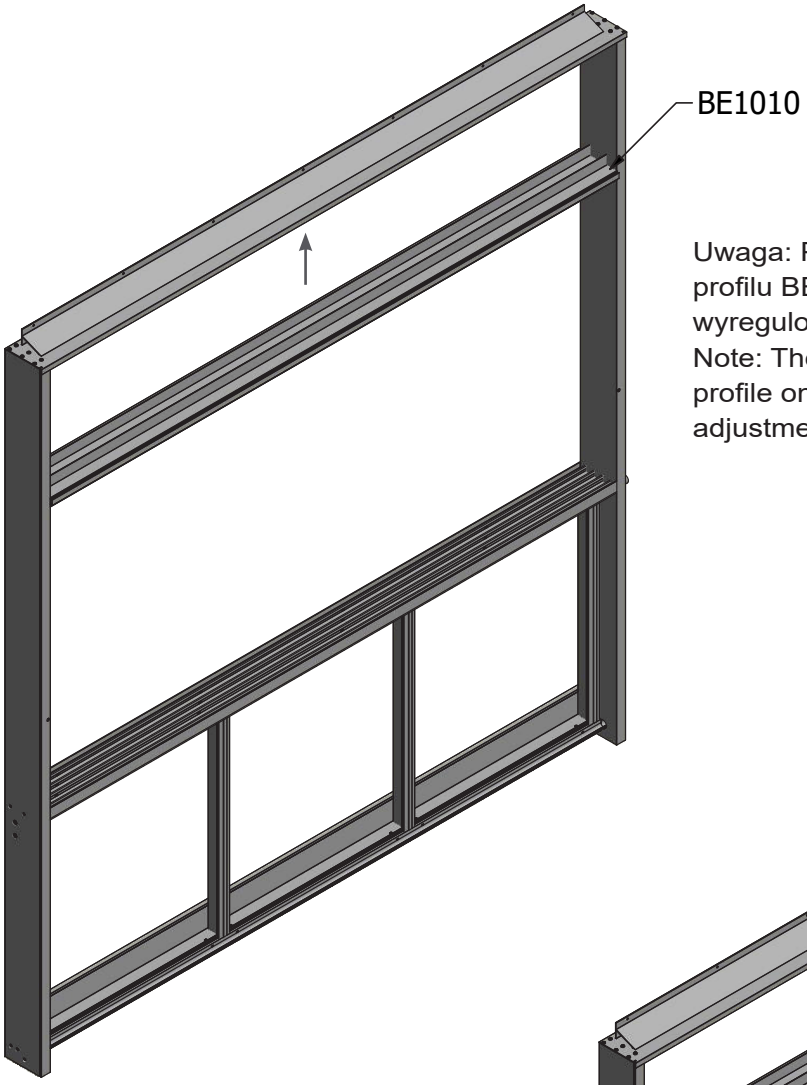
Montaż ramy zabudowy tarasu
Assembling the terrace frame



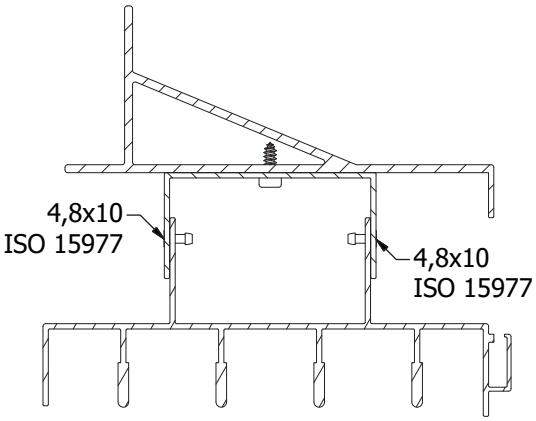
Uwaga: Przed połączeniem profili BE1002 i BE1011, profil BE1011 należy odtłuścić i posmarować bezbarwnym klejem poliuretanowym
Note: Before connecting the BE1002 and BE1011 profiles, the BE1011 profile must be degreased and coated with a clear polymer adhesive



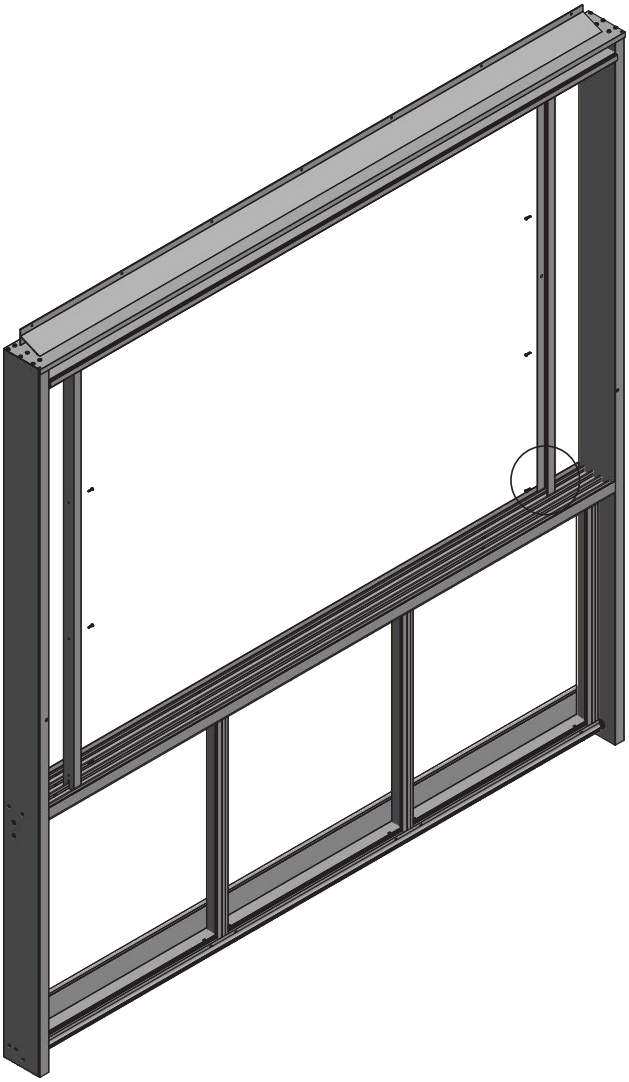
Montaż górnej prowadnicy - BE1010
Assembling the top guide bar - BE1010



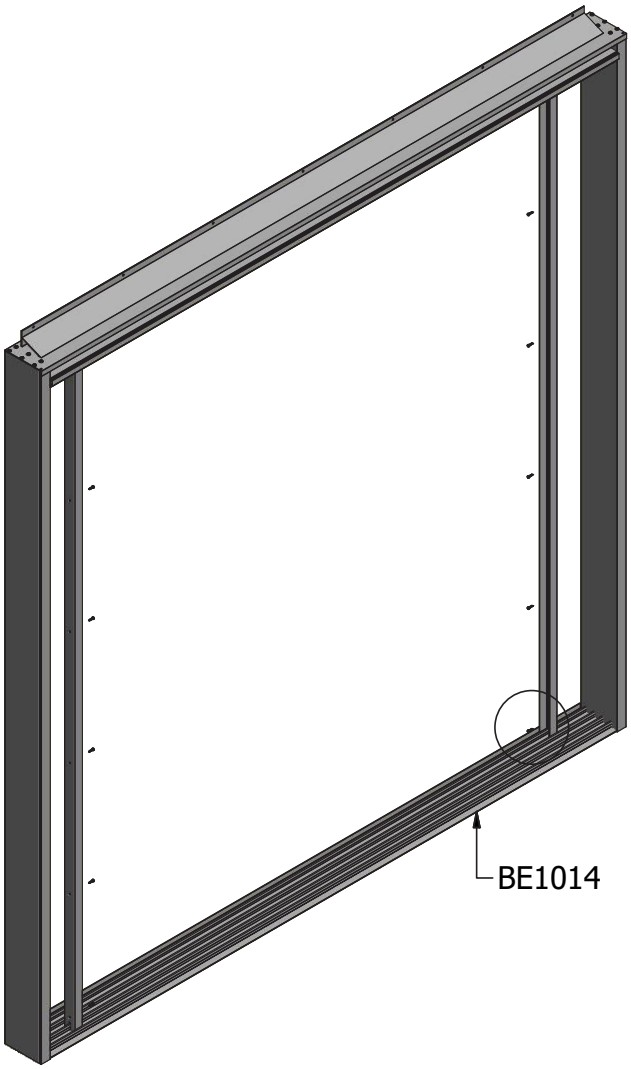
Uwaga: Profil BE1010 zostaje przynitowany do profilu BE1011 dopiero po wstawieniu skrzydeł oraz wyregulowaniu wysokości
Note: The BE1010 profile is revited to the BE1011 profile only after installation of the sashes and adjustment of the height

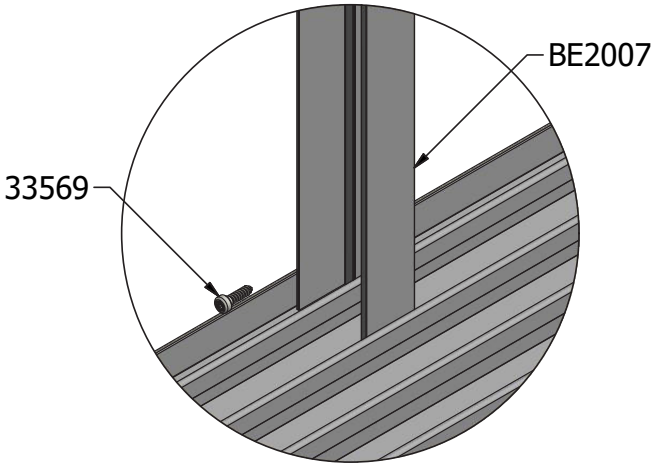


Montaż profilu zamykającego - BE2007
Assembling the closing profile - BE2007



Uwaga: Przed połączeniem profili BE2007 i BE1001, profil BE2007 należy odtłuścić i posmarować bezbarwnym klejem poliuretanowym
Note: Before connecting the BE2007 and BE1001 profiles, the BE2007 profile must be degreased and coated with a clear polymer adhesive

