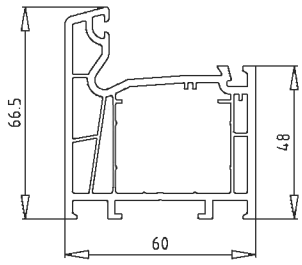
FIRAT

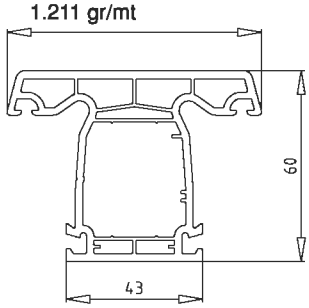
S60

TECHNICAL INSTRUCTION

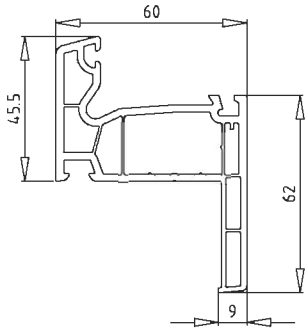
Frame Profile
1.128 gr/mt



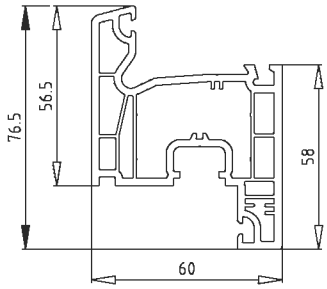
Mullion Profile
1.211 gr/mt



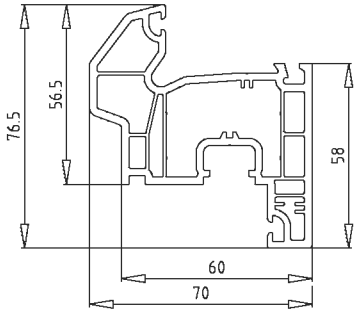
60 Lining Frame Profile
1.015 gr/mt



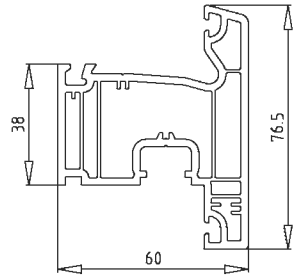
Sash Profile
1.256 gr/mt



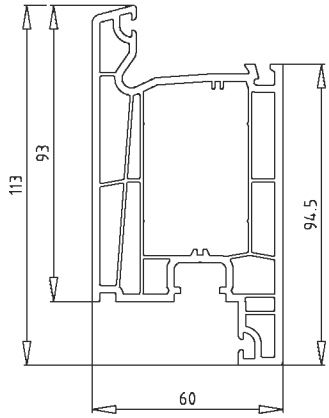
Drained Sash Profile
1.305 gr/mt



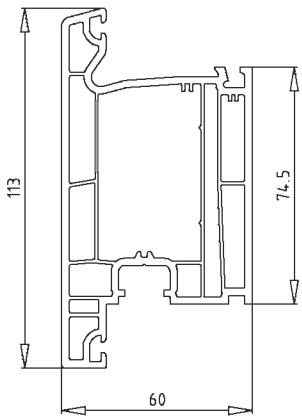
Outside Opening Sash Profile
1.243 gr/mt



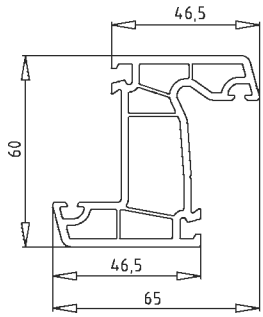
Inside Opening Door Profile
1.686 gr/mt



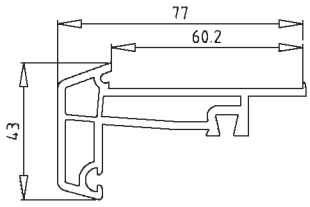
Outside Opening Door Profile
1.686 gr/mt



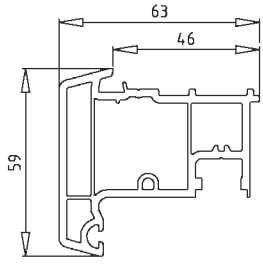
Z Mullion Profile
995 gr/mt



Sash Adapting Profile
1.860 gr/mt

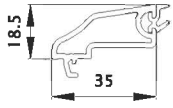


New Sash Adapting Profile
(Moving Mullion Profile)
1.020 gr/mt

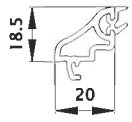


AUXILIARY PROFILES

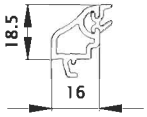
Single Glazing
Bead Profile
312 gr/mt



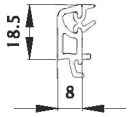
20 mm Double Glazing
Bead Profile
312 gr/mt



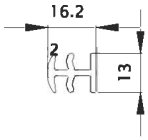
24 mm Double Glazing
Bead Profile
217 gr/mt



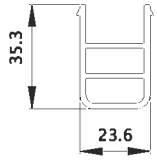
32 mm Triple Glazing
Bead Profile
195 gr/mt



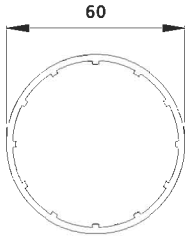
Connecting Profile
100 gr/mt



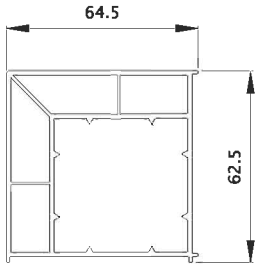
Frame Base
Montage Profile
330 gr/mt



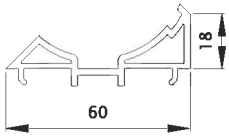
Angled Post Pipe Profile
650 gr/mt



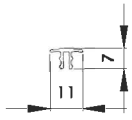
Angled Post Box 90° Profile
800 gr/mt



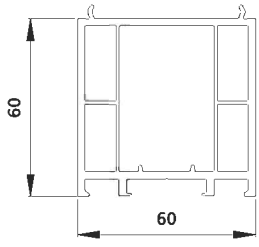
Angled Post Adopting
Profile
405 gr/mt



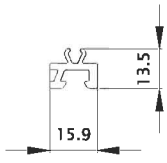
Channel Closing Bead Profile
31 gr/mt



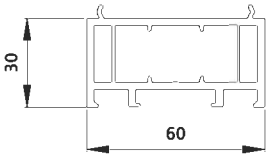
Frame Elevation
Profile (60 mm)
1064 gr/mt



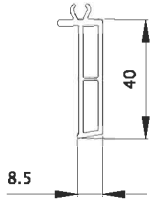
Lining Leaning Profile
125 gr/mt

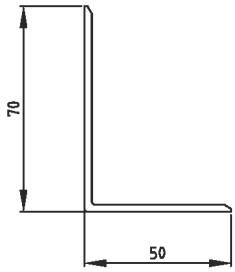


Frame Elevation
Profile (30mm)
736 gr/mt

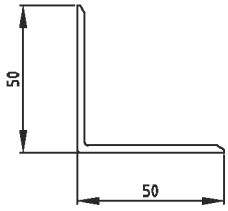


Zero Based Lining Profile
243 gr/mt

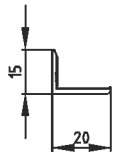




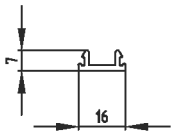
Lining Profile (50x70)



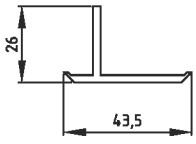
Lining Profile (50x50)



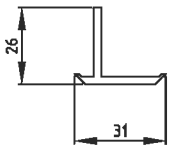
Corner Profile (15 x 20)



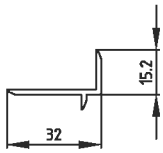
Espagnolette Channel Closing Profile



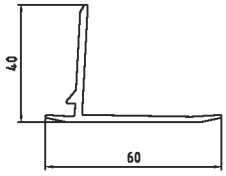
Wide Assimetrical T Profile



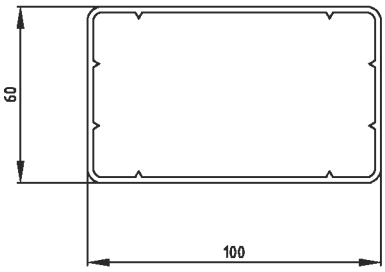
Narrow Assimetrical T Profile



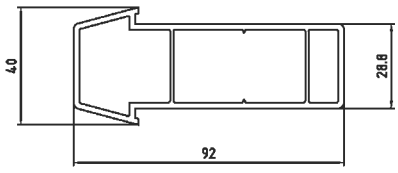
T-Profile



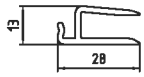
Closing Profile



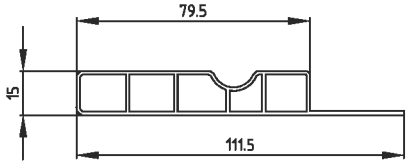
60x100 Box Profile



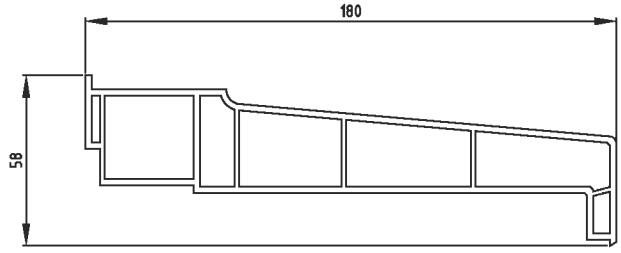
40 x 90 U-Box Profile



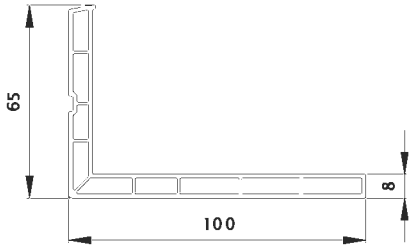
Lining Adopting Profile



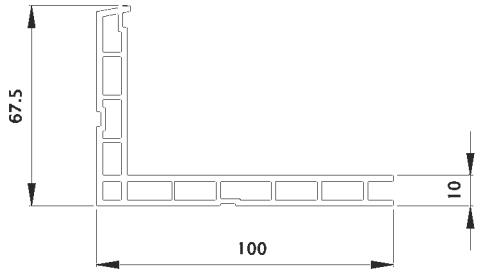
Inside sill Profile



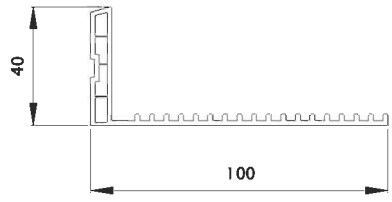
Outside Sill Profile



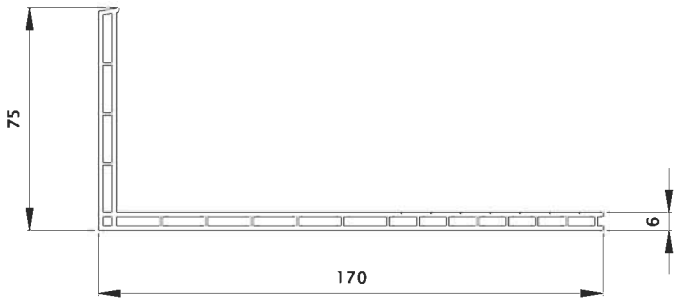
New Window Lining Profile



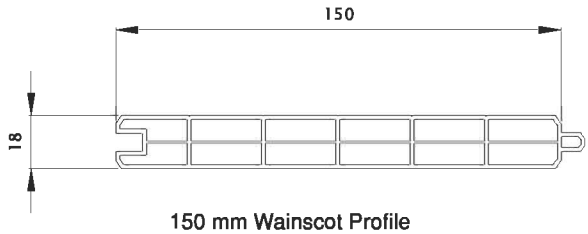
Door Lining Profile



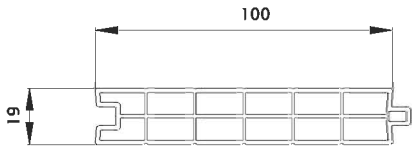
Old Window Lining Profile



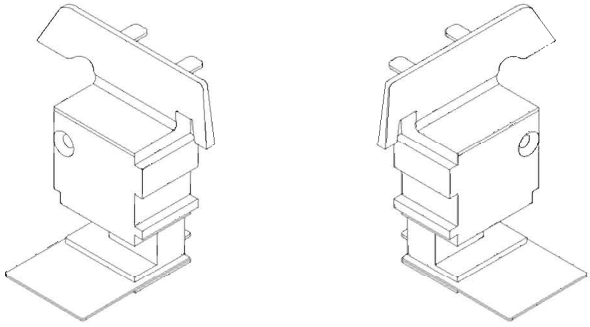
170 mm Lining Profile



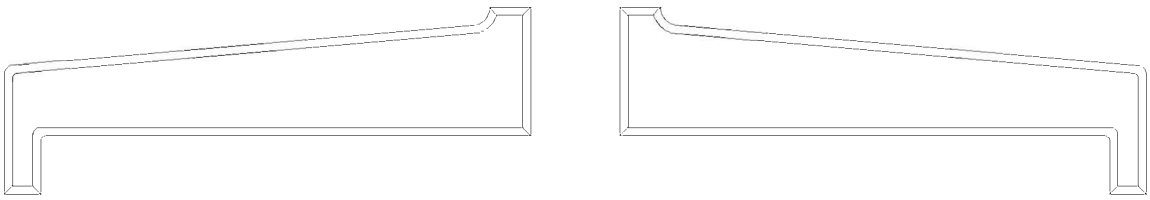
150 mm Wainscot Profile



100 mm Wainscot Profile



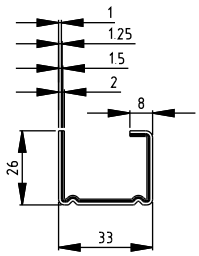
Sash Adaptor Profile Covers (Top-Bottom)



Outer Sill Profile Covers (Right- Left)

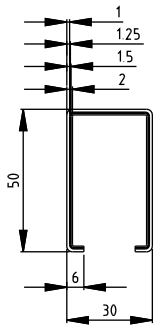
Inner Parapet Profile Covers (Right-Left)

s60 REINFORCEMENT STEEL AND MOMENTS OF INERTIA



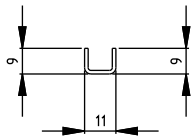
Frame, Sash, Mulion, Sash Adapting and
40 mm Frame Elevation Reinforcement Steel

	REINFORCEMENT STEEL THICKNESS			
	1.0 mm	1.25 mm	1.5 mm	2.0 mm
Weight	W = 690 gr/mt	W = 830 gr/mt	W = 1020 gr/mt	W = 1350 gr/mt
Center of Gravity	Xo=17.28 mm Yo= 9.52 mm	Xo=17.25 mm Yo= 9.56 mm	Xo=17.23 mm Yo= 9.61 mm	Xo=17.17 mm Yo= 9.70 mm
Moment of Inertia	Ix= 0.744 cm4 Iy= 1.661 cm4	Ix= 0.910 cm4 Iy= 2.033 cm4	Ix= 1.067 cm4 Iy= 2.389 cm4	Ix= 1.360 cm4 Iy= 3.055 cm4

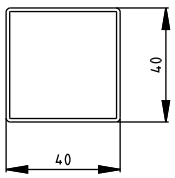


Inside and Outside Opening
Door Reinforcement Steel

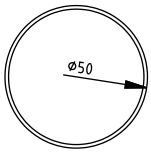
	REINFORCEMENT STEEL THICKNESS			
	1.0 mm	1.25 mm	1.5 mm	2.0 mm
Weight	W = 1.160 gr/mt	W = 1.400 gr/mt	W = 1.720 gr/mt	W = 2.040 gr/mt
Center of Gravity	Xo=15.00 mm Yo= 28.23 mm	Xo=15.00 mm Yo= 28.24 mm	Xo=15.00 mm Yo= 28.25 mm	Xo=15.00 mm Yo= 28.26 mm
Moment of Inertia	Ix= 4.123 cm4 Iy= 2.384 cm4	Ix= 5.042 cm4 Iy= 2.909 cm4	Ix= 5.928 cm4 Iy= 3.410 cm4	Ix= 7.608 cm4 Iy= 4.346 cm4



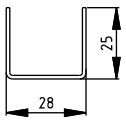
11 Hinge Reinforcement Steel



Angled Post Box 90° Profile
Reinforcement Steel



Angled Post Pipe Profile
Reinforcement Steel



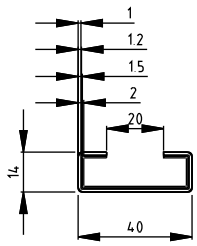
New Sash Adapting Profile
(Moving Mullion Pr.) Reinforcement Steel

Thickness (mm)	Weight (gr/m)
1.00	199
1.20	245
1.50	289
2.00	383

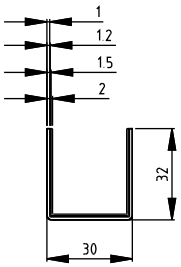
Thickness (mm)	Weight (gr/m)
1.00	1.197
1.20	1.496
1.50	1.795
2.00	2.394

Thickness (mm)	Weight (gr/m)
1.00	1.194
1.20	1.493
1.50	1.792
2.00	2.389

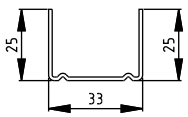
Thickness (mm)	Weight (gr/m)
1.00	578
1.20	723
1.50	868
2.00	1.157



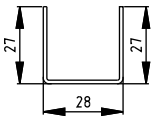
30 mm Frame Elevation Profile
Reinforcement Steel



60 mm Frame Elevation Profile
Reinforcement Steel



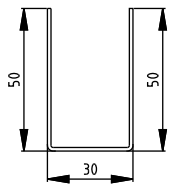
New Frame - Sash
Reinforcement Steel
(U-Metal)



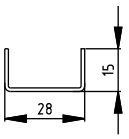
New Mullion
Reinforcement Steel

Thickness (mm)	Weight (gr/m)
1.00	768
1.20	953
1.50	1.134
2.00	1.488

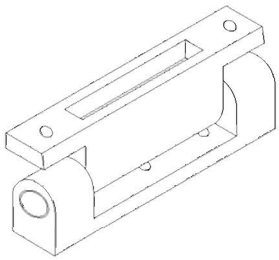
Thickness (mm)	Weight (gr/m)
1.00	706
1.20	878
1.50	1.050
2.00	1.387



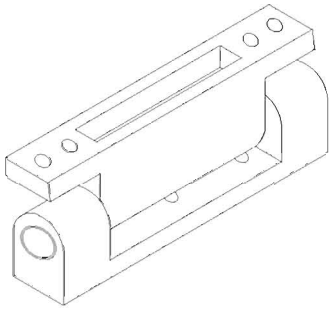
New Door Reinforcement Steel
(U-Metal for Door)



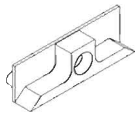
Lining Frame Profile
Reinforcement Steel



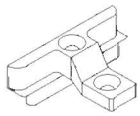
75 mm HINGE



90 mm HINGE



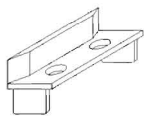
SINGLE-SCREW LOCKING PIECE
(COUNTERPART OF ESPAGNOLETTE)



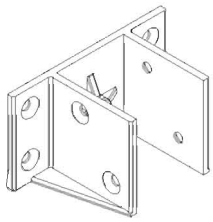
DOUBLE-SCREW LOCKING PIECE
(COUNTERPART OF ESPAGNOLETTE)

LOCKING DOOR ESPAGNOLETTE

TURN-ONLY ESPAGNOLETTE



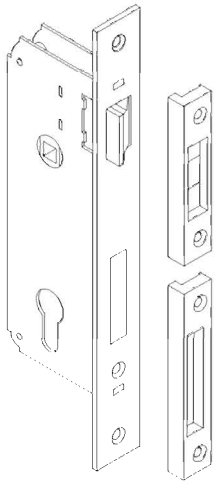
ESPAGNOLETTE
COUNTERPART SASH WITH ADAPTER



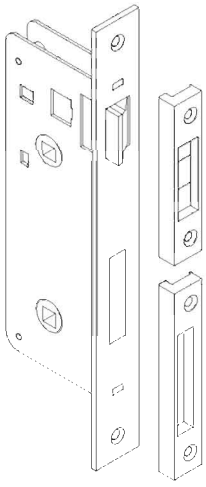
MULLION CONNECTION
BLOCK (METAL)

ACCESSORIES - LOCKS

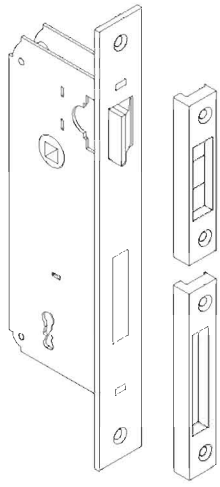
OUTER DOOR LOCK AND
ITS COUNTERPART



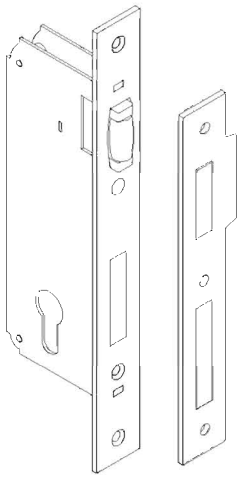
W.C. LOCK AND
ITS COUNTERPART



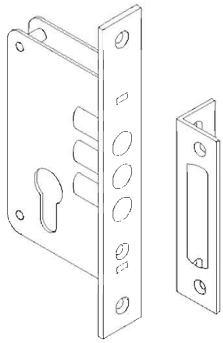
CHAMBER DOOR LOCK
AND ITS COUNTERPART



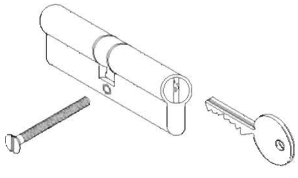
IMPACT LOCK WITH CYLINDER
AND COUNTERPART



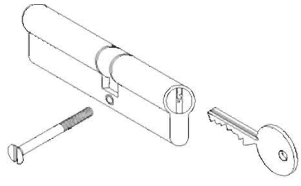
SECURITY LOCK
WITH COUNTERPART

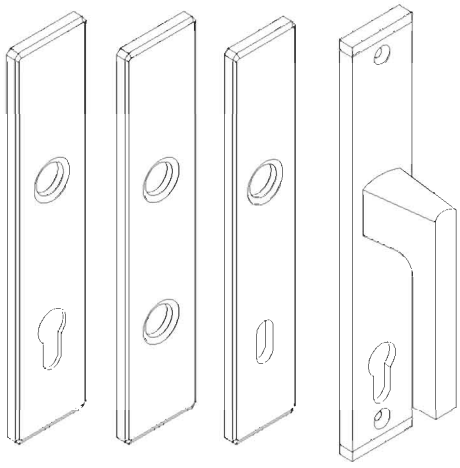


Size 76 BAREL

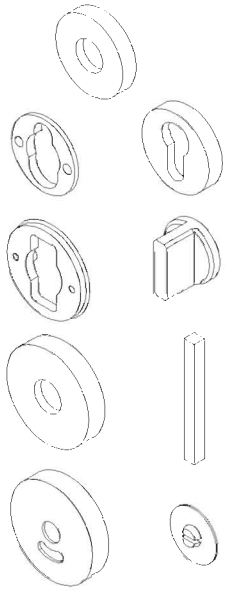


Size 90 BAREL

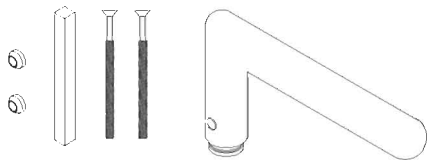




LOCKING DOOR HANDLE



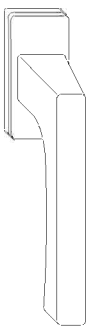
WC DOOR HANDLE PIECES



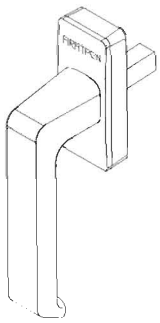
DOOR HANDLE (COUNTERPART)

CAP

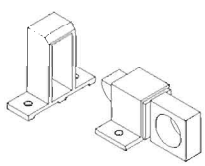
TRANSOM SNAP - LOCKS

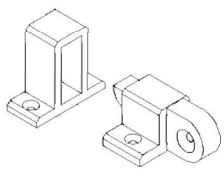


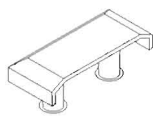
WINKHAUS
WINDOW HANDLE



FIRAT
WINDOW HANDLE





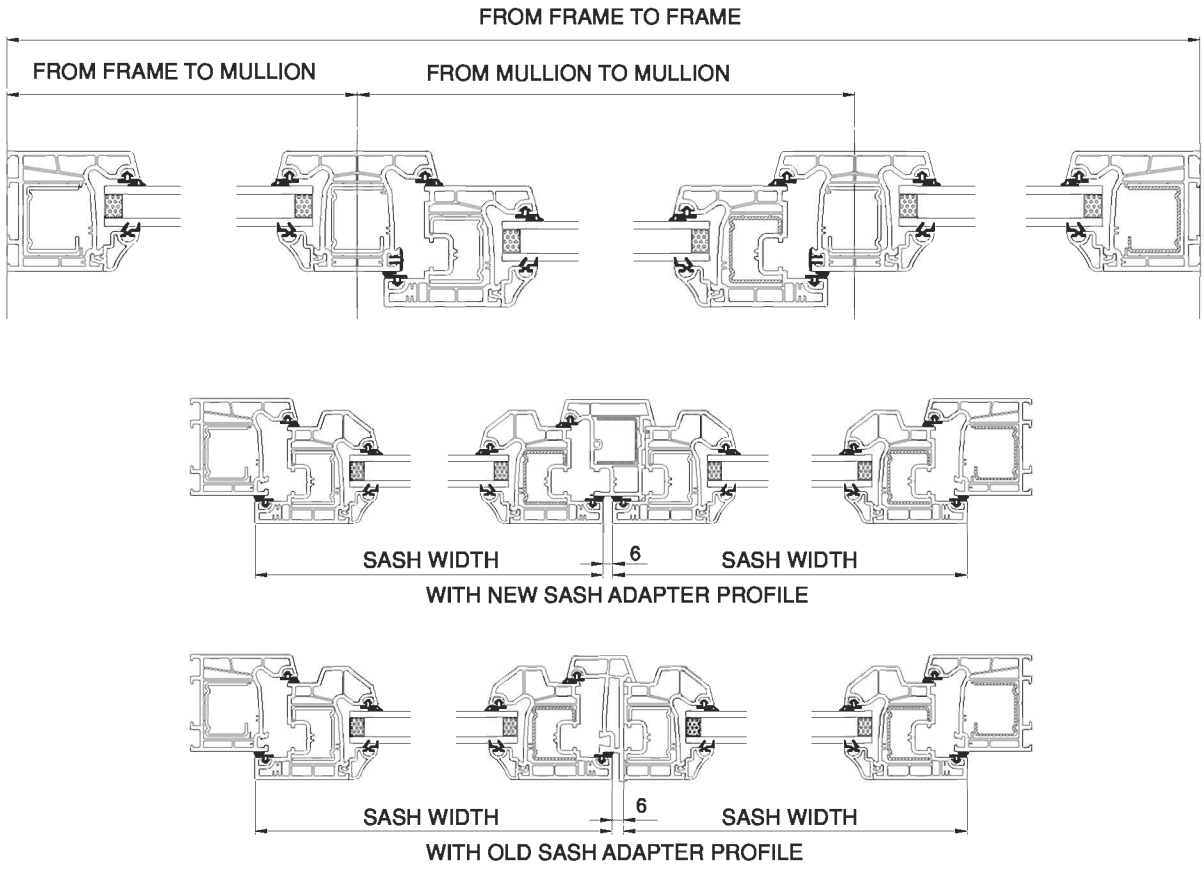


WATER DRAIN PLUG
(WINDBOX)

SASH ADJUSTMENT
BLOCK

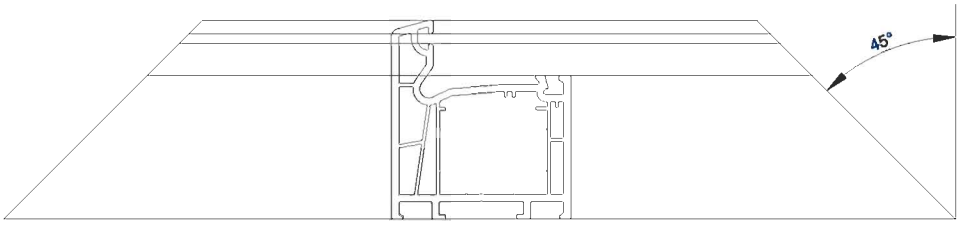
CALCULATION TABLE FOR PROFILE CUTTING MEASURES

	FROM FRAME TO FRAME	FROM FRAME TO MULLION	FROM MULLION TO THE MULLION
FRAME	+ 6	X	X
SASH	- 74	- 47,5	- 21
LOCKING DOOR	- 74	- 47,5	- 21
MULLION	- 93	- 66,5	- 40
SASH INNER MULLION	- 190	- 163,5	- 137
LOCKING DOOR INNER MULLION	- 263	- 236,5	- 210
FIXED GLAZING	- 106	- 79,5	- 53
SASH INNER GLAZING	- 206	- 179,5	- 153
LOCKING DOOR INNER GLAZING	- 279	- 252,5	- 226
SASH WITH OLD ADAPTER	- 55 (/ 2)	- 28,5 (/ 2)	- 2 (/ 2)
SASH WITH NEW ADAPTER	- 74 (/ 2)	- 47,5 (/ 2)	- 21 (/ 2)

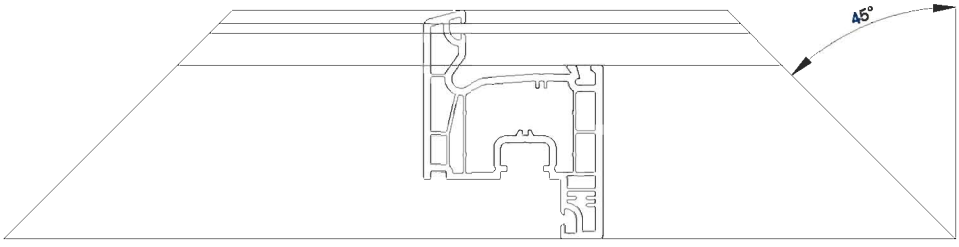


OPERATION DEFINITION

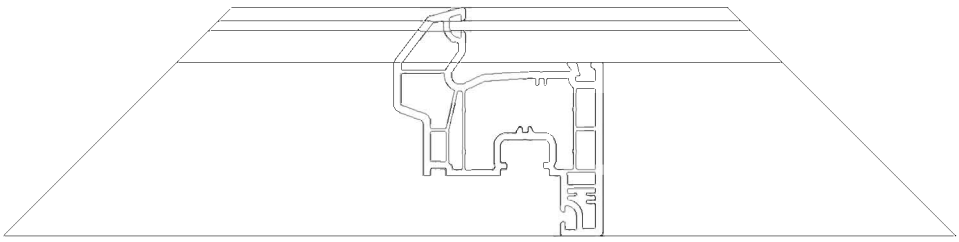
1-Frame profile cutting (45°)
2-Sash profile cutting (45°)
3-Sash with dripper profile cutting (45°)
4-Mullion profile cutting (90°)
5a-New sash adapter profile cutting (90°)
5b-Old sash adapter proflie cutting (90°)



1



2



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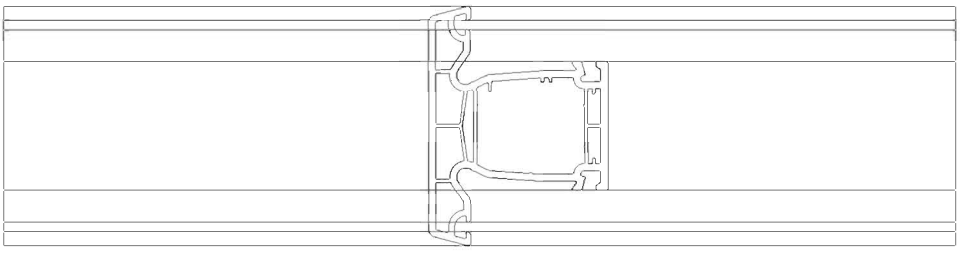

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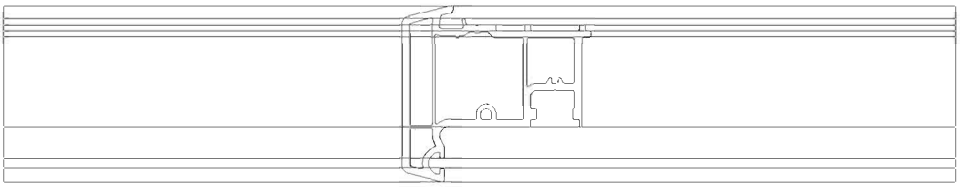
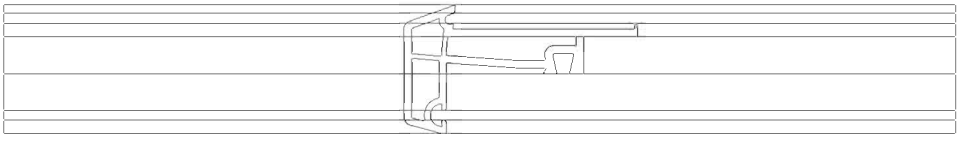


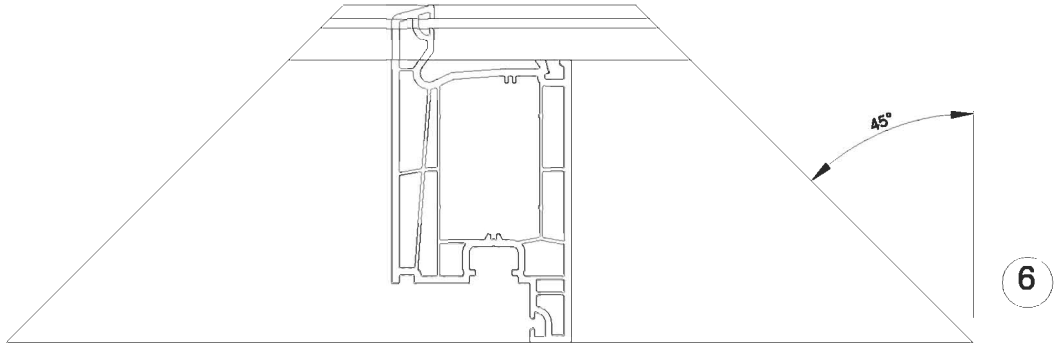
5a

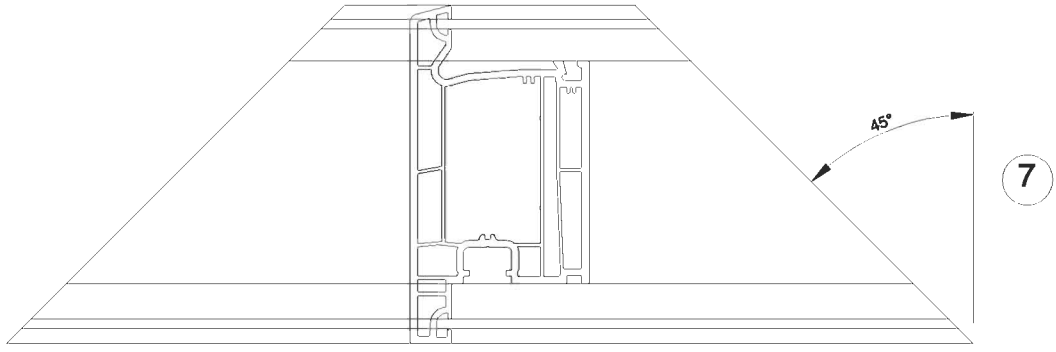


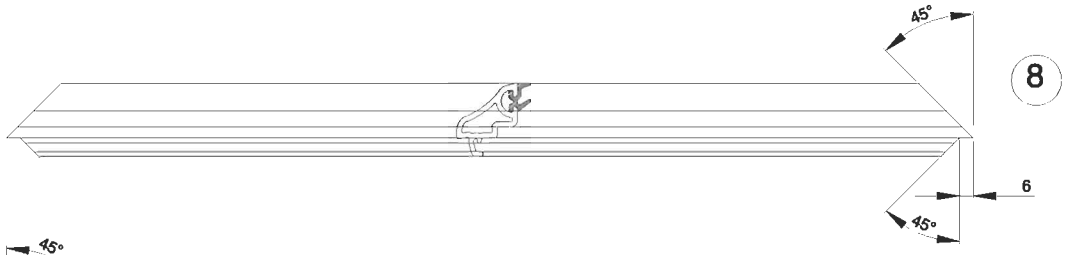
5b

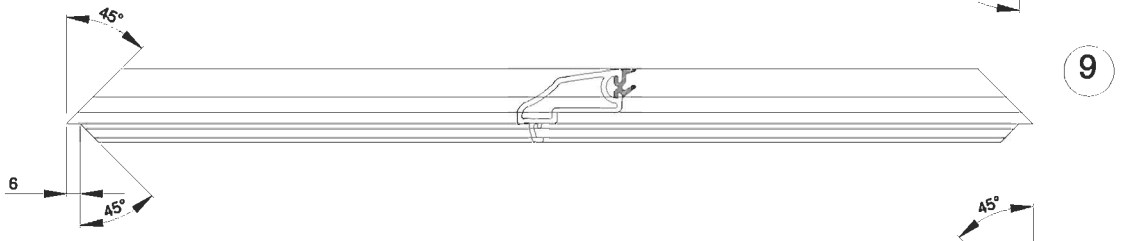
PROFILE CUTTING

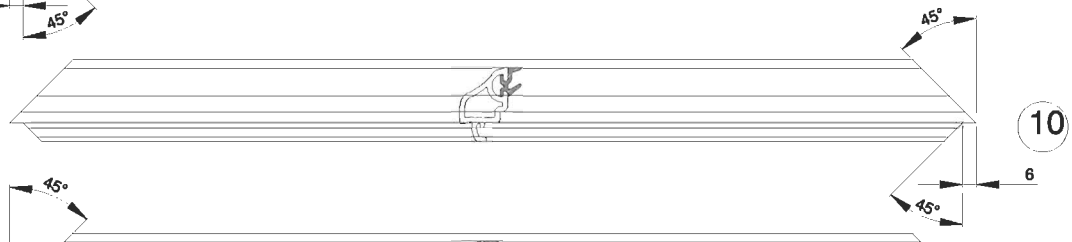
6-Locking door profile cutting
7-Outward opening locking door profile cutting
8-Double glazing bead profile cutting
9-Single glazing profile cutting
10-24 mm double glazing bead profile cutting
11-Triple glazing beard profile cutting

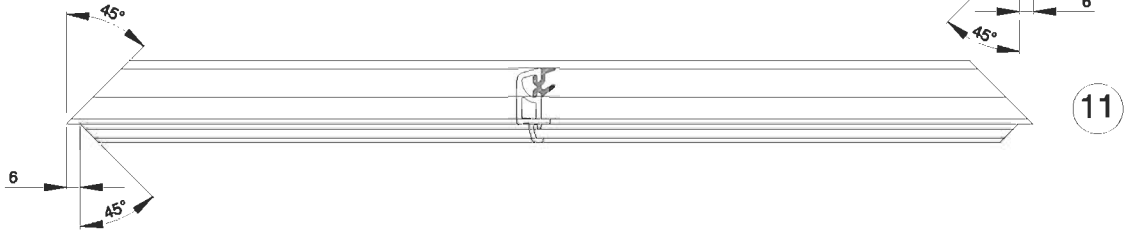










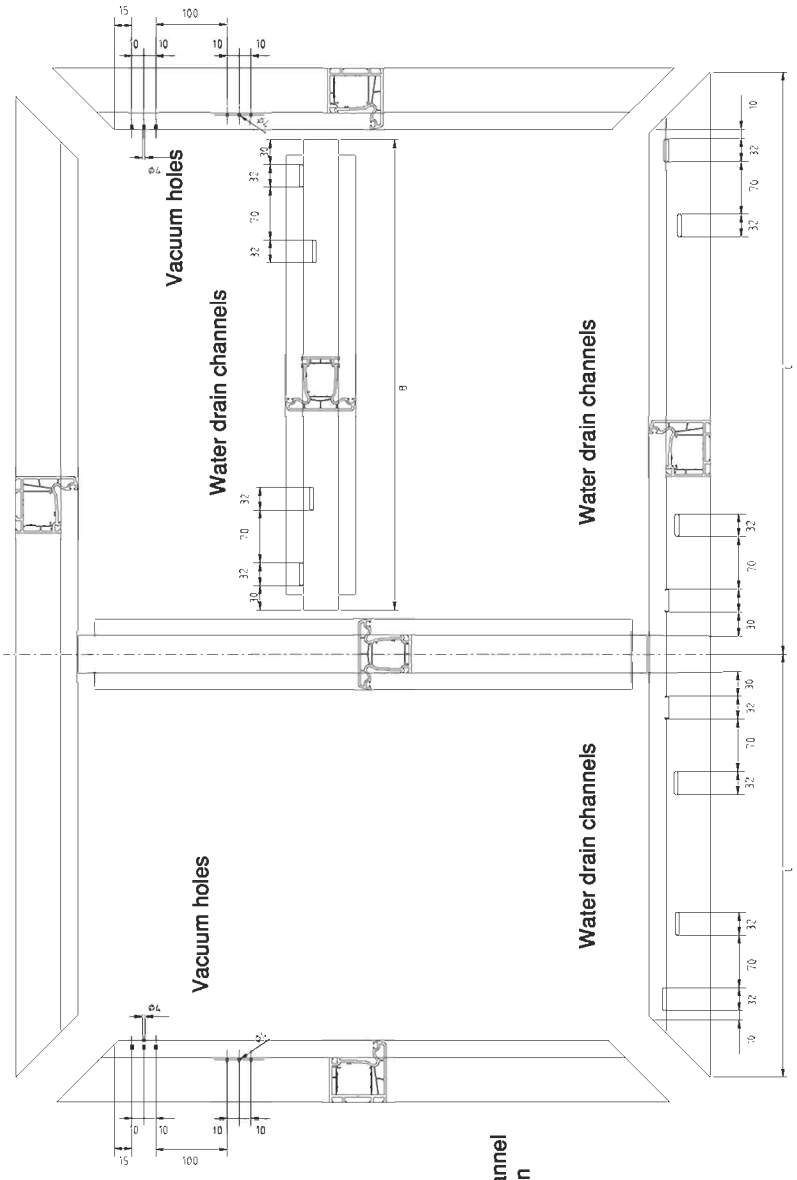


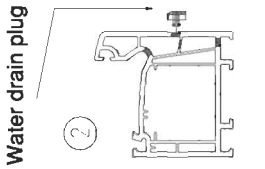
OPERATION SEQUENCE

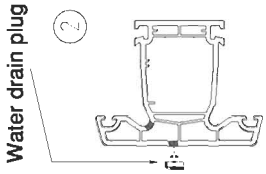
1- Water drain channels are grooved into the frame bottom levels, sash bottom levels and mullion levels.
2- Inner and outer channels are grooved so that they will be positioned with 7 cm offset from each other.
3- While the channels are grooved, special care should be taken to form a slope of 60°.
4- Where needed, vacuum holes are generally opened in North-South elevation.
5- Water Drain Plugs (windbox) are fitted at the conclusion of mounting.

