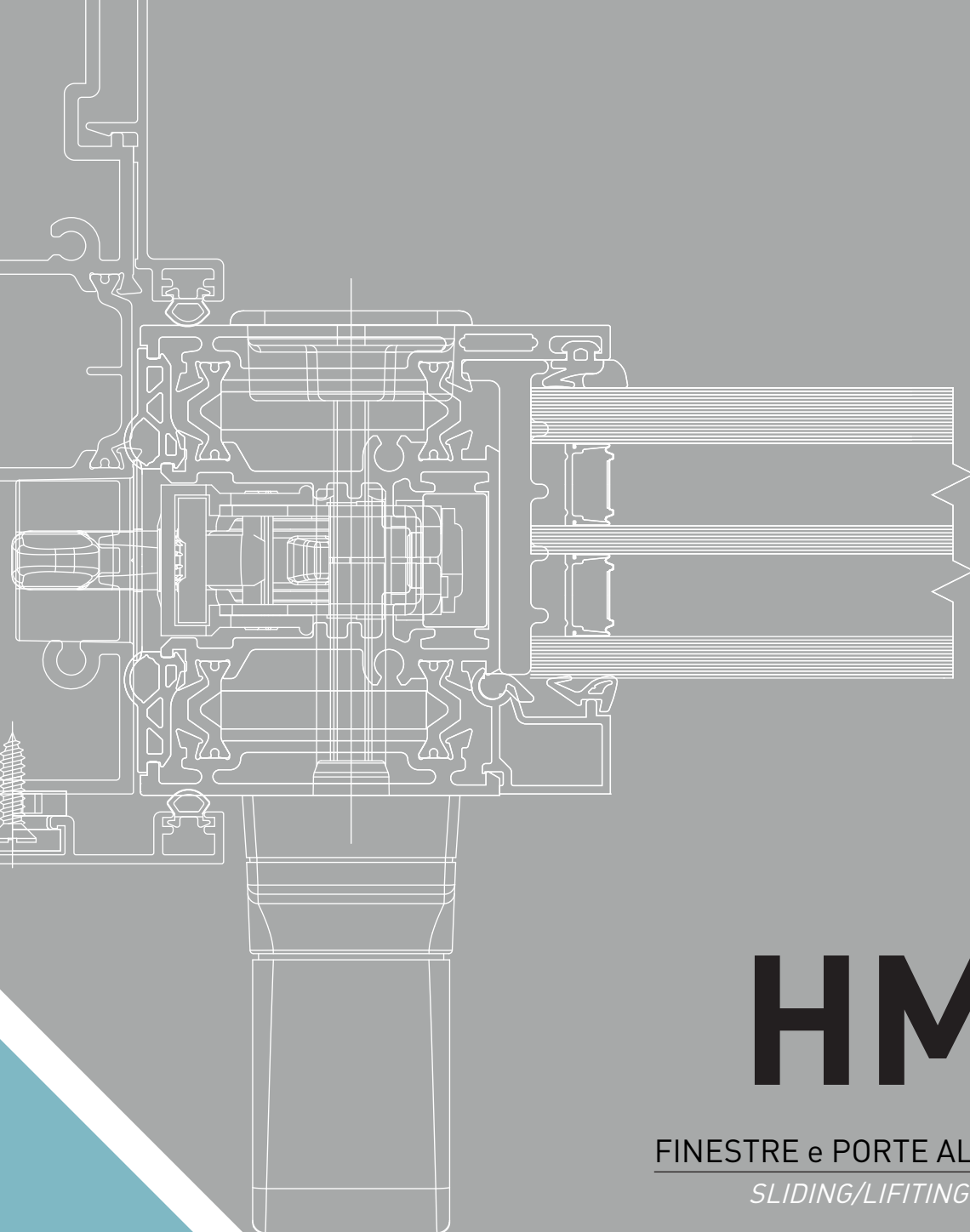




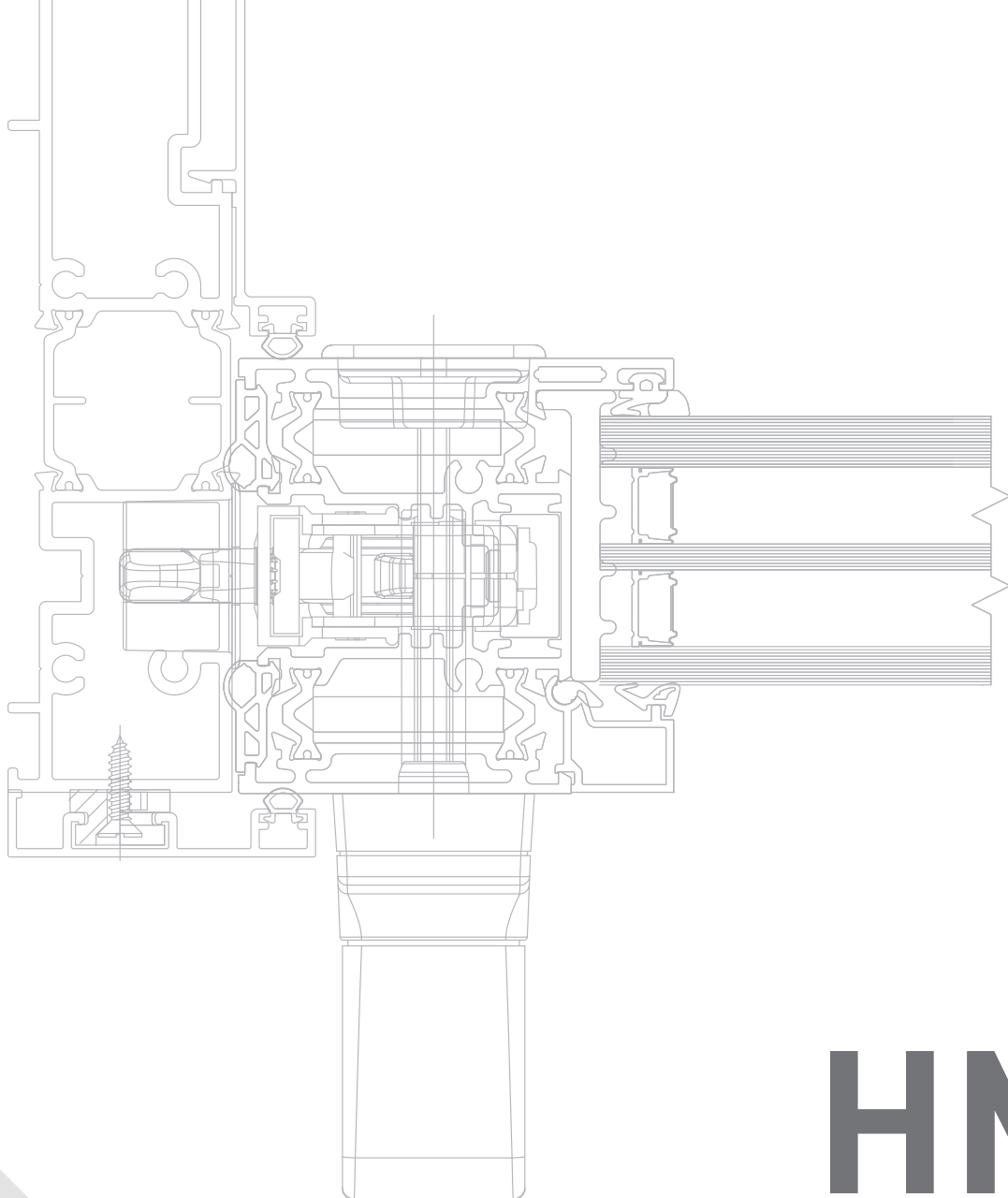
HM160

FINESTRE e PORTE ALZANTI / SCORREVOLI
SLIDING/LIFTING WINDOWS AND DOORS



TWIN
SYSTEMS

ARCHITETTURE IN ALLUMINIO



HM160

FINESTRE e PORTE ALZANTI / SCORREVOLI
WINDOW AND DOORS SLIDING/LIFTING





TWIN SYSTEMS

ARCHITETTURE IN ALLUMINIO



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Tutti i dati riportati sul presente catalogo sono indicativi e non impegnativi. La società si riserva il diritto di apportare in qualsiasi momento modifiche atte a migliorare i prodotti. Per informazioni tecniche riguardanti il catalogo contattare l'ufficio tecnico.

All the data shown in this catalog are indicative and not binding. The company reserves the right to make changes to improve the products at any time. For technical information regarding the catalog, contact the technical department.



Informazioni Generali
General Information

Gruppo A

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**PESO PROFILATI**

Il peso indicato è quello teorico e potrà variare in funzione delle tolleranze di spessore e dimensionali dei profilati (NORMA UNI EN 12020-2)

LEGA DI ESTRUSIONE

I profilati sono estrusi in lega EN-AW-6060 (UNI EN 573/3)

DIMENSIONI DEI PROFILATI

Le dimensioni indicate sono quelle teoriche, potranno quindi variare in funzione delle tolleranze dimensionali di estrusione (norma UNI EN 12020-2). Questa variabilità che interessa tutti i profilati, può influire, anche se minimamente, sulle dimensioni di taglio e quindi finali del serramento. Anche la verniciatura, aumentando gli spessori, contribuisce a far variare la dimensione dei profilati e, particolarmente, riduce lo spazio nelle sedi di inserimento delle guarnizioni e degli accessori.

DIMENSIONI DI TAGLIO E LAVORAZIONI

Le dimensioni teoriche di taglio e le quote delle lavorazioni indicate nel presente catalogo sono esatte, ovvero matematicamente corrette, in certi casi dovranno, nella pratica, essere adattate in base alla precisione ed al tipo di impostazione delle misure delle macchine utilizzate. È pertanto consigliabile nei primi lavori o nel caso di importanti quantità di serramenti effettuare delle campionature di prova.

PROTEZIONE SUPERFICIALE

Al fine di limitare i processi di corrosione filiforme è importante applicare le seguenti regole:

- ♦ **Utilizzare accessori di assemblaggio in alluminio**
- ♦ **Utilizzare viti in acciaio inox**
- ♦ **Proteggere le parti tagliate e lavorate con prodotti idonei**
- ♦ **Evitare ristagni di condense all'interno dei profilati.**

Per la realizzazione di serramenti è necessario attenersi alla tecnologia costruttiva e utilizzare le guarnizioni e gli accessori originali riportati sul catalogo tecnico e al rispetto delle norme, prescrizioni e raccomandazioni vigenti. L'osservanza di quanto sopra determina la garanzia. Su queste basi sono stati realizzati campioni che, collaudati in laboratorio hanno ottenuto i risultati indicati nelle certificazioni. Per il buon funzionamento e la durata degli infissi realizzati con profilati ed accessori del sistema, è necessario effettuare alcune semplici operazioni:

- una buona pulizia, eliminando residui di calce, cemento e/o altro.
- È consigliabile peraltro proteggere il manufatto sino al momento della messa in esercizio, lubrificare con olio o grasso neutri le parti in movimento e gli organi di chiusura, controllare il corretto serraggio delle viti e dei grani, controllare gli assetti, registrandoli laddove sono previste regolazioni.

Si raccomanda di effettuare queste operazioni almeno con cadenza semestrale.

In caso di funzionamento anomalo di qualche componente, evitare assolutamente interventi atti a modificarne le caratteristiche e la sostituzione con ricambi non originali. Ci sembra utile ricordare che interventi di regolazione e/o sostituzione, con particolare riferimento ai meccanismi per oscillo-battente, andranno eseguiti da personale specializzato.

- Si raccomanda inoltre, in occasione delle operazioni di pulizia, di non utilizzare detergenti che possano deteriorare i trattamenti superficiali, escludendo tassativamente acidi, solventi, materiali abrasivi, spazzole metalliche o comunque in grado di scalfire le superfici, pagliette metalliche e altro.

WEIGHT OF PROFILES

The weight indicated is the theoretical one and may vary depending on the thickness and dimensional tolerances of the profiles (STANDARD UNI EN 12020-2)

EXTRUSION ALLOY

The profiles are made of extrusion alloy EN-AW-6060 (UNI EN 573/3)

DIMENSIONS OF PROFILES

The dimensions indicated are the theoretical ones; they may vary depending on the extrusion dimensional tolerances (STANDARD UNI EN 12020-2). This variability, which affects all the profiles, can affect, even if minimally, the cutting size and, therefore, the final size of the window. Also the coating, increasing the thickness, affects the size of the profiles and, in particular, reduces the space in the housing of window gaskets and accessories.

CUTTING AND TOOLING DIMENSIONS

The theoretical cutting and tooling sizes indicated in this catalogue are accurate, that is, they are mathematically correct. In practice, in some cases they may need to be adapted to take into consideration the precision and dimensional settings of the machines used. We therefore recommend that test samples be made in the first jobs or in the case of large quantities of windows.

SURFACE PROTECTION

The rules below should be followed to limit filiform corrosion phenomena:

- ♦ **Use aluminium assembly accessories**
- ♦ **Use stainless steel screws**
- ♦ **Use appropriate products to protect cut and tooled parts.**
- ♦ **Prevent condensation from accumulating inside the profiles.**

For the manufacture of windows and doors, it is necessary to adhere to the construction technology and use the original gaskets and accessories listed in the technical catalogue, in compliance with current standards, regulations and recommendations.

Compliance with the above determines the warranty.

On this basis, samples have been produced which, when tested in the laboratory, have obtained the results indicated in the certifications.

For the proper functioning and durability of the fixtures made with the system's profiles and accessories, it is necessary to carry out a few simple operations:

- thorough cleaning, removing any residues of lime, cement and/or other materials.

- It is also advisable to protect the product until it is put into service, lubricate the moving parts and closing mechanisms with neutral oil or grease, check that the screws and grub screws are tightened correctly, check the settings and adjust them where necessary.

It is recommended that these operations be carried out at least every six months.

In the event of abnormal operation of any component, avoid any intervention that could modify its characteristics and avoid replacing it with non-original spare parts. It is important to remember that any adjustment and/or replacement, with particular reference to tilt-and-turn mechanisms, must be carried out by specialised personnel.

- When cleaning, it is also recommended not to use detergents that could damage the surface treatments, strictly excluding acids, solvents, abrasive materials, metal brushes or anything else that could scratch the surfaces, metal scouring pads and so on.



DIMENSIONS AND TYPE OF WINDOWS

DIMENSIONI E TIPOLOGIA DEI SERRAMENTI

La valutazione delle dimensioni dei serramenti, richiede la considerazione di vari fattori quali: il momento d'inerzia dei profilati, le dimensioni e il peso dei tamponamenti (vetri-pannelli), la larghezza e l'altezza delle parti apribili, caratteristiche e portate degli accessori, le condizioni e le quantità degli ancoraggi alle opere morte, l'esposizione, ecc... Fattori che sono valutabili e applicabili, grazie alla buona conoscenza dello stato dell'arte, alle informazioni riportate dai cataloghi, manuali tecnici e dalle normative vigenti. Consigliamo, al fine di evitare inutili contestazioni, di consultare il nostro servizio tecnico sistemi, prima di realizzare serramenti che, per dimensione, forma, esposizione e/o altro possono essere ritenuti atipici. Le soluzioni e le combinazioni proposte in questo catalogo, non hanno carattere limitativo, ma presentano solo le situazioni e combinazioni più comunemente riscontrabili nella realtà.

Various factors must be taken into consideration when assessing the dimensions of the windows, such as: the moment of inertia of the profiles, the dimensions and weight of the panels (glass-panels), the width and height of the opening parts, the characteristics of the accessories, the condition and number of fastenings to the dead work, the exposure, etc. These factors can be assessed and applied, thanks to the good knowledge of the state of the art and to the information reported in catalogues, technical manuals and current regulations.

In order to avoid needless complaints, we invite you to contact our technical service before making windows that, due to their size, shape, exposure and/or other characteristic, could be considered non-standard. The solutions and combinations proposed in this catalogue are not the only ones available, but merely represent the most common situations and combinations.

COMPOSIZIONE PROFILATI

I profilati per serramenti saranno in lega di alluminio ENAW 6060 (EN 573-3 e EN 755-2) con stato fisico di fornitura UNI EN 515. I telai fissi e le ante mobili dovranno essere realizzati con profilati ad interruzione di ponte termico a tre camere (profilo interno ed esterno tubolari, collegati tra di loro con barrette in poliammide PA6.6 rinforzate con fibra di vetro).

INFISSI

Le finestre scorrevoli e le porte finestre scorrevoli dovranno avere un profilato di telaio fisso con profondità di mm.160 mm. ed un profilato di anta mobile con profondità minima 68 mm. I profilati di telaio fisso inferiore dovranno avere la possibilità di utilizzare un binario inox, riportato, per lo scorrimento facilitato e l'usura con conseguente sostituzione.

I profilati di telaio fisso dovranno essere predisposti, dove necessario, per ricevere alette di battuta interna sulla muratura da 25 mm. I profilati di ante mobili potranno contenere vetrazioni fino a 50 mm. Inoltre le finestre e porte scorrevoli avranno la possibilità di essere realizzate con 1 o più ante compresa la soluzione angolare.

ISOLAMENTO TERMICO

L'interruzione del ponte termico sarà ottenuta da barrette continue in poliammide da 28 mm., e da 14 mm. per le ante mobili, e dovrà garantire un valore di trasmittanza termica per l'infisso $U_w = \dots W/m^2K$. L'assemblaggio dei profilati in alluminio a taglio termico dovrà garantire i valori di scorrimento (T) tra profilati in alluminio e barrette in POLIAMMIDE previsti dalla direttiva tecnica Europea (UEAtc).

DRENAGGI E VENTILAZIONE

I profilati esterni delle ante mobili dovranno prevedere una gola ribassata per la raccolta delle acque di infiltrazione e di condensa onde poter permettere il libero deflusso delle stesse attraverso apposite asole di scarico. Le barrette in poliammide dovranno avere una conformazione geometrica atta ad evitare eventuale ristagno di acque di infiltrazione e di condensa ed essere perfettamente complanari con le pareti trasversali dei profilati di alluminio.

ACCESSORI DI ASSEMBLAGGIO

Le giunzioni tra profilati orizzontali e verticali dovranno essere perfettamente solidali e ben allineate tra di loro, sia nella parte esterna che interna dei profilati ed unite mediante apposite squadrette a bottone o, in alternativa, in alluminio estruso o pressofuso, con metodo a spino-cianfrinatura od a cianfrinatura totale. Le sezioni dei profilati orizzontali e verticali dovranno essere opportunamente sigillate prima di essere unite con le squadrette. I fermavetri saranno accoppiati a scatto e posizionati nei canali dei profilati in alluminio.

GUARNIZIONI

Tutte le guarnizioni dovranno essere in elastomero (EPDM). LA continuità angolare sarà assicurata mediante l'impiego di angoli vulcanizzati preformati incollati alla stessa o in alternativa mediante telai vulcanizzati.

PRESTAZIONI

I serramenti dovranno avere prestazioni di permeabilità all'aria, tenuta all'acqua e resistenza ai carichi del vento conformemente alle norme: (UNI-EN 12207 - 12208 - 12210 e UNI-EN 1026 - 1027 - 12211)

PROFILES COMPOSITION

The window profiles are made of ENAW 6060 aluminum alloy (EN 573-3 and EN 755-2) with physical state of supply UNI EN 515. The fixed frames and sliding doors must be made with three-chamber thermal break profiles (tubular internal and external profile, connected to each other with glass fibre reinforced polyamide PA6.6 bars).

DOORS AND WINDOWS

The registered sliding doors and windows sash have a fixed frame profile with a depth of mm. 120 mm. (alternatively mm. 60.3 for single-leaf and mm. 179.7 for 3-leaf) and a mobile leaf profile with depth minimum 46 mm. The registered lower fixed frame profiles have the possibility of using a stainless steel rail, brought back, for easier sliding and wear with subsequent replacement.

The registered fixed frame profiles must be prepared, where necessary, to have internal rebate fins on the 25 mm masonry. The profiles of mobile doors can contain glazing up to 50 mm. Furthermore, the windows and sliding doors will have the possibility of being made with 1 or more doors including the corner solution.

THERMAL BREAK

The interruption of the thermal bridge will be obtained by continuous 28 mm polyamide bars. for frames with snap technology, and 14 mm. for the mobile leaves, and must guarantee a thermal transmittance value for the frame $U_w = \dots W/m^2K$. The assembly of aluminum profiles with thermal break must guarantee the sliding values (T) between aluminum profiles and POLYAMIDE bars envisaged by the European technical directive (UEAtc).

DRAINAGE AND VENTILATION

The junctions between horizontal and vertical profiles must be perfectly integral and well aligned with each other, both in the external and internal part of the profiles and joined by means of special button brackets or, alternatively, in extruded or die-cast aluminum, with the pin-crimping method or with total crimping. The sections of the horizontal and vertical profiles must be properly sealed before being joined with the brackets. The glazing beads will be snap coupled and positioned in the channels of the aluminum profiles.

ASSEMBLY ACCESSORIES

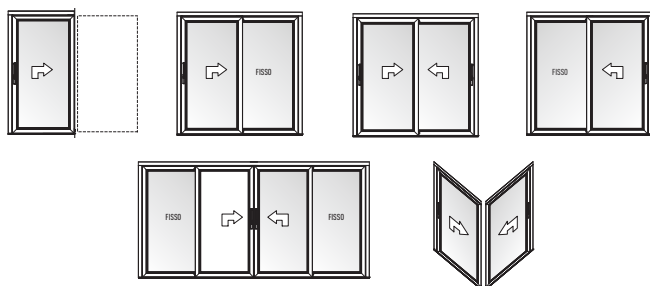
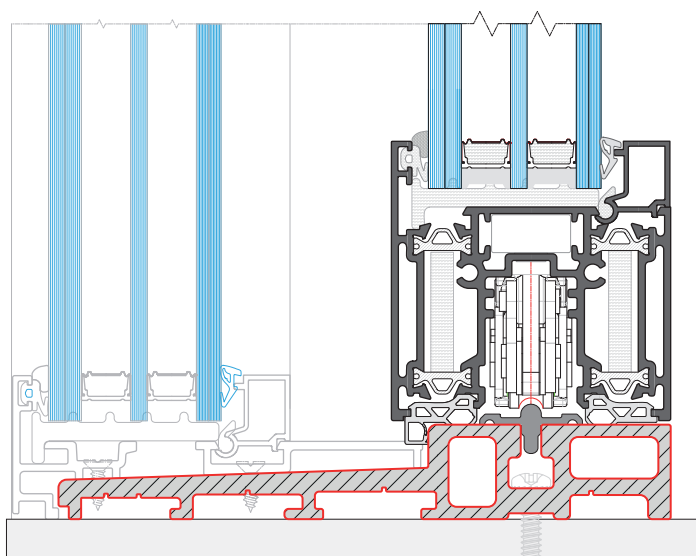
The joints between the horizontal and vertical profiles must be perfectly united and correctly aligned with each other, both externally and internally and joined by means of special slot corner joints or, alternatively, in extruded or die-cast aluminum, with a dowel-crimping or full crimping method. The sections of the horizontal and vertical profiles must be properly sealed before being joined with the corner joints. The glazing beads will be snap-coupled and positioned in the channels of the aluminum profiles.

WINDOW GASKETS

All window gaskets will have to be made in elastomer (EPDM). SALL corner sealings will ensure continuity using preformed vulcanized corner joints glued to it or, alternatively, vulcanized frames.

PERFORMANCES

The windows and doors must have air permeability, water tightness and resistance to wind loads in accordance with the standards: (UNI-EN 12207 - 12208 - 12210 e UNI-EN 1026 - 1027 - 12211)


CARATTERISTICHE FISICHE
Profilati estrusi lega:

- ENAW 6060 (EN 573 - 3)

Stato di fornitura:

- T5 (EN 752 - 2)

Tolleranze dim. e spessori:

- EN 755 - 9

Tipo di tenuta aria/acqua:

- Con spazzolino / guarnizione speciale per scorrimento.

Inserimento del vetro :

- con Fermavetro

H utile alloggiamento vetro:

- mm. 16 Possibilità di inserimento volumi di vetro o pannelli con spessori variabili fino a mm. 55.

Impiego:

- Profilati per finestre e porte scorrevoli ad alto valore termico che consentono la costruzione di infissi ad una, due o più ante e soluzione angolare. Gli accessori del sistema HM 160 permettono la realizzazione di ante con peso di 400 kg.

PHYSICAL CHARACTERISTICS
Alloy extruded profiles:

- ENAW 6060 (EN 573 - 3)

Delivery State:

- T5 (EN 752 - 2)

Size and thickness tolerances:

- EN 755 - 9

Type of air/water seal:

- With brush / special sliding seal.

Glass insertion :

- Glassholder

H useful glass housing:

- mm. 16. Possibility of inserting glass volumes or panels with variable thicknesses up to mm. 55.

Use:

- Profiles for windows and sliding doors with high thermal value that allow the construction of fixtures with one, two or more wings and angular solution.

The accessories of the HM 160 system allow the creation of doors with a weight of 400 kg.