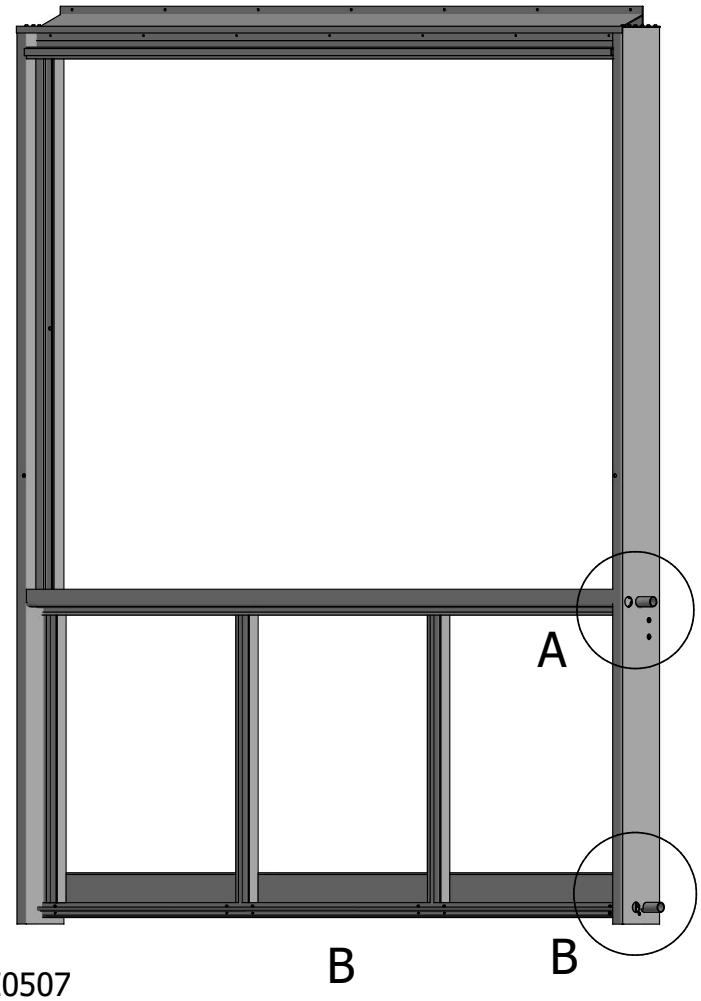


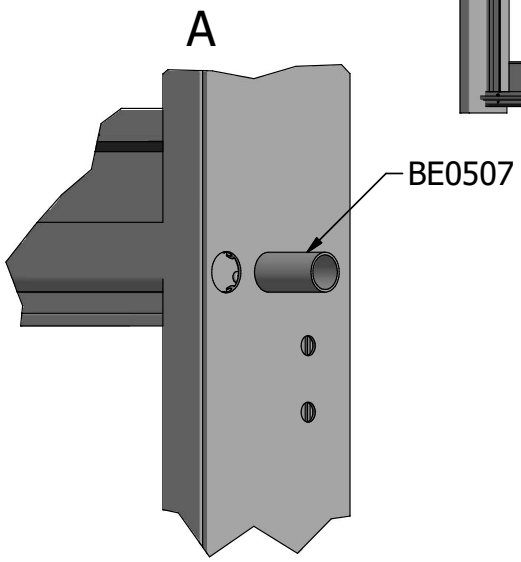


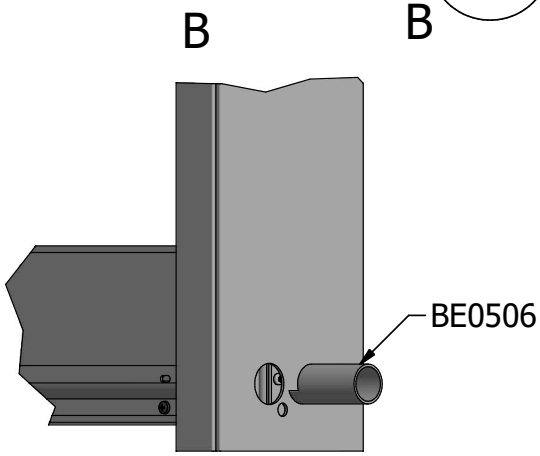
Montaż rur do odwodnienia
Mounting of the tubes for drainage

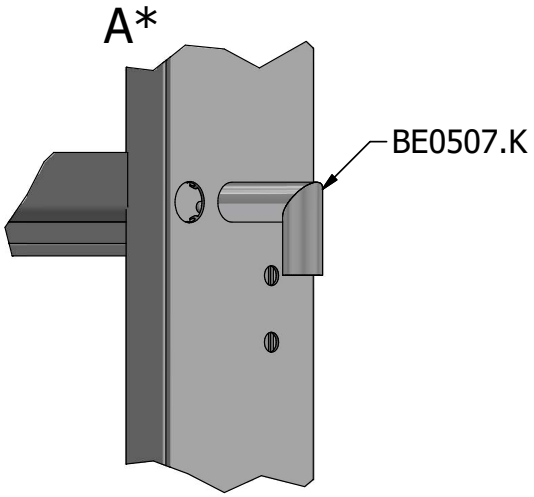
Uwaga: Rury do odwodnienia montowane są przy użyciu kleju polimerowego
Note: Tubes for drainage are mounted using polymer adhesive

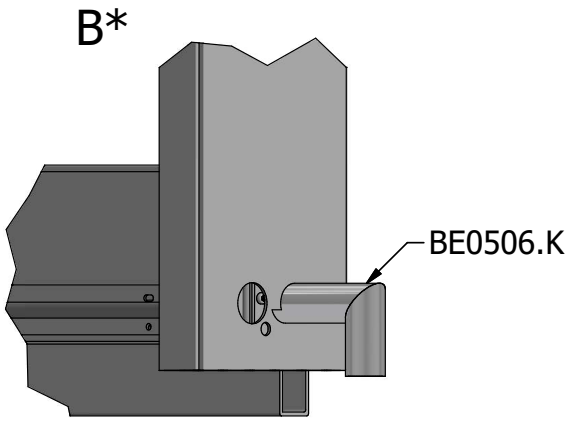
Uwaga: Rury montowane są na głębokość ok. 40 mm
Note: Tubes for drainage are mounted to a depth of approx. 40 mm



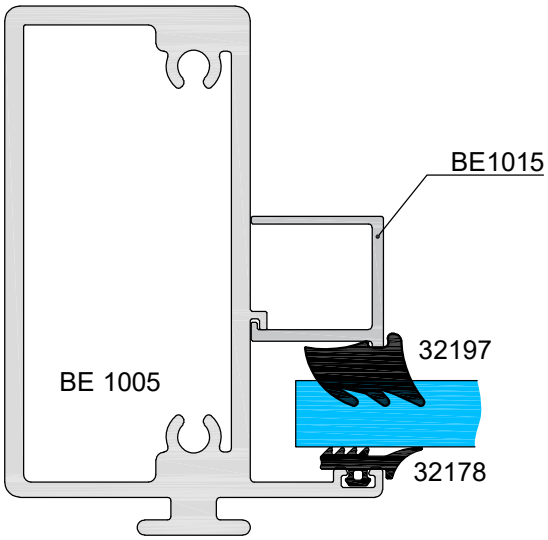


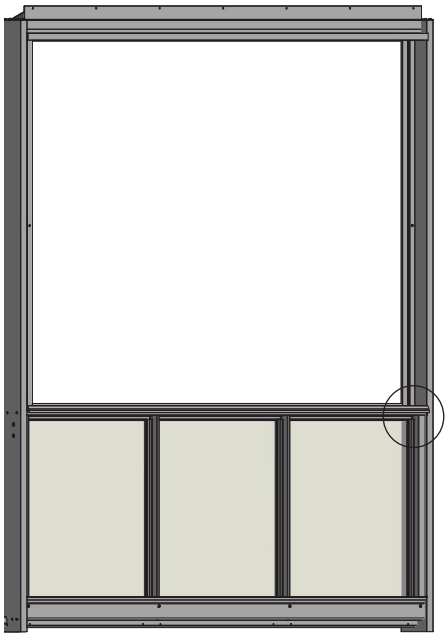


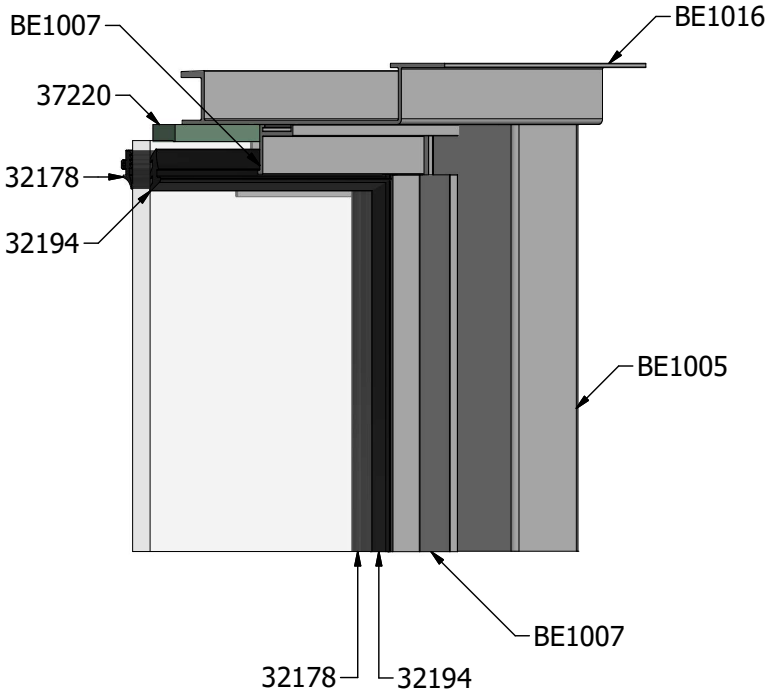




Mocowanie szkła w dolnej części zabudowy balkonu
Fixing the glass in the lower part of the balcony