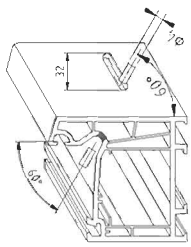
DETERMINING THE NUMBER OF DRAIN CHANNELS

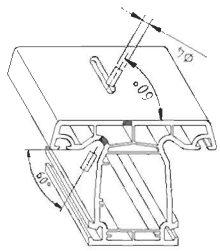
If C < 5001	channel
If 500 < C < 1000	2 channel
If 1000 < C 2000	3 channel
If 2000 < C	4 channel

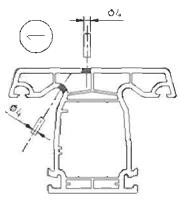


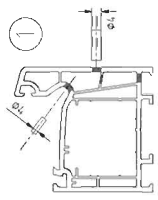




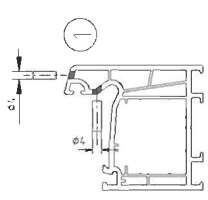






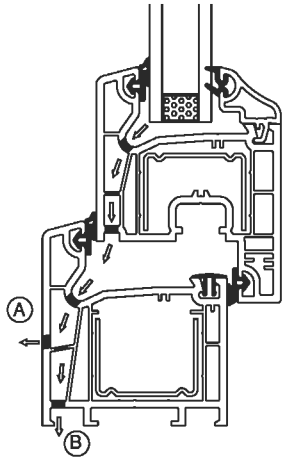


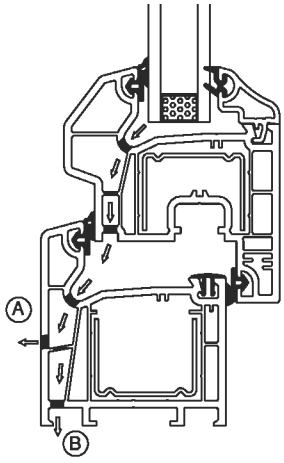
Grooving water drain channel into the frame and mullion profiles

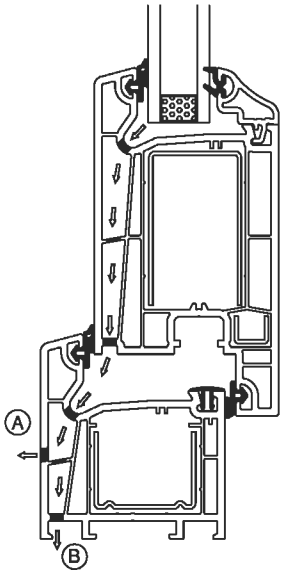


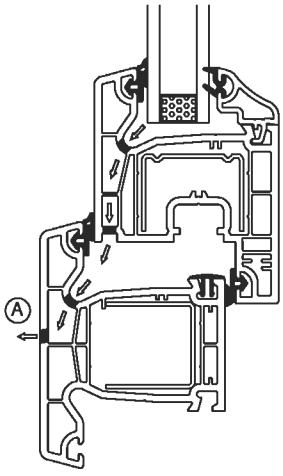
Drilling Vacuum Holes

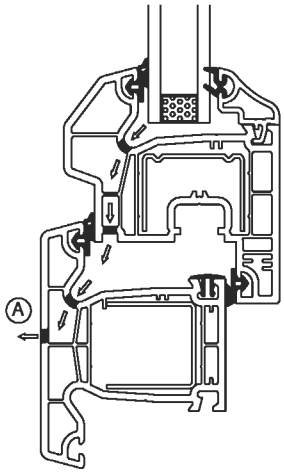
WATER DRAINING

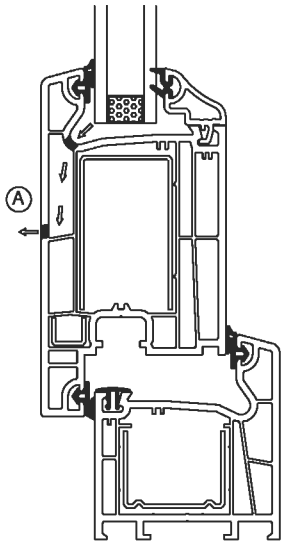


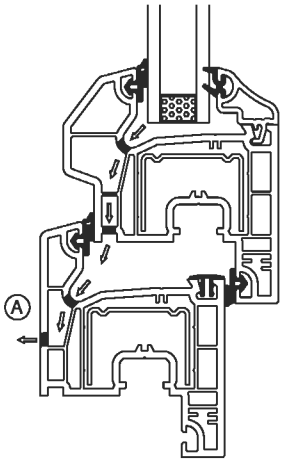


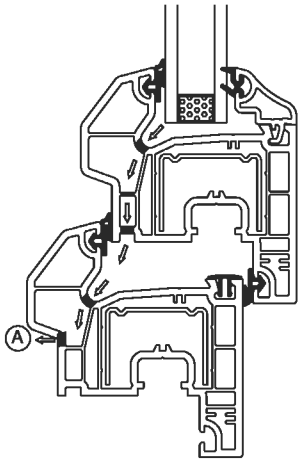


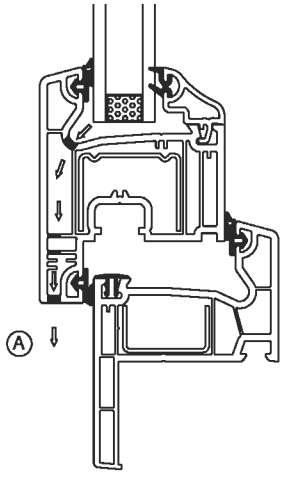












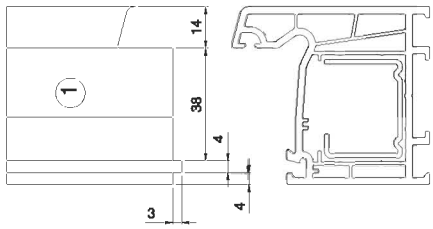
Discharge of water through drain channels can be achieved in two different ways. The choice of the way between those two, depends on the method of connecting the frame to the wall.

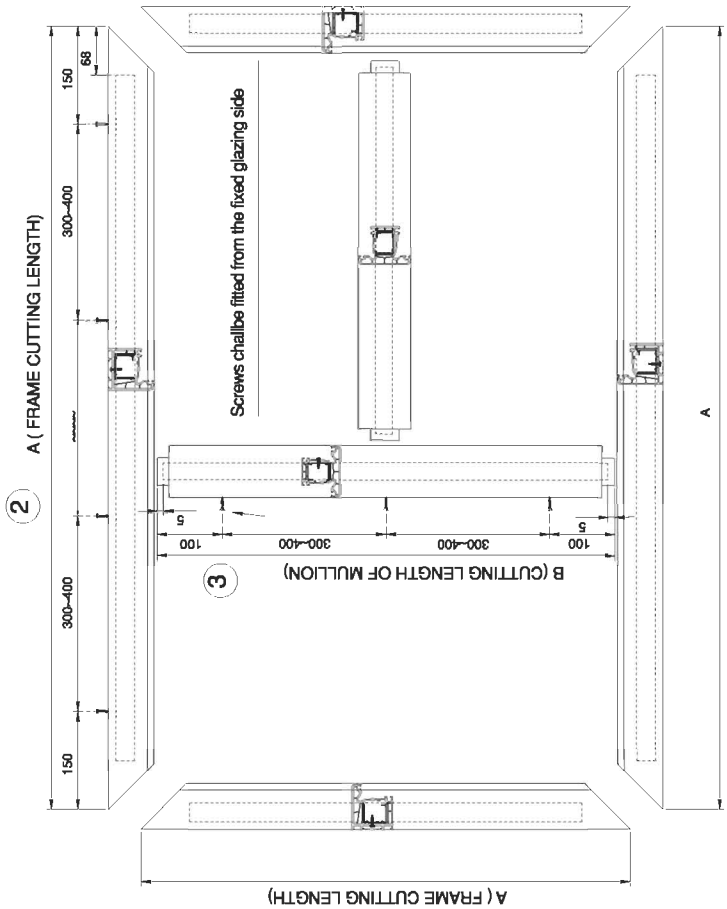
OPERATION SEQUENCE

1- Mullion notching is done.
2- Reinforcement steels are cut.
3- Reinforcement steels are screwed.
4- Screwing Reinforcement steels must be started so as to leave 15 cm distance from both ends.
5- Screwing is made so that there will be at least 3 screws per meter.

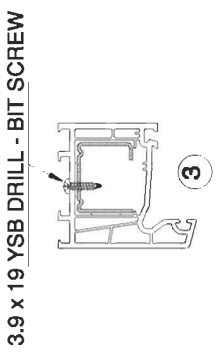
MULLION NOTCHING METHOD

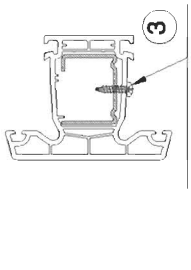
The chisels casung the notching of mullion must form the profile as shown in drawing.

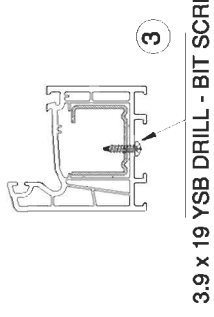




REINFORCEMENT STEEL		
Frame	A - 153	
Mullion		B - 10



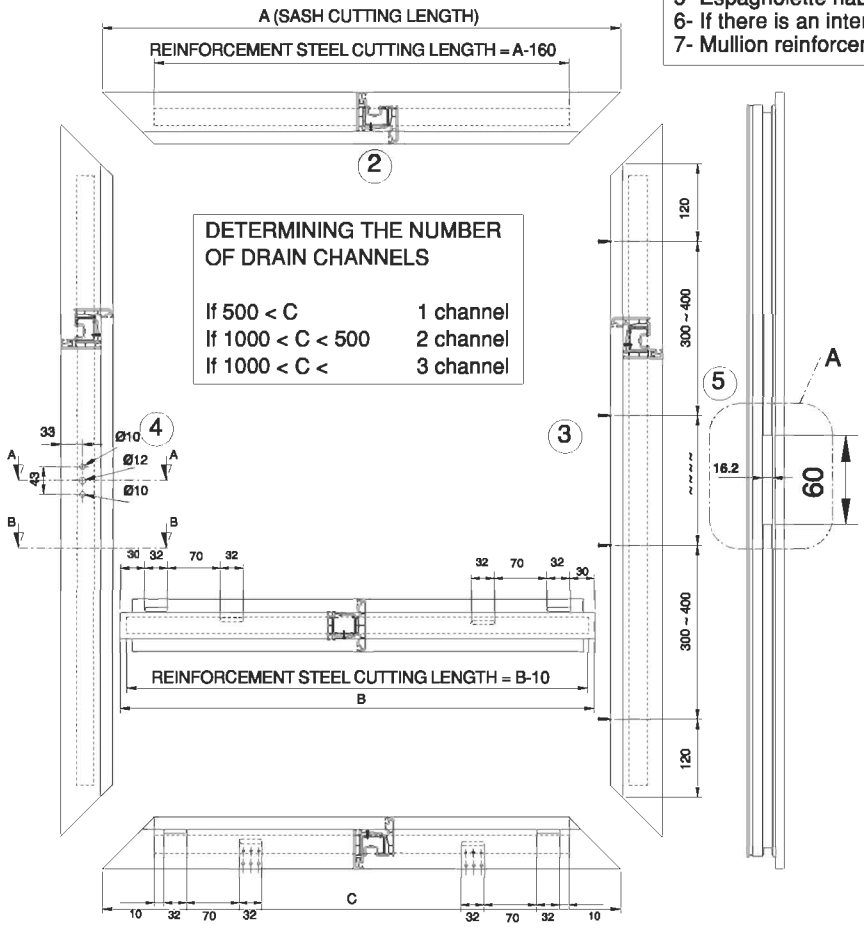


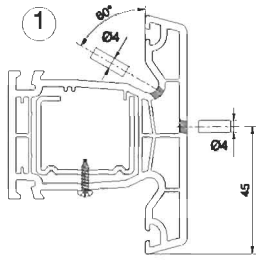


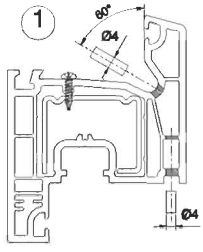
SASH MULLION PREPARATION

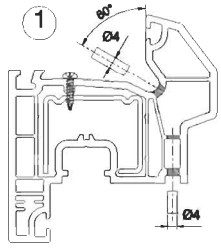
OPERATION SEQUENCE

1- Water drain channels are grooved by water drain grooving machine
2- Reinforcement steel are cut the burrs are removed.
3- Reinforcement steel are screwed form the stationary side of the profile.
4- Handle fitting holes are bored by its machine.
5- Espagnolette hab channel is grooved.
6- If there is an internal sash mullion, if will be notched.
7- Mullion reinforcement steel is screwed.

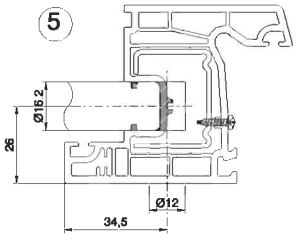




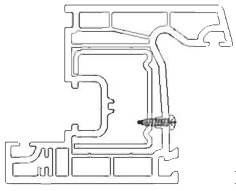


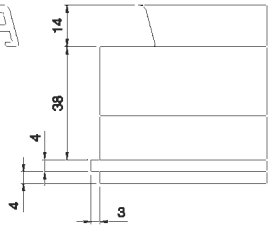


A - A SECTION



B - B SECTION





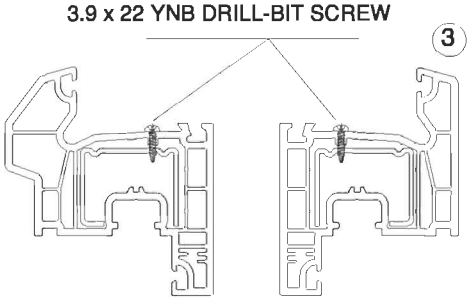
WATER DRAIN CHANNEL GROOVING METHOD

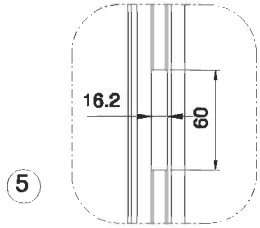
Water drain channels are grooved by water drain channel grooving machine as shown in figure 1.

MULLION NOTCHING METHOD

The chisels causing the notching of mullion must form the profile as shown in drawing 6.

3.9 x 22 YNB DRILL-BIT SCREW



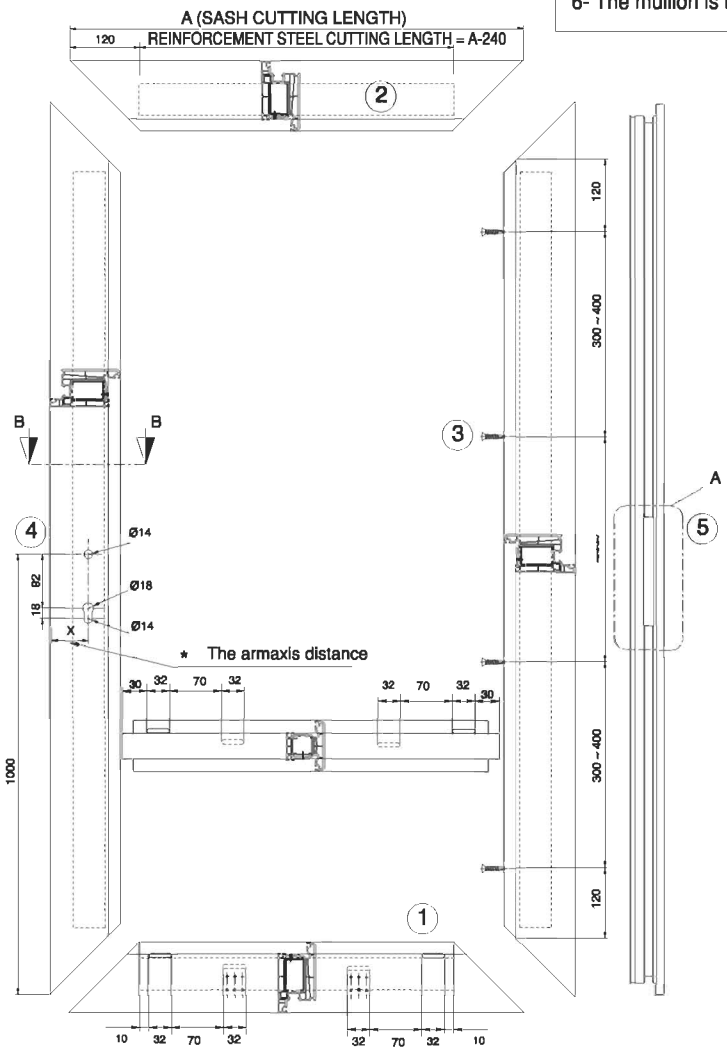


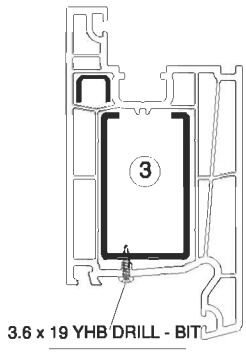
A - DETAIL

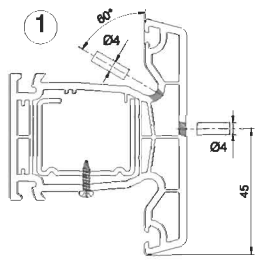
LOCKING DOOR MULLION PREPARATION **s60**

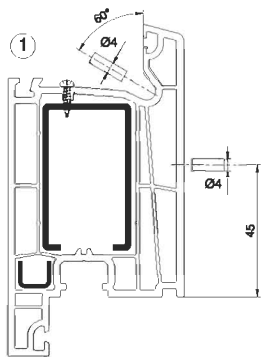
OPERATION SEQUENCE

1- Drain channels are grooved into the leaf meeting rail levels.
2- Reinforcement steel are cut according to its technique.
3- Reinforcement steel are screwed using at least two screws.
4- The holes for arm place are bored. At this area, reinforcement stel should be made of one piece.
5- Espagnolette hub channel is grooved into the sash profile.
6- The mullion is notched from both ends.

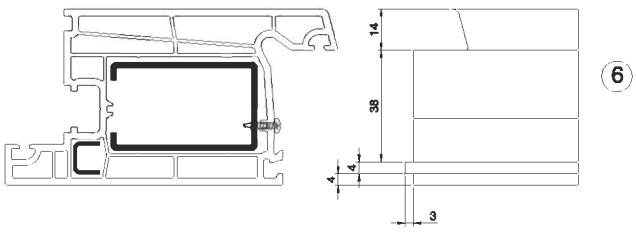




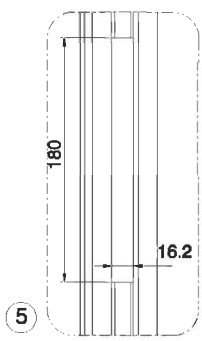


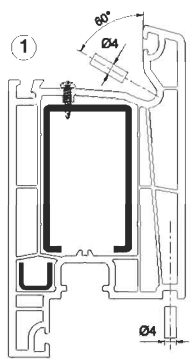


B - B SECTION



A - DETAIL



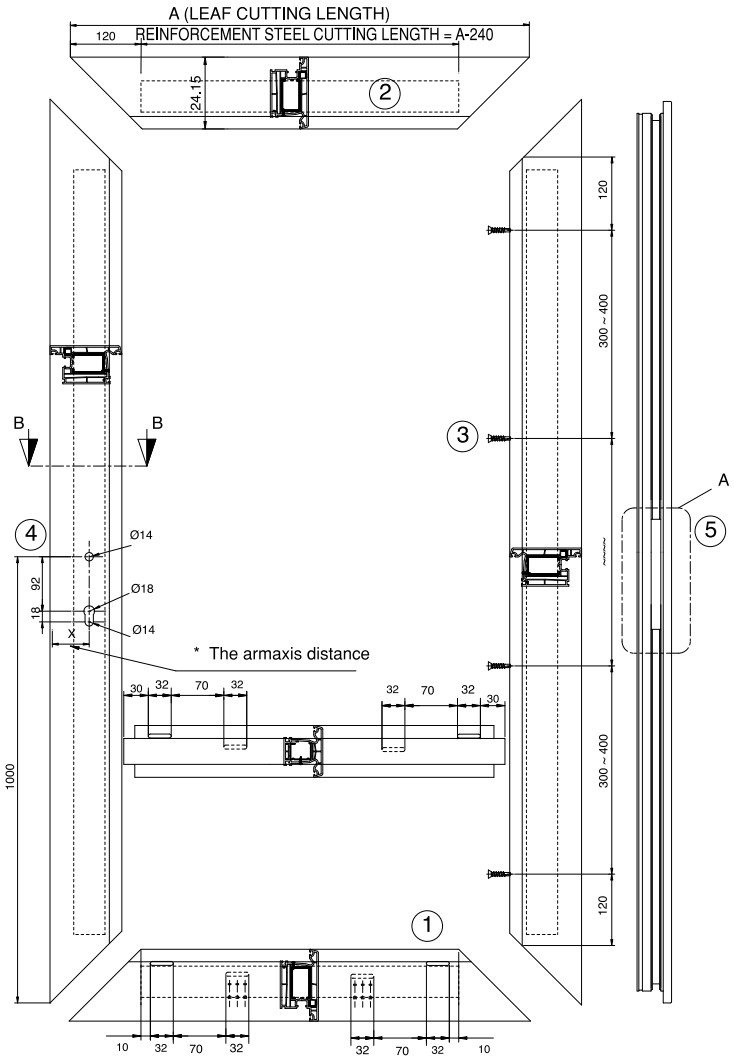


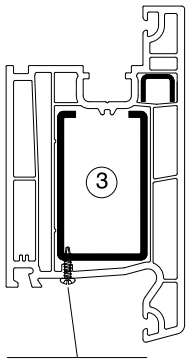
* Since the arm axial distance varies according to the firms and lock types, the measure should be taken over the lock being used.

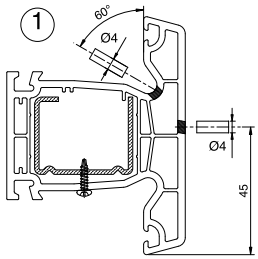
s60 MULLION PREPARATION FOR OUTWARD OPENING WITH LOCKING DOR

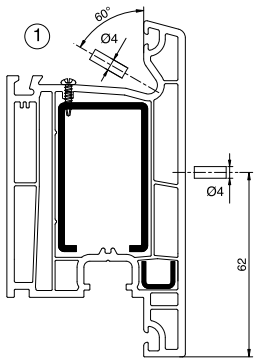
OPERATION SEQUENCE

1- Drain channels are grooved into the leaf meeting rail levels.
2- Reinforcement steel are cut according to its technique.
3- Reinforcement steel are screwed using at least two screws.
4- The holes for arm place are bored. At this area, reinforcement stel should be made of one piece.
5- Espagnolette hub channel is grooved into the sash profile.
6- The mullion is notched from both ends.

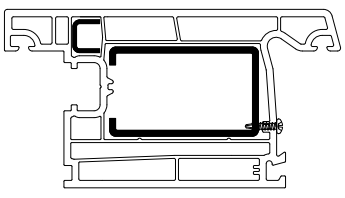


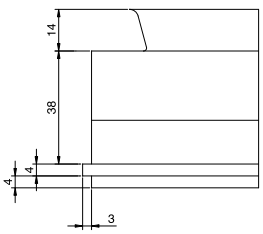




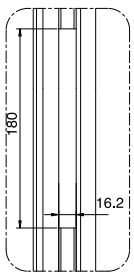


A- A SECTION

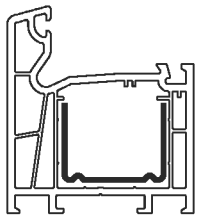




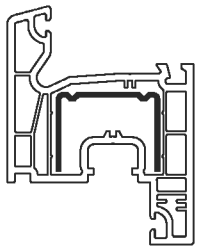
A - DETAIL



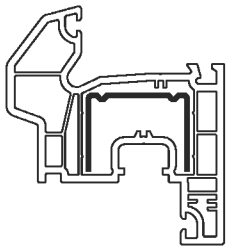
* Since the arm axial distance varies with the firms and lock types, the measure should be taken over the lock being used.



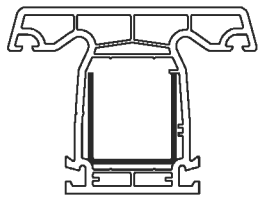
Frame Profile



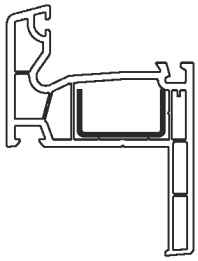
Sash Profile



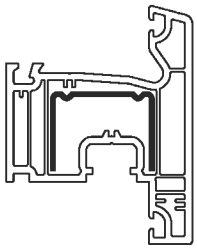
Drained Sash Profile



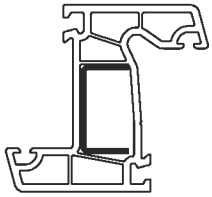
Mullion Profile



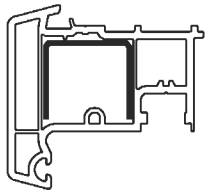
Lining Frame Profile



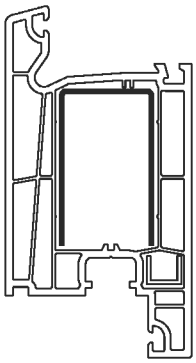
Outside Opening Sash Profile



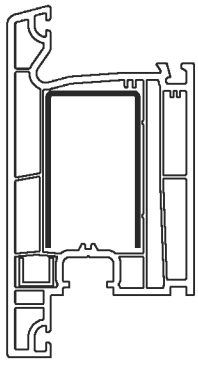
Z Mullion Profile



Sash Adapting Profile

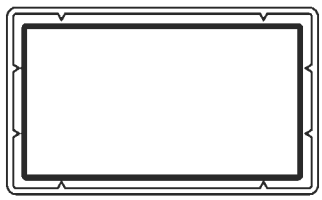


Inside Opening Door Profile

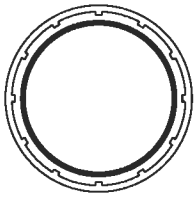


Outside Opening Door Profile

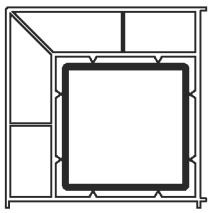
40x90 U Box Profile Midi



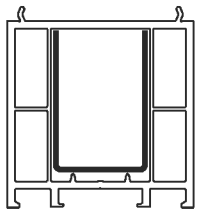
60x100 Box Profile



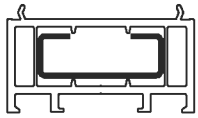
Angled Post Pipe Profile



Angled Post Box 90° Profile

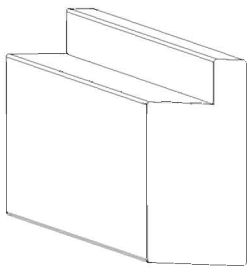


60 mm Frame Elevation Profile

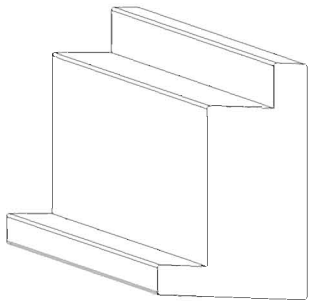


30 mm Frame Elevation Profile

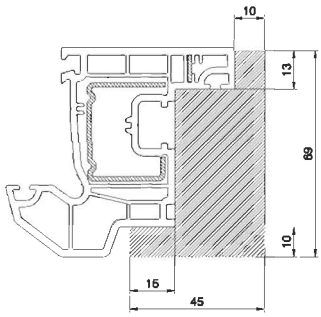
1. Welding is performed by welding machines specially manufactured for PVC profile.
Using the welding machines, this operation is performed by heating the profile surfaces to be welded by the aid of welding plate with heater and by pressing them against each other and letting them wait. Welding plate temperature is between 240 - 280 ° C.
2. During welding operation, the welding prop plates are used in order to avoid distortion and movement of the profiles to be welded.
The shapes and dimensions of the welding prop plates are shown below.
3. The welding plate surface of welding machines is coated with a special teflon-based fabric in order to avoid adhesion. The cleanliness of plate surfaces are very important in order to obtain a good weld. Therefore teflon surface must be cleaned by a solvent (i.e. Aceton) with regular intervals. When Teflon fabric starts to show signs of abrasion it must be replaced.
4. Welding surfaces must be cleaned so that the burrs (PVC profile chippings) formed during profile cutting will not stick on the teflon.



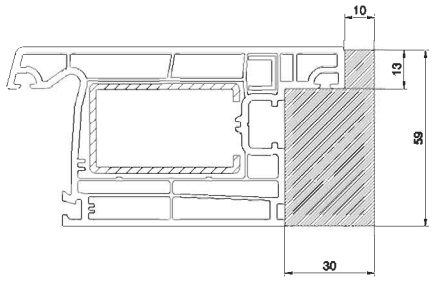
Welding Rest Plate



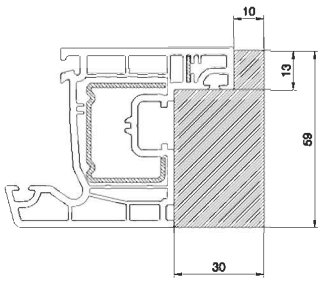
Welding prop plate for
sash with dripper profile



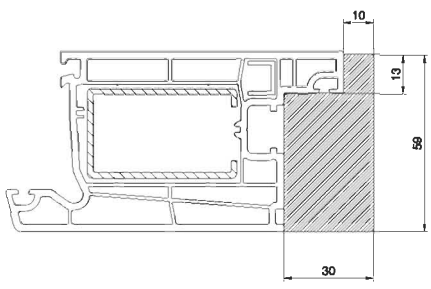
Sash with Dripper Profile



Outward open locking door profile

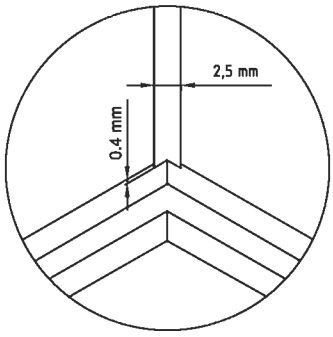


Sash profile

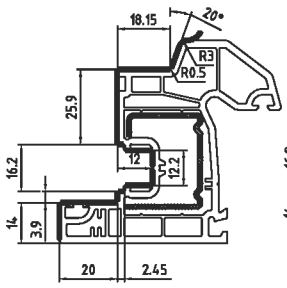


Locking door profile

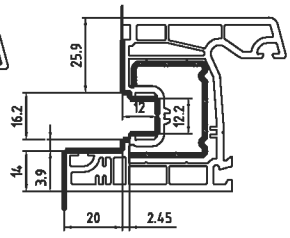
CORNER CLEANING



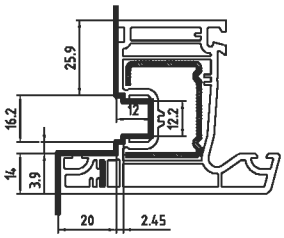
Burr removing measures for internal and external surface weldings.



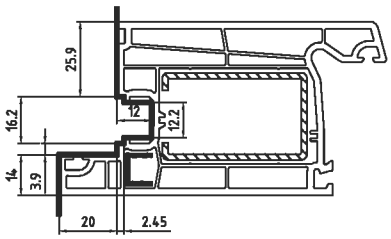
Drained Sash Profile



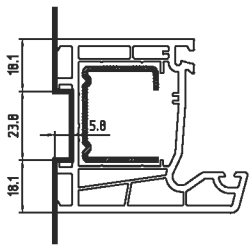
Sash Profile



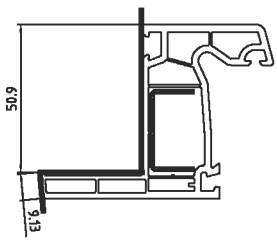
Outside Opening Sash Profile



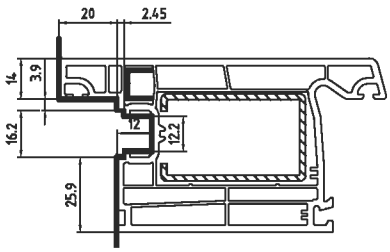
Locking Door Profile



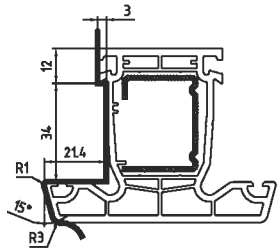
Frame Profile



Lining Frame Profile

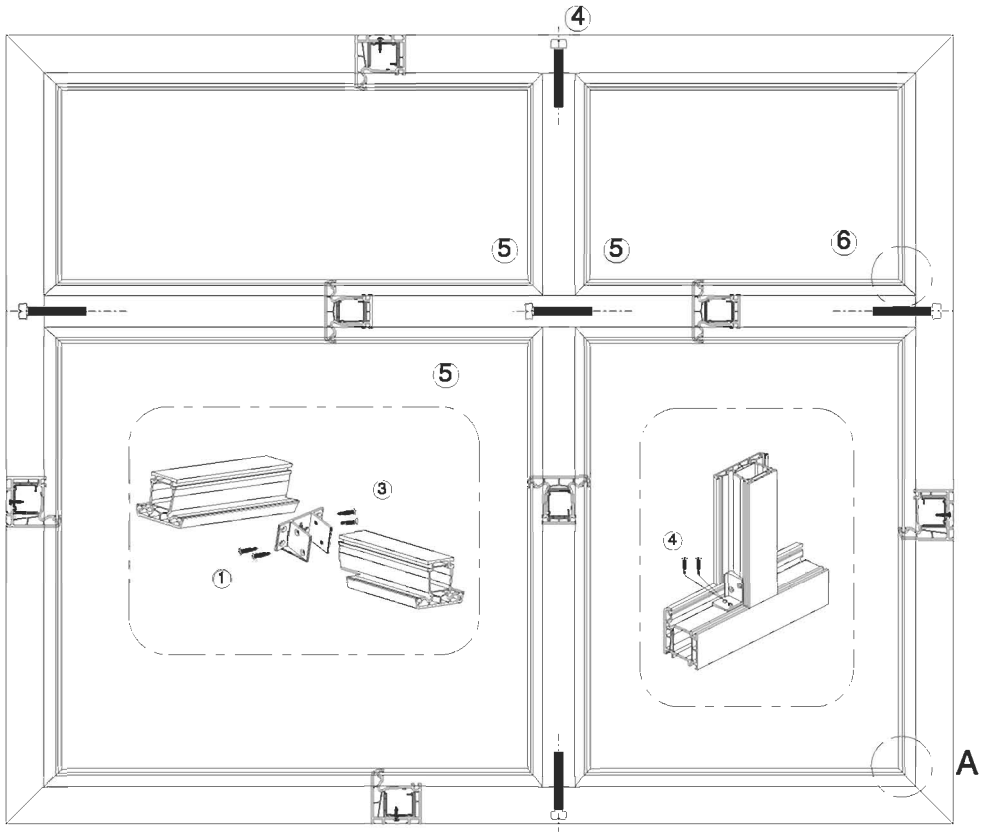


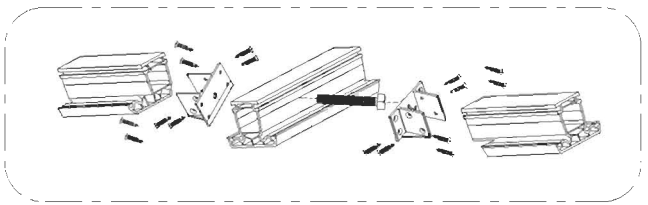
Outside Opening Door Profile



Mullion (Overlapping Frame) Profile

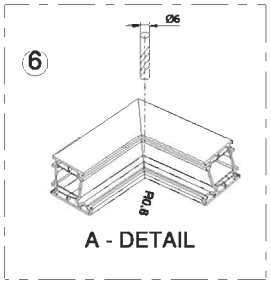
Note: The same chisel used for sash with dripper profiles is also used for the locking door, outside open door and sash profiles.