CARATTERISTICHE FISICHE | PHYSICAL CHARACTERISTICS

- ♦ Telaio Fisso | Fixed Frame: **160 x35 mm.**
- ♦ Telaio Mobile | Window Frame: **68 x 68 mm.**
- ♦ Barrette Isolanti | Insulating Rods: **Poliammide Green**
- ♦ Alloggiamento Accessori | Accessories Housing: **ad inserimento [insertion]**
- ♦ Giunzione Angolare | Corner Joint: **squadrette [Corner Joints]**

PRESTAZIONI CERTIFICATE | CERTIFIED PERFORMANCES
■ AAV

- ♦ Permeabilità all'aria | Air Permeability: **Classe 4**
- ♦ Tenuta all'acqua | Watertightness: **Classe E750**
- ♦ Carico di vento | Wind load resistance: **Classe C5**
- ♦ Isolamento acustico | Sound Insulation: **42dB**
- ♦ Resistenza all'effrazione | Breakage resistance: **RC3**

Risultati dei test / CE product pass conforme ad:

Tests Results / CE product pass Compliant with:

UNI EN 14351-1:2006+A1:2010

■ TRASMITTANZA ■ TRANSMITTANCE

$$U_w = 1.30 \text{ W/(m}^2\text{K)}$$

SERRAMENTO CAMPIONE | SAMPLE FRAME

- ♦ Vetro Certificato | Certified Glass:
Doppio Vetro | Double Glazing $U_g = 1.0 \text{ W/(m}^2\text{K)}$
- ♦ Canalina | Duct: $\psi = 0.036 \text{ W/(m}^2\text{K)}$
- ♦ Finestra normalizzata | Normalized Window:
H = 2500 mm. ed L = 2720 mm.

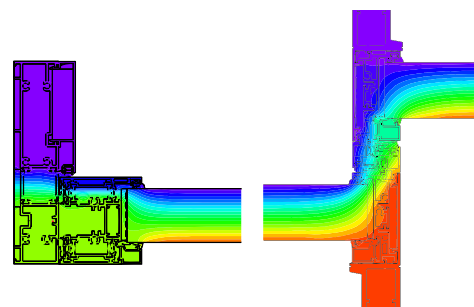
$$U_w = 0.98 \text{ W/(m}^2\text{K)}$$

SERRAMENTO CAMPIONE | SAMPLE FRAME

- ♦ Vetro Certificato | Certified Glass:
Triplo Vetro | Triple Glazing $U_g = 0.6 \text{ W/(m}^2\text{K)}$
- ♦ Canalina | Duct: $\psi = 0.031 \text{ W/(m}^2\text{K)}$
- ♦ Finestra normalizzata | Normalized Window:
H = 2500 mm. ed L = 2720 mm.

■ Dimensioni massime ammesse per il calcolo U_w su serramento campione fino a 2.3 m² (secondo norma UNI EN 14351-1:2006+A1:2010) +/- 25%

■ Maximum allowable dimensions for calculation of the U_w on sample window frame up to 2.3 m² (according to UNI EN 14351-1:2006+A1:2010) +/- 25%



■ Analisi termica con FLIXO vers.8 e WinIso2D Professional 7.8
 ■ Thermicon FLIXO vers.8 e WinIso2D Professional 7.8

Tenuta all'Acqua
Watertightness

Capacità di un inso di impedire infiltrazioni quando è investito da un flusso d'acqua ed è presente una differente pressione tra interno ed esterno.
Capacity of a window to prevent infiltrations when impacted by a gush of water and there is a different internal and external pressure.

Press.	0 Pa	0 Pa	100 Pa	150 Pa	200 Pa	250 Pa	300 Pa	450 Pa	600 Pa	750 Pa	900 Pa	1050 Pa	1200 Pa	1350 Pa	1500 Pa
Velocità	03	24	55	56	47	27	89	6	111	126	138	149	159	169	178
Classe	-1	A2	A3	A4	A5	A6	A7	A8	A9	E750	E900	E1050	E1200	E1350	E1500

Pressure
Speed
Class

L'infisso TWIN, con una pressione del vento pari ad una velocità di 126 Km/h (750 Pa) non ha avuto infiltrazioni
The frame TWIN with a wind pressure equal to a speed of 126 Km/h (750 Pa), had no infiltrations

Classe | Class

E750

EN 1027 - EN 12208

Tenuta all'Aria
Air Permeability

Caratteristica di un inso chiuso di lasciare ltrare aria quando è presente una dierenza di pressione tra l'interno e l'esterno; minori saranno i volumi dispersi, maggiore sarà la qualità del serramento.
Characteristic of a closed window to let air filter through when there is a different internal and external pressure; the lower the dispersed volumes, the higher the quality of the frame.

Press.	150Pa	300Pa	450Pa	600Pa	Pressure
Classe	1	2	3	4	Class

L'infisso TWIN ha superato la prova con Pressione Vento = 111 k/h (600Pa)

The frame TWIN has passed the test with a Wind Pressure = 111 Km/h (600Pa)

Classe | Class

4

EN 1026 - EN 12207

Resist. al Vento
Wind Resistance

Press.	400Pa	800Pa	1200Pa	1600Pa	2000Pa	>2000Pa	Pressure
Flessione	A ($\leq 1/150$)	B ($\leq 1/200$)	C ($\leq 1/300$)				Flexure
Classe	12		34		5E	xxx	Class

* Serramento a 2 ante, dimensione L = mm.3000 ed H = mm.2100 - Certificato n° 1994-CPR-RP2819 (Altre Certificazioni Disponibili)
Double Casement window, dimension L = mm.3000 ed H = mm.2100 - Test certificate no. RP no. 1994-CPR-RP2819 (Other certifications available).

Classe | Class

C5

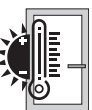
EN 12211-EN 12210

Fonoisolamento
Sound Insulation

Classe	1	2	3	4	Class	DRw ≤ 38 dB	Ammesso l'utilizzo di questo metodo tabellare Admitted This table method
Perdita	8dB	6dB	4dB	2dB	Loss	DRw > 39 dB	Necessario realizzare un campione al vero e sottoporre a prove di Laboratorio. An actual sample must be made and tested in the laboratory.

Abbattimento Acustico
Noise Reduction**42 dB**

EN ISO140-3/1717-1

Trasmissione
Transmittance

Flusso di calore che passa attraverso il serramento per m2 di superficie e per ogni grado di differenza di temperatura tra interno ed esterno.
Flow of heat that passes through the window per m2 of surface and for every degree of difference in temperature between outdoors and indoors.

U_w **1,30 W/m²K**

Finestra a 2 ante normalizzata (2500 mm. x 2720 mm; vetro doppio U_g=1.0 W/m²K certificato con canalina psi=0.036 W/m²K)
Normalised 2 Sashes window (2500 mm x 2720 mm; double glazing U_g=1.0 W/m²K certified with duct psi=0.036 W/m²K)

U_w **0,98 W/m²K**

Finestra a 2 ante normalizzata (2500 mm. x 2720 mm; vetro Triplo U_g=0.6 W/m²K certificato con canalina psi=0.031 W/m²K)
Normalised 2 Sashes window (2500 mm x 2720 mm; triple glazing U_g=0.6 W/m²K certified with duct psi=0.031 W/m²K)

Agenti Atmosferici | Atmospherics

Effrazione | Breakeage

Antieffrazione
Breakage Resistance

Classe	RC1	RC2	RC3
Intrusione	Forza Fisica (Calci, pugni, spallate)	Semplice Attrezzatura (Cunei, Cacciaviti)	R2 + Piede di Porco
Intrusion	Physical strength (Kicks, pushing, pushing with shoulder)	Simple Tools (Wedges, Screwdrivers)	R2 + Crowbar

L'infisso TWIN, resiste in modo efficace ai tentativi di intrusione interna.
The TWIN window effectively resists attempted breakins

Resistenza Effrazione
Breakage Resistance**RC3**

**LA MARCATURA CE DELLE FINESTRE E PORTE PEDONALI**
[Senza caratteristiche di resistenza al fuoco e/o di tenuta al fumo]

Il marchio CE, apposto sui prodotti da costruzione, attesta la loro conformità ai requisiti essenziali definiti dalla direttiva 89/106/CE "Prodotti da costruzione", emanata dal Consiglio della Comunità Europea il 21/12/1988 ed attuata, in Italia, dal D.P.R. n. 246 del 21/04/1993. La marcatura CE di uno specifico prodotto da costruzione diviene obbligatoria, al fine di immettere il prodotto in un mercato della Comunità Europea, allorché sia stata emessa dal CEN, su mandato della Comunità Europea, una "specificazione tecnica" (norma o benestare tecnico) che regolamenti la sua applicazione.

La responsabilità per la verifica dei requisiti del prodotto e per l'apposizione della marcatura CE spetta al suo fabbricante. Al fine di garantire i requisiti richiesti dalle relative norme, il fabbricante è tenuto a:

- ♦ **Predisporre un piano di controllo della produzione (FPC). E' un sistema di procedure e controlli da eseguire durante le fasi di produzione**
- ♦ **Effettuare delle "prove iniziali di tipo" (ITT) sul prodotto al fine di determinare le prestazioni. Le modalità di prova dei requisiti del prodotto sono definite dalle norme richiamate dalla specifica norma prodotto".**

Alcune prove possono essere eseguite dal produttore stesso, secondo le disposizioni delle relative norme armonizzate, mentre altri requisiti sono di competenza di laboratori in possesso di una notifica attribuita loro dallo stato membro di appartenenza (organismi notificati).

IL FABBRICANTE PUO' PROCEDERE IN PIU' MODI

- ♦ **Eseguire autonomamente i test sui propri prodotti presso un istituto Notificato, diventando quindi titolare degli ITT**
- ♦ **Far riferimento ai risultati di prove effettuate dal detentore del sistema di serramento, purché quest'ultimo abbia espresso il proprio consenso per mezzo di un contratto di licenza d'uso stipulato tra le parti.**

Da Febbraio 2010 è obbligatoria la marcatura CE per finestre e porte pedonabili senza caratteristiche di resistenza al fuoco e tenuta al fumo.

L'appendice ZA della norma UNI EN 14351-1 specifica le caratteristiche essenziali per finestre e porte e attribuisce le competenze delle prove iniziali di tipo.

Il requisito relativo ad una determinata caratteristica non è applicabile in quegli Stati Membri nei quali non sussistono requisiti di regolamentazione per tale caratteristica per l'impiego previsto del prodotto. In questo caso, i fabbricanti che immettono i loro prodotti sul mercato di questi Stati membri non sono obbligati a determinare né a dichiarare le prestazioni dei loro prodotti in relazione a questa caratteristica e può essere utilizzata l'opzione "Nessuna Prestazione Determinata" (NPD) nelle informazioni che accompagnano la marcatura CE (vedere punto ZA.3). Tuttavia, l'opzione NPD non può essere utilizzata nel caso in cui la caratteristica sia soggetta a un livello soglia. (Citazione integrale tratta dalla norma UNI EN 14351-1 - appendice ZA)

CE MARKING OF PEDESTRIAN WINDOWS AND DOORS
[Without fire resistance and/or smoke resistance characteristics]

The CE marking, affixed to products, certifies their compliance with the essential requirements of Directive 89/106/EC "Construction products", issued by the Council of the European Community on 21/12/1988 and implemented, in Italy, by Presidential Decree no. 246 of 21/04/1993. The CE marking of a specific product is mandatory when the product is to be placed on a European Community market, whenever a "technical specification" (standard or technical approval) that regulates its application has been issued by CEN, under mandate of the European Community.

The manufacturer is responsible for verifying product requirements and affixing the CE marking. To ensure fulfilment of the requirements of the relevant standards, the manufacturer must:

- ♦ *Draw up a production control plan (PCP). This system of procedures and controls are performed during the production stages.*
- ♦ *Carry out "initial type tests" (ITT) on the product in order to determine performance. The test methods of the product requirements are defined by the standards referred to in the specific product standard ".*

Some tests can be carried out by the manufacturer, in accordance with the provisions of the relevant harmonised standards, while others are the responsibility of laboratories awarded notified body status by their Member State (notified bodies).

THE MANUFACTURER MAY PROCEED IN SEVERAL WAYS:

- ♦ *Carry out the tests on its products independently at a Notified Body, thus becoming the holder of the ITTs*
- ♦ *Refer to the results of tests carried out by the holder of the window and door system, provided that the latter has given his consent by means of a user licence agreement signed by the parties.*

From February 2010, CE marking is mandatory for pedestrian windows and doors without fire resistance and smoke resistance characteristics. Appendix ZA of standard UNI EN 14351-1 specifies the essential characteristics for windows and doors and attributes responsibilities for the initial type tests.

The requirement for a given characteristic does not apply in the Member States where there are no regulatory requirements for that characteristic for the intended use of the product. In this case, manufacturers who place their products on the market of these Member States shall not be obliged to determine or to declare the performance of their products for same characteristic and the "No Performance Determined" (NPD) option may be used in the information accompanying the CE marking (see point ZA.3). However, the NPD option cannot be used when the characteristic is subject to a threshold level. (Full quote from UNI EN 14351-1 - Appendix ZA)



Per finestre e porte senza funzione di compartimentazione del fuoco o fumo e non poste nelle vie di fuga (sistema di attestazione della conformità 3):

For windows and doors without a fire or smoke compartmentalization function and not located in run off areas (conformity attestation system 3):

CARATTERISTICHE FONDAMENTALI FUNDAMENTAL CHARACTERISTICS	Espressioni di Prestazione Expressions of Performance	Competenze Prove Iniziali Tipo Initial Type Test Responsibilities		
		ON= Organismo Notificato; PR= Produttore ON=Notified Body; PR= Manufacturer		
		Finestre Windows	Porte Doors	Lucernari Hopper Windows
Comportamento al FUOCO Dall'Esterno <i>External Fire Behaviour</i>				ON
Resistenza al FUOCO <i>Fire Reaction</i>	Euroclassi <i>Euroclasses</i>			ON
Tenuta all'ACQUA <i>Watertightness</i>	Classi Tecniche <i>Technical Classes</i>	ON	ON	ON
Sostanze Pericolose <i>Hazardous Substances</i>		ON	ON	
Resistenza al Carico del VENTO <i>Wind Load Resistance</i>	Classi Tecniche <i>Technical Classes</i>	ON	ON	PR
Resistenza al Carico della NEVE e Carico Permanente <i>Snow Load and Permenent Load</i>	Classi Tecniche <i>Technical Classes</i>			PR
Resistenza all'URTO <i>Shock Resistance</i>	KN/m² <i>KN/sqm</i>		PR	ON
Capacità Portante dei Dispositivi di Sicurezza <i>Load-bearing Capacity of Savety evices</i>	Soglia	ON	ON	ON
Altezza <i>Height</i>	mm.		PR	
Forze di azionamento (solo dispositivi automatici) <i>Operating forces (automatic devices only)</i>	Classi Tecniche <i>Technical Classes</i>		ON	
Prestazione acustica <i>Acoustic Performance</i>	dB	ON	ON	ON
Trasmittanza termica <i>Heat Transmittance</i>	W/m²K	ON	ON	ON
Proprietà radioattive <i>Radioactive properties</i>				PR
Permeabilità all'ARIA <i>AIR Permeability</i>	Classi Tecniche <i>Technical Classes</i>	ON	ON	PR

La valutazione delle caratteristiche da dichiarare è funzione della destinazione d'uso del prodotto e della legislazione vigente nello Stato Membro, ove esso è immesso.

The characteristics to be declared depend on the intended use of the product and the legislation in force in the Member State where it is sold.



TEST INIZIALI di TIPO (ITT)

La serie riportata nel presente catalogo è stata sottoposta a test iniziali di tipo (ITT) relativamente ai requisiti previsti dalla norma prodotto UNI EN 14351-1.

I risultati dei test iniziali di tipo sono estendibili a serramenti di differente tipologia e con differenti dimensioni e componenti, secondo le indicazioni fornite dalla norma EN 14351-1 in Appendice A (interdipendenza fra le caratteristiche e i componenti), Appendice E (determinazione delle caratteristiche) ed Appendice F (selezione facoltativa di provini rappresentativi per le finestre)

Il costruttore di serramenti ha la responsabilità di verificare la rispondenza del serramento prodotto rispetto al campione sottoposto a prova. Il consorzio TWIN Systems mette a disposizione dei propri clienti i risultati dei test effettuati, a seguito della stipulazione di un contratto d'uso gratuito degli stessi.

Dichiarazione di Conformità

Il fabbricante del serramento è tenuto a consegnare al committente una dichiarazione di conformità la quale, in accordo alla norma UNI EN 14351-1, deve includere :

- ♦ **Nome ed indirizzo del fabbricante o del suo rappresentante autorizzato con sede nella EEA;**
- ♦ **Descrizione del prodotto (tipo, identificazione, impiego, ecc.) e una copia delle informazioni che accompagnano la marcatura CE;**
- ♦ **Disposizioni alle quali il prodotto è conforme (appendice AZ della norma prodotto UNI EN 14351-1);**
- ♦ **Condizioni particolari applicabili all'impiego del prodotto (per esempio disposizioni per l'impiego in determinante condizioni, ecc.);**
- ♦ **Nome e indirizzo del/i laboratorio/i approvato/i.**
- ♦ **Nome e qualifica della persona incaricata di firmare la dichiarazione per conto del fabbricante o del suo rappresentante autorizzato.**

La dichiarazione e il certificato devono essere presentati nella lingua o nelle lingue ufficiali dello Stato Membro in cui il prodotto deve essere utilizzato.

Etichettatura e Marcatura

Il fabbricante deve fornire informazioni sufficienti ad assicurare la rintracciabilità del suo prodotto fornendo il collegamento fra il prodotto, il fabbricante e la produzione. Queste informazioni devono essere contenute su un'etichetta o specificate in documenti di accompagnamento nelle specifiche tecniche pubblicate dal fabbricante. Le informazioni seguenti devono accompagnare il simbolo di marcatura CE:

- ♦ **Nome e indirizzo registrato o marchio di identificazione del fabbricante;**
- ♦ **Ultime due cifre dell'anno in cui la marcatura CE è stata applicata;**
- ♦ **Riferimento alla norma di prodotto (EN 14351-1);**
- ♦ **Descrizione del prodotto: nome generico, materiale, dimensioni, ecc. e impiego previsto;**
- ♦ **Informazioni sulle caratteristiche essenziali che devono essere dichiarate presentate come:**
- ♦ **Valori dichiarati o livelli e/o classi;**
- ♦ **NPD - " Nessuna prestazione determinata" per le caratteristiche quando è pertinente.**

INITIAL TYPE TESTS (ITT)

The series in this catalogue has been subjected to initial type tests (ITT) for the requirements of product standard UNI EN 14351-1. The results of the initial type tests can be extended to doors and windows of different types and of different sizes and compositions, according to the indications provided for by EN 14351-1 in Appendix A (interdependence between the characteristics and compositions), Appendix E (determination of characteristics) and Appendix F (optional selection of representative samples for the windows).

The door and window manufacturer is responsible for verifying compliance of the window with the sample under test. The TWIN Systems consortium makes the results of the test performed available to its customer, after the free usage agreement has been signed.

Declaration of Conformity

The window and door manufacturer must provide the customer with a declaration of conformity which, in accordance with UNI EN 14351-1, must include:

- ♦ ***Name and address of the manufacturer or its authorised representative established in the EEA;***
- ♦ ***Description of the product (type, identification, use, etc.) and a copy of the information accompanying the CE marking;***
- ♦ ***Provisions with which the product complies (Appendix AZ of product standard UNI EN 14351-1);***
- ♦ ***Special conditions applicable to the use of the product (e.g. provisions for use under certain conditions, etc.);***
- ♦ ***Name and address of the approved laboratory(ies).***
- ♦ ***Name and capacity of the person empowered to sign the declaration on behalf of the manufacturer or his authorised representative.***

The declaration and certificate must be done in the official language or languages of the Member State where the product is to be used.

Labelling and Marking

The manufacturer must provide sufficient information to ensure the traceability of the product providing the link between the product, the manufacturer and the production. This information must be contained on a label or specified in accompanying documents in the technical specifications published by the manufacturer. The following information must accompany the CE marking symbol:

- ♦ ***Manufacturer's name and registered address or identification mark;***
Last two digits of the year in which the CE marking was applied;
Reference to the product standard (EN 14351-1);
- ♦ ***Description of the product: generic name, material, size, etc. and intended use; Information about the essential characteristics that must be declared: Declared values or levels and/or classes;***
- ♦ ***NPD - " No Performance Determined" for characteristics when relevant.***



Il simbolo della marcatura CE e le informazioni di accompagnamento devono essere apposti in modo visibile, leggibile e indelebile in una o più delle posizioni seguenti (gerarchia di preferenza del fabbricante):

Qualsiasi parte idonea del prodotto stesso, purché sia assicurata la visibilità quando si aprono le ante; Su un'etichetta attaccata; Sul suo imballaggio; Sul documento commerciale di accompagnamento.

DOCUMENTAZIONE TECNICA DI ACCOMPAGNAMENTO

Il fabbricante deve fornire informazioni su quanto segue:

- *Immagazzinaggio e movimentazione, se il fabbricante non è responsabile dell'installazione del prodotto;*
- *Requisiti e tecniche d'installazione (sul posto), se il fabbricante non è responsabile dell'installazione del prodotto (Guida UNCSAAL)*
- *Manutenzione e pulizia (Manuale Consorzio TWIN SYSTEMS)*
- *Istruzioni d'uso finali incluse le istruzioni per la sostituzione di componenti*
- *Istruzioni per l'uso in condizioni di sicurezza.*

In Italia i requisiti obbligatori per la Marcatura CE sono:

- *Permeabilità dell'aria*
- *Trasmittanza termica*
- *Proprietà radiative (Fattore solare g, Trasmissione luminosa (TV))*

In Spagna e in Portogallo i requisiti obbligatori per la Marcatura CE sono:

- *Permeabilità all'aria*
- *Tenuta all'acqua*
- *Resistenza al vento*
- *Trasmittanza termica*
- *Isolamento acustico*

The CE marking and accompanying information must be affixed in a visible, legible and indelible way in one or more of the following positions (manufacturer's hierarchy of preference):

Any suitable part of the product itself, provided that visibility is ensured when opening the doors; On an attached label; On its packaging; On the accompanying commercial document.

ACCOMPANYING TECHNICAL DOCUMENTATION

The manufacturer will provide information about:

- *Storage and handling, if the manufacturer is not responsible for the installation of the product*
- *Requirements and installation methods (on site), if the manufacturer is not responsible for the installation of the product (UNCSAAL Guide)*
- *Maintenance and cleaning (TWIN SYSTEMS Consortium Manual)*
- *Final instructions for use including instructions for replacing components; Instructions for safe use.*

In Italy, the mandatory requirements for CE marking are:

- *Air permeability*
- *Heat Transmittance*
- *Radiative properties (Solar factor g, Light transmission (TV)).*

In Spain and Portugal the mandatory requirements for CE marking are :

- *Air permeability*
- *Watertightnes*
- *Wind resistance*
- *Heat Transmittance*
- *Sound insulation*



TRASMITTANZA TERMICA DEI SERRAMENTI

HEAT TRANSMISSION OF WINDOWS

E' necessario sapere che le prescrizioni dettate dal decreto ministeriale cambiano in funzione della tipologia di intervento edilizio (nuova costruzione, ristrutturazione importante di primo oppure secondo livello, riqualificazione energetica) e si applicano ad edifici sia pubblici sia privati.

Per edifici di nuova costruzione si intendono quei fabbricati il cui titolo abilitativo sia stato richiesto dopo l'entrata in vigore del decreto.

Sono assimilati agli edifici di nuova costruzione gli edifici sottoposti a demolizione e ricostruzione, qualunque sia il titolo abilitativo necessario, e gli ampliamenti di edifici esistenti la cui nuova porzione abbia un volume lordo climatizzato superiore al 15% di quello esistente o comunque superiore a 500 m³.

Per interventi di ristrutturazione importante di primo livello si intendono quelli che interessano l'involucro edilizio con un'incidenza superiore al 50 per cento della superficie disperdente lorda complessiva dell'edificio, comprendendo anche la ristrutturazione dell'impianto termico per il servizio di climatizzazione invernale e/o estiva asservito all'intero edificio.

Per interventi di ristrutturazione importante di secondo livello si intendono quelli che interessano l'involucro edilizio con un incidenza superiore al 25 per cento della superficie disperdente lorda complessiva dell'edificio e possono interessare l'impianto termico per il servizio di climatizzazione invernale e/o estiva.

Negli interventi di riqualificazione energetica rientrano gli interventi non riconducibili agli interventi succitati e che hanno un impatto sulla prestazione energetica dell'edificio. Rientrano quindi anche:

- Le ristrutturazioni che interessano l'involucro edilizio con un incidenza inferiore o uguale al 25% della superficie disperdente lorda complessiva dell'edificio e/o consistono nella nuova installazione, nella ristrutturazione di un impianto termico asservito all'edificio o di altri interventi parziali, ivi compresa la sostituzione del generatore;

- Gli ampliamenti di edifici esistenti la cui nuova porzione abbia un volume lordo climatizzato inferiore o uguale al 15% di quello esistente o comunque inferiore a 500 m³.