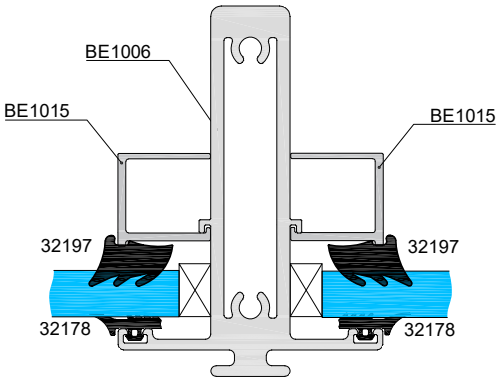


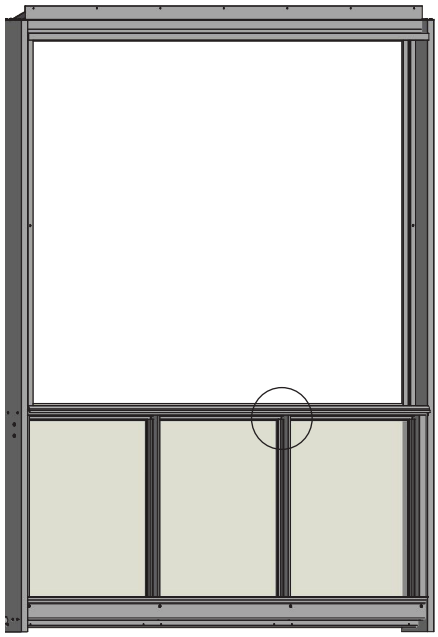


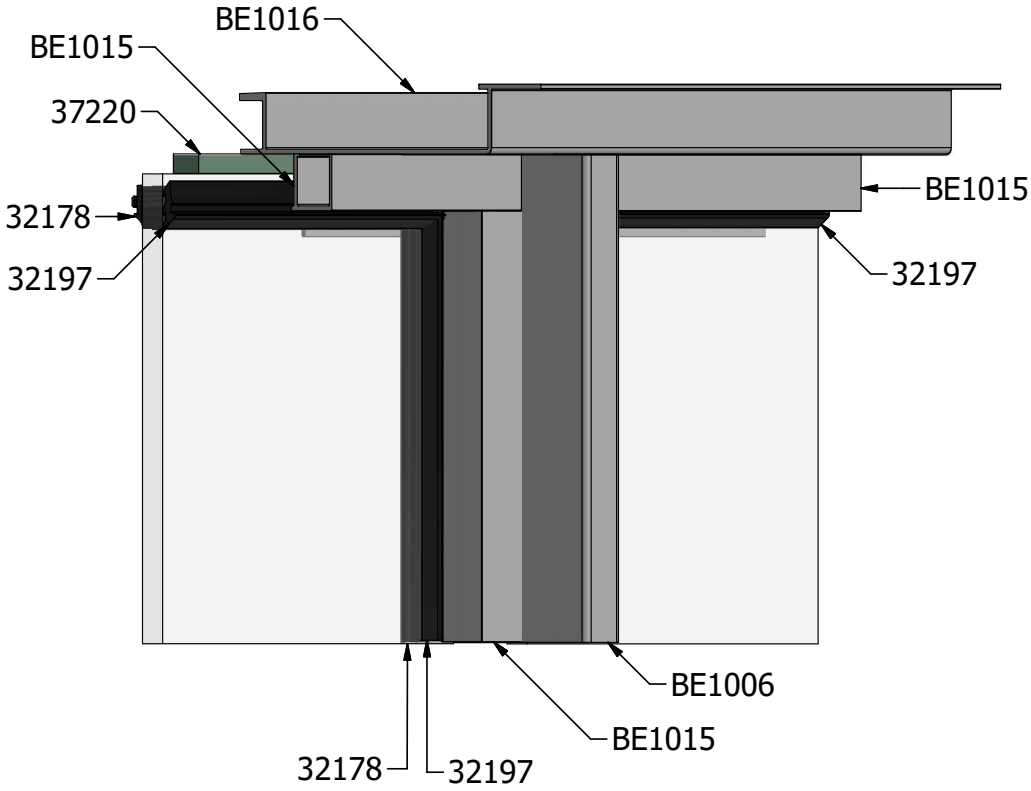


Uwaga: Podkładki szklarskie 37220 należy przeciąć na pół na szerokość 11 mm
Note: The glazing support 37220 should be cut in half 11 mm wide

Mocowanie szkła w dolnej części zabudowy balkonu
Fixing the glass in the lower part of the balcony



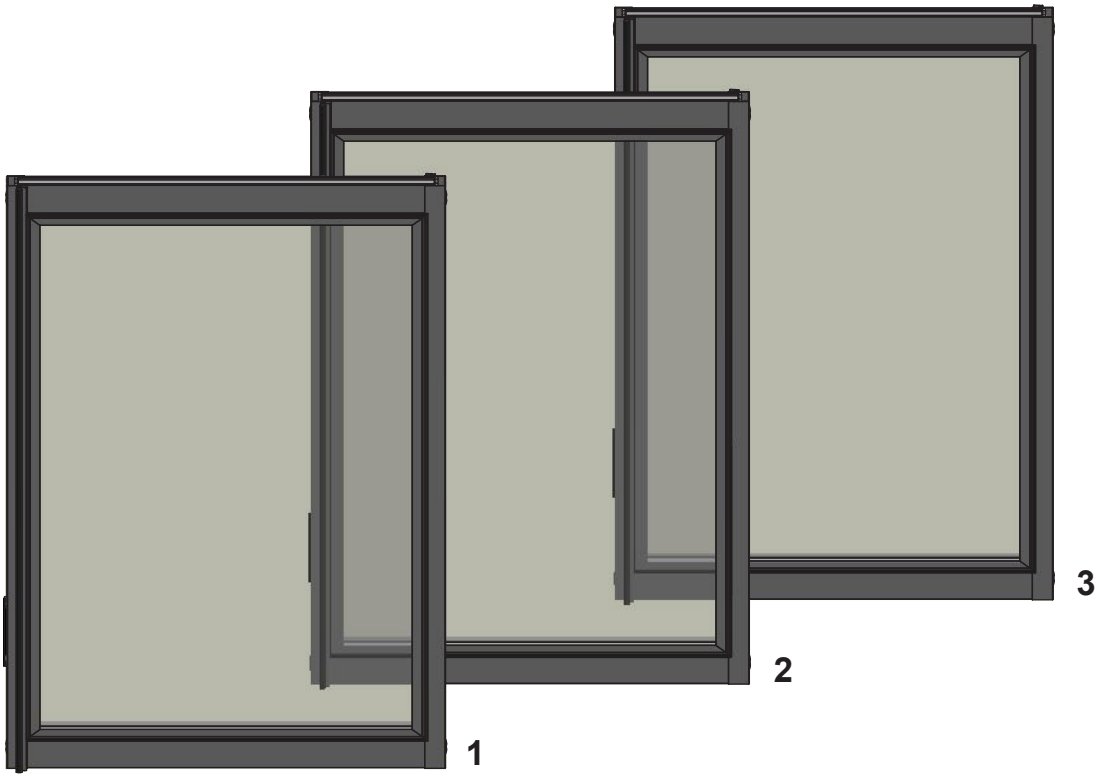


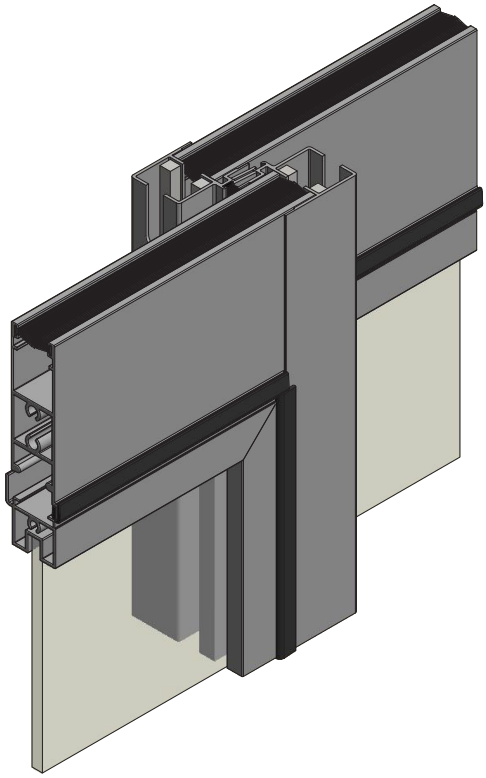


Uwaga: Podkładki szklarskie 37220 należy przeciąć na pół na szerokość 11 mm
Note: The glazing support 37220 should be cut in half 11 mm wide

Montaż skrzydeł
Installation of the sashes

Uwaga: Skrzydła należy wstawiać pojedynczo zaczynając od skrzydła najbardziej wysuniętego na zewnątrz
Note: The sashes should be installed one at a time starting with the outermost sash