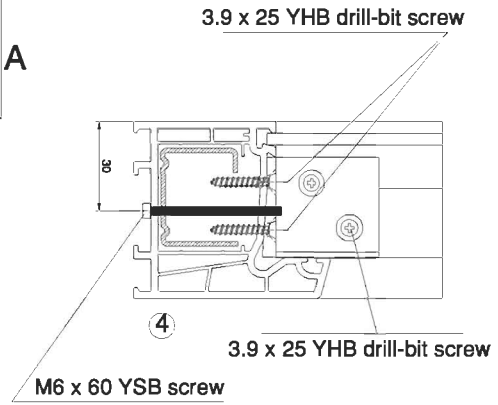


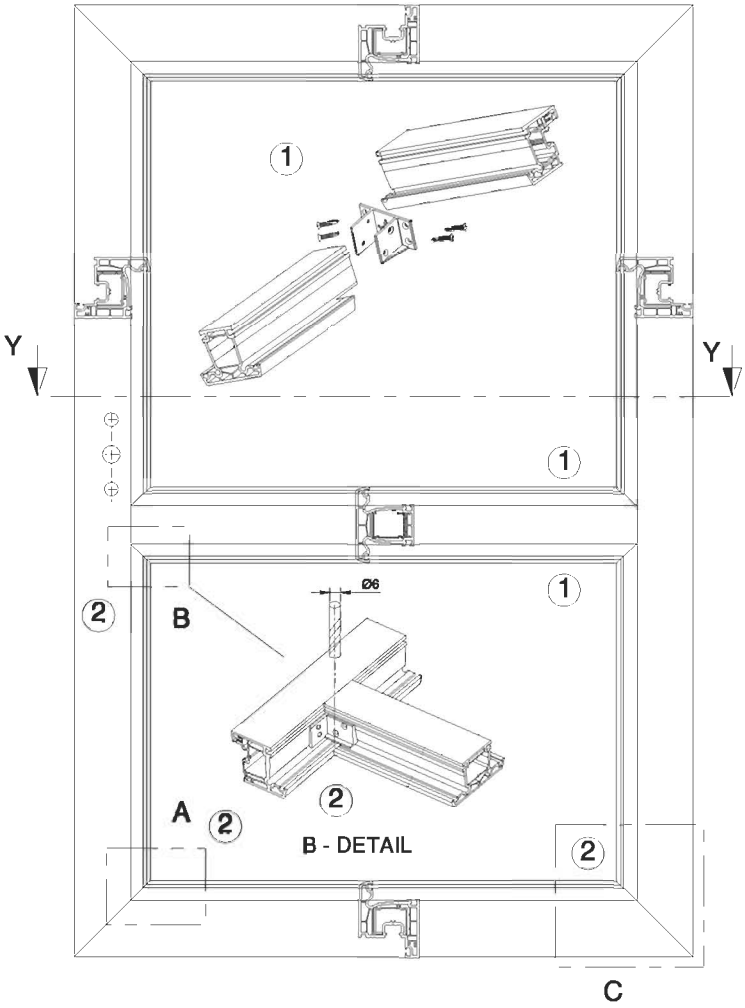


OPERATION SEQUENCE

1- Mullion connection block is assembled on the cut and notched mullion profiles.
2- Silicone is applied on the mullion joints.
3- Mullion is screwed using a screw with 3.9 x 22 or 3.9 x 25 YHB drill bit.
4- Mullion are fastened with a M6 x 60 YSB screw, by pulling them from the back of frame.
5- Intermediate mullion if an, are fastened. If there are two counterpart mullion then one is driven by a M6 x 60 YSB screw, and while the other is fixed at to the back-up reinforcement steel by iron using a 3.9 x 22 or 3.9 x 25 YHB drill-tip screw with drill bit.
6- Seal channels are cleaned. 3.9 x 25 YHB Plastic Screw



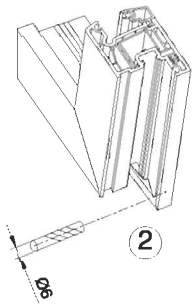




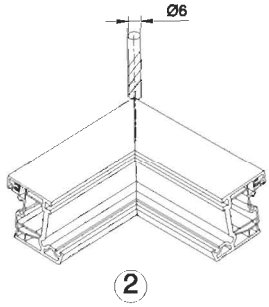
B - DETAIL

OPERATION SEQUENCE

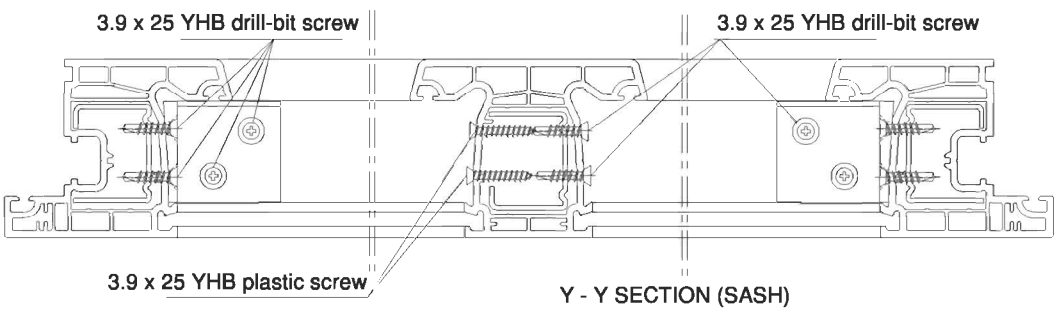
1- Sash inner mullion assembly is done by the ald of mullion connection black.
2- Seal channels are cleaned at the junction point of in sash inner mullion and sash profile.



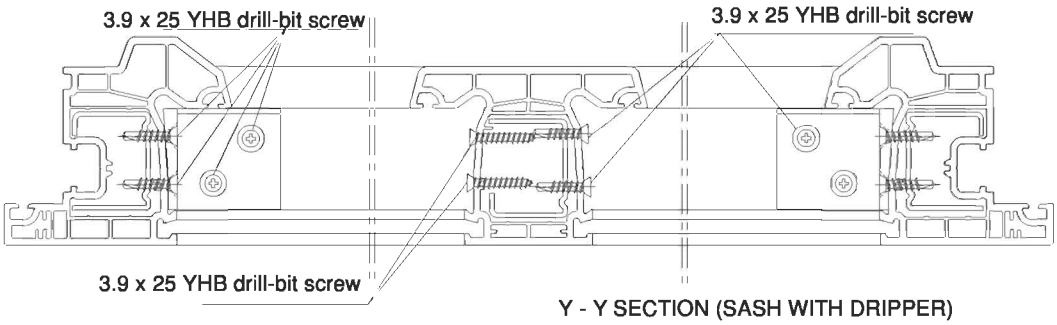
C - DETAIL



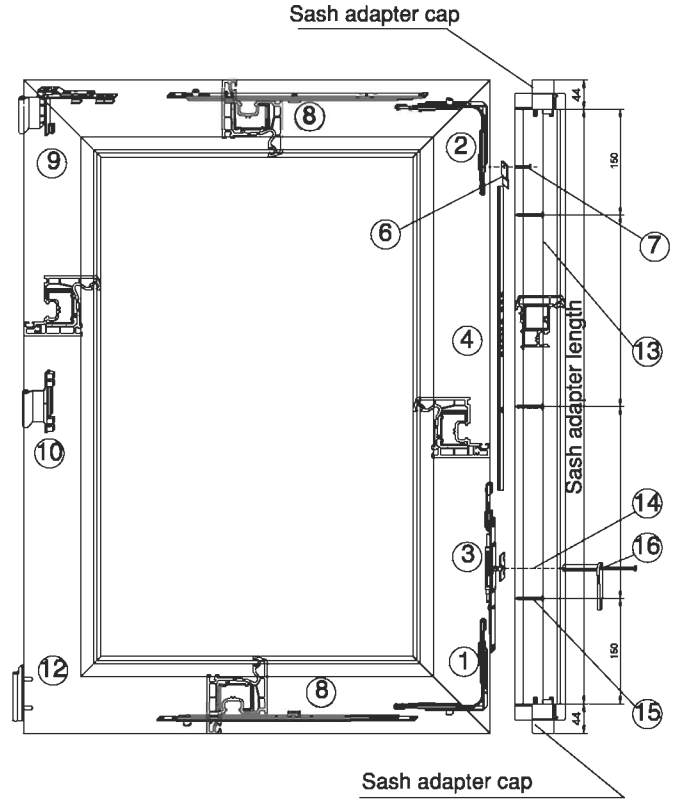
A - DETAIL



Y - Y SECTION (SASH)

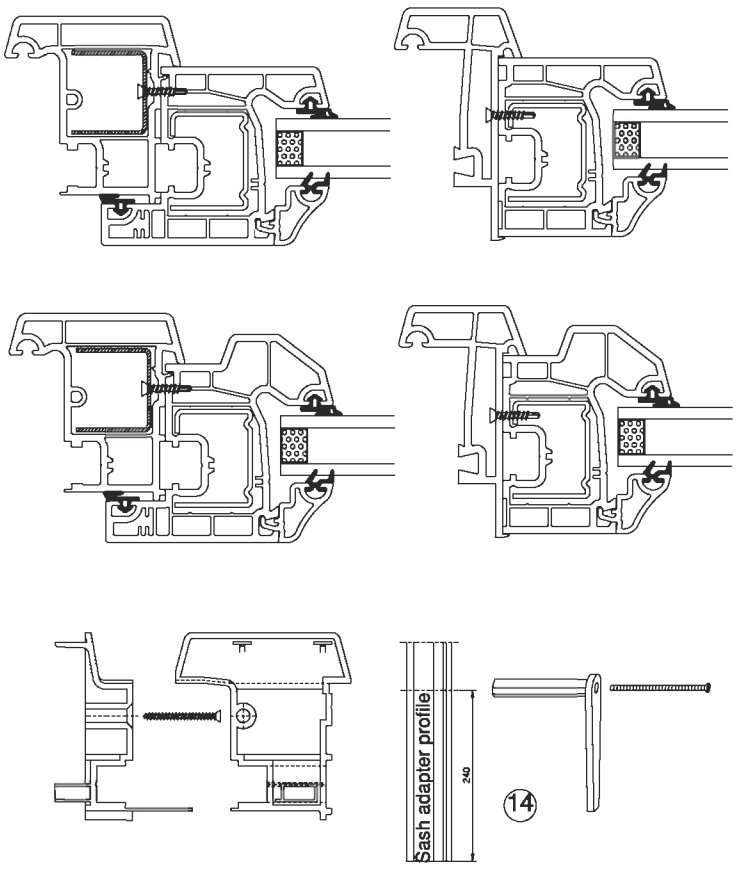


Y - Y SECTION (SASH WITH DRIPPER)



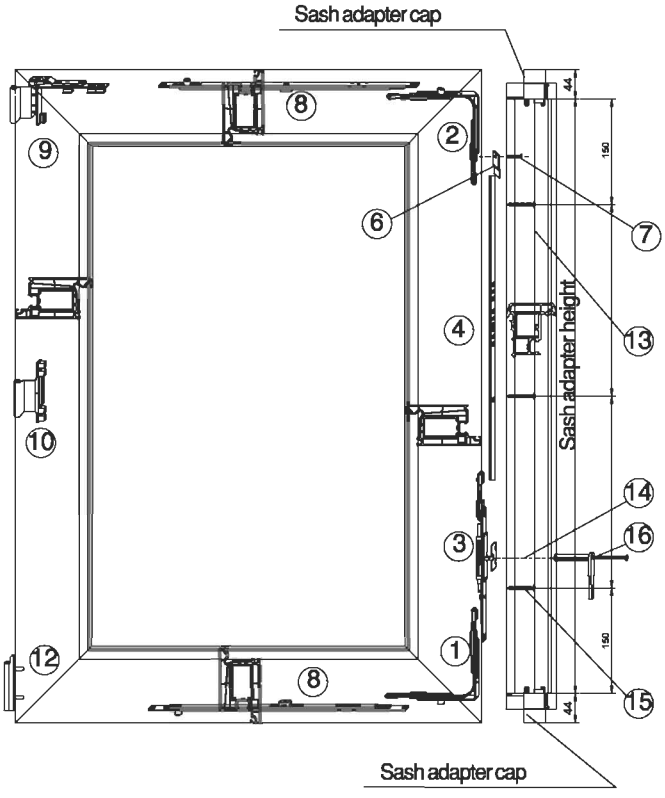
Sash adapter profile cutting measurement - H

H = (Sash Height) - (72 mm)



OPERATION SEQUENCE

1- Bottom corner actuator piece is fixed on the bottom corner of the leaf by a 3.9x22 YHB.
2- The espagnolette is fitted into its slot so that corner actuator piece will be positioned at the upper corner and the espagnolette pin ward the Zamak counterpart. It is screwed by a 3.9xx22 YHB plastic screw.
3- Actuating mechanism is fixed to the bottom corner piece of actuating mechanism using a 3.9 xx 22 YHB screw.
4- An espagnolette suited to the sash length is selected and the length of espagnolette is cut so as to fit the leaf length.
5- The upper corner piece of actuating mechanism enabling the espagnolette to move is fitted to the bottom corner piece of actuating mechanism so that the brand name of espagnolette will be clearly readable.
6- Fixing of the manually cut espagnolettes to the corner actuator pieces are effected by intermediate fittings.
7- Intermediate fittings are fixed by a 3.9 x 22 YHB screw.
8- Where the sash length exceeds 300 mm, the intermediate locking piece is fitted to bottom and upper corner pieces of actuating mechanism, and the sash is fixed to the espagnolette slot with a 3.9 x 22 YHB screw.
9- Adjustable turn-only sash spring hinge fitted into the espagnolette slot at the upper corner of the leaf, and is fixed by a 3.9x22 YHB screw.
10- Vertically middle point for the adjustable turn-only central pressing hinge (used where leaf veritcal length exceeds 800 mm) is marked, on the sash and the espagnolette is fitted into its slot and fixed by a 3.9 x 22 YHB plastic screw.
11- Centering pin holes are bored by a 0.6 mm drill.
12- Moving hinge is fastened and fixed by a 4.2x45 YHB screw.
13- An adapter suited to the sash length is cut.
14- The location of actuator mechanism's arm axis is marked on the sash adaptor and it is bored by a 10 drill.
15- Sash adapter profile is fixed on the leaf by a 4.2 x 38 YSB screw.
16- Actuator mechanism arm is cut in proper manner and passed through sash adapter.
The mechanism is actuated
17- Sash adapter covers are placed on the adapter profile and screwed.

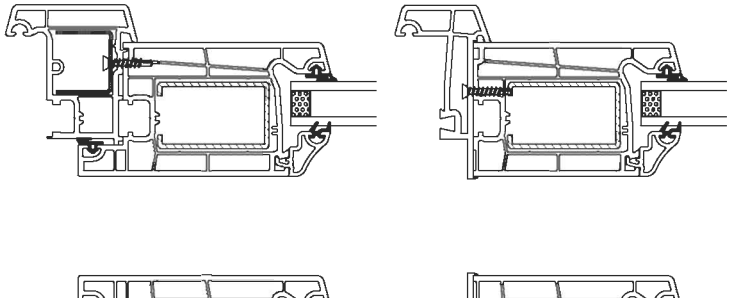


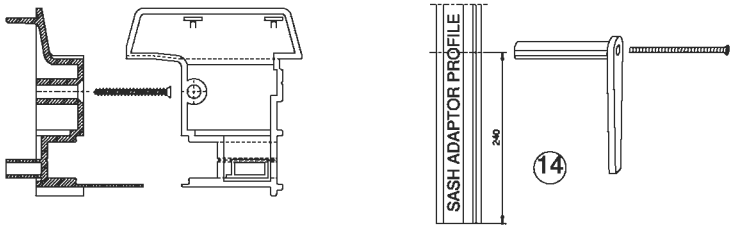
Sash adapter profile cutting measurement - H

H= (Sash Height) - (72 mm)

OPERATION SEQUENCE

1-Bottom corner actuator piece is fixed on the bottom corner of the leaf by a 3.9X22 YHB.
2-The espagnolette is fitted into its slot so that corner actuator piece will be positioned at the upper corner and the espagnolette pin ward the Zamak counterpart.
It is screwed by a 3.9 X 22 YHB plastic screw.
3-Actuating mechanism is fixed to the bottom corner piece of actuating mechanism using a 3.9 X 22 YHB screw.
4-An espagnolette suited to the sash length is selected and the length of espagnolette is cut so as to fit the sash length.
5-The upper corner piece of actuating mechanism enabling the espagnolette to move is fitted to the bottom corner piece of actuating mechanism so that the brand name of espagnolette will be clearly readable.
6-Fixing of the manually cut espagnolettes to the corner actuator pieces are effected by intermediate fittings.
7-Intermediate fittings are fixed by a 3.9 X 22 YHB screw.
8-Where the sash length exceeds 800 mm, the intermediate locking piece is fitted to bottom and upper corner pieces of actuating mechanism, and the sash is fixed to the espagnolette slot with a 3.9 X 22 YHB screw.
9-Adjustable turn-only sash spring hinge fitted into the espagnolette slot at the upper corner of the sash, and is fixed by a 3.9x22 YHB screw.
10-Vertically middle point for the adjustable turn- only central pressuring hinge (used where sash vertical length exceeds 800 mm) is marked on the sash, and the espagnolette is fitted into its slot and fixed by a 3,9 X 22 YHB plastic screw.
11 -Centering pin holes are bored by a 0.6 mm drill.
12-Moving hinge is fastened and fixed by a 4.2 X 45 YHB screw.
13-An adapter suited to the sash length is cut.
14-The location of actuator mechanism's arm axis is marked on the sash adaptor and it is bored by a 10 drill.
15-Sash adapter profile is fixed on the sash by a 4 x 38 YSB screw.
16-Actuator mechanism arm is cut in proper manner and passed through sash adapter. The mechanism is actuated.
17-Sash adapter covers are placed on the adaptor profile and screwed.



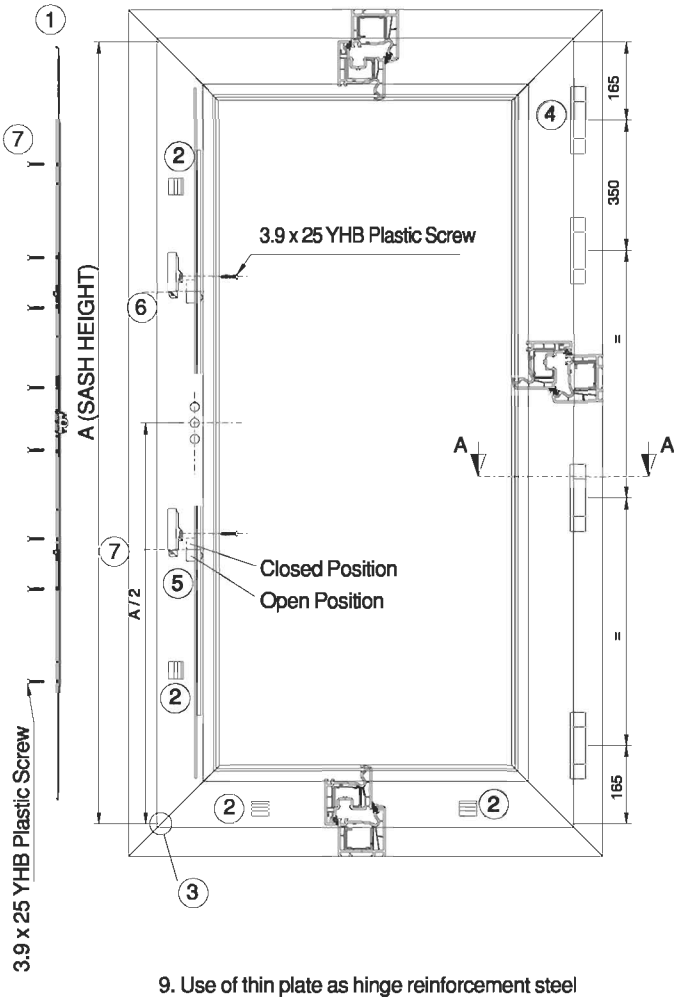


FRAME SASH MOUNTING

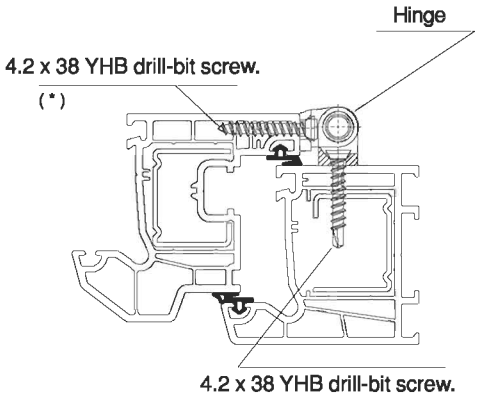
NUMBER OF HINGES	
A < 1100	2 HINGE
1101 < A < 1400	3 HINGE
1401 < A	4 HINGE

OPERATION SEQUENCE

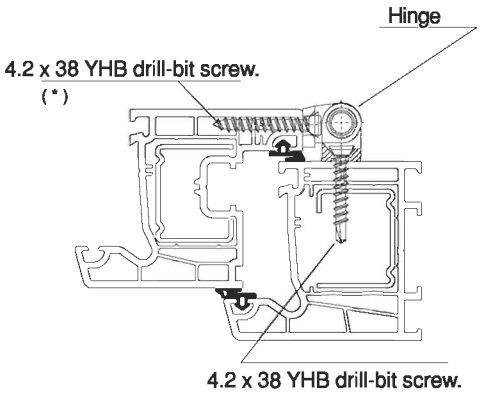
1-Espagnolette is selected and then assembled.
2-Assembling blocks are fitted.
3-Sash is rested against the reference corner.
4-Hinge, sash and frame holes are bored by means of a stencil and the hinges are screwed.
5-Espagnolette is brought to open position.
6-The upper levels of the lock bolts are marked.
7-Locking pieces are screwed.



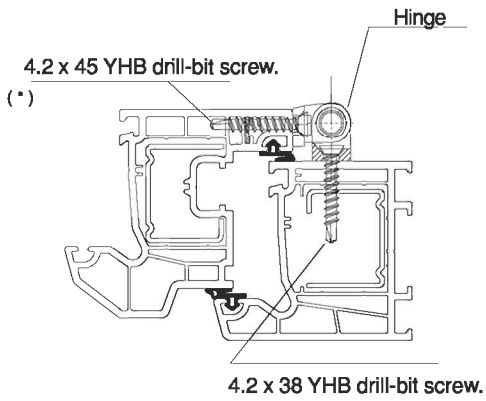
A - A SECTION (Sash with dripper)

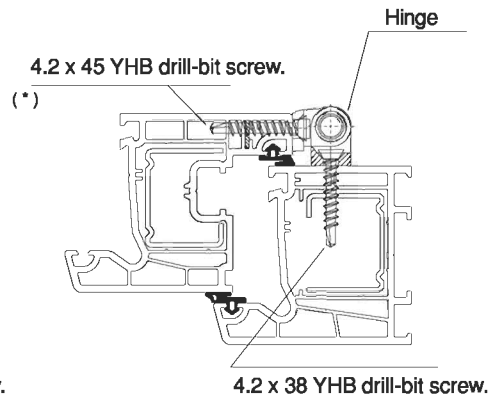


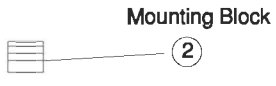
A - A SECTION (Sash)



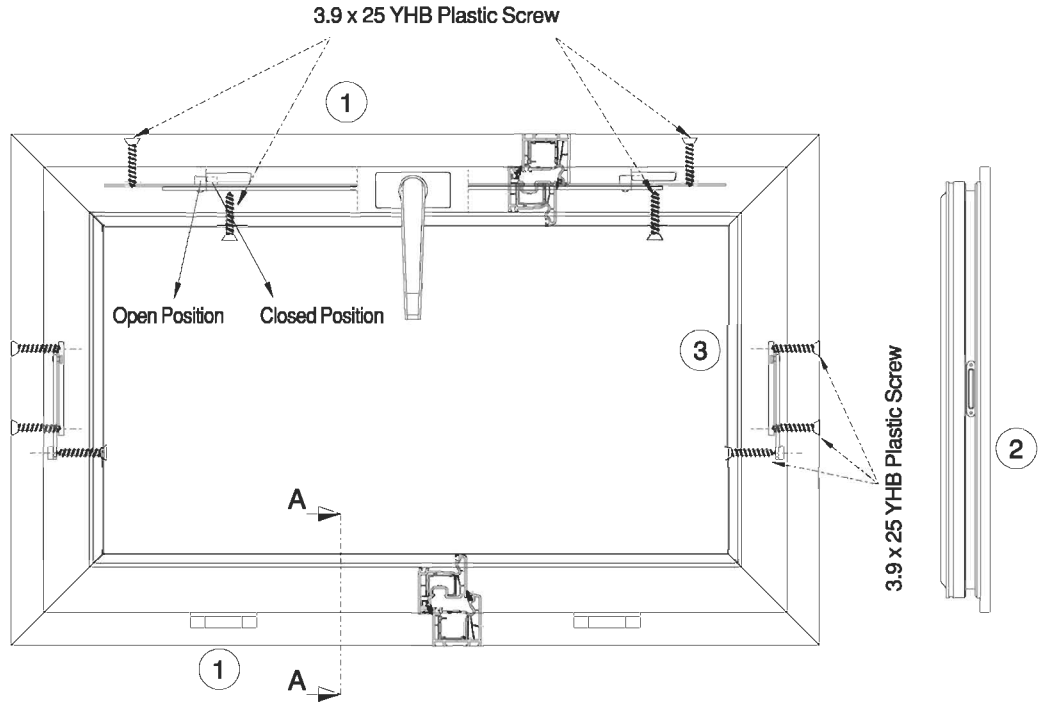
9. Use of thin plate as hinge reinforcement steel







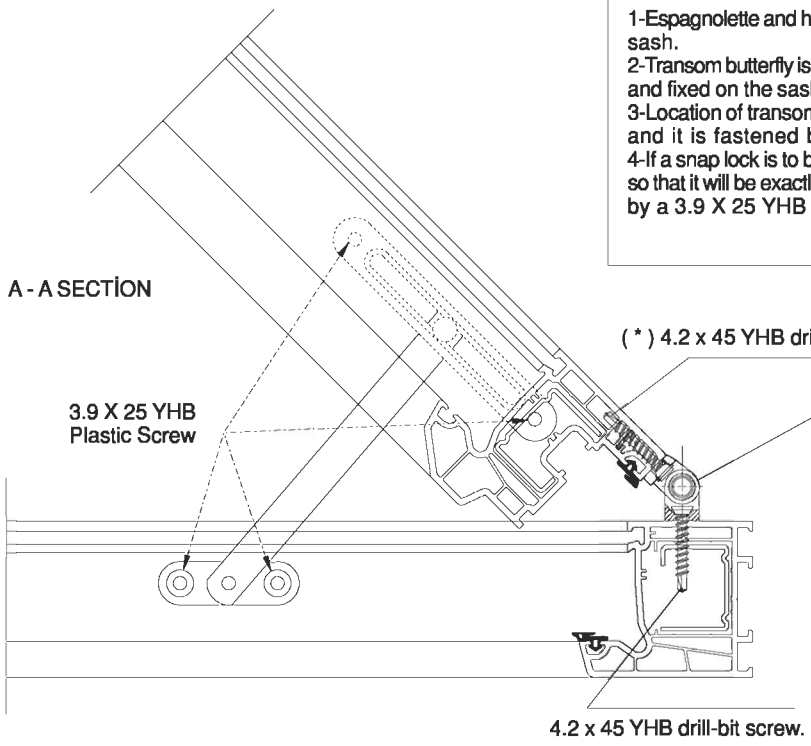
(*) When a hinge reinforcement steel or thin plate is used, a drill-bit screw must be used. When a hinge reinforcement steel or thin plate is not used, a plastic screw of min 4.2 x 38 size must be used.



OPERATION SEQUENCE

1-Espagnolette and hinge assembling is done as for normal sash.
2-Transom butterfly is adjusted according to the sash height, and fixed on the sash with a 3,9 X 25 YHB plastic screw.
3-Location of transom sash spring is marked on the frame and it is fastened by a 3.9 X 25 YHB plastic screw.
4-If a snap lock is to be used, the location of lock is marked so that it will be exactly at the midpoint, and will be mounted by a 3.9 X 25 YHB plastic screw.

A - A SECTİON

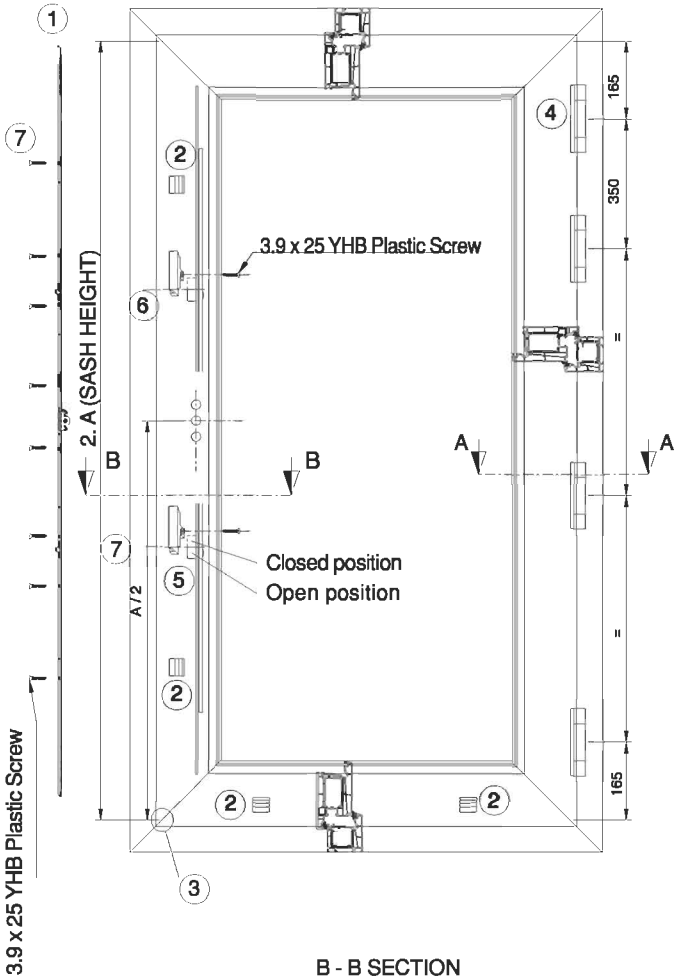


(*) When a hinge reinforcement steel or thin plate is used, a drill-bit screw must be used.
When a hinge reinforcement steel or thin plate is not used, a plastic screw of min 4.2 x 38 size must be used.

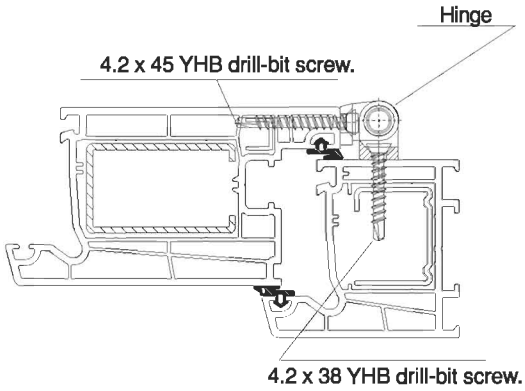
NUMBER OF HINGES	
A < 1100	2 HINGE
1101 < A < 1400	3 HINGE
1401 < A	4 HINGE

OPERATION SEQUENCE

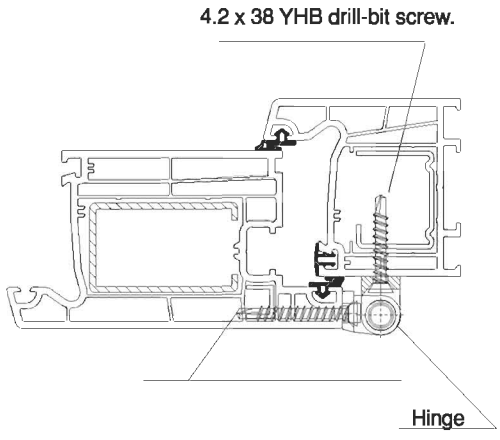
1-Espagnolette is selected and then assembled.
2-Assembling blocks are fitted.
3-Sash is rested against the reference corner.
4-Hinge, sash and frame holes are bored by means of a stencil and the hinges are screwed.
5-Espagnolette is brought to open position.
6-The upper levels of the lock bolts are marked.
7-Locking pieces are screwed.
8-Minimum size 90 hinges should be used on the doors.



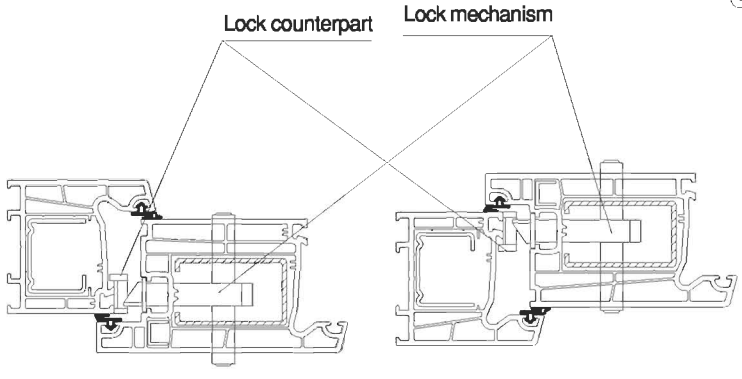
A-A SECTION (Inward opening Locking Doors)

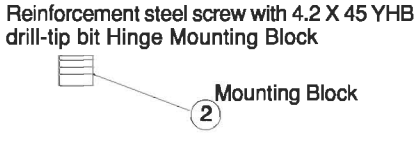


A-A SECTION (Outward opening Locking Doors)



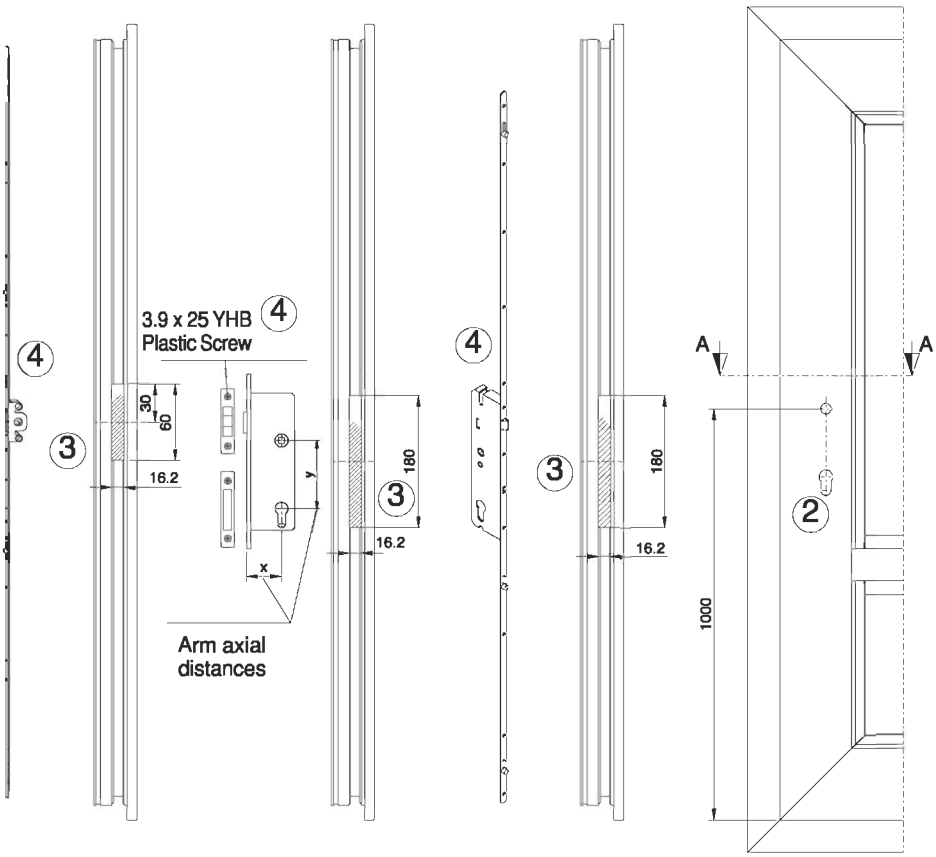
B - B SECTION





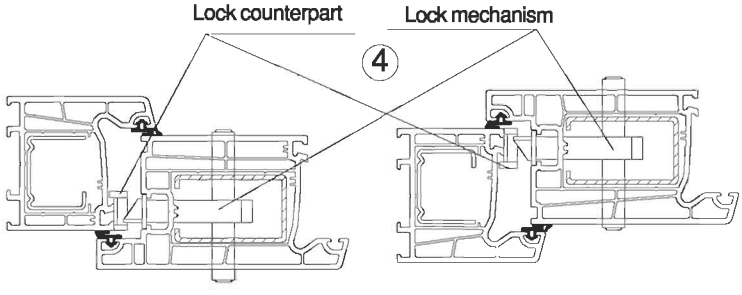
OPERATION SEQUENCE

1-Selection of espagnolette or lock is made.
Locks can be of size 85X28, 85X35, 92X28 or 92X35 axial distance
2-The holes for the location of lock and handle are bored by copy milling machine.
3-Lock slot is bored by copy milling machine.
4-Lock or espagnolette is assembled.
5-Reinforcement steel on the lock side should be of single piece. To achieve this, a punch machine or specially designed reinforcement steel boring presses or shears should be used.



A - A SECTION

(*) Since x and y "arm axial distance" varies as 85 mm, 92 mm and 28 mm, 35 mm, depending on the firms and the lock types, the measurements should be taken on the basis of the lock used.



OUTWARD OPENING
LOCKING DOOR DETAIL

INWARD OPENING
LOCKING DOOR DETAIL

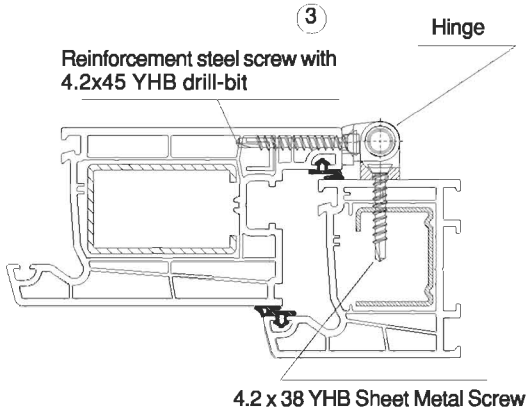
s60 LOCKING DOOR INNER MULLION MOUNTING

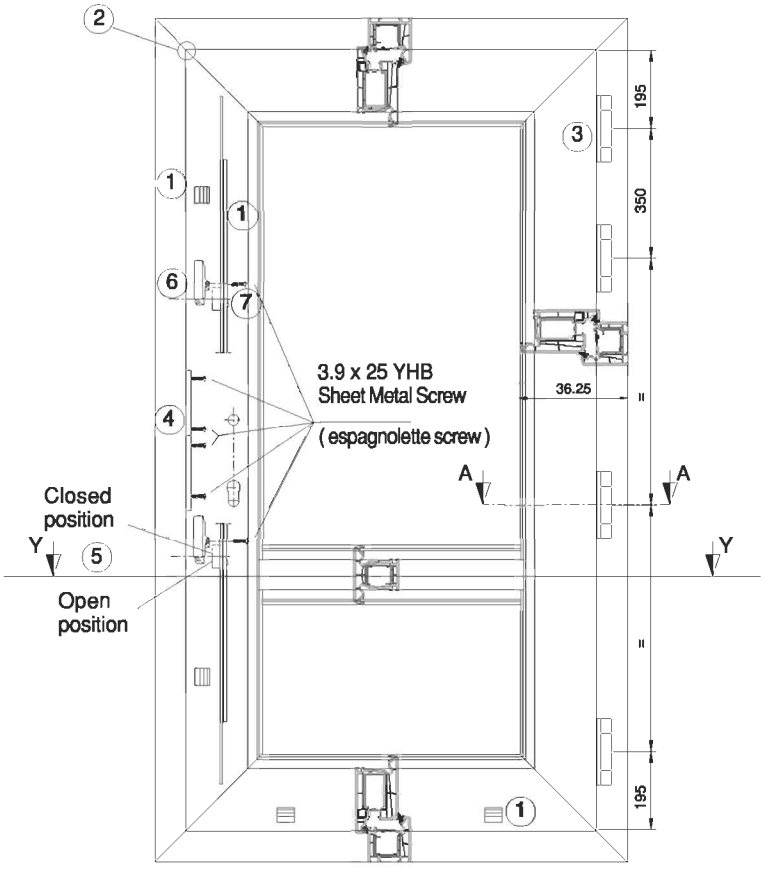
OPERATION SEQUENCE

1-Assembling blocks are fitted.
2-Sash is rested against the reference corner.
3-Hinge, sash and frame holes are bored by means of a stencil and the hinges are screwed.
4-The location of lock counterpart is marked and it is screwed.
5-Espagnolette is brought to open position.
6-The upper levels of the lock bolts are marked.
7-Locking pieces are screwed.