Per gli edifici di nuova costruzione e per quelli sottoposti a ristrutturazioni di primo livello, non sono previsti specifici limiti di trasmittanza termica da rispettare per le chiusure trasparenti. Sussiste l'obbligo di rispettare limiti per quanto concerne altri parametri tecnici che connotano gli impianti, l'involucro edilizio e l'edificio nel loro complesso (per esempio coefficiente medio globale di scambio termico per trasmissione per unità di superficie disperdente HT' - area solare equivalente estiva per unità di superficie utile Asol,est/Asup utile - indice di prestazione termica utile per riscaldamento EPH,nd - indice di prestazione termica utile per il raffrescamento EPC,nd - indice di prestazione energetica globale dell'edificio EPgl,tot, ecc.) contenuti nell'Allegato A del decreto

Note that the requirements as of the ministerial decree depend on the type of construction (new construction, major first or second level renovation, energy upgrading) and apply to both public and private buildings.

New buildings are those whose building permit has been requested following the promulgation of the decree.

Buildings subject to demolition and reconstruction, irrespective of the type of building permit, and extensions to existing buildings whose new portion has a gross air-conditioned volume of more than 15% of the existing one or in any case more than 500 m³ are considered new buildings.

Major first level renovations are those affecting the building shell with an impact of more than 50% of the building's total gross dispersant surface, also including the renovation of the heating system for the winter and/or summer air conditioning service of the entire building.

For major second-level renovation interventions, those that concern the building shell with an impact of more than 25 percent of the building's total gross dispersant surface and can regard the heating plant system for the winter and/or summer air conditioning service.

Energy upgrading works include activities that are not attributable to the aforementioned activities and that have an impact on the building's energy performance. The following are therefore also included:

- Renovations that affect the building shell with an impact of less than or equal to 25% of the building's total gross dispersant surface and/or the new installation or upgrading of the building's heating plant or other partial works, including the replacement of the generator;
- Extensions of existing buildings whose new portion has a gross air-conditioned volume of less than or equal to 15% of the existing one or in any case less than 500 m³.

For new buildings and buildings undergoing first level renovations, there are no specific heat transmission limits to be respected for transparent doors. There is an obligation to respect the limits of other technical parameters that characterise the plants, shell and building as a whole (for example, average overall heat exchange coefficient for transmission by dispersant surface unit HT' - equivalent summer solar area per unit of surface area Asol,est/Asup - useful heat performance index for heating EPH,nd - heat performance index for cooling EPC,nd - overall energy performance index of the building EPgl,tot, etc.) contained in Annex A of the decree

I limiti dell'Allegato A sul coefficiente medio globale di scambio termico per trasmissione per unità di superficie disperdente HT' sono da rispettare anche per gli interventi di ristrutturazione importante di secondo livello.

Nell'ambito degli interventi di ristrutturazione importante di secondo livello e degli interventi di riqualificazione energetica sono invece da rispettare i limiti riportati nell'Appendice B del decreto relativamente:

- Alla trasmittanza termica U_w dei serramenti (**trasparenti, opachi**) e dei cassonetti **posti a delimitazione di ambienti climatizzati verso l'esterno oppure verso ambienti non climatizzati (cfr. tabella 1);**
- Al fattore di trasmissione solare totale g_{gl+sh} dei serramenti vetrati in combinazione con schermature solari mobili **posizionati sui fronti dell'edificio SUD, EST, OVEST, SUD-EST, SUD-OVEST (cfr. tabella 2).**

The limits of Annex A on the overall average coefficient of heat exchange through transmission by unit of dispersant surface HT' must also be respected for major second-level renovations.

In the case of major second level renovations and energy upgrading works, the limits set out in Appendix B of the decree must be respected for:

- Heat transmission U_w of the windows (transparent, opaque) and shutter boxes positioned to delimit air-conditioned environments towards the outside or towards non-conditioned environments (see table 1);
- The total solar transmission factor g_{gl+sh} glazed windows in combination with mobile solar shields positioned on the SOUTH, EAST, WEST, SOUTH-EAST, SOUTH-WEST building façades (see table 2).

Tabella/Table 1

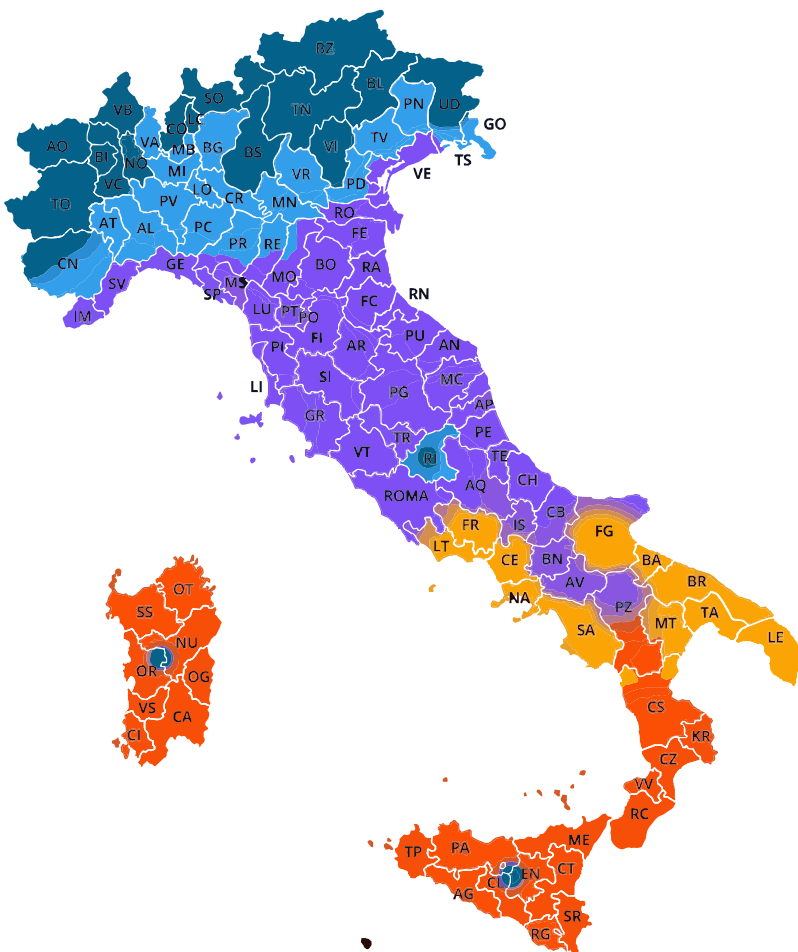
Valori limite della trasmittanza U_w dei serramenti (trasparenti, opachi) e dei cassonetti posti a delimitazione di ambienti climatizzati verso l'esterno oppure verso ambienti non climatizzati.

ZONA CLIMATICA	U_w [W/m ² K]	
	2021	ECOBONUS
Zona A	3.00	2.60
Zona B	3.00	2.60
Zona C	2.00	1.75
Zona D	1.80	1.67
Zona E	1.40	1.30
Zona F	1.00	1.00

Tabella/Table 2

Valori limite del fattore di trasmissione solare totale g_{gl+sh} chiusure trasparenti in presenza di schermature solari mobili installate su fronti dell'edificio SUD, EST, OVEST, SUD-EST, SUD-OVEST

ZONA CLIMATICA CLIMATIC ZONE	g_{gl+sh}
	2021
Zone TUTTE ALL ZONES	0.35





VALUTAZIONE DELLA PRESTAZIONE TERMICA DEI SERRAMENTI

TRASMITTANZA TERMICA:

La trasmittanza termica rappresenta il parametro più significativo per la valutazione del comportamento termico di un prodotto edilizio: minore è il suo valore migliore è la prestazione termica posseduta dal componente stesso.

Il calcolo semplificato della trasmittanza termica del componente finestrato U_w composta da un singolo serramento e relativo vetro (o pannello) si esegue con la formula:

VALUTAZIONE DELLA PRESTAZIONE TERMICA DEI SERRAMENTI

HEAT TRANSMISSION:

Heat transmission is the most significant factor in the evaluation of the thermal performance of a building product: the lower its value, the higher the thermal performance of the product.

The simplified heat transmission calculation of the product glazing U_w comprising a single window and related glass (or panel) the formula is:

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

■ A_g : Area del vetro in m^2

■ U_g : Trasmittanza termica riferito all'area centrale della vetrata, e non include l'effetto del distanziatore del vetro lungo il bordo della vetrata stessa

■ A_f : Area del telaio

■ U_f : Trasmittanza termica del telaio applicabile in assenza della vetrata

■ l_g : Lunghezza del perimetro del vetro

■ $\emptyset_g$: Trasmittanza termica lineare concernente la conduzione di calore supplementare che avviene a causa dell'interazione tra telaio, vetri e distanziatore dei vetri in funzione delle proprietà termiche di ognuno di questi componenti e si rileva, secondo quanto precisato nell'allegato E della norma UNI EN ISO 10077-1, preferibilmente con il calcolo numerico eseguito in accordo con la norma ISO 10077-2; quando non sono disponibili i risultati di calcolo dettagliati ci si può riferire ai prospetti E.1 ed E.2 i quali indicano i valori $\emptyset_g$ di default per le tipiche combinazioni di telai, vetri e distanziatori.

■ A_g : Area of the glass in m^2

■ U_g : Heat transmission of the central area of the window, not including the effect of the glass spacer along the edge of the window

■ A_f : Frame area

■ U_f : Heat transmission of the frame applicable in absence of the glass

■ l_g : Length of the perimeter of the glass

■ $\emptyset_g$: Linear heat transmission concerning the additional heat conduction that occurs due to the interaction between the frame, glass and spacer of the glass as a function of the thermal properties of each of these components and it is noted, as specified in Annex E of standard UNI EN ISO 10077-1, preferably with the numerical calculation performed in accordance with ISO 10077-2; when the detailed calculation results are not available you can refer to the default $\emptyset$ for the typical combinations of frames, glass and spacers.

**ESTENDIBILITÀ**

L'appendice F della norma di prodotto UNI EN 14351-1 suggerisce le tipologie di serramento rappresentative e le relative estensioni, ma essendo la tabella puramente informativa, sta allo stesso produttore scegliere i campioni.

EXTENSIBILITY

Appendix F of the product standard UNI EN 14351-1 suggests the types of typical windows and their extensions, but since the table is purely informative, it is up to the manufacturer to choose the samples.

TIPO DI FINESTRA WINDOW TYPE	POSSIBILE ESTENSIONE Possible Extension
Anta FISSA <i>Fixed</i>	Finestra Battente/Ribalta <i>Tilt & Turn Window</i>
Porta Finestra ad Anta Singola (Apertura Interna o Esterna) <i>Single door window (internal or external opening)</i>	
Finestra Anta Singola con Ribalta <i>Single Sash Tilt & Turn Window</i>	
Finestra con DUE o più Porte (Apertura Interna o Esterna) <i>Window with two or more doors (internal or external opening)</i>	Stessa Tipologia <i>Same Type</i>
Finestra a UNA o DUE ante orizzontali scorrevoli <i>Window with ONE or TWO horizontal sliding sashes</i>	
Finestra con DUE Ante Scorrevoli <i>Window with TWO Sliding Sashes</i>	Stessa Tipologia <i>Same Type</i>
Finestra a UNA o DUE ante orizzontali scorrevoli con Ribalta <i>Window with ONE or TWO horizontal sliding sashes with Tilt & Turn</i>	Stessa Tipologia <i>Same Type</i>
Bilico Orizzontale o Verticale <i>Horizontal or vertical pivoting window</i>	Stessa Tipologia <i>Same Type</i>
Finestra a Soffietto <i>Folding Window</i>	Stessa Tipologia <i>Same Type</i>

La norma UNI EN 14351-1 prevede che il calcolo effettuato su di un serramento aventi dimensioni:

1230 (±25%) x 1480 (-25%)
1480 (+25%) x 2180 (±25%)

Le analisi termiche effettuate con le misure sopra descritte, possono essere estese a tutti i serramenti di tutte le dimensioni, purché il vetro utilizzato abbia come valore di U_g uguale o inferiore a 1.9 W/m²K, altrimenti la norma delle regole di estensione dei valori calcolati sull'infisso normalizzato ad infissi di diverse dimensioni.

Ovviamente i calcoli devono essere effettuati sulle stesse tipologie di infissi, e s'intende che una modifica del componente modifica la caratteristica in questione. In termini di prestazioni termiche è ovvio che andando a togliere o ad aggiungere elementi (per esempio passare da una finestra ad una anta, da una a due e così via), determina una variazione dei valori finali.

The UNI EN 14351-1 standard sets forth the calculation carried out on a window with dimensions:

1230 (±25%) x 1480 (-25%)
1480 (+25%) x 2180 (±25%)

The thermal analyses carried out with the measurements described above can be extended to doors and windows of all sizes, provided that the glass used has a U_g value equal to or less than 1.9 W/m²K, otherwise the standard of the rules of the values calculated on the normalised frame is extended to frames of different sizes.

Obviously, the calculations must be carried out on the same types of frames, and it is understood that any modification to the component changes the characteristic in question. In terms of thermal performance, it is clear that, removing or adding elements (for example, switching from a window with one door to one with two doors, and so on) results in a change in the final values.



POSA QUALITÀ

IL MARCHIO

Il Marchio Posa Qualità Serramenti distinguerà i migliori costruttori italiani di serramenti di tutti i materiali, offrendo ai consumatori italiani uno strumento tangibile per distinguere le migliori aziende con una garanzia assicurativa post vendita sul prodotto installato fino a 10 anni.

In questo modo il costruttore di serramenti potrà qualificare al cliente non solo le prestazioni «astratte» di un serramento, bensì quelle reali, una volta installato, potrà attestare la qualificazione della propria Azienda e potrà garantire nel tempo ciò che ha venduto. Perché un Marchio rigoroso sulla Posa è l'unica forma di garanzia tangibile da offrire al consumatore.

Il progetto Marchi Posa Qualità prevede un piano di formazione che coinvolgerà tutta la filiera industriale del serramento, un Marchio che certificherà la qualità della progettazione della posa attraverso severi test di laboratorio e un Marchio che garantirà e verificherà la sua corretta esecuzione attraverso controlli a campione.

Il consorzio TWIN SYSTEMS è certificato PROGETTAZIONE Posa Qualità Serramenti dal 2020. I suoi consorziati organizzano periodicamente corsi professionali per l'acquisizione dei patentini professionali per i posatori.



POSA QUALITÀ

THE TRADEMARK

The Posa Qualità Serramenti Trademark identifies the best Italian manufacturers of windows and doors in all materials, offering Italian consumers a tangible way of identifying the best companies with an after-sales warranty on the installed product of up to 10 years.

In this way, the window manufacturer will be able to offer the customer not only a guaranteed "generic" good performance of the window, but real guarantees and, once installed, it will be able to attest the quality of the company and guarantee the products sold over time. Because guaranteed good installation is the only way offering customers peace of mind.

The Posa Qualità Brands project includes a training plan that will involve the entire window supply chain, a Brand that will certify the quality of the installation by means of strict laboratory tests and guarantee correct installation through spot checks.

The TWIN SYSTEMS Consortium has been certified Posa Qualità Serramenti DESIGN since 2020. The consortium members organise periodic training courses for installers with the award of professional licenses.

MANUALE e CATALOGO PRODOTTI TWIN SYSTEMS POSA QUALITÀ

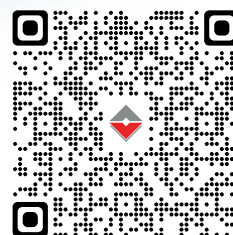


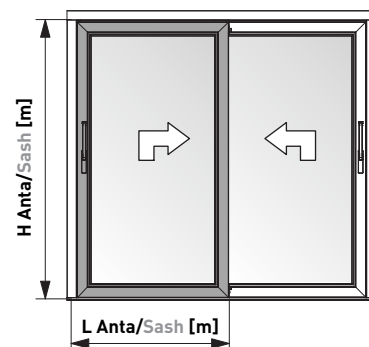
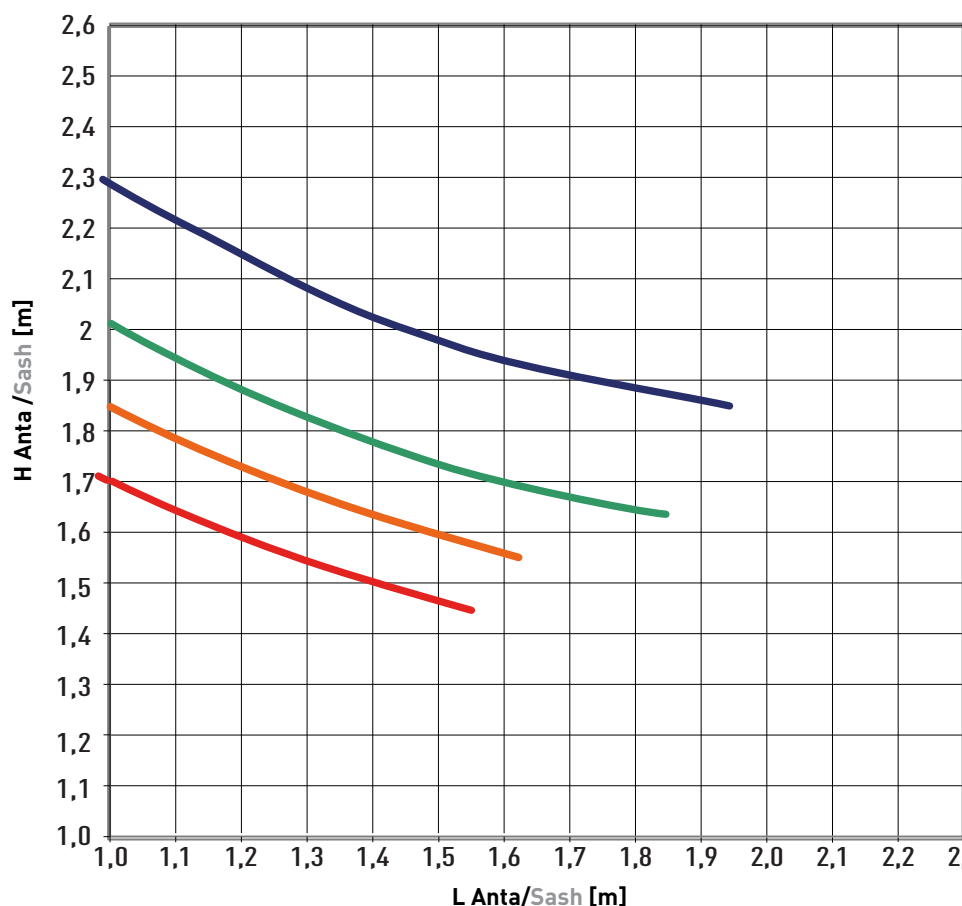
IL MANUALE e CATALOGO PRODOTTI TWIN SYSTEMS per la POSA QUALITÀ è

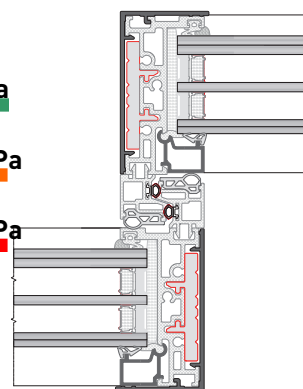
- Disponibile presso le sedi dei consorziati e dei serramentisti di riferimento
- Liberamente scaricabile sul sito www.twinsystems.it nella sezione CATALOGHI

The TWIN SYSTEMS MANUAL and PRODUCT CATALOGUE for POSA QUALITÀ

- Is available from consortium members and reference window and door manufacturers
- Free download from the website www.twinsystems.it in the CATALOGUES section




1 Anta Fissa EXT + 1 Anta mobile INT | Versione 90°
[1 Fixed EXT Sash + 1 Mobile INT Sash] 90° Version

Centrale Ridotto
Reduced Middle Stud

500 Pa
750 Pa
1000 Pa
1250 Pa

BX48 + HM16.306
**Infisso a 2 ante.
Deflessione del nodo centrale**

Il dimensionamento risultante dal grafico è solo indicativo. Il progettista o il serramentista, nel determinare le dimensioni massime dei serramenti, dovrà considerare e valutare, oltre le dimensioni ed il momento d'inerzia dei profilati, anche le caratteristiche applicative e meteorologiche quali l'altezza dal suolo, l'esposizione alla pioggia e la velocità dei venti nella zona.

Per questi dati consigliamo di consultare e seguire le "Raccomandazioni UNCSAAL" elaborate sulla base delle norme UNI, UNI-EN e UNI-CNR esistenti in merito. Verificare che la freccia del profilato sia compatibile con quella del vetro utilizzato.

Le curve rappresentano la larghezza massima dell'anta in funzione della sua altezza e della pressione del vento. Il serramento è considerato a 2 ante uguali. Le curve sono calcolate sulla base della deformazione elastica di 1/300 dell'altezza del serramento.

**Double sash windows.
Deflection of the central node**

In determining the maximum dimensions of the doors and windows, in addition to the dimensions and moment of inertia of the profiles, the designer or manufacturer must also consider and evaluate the application and meteorological conditions such as the height from the ground, exposure to rain and the speed of the winds in the area.

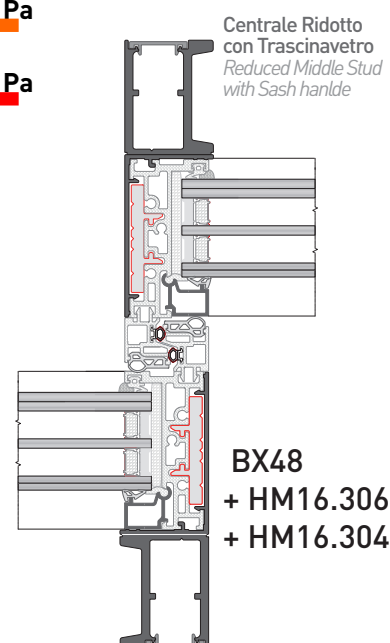
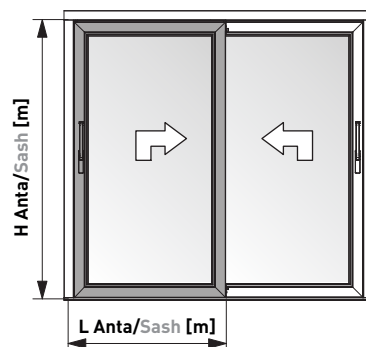
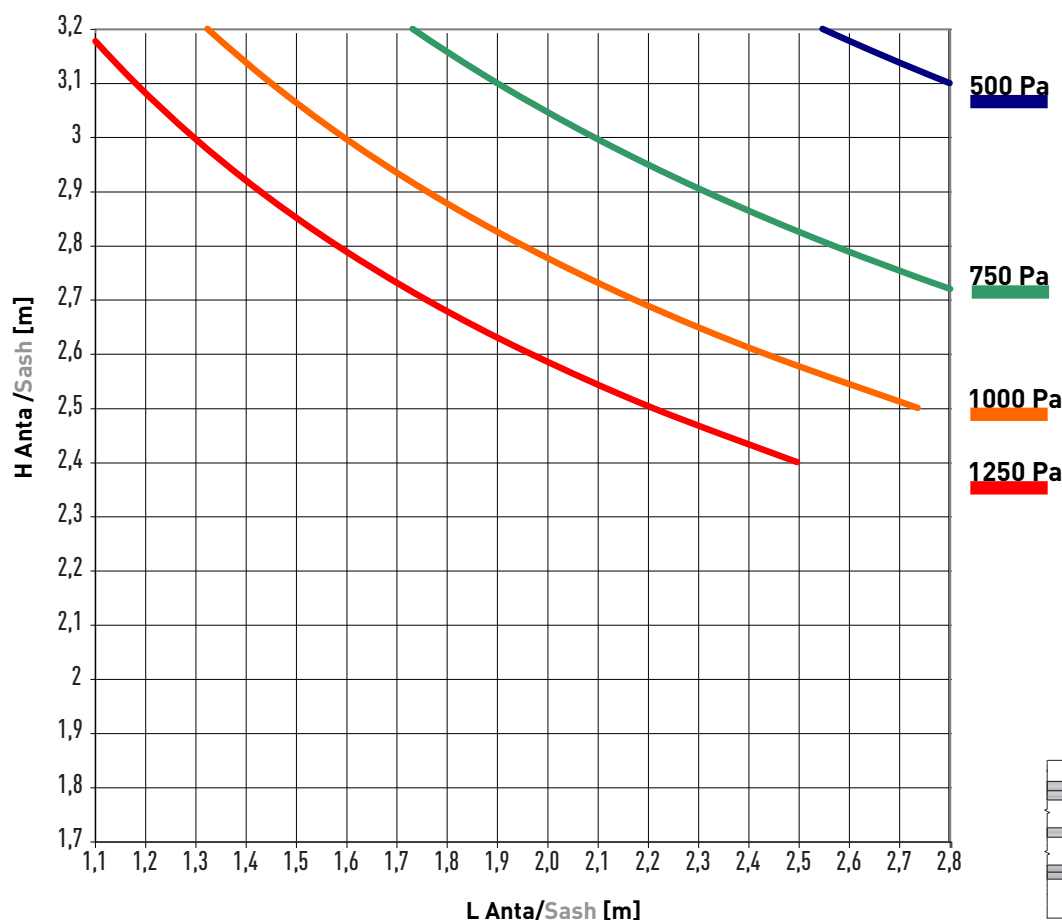
For these data, we recommend consulting and following the "UNCSAAL Recommendations" drawn up on the basis of the relative UNI, UNI-EN and UNI-CNR standards. Check that the arrow on the profile is compatible with the arrow on the glass used.