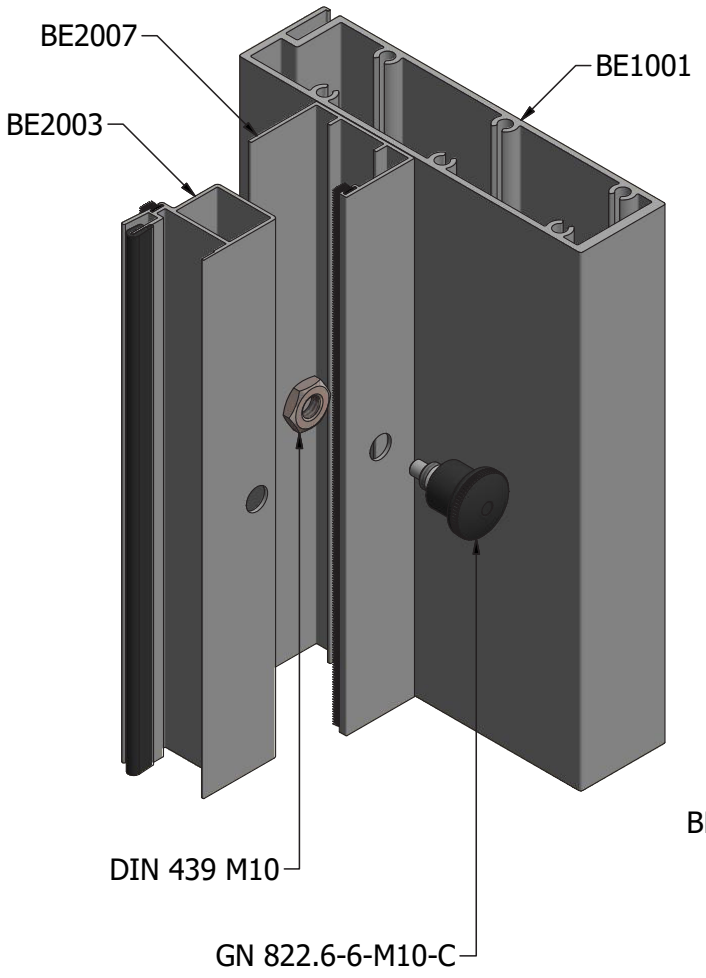


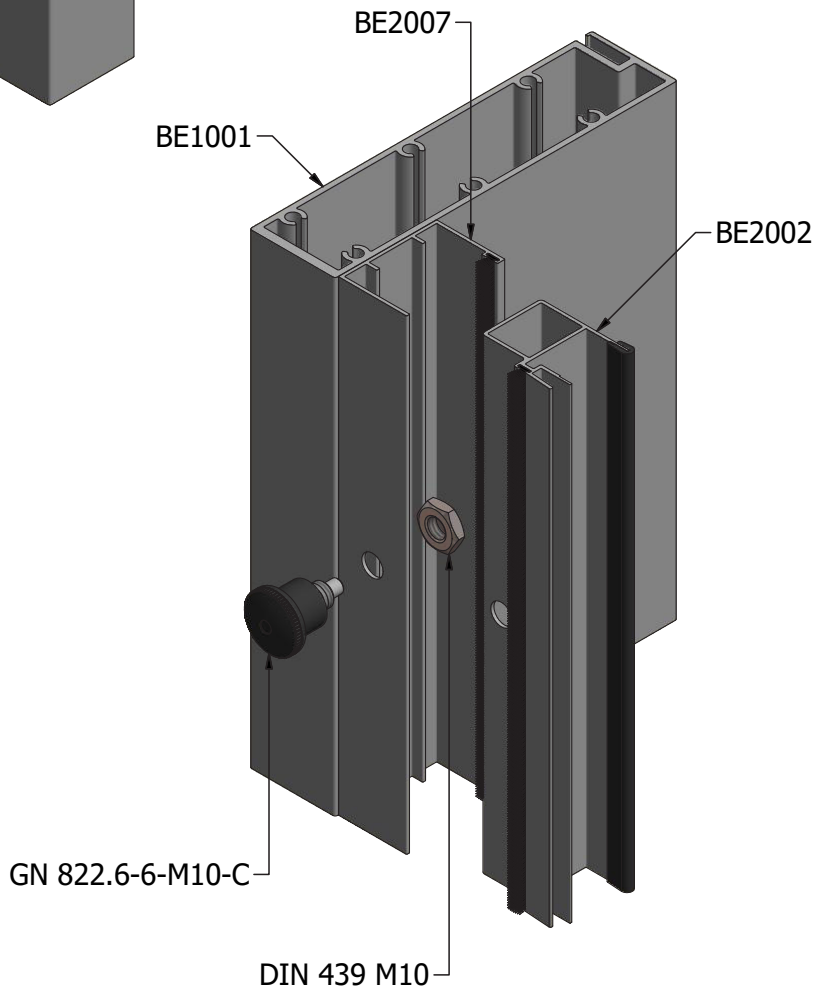


1. Górną część skrzydła należy wsunąć do oporu w górną prowadnicę
2. Następnie należy ustawić skrzydło pionowo i opuścić je na dolną prowadnicę

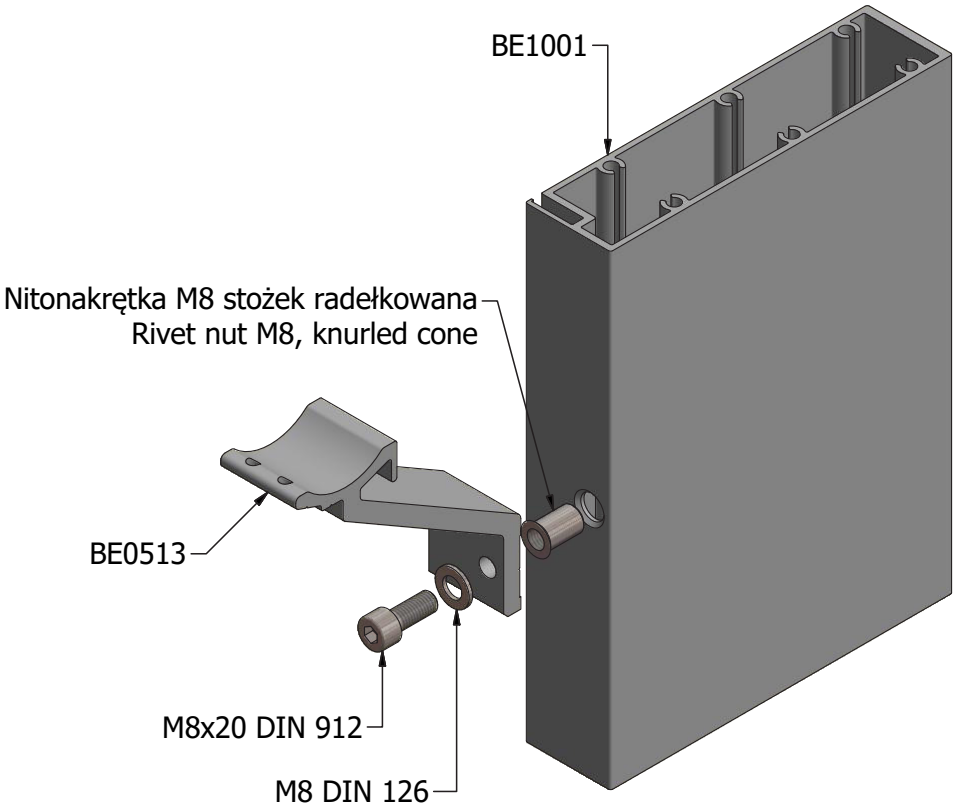
1. The top part of the sash must be pushed into the top guide bar as far as it will go
2. Then the sash should be placed vertically and lower it to the bottom guide bar

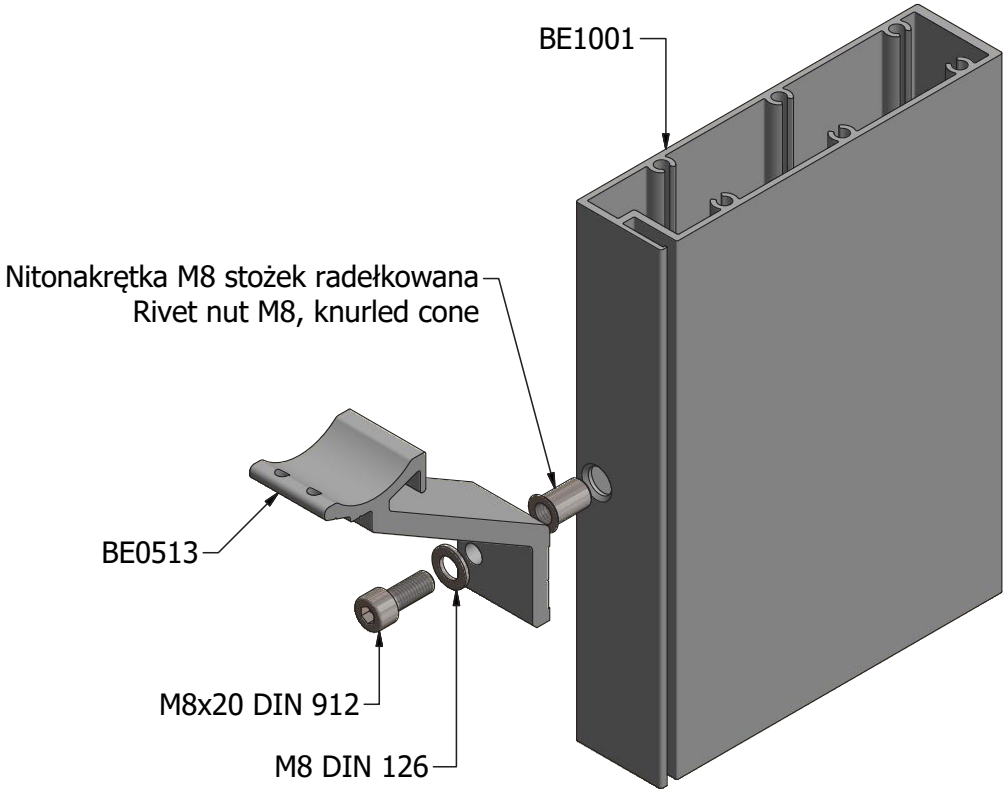
Montaż trzpieni blokujących
Mounting of the locking bolts