NUMBER OF HINGES	
A < 1100	2 HINGE
1101 < A < 1400	3 HINGE
1401 < A	4 HINGE

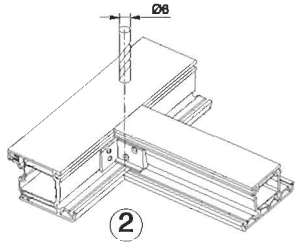
A - A SECTION (Inward Opening Locking Door)

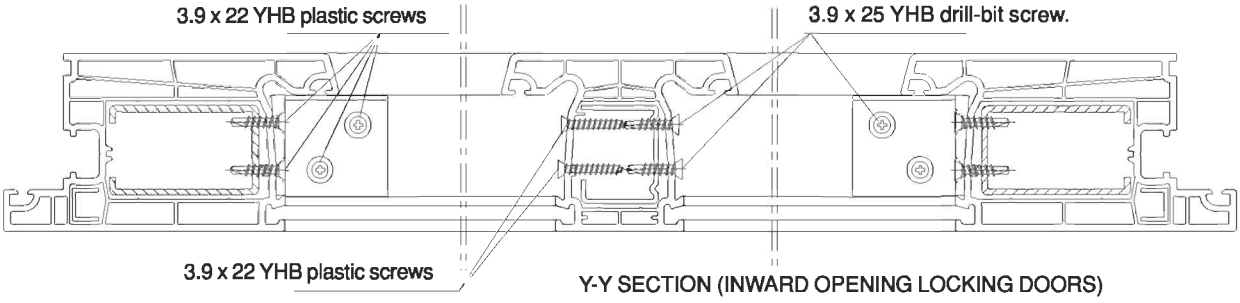




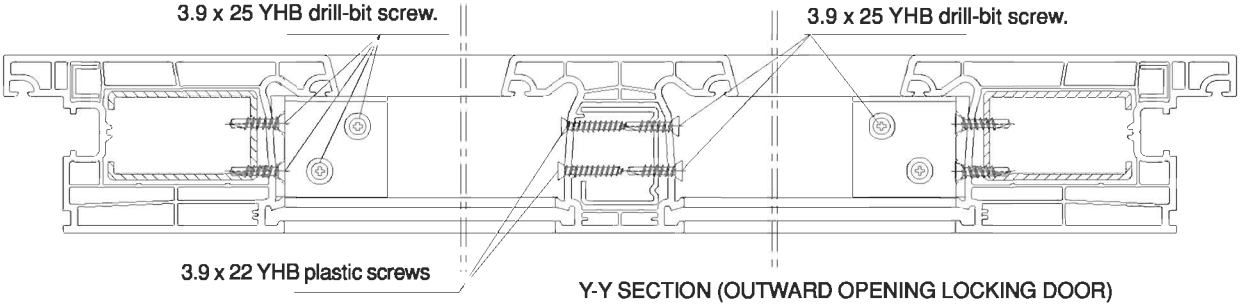
OPERATION SEQUENCE

1-Mullion assembling is done by means of mullion connection block.
2-Seal channels located at the point inner mullion and sash profile are cleaned.



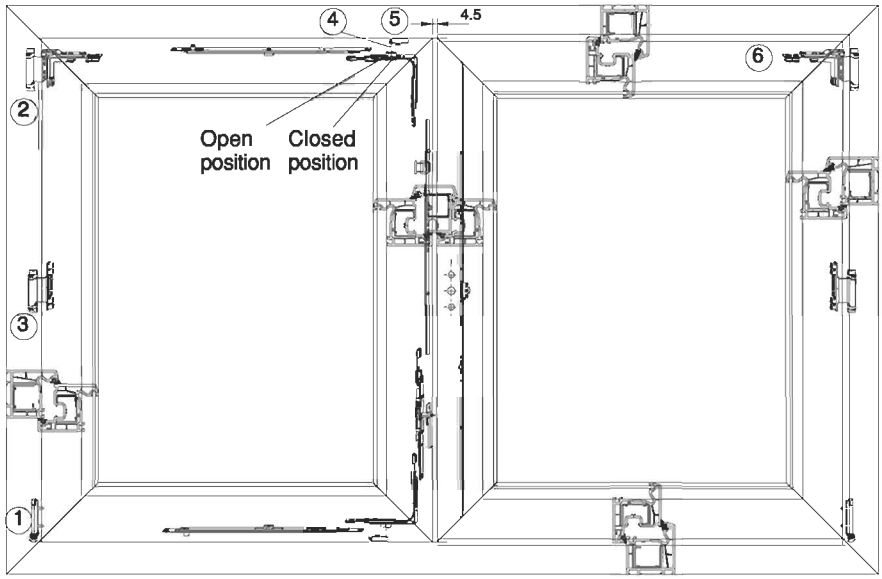


Y-Y SECTION (INWARD OPENING LOCKING DOORS)



Y-Y SECTION (OUTWARD OPENING LOCKING DOOR)

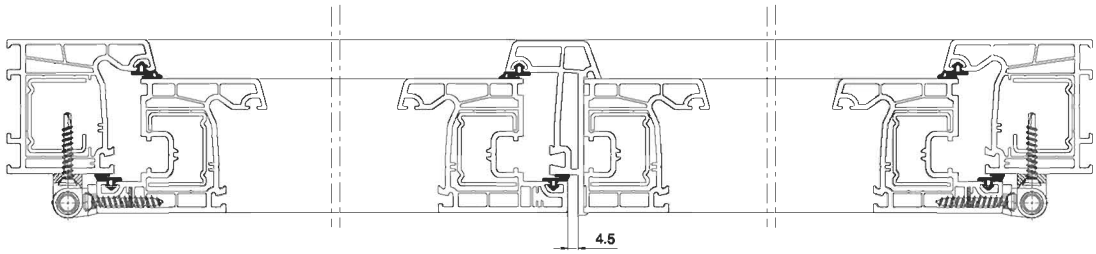
DOUBLE SASH, TURN-ONLY WINDOW MOUNTING **s60**



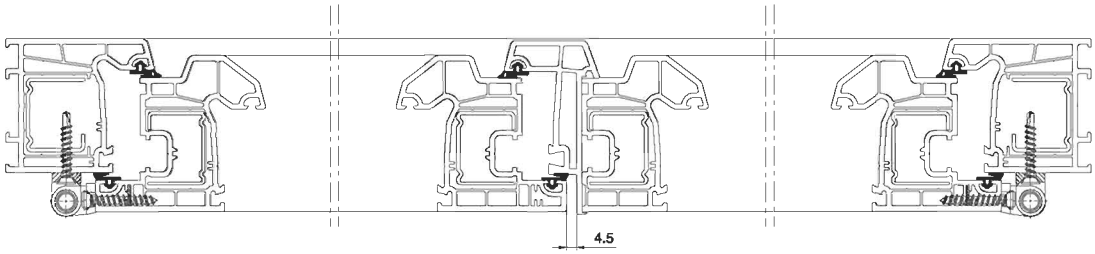
OPERATION SEQUENCE

1-Stationary sash is assembled on the frame and fixed toggle is fitted on the swing toggle.
2-Adjustable turn-only sash spring-hinge is fitted to the frame hinge and is secured by the hinge pin.
3-Adjustable turn-only central pressing hinge is fitted to the frame hinge and secured by the hinge pin.
4-The upper levels of the lock bolts are marked on the frame by bring the actuating mechanism the corner actuating parts and the pims to open position.
5-Locking pieces are fixed by a 3.9 X 25 YHB screw.
6-Swing sash is assembled on the frame and the operations made for the stationary sash are repeated.

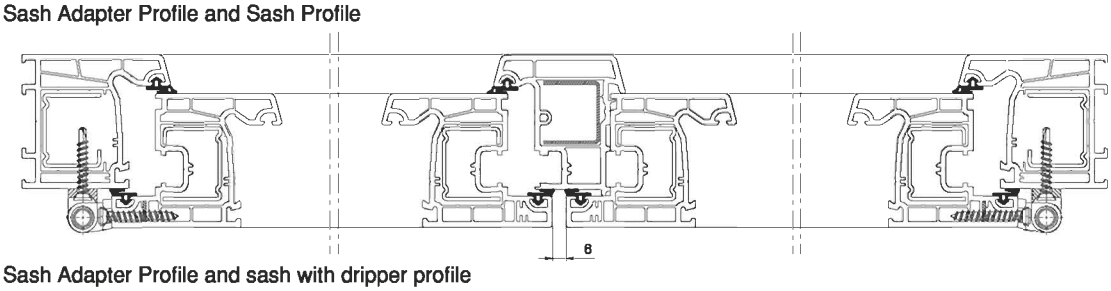
Old Sash Adapter Profile and Sash Profile



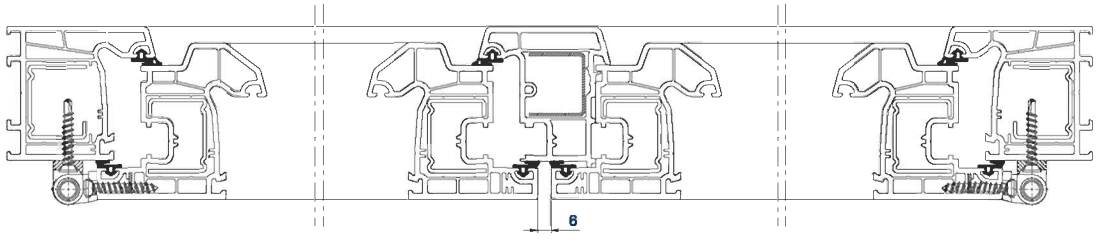
Old Sash Adapter Profile and sash with dripper profile



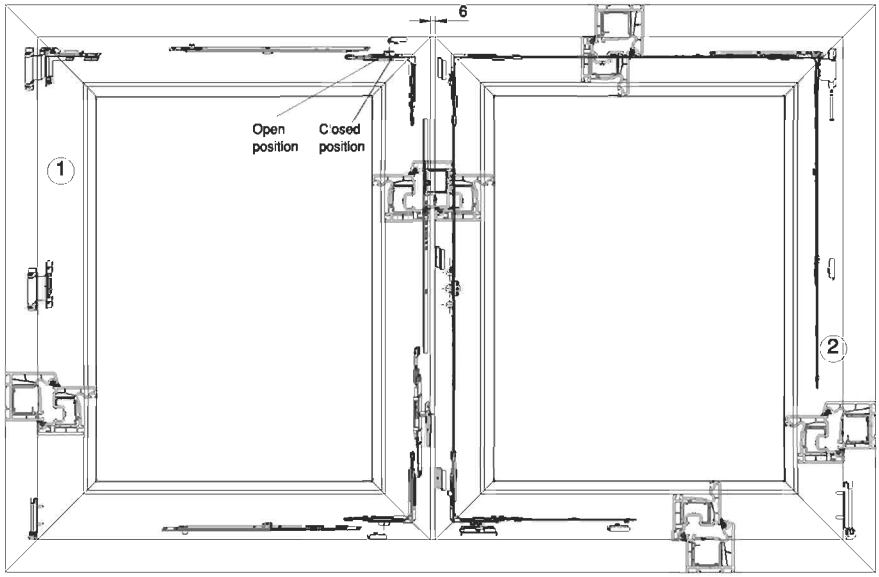
New Sash Adapter Profile and Sash Profile



New Sash Adapter Profile and sash with dripper profile



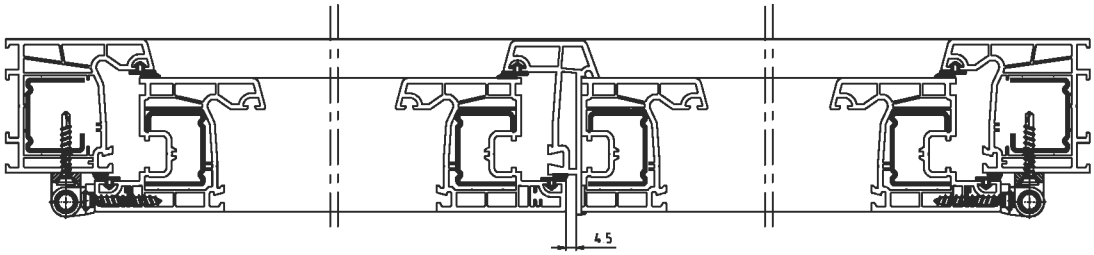
s60 DOUBLE-SASH, TILT OR TURN WINDOW MOUNTING



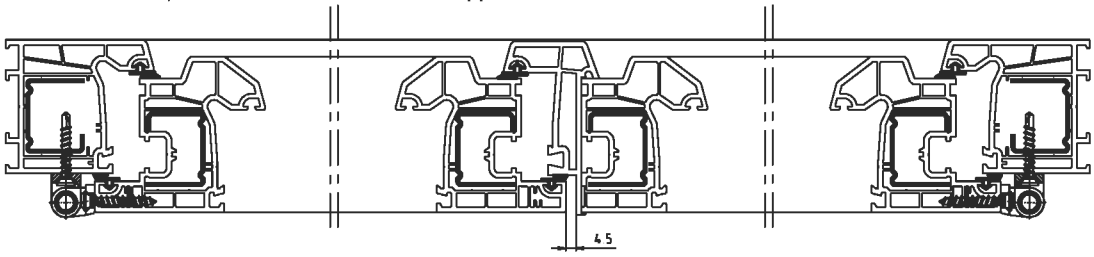
OPERATION SEQUENCE

1-Operation sequence of stationary sash assembling is same as that for the tilt or turn frame-sash assembling.
2-Operation sequence of movable sash assembling is same as that for the tilt or turn system frame-sash assembling.

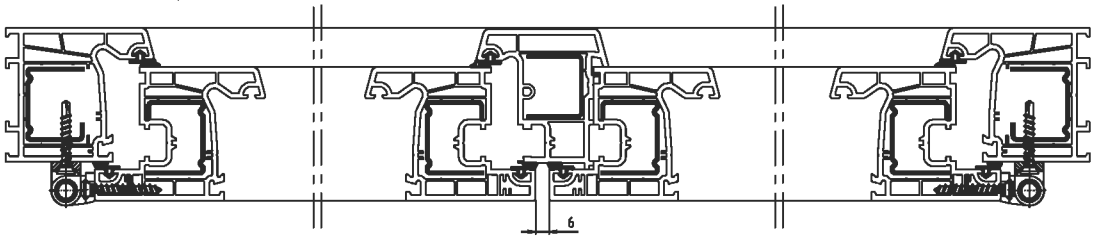
Old Sash Adapter Profile and Sash Profile



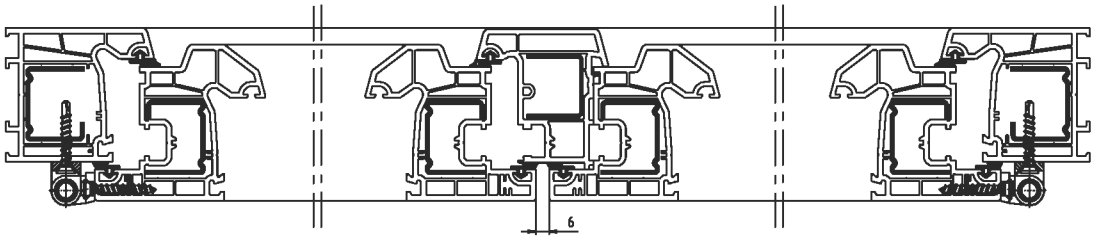
Old Sash Adapter Profile and of Sash with Dripper Profile



New Sash Adapter Profile and Sash Profile

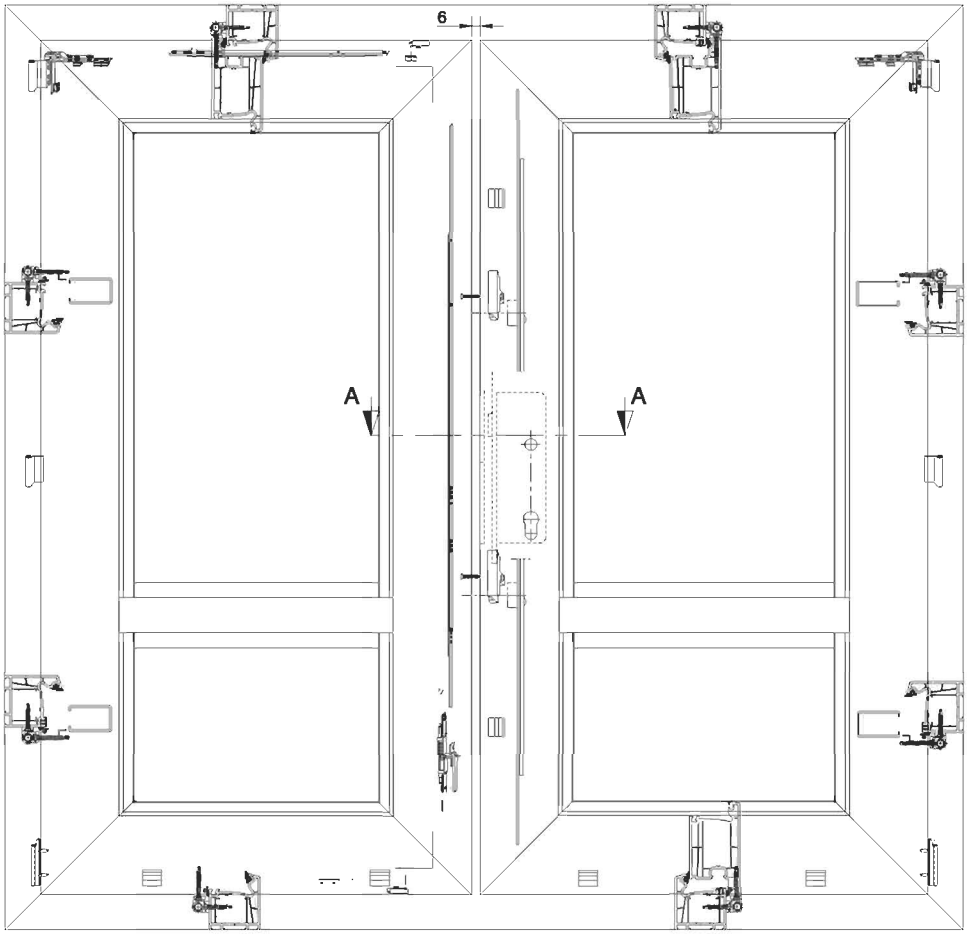


New Sash Adapter Profile and Sash with Dripper Profile



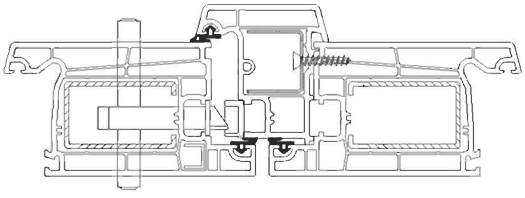
OPERATION SEQUENCE

1-Frame stencil and frame hinge, stationary toggle and centering pin holes are bored by a 3 mm drill.
2-Frame hinge and stationary toggle is fitted into their slots and fixed by a 3,.9 X 32 YHB screw.
3-Where the sash vertical length exceeds 800 mm, the second frame hinge is placed at the middle point of the sash vertical axis and fixed by a 3.9 X 32 screw.
4-Assembling operation sequence is same as that for tilt or turn sash-frame assembling.

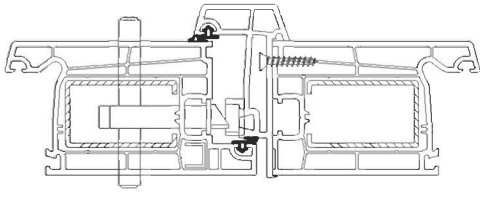


A - A SECTION

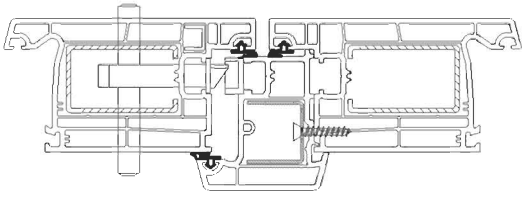
New Sash Adapting Profile and Inward Opening Locking Door Profile



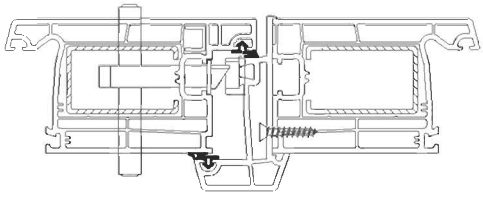
Old Sash Adapting Profile and Inward Opening Locking Door Profile



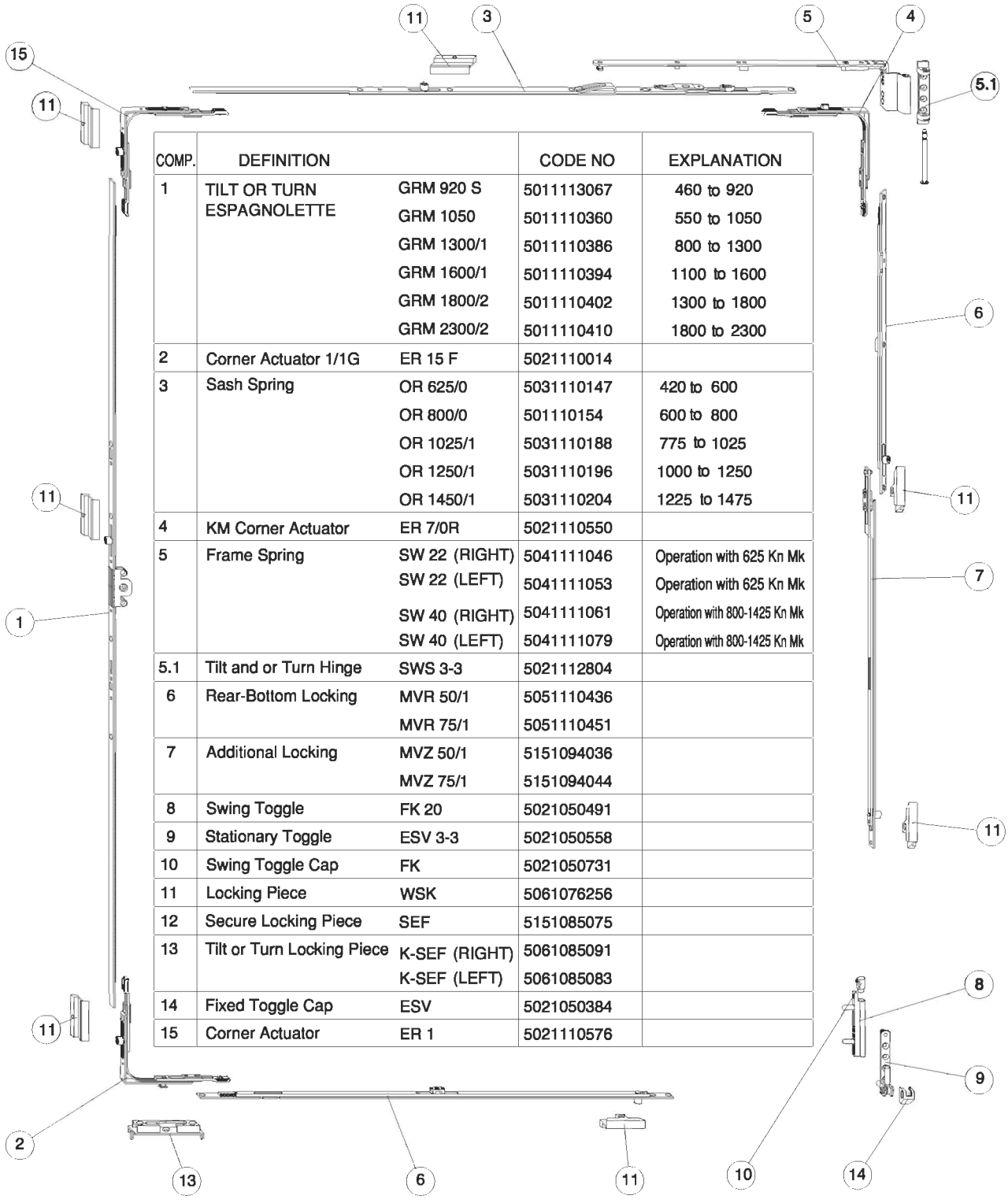
New Sash Adapting Profile and Outward Opening Locking Door Profile



Old Sash Adapting Profile and Outward Open Opening Locking Door Profile

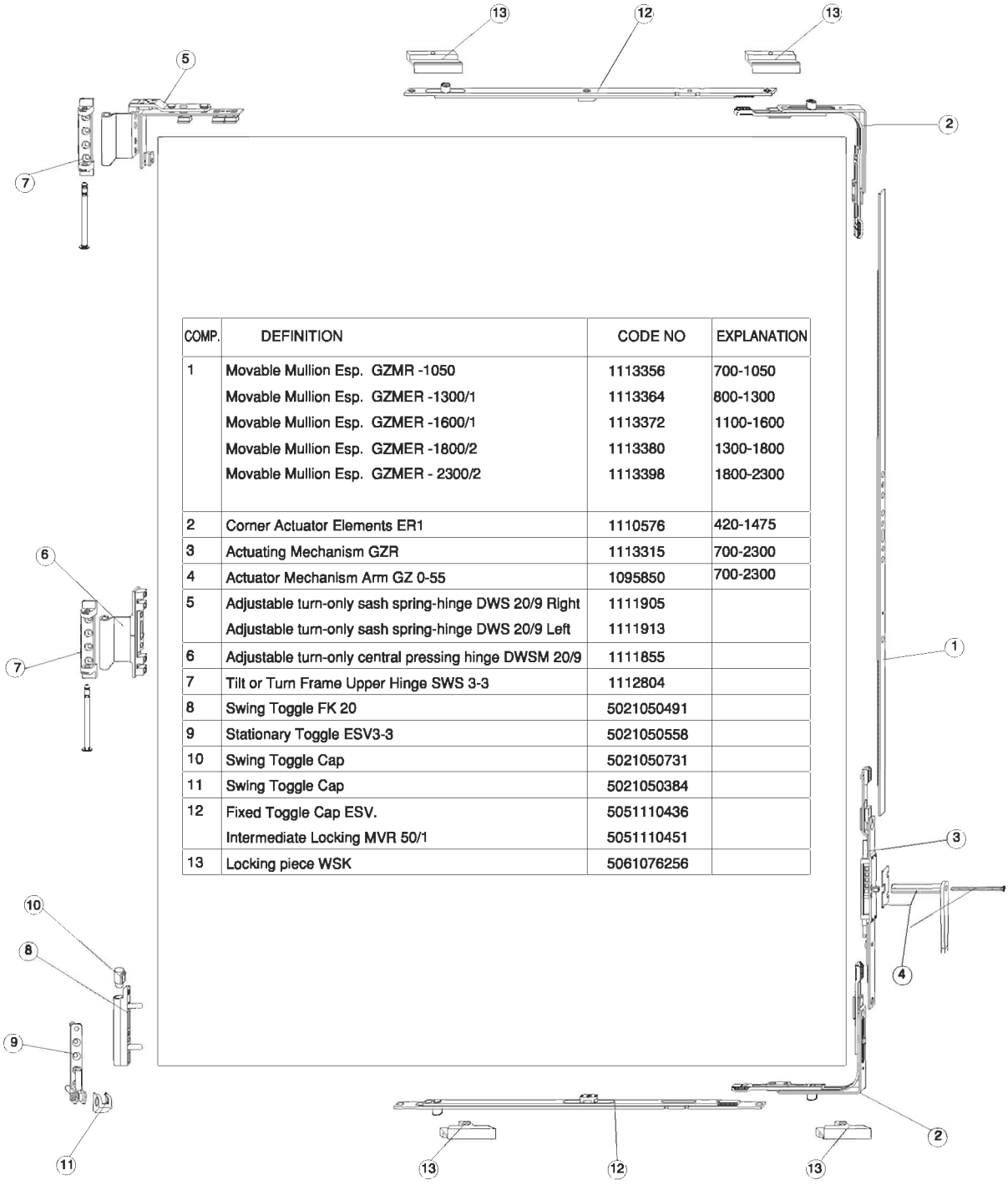


WINKHAUS TILT AND TURN ELEMENTS

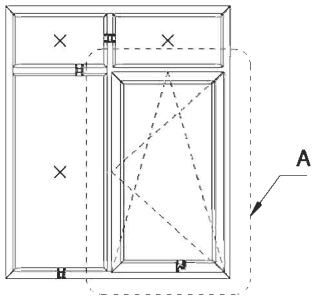


COMP.	DEFINITION		CODE NO	EXPLANATION
1	TILT OR TURN ESPAGNOLETTE	GRM 920 S	5011113067	460 to 920
		GRM 1050	5011110360	550 to 1050
		GRM 1300/1	5011110386	800 to 1300
		GRM 1600/1	5011110394	1100 to 1600
		GRM 1800/2	5011110402	1300 to 1800
		GRM 2300/2	5011110410	1800 to 2300
2	Corner Actuator 1/1G	ER 15 F	5021110014	
3	Sash Spring	OR 625/0	5031110147	420 to 600
		OR 800/0	501110154	600 to 800
		OR 1025/1	5031110188	775 to 1025
		OR 1250/1	5031110196	1000 to 1250
		OR 1450/1	5031110204	1225 to 1475
4	KM Corner Actuator	ER 7/0R	5021110550	
5	Frame Spring	SW 22 (RIGHT)	5041111046	Operation with 625 Kn Mk
		SW 22 (LEFT)	5041111053	Operation with 625 Kn Mk
		SW 40 (RIGHT)	5041111061	Operation with 800-1425 Kn Mk
		SW 40 (LEFT)	5041111079	Operation with 800-1425 Kn Mk
5.1	Tilt and or Turn Hinge	SWS 3-3	5021112804	
6	Rear-Bottom Locking	MVR 50/1	5051110436	
		MVR 75/1	5051110451	
7	Additional Locking	MVZ 50/1	5151094036	
		MVZ 75/1	5151094044	
8	Swing Toggle	FK 20	5021050491	
9	Stationary Toggle	ESV 3-3	5021050558	
10	Swing Toggle Cap	FK	5021050731	
11	Locking Piece	WSK	5061076256	
12	Secure Locking Piece	SEF	5151085075	
13	Tilt or Turn Locking Piece	K-SEF (RIGHT)	5061085091	
		K-SEF (LEFT)	5061085083	
14	Fixed Toggle Cap	ESV	5021050384	
15	Corner Actuator	ER 1	5021110576	

WINKHAUS TILT OR TURN SASH ELEMENTS

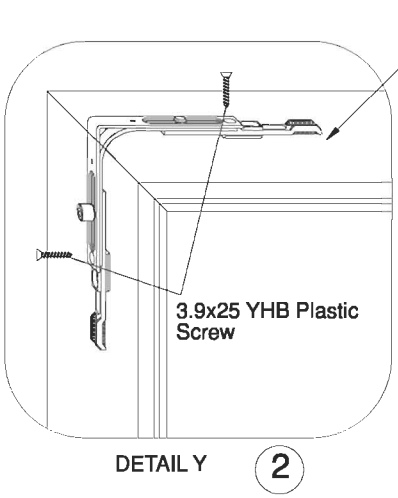


COMP.	DEFINITION	CODE NO	EXPLANATION
1	Movable Mullion Esp. GZMR -1050	1113356	700-1050
	Movable Mullion Esp. GZMER -1300/1	1113364	800-1300
	Movable Mullion Esp. GZMER -1600/1	1113372	1100-1600
	Movable Mullion Esp. GZMER -1800/2	1113380	1300-1800
	Movable Mullion Esp. GZMER - 2300/2	1113398	1800-2300
2	Corner Actuator Elements ER1	1110576	420-1475
3	Actuating Mechanism GZR	1113315	700-2300
4	Actuator Mechanism Arm GZ 0-55	1095850	700-2300
5	Adjustable turn-only sash spring-hinge DWS 20/9 Right	1111905	
	Adjustable turn-only sash spring-hinge DWS 20/9 Left	1111913	
6	Adjustable turn-only central pressing hinge DWSM 20/9	1111855	
7	Tilt or Turn Frame Upper Hinge SWS 3-3	1112804	
8	Swing Toggle FK 20	5021050491	
9	Stationary Toggle ESV3-3	5021050558	
10	Swing Toggle Cap	5021050731	
11	Swing Toggle Cap	5021050384	
12	Fixed Toggle Cap ESV.	5051110436	
	Intermediate Locking MVR 50/1	5051110451	
13	Locking piece WSK	5061076256	

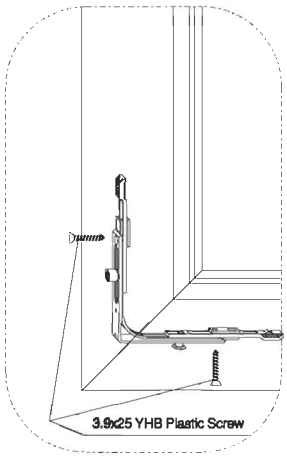


OPERATION SEQUENCE -1

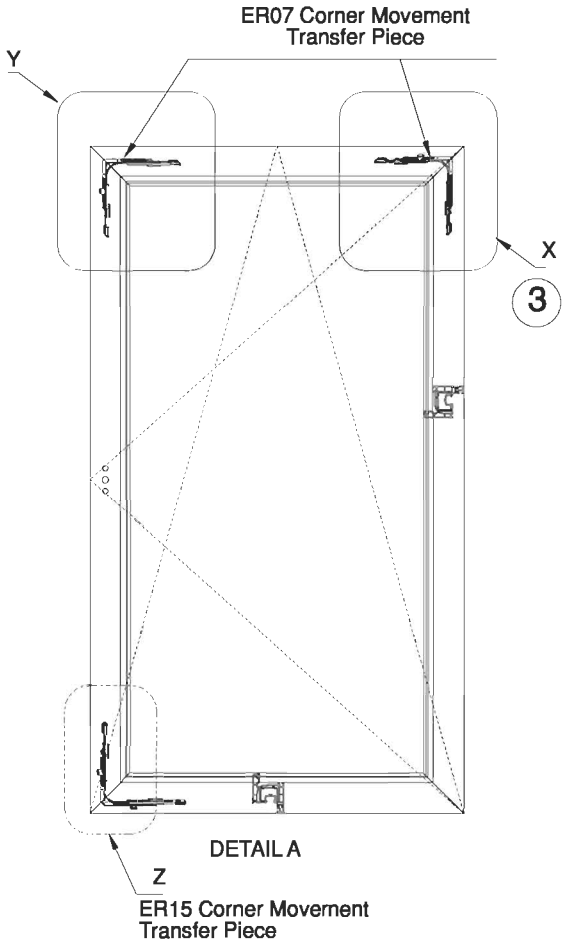
1 -Espagnolette is fitted into its slot so that the hexagonal actuating piece will be positioned at the lower corner of the sash and the dome-headed lock bolt will be positioned at the bottom. It is fixed by a 3.9 X 25 YHB plastic screw as shown in detail Z. 2-The espagnolette is fitted into its slot so that corner actuator piece will be positioned at the upper left corner and the espagnolette pin to ward the Zamak counterpart. It is screwed by a 3.9 X 25 YHB plastic screw as shown in detail Y. It is fixed by a 3.9 X 25 YHB plastic screw as shown in detail Z. 3-Espagnolette is fitted into the sash spring side of its slot so that the corner actuator the upper right corner and the flat pin will stand up in vertical position. It is fixed by a 3.9 X 25 YHB plastic screw as shown in detail X.

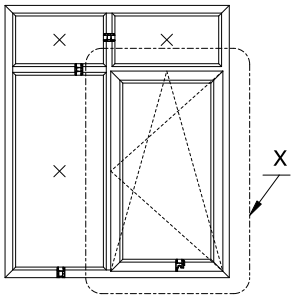


DETAIL Y 2

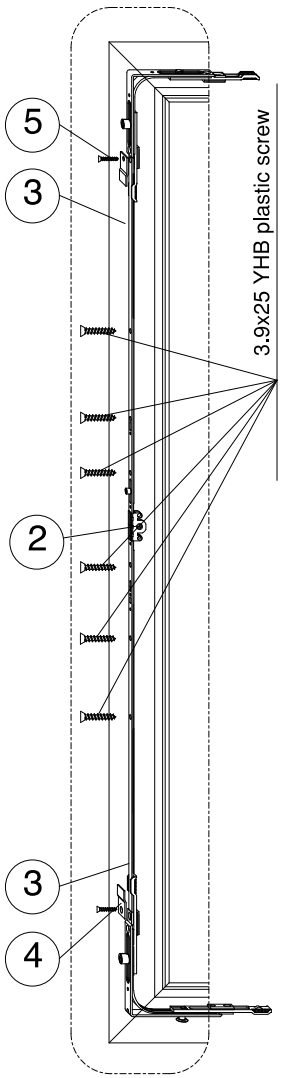


DETAIL Z 1

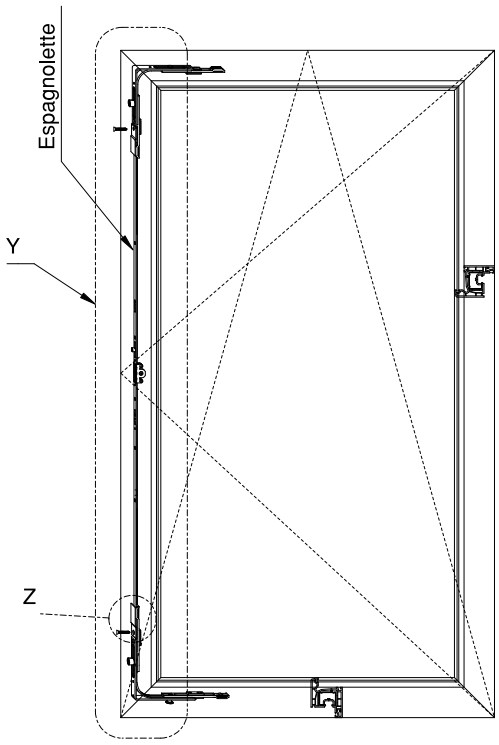




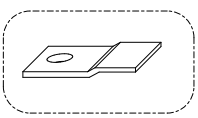
1-Espagnolette suited to the length of sash is selected.
2-Length of the espagnolette is cut so as to suit the size of the sash.
3-Espagnolette is fitted into its hub so that its brand name will be clearly readable, and both ends of the piece actuating the espagnolette are fastened to the corner actuator piece and to the bottom actuator piece.
4-Fixing of the manually cut espagnolette to the corner actuator parts are effected by fittings.
(As shown in detail Z)
5-Fittings are mounted on the junction point of the espagnolette and the corner actuator piece, and fixed by a 3.9 X 25 YHB plastic screw.