The curves represent the maximum width of the door as a function of its height and wind pressure. The frame is considered to have 2 doors. The curves are calculated on the basis of the elastic deformation of 1/300 of the height of the window.

NB: I dati dimensionali del grafico sono indicativi e da verificare in fase di progettazione esecutiva
NB: The dimensional data in the diagram are indicative and must be verified during the final design phase.



1 Anta Fissa EXT + 1 Anta mobile INT] + Rinforzi EXT/INT | Versione 90°
(1 Fixed EXT Sash + 1 Mobile INT Sash] + +INT/EXT Reinforcement | 45° Version



Infisso a 2 ante.
Deflessione del nodo centrale

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Double sash windows.
Deflection of the central node

In determining the maximum dimensions of the doors and windows, in addition to the dimensions and moment of inertia of the profiles, the designer or manufacturer must also consider and evaluate the application and meteorological conditions such as the height from the ground, exposure to rain and the speed of the winds in the area.

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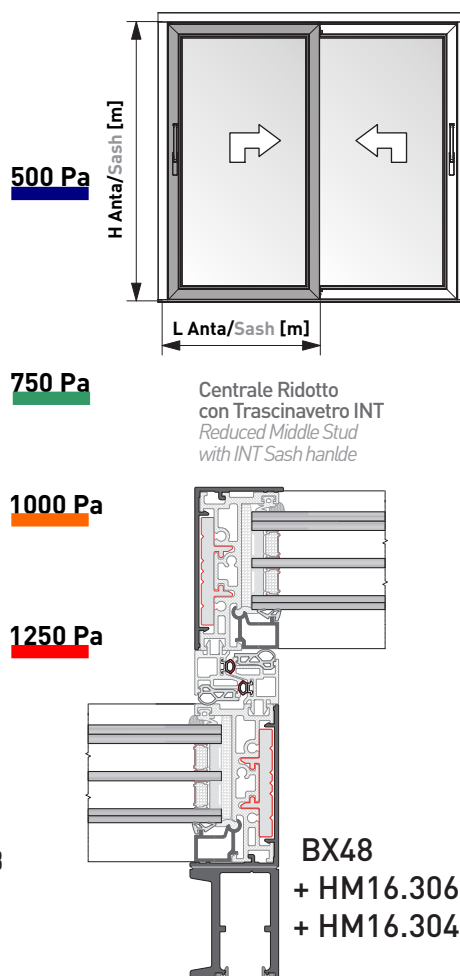
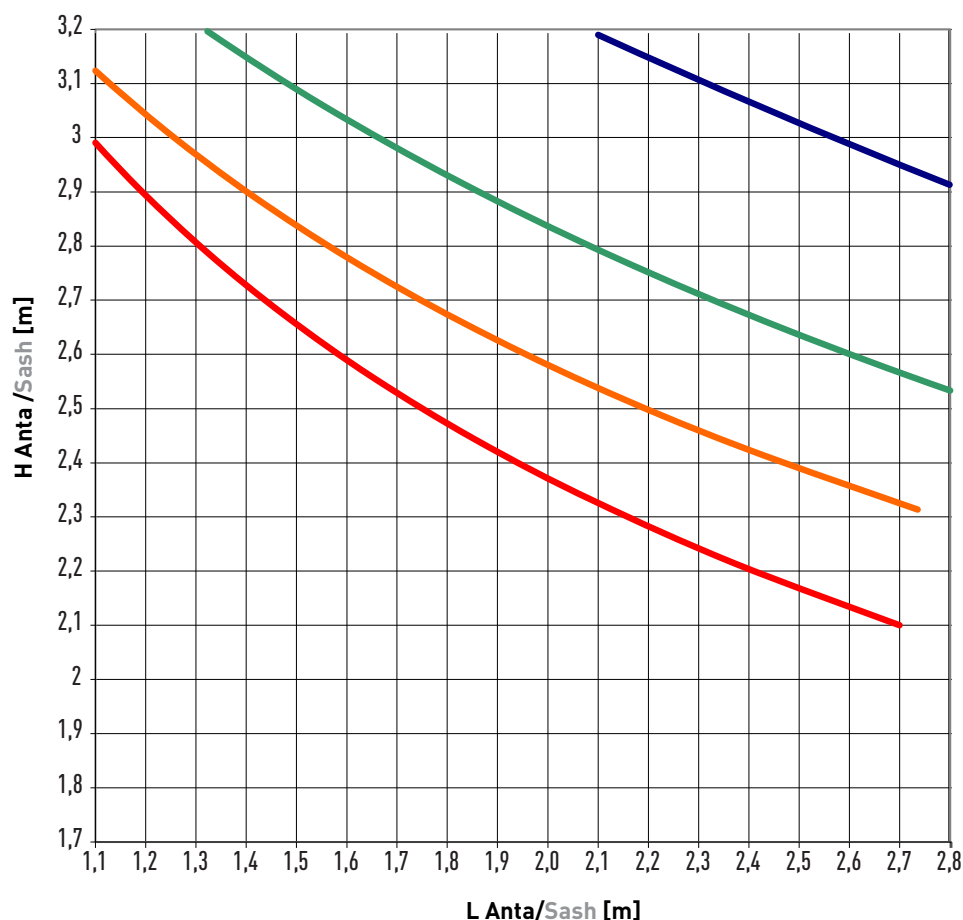
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1 Anta Fissa EXT + 1 Anta mobile INT) + Rinforzo INT | Versione 90°

(1 Fixed EXT Sash + 1 Mobile INT Sash) + EXT Reinforcement | 45° Version



**Infisso a 2 ante.
Deflessione del nodo centrale**

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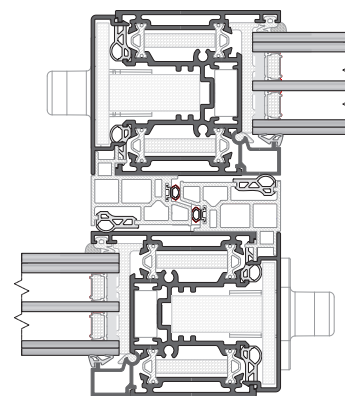
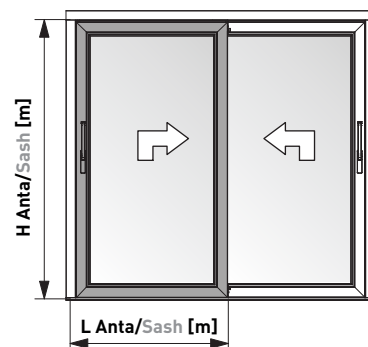
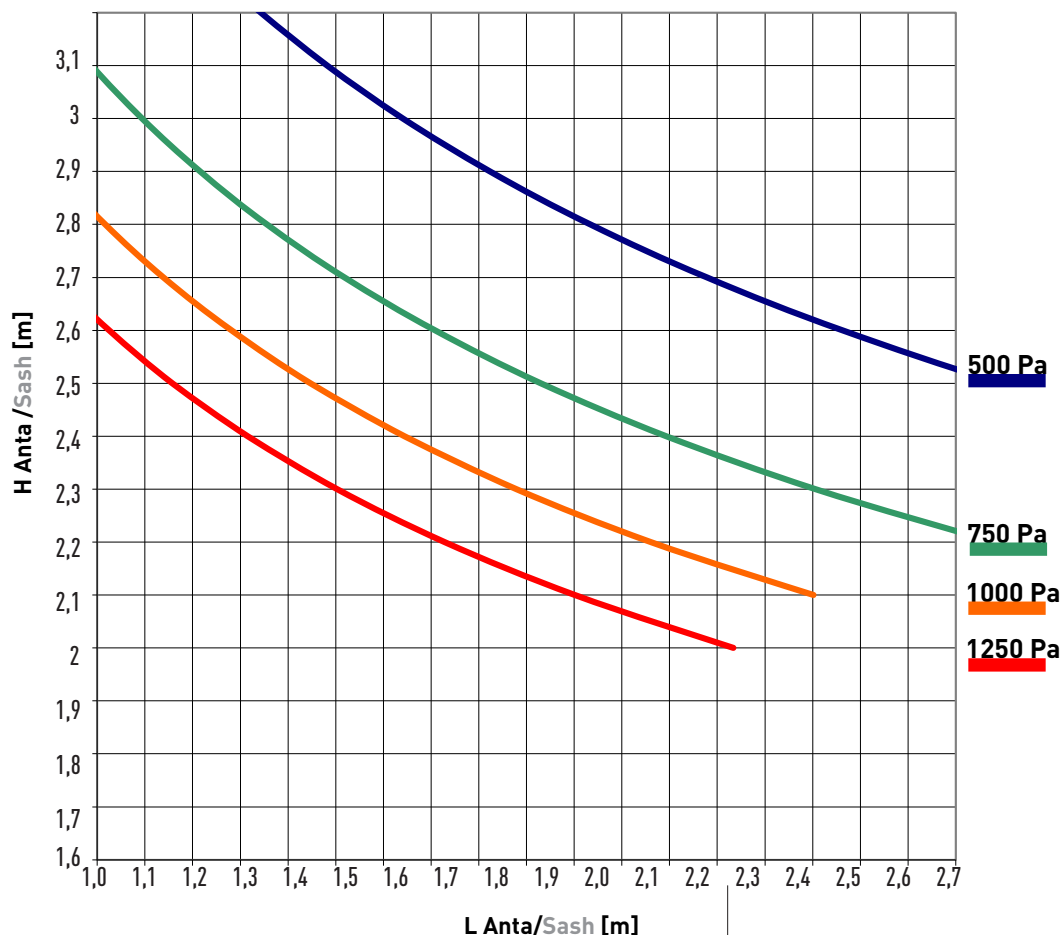
**Double sash windows.
Deflection of the central node**

In determining the maximum dimensions of the doors and windows, in addition to the dimensions and moment of inertia of the profiles, the designer or manufacturer must also consider and evaluate the application and meteorological conditions such as the height from the ground, exposure to rain and the speed of the winds in the area.

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1Anta Fissa EXT + 1 Anta mobile INT) | Versione 45°
(1 Fixed EXT Sash + 1 Mobile INT Sash) | 45° Version

HM16.204
Infisso a 2 ante.
Deflessione del nodo centrale

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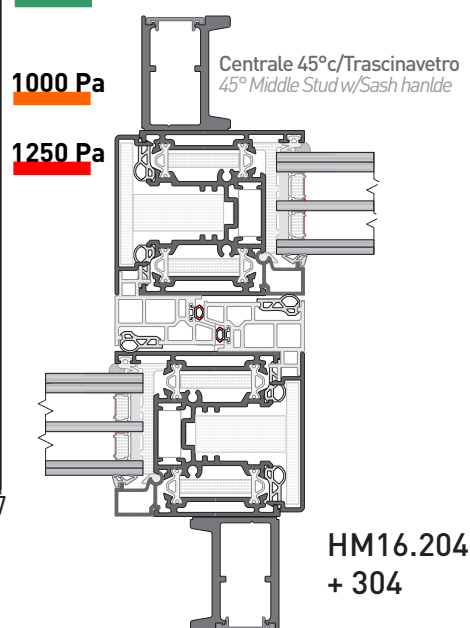
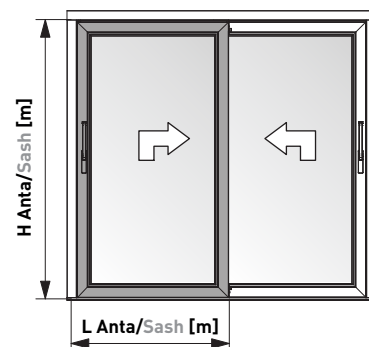
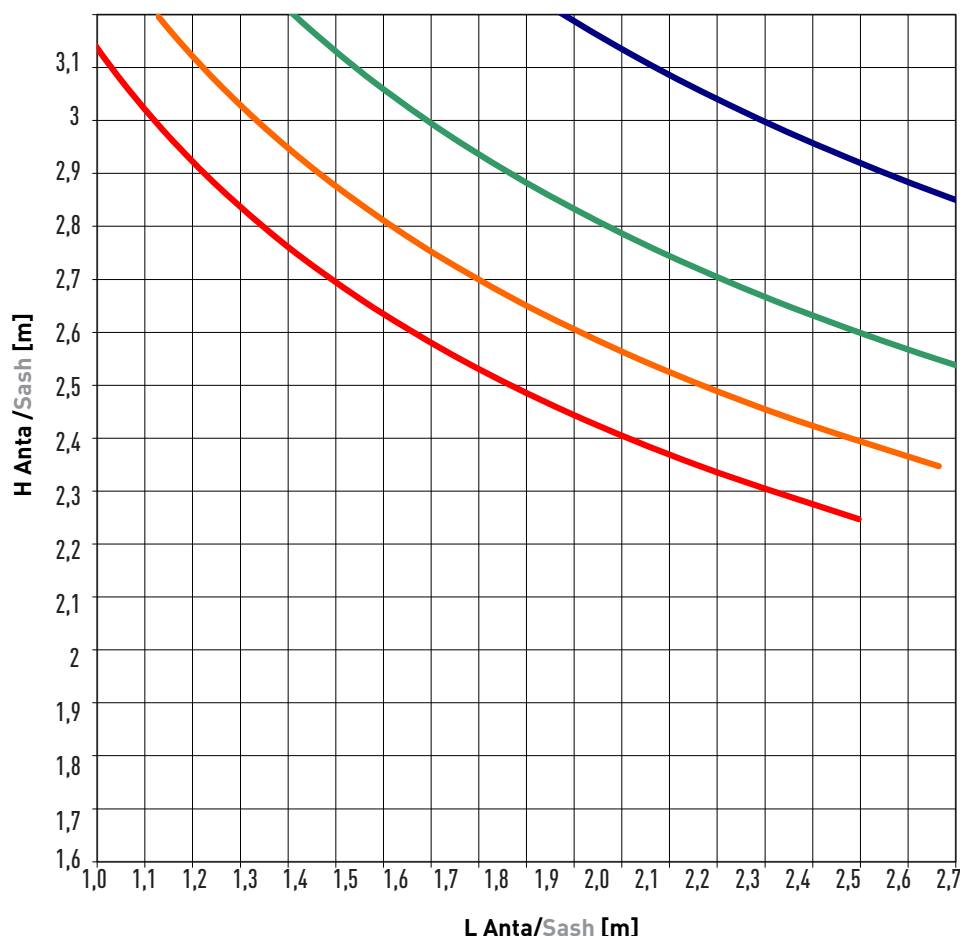
Double sash windows.
Deflection of the central node

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1 Anta Fissa EXT + 1 Anta mobile INT) + Rinforzi EXT/INT | Versione 45°
(1 Fixed EXT Sash + 1 Mobile INT Sash) + +INT/EXT Reinforcement | 45° Version

Infisso a 2 ante.
Deflessione del nodo centrale

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Double sash windows.
Deflection of the central node

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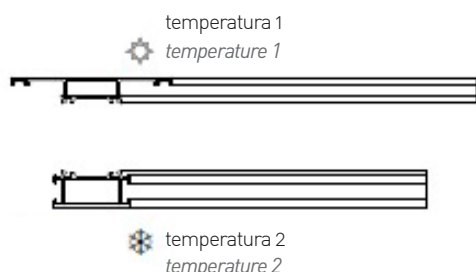
EFFETTO BI-METAL

Il fenomeno fisico denominato "effetto bi-metal" si manifesta con una deformazione ad arco dei profili a taglio termico, quando le due superfici (interna ed esterna) del serramento sono sottoposte ad una sensibile differenza di temperatura.

Ricordando che la norma EN14024 sulle prestazioni meccaniche dei profili metallici richiede un efficace ammortamento dei componenti di alluminio con le barrette isolanti per conferire un'adeguata resistenza a taglio del profilo, questo produce l'effetto di impedire qualsiasi dilatazione differenziale tra i due semiprofilo quando le superfici interna ed esterna si trovino a temperature diverse tra loro.

Ciò determina una flessione ad arco verso il lato più caldo, di entità proporzionale alla differenza termica e più rilevante per i profili maggiormente isolati.

Dilatazione in caso di ELEMENTI LIBERI



I rischi maggiori possono insorgere in caso di serramenti di colore scuro esposti alla radiazione solare diretta, in qualsiasi stagione, o altre situazioni in cui si generi un gradiente termico elevato tra superficie interna ed esterna del profilo.

In genere questo fenomeno non determina particolari conseguenze negative sulle finestre tradizionali a battente, mentre può causare il mancato allineamento delle chiusure con i relativi incontri su profili per porte o su sistemi scorrevoli con conseguenti anomalie di funzionamento in fase di apertura e chiusura.

Nel caso di serramenti scorrevoli, il fenomeno potrebbe riguardare anche i traversi orizzontali dell'anta che, spanciando verso le guide del telaio, possono compromettere il regolare scorrimento.

Le conseguenze possono coinvolgere anche aspetti legati alla sicurezza, come la difficoltà di apertura in situazioni di emergenza, se riferite a porte sulle vie di esodo.

SOLUZIONI

Per cercare di ridurre il più possibile gli inconvenienti sopra descritti, Twin Systems propone diverse soluzioni in funzione della specifica serie, adottando di volta in volta i giusti compromessi tra resistenza meccanica e riduzione dell'effetto bi-metal. In ogni caso, essendo il fenomeno **non eliminabile totalmente**, in presenza di elevate differenze di temperatura fra esterno ed interno degli infissi o irraggiamenti solari diretti, in particolare con superfici scure ed elementi di dimensioni elevate, è sempre suggerita un'analisi più accurata delle condizioni, fino a coinvolgere il progettista dell'edificio nella ricerca delle soluzioni, anche architettoniche, più opportune. Si raccomanda di trattare questo tema con la stessa attenzione in genere riservata ad altri importanti aspetti tecnici quali l'isolamento termico ed acustico, il fenomeno della condensa, la permeabilità all'aria, la tenuta all'acqua, la resistenza meccanica ecc.

Come base per la serie HM160, viene proposta la soluzione con barrette isolanti standard regolarmente ammortate ai profili di alluminio per massimizzare le caratteristiche statiche e meccaniche, generalmente prioritarie specialmente per i montanti intermedi di un serramento scorrevole di grandi dimensioni.

Per qualsiasi chiarimento è possibile consultare il nostro ufficio tecnico.

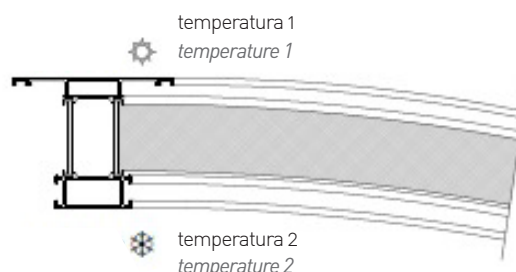
BI-METAL EFFECT

The physical phenomenon known as the "bi-metal effect" occurs with an arched deformation of the thermal break profiles, when the two surfaces (internal and external) of the window are subjected to a significant difference in temperature.

Recalling that the EN14024 standard on the mechanical performance of metal profiles requires an effective clamping of the aluminum components with the insulating bars to give the profile adequate shear strength, this produces the effect of preventing any differential expansion between the two semi-profiles when the internal and external surfaces are at different temperatures.

This determines an arc bending towards the hotter side, proportional to the thermal difference and more relevant for the more insulated profiles.

Dilatation in the case of BINDING ELEMENTS



The greatest risks can arise in the case of dark colored windows exposed to direct solar radiation, in any season, or other situations in which a high thermal gradient is generated between the internal and external surface of the profile.

In general, this phenomenon does not cause particular negative consequences on traditional casement windows, while it can cause the closures to not align with the relative strikers on door profiles or sliding systems with consequent malfunctions during the opening and closing phases.

In the case of sliding windows, the phenomenon could also concern the horizontal crosspieces of the sash which, bulging towards the guides of the frame, can compromise regular sliding.

The consequences can also involve aspects related to safety, such as the difficulty of opening in emergency situations, if referring to doors on escape routes.

SOLUTIONS

To try to reduce the drawbacks described above as much as possible, Twin Systems offers various solutions according to the specific series, each time adopting the right compromises between mechanical strength and reduction of the bi-metal effect. In any case, since the phenomenon **cannot be totally eliminated**, in the presence of high temperature differences between the outside and inside of the fixtures or direct sunlight, especially with dark surfaces and large elements, a more accurate analysis of the conditions is always recommended, up to involving the building designer in the search for the most appropriate solutions, including architectural ones. It is recommended to treat this issue with the same attention generally reserved for other important technical aspects such as thermal and acoustic insulation, the phenomenon of condensation, air permeability, water tightness, mechanical resistance, etc.

As a basis for the HM160 series, the solution with standard insulating bars regularly clamped to the aluminum profiles is proposed to maximize the static and mechanical characteristics, generally a priority especially for the intermediate uprights of a large sliding window.

For any clarification you can consult our technical office.