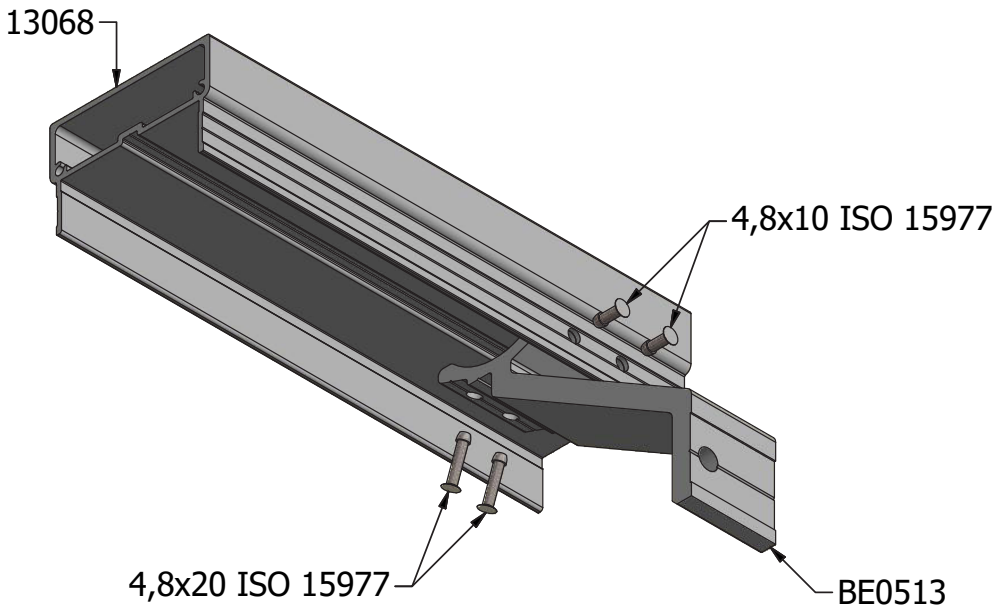


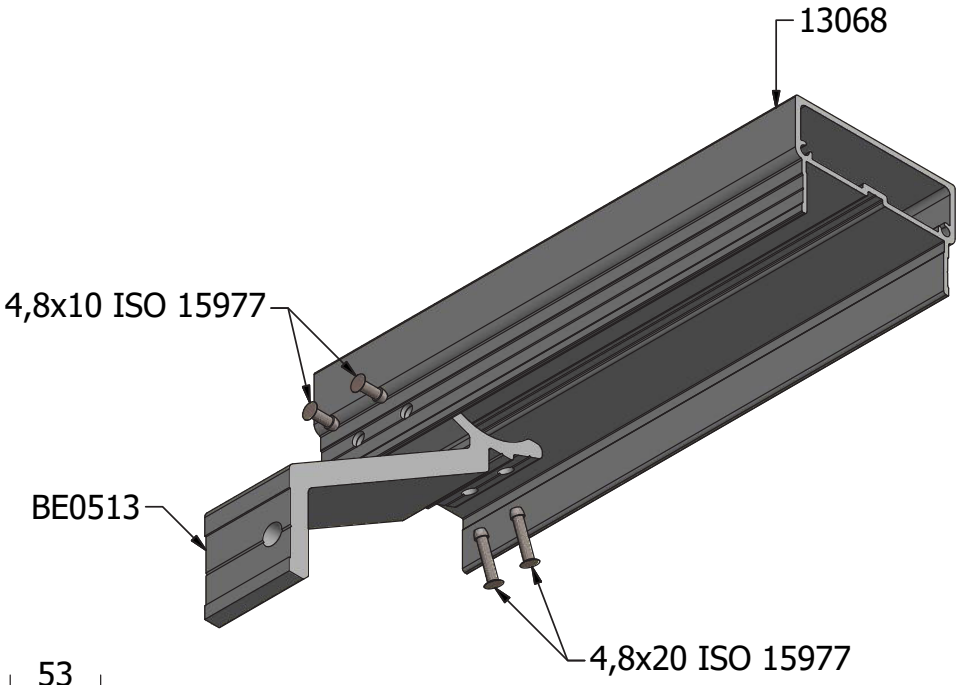
Montaż wspornika do profilu BE1001
Mounting of the support to the BE1001 profile

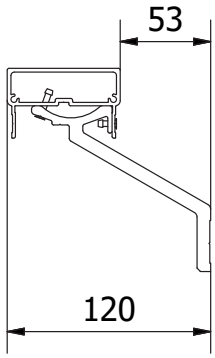




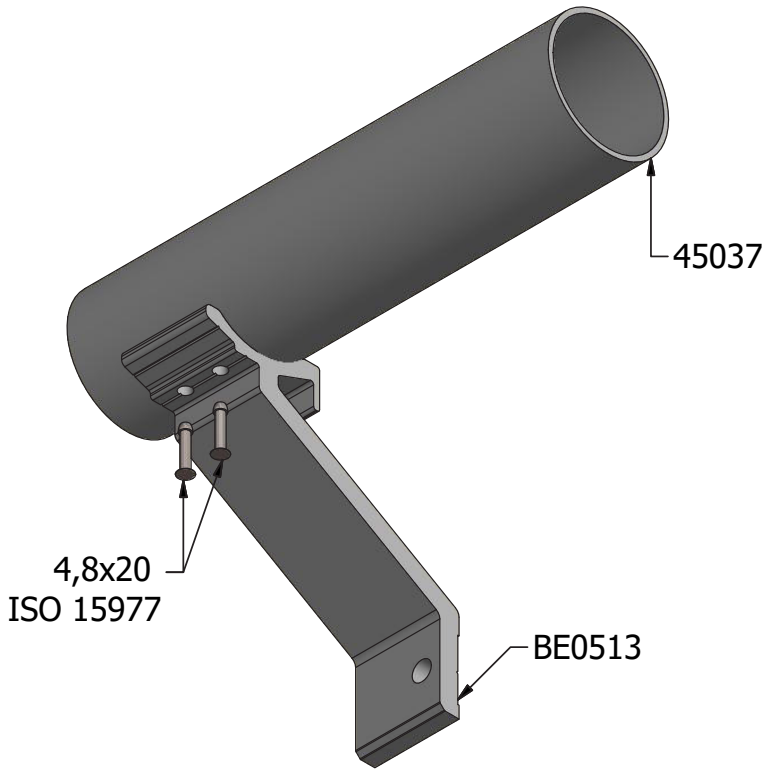
Montaż wspornika do poręczy 13068
Mounting of the support to handrail 13068

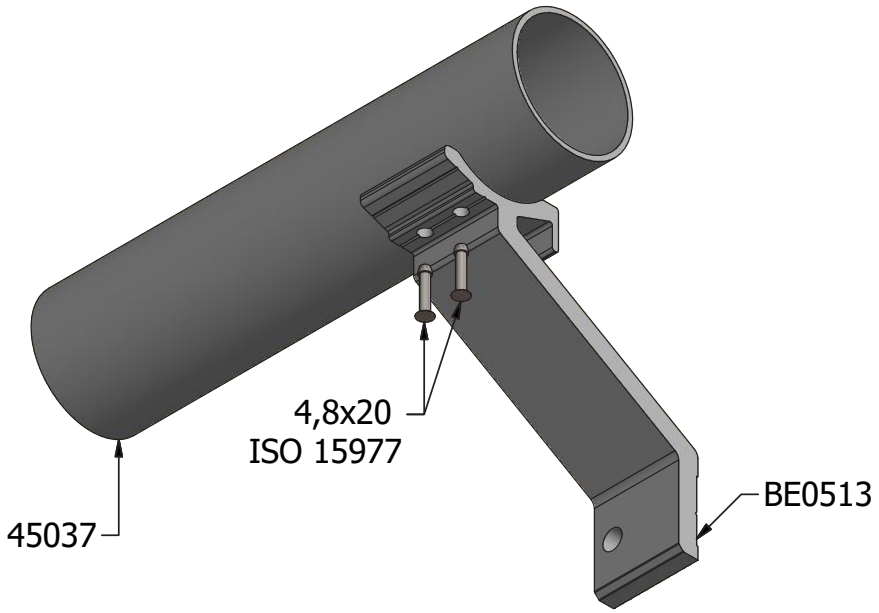


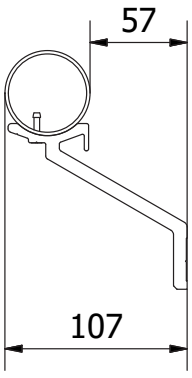




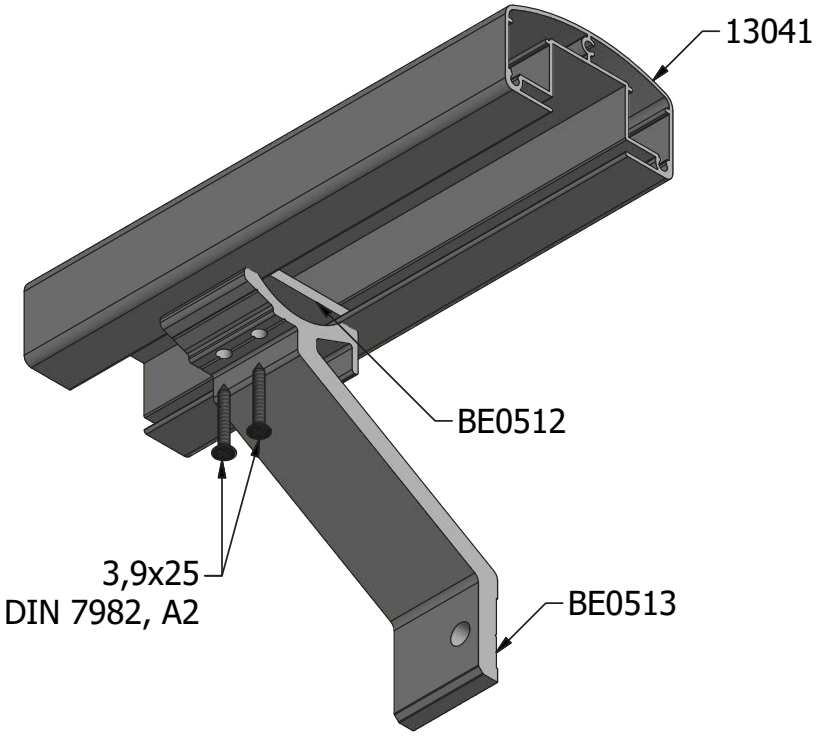
Montaż wspornika do poręczy 45037
Mounting of the support to handrail 45037