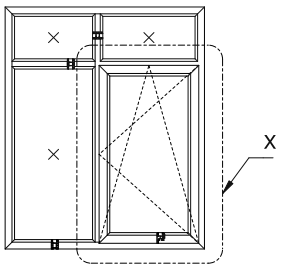
DETAIL Y



DETAIL X

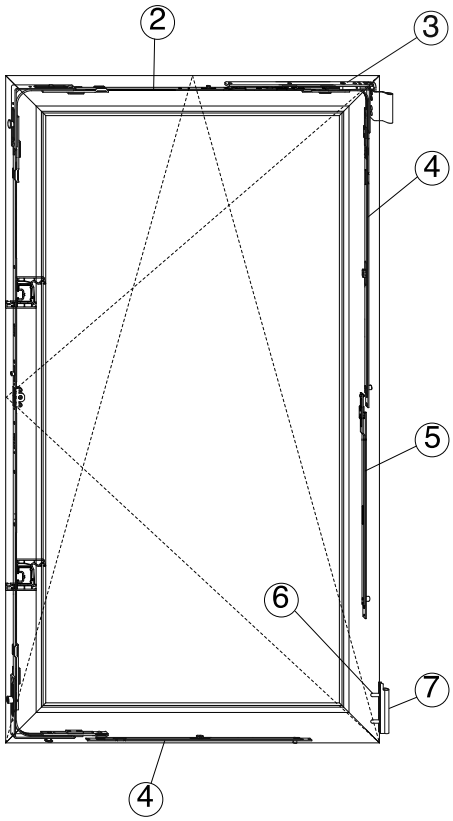


DETAIL Z



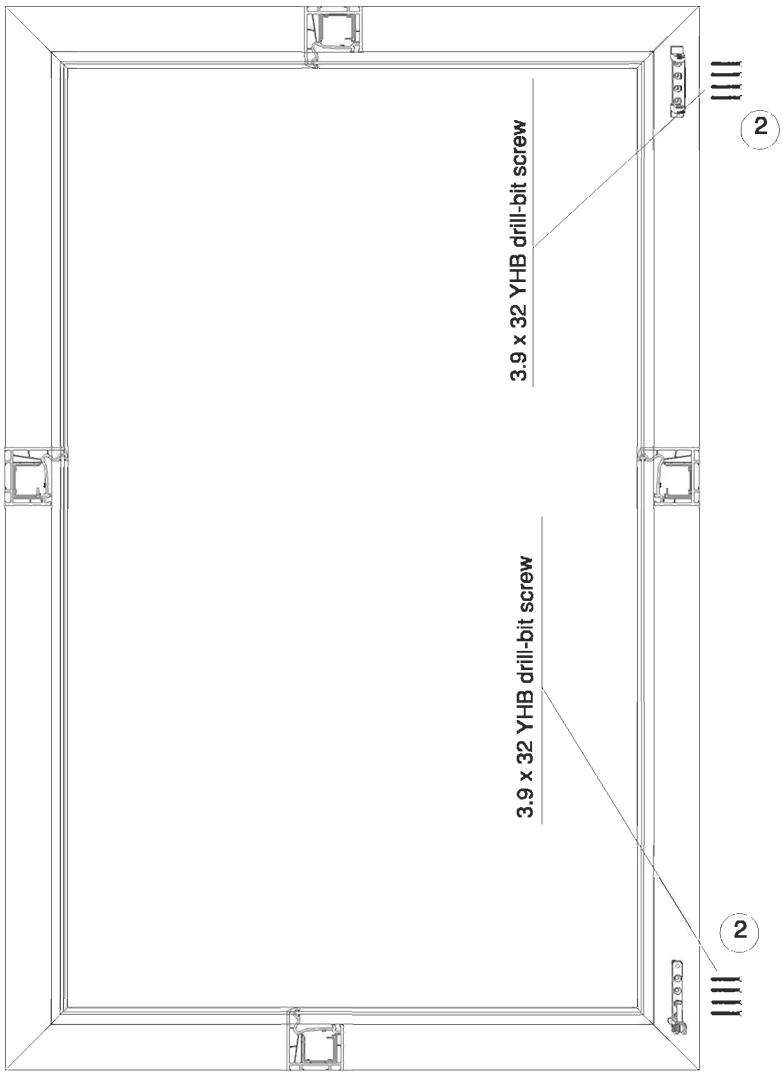
OPERATION SEQUENCE -3

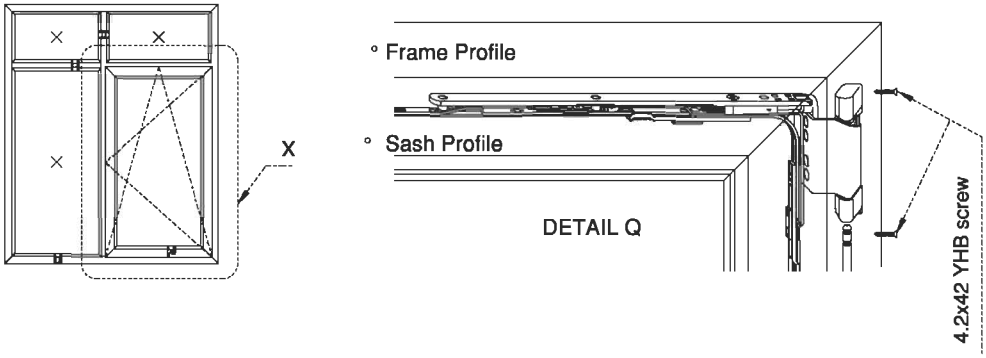
1-Sash width is measured and the cutting of leafspring member is made.
2-Sash spring is fitted into the espagnolette slot and fixed by a 3.9 X 25 YHB plastic screw.
3-Frame sash spring is mounted on the sash spring.
4-Rear locking part is fastened to the sash spring corner actuator in vertical plane and bottom locking part to the bottom corner actuator in horizontal plane, and then fixed to the sash espagnolette slot by a 3.9x25 YHB plastic screw. 5-For high sash lengths, additional locking pieces must be used without fail.
6-Centering pin holes are bored by a 0.6 mm drill by the aid of a stencil.
7-Toggle is fitted and fixed by a 4.2 X 45 YHB screw.

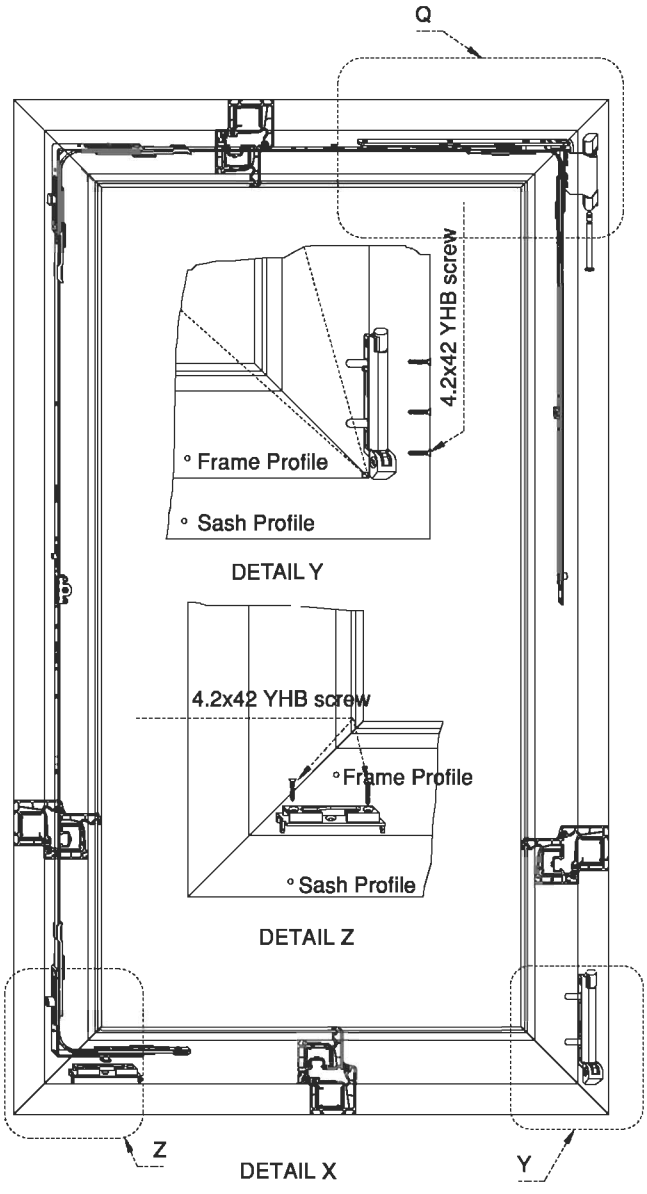


OPERATION SEQUENCE - 4

1-The holes of frame stencil and the tilt or turn sash hinge and stationary toggle are bored by a 3 mm drill, while the centering pin holes by a 6 mm drill.
2-Tilt or turn sash hinge and stationary toggle are fitted and screwed by a 3.9 X 32 YHB sheet metal screw.

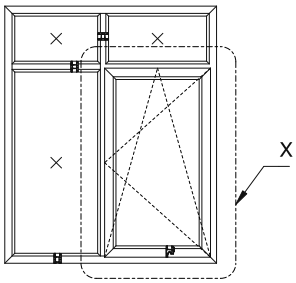






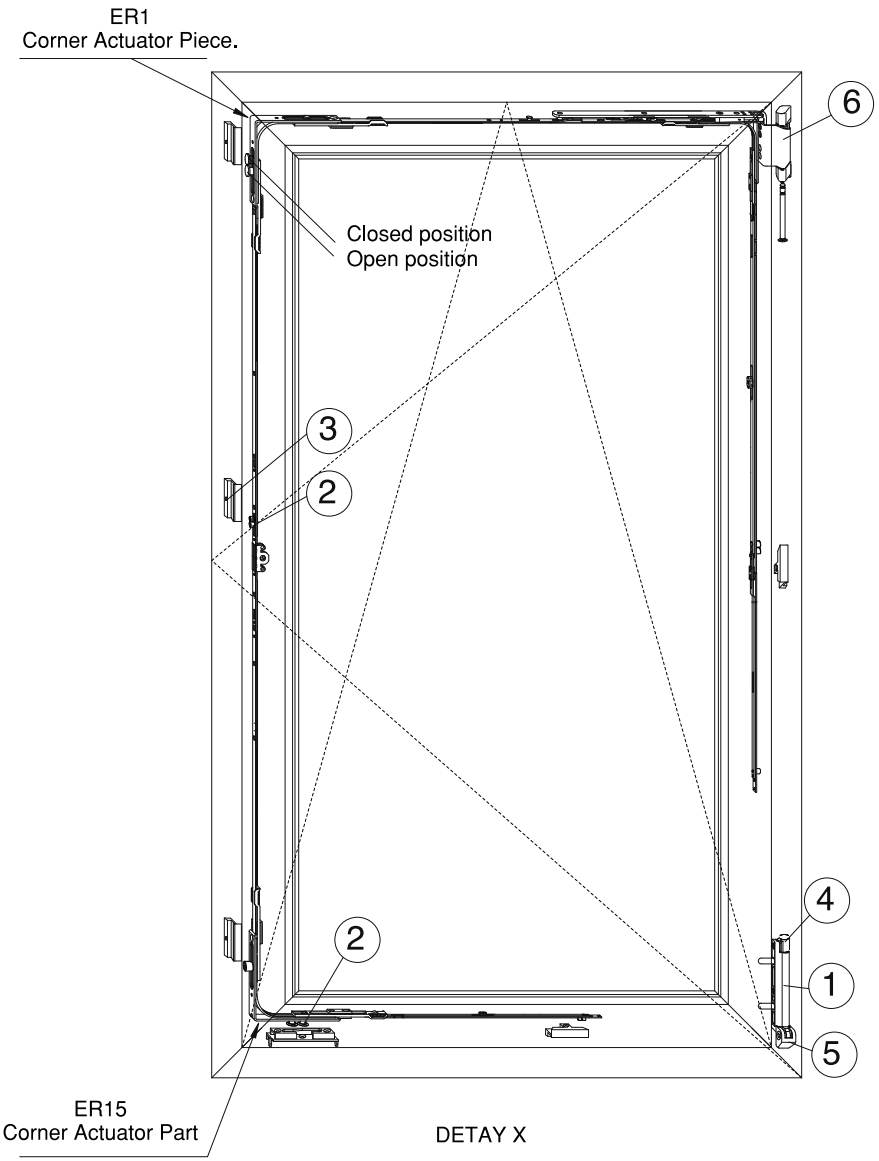
OPERATION SEQUENCE

(Assembling of sash on the frame)
1 -The location of the part of bottom frame toggle hinge lying on the frame is determined by the aid of a stencil and it is fixed in place by a 4.2 X 32 YHB sheet metal screw.
2-The locations of the upper frame hinge and the part of transom sash spring lying on the frame are determined by the aid of a stencil, and they are fixed in place by a 4.2 X 42 YHB sheet metal screw.
3-The location of left-hand side bottom locking piece on the frame is determined by the aid of a stencil and it is screwed by a 3.9x25 YHB plastic screw.
Note: At the time of receipt of the tilt or turn accessories, all locking parts must be in closed position. If they are positioned at a fully open or half open position for any reason whatsoever, problems would occur and even tilt or turn system may not operate.



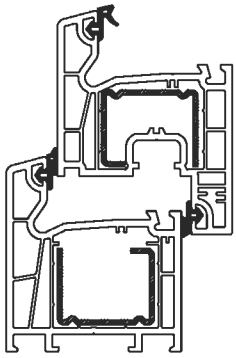
OPERATION SEQUENCE -5

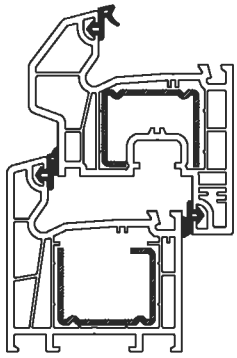
1-Frame is assembled on the sash and the stationary toggle is fitted to the swing toggle.
2-Espagnolette is brough to the open position and the top level of lock bolts are marked on the frame.
3-Locking pieces are fixed to the frame by a 3.9 X 25 YHB plastic screw.
4-Swing toggle cap is fitted.
5-Stationary toggle cap is fitted.
6-Frame sash spring is fitted on tilt or turn hinge, and secured by the hinge pin.
7-If sash width, height, or both, are shorter than 475 mm, then special corner actuators ER3 and ER3 EF will substitute the corner actuator pieces ER1 and ER15, enabling the realization of application up to 420 mm.



DETAY X

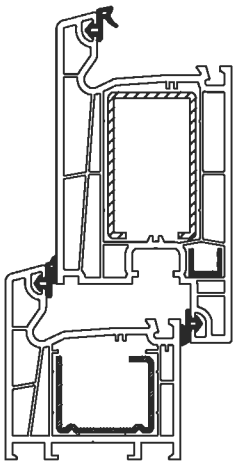
SEAL AND SEAL MOUNTING

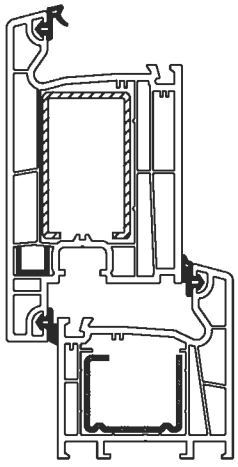


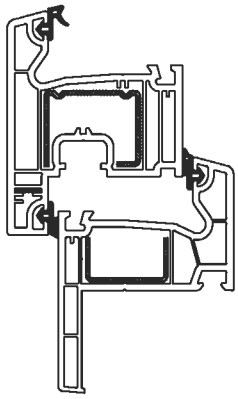


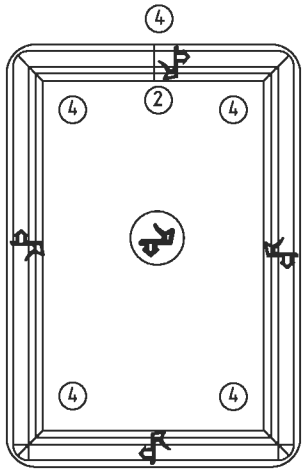
OPERATION SEQUENCE

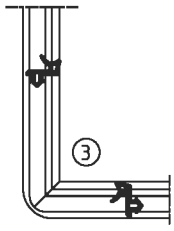
1-Channels are dampened with soapy water.
2-Seal fitting operation is started from the upper middle section.
3-The bent parts of universal seal lying on the corners are cut by a seal scissors.
4-Seal is pasted to the seal channel at the seal turn and points.



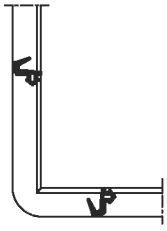




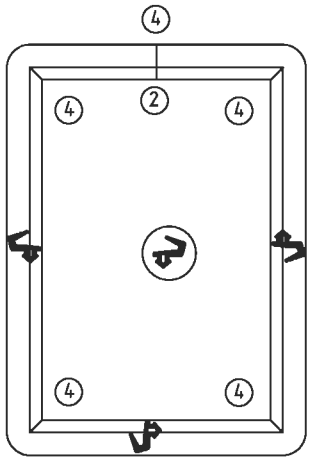




Universal seal
50 gr/mt



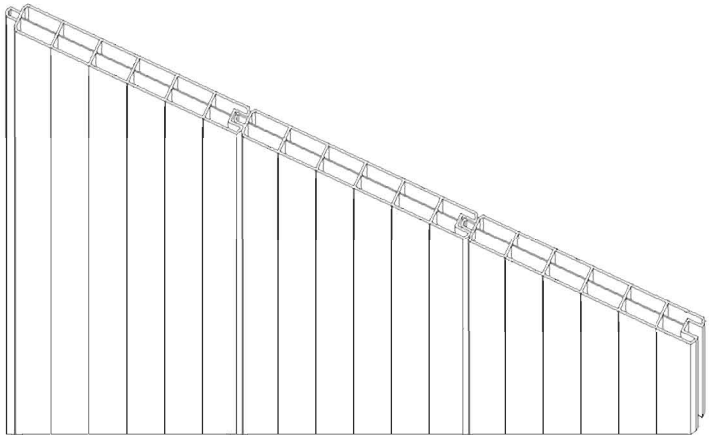
U seal
38 gr/mt
(No notching)



When seal pressing cheeks are cut from the turning corner of the universal seal and window seal, at area as shown in the section, and are pulled after having overlapped to each other, the sealing of corners will be ensured without requiring any pasting.

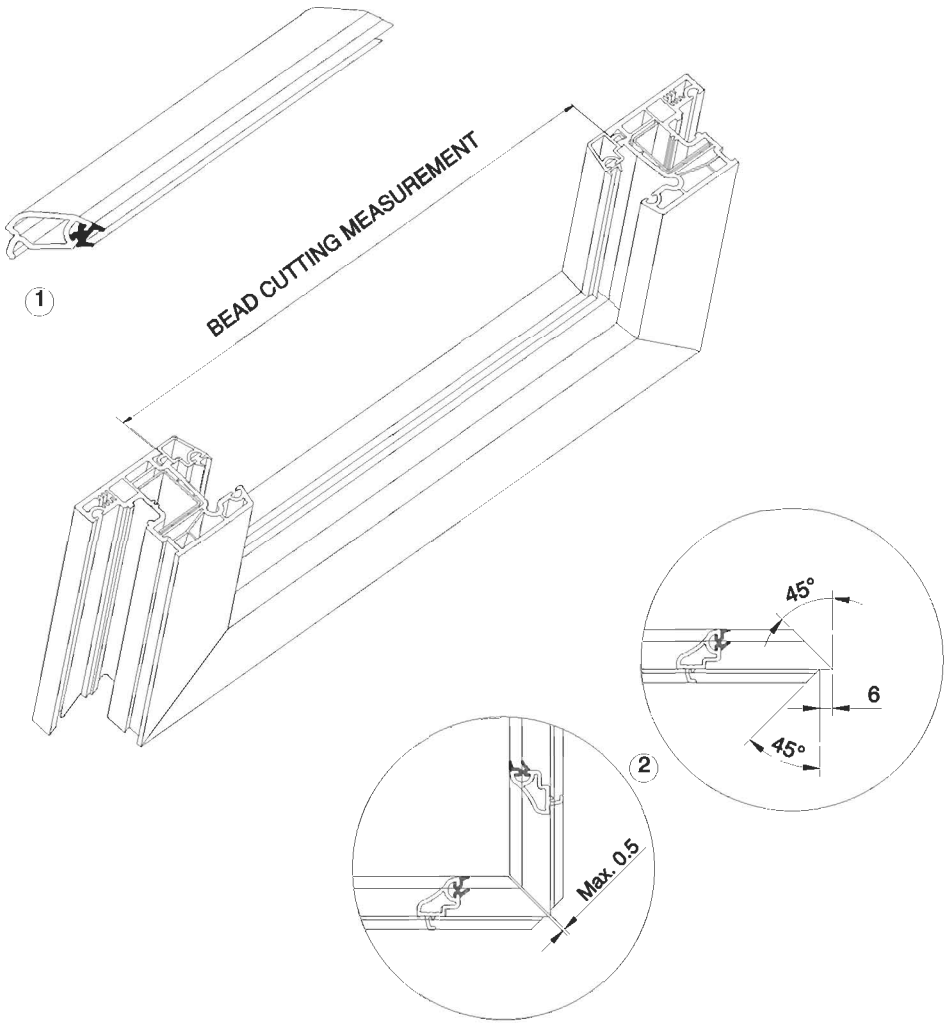
WAINSCOT CUTTING

1-Wainscots are cut and prepared according to the calculated glass cutting measures.
2-If wainscots are to be cut at an angle, first each piece cut evenly according to its measure and then they are fitted to each other and cut at desired angle.
3-Where the wainscot needs to be slitted as required by its measurement, it must be cut evenly with a scroll or prop saw, taking the lines on it as a reference.
4-The combined wainscots should be pasted to each other with a PVC adhesive (tangit) so that they would not break up but act as a whole during blocking of leaf.

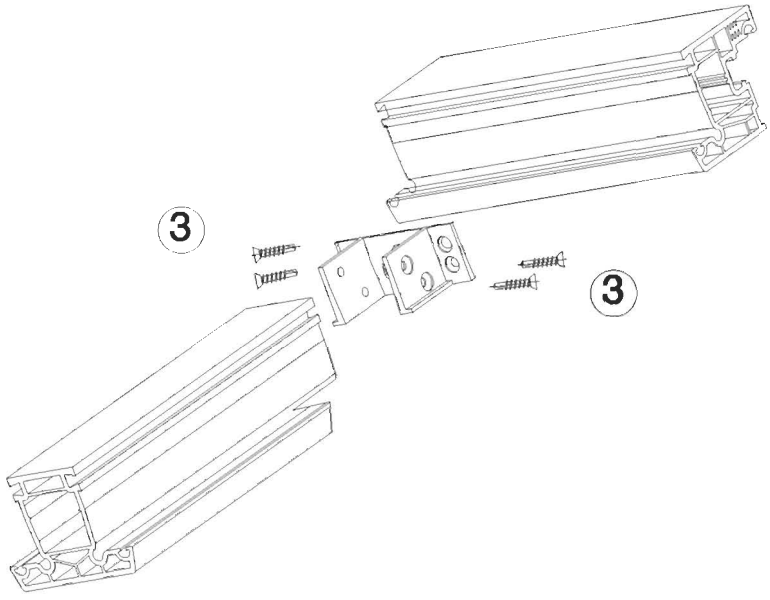


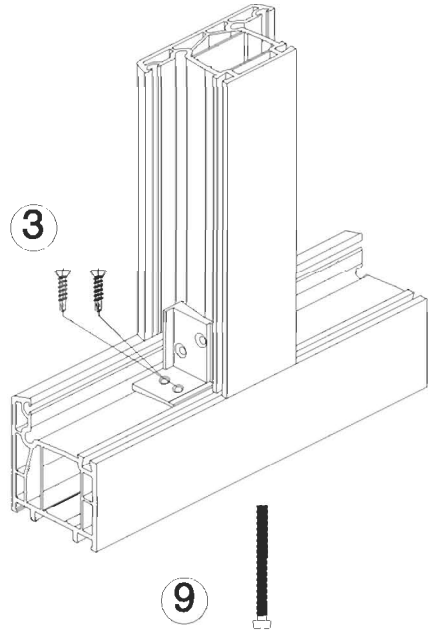
BEAD CUTTING

1-After the beads are measured according to relevant technique, they are cut using the bead cutting machines specially designed for this purpose. For each bead of different size, separately prepared bead molds should be used. At each cutting operation, a cutting with an angle of 45 degrees on both sides of the bead is done.
2-Beads are cut with an angle of 45 degrees according to the cutting measurements taken. To allow the beads to fully set at the junction corner of beads, the gap at junction points should not be more than 0.5 mm.



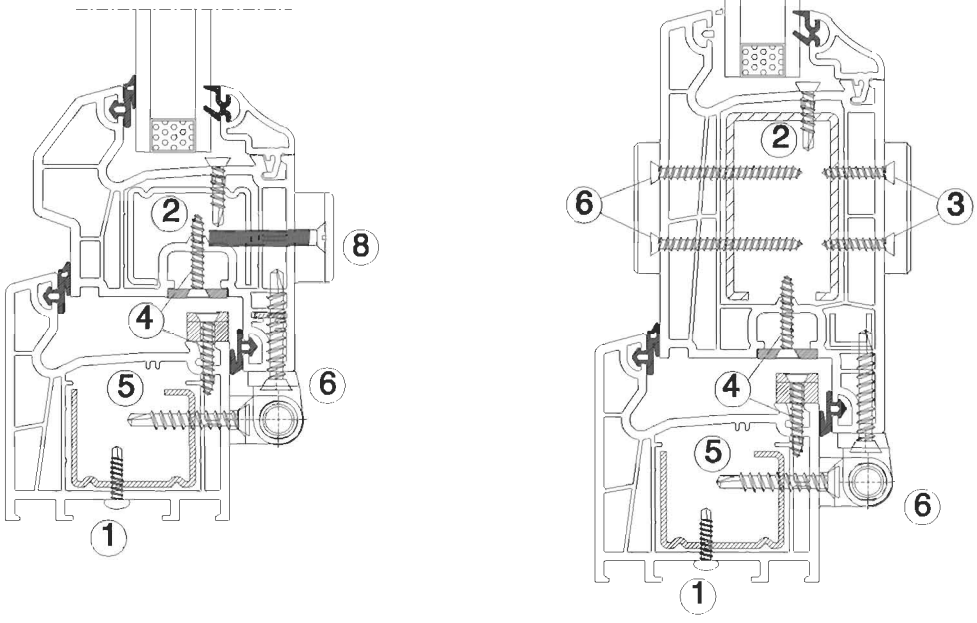
SCREWS USED FOR MULLION CONNECTION **s60**





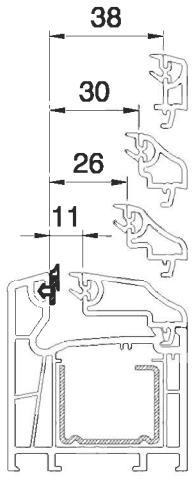
REF	SCREW TYPE	PLACE OF USAGE	SCREW TYPE
3	3.9 x 25 YSB Drill-bit Screw	Mullion Connection Block	
9	M6 X 60 YSB	Mullion Fastening (Pulling)	

SCREWS USED IN MANUFACTURE

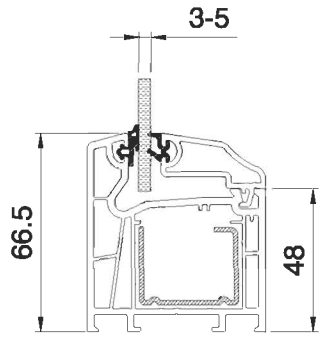


REF	SCREW TYPE	PLACE OF USAGE	SCREW TYPE
1	3.9x22 YSB Drill-bit Screw	Frame Reinforcement Steel	
2	3.9 x 25 YSB Drill-bit Screw	Sash Reinforcement Steel Mullion Reinforcement Steel Locking Door Reinforcement Steel	
3	3.9 x 32 YSB Drill-bit Screw	Door Handle Plate Mullion Connection Block Turn-only Sash Spring-Hinge with Adjustable Tilt or Turn Flap Turn-only Central Pressing Hinge with Adjustable Tilt or Turn Flap Transom Snap-Lock	
4	3.9 X 38 YHB Plastic Screw	Espagnolette Door Lock Counterpart Locking Piece Cartridge Door Latch Tilt or Turn Actuator Tilt or Turn Fitting Tilt or Turn Sash Sash Spring Tilt or Turn Intermediate Bottom Locking Tilt or Turn Additional Locking Tilt or Turn Sash Corner Actuating Ç.K. Actuating Mechanism Double Sash Intermediate Locking	
5	4.2 X 32 YHB Sheet Metal Screw	Hinge (Frame) Transom Butterfly and Sash Spring	
6	4.2 X 38 YHB Sheet Metal Screw	Door Lock Hinge (Sash)	
7	4.2 X 45 YHB Plastic Screw	Sash Adapter Mounting Tilt or Turn and Double-Sash Toggle	
8	M5 X 40 HB Screw	Window Handle	

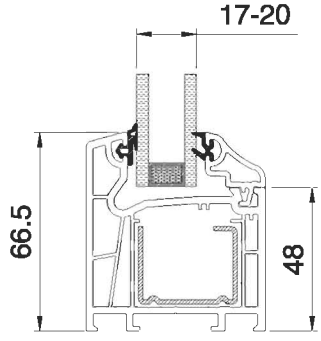
DOT DETAILS



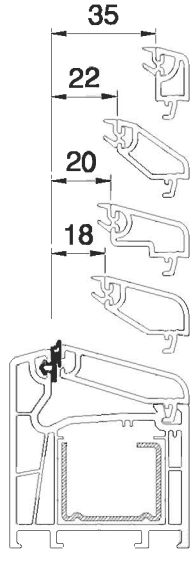
Series's bead spaces



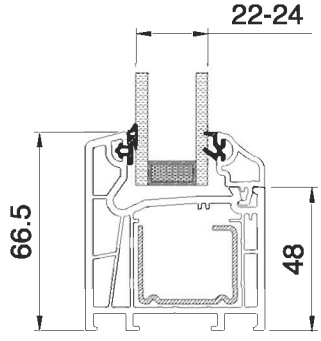
Single glazing, fixed



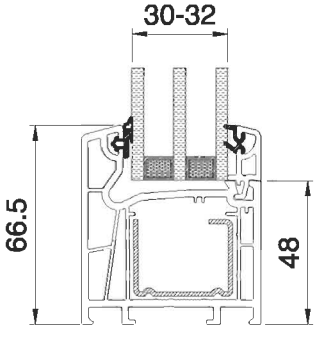
20 mm double glazing, fixed



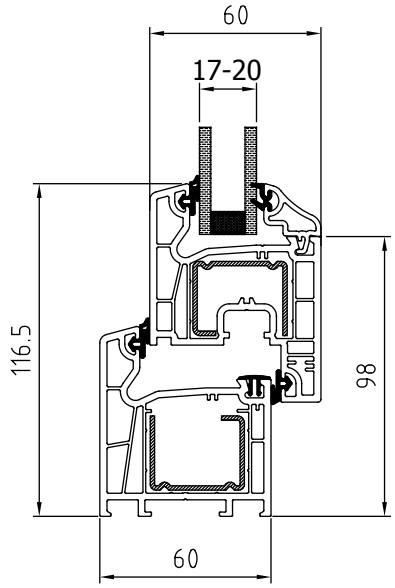
Spaces of other series's beads



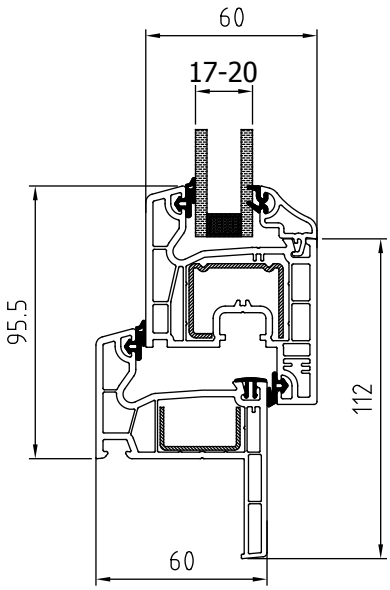
24 mm double glazing, fixed



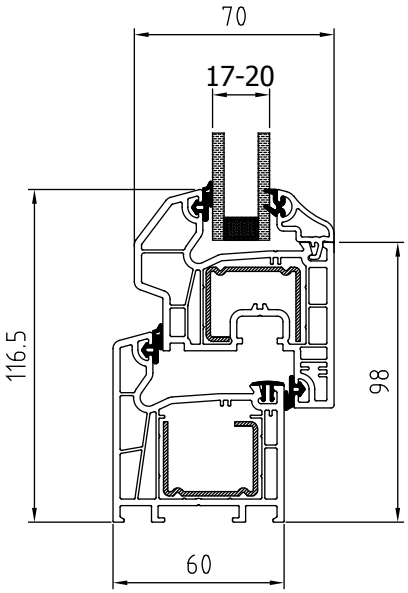
32 mm triple glazing, fixed



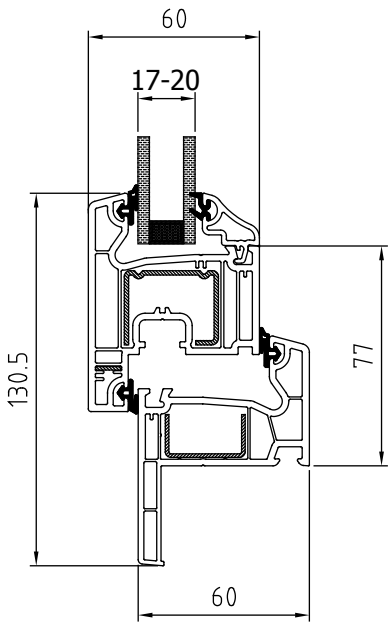
Frame Details for Sash



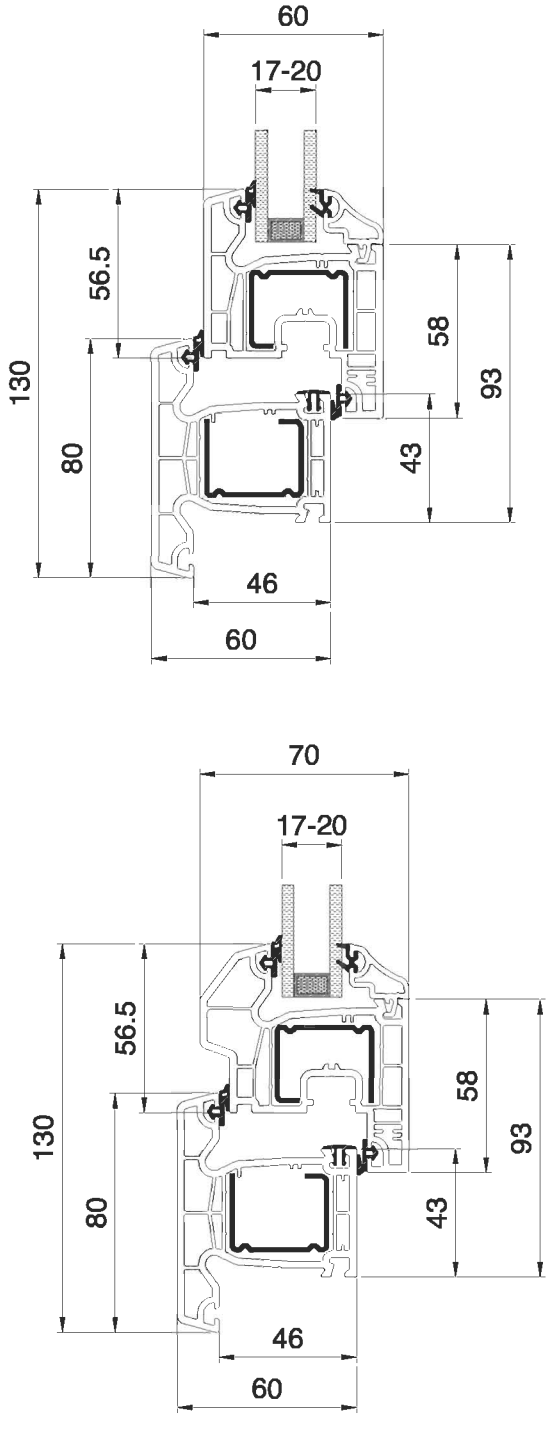
Lining Frame Sash Profile Details



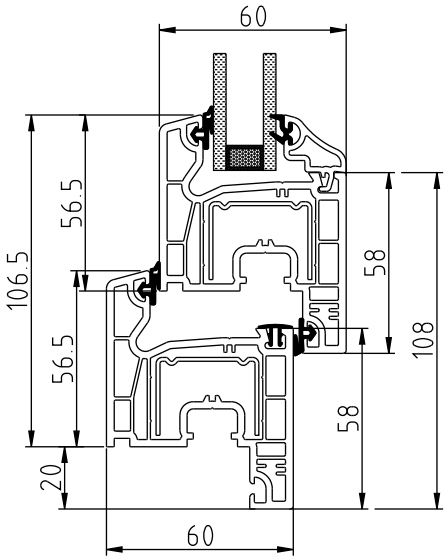
Frame details for Draning Sash



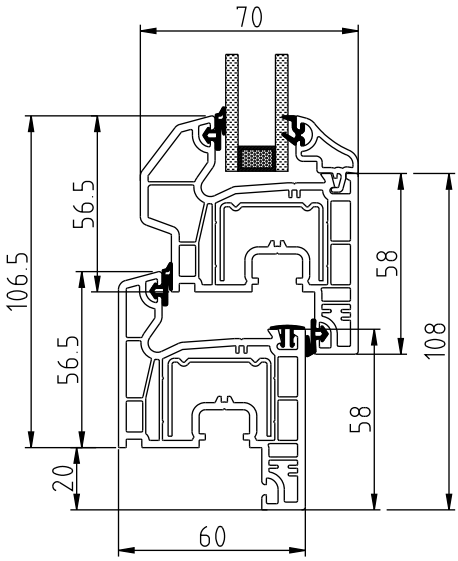
Lining Frame Outside Opening Sash Profile



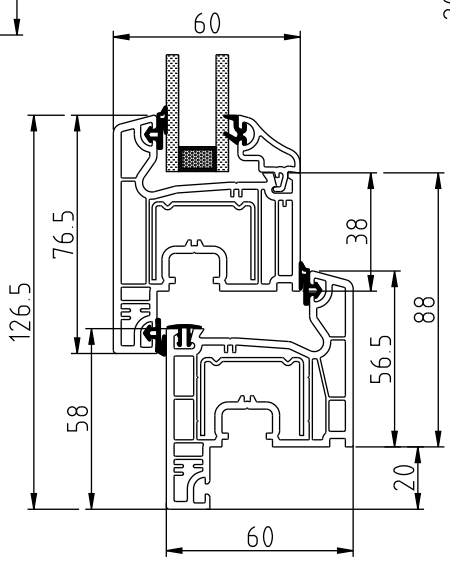
Frame Application for Mullion (outer overlapping system)