Profili
Profiles

Gruppo B

Elenco Profili
Profili Scala 1:1

Profiles List
Profiles Scale 1:1



HX16.105		Tavola Table B06
Telaio montante laterale		
Lateral Mullion Frame Profile		
Peso Weight kg/ml 2.948		
J _x 270.3 cm ⁴	W _x 33.04	
J _y 13.52 cm ⁴	W _y 7.26 cm ³	



HX16.504			Tavola Table
Cover Profilo Trasverso			B06
Transom Profile Cover			
Peso Weight kg/ml 0.344			
J _x 0 cm ⁴ W _x 0	J _y 0 cm ⁴ W _y 0 cm ³		



HX16.106					Tavola Table
Telaio Trasverso Superiore					B05
Upper Transom Frame Profile					
Peso Weight kg/ml 2.983					
J _x	0	cm ⁴	W _x 0		
J _y	0	cm ⁴	W _y 0	cm ³	



HM16.505			Tavola Table
Battuta vetro per vetrazione fissa			B07
Glass beating for fixed glazing			
Peso Weight kg/ml 0.215			
J _x 0 cm ⁴ W _x 0	J _y 0 cm ⁴ W _y 0 cm ³		



HX16.107				Tavola Table B05
Telaio soglia inferiore				
Lower Threshold Frame				
Peso Weight kg/ml 1.86				
J _x 0 cm ⁴ W _x 0	J _y 0 cm ⁴ W _y 0 cm ³			



HM16.506					Tavola Table
Battuta vetro per vetrazione fissa inferiore					B07
Gloss heading for lower fixed glazing					
Peso Weight kg/ml 0.497					
J _x	cm ⁴	W _x	0		
J _y	0	cm ⁴	W _y	0	cm ³
0				0	



HM16.108					Tavola Table
Telaio soglia inferiore Monoanta					B06
Single Sash Lower Threshold Frame					
Peso Weight kg/ml 1.247					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		



HM16.507				Tavola Table	B07
Supporto fermavetro inferiore					
Lower glass bead support					
Peso Weight kg/ml 0.414					
J _x 0 cm ⁴	W _x 0				
J _y 0 cm ⁴	W _y 0 cm ³				



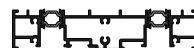
HX16.110					Tavola Table B06
Telaio soglia a filo pavimento					
Floorlevel Threshold frame					
Peso Weight kg/ml 2.603					
J _x	0	cm ⁴	W _x 0		
J _y	0	cm ⁴	W _y 0	cm ³	



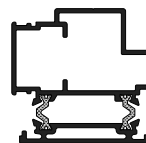
HM16.508			Tavola Table
Cover profilo montante			B06
Cover upright profile			
Peso Weight kg/ml 0.577			
J _x 0 cm ⁴ W _x 0	J _y 0 cm ⁴ W _y 0 cm ³		



HM16.111			Tavola Table
Telaio Montante + Trasverso Sup. per F+M			B05
Frame Upright + Upper Transom for F + M			
Peso Weight kg/ml 3.331			
J _x 292.77 cm ⁴	W _x 36.77		
J _y 12.8 cm ⁴	W _y 6.78 cm ³		



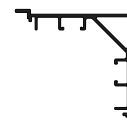
HM16.509			Tavola Table B08
Profilo interno soluzione ad angolo			
Internal profile corner solution			
Peso Weight kg/ml 1.702			
J _x 17.99 cm ⁴	W _x 5.77		
J _y 17.14 cm ⁴	W _y 5.88 cm ³		



HM16.112					Tavola Table
Telaio Trasverso Superiore Monoanta					B05
Single Sash Upper Transom Frame					
Peso Weight kg/ml					
J _x	0	cm ⁴	W _x 0		
J _y	0	cm ⁴	W _y 0	cm ³	



HM16.510			Tavola Table
Profilo Esterno Soluzione Angolo			
External PProfile for Corner Solution			
Peso Weight kg/ml 1.220			B08
J _x 28.01 cm ⁴	W _x 5.21		
J _y 25.33 cm ⁴	W _y 4.55 cm ³		



HX16.503					Tavola Table B06
Cover Profilo Trasverso					
Transom Profile Cover					
Peso Weight kg/ml 0.593					
J _x 0 cm ⁴ W _x 0					
J _y 0 cm ⁴ W _y 0 cm ³					

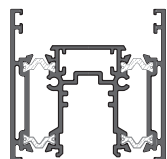


HM16.511					Tavola Table B08
Cover incontro 4 anta					
Cover joint 4 sash					
Peso Weight kg/ml 0.221					
J _x	0	cm ⁴	W _x		
J _y	0	cm ⁴	W _y	0	cm ³

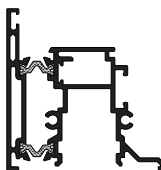




HM16.512					Tavola Table
Cover Profilo Trasverso					B06
Transom Profile Cover					
Peso Weight kg/ml 1.247					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HM16.205					Tavola Table
Anta vetro ad infilare					B07
Insertion glass sash					
Peso Weight		kg/ml	2.57		
J _x	51.52 cm ⁴	W _x	15.15		
J _y	26.01 cm ⁴	W _y	7.13 cm ³		

XX16.102					Tavola Table B08
Doga per Soglia FILOPAVIMENTO					
Bed for FLOORLEVER Threshold					
Peso Weight kg/ml 0.14					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HM18.205					Tavola Table
Anta per soluzione legno					B09
Sash for wood solution					
Peso Weight kg/ml 2.24					
J _x 21.83 cm ⁴	W _x 5.22	J _y 18.38 cm ⁴	W _y 4.79 cm ³		

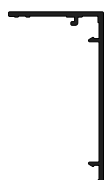
HX16.149					Tavola Table
Binario Singolo Ribassato					B08
Single Lowered Rail					
Peso Weight kg/ml 0.267					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HX16.303					Tavola Table B08
Profilo centrale 4 anta					
Central orofile .f sash					
Peso Weight kg/ml 0.146					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HX16.169					Tavola Table B08
Bianrio Alluminio					
Aluminum Rail					
Peso Weight kg/ml 0.231					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HM16.304					Tavola Table
Profilo di trascinamento					B07
Drag and drop profile					
PesoWeight kg/ml 1.355					
J _x 13.75 cm ⁴	W _x 5.04	J _y 8.58 cm ⁴	W _y 4.31 cm ³		

HX16.171				 B08
Guida esterna per soglia				
External threshold guide				
Peso Weight kg/ml 0.688				
J_x 0 cm ⁴	W_x 0	J_y 0 cm ⁴	W_y 0 cm ³	

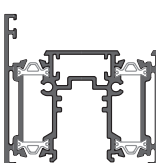
HM16.306					Tavola Table
Cover centrale anta nodo ridotto					
Reduced node central sash cover					
Peso Weight kg/ml 0.567					B07
J _x 11.28 cm ⁴	W _x 2.42	J _y 2.31 cm ⁴	W _y 0.07 cm ³		

HM18.506					Tavola Table
Fermavetro anta per soluzione legno					B07
Sash glazing bead for wood solution					
Peso Weight kg/ml 0.212					
J _x 0	cm ⁴	W _x 0			
J _y 0	cm ⁴	W _y 0	cm ³		

HM16.307					Tavola Table
Cover centrale anta					B07
Central sash cover					
Peso Weight kg/ml 0.39					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HM18.507					Tavola Table B09
Fermavetro per soluzione legno					
Glazing bead for wood solution					
Peso Weight kg/ml 0.305					
J _x 0 cm ⁴	W _x 0	J _y 0 cm ⁴	W _y 0 cm ³		

HM16.308					Tavola Table
Profilo interno di rinforzo centrale					B07
Central internal reinforcement profile					
Peso Weight kg/ml 0.788					
J _x 4.82 cm ⁴	W _x 2.08	J _y 2.2 cm ⁴	W _y 0.02 cm ³		

HM16.204					Tavola Table
Anta con fermavetro					B07
Sash with glazing bead					
Peso Weight kg/ml 2.477					
J _x 47.75 cm ⁴	W _x 13.52	J _y 22.55 cm ⁴	W _y 5.98 cm ³		

XX70.704					Tavola Table B07
Cover Coprivite					
Screw Center					
Peso Weight kg/ml 0.135					
J _x	0	cm ⁴	W _x 0		
J _y	0	cm ⁴	W _y 0	cm ³	



DW86.101					Tavola Table
Adattatore fissaggio legno					B09
Wood fixing adapter					
PesoWeight		kg/ml	0.258		
J _x	0	cm ⁴	W _x 0		
J _y	0	cm ⁴	W _y 0	cm ³	



MX603.501					Tavola Table	B08
Fermavetro da mm. 13.6						
Glazing Bead 13.6 mm.						
PesoWeight		kg/ml	0.216			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



MX603.502					Tavola Table	B08
Fermavetro da mm. 18.6						
Glazing Bead 18.6 mm.						
Peso Weight		kg/ml	0.244			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



MX603.503					Tavola Table	B08
Fermavetro da mm. 23.6						
Glazing Bead 23.6 mm.						
Peso Weight		kg/ml	0.259			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



MX603.504					Tavola Table	B08
Fermavetro da mm. 22.6						
Glazing Bead 22.6 mm.						
Peso Weight		kg/ml	0.256			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



MX603.505					Tavola Table	B08
Fermavetro da mm. 27.6						
Glazing Bead 27.6 mm.						
Peso Weight		kg/ml	0.276			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



MX603.506					Tavola Table	B08
Fermavetro da mm. 32.6						
Glazing Bead 32.6 mm.						
Peso Weight		kg/ml	0.297			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		

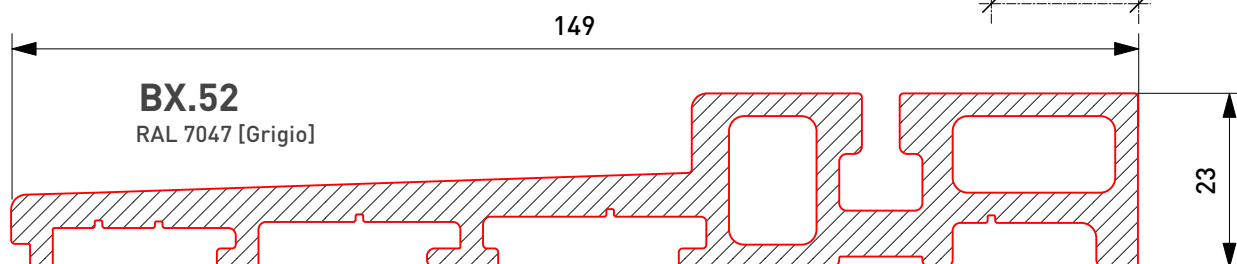
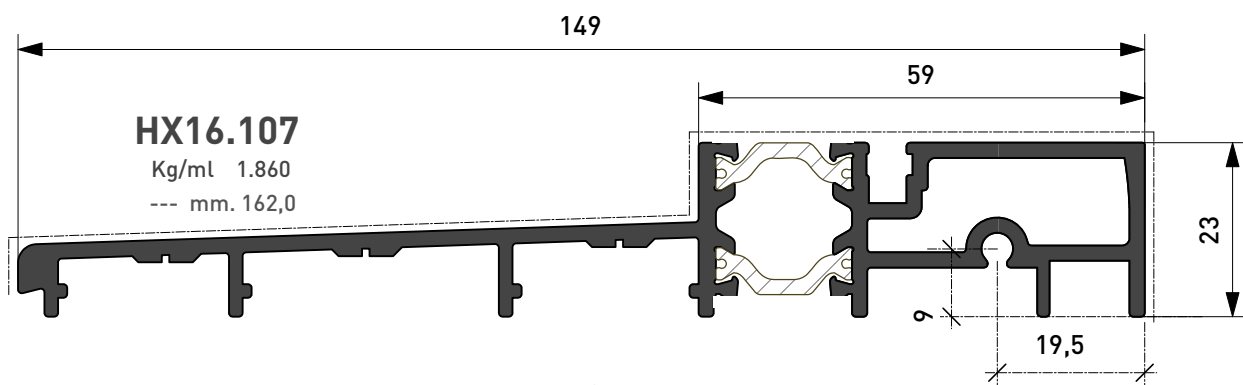
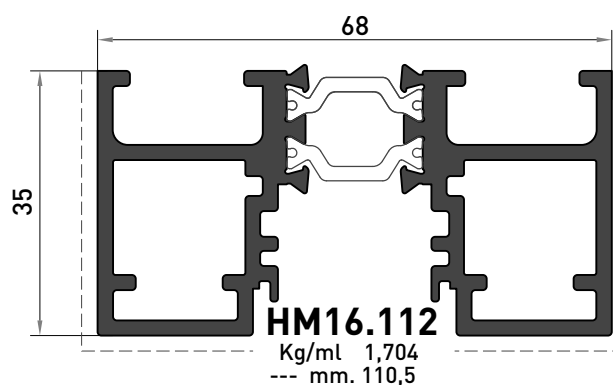
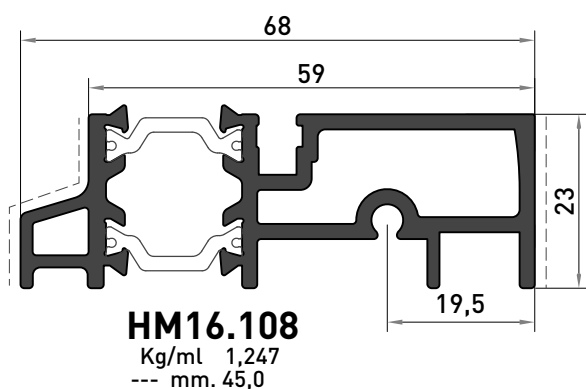
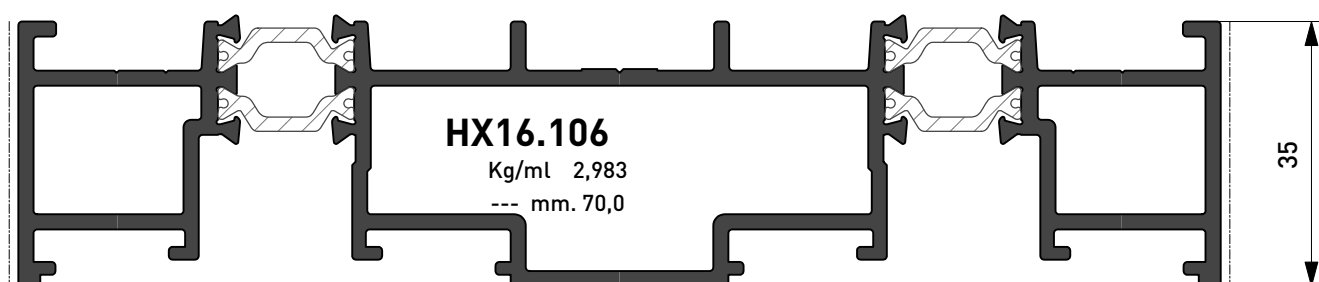
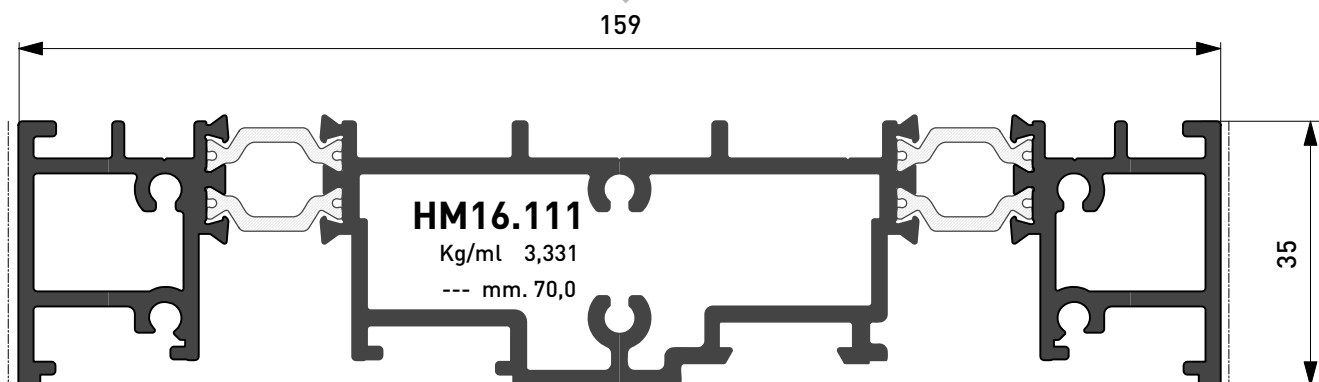


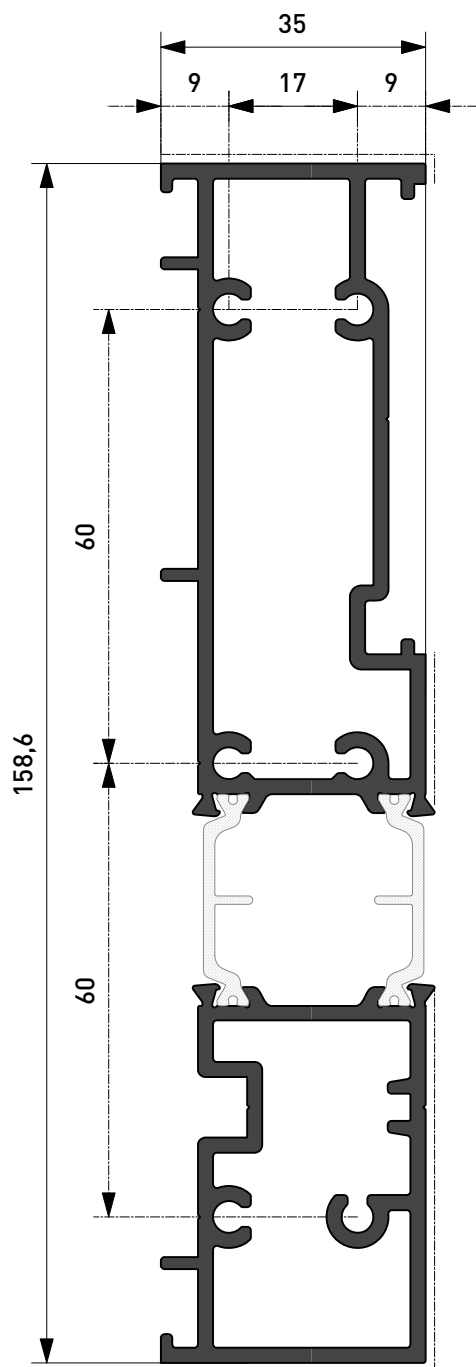
MX603.509					Tavola Table	B09
Adattatore fissaggio legno						
Wood fixing adapter						
Peso Weight		kg/ml	0.21			
J _x	0	cm ⁴	W _x 0			
J _y	0	cm ⁴	W _y 0	cm ³		



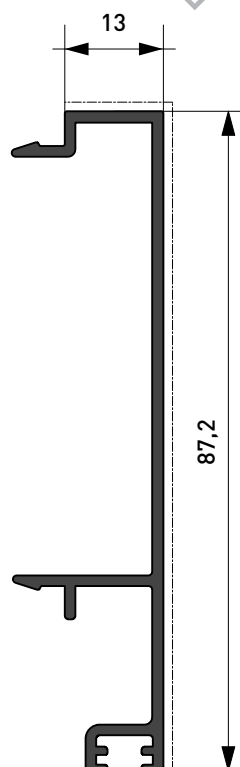

Poliammide
Polyamide
Legni
Woods

BX48 Profilo in poliammide di rinforzo centrale <i>Central reinforcing polyamide profile</i>		Tavola Table B09	HW-D Sagoma legno per anta <i>Wood shape for sash</i>		Tavola Table B09
BX49 Profilo in poliammide guida superiore <i>Upper guide polyamide profile</i>		Tavola Table B09	HW-E Sagoma legno per fermavetro anta <i>Wood shape for sash glazing bead</i>		Tavola Table B09
BX50 Profilo in poliammide labirinto ridotto <i>Reduced polyamide labyrinth profile</i>		Tavola Table B09	HW-F Sagoma legno per fermavetro superiore <i>Wood shape for upper glass bead</i>		Tavola Table B09
BX51 Profilo in poliammide labirinto <i>Polyamide labyrinth profile</i>		Tavola Table B09	HW-G Sagoma legno per nodo centrale <i>Wood profile for central node</i>		Tavola Table B09
BX52 Soglia inferiore materiale isolante <i>Lower threshold insulation material</i>	Barre/Bars = 6.5 mts Conf = 4 pz. / Pack. = 4 pcs. 	Tavola Table B05	HW-H Sagoma legno per fermavetro inferiore <i>Wood shape for lower glass bead</i>		Tavola Table B09
			DW-A Sagoma legno per telaio <i>Wood shape for frame</i>		Tavola Table B09
			HW-C Sagoma legno per profilo montante <i>Wood profile for mullion</i>		Tavola Table B09

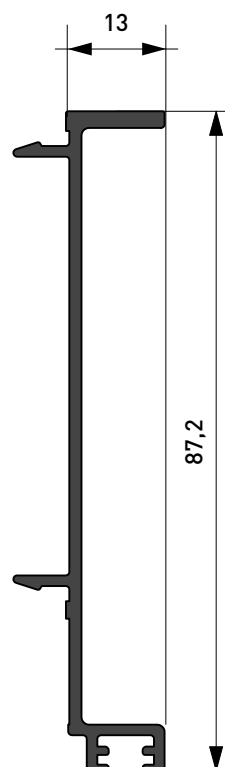




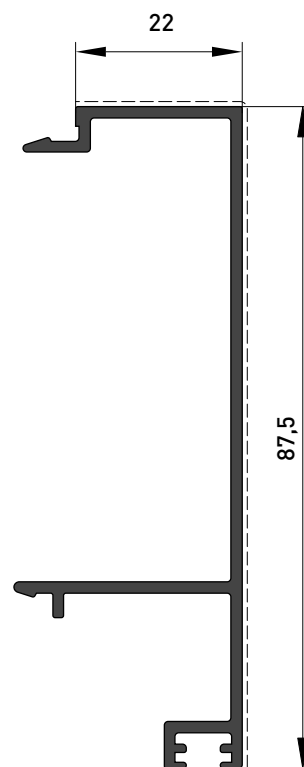
HX16.105
Kg/ml 2.948
--- mm. 162,0



HX16.503
Kg/ml 0.593
--- mm. 100,0

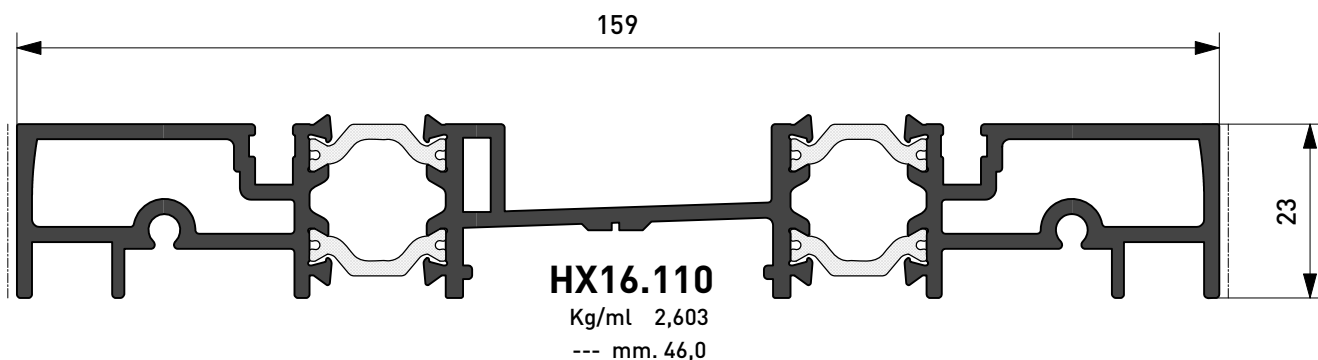
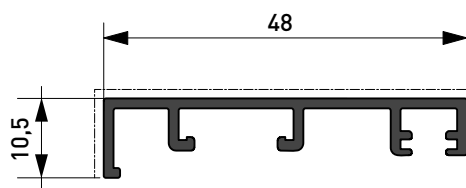