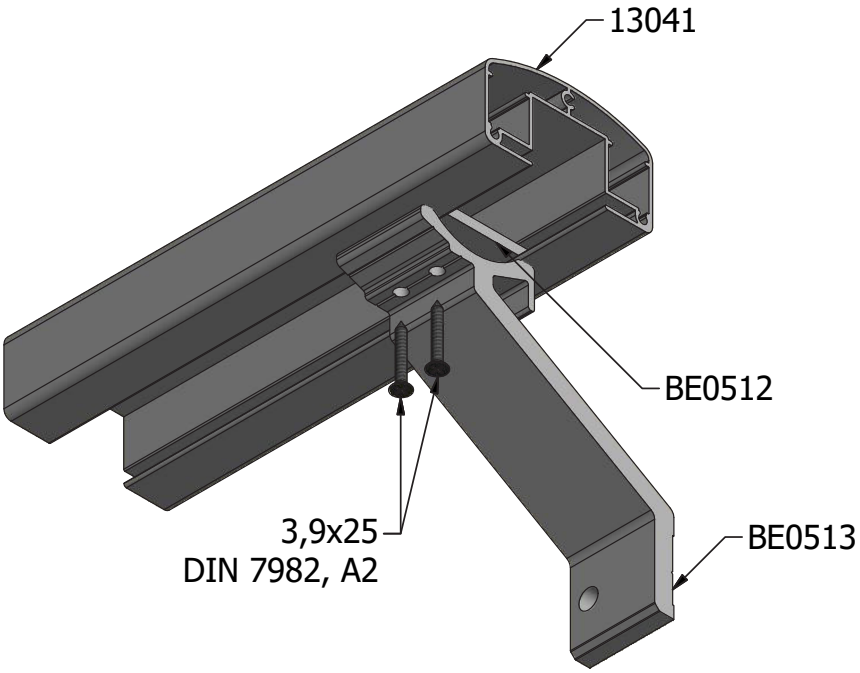


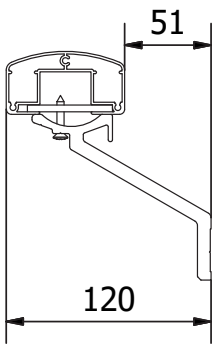




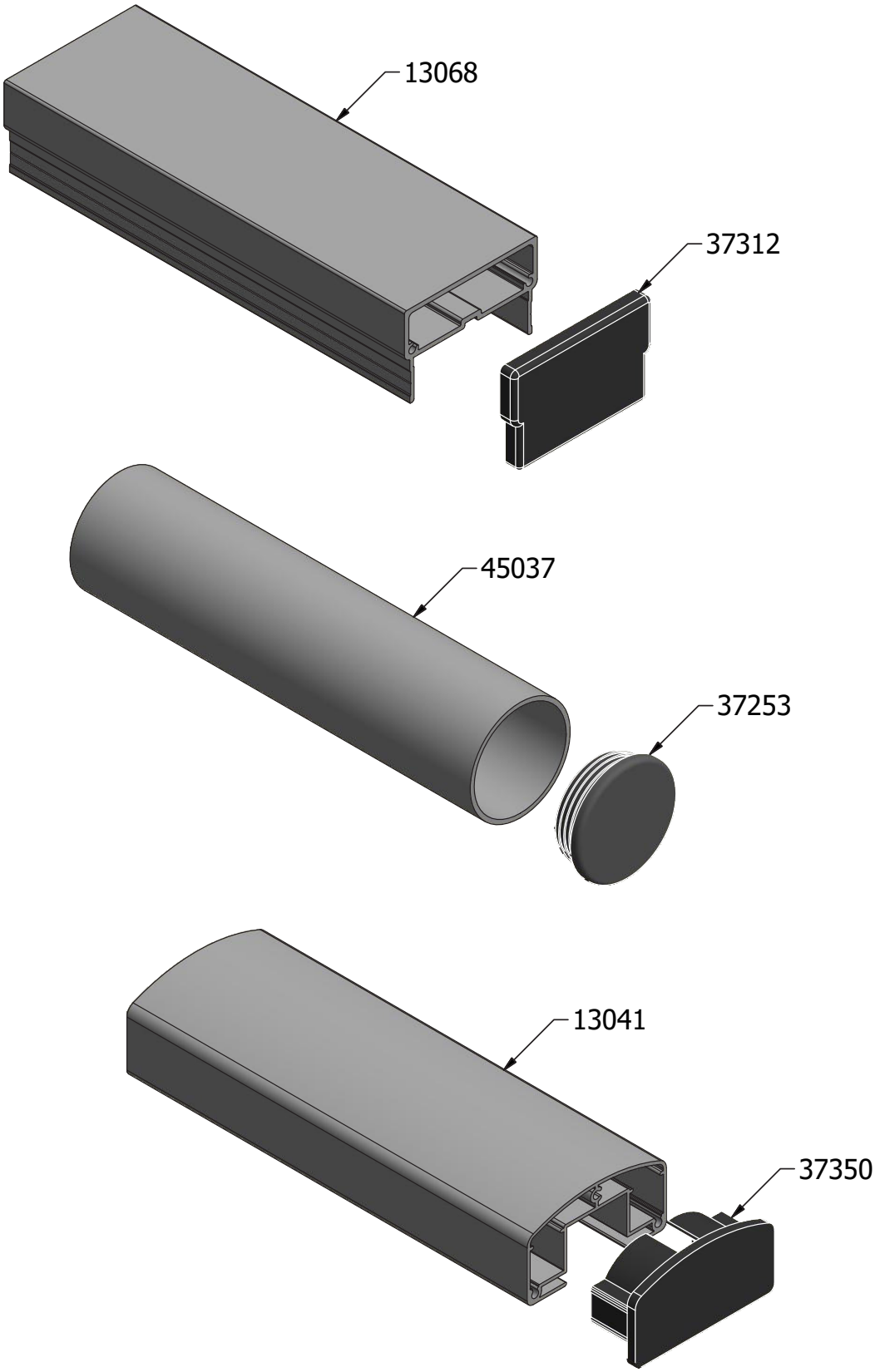
Montaż wspornika do poręczy 13041
Mounting of the support to handrail 13041