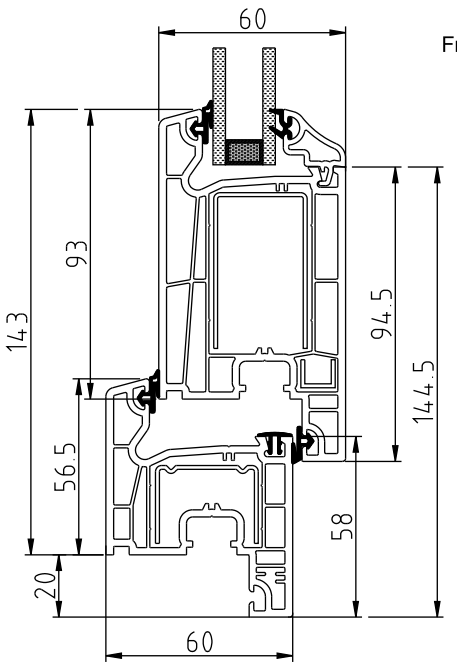
Frame-Sash Application
(Inner Overlapping System)



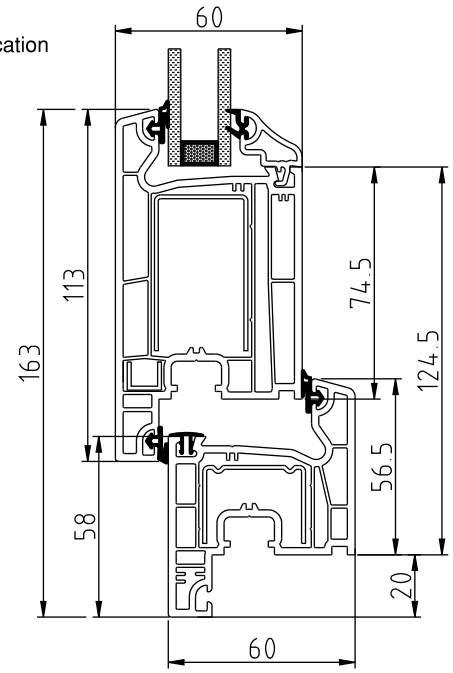
Frame-Drained Sash Application
(Inner Overlapping System)



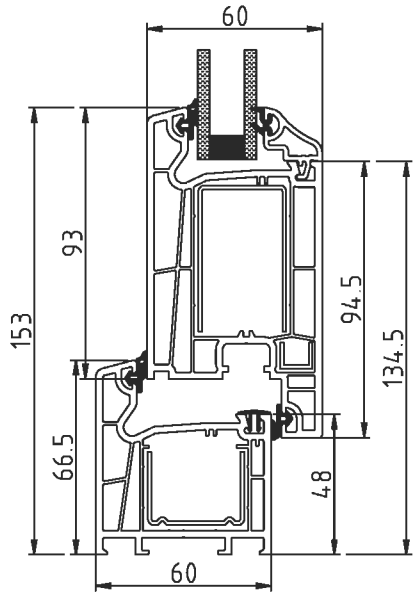
Frame-Outside Opening Sash Application
(Outer Overlapping System)



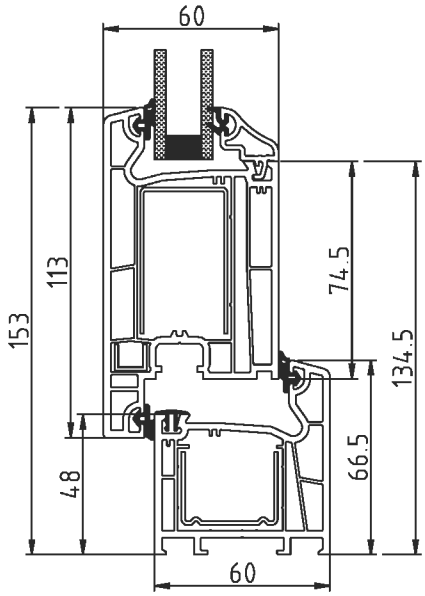
Frame-Inside Opening Door Application
(Inner Overlapping System)



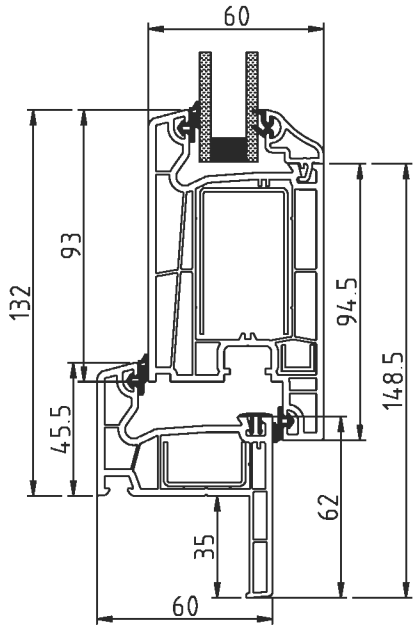
Frame-Outside Opening Door Application
(Outer Overlapping System)



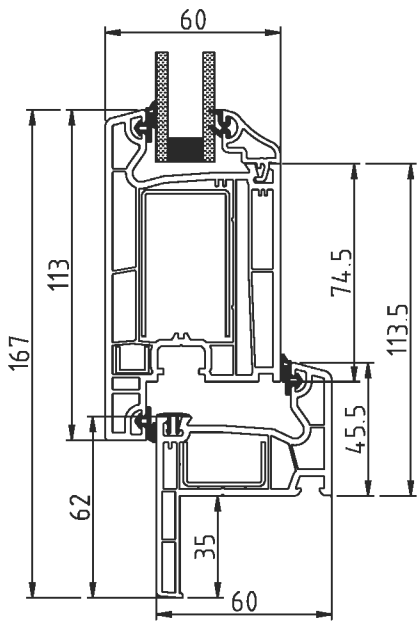
Frame-Inside Opening Door Application



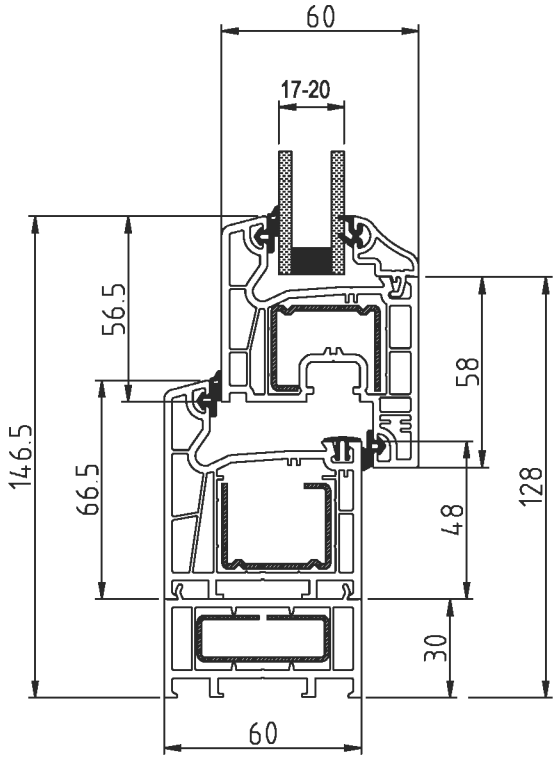
Frame-Outside Opening Door Application



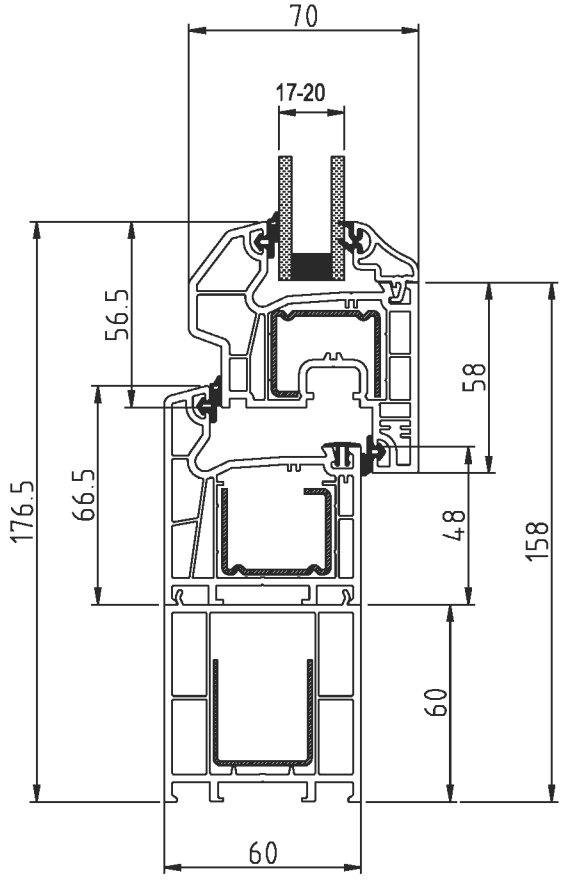
Lining Frame-Inside Opening Door Application



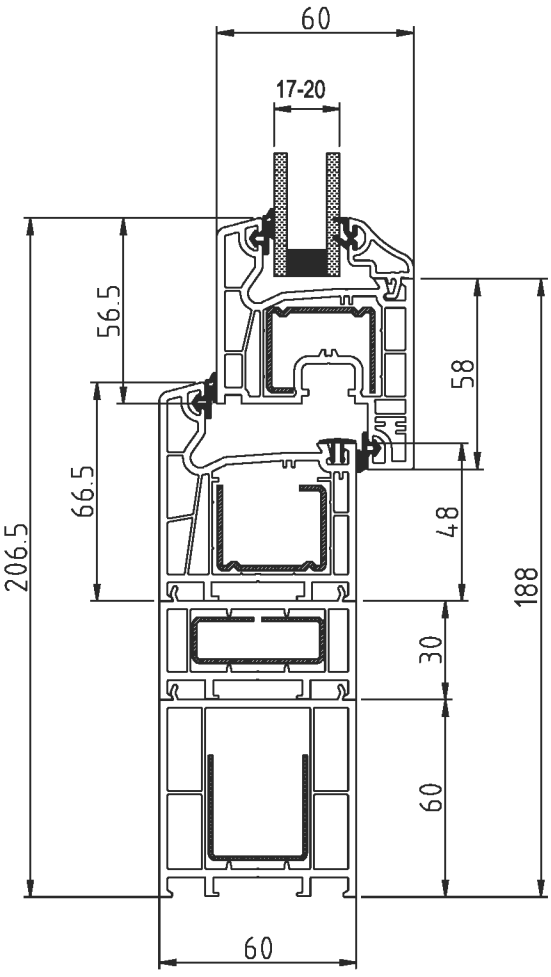
Lining Frame-Outside Opening Door Application



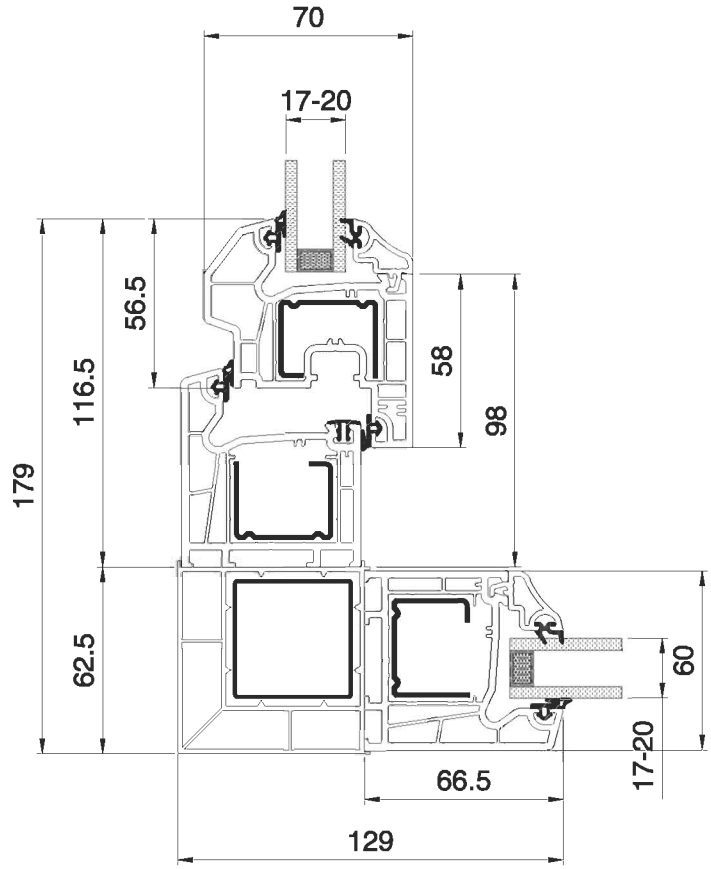
30 mm Frame Elevation Elevation Application



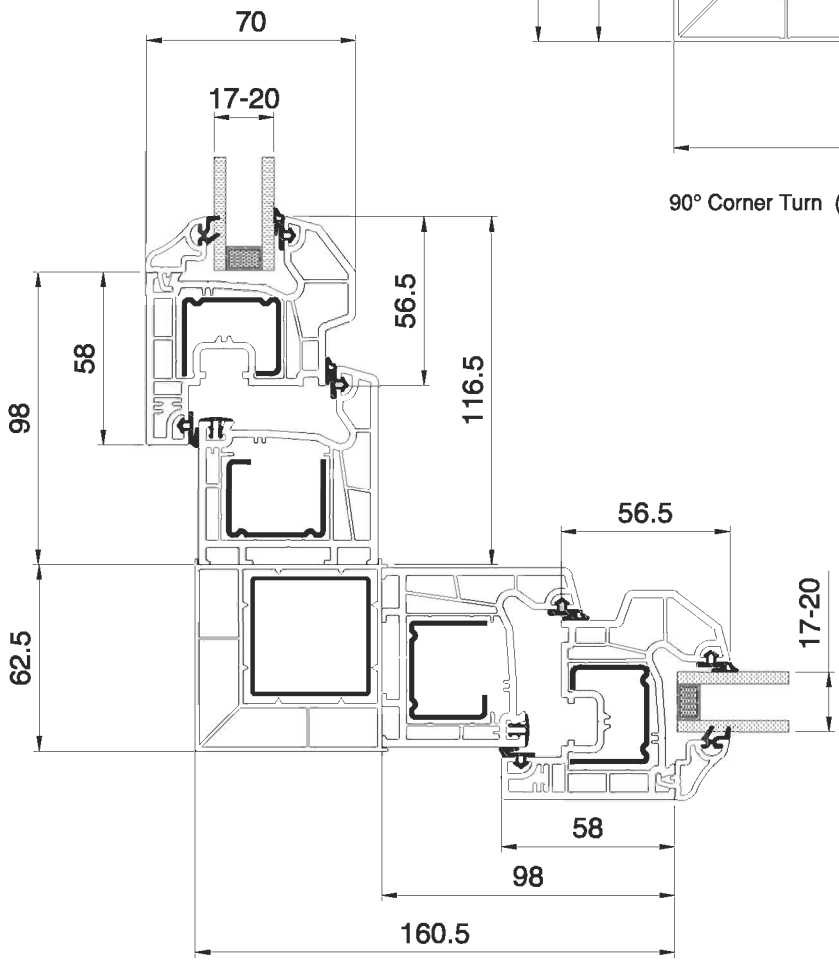
60 mm Frame Elevation Application



30 mm and 60 mm Frame Elevation Application

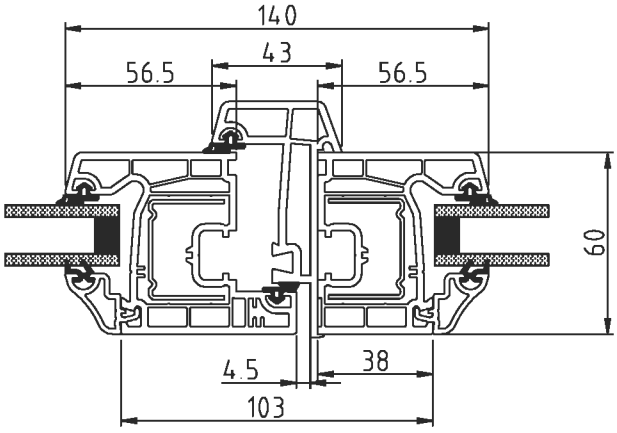


90° Corner Turn (Interior) Applications



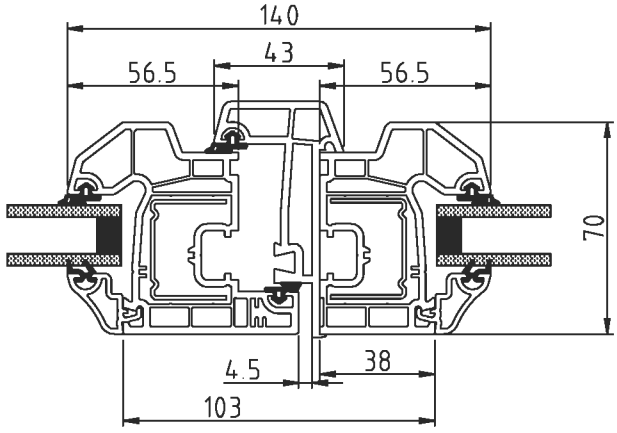
90° Corner Turn (Exterior) Applications

SASH ADAPTING APPLICATIONS

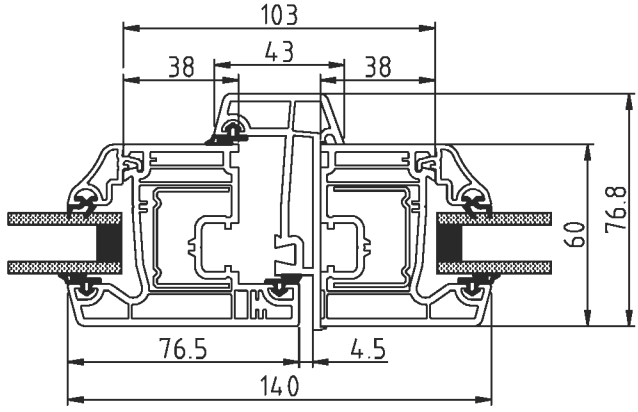


Old Sash Adapting Application
with Sash

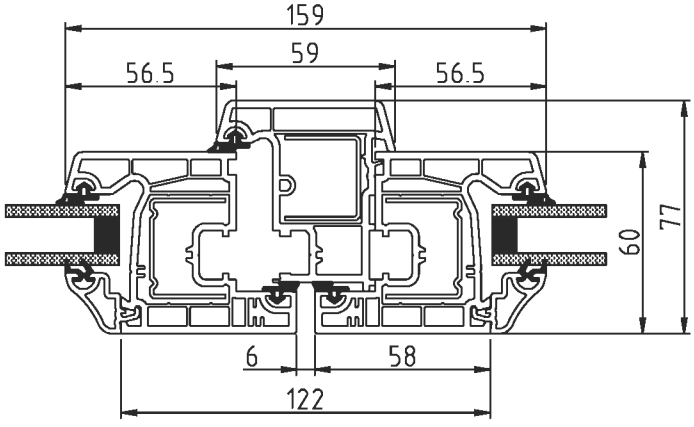
Note: Sash adapting profiles are named as movable mullion profile used vertical.
They are closed with a plastic injection part (sash adapting profile plug)
one the top and at the bottom.



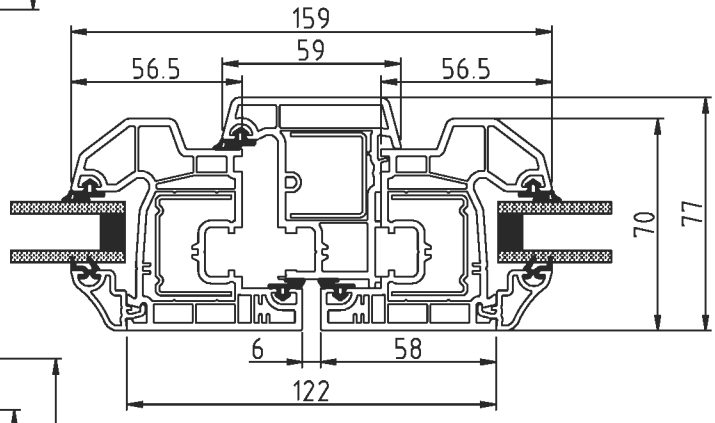
Old Sash Adapting Application
with Dranined Sash



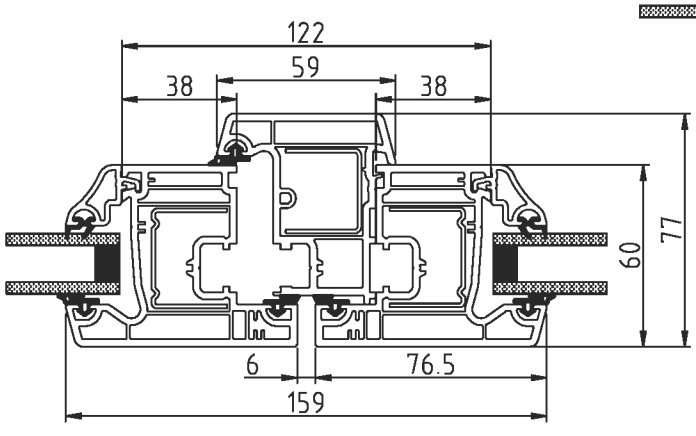
Outside Opening Sash-Old Sash Adapting Application



New Sash Adapting Application
with Sash

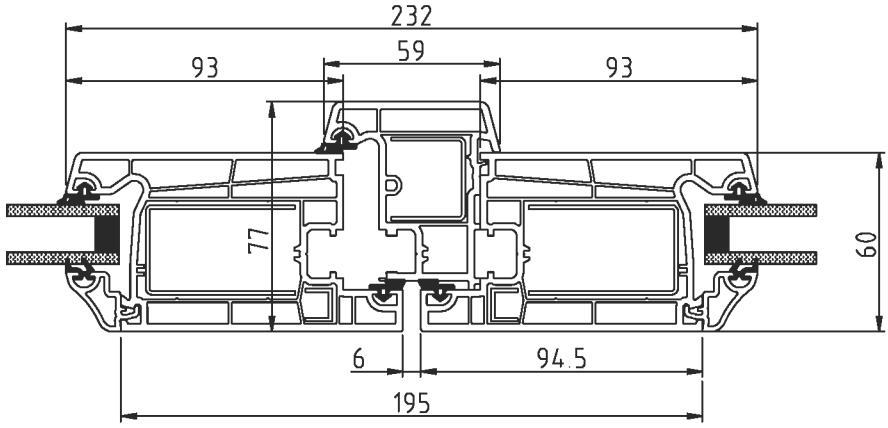


New Sash Adapting Application
with Drained Sash

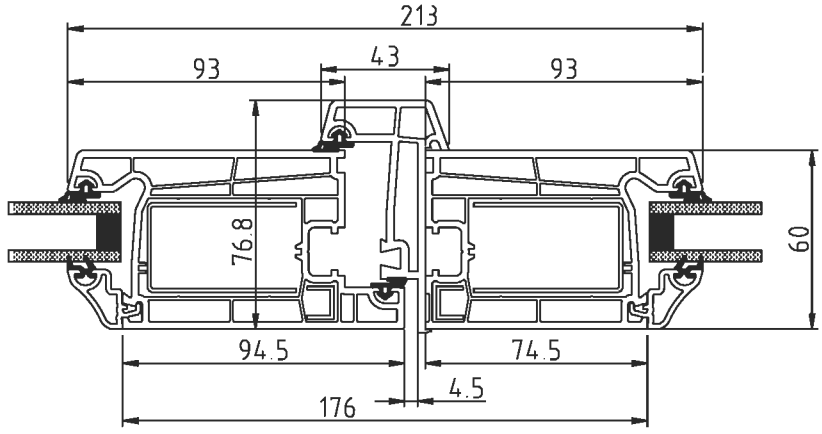


New Sash Adapting Application
Outside Opening Sash

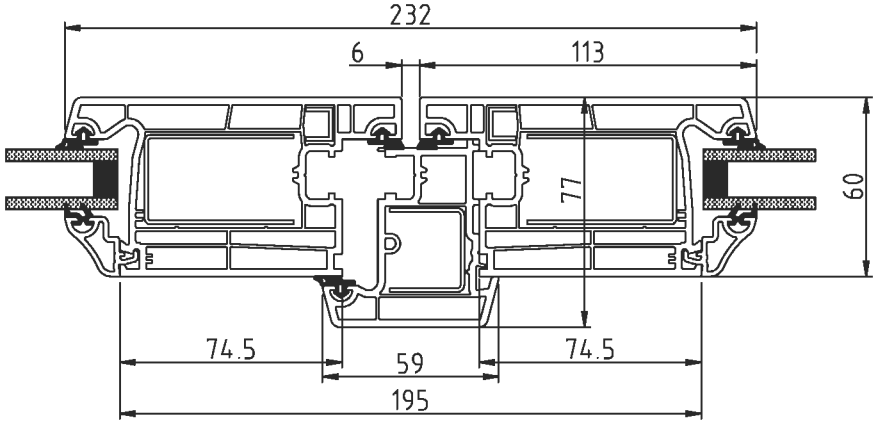
Note: The application with the sash adapting profile is made, without cutting the sash profile.



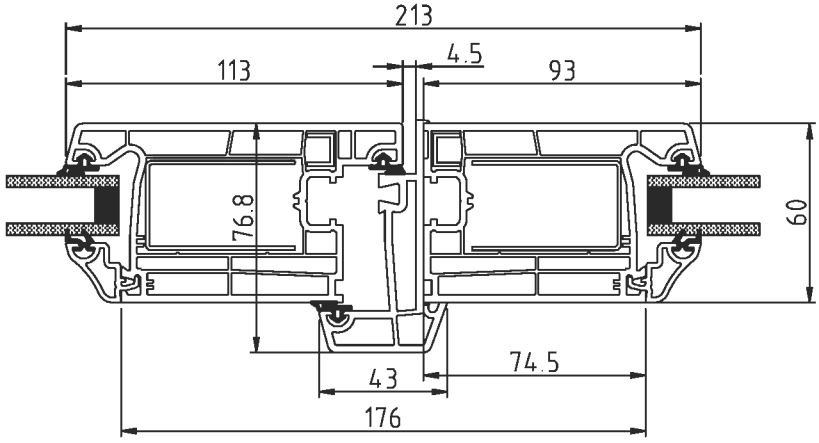
New Sash Adapting Application with Inside Opening Door



Old Sash Adapting Application with Inside Opening Door



New Sash Adapting Application on Outside Opening Door

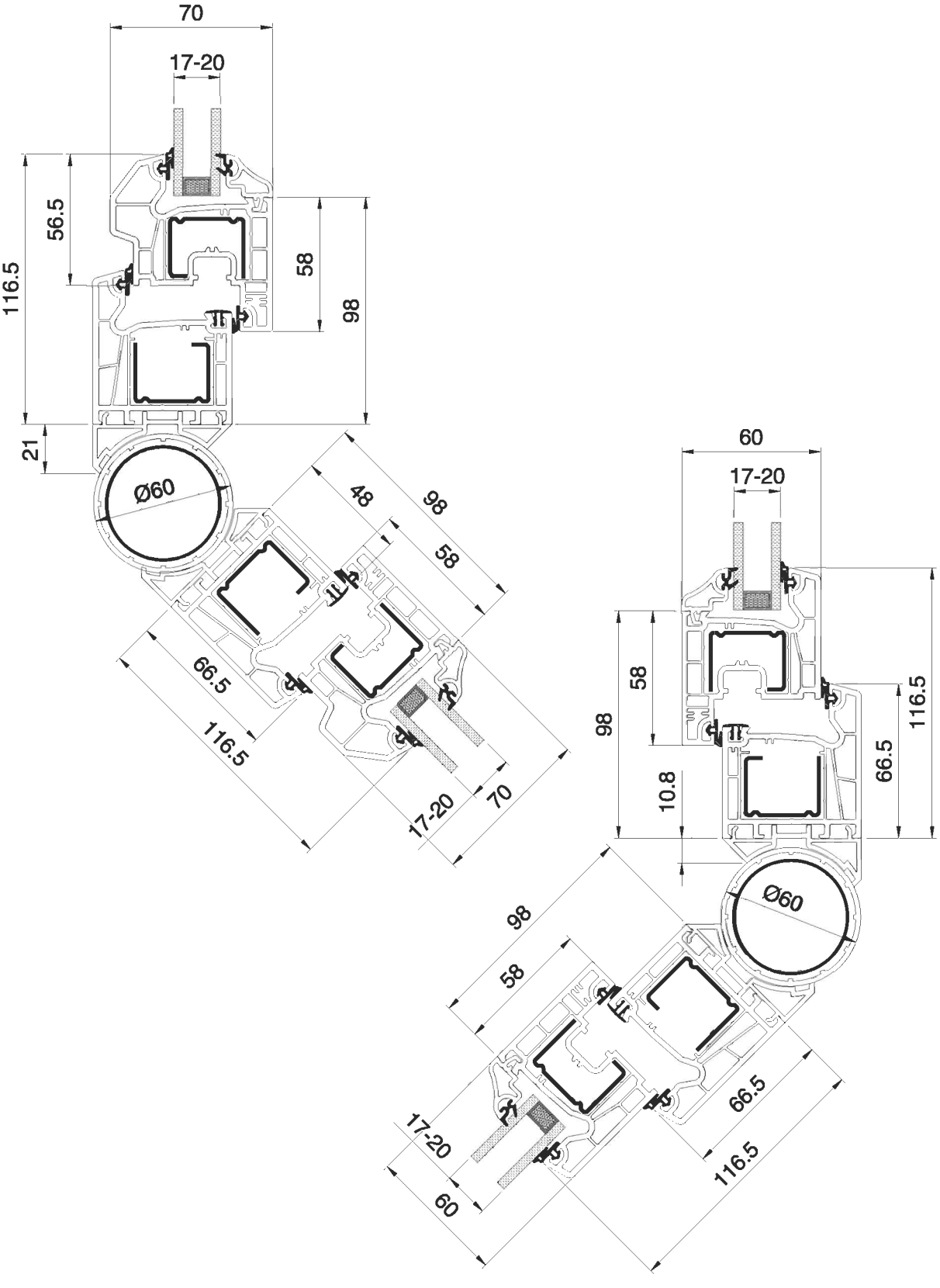


Old Sash Adapting Application on Outside Opening Door

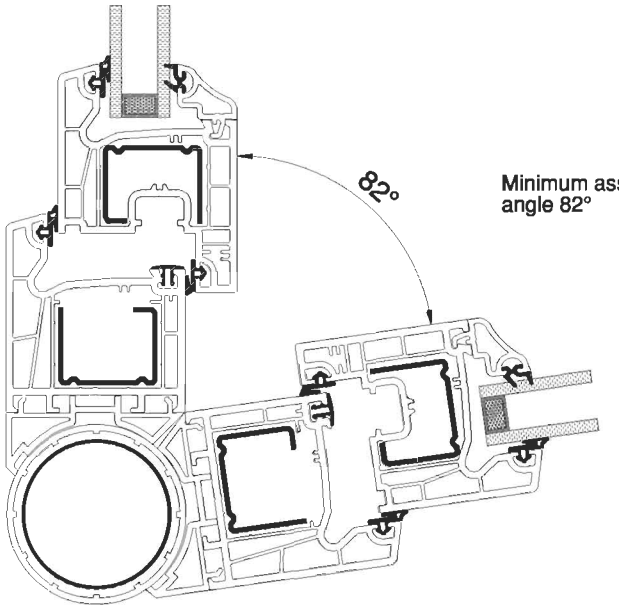
Note: Sash adapting profiles are named as movable mullion profile used vertical. They are closed with a plastic injection part (sash adapting profile plug) one the top and at the bottom.

Note:The Application With New Door Profile Is Made Without Cutting The Sash Profile. As espagnolette counterpart, the Special "Espagnolette Counterpart Fitting Into Espagnolette Slot" is used.

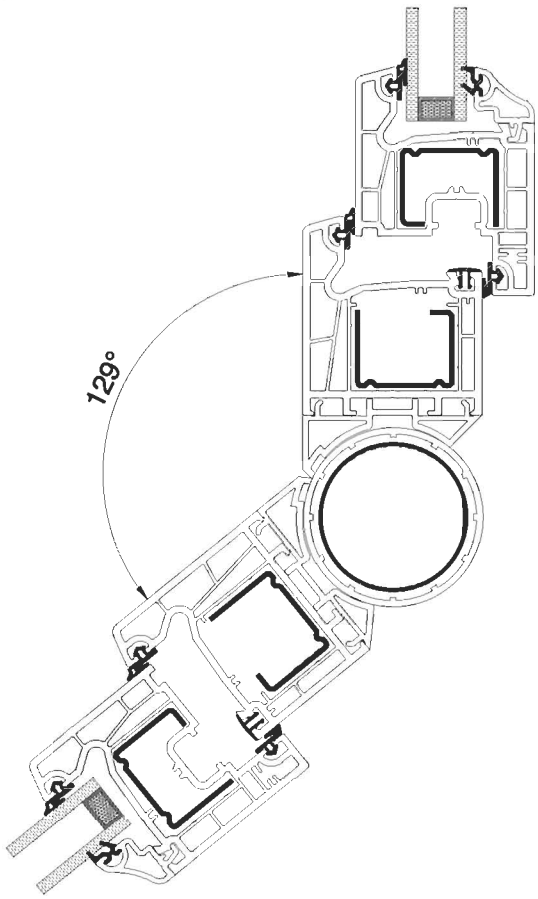
s60 ANGLED RETURN PIPE-ADAPTER APPLICATIONS