HM16.508
Kg/ml 0.577
--- mm. 100,0

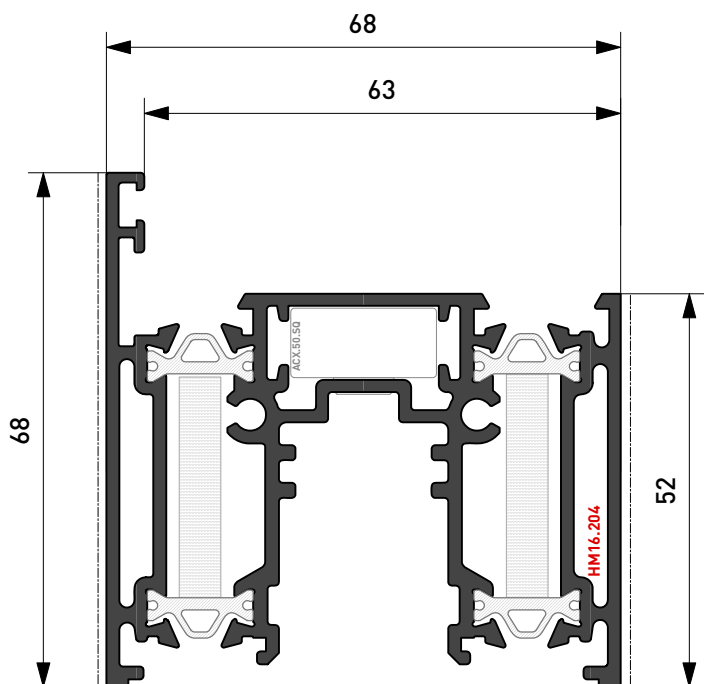


HM16.512
Kg/ml 0.682
--- mm. 110,5

HX16.504
Kg/ml 0,344
--- mm. 66,0



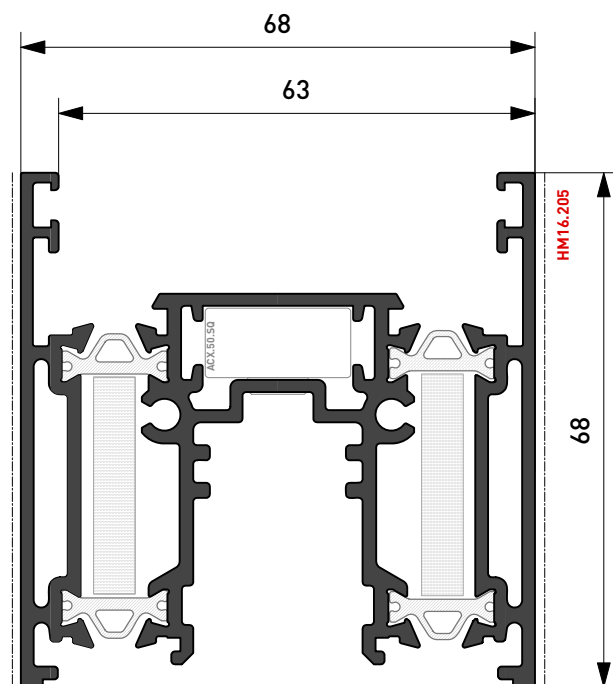
HX16.110
Kg/ml 2,603
--- mm. 46,0



HM16.204

Kg/ml 2.477

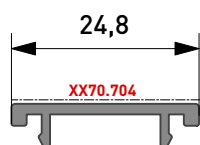
--- mm. 162,0



HM16.205

Kg/ml 2.570

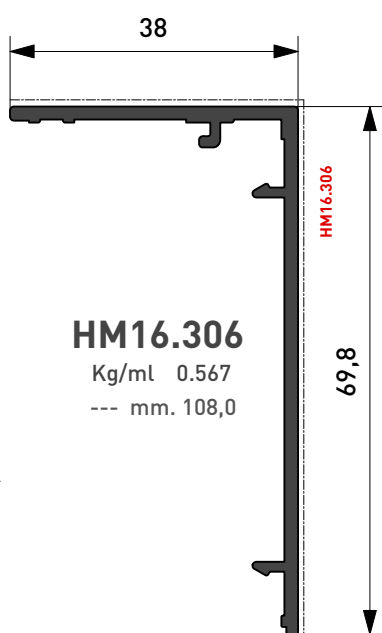
--- mm. 162,0



XX70.704

Kg/ml 0.135

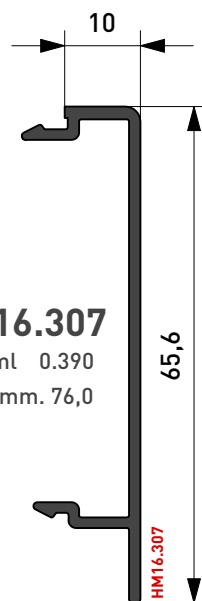
--- mm. 25,0



HM16.306

Kg/ml 0.567

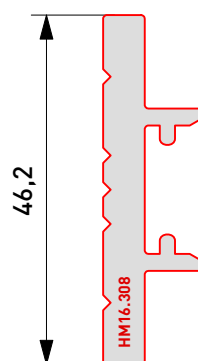
--- mm. 108,0



HM16.307

Kg/ml 0.390

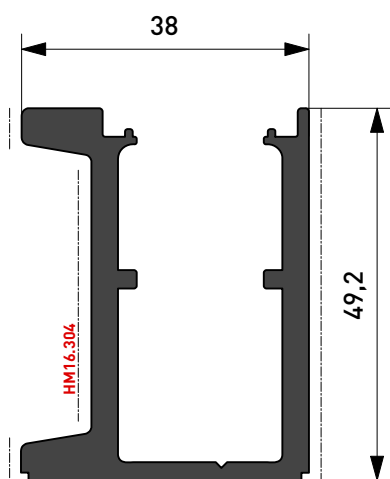
--- mm. 76,0



HM16.308

Kg/ml 0.788

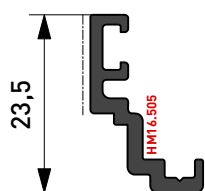
--- mm. 000,0



HM16.304

Kg/ml 1.355

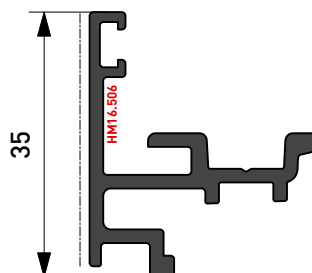
--- mm. 124,0



HM16.505

Kg/ml 0.215

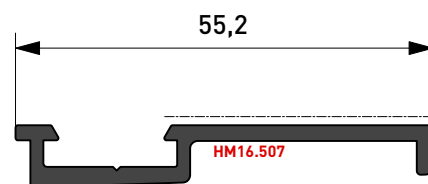
--- mm. 18,0



HM16.506

Kg/ml 0.497

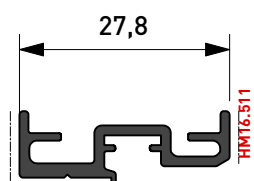
--- mm. 35,0

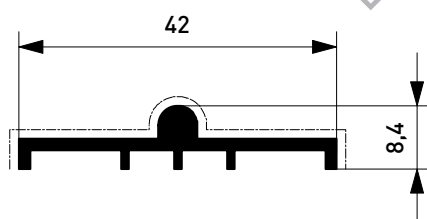


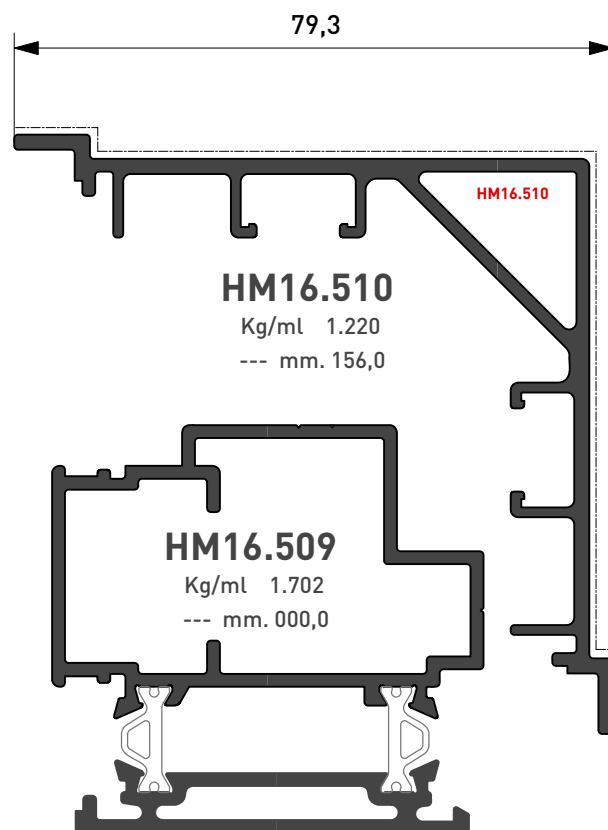
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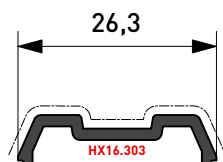
Kg/ml 0.414

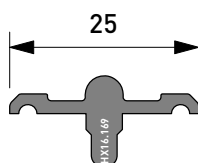
--- mm. 35,0

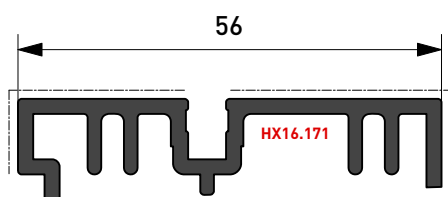

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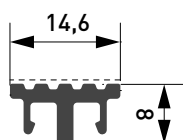
Kg/ml 0.221
--- mm. 18,0

HX16.149

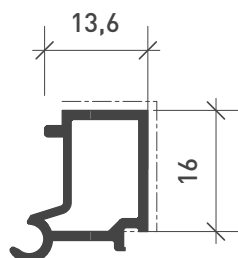
Kg/ml 0.267
--- mm. 54,0

HM16.510

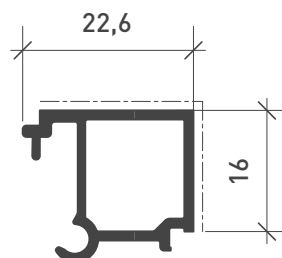
Kg/ml 1.220
--- mm. 156,0

HX16.303

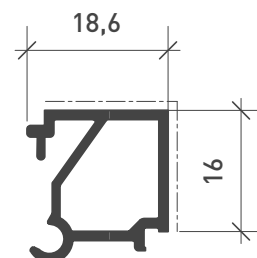
Kg/ml 0.146
--- mm. 32,0

HX16.169

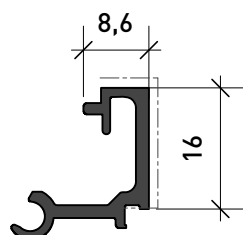
Kg/ml 0.231
--- mm. 22,0

HX16.171

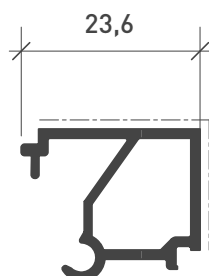
Kg/ml 0.688
--- mm. 76,0

XX16.102

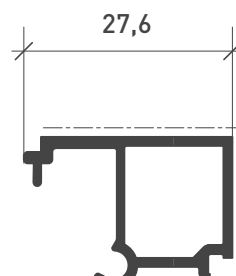
Kg/ml 0.140
--- mm. 14,6

MX603.501

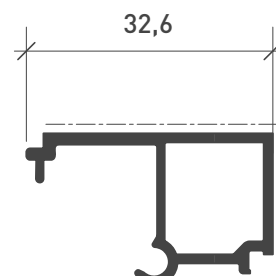
Kg/ml 0.216
--- mm. 30,0

MX603.504

Kg/ml 0.256
--- mm. 39,0

MX603.502

Kg/ml 0.244
--- mm. 35,0

MX603.509

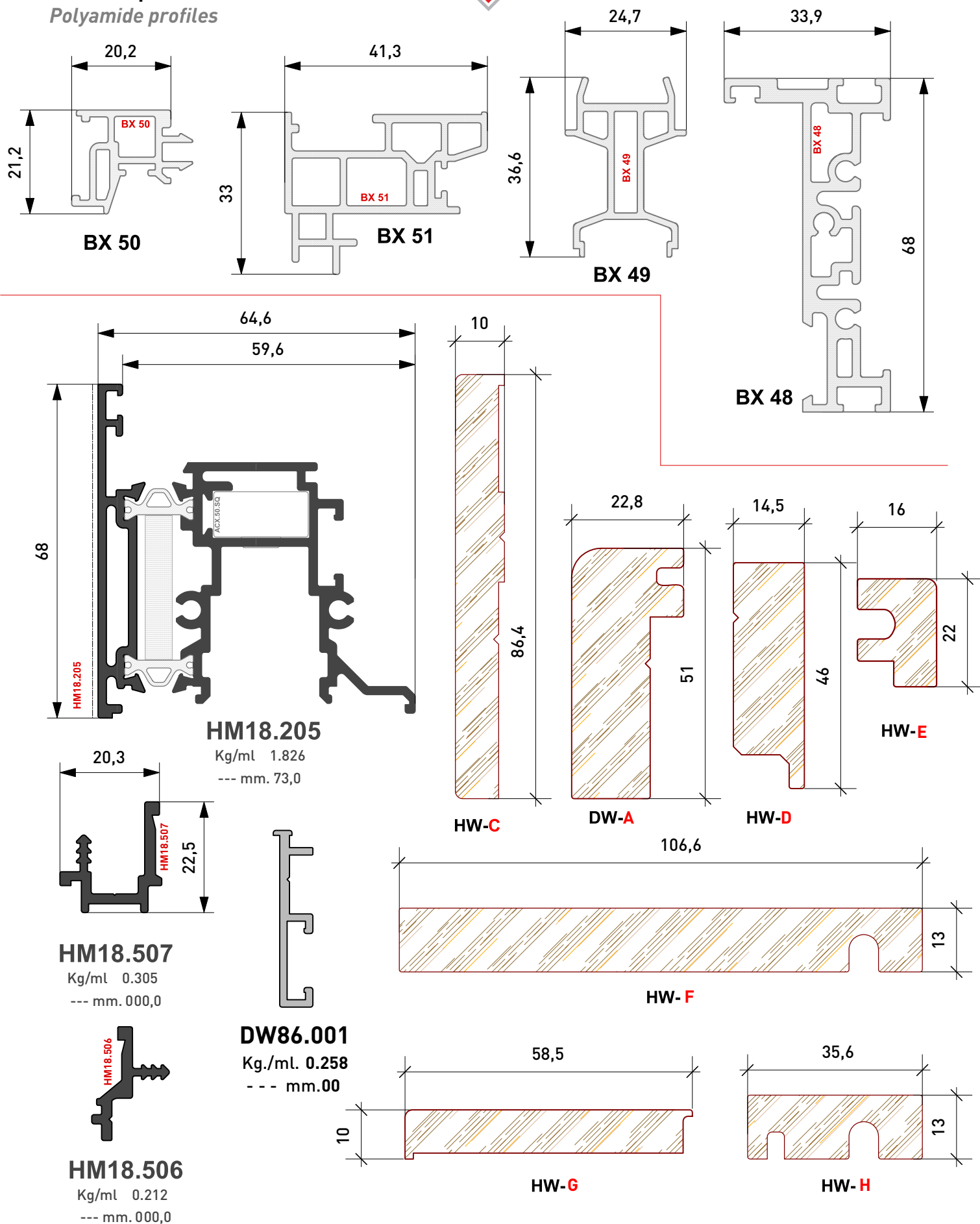
Kg/ml 0.210
--- mm. 25,0

MX603.503

Kg/ml 0.259
--- mm. 40,0

MX603.505

Kg/ml 0.276
--- mm. 44,0

MX603.506

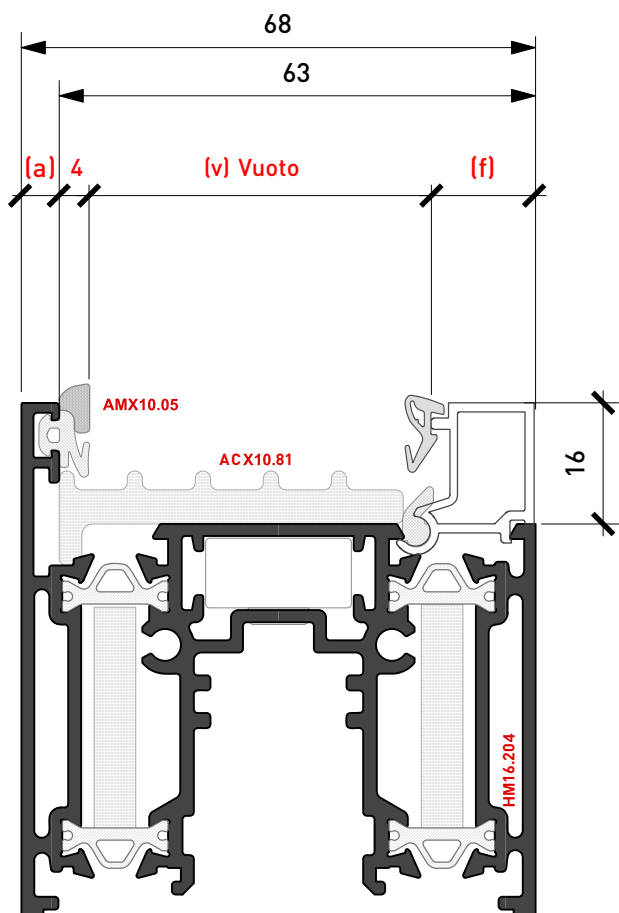
Kg/ml 0.297
--- mm. 49,0

Profili in poliammide
Polyamide profiles





Aletta <i>Ext Wing</i>	Vuoto <i>Gap</i>	Dim. Fermavetro <i>Glazing Bead Dim.</i>	Codice Fermavetro <i>Glazing Bead CODE</i>	Guarnizione EXT <i>EXT Gasket</i>	Guarnizioni interne Vetro <i>Glass Internal Gaskets</i>							
					ARX 10.15		ARX 10.14		ARX 10.13		ARX 10.12	
												
(a) mm.	(v) mm.	(f) mm.			10 mm. 9 mm.	8 mm. 7 mm.	6 mm. 5 mm.	4 mm.				
					Vetrazioni (Spessore Vetro mm.) <i>Glazing (Glass Thickness mm.)</i>							
5	50	9	MX603.509	4	40	41	42	43	44	45	46	
5	45	14	MX603.501	4	35	36	37	38	39	40	41	
5	40	23	MX603.502	4	30	31	32	33	34	35	36	
5	36	24	MX603.504	4	26	27	28	29	30	31	32	
5	35	26	MX603.503	4	25	26	27	28	29	30	31	
5	31	28	MX603.505	4	21	22	23	24	25	26	27	
5	26	33	MX603.506	4	16	17	18	19	20	21	22	





Gruppo **C**

Elenco Accessori
Elenco Guarnizioni

List of Accessories
List of Gaskets



CODIFICA FINITURE SUPERFICIALI ACCESSORI

ACCESSORIES SURFACE FINISHING CODES

In fase di ordine aggiungere agli accessori, se previste, le seguenti codifiche superficiali:

When ordering, add the following surface codes to the accessories listed below, where applicable:

DESCRIPTION	CODICE CODE	DESCRIZIONE
PAINTED MATT BLACK	NEOPA	VERNICIATO NERO OPACO
WHITE	R9010	VERNICIATO BIANCO
IVORY	R1013	VERNICIATO AVORIO
GREEN	R6005	VERNICIATO VERDE
BLACK	R9005	VERNICIATO NERO LUCIDO
BROWN	R8017	VERNICIATO MARRONE
GOTHIC GREEN	G6360	VERNICIATO VERDE GOTICO
GOTHIC GREY	G9420	VERNICIATO GRIGIO GOTICO
GOTHIC BROWN	G3976	VERNICIATO MARRONE GOTICO
SILVER	VEAR	VERNICIATO ARGENTO
WITHERED MOSS	VSCRA	VERDE SCURO RAGGRINZITO
FALLOW	MARAG	MARRONE RAGGRINZITO
GOLDFINISH GUNMETAL GRAY	KANFU	CANNA DI FUCILE GOLDFINISH
GOLDFINISH COPPER	KRAME	RAME GOLDFINISH
GOLDFINISH POLISHED	KINOX	INOX LUCIDO GOLDFINISH
GOLDFINISH SATIN-FINISH STAINLESS STEEL	KSATI	INOX SATINATO GOLDFINISH
GOLDFINISH GOLD	KGOLD	GOLD GOLDFINISH
GOLDFINISH ANTIQUE BRASS	KANTIC	OTTONE ANTICO GOLDFINISH
NEW SILVER	ARGENT	NEW ARGENTO
NEW BRONZE	BRONZ	NEW BRONZO

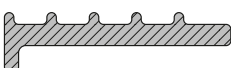
ESEMPIO

AHX 3080.20 | R 9010

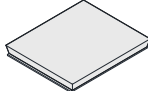
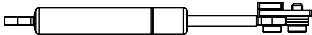
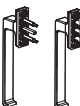
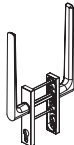
EXAMPLE

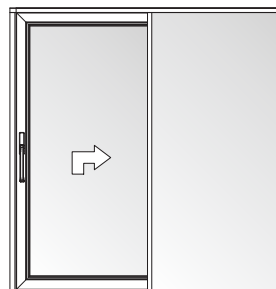
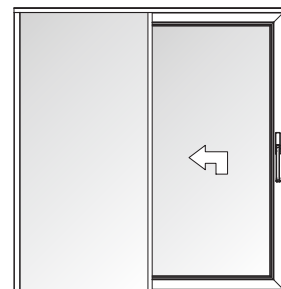
Maniglia Verniciata | COLORE Bianco Ral 9010
Painted Handle | COLOUR White RAL 9010



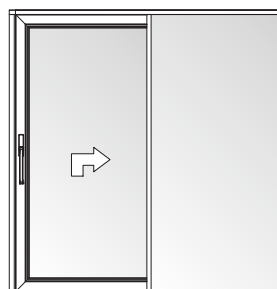
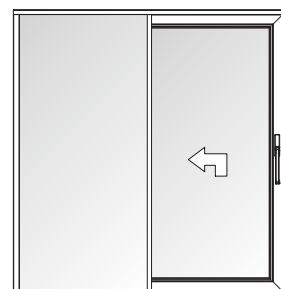
ARX.10.SQ Descrizione Description Squadretta Anta <i>Sash Corner Joint</i>		AMX.10.05 Descrizione Description Guarnizione Vetro EXT <i>Glass Gasket</i>	
ACX.16.SQ Descrizione Description Squadretta a pulsante <i>Button Corner Joint</i> 17.5 mm x 15 mm Foro(Hole)=8 mm		ARX.10.12 Descrizione Description Guarnizione Vetro INT <i>Glass Gasket</i> Spessore(Thickness) = 3-4 mm.	
ACX.50.SQ Descrizione Description Squadretta a bottone <i>Button Corner Joint</i> 19.3 mm x 9.2 mm Foro(Hole)=8 mm		ARX.10.13 Descrizione Description Guarnizione Vetro INT <i>Glass Gasket</i> Spessore(Thickness) = 5-6 mm.	
ACX.51.SQ Descrizione Description Squadretta Cianfrinare/Spinare <i>Riveting/Crimping Corner Joint</i> 19.4 mm x 9.3 mm		ARX.10.14 Descrizione Description Guarnizione Vetro INT <i>Glass Gasket</i> Spessore(Thickness) = 7-8 mm.	
ACX.53.SQ Descrizione Description Spina inox Squadretta ACX.51.SQ <i>INOX plug for ACX.51.SQ Corner Joint</i>		ARX.10.15 Descrizione Description Guarnizione Vetro INT <i>Glass Gasket</i> Spessore(Thickness) = 9-10 mm.	
ACX.06.04 Descrizione Description Registro Z/P <i>Z/P Adjusting Screw</i>		AHX 10.47 Descrizione Description Guarnizione Superiore Anta <i>Upper Sash Gasket</i>	
ACX 10.81 Descrizione Description Guarnizione Sotto Vetro <i>Under Glass Window Gasket</i>		AHX 10.48 Descrizione Description Guarnizione Perimetrale Anta <i>Perimetral Sash Gasket</i>	
		AHX 10.63 Descrizione Description Guarnizione Inferiore Anta <i>Lower Sash Gasket</i>	



AHX 10.64 Descrizione Description Guarnizione Autoadesiva Riporto Centrale <i>Self-adhesive Central Mullion Gasket</i> Dim. 16 X10 mm.		ASX 16.21 Descrizione Description Copricilindro di sicurezza "ITALIA" <i>"ITALIA" safety cylinder cover</i>	
AWX 10.21 Descrizione Description Guarnizione int. profilo di sicurezza HX16.501 <i>Internal Gasket (Safety Profile HX16.501)</i>		LS 09 Descrizione Description Listello Isolante <i>Insulating Shim</i> Dim. 5 x 28 mm.	
ASX 10.69 Descrizione Description Guarnizione di tenuta per anta <i>Sealing gasket for Sash</i>		AHM16.01 Descrizione Description Supp. Doghe SOGLIA FILOPAVIMENTO <i>FLOORLEVEL THRESHOLD Beds Support</i> 100x50 mm. Conf = 25 pz. / Pack. = 25 pcs.	
ACX 10.71 Descrizione Description Guarnizione int. profilo di sicurezza <i>Internal Gasket Safety Glassholder Profile</i>		AS 5952F.16 Descrizione Description Nastro Biadesivo <i>Double Side Adhesive Tape</i> 16.5 X 1.10 mm. Conf = 6.5 ml. / Pack. = 1 pcs.	
AWX 06.04 Descrizione Description Nottolino Per fissaggio AHM 18.205 e DW 86.001 <i>Fixing Pawl for AHM 18.205 and DW 86.001</i>		AHM 10.93 Descrizione Description Spugna Nodo Centrale <i>Sponge for Cenral Node</i> 49 X 40 X 5 mm.	
ASX 05.02 Descrizione Description Boccola di Drenaggio <i>Drainage Bush</i>		AHM 10.94 Descrizione Description Ammortizzatore Serratura <i>Locker Stopper</i>	
AHX 3080.20 Descrizione Description Maniglia Alzante c/ vaschetta Traino <i>Handle for Lifting Window w/ Washer</i> Rosette 10 mm.	 linea ITALIA	AHM 3081.20 Descrizione Description Maniglia Alzante c/ vaschetta Traino <i>Handle for Lifting Window w/ Washer</i> Rosette 10 mm.	 linea KARMA
AHX 3080.25 Descrizione Description Doppia Maniglia Alzante <i>Double Handle for Lifting Window</i> Rosette 10 mm.	 linea ITALIA	AHM 3081.35 Descrizione Description Doppia Maniglia Alzante <i>Double Handle for Lifting Window</i> Rosette 10 mm.	 linea KARMA

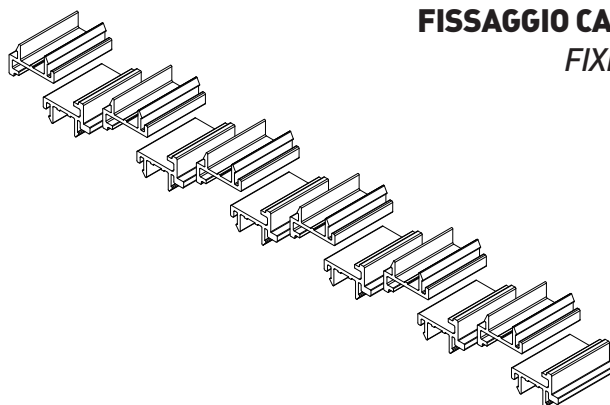

CONFEZIONE KIT
VETRATA FISSA+ ANTA 90° MOBILE
FIX GLAZING + 90° MOBILE SASH PACK
Tipo A | A Type

Tipo F | F Type

AHM 16.6745.68

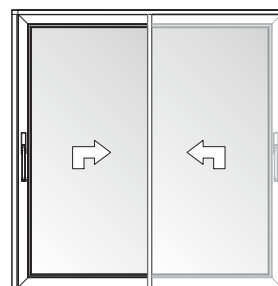
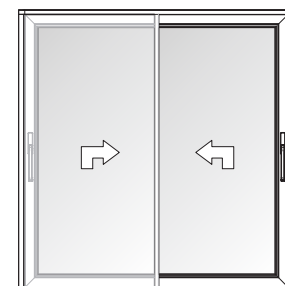
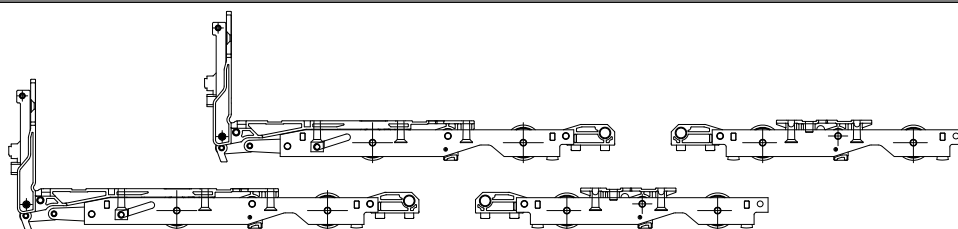
■ KIT Carrelli ▶ KIT Track Roller			
		1 pz.	
■ KIT Basamenti per Montanti ▶ KIT Mullion Basement Caps			
Tappi Superiori <i>Upper Caps</i> 1 cp.	Tappi Inferiori <i>Lower Caps</i> 1 cp.	Tappi Superiori <i>Upper Caps</i> 1 cp.	Tappi Inferiori <i>Lower Caps</i> 1 cp.
■ KIT Tappi Centrali Sup +Inf ▶ KIT Sup + Inf Central Caps			
Tappi Superiori <i>Upper Caps</i> Angoli Guarnizioni <i>Corner Gaskets</i> AHX10.47 1 cp.	Tappo Riporto Centrale +Spazzolino + Cover <i>Central Joint Cap + Brush + Cover</i> 1 pz.	Tappo BX50 <i>BX50 Cap</i> 1 cp.	
Tappi Inferiori <i>Lower Caps</i> Angoli Guarnizioni <i>Corner Gaskets</i> AHX10.63 1 cp.	Tappo Riporto Centrale + Spugna + Cover <i>Central Joint Cap +Sponge + Cover</i> 1 pz.	Tappo Profilo HM16.304 <i>Profile HM16.304 Cap</i> 1 cp.	
■ KIT Tenuta Centrale + Bumper ▶ KIT Central Sealing + Bumper			
Tappo di tenuta per Montante Centrale [Lato Fisso] <i>Central Sealing for Mullion [Fix Side]</i> 1 pz.	Spugna Inferiore Telaio Lato Serratura <i>Lower Frame Sponge [Latch Side]</i> 1 pz.	Bumper <i>Bumper</i> 1 pz.	Tappo Inferiore Centrale per BX48 [Anta Fissa] <i>Under Mullion Cap for BX48 [Central Side Fixed Sash]</i> 1 pz.