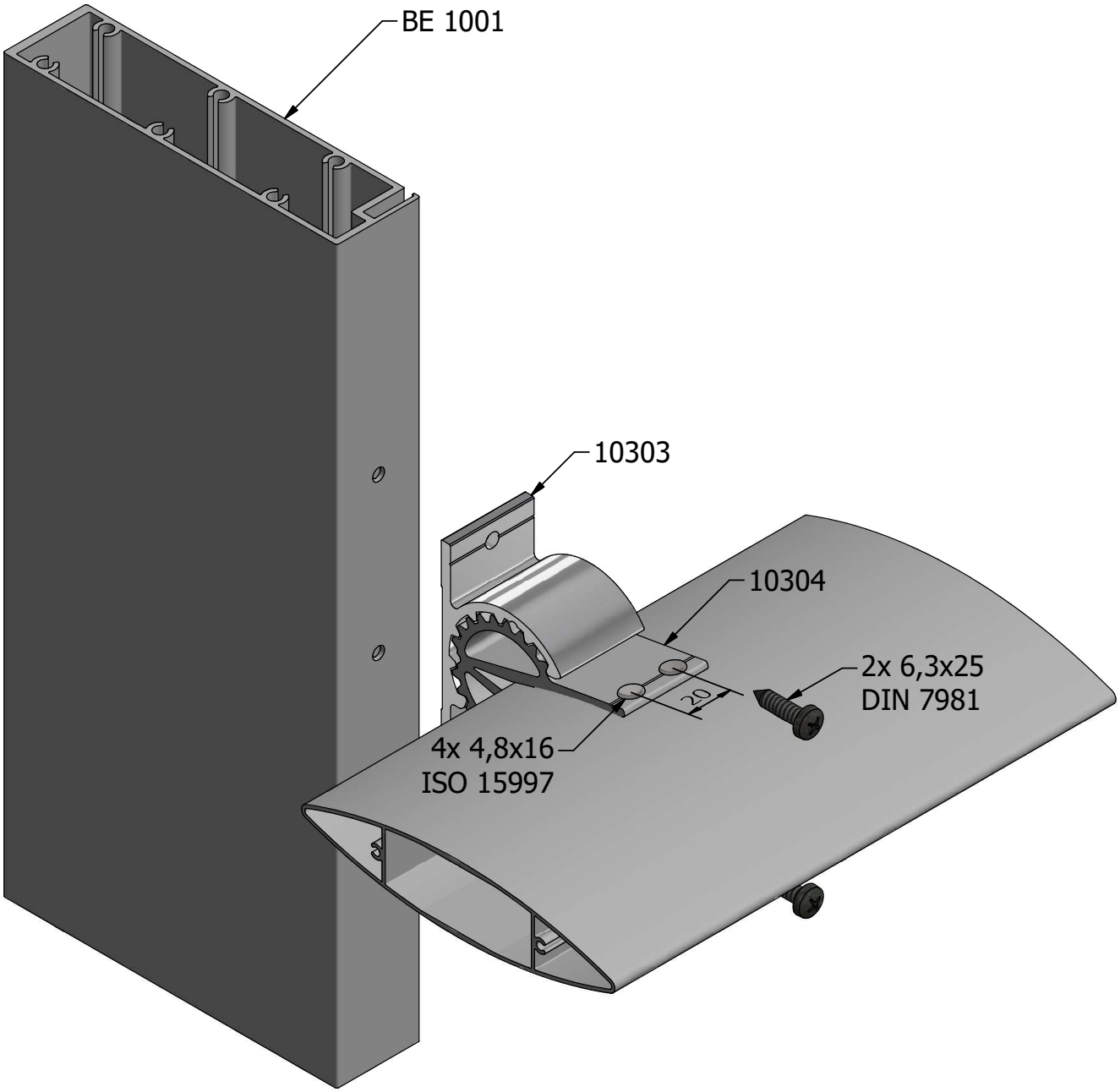


Montaż zaślepki poręczy
Mounting of the end cap of handrail

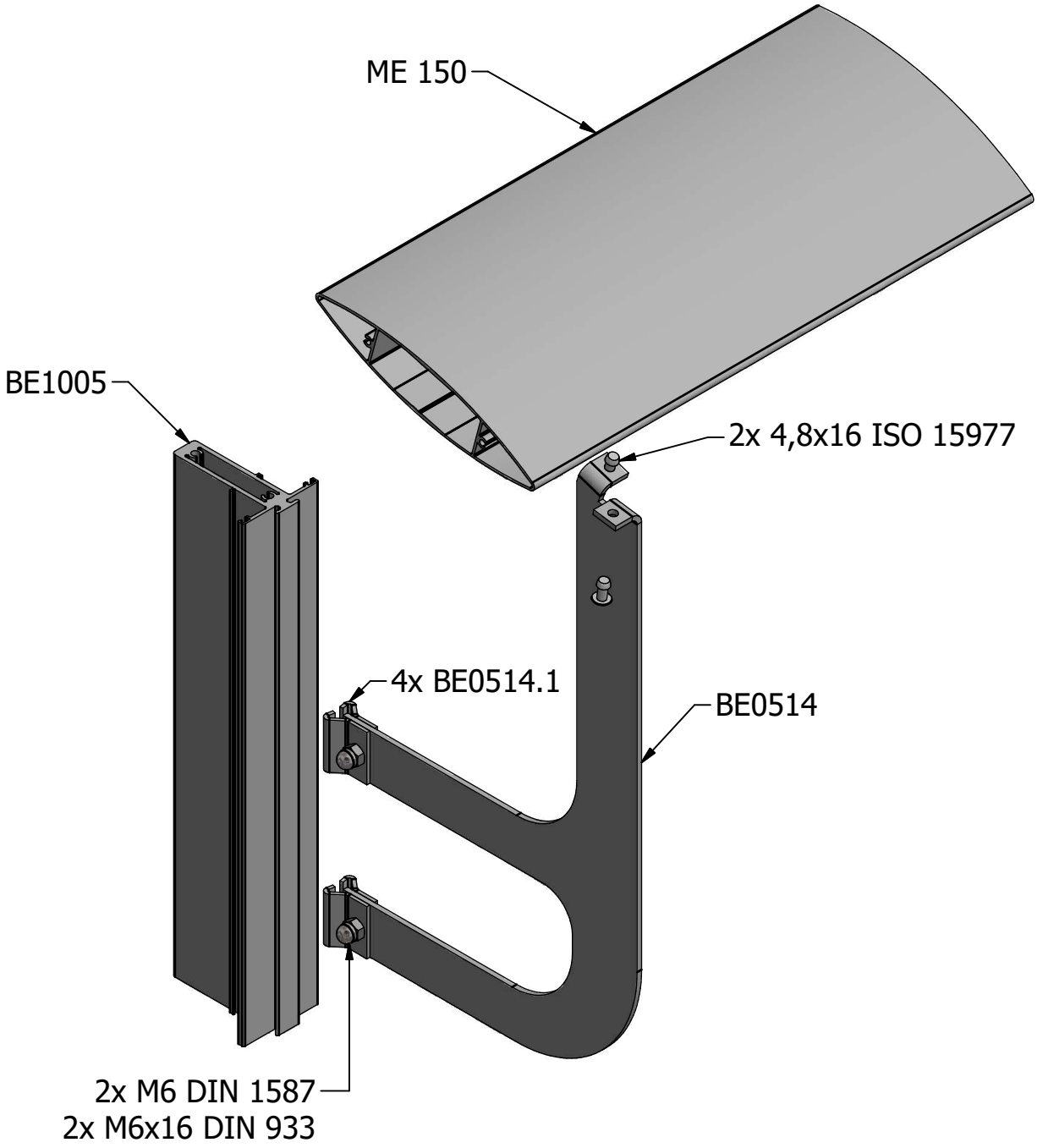


Uwaga: Zaślepki należy przymocować za pomocą kleju polimerowego
Note: End caps should be fixed with a polymer adhesive

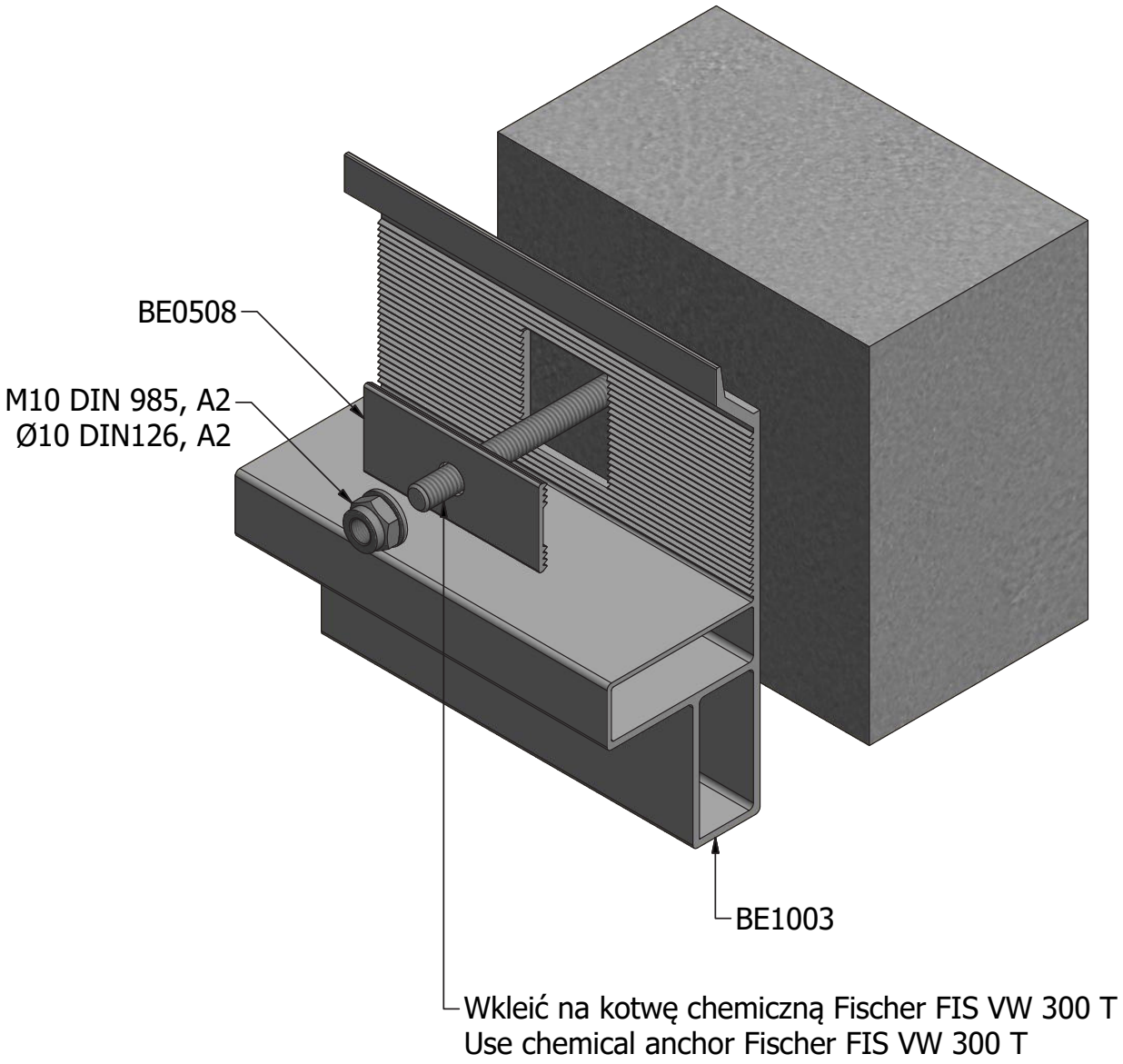
Montaż klipsa lameli
Mounting of the lamella clip



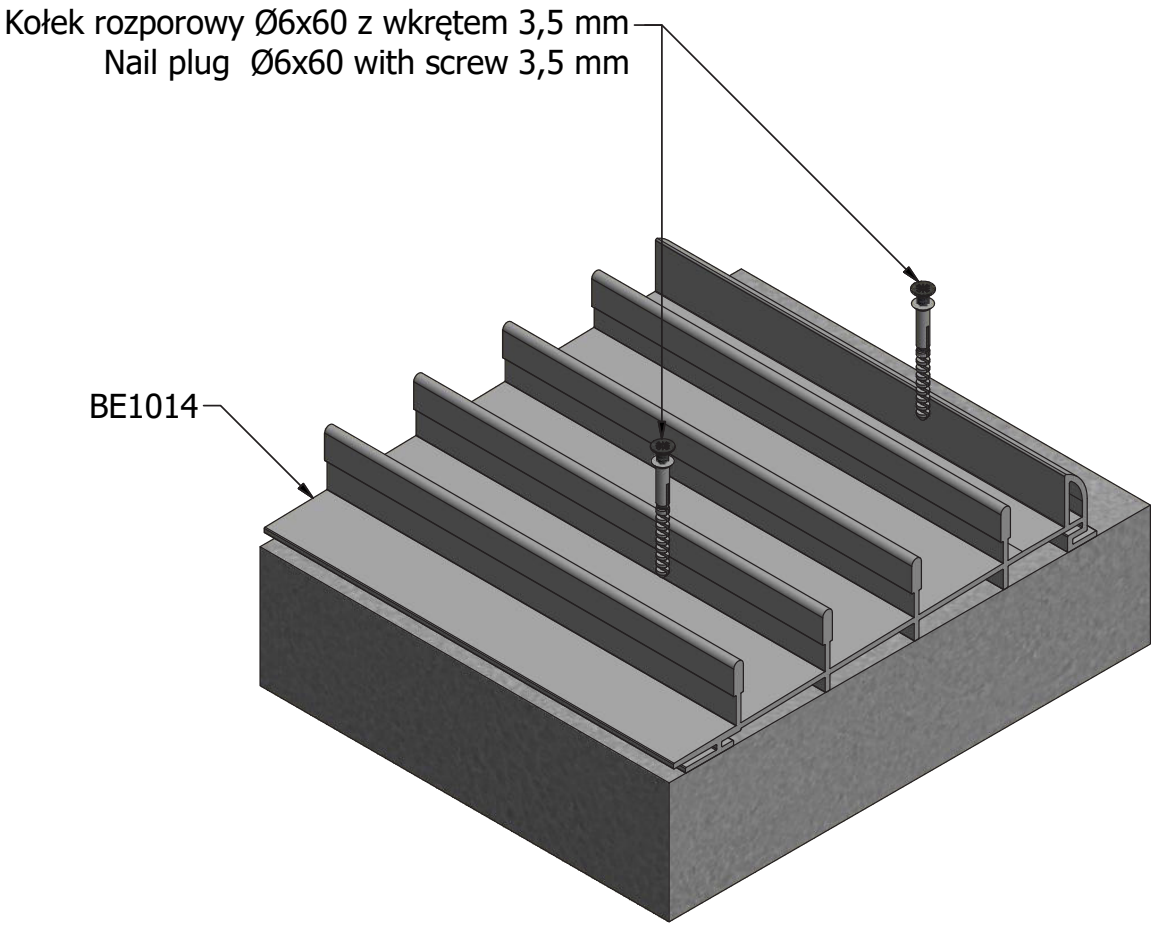
Montaż podpory lameli pod kątek 15°
Mounting of the bracket to handrail angle 15°