ANGLED RETURN PIPE-ADAPTER APPLICATIONS **s60**

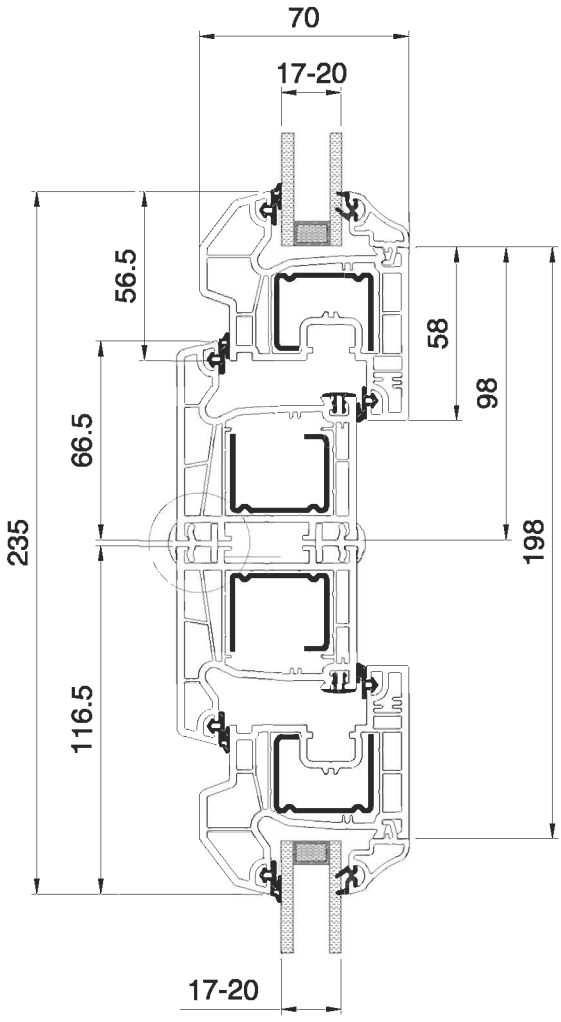


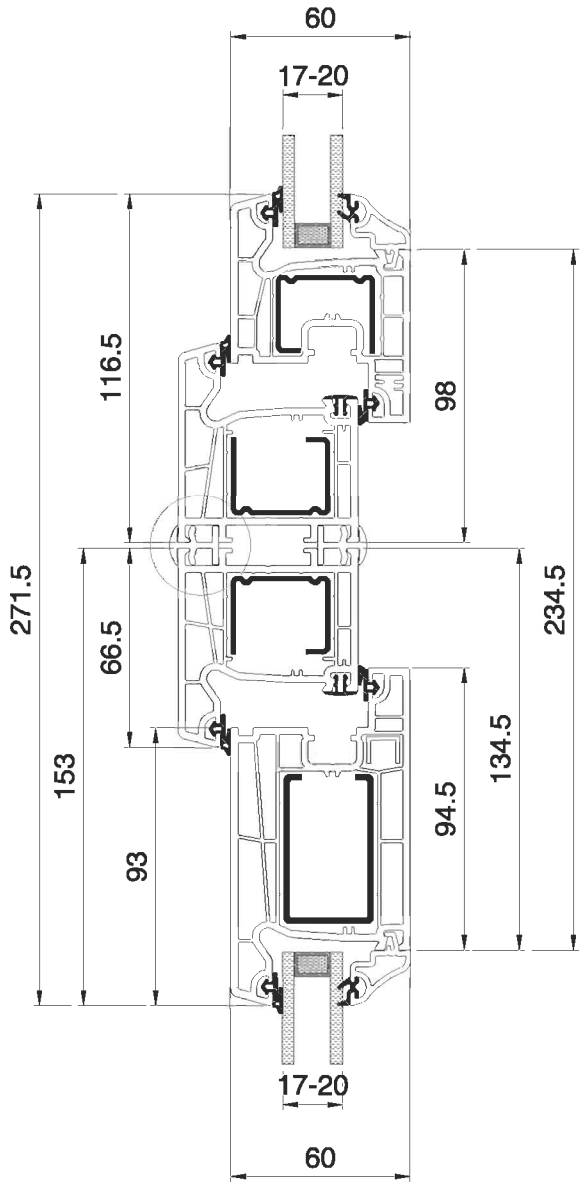
Minimum assembling
angle 82°

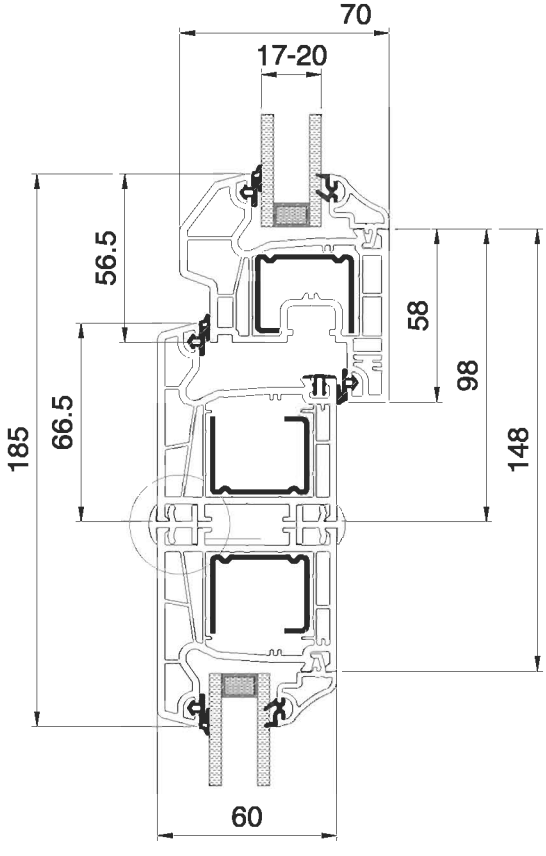


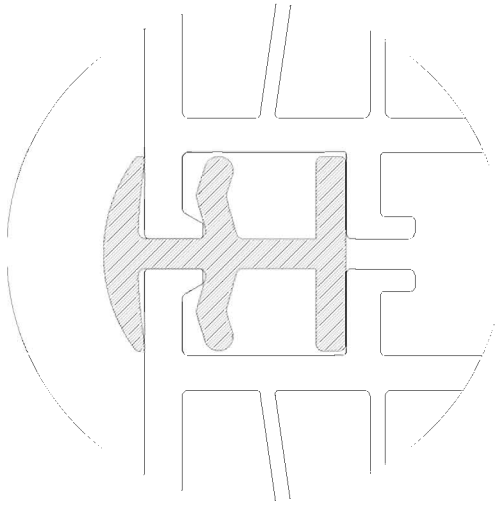
Maximum assembling
angle 129°

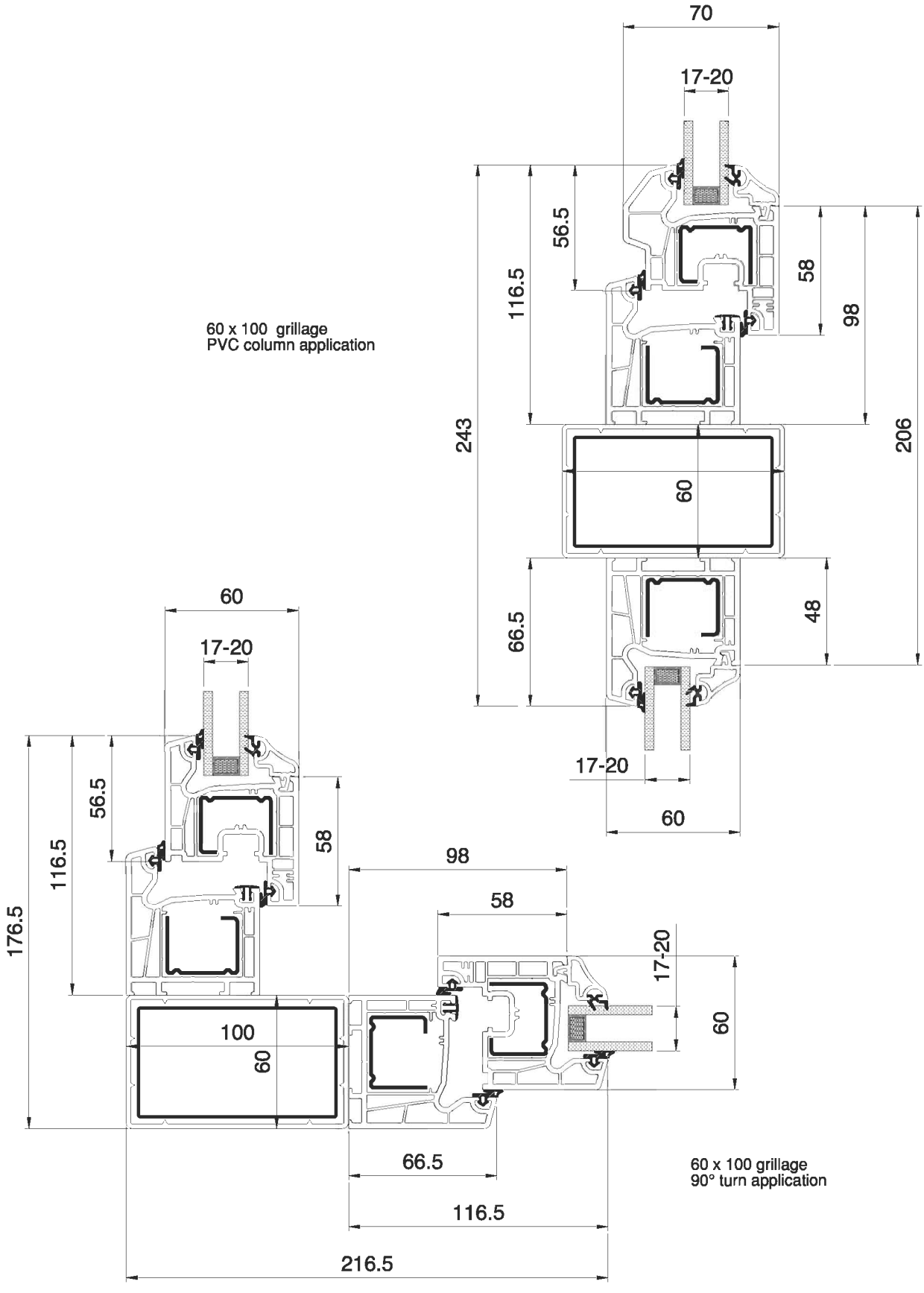
HEADER PROFILE APPLICATIONS







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66.5
48
17-20
60
60 x 100 grillage
PVC column application
60
17-20
56.5
116.5
176.5
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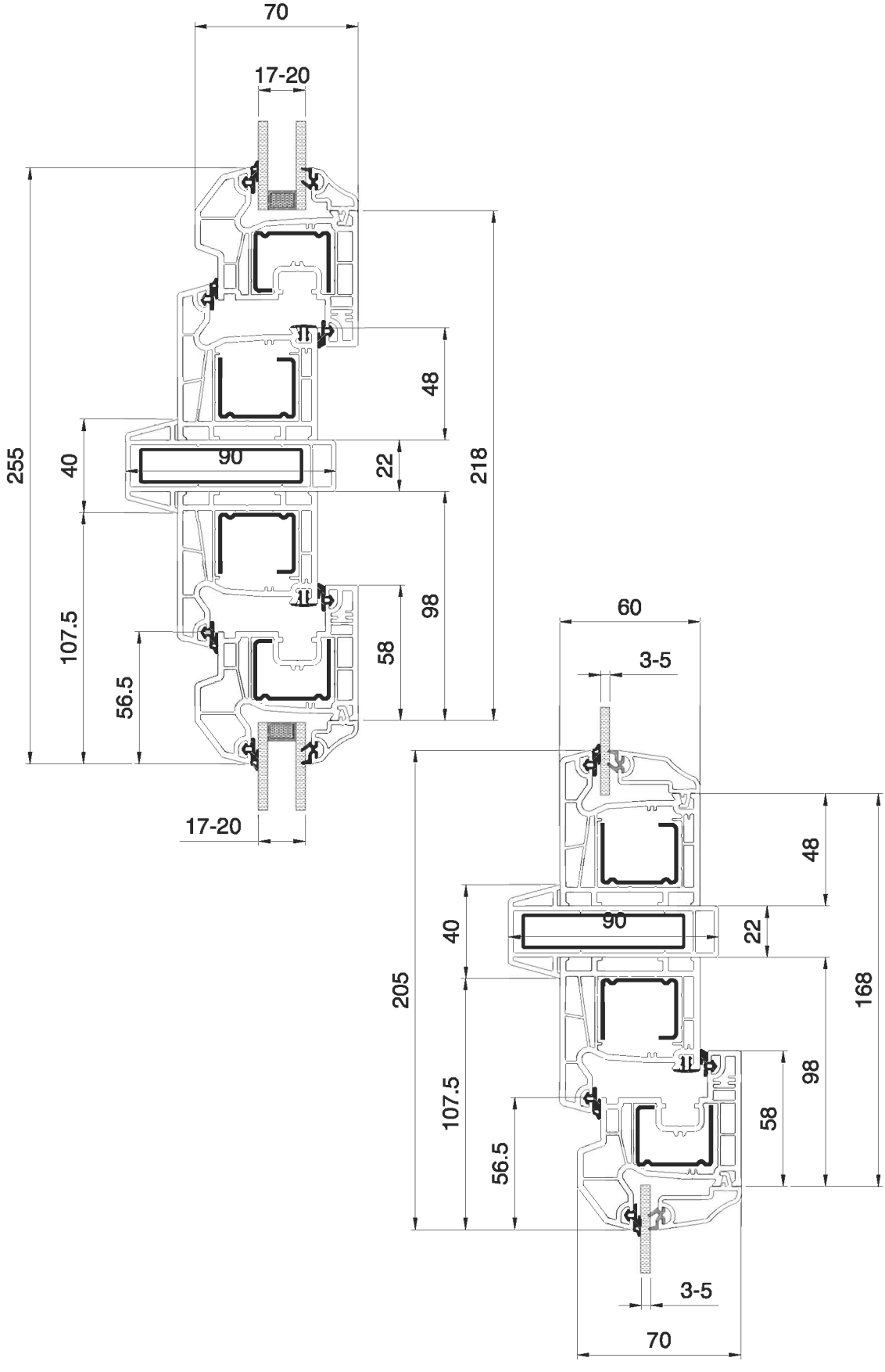
98
58
17-20
60
100
60
66.5
116.5
216.5
60 x 100 grillage
90° turn application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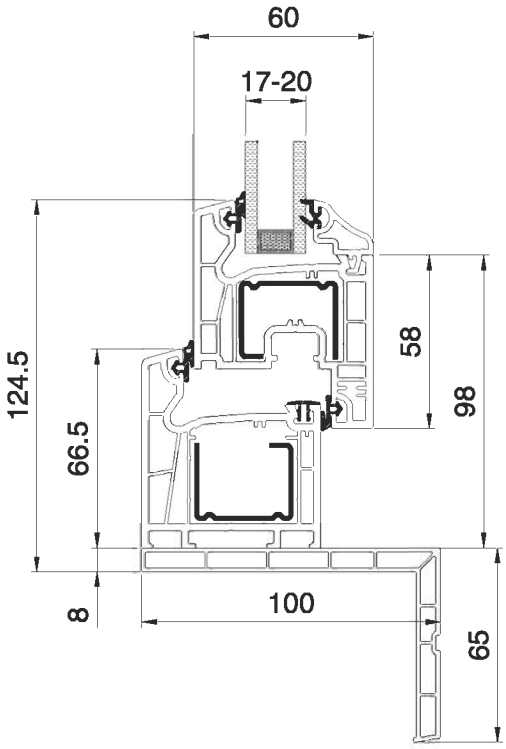
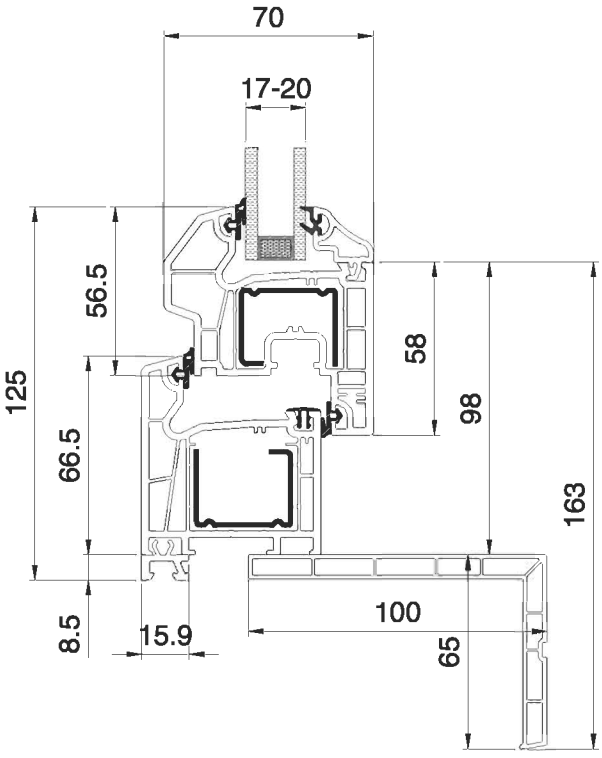
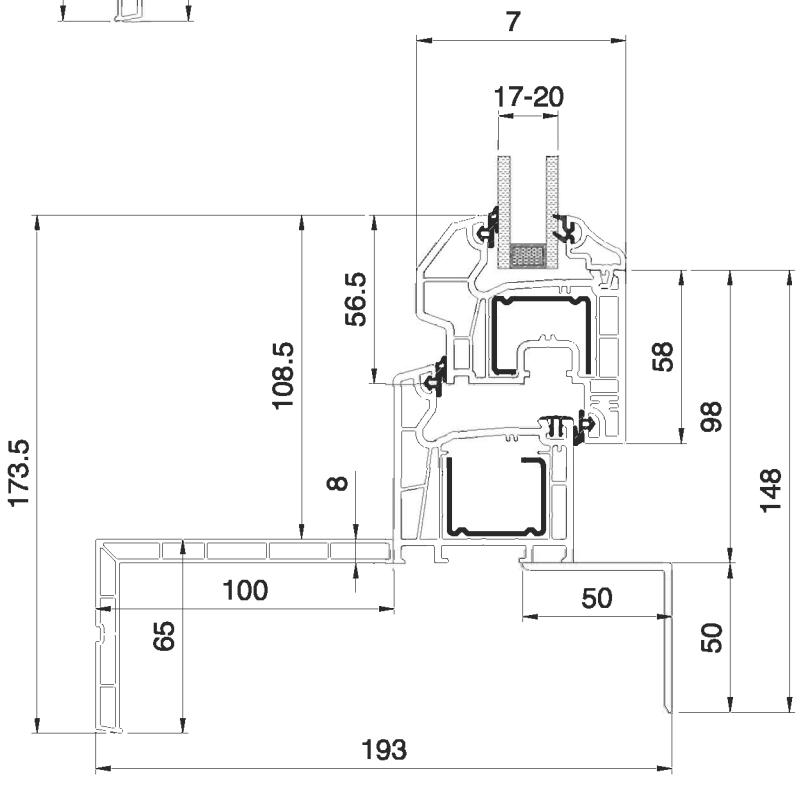


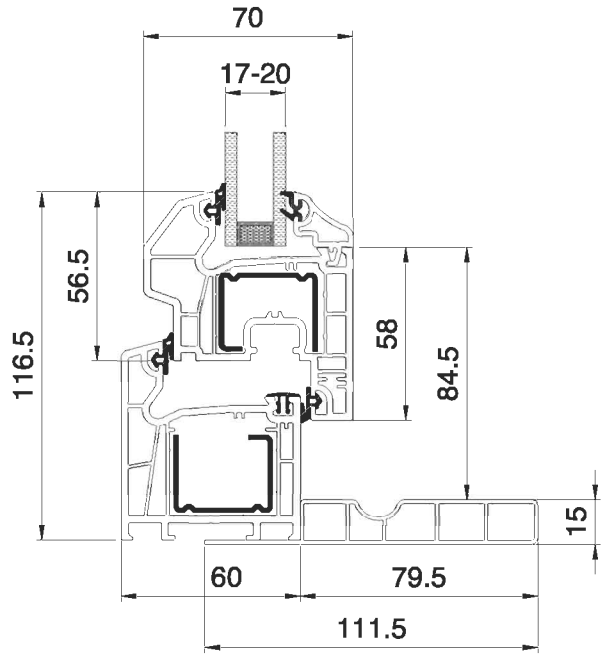
New Window Lining Application



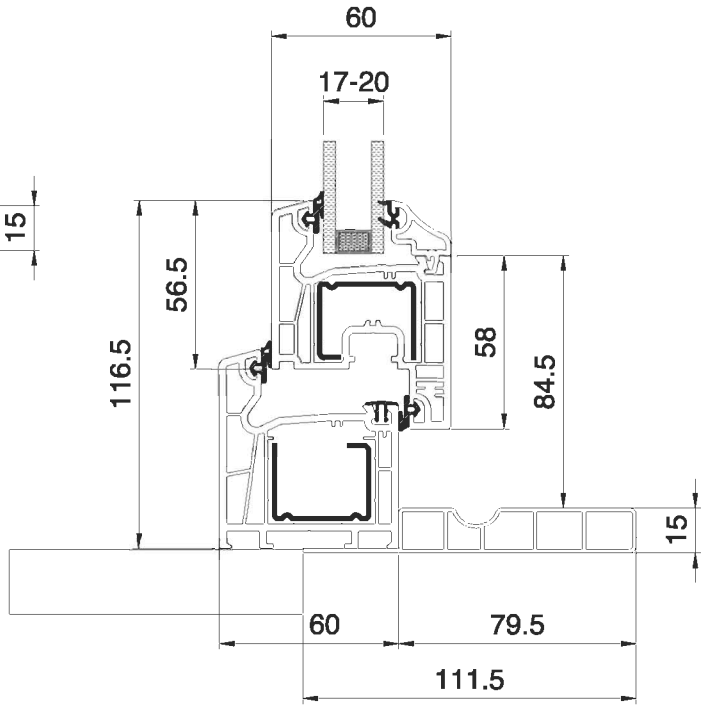
New Window Lining and
50x50 Lining Application



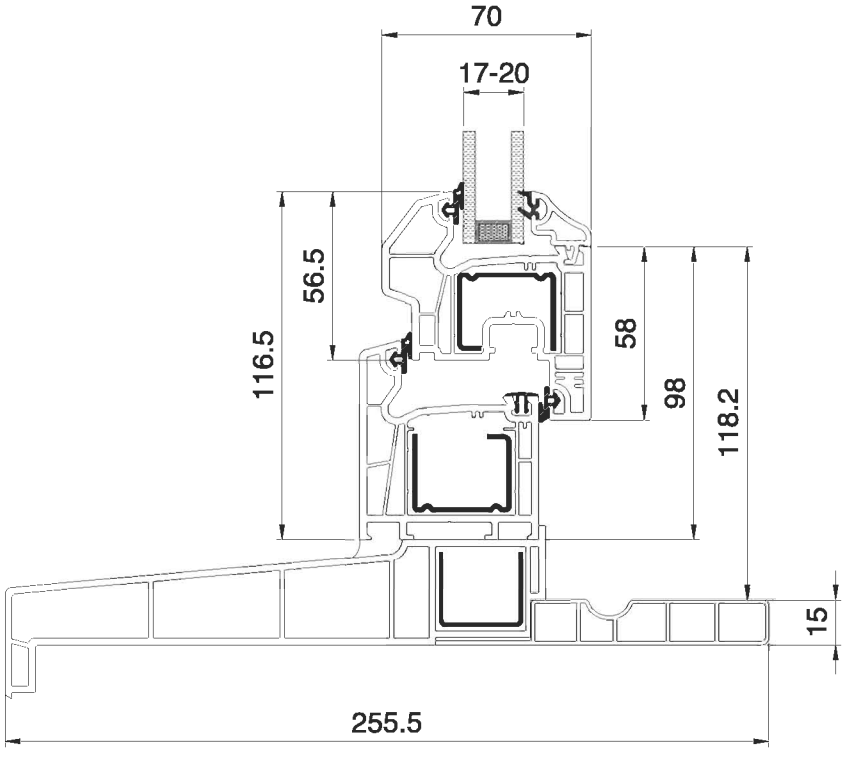
New Window Lining and
50x50 Lining Application



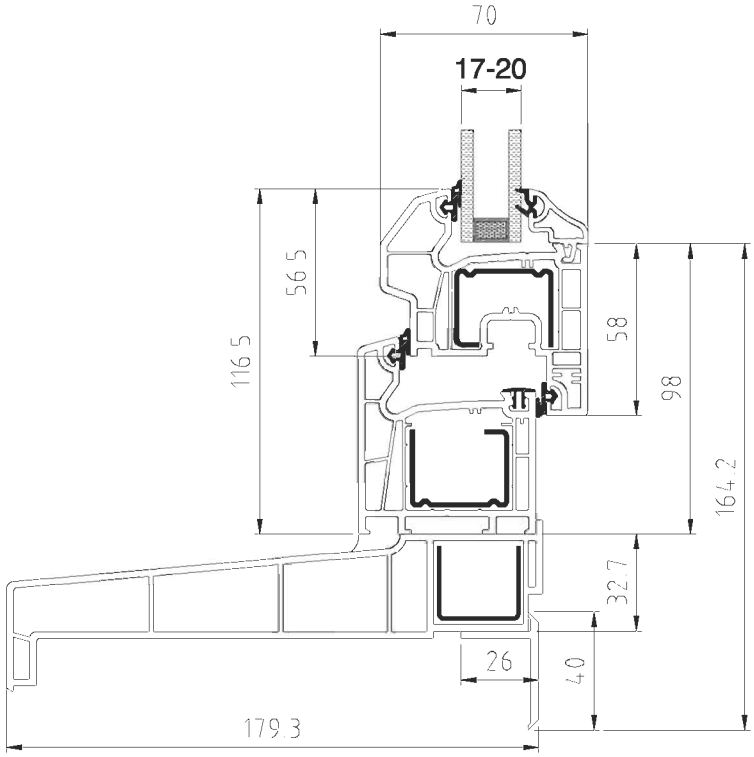
Inner Parapet Application



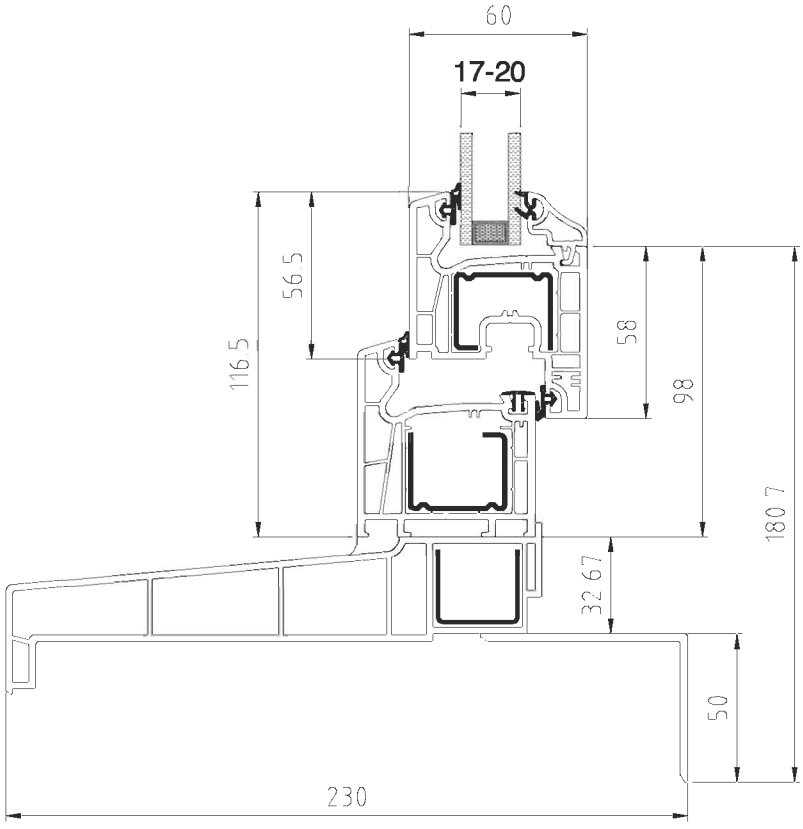
Inner Parapet and
Marble Application



Inner Parapet and Outer Sill Application

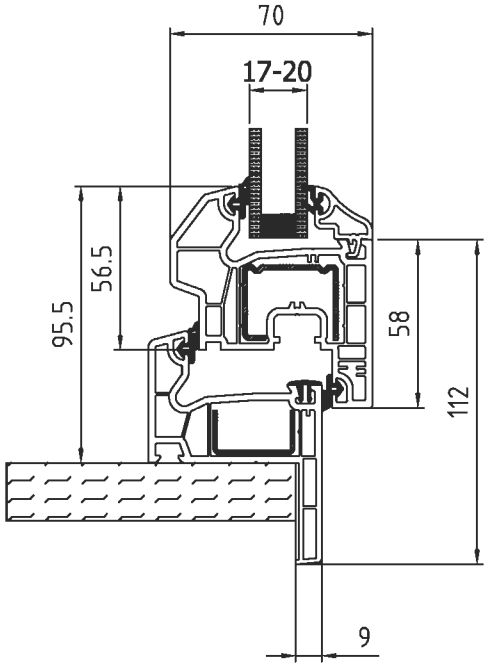


Outer Sill and Asymmetric T Application

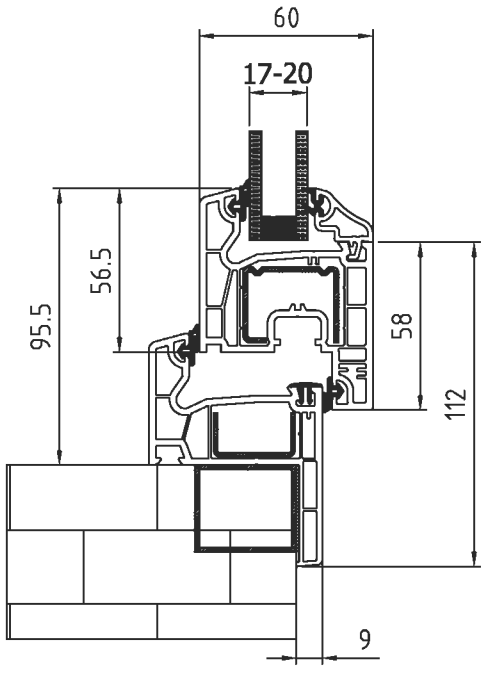


Outer Sill and 50 x 70 Lining Application

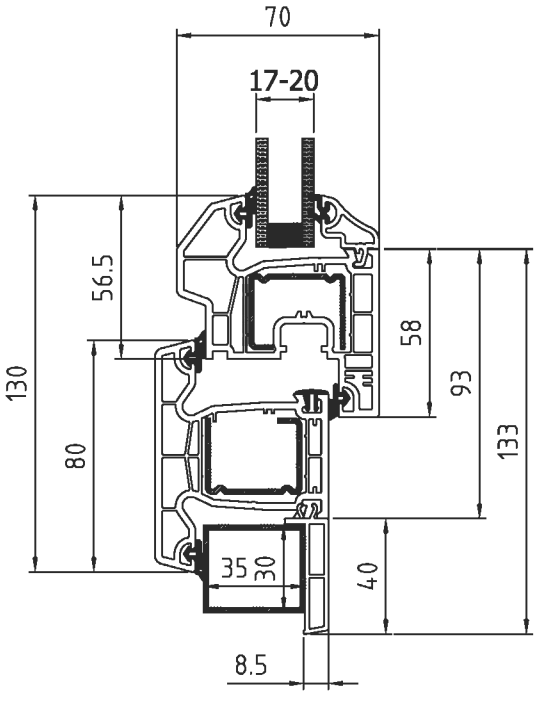
ZERO BASED LINING APPLICATIONS



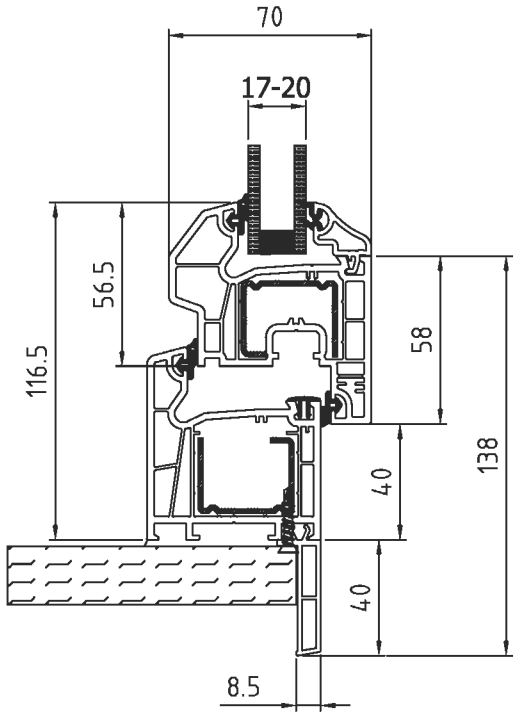
Zero Based Lining Application



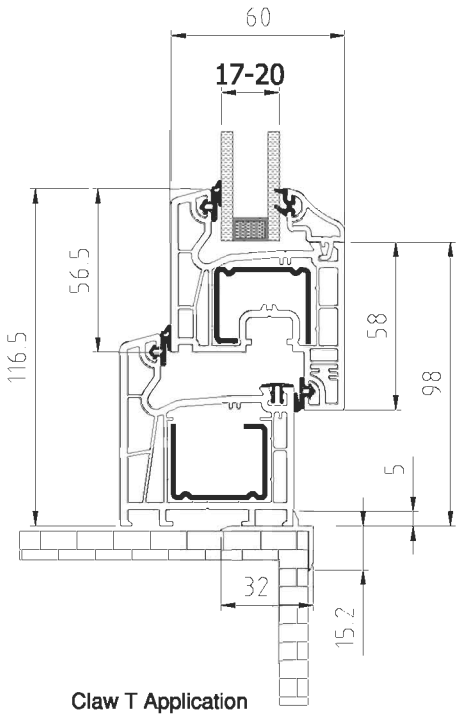
Zero Based Lining Application



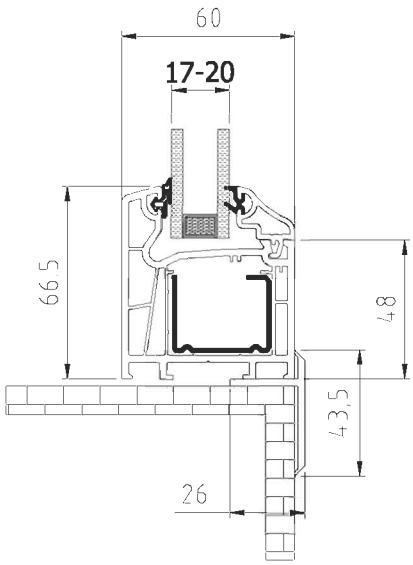
From mullion to Frame
(Overlapping Frame)
Zero Application
Note: One of the zero
casing claws must be broken.



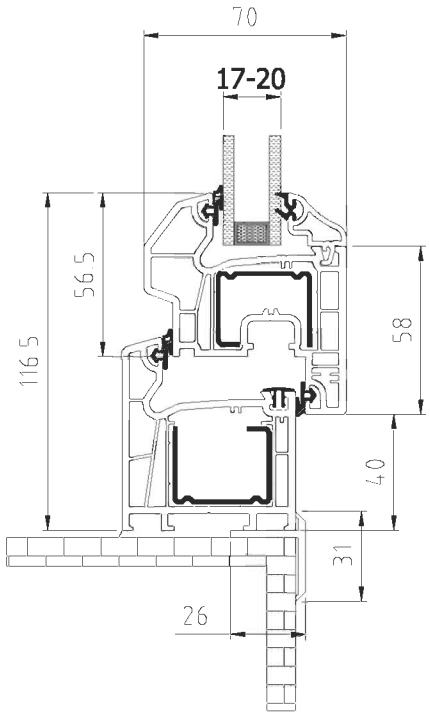
Zero Based Lining and Marble Application



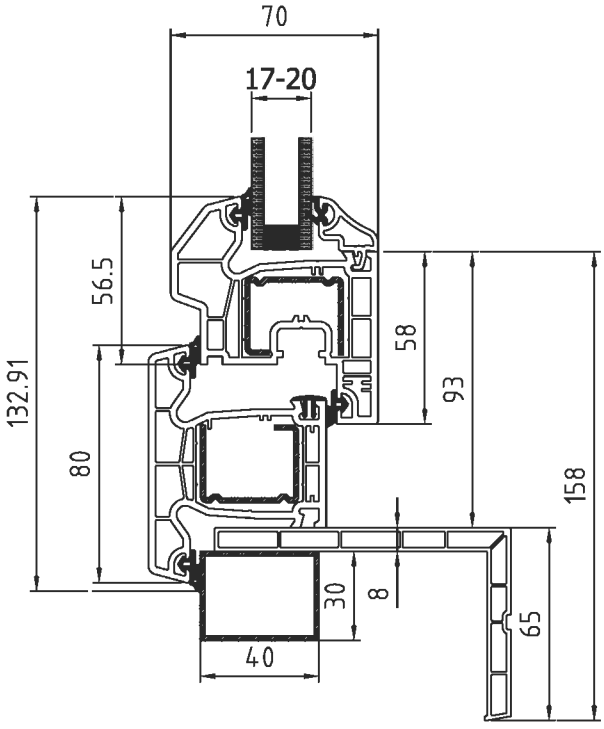
Claw T Application



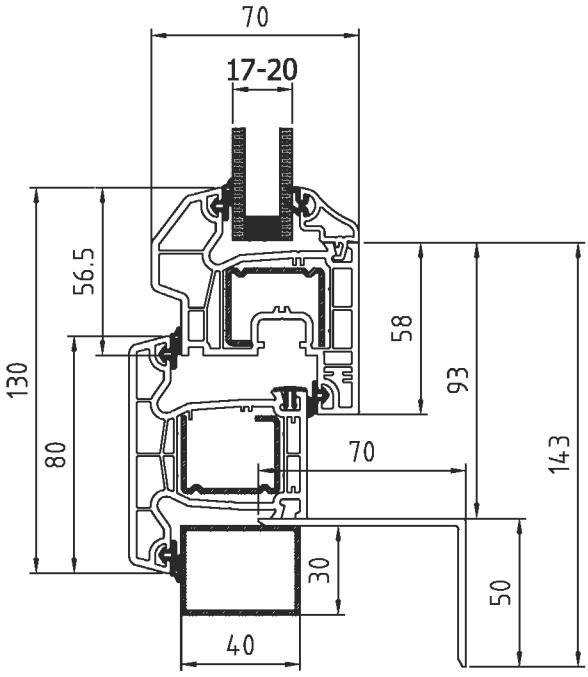
Wide Asymetric T Application



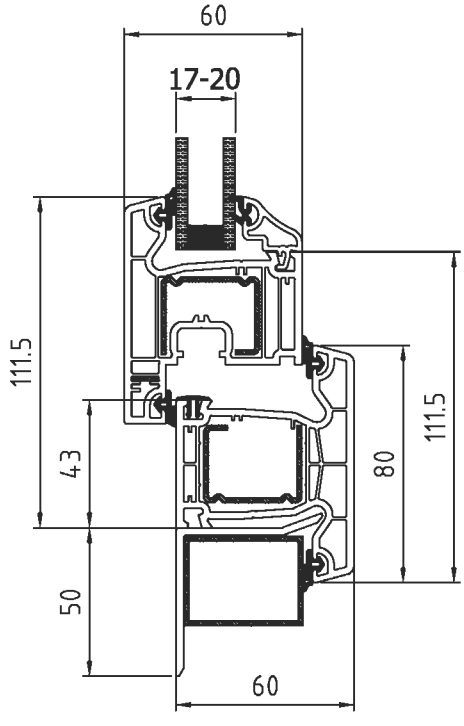
Narrow Asymetric T Application



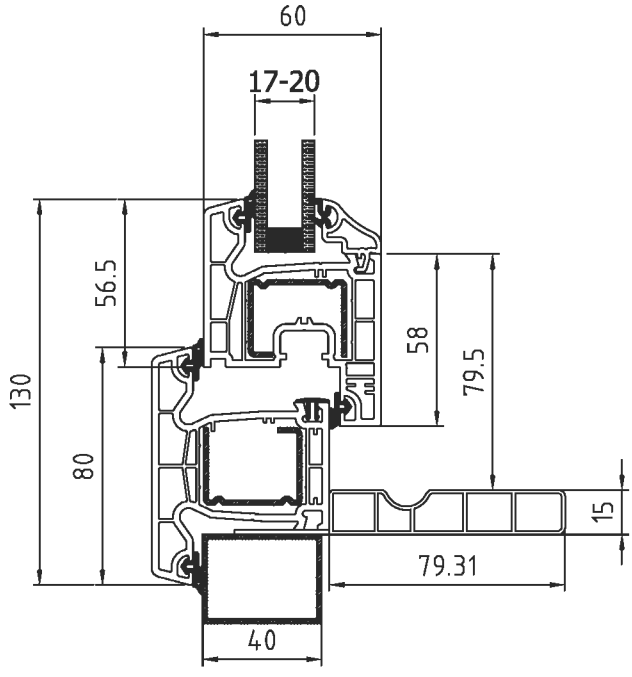
Application of Overlapping Frame
with New Window Lining



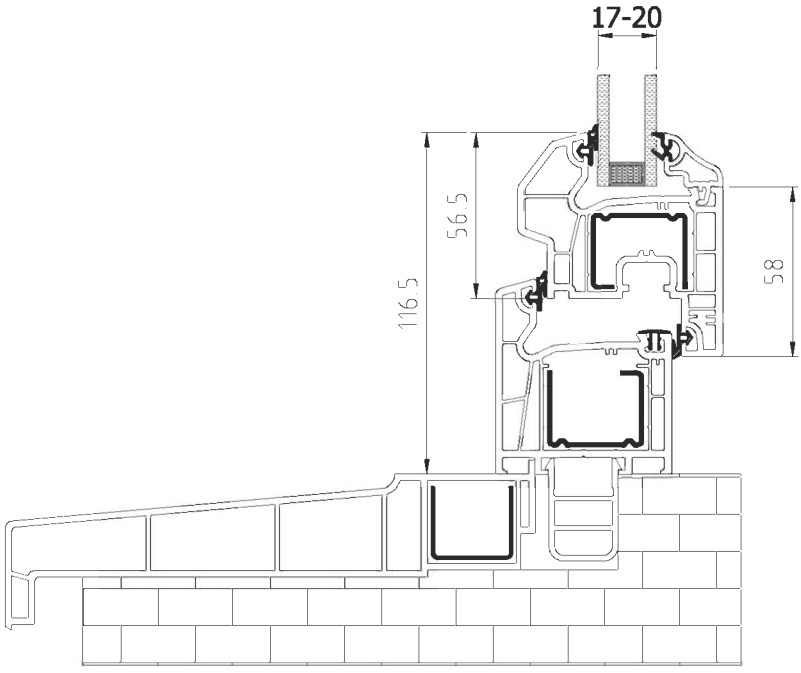
Application of Overlapping
Frame with 50 x 70 Lining



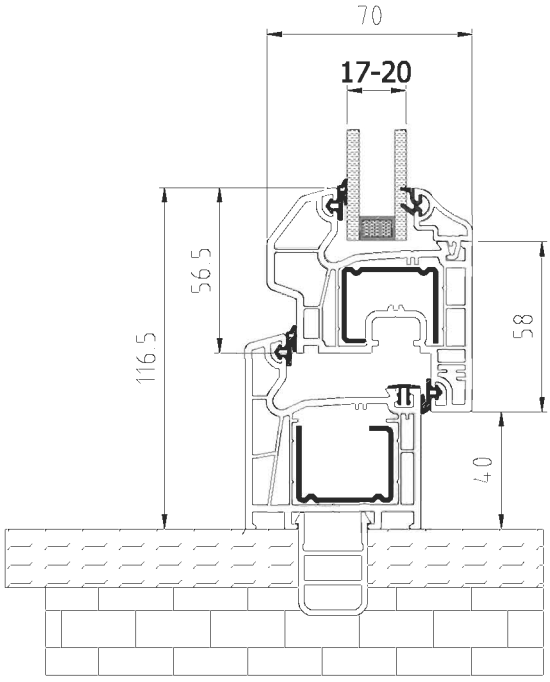
Application of Overlapping
Frame with 50 x 50 Lining



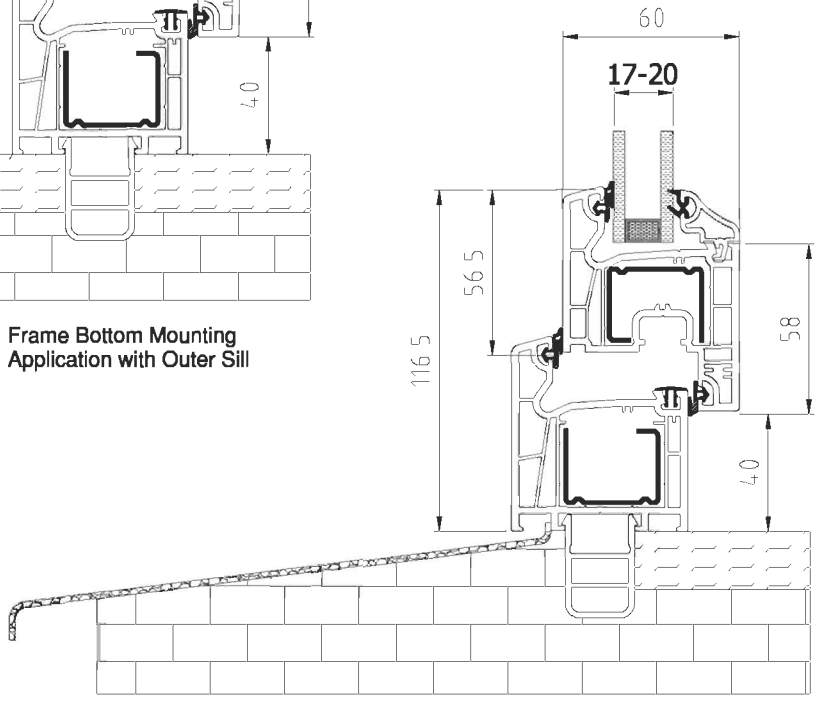
Overlapping Frame Application
with Inner Parapet