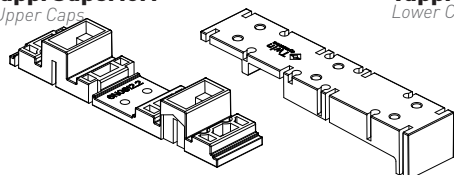
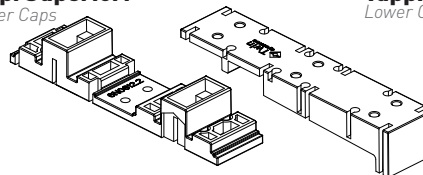
**CONFEZIONE KIT CLIPS VETRATA FISSA+ ANTA MOBILE 90°**
*FIX GLAZING + MOBILE 90° SASH CLIPS KIT***Tipo A | A Type****Tipo F | F Type****AHM 16.6745.72**

■ KIT Clips

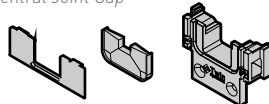
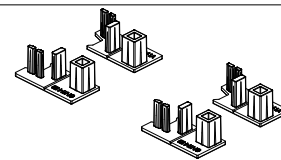
► KIT Clips

**FISSAGGIO CARTER SUPERIORE HM16.508**
*FIXING UPPER CARTER HM16.508***6 Cp.**

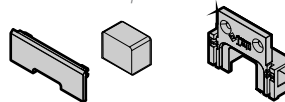
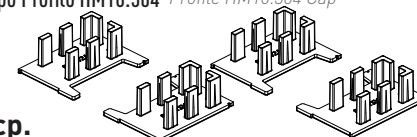
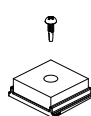
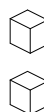
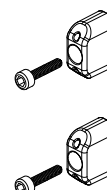
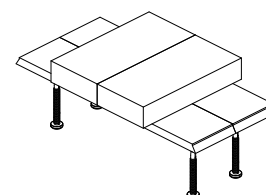

CONFEZIONE KIT 2 ANTE 90° MOBILI
2 SLIDING 90° SASHES PACK
Tipo C | C Type

Tipo H | H Type

AHM 16.6745.69
KIT Carrelli ▶ *KIT Track Roller*

Portata MAX
MAX Weight

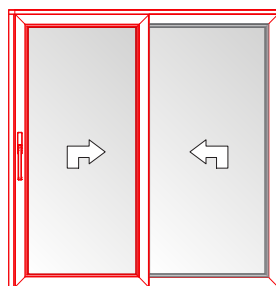
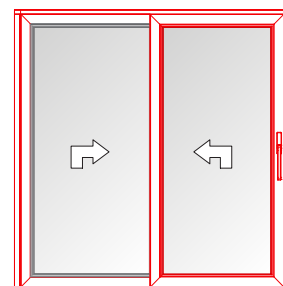
300kg
2 pz.
KIT Basamenti per Montanti ▶ *KIT Mullion Basement Caps*
Tappi Superiori
Upper Caps

1 cp.
Tappi Inferiori
Lower Caps
Tappi Superiori
Upper Caps

1 cp.
KIT Tappi Centrali Sup + Inf ▶ *KIT Sup + Inf Central Caps*
Tappi Superiori *Upper Caps*

Angoli Guarnizioni
Corner Gaskets
AHX10.47

2 cp.
Tappo Riporto Centrale
Central Joint Cap

2 pz.
Tappo BX50
BX50 Cap

2 cp.
Tappi Inferiori *Lower Caps*

Angoli Guarnizioni
Corner Gaskets
AHX10.63

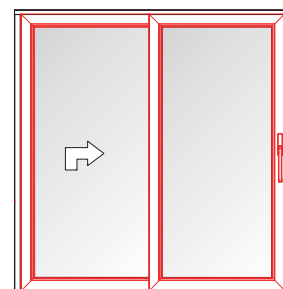
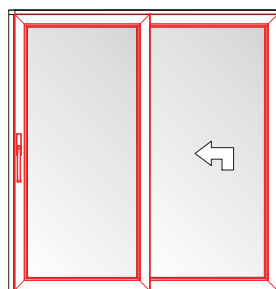
2 cp.
Tappo Riporto Centrale
Central Joint Cap

2 pz.
Tappo Profilo HM16.304 *Profile HM16.304 Cap*

2 cp.
KIT Tenuta Centrale + Bumper ▶ *KIT Central Sealing + Bumper*
Tassello Tenuta Centrale Inferiore
Lower Central Sealing Raw Plug

1 pz.
Spugna Inferiore Telaio Lato Serratura
Lower Frame Sponge [Latch Side]

2 pz.
Bumper

2 pz.
Tassello Tenuta Centrale Superiore
Upper Central Sealing Raw Plug

1 pz.

CONFEZIONE KIT 2 ANTE 45° MOBILI
2 MOBILE 45° SASHES PACK
Tipo D | D Type

Tipo I | I Type

AHM 16.6745.70

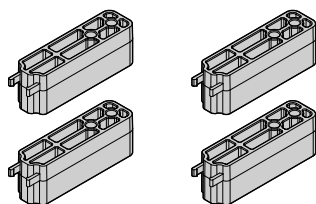
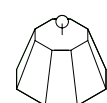
KIT Carrelli ▶ <i>KIT Track Roller</i>			
			Portata MAX MAX Weight 300kg 2 cp.
KIT Basamenti per Montanti ▶ <i>KIT Mullion Basement Caps</i>			
Tappi Superiori <i>Upper Caps</i> 1 cp.	Tappi Inferiori <i>Lower Caps</i> 1 cp.	Tappi Superiori <i>Upper Caps</i> 1 cp.	Tappi Inferiori <i>Lower Caps</i> 1 cp.
KIT Tappi Centrali Sup + Inf ▶ <i>KIT Sup + Inf Central Caps</i>			
Tappi Superiori <i>Upper Caps</i> 2 cp.	Tappo Riporto Centrale <i>Central Joint Cap</i> 2 pz.	Tappo SUP per BX51 <i>BX51 Cap</i> 2 cp.	
Tappi Inferiori <i>Lower Caps</i> 2 cp.	Tappo Riporto Centrale <i>Central Joint Cap</i> 2 cp.	Tappo INF per BX51 <i>BX51 Cap</i> 2 cp.	
KIT Tenuta Centrale + Bumper ▶ <i>KIT Central Sealing + Bumper</i>			
Tassello Tenuta Centrale Inferiore <i>Lower Central Sealing Raw Plug</i> 2 pz.	Spugna Inferiore Telaio Lato Serratura <i>Lower Frame Sponge [Latch Side]</i> 2 pz.	Bumper 2 pz.	Tassello Tenuta Centrale Superiore <i>Upper Central Sealing Raw Plug</i> 1 pz.



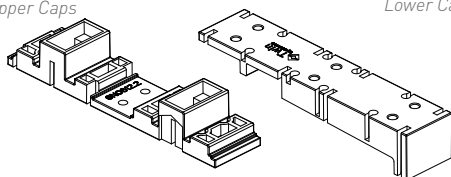
CONFEZIONE KIT 1 ANTE 45° MOBILE + Anta 45° FISSA
1 MOBILE 45° + 1 FIXED 45° SASHE PACK

Tipo B | B Type
Tipo G | G Type

AHM 16.6745.76
■ KIT Carrelli + Distanziatori

▶ KIT Track Roller + Spacers

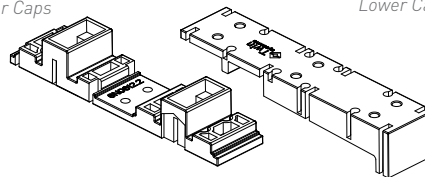

Portata MAX
MAX Weight

300kg
■ KIT Basamenti per Montanti

▶ KIT Mullion Basement Caps

Tappi Superiori
Upper Caps


1 cp.

Tappi Inferiori
Lower Caps

Tappi Superiori
Upper Caps


1 cp.

Tappi Inferiori
Lower Caps

■ KIT Tappi Centrali Sup + Inf

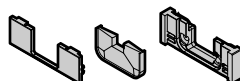
▶ KIT Sup + Inf Central Caps

Tappi Superiori

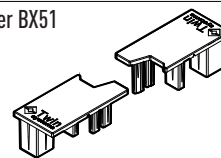
Upper Caps



2 cp.

Tappo Riporto Centrale
Central Joint Cap


2 pz.

Tappo SUP per BX51
BX51 Cap


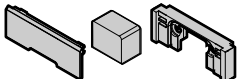
2 cp.

Tappi Inferiori

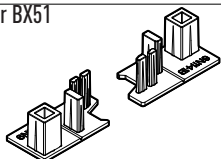
Lower Caps



2 cp.

Tappo Riporto Centrale
Central Joint Cap


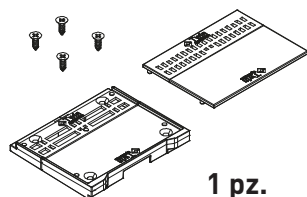
2 cp.

Tappo INF per BX51
BX51 Cap


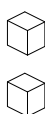
2 cp.

■ KIT Tenuta Centrale + Bumper

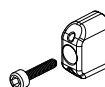
▶ KIT Central Sealing + Bumper

lassetto Tenuta Centrale Inferiore
Lower Central Sealing Raw Plug


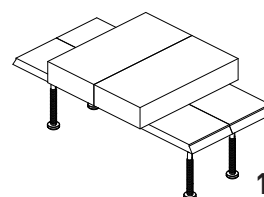
1 pz.

Spugna Inferiore Telaio Lato Serratura
Lower Frame Sponge [Latch Side]


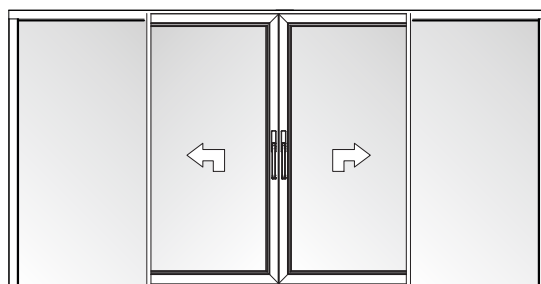
2 pz.

Bumper


2 pz.

lassetto Tenuta Centrale Superiore
Upper Central Sealing Raw Plug


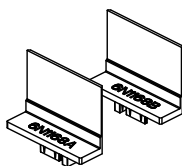
1 pz.


Tipo E | E Type


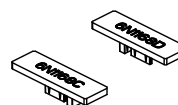
CONFEZIONE KIT 2 ANTE MOBILE 90° + 2 VETRATE FISSE
2 90° SLIDING SASHES + 2 FIX GLAZING PACK

AHM 16.6745.71
■ KIT 4 Ante

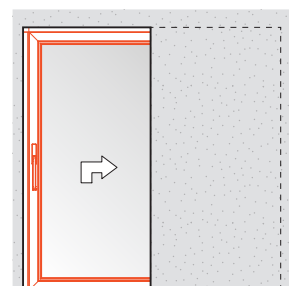
Tappo Superiore HM16.511
Upper Cap HM16.511


1 cp.

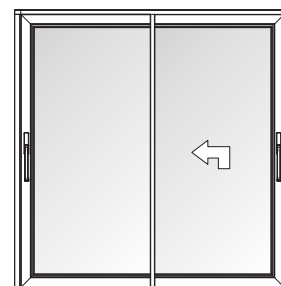
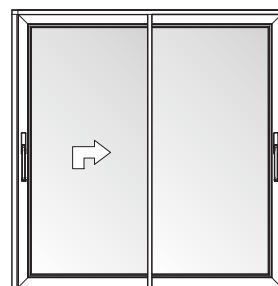
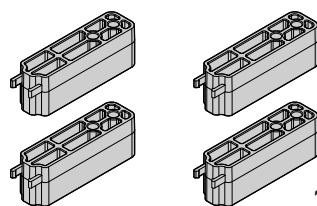
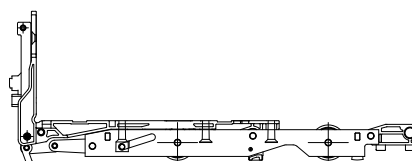
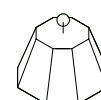
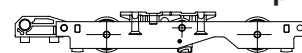
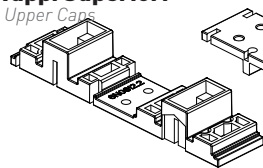
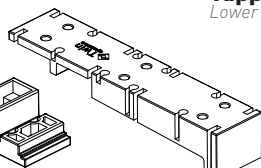
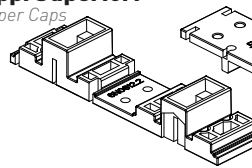
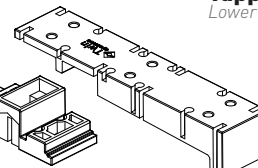
Tappo Inferiore HM16.511
Bottom Cap HM16.511


1 cp.

NB. Da abbinare a 2 KIT HM16.6745.68
To be paired with 2 KIT HM16.6745.68

**CONFEZIONE KIT 1 ANTa 45° ad INCASSO**
1 MOBILE 45° SASH FOLDABLE**Tipo L | L Type****AHM 16.6745.75**

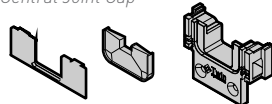
■ KIT Carrelli		► KIT Track Roller	
		1 pz.	
■ KIT Tappi Centrali Sup +Inf		► KIT Sup + Inf Central Caps	
Tappi Superiori	Upper Caps	Tappo Finitura Anta	Sash Finishing Cap
1 cp.		1 pz.	
Tappi Inferiori	Lower Caps		
1 cp.		1 pz.	

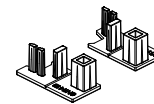
CONFEZIONE KIT 2 ANTE MIN FISSO + MOBILE
2 SASHES MIN SASHES PACK
Tipo M | M Type
Tipo N | N Type

AHM 16.6745.77
KIT Carrelli + Distanziatori
KIT Track Roller + Spacers

1 pz.

Portata MAX
MAX Weight

300kg
1 pz.

KIT Basamenti per Montanti
KIT Mullion Basement Caps
Tappi Superiori
Upper Caps

Tappi Inferiori
Lower Caps

1 cp.
Tappi Superiori
Upper Caps

Tappi Inferiori
Lower Caps

1 cp.
KIT Tappi Centrali Sup + Inf
KIT Sup + Inf Central Caps
Tappi Superiori
Upper Caps

Angoli Guarnizioni
Corner Gaskets

AHX10.47


2 cp.

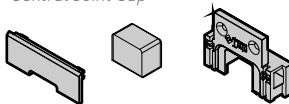
Tappo Riporto Centrale
Central Joint Cap

2 pz.

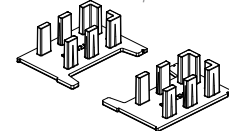
Tappo BX50
BX50 Cap

1 cp.
Tappi Inferiori
Lower Caps

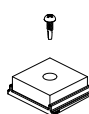
Angoli Guarnizioni
Corner Gaskets

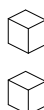
AHX10.63


2 cp.

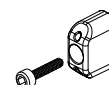
Tappo Riporto Centrale
Central Joint Cap

2 pz.

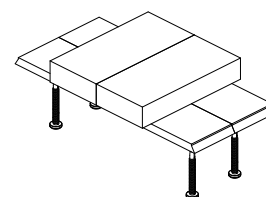
Tappo Profilo HM16.304
Profile HM16.304 Cap

1 cp.
KIT Tenuta Centrale + Bumper
KIT Central Sealing + Bumper

Tassello Tenuta Centrale Inferiore
Lower Central Sealing Raw Plug

2 pz.

Spugna Inferiore Telaio Lato Serratura
Lower Frame Sponge [Latch Side]

2 pz.

Bumper

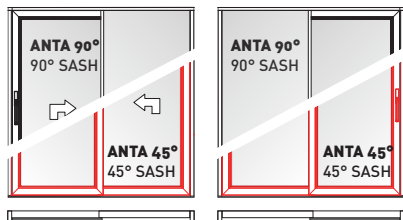

1 pz.

Tassello Tenuta Centrale Superiore
Upper Central Sealing Raw Plug

1 pz.

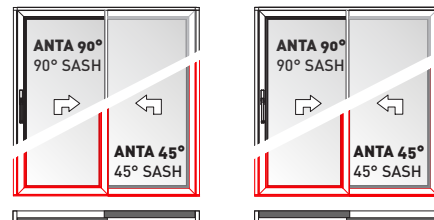


TUTTI TIPI A 2 ANTE
ALL 2 SASHES TYPES

Tipo | Type A/B **Tipo | Type D/F**



Tipo | Type C/D **Tipo | Type H/I**



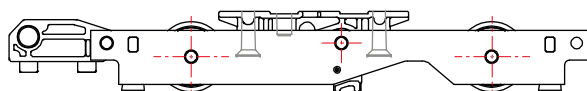
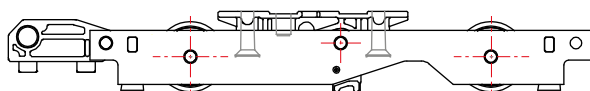
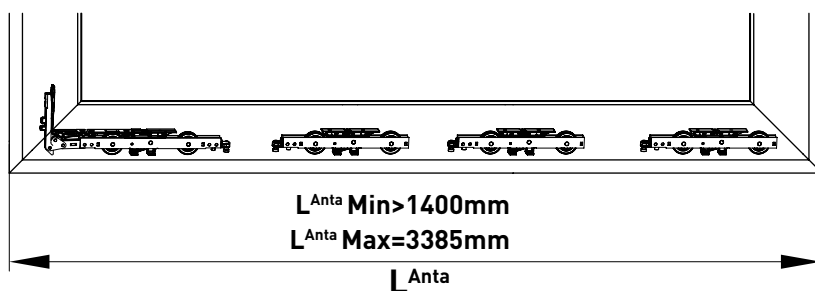
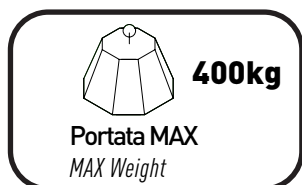
AHM 16.6740.12

■ **KIT Carrelli Supplementari (Senza Spazzole)**

► *KIT Assitional Track Roller (Brushless)*

Coppia Carrelli Supplementari
Additional Track Roller Pair

1 cp.



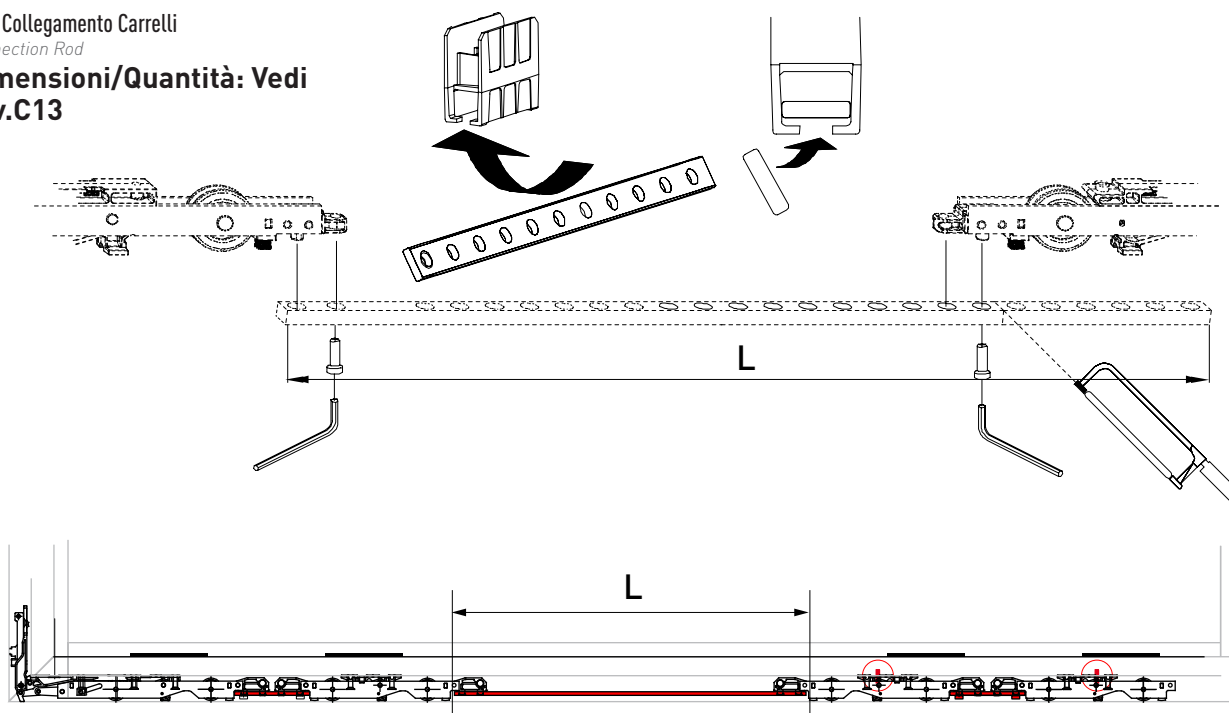
Ammortizzatore Serratura OBBLIGATORIO
MANDATORY Cremone Dumper

1 pz.