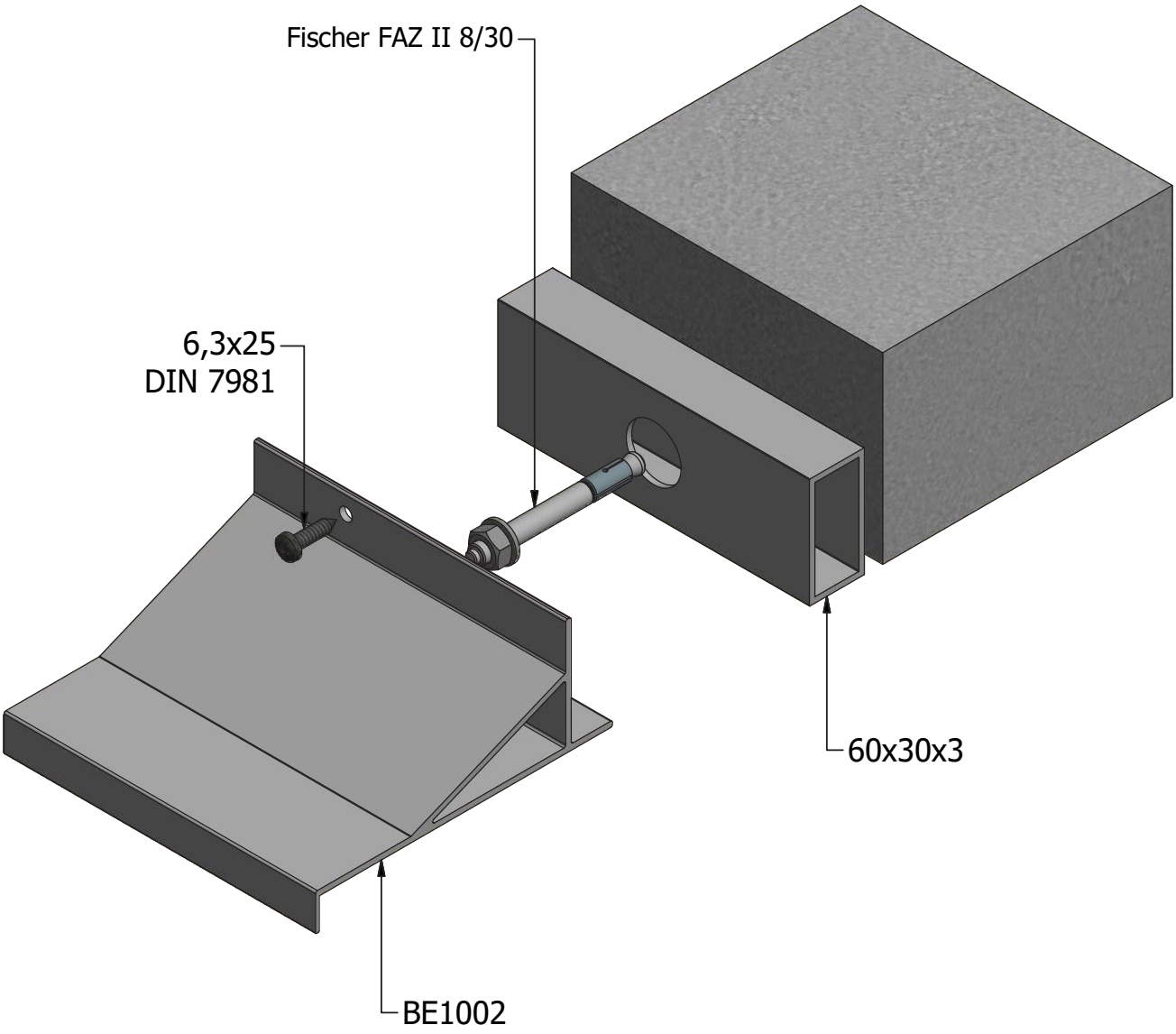
Montaż profilu kotwiącego - BE1003
Mounting of the anchoring profile - BE1003



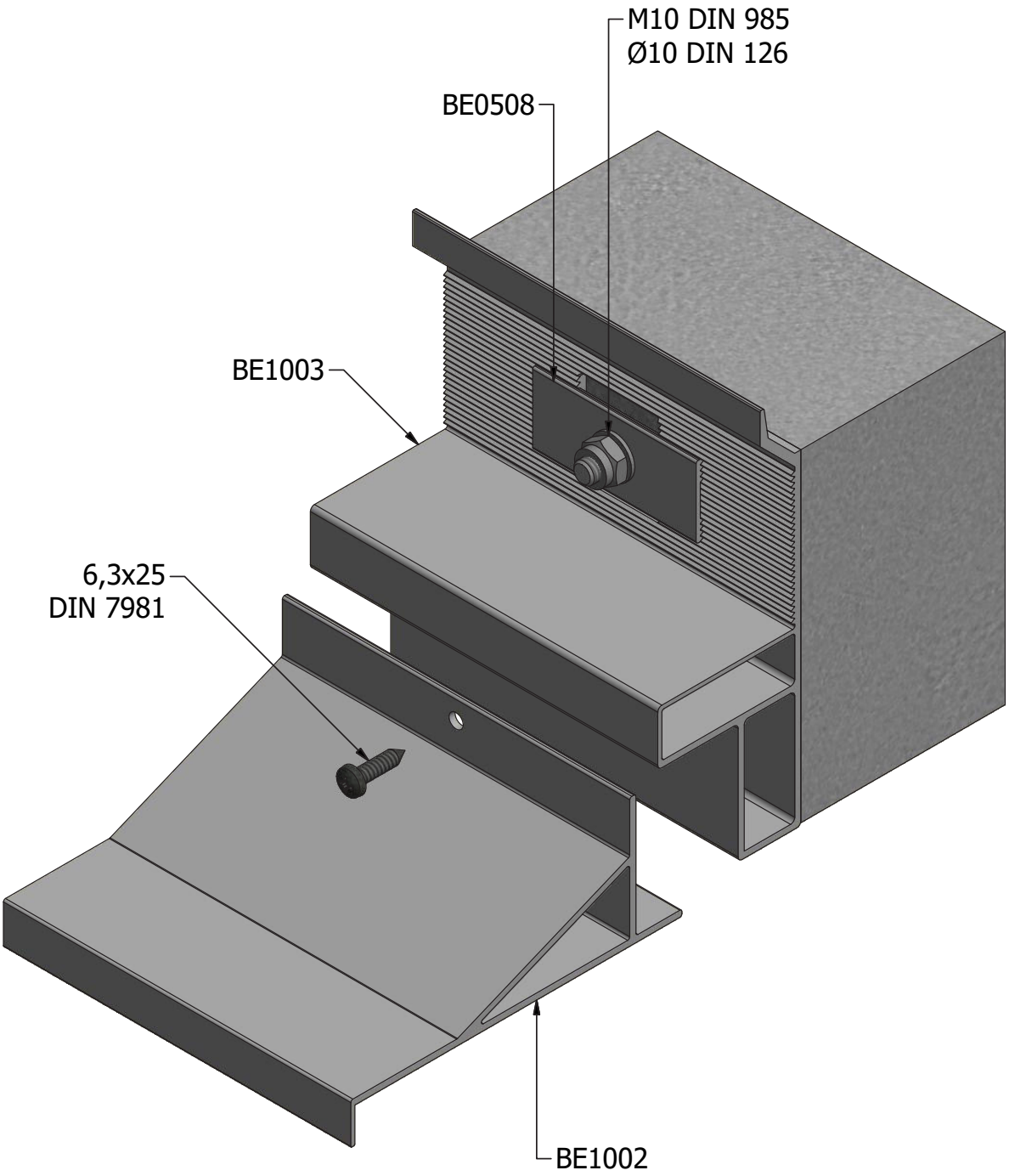
Montaż prowadnicy dolnej/ progu - BE1014
Mounting of the bottom guide bar/ threshold - BE1014



Montaż górnego profilu ramy - BE1002
Mounting of the top frame profile - BE1002



Montaż górnego profilu ramy - BE1002
Mounting of the top frame profile - BE1002



MORAD
SYSTEMY ALUMINIOWE

SYSTEMY ALUMINIOWE SZKLANE
ALUMINIUM GLASS SYSTEMS

GŁÓWNA SIEDZIBA
/ Headquarters

ul. Kościerska 13
83–300 Kartuzy, Polska

+48 58 694 91 12
morad@morad.pl

HURTOWNIA
/ Warehouse

ul. Tęczowa 41
80–209 Tuchom, Polska

+48 58 694 91 66
morad@morad.pl

ODDZIAŁY HANDLOWE
/ Sales Departments

Oddział / Branch
BIAŁYSTOK

+48 85 662 75 22
+48 605 744 742
bialystok@morad.pl

Oddział / Branch
ŁÓDŹ

+48 691 939 900
lodz@morad.pl

Oddział / Branch
LITWA / LITHUANIA

+37 069 400 721
moradlt@morad.eu

Oddział / Branch
BYDGOSZCZ

+48 52 346 55 02
+48 601 502 905
bydgoszcz@morad.pl

Oddział / Branch
POZNAŃ

+48 61 825 04 87
+48 601 573 767
poznan@morad.pl

Oddział / Branch
SŁOWACJA / SLOVAKIA

+42 190 241 11 01
moradsk@morad.eu

Oddział / Branch
WARSZAWA

+48 512 045 284
warszawa@morad.pl

SKLEP INTERNETOWY
/ ONLINE SHOP

ul. Tęczowa 41
80–209 Tuchom, Polska

+48 58 694 91 33
sklep@morad.pl

www.morad.pl
www.sklep.morad.pl