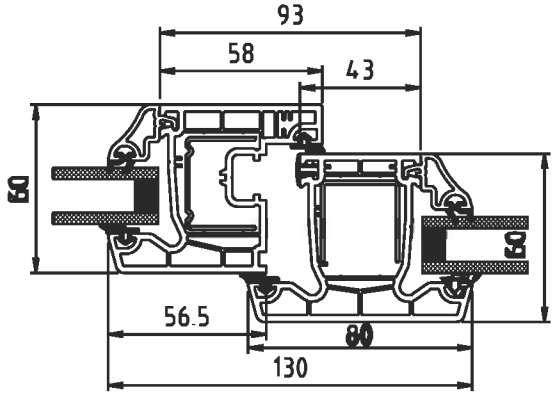
Marble and Frame
Bottom Mounting Application



Frame Bottom Mounting
Application with Outer Sill



Metal Sill and Frame
Bottom Mounting Application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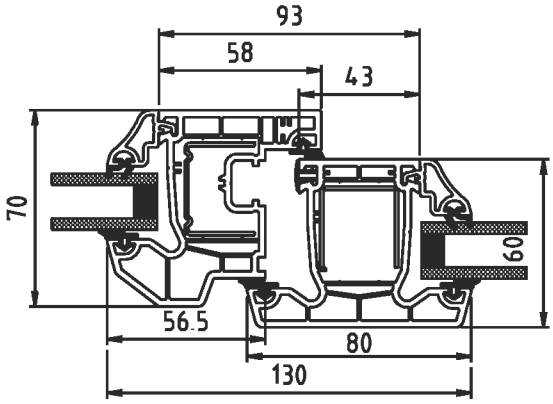
60
60
56.5
80
130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43
70
60
56.5
80
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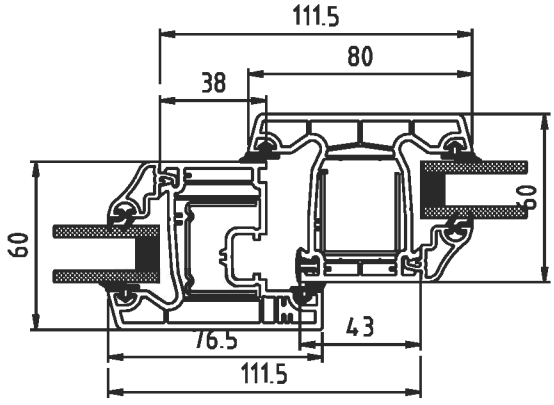
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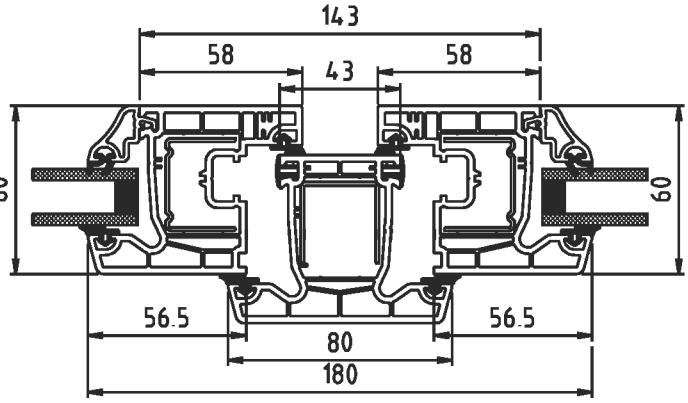
80
38
60
60
76.5
43
111.5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60
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80
56.5
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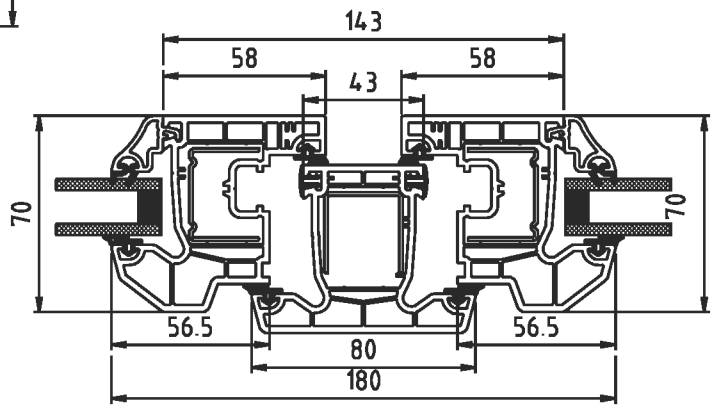
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43
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70
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56.5
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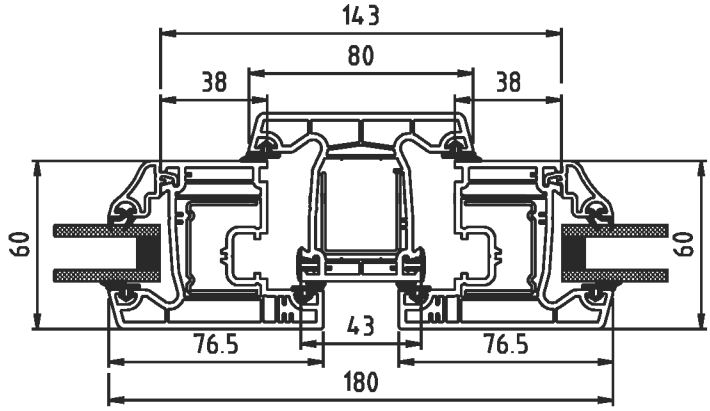
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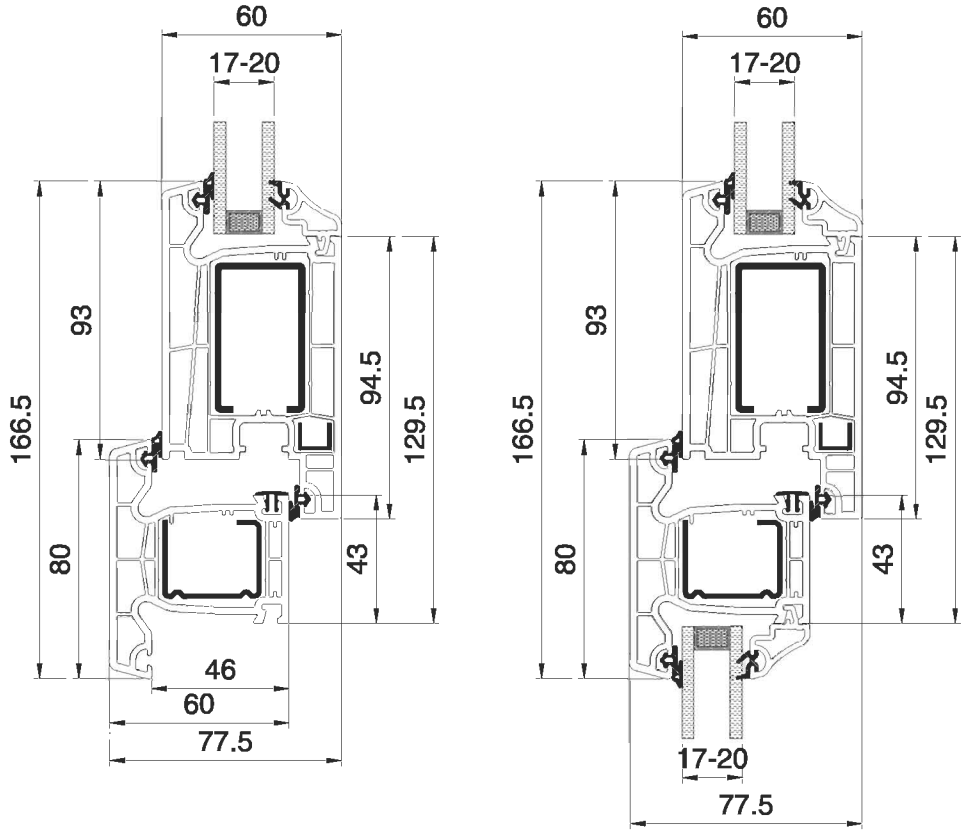
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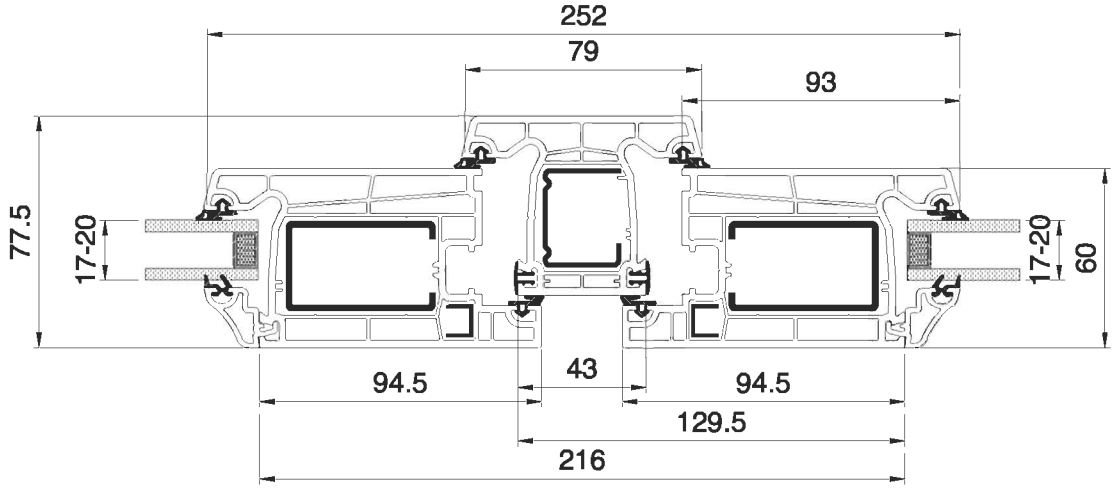
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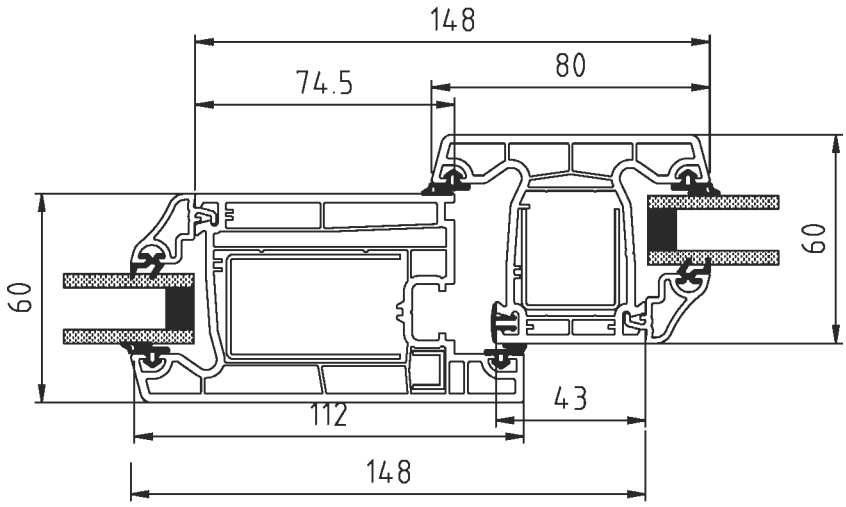
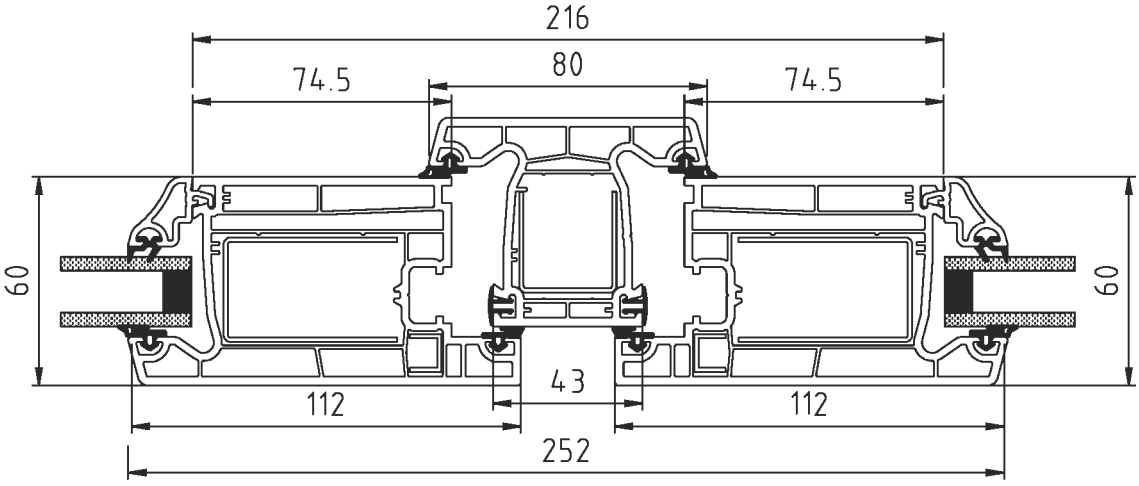
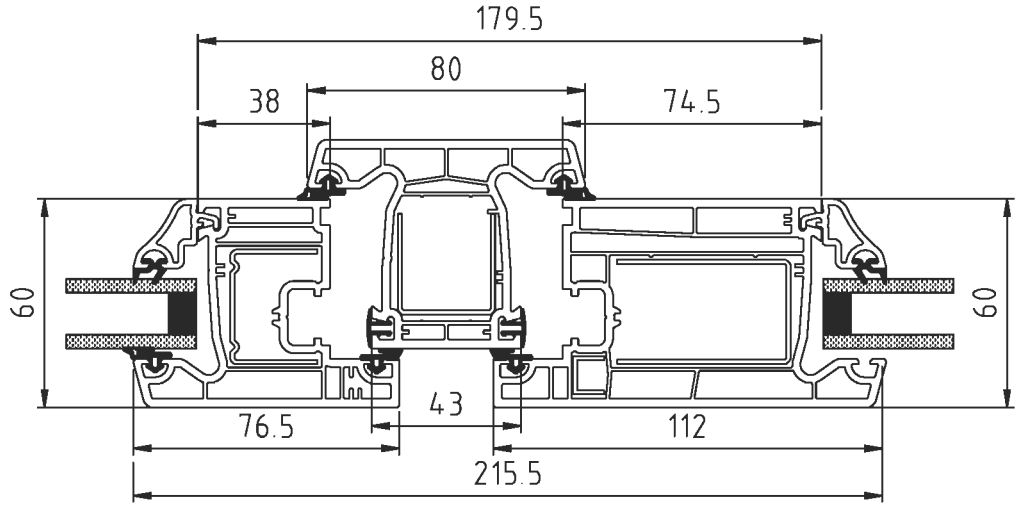
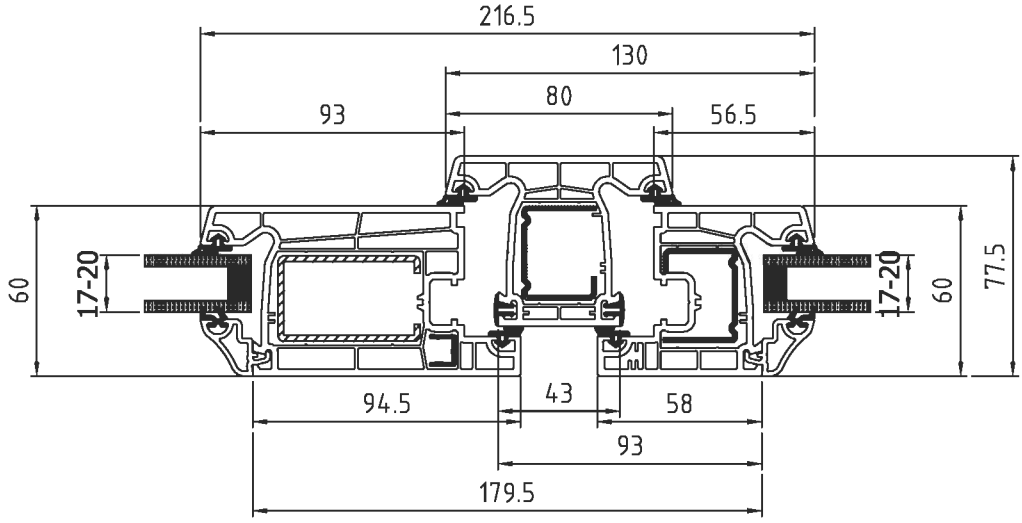
s60 MULLION AND OUTSIDE OPENING DOOR APPLICATIONS

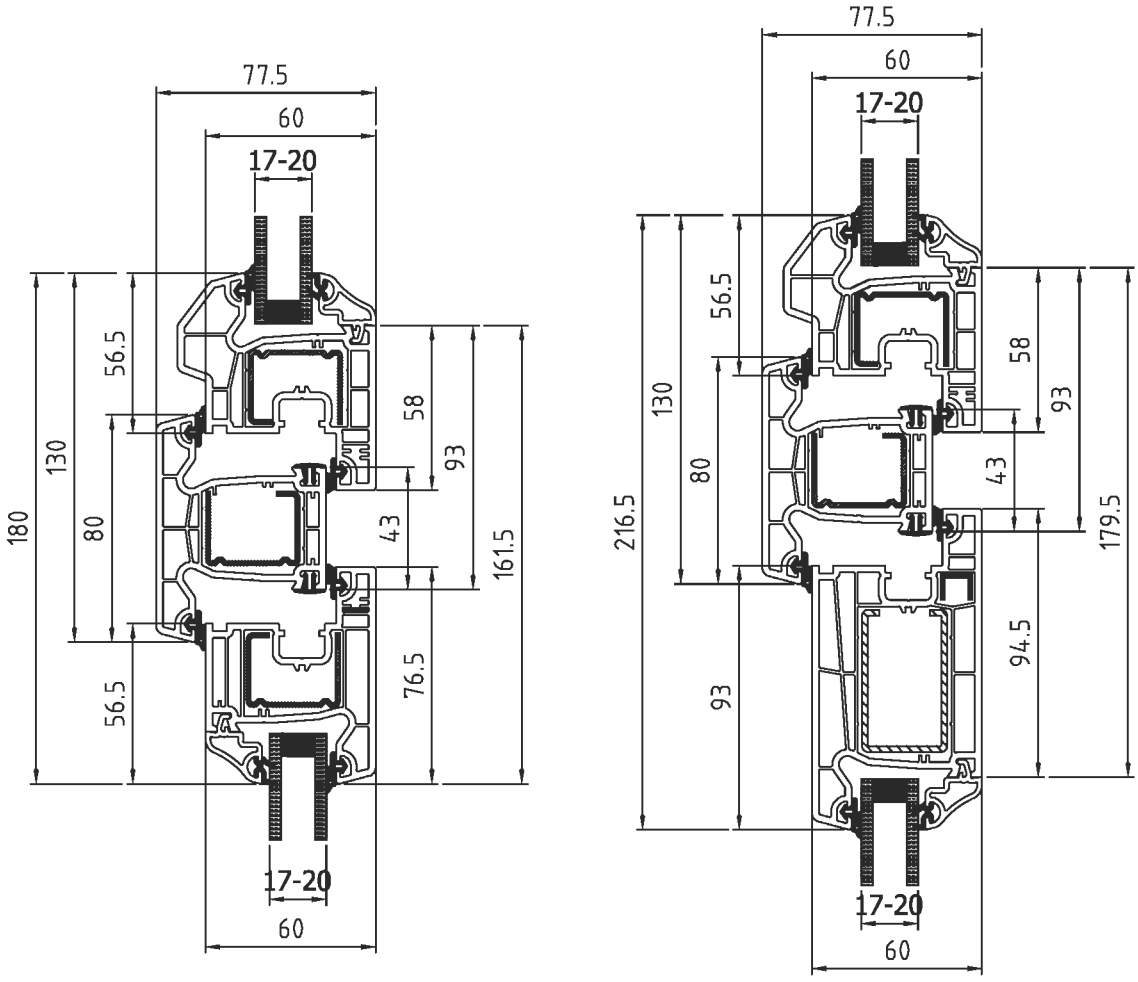




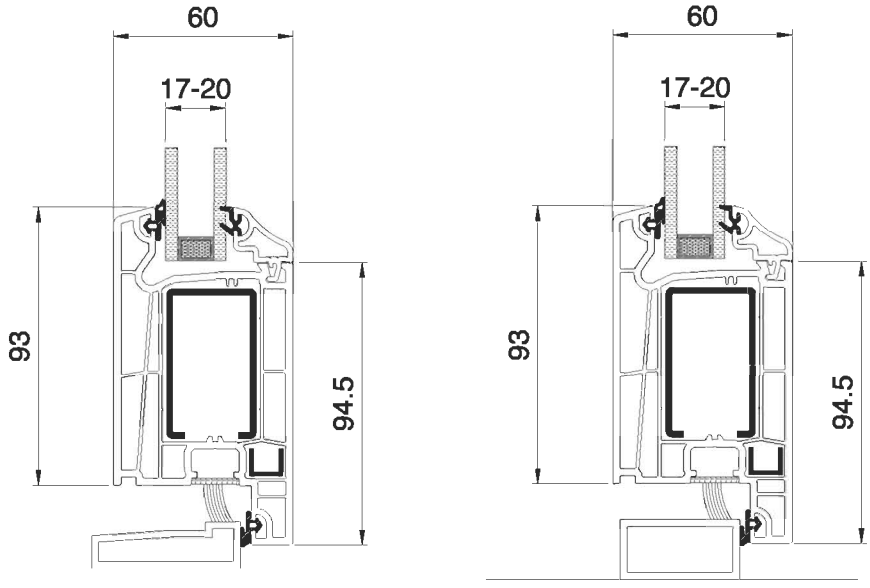




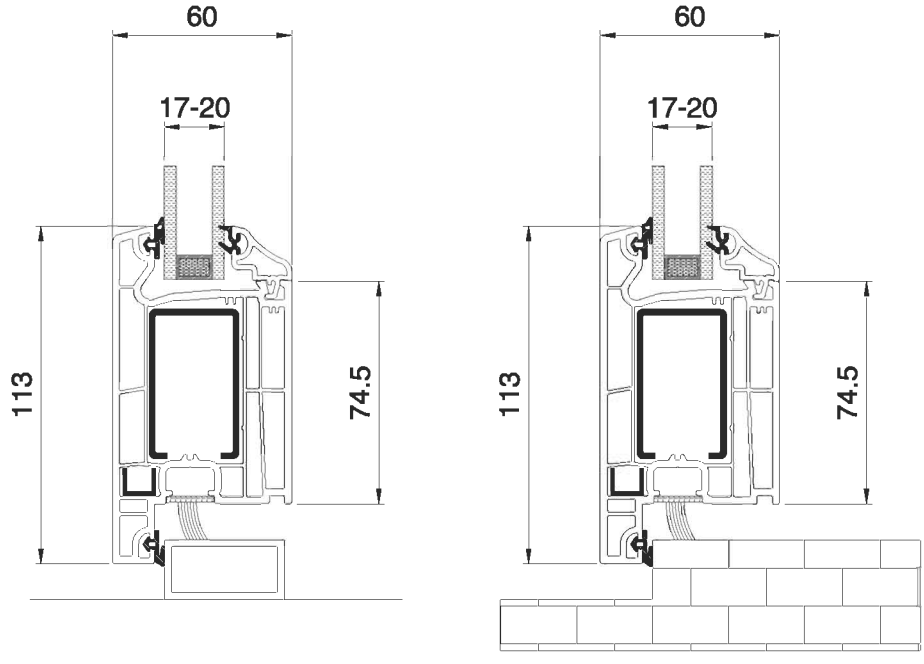
Sash Profile Application with Inside Opening Door Profile



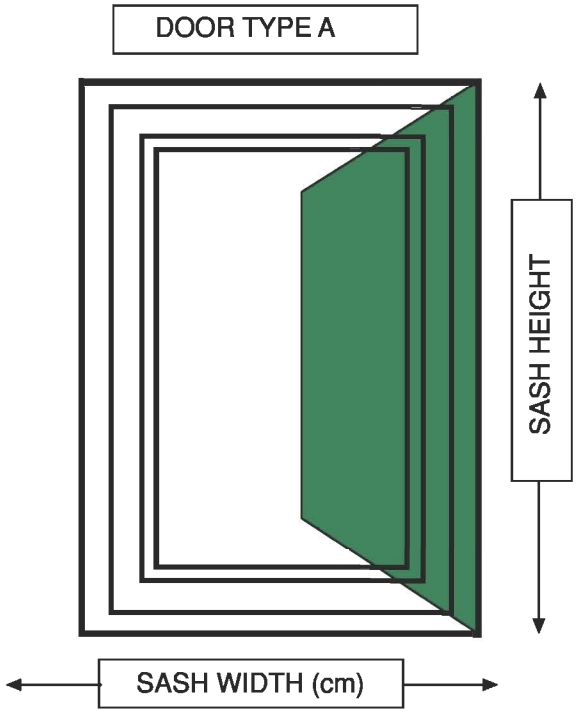
Drained Sash Profile Application with Outside Opening Sash Profile



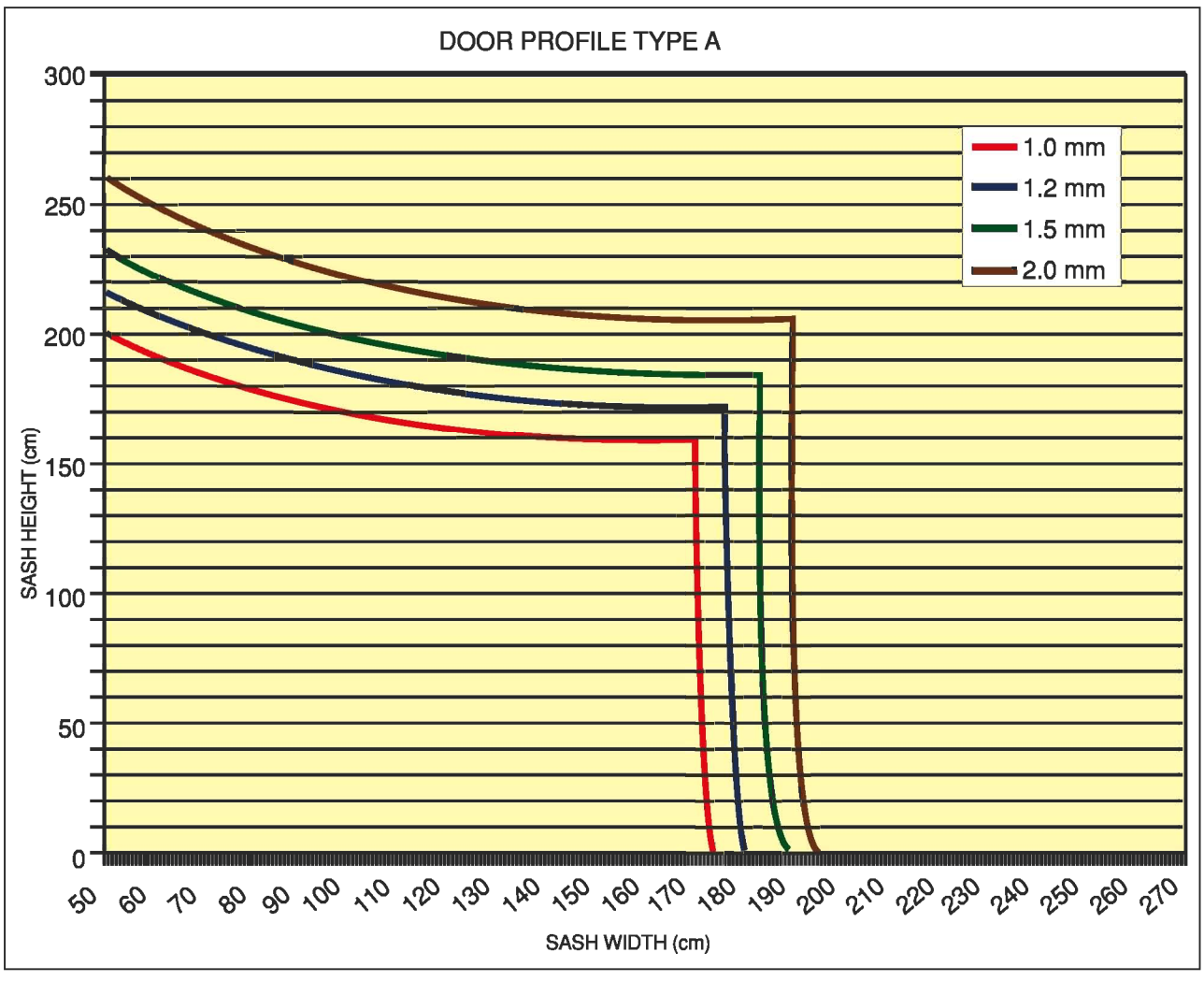
Threshold Application with Inward Opening Locking Door

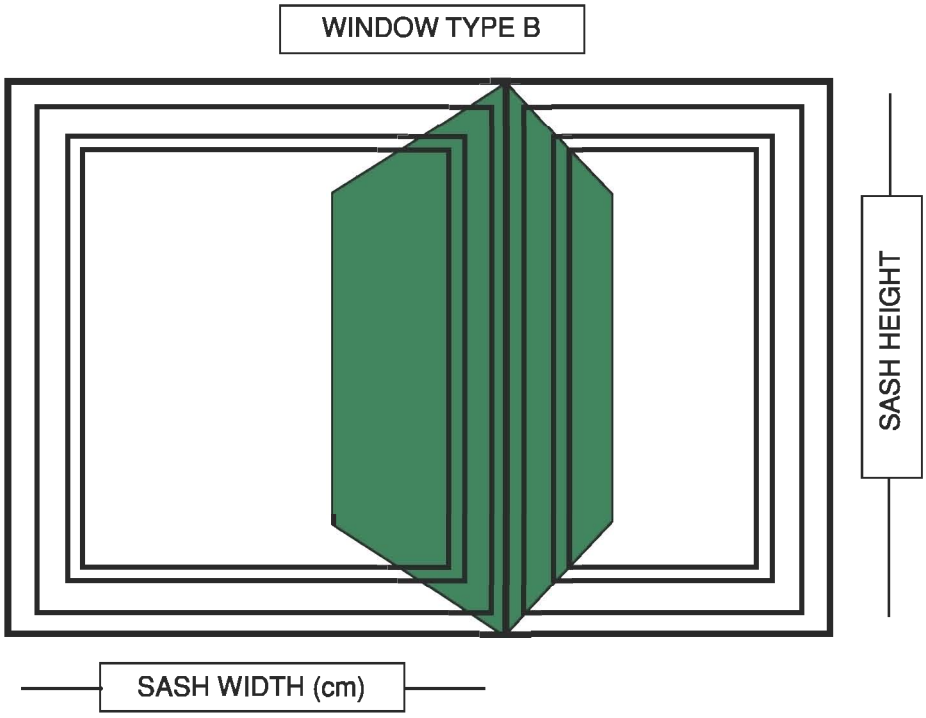


Outward opening locking door and threshold application

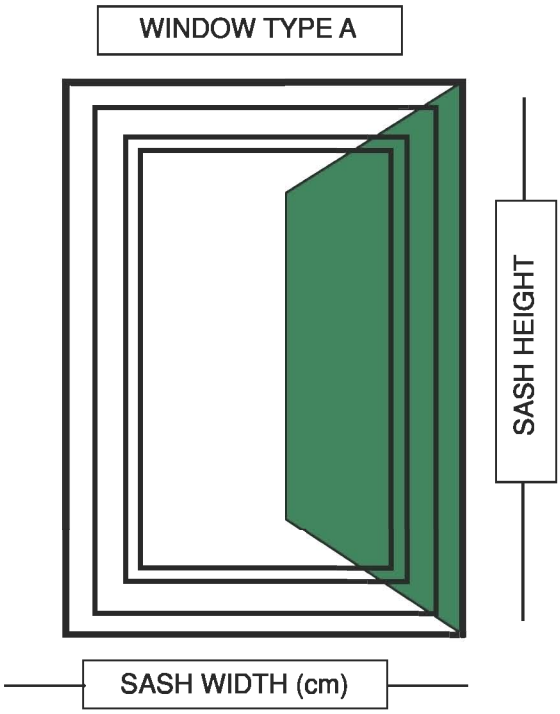


SASH HEIGHT LIMITS DEPENDING ON THE WALL THICKNESS OF REINFORCEMENT STEEL

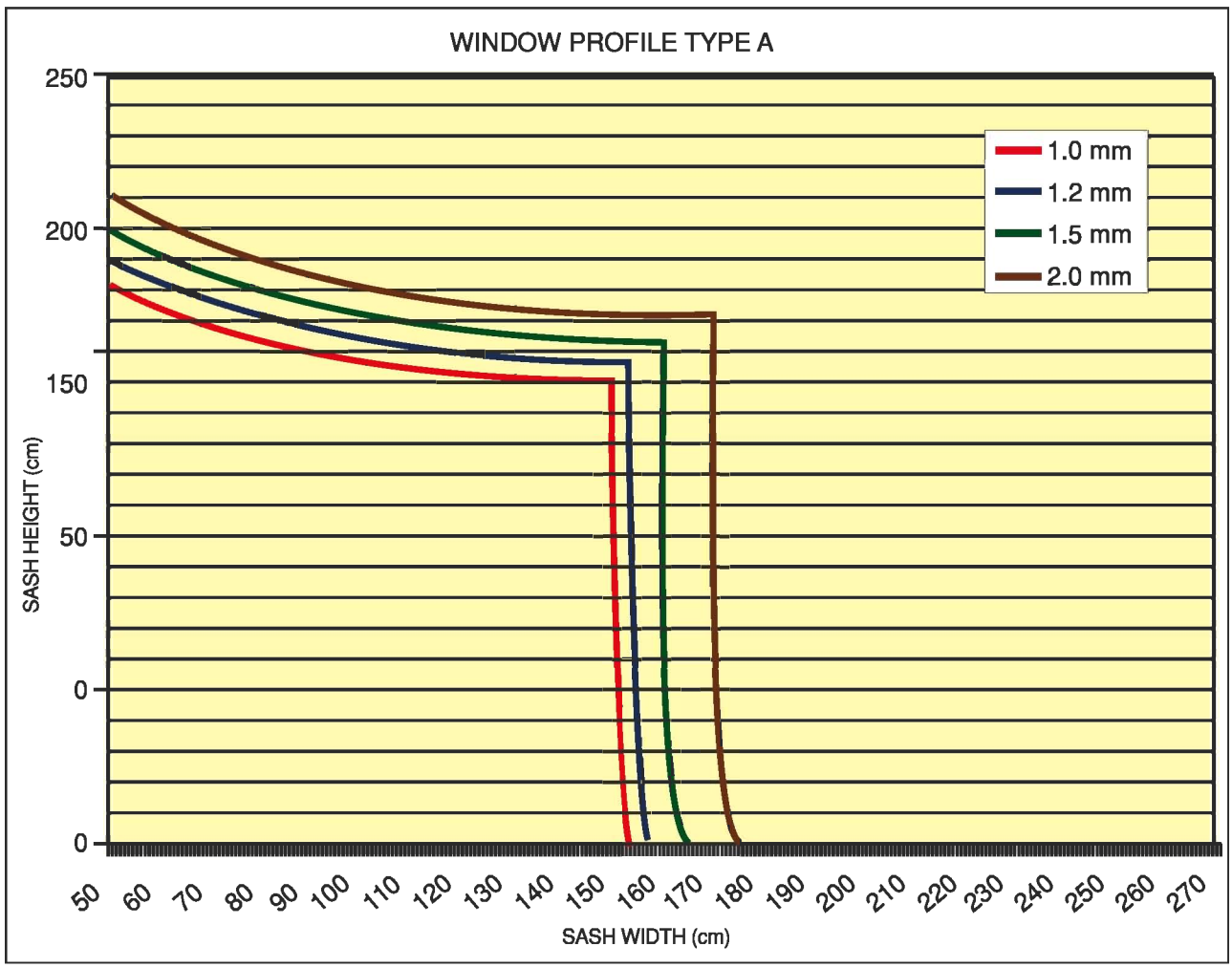




SASH HEIGHT LIMITS DEPENDING ON THE WALL THICKNESS OF REINFORCEMENT STEEL



SASH HEIGHT LIMITS DEPENDING ON THE WALL THICKNESS OF REINFORCEMENT STEEL



QUALITY CERTIFICATES


TÜRK STANDARDLARI ENSTİTÜSÜ
TÜRK STANDARDLARINA UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS


TÜRK STANDARDLARI ENSTİTÜSÜ
TÜRK STANDARDLARINA UYGUNLUK BELGESİ
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СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ
СЕРТИФИКАТ СООТВЕТСТВИЯ


СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ
СЕРТИФИКАТ СООТВЕТСТВИЯ


СЕРТИФІКАТ ВІДПОВІДНОСТІ

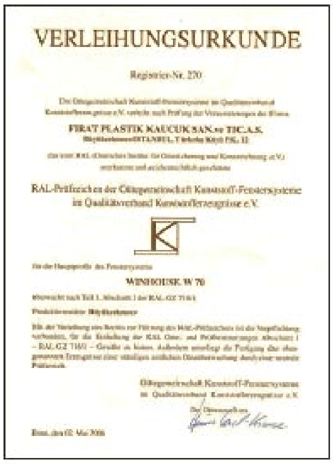

СЕРТИФІКАТ ВІДПОВІДНОСТІ


VERLEIHUNGSURKUNDE


VERLEIHUNGSURKUNDE


VERLEIHUNGSURKUNDE


SERTİFİKA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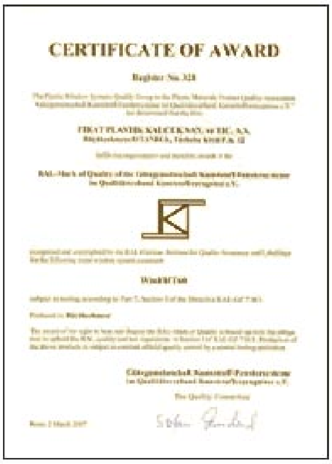
CERTIFICATE OF AWARD


SERTİFİKA


CERTIFICATE OF AWARD


SERTİFİKA


FIRATPEN


SGS
FIRAT PLASTİK KAUÇUK
SANAYİ VE TİCARET A.Ş.
ISO 14001:2004
The scope of registration appears on page 2 of this certificate


SGS
FIRAT PLASTİK KAUÇUK
SANAYİ VE TİCARET A.Ş.
OHSAS 18001:2007
The scope of registration appears on page 2 of this certificate.


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11363
KALİTE YÖNETİM SİSTEMİ BELGESİ
QUALITY MANAGEMENT SYSTEM CERTIFICATE
Partner of IQNet
K - Q
TSE-ISO-EN
9000
TÜRK STANDARDLARI ENSTİTÜSÜ
TURKISH STANDARDS INSTITUTION


PÜKAD
KALİTE SERTİFİKASI
Fırat Plastik Kauçuk Sanayii ve Ticaret A.Ş.
Fıratpen B,
Winhouse B,
ve
Gedizpen B,
Plastik Profil Üreticileri Kalitebirliği Derneği kalite işaretini
belirtilen seri profilleri üzerinde kullanma hakkı verilmiştir.
Belge No: 06
Son Geçerlilik Tarihi: 13 Eylül 2011
İstanbul, 13 Eylül 2010


008
TSE
MÜŞTERİ MEMNUNİYETİ YÖNETİM SİSTEMİ BELGESİ
CUSTOMER SATISFACTION MANAGEMENT SYSTEM CERTIFICATE
Partner of IQNet
M - C
TSE - ISO
10002
TÜRK STANDARDLARI ENSTİTÜSÜ
TURKISH STANDARDS INSTITUTION


SKZ
Test report no.:
Customer: FIRAT Plastik Kauçuk San. ve Tic. A.Ş.
Result: The requirements are met.

FIRAT
PLASTİK, KAUÇUK SAN. ve TİC. A.Ş.

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