Asta Collegamento Carrelli
Connection Rod

Dimensioni/Quantità: Vedi Tav.C13





ASTA DI COLLEGAMENTO

CAMPO DI APPLICAZIONE HS CARRELLO 250Kg/400kg
FIELD OF APPLICATION HS TROLLEY 250Kg/400kg

AHX 6741.X		UTILIZZO SINGOLO 250 Kg SINGLE USE 250 Kg		UTILIZZO TANDEM 400 Kg TANDEM USE 400 Kg	
Descrizione Description		Asta ORIZZONTALE HORIZONTAL Rod	Asta VERTICALE VERTICAL Rod	Asta ORIZZONTALE HORIZONTAL Rod	Asta VERTICALE VERTICAL Rod
Asta di Collegamento Carrelli Track Roller Connectin Beam	L Asta Rod LENGHT	L = L ^{Anta} - 574	L = L ^{Anta} - 662	L = L ^{Anta} - 1139	L = L ^{Anta} - 1187
		Anta/Sash	Anta/Sash	Anta/Sash	Anta/Sash
AHX 6741.1	L=96	670	670 - 718	1235	1235 - 1283
AHX 6741.2	L=692	690 - 1266	714 - 1314	1255 - 1831	1279 - 1879
AHX 6741.3	L=1196	1194 - 1770	1218 - 1818	1759 - 2335	1783 - 2383
AHX 6741.4	L=1700	1698 - 2274	1722 - 2322	2263 - 2839	2287 - 2887
AHX 6741.5	L=2204	2202 - 2778	2226 - 2826	2767 - 3343	2791 - 3391
AHX 6741.6	L=2708	2706 - 3282	2730 - 3330	3271 - 3847	3295 - 3895

L = 96

L = 692

L = 1.196

L = 1.700

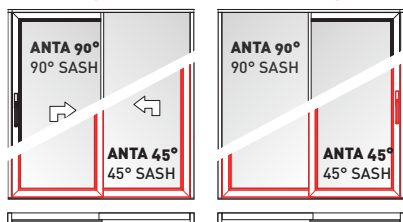
L = 2.204

L = 2.708

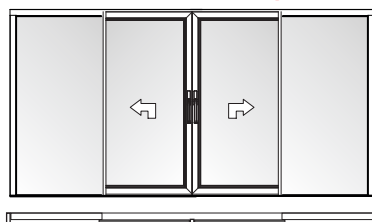


TUTTI I TIPI [ANTA 45°+ MIN]
ALL TYPES [45°+ MIN SASH]

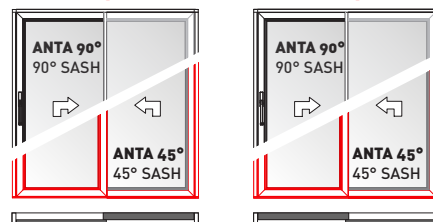
Tipo | Type A/B **Tipo | Type D/F**



Tipo E | E Type



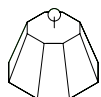
Tipo | Type C/D **Tipo | Type H/I**



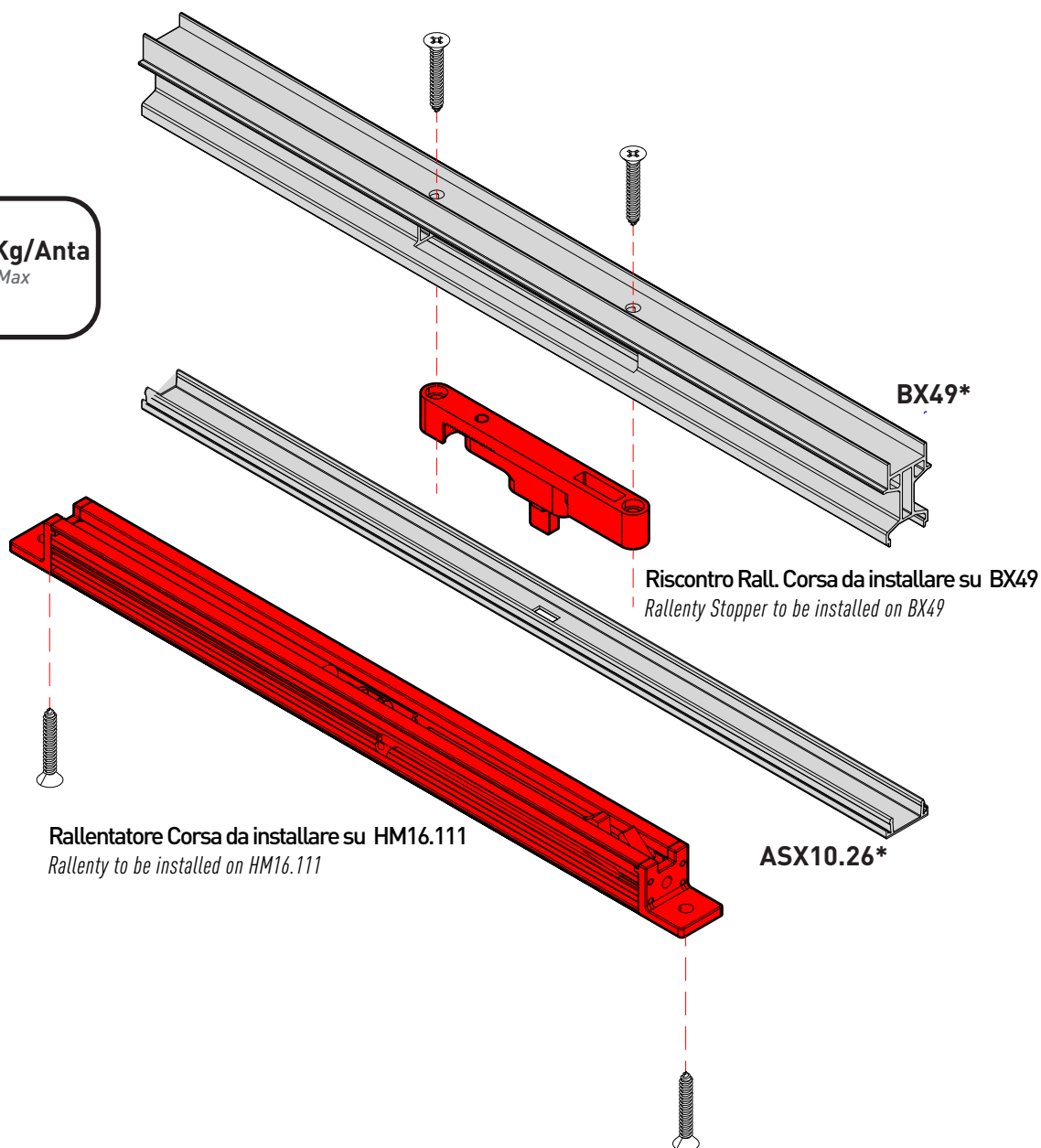
AHM 16.6744.2

■ **KIT Rallentatore Corsa**

► *KIT Rallenty*



Max 300 Kg/Anta
300 Kg/Sash Max



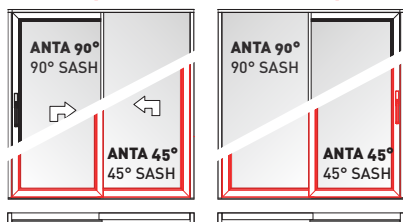
BM49 e ASX10.26 con le relative lavorazioni NON sono INCLUSE NEL KIT

***BM49 and ASX10.26 are to be tooled and are NOT included in the KIT**

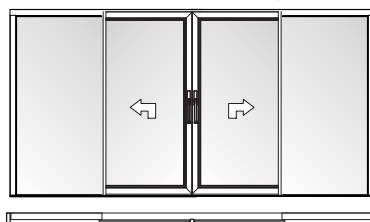


TUTTI I TIPI [ANTA 45°+ MIN]
ALL TYPES [45°+ MIN SASH]

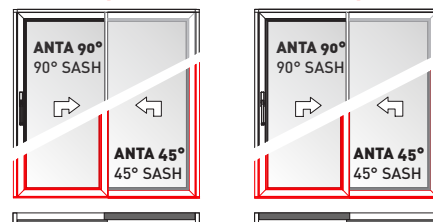
Tipo | Type A/B **Tipo | Type D/F**



Tipo E | E Type

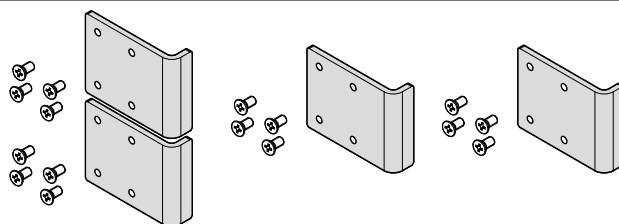


Tipo | Type C/D **Tipo | Type H/I**

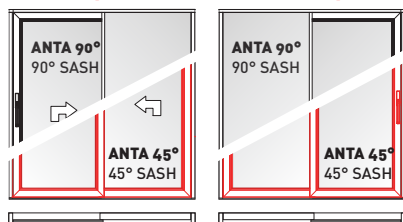
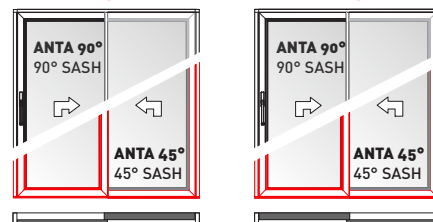


AHM 16.6745.73

■ **KIT ANTIEFFRAZIONE**



4 cp.

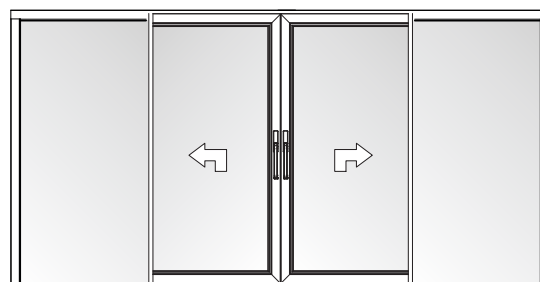

TUTTI TIPI A 2 ANTE
ALL 2 SASHES TYPES
Tipo | Type A/B Tipo | Type D/F

Tipo | Type C/D Tipo | Type H/I

KIT AHM16.6732.XX

■ KIT Serratura ► KIT Latch		HM16.6732.2	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	2 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	400 mm.
		H Anta <i>H Sash</i>	735/1360 mm.
		L Asta <i>L Rod</i>	1305 mm.
		HM16.6732.3	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	2 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	400 mm.
		H Anta <i>H Sash</i>	1235/1960 mm.
		L Asta <i>L Rod</i>	1900 mm.
		HM16.6732.4	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	2 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	1835/2560 mm.
		L Asta <i>L Rod</i>	2500 mm.
		HM16.6732.5	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 3 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	2270/2860 mm.
		L Asta <i>L Rod</i>	2800 mm.
		HM16.6732.6	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 3 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	2670/3360 mm.
		L Asta <i>L Rod</i>	3300 mm.
		HM16.6732.7	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 3 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	1 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	2670/3860 mm.
		L Asta <i>L Rod</i>	3800 mm.



Tipo C | C Type

CONFEZIONE KIT 2 ANTE MOBILE 90° + 2 VETRATE FISSE
2 90° SLIDING SASHES + 2 FIX GLAZING PACK



KIT AHM16.6730.XX

■ KIT Serratura ▶ KIT Latch		HM16.6730.2	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	2 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	400 mm.
		H Anta <i>H Sash</i>	735/1360 mm.
		L Rod	
		L Asta	1300 mm.
		HM16.6730.3	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	2 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	1260/1760 mm.
		L Rod	
		L Asta	1700 mm.
		HM16.6730.4	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	1660/2160 mm.
		L Rod	
		L Asta	2100 mm.
		HM16.6730.5	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	1060/2560 mm.
		L Rod	
		L Asta	2500 mm.
		HM16.6730.6	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	2460/2860 mm.
		L Rod	
		L Asta	2800 mm.
		HM16.6730.7	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	2860/3360 mm.
		L Rod	
		L Asta	3300 mm.
		HM16.6730.8	Qt.
		Scontro Regolabile <i>Adjustable Lock Striker</i>	3 pz.
		Serratura alzante 2 Ganci <i>Latch for Lifting Sliding Window 2 Hooks</i>	2 pz.
		H Maniglia <i>H Handle</i>	1000 mm.
		H Anta <i>H Sash</i>	3260/3860 mm.
		L Rod	
		L Asta	3800 mm.

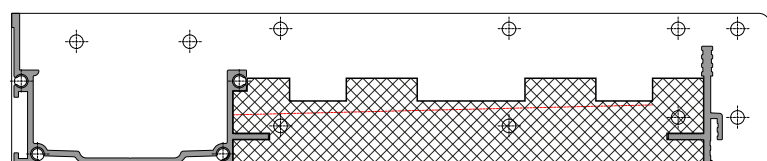
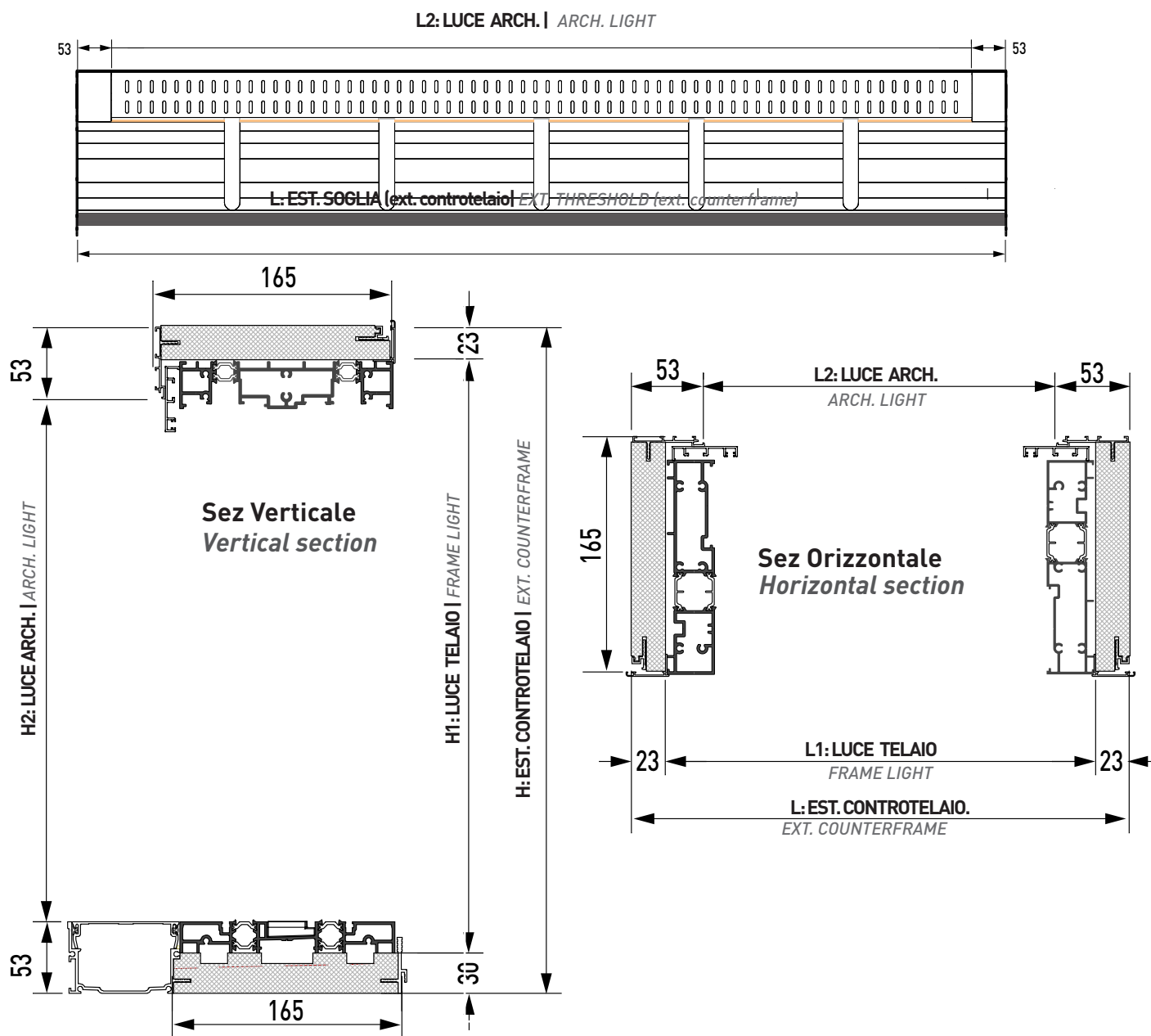


CONTROTELAIO per HX16.110

COUNTERFRAME for HX16.110 Profile

AMX SC160L.2

Kit Controtelaio Perimetrale + Soglia c/Canalina di Drenaggio Integrata
Perimetral Counterframe + Threshold w/Integrated Drainage Channel

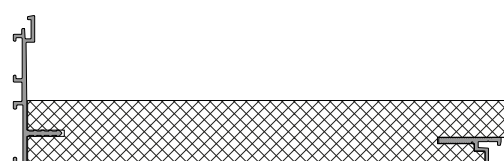


AMXSV160.2

Soglia PVC 2 Binari c/vasca + Griglia + Tappi [Prodotto Finito]
PVC Threshold 2 Rails w/Drainage Canal + Drain + Caps [End Product]

AMXSG160.2

Soglia PVC 2 Binari c/vasca Esterna Griglia + Profilo Interno
PVC Threshold 2 Rails w/External Drainage Canal + Drain + Internal Profile



TH130.1675

CONTROTELAIO THERMAL UNO L. 175 mm. c/Aletta 50 mm.
THERMAL COUNTERFRAME UNO L. 175 mm. w/Flap 50 mm.



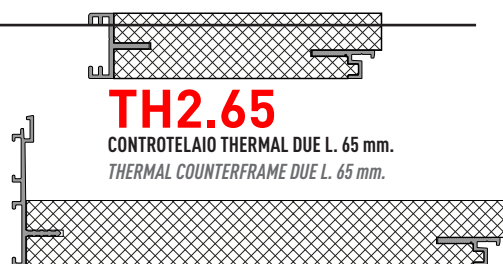
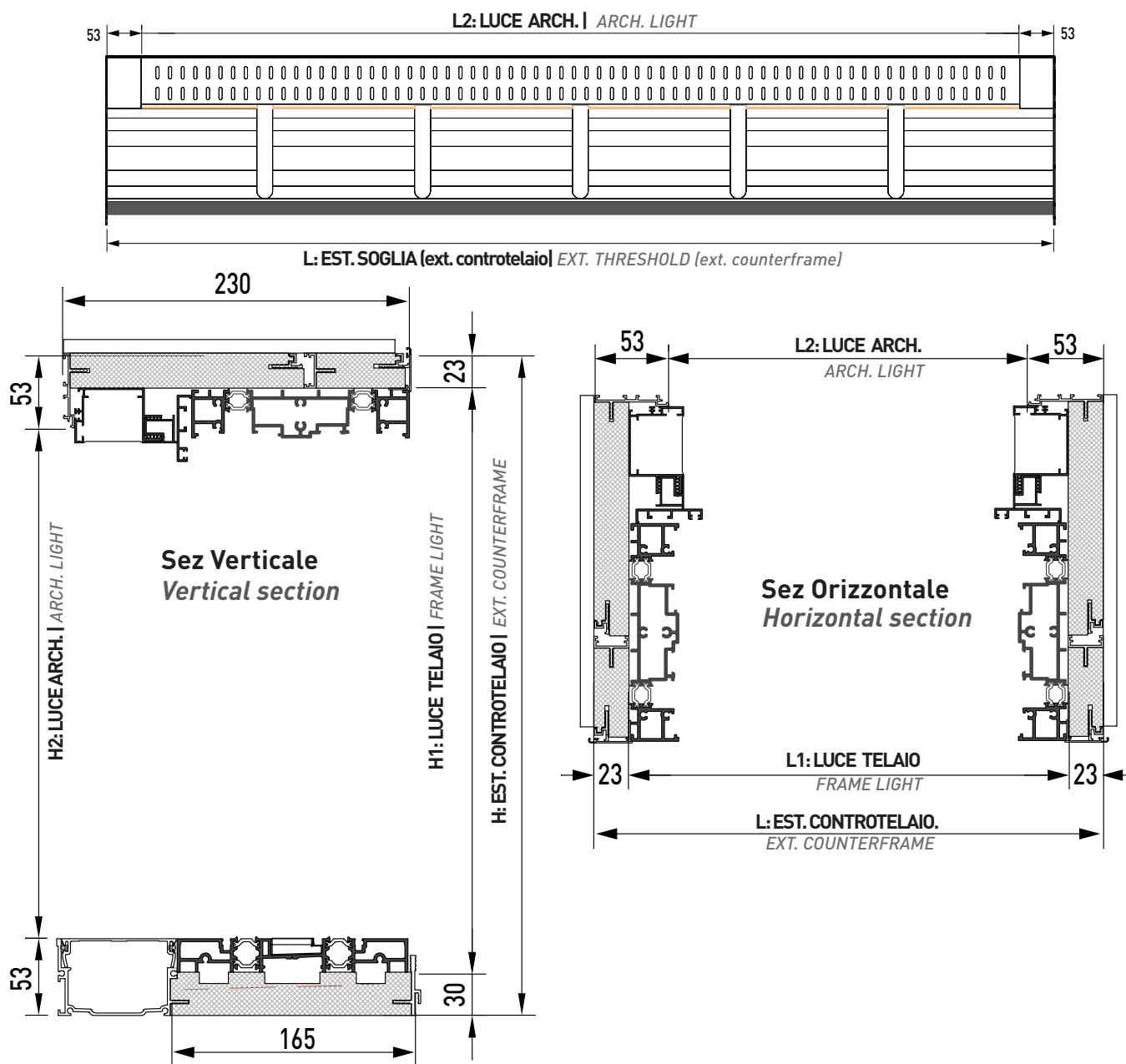
CONTROTELAIO per HX16.110 predisposizione Zanzariera

COUNTERFRAME for HX16.110 Profile

mosquito net profile prearrangement

AMX SC160LZ.2

Kit Controtelaio Perimetrale + Soglia c/Canalina di Drenaggio Integrata
Perimetral Counterframe + Threshold w/Integrated Drainage Channel



TH2.65

CONTROTELAIO THERMAL DUE L. 65 mm.
THERMAL COUNTERFRAME DUE L. 65 mm.

TH130.1675

CONTROTELAIO THERMAL UNO L. 175 mm. c/Aletta 50 mm.
THERMAL COUNTERFRAME UNO L. 175 mm. w/Flap 50 mm.

AMXSV160.2

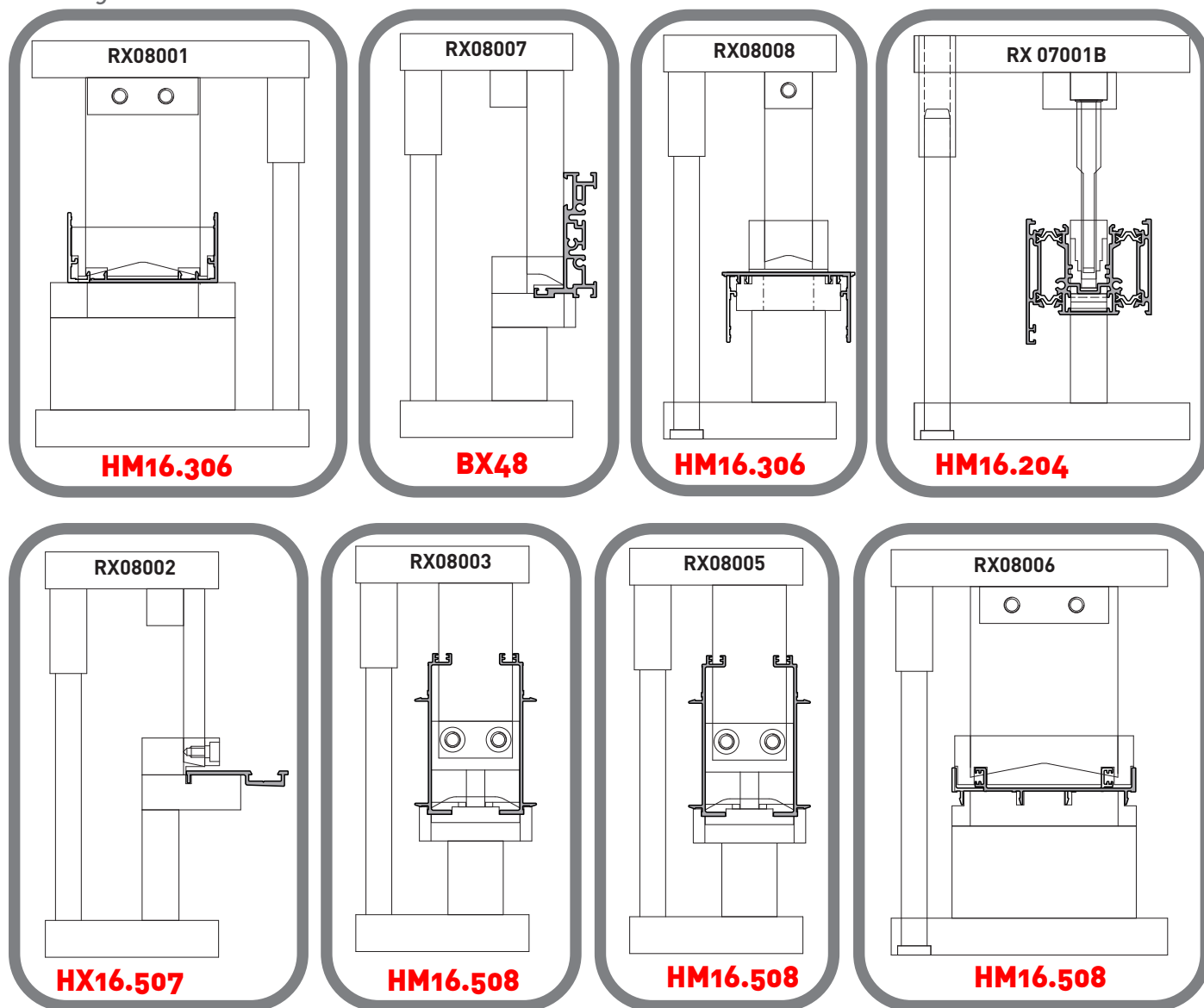
Soglia PVC 2 Binari c/vasca + Griglia + Tappi [Prodotto Finito]
PVC Threshold 2 Rails w/Drainage Canal + Drain + Caps [End Product]

AMXSG160.2

Soglia PVC 2 Binari c/vasca Esterna Griglia + Profilo Interno
PVC Threshold 2 Rails w/External Drainage Canal + Drain + Internal Profile

Elenco Punzonatrici

Punching Machines List



PUNZONATRICE Punching Machine	TIPOLOGIA Type			PROFILO Profile	Tav. Rif. Lavorazione Reference Tooling Table	DESCRIZIONE Description
RX08001	F+M		90°	HM16.306	G07	- Lavorazione Carter Montante Centrale lato Fisso ▶ Tooling for Central Mullion Carter Fixed Side
RX08002	F+M		90°	HM16.507	G09	- Drenaggio Soglia LATO FISSO ▶ Threshold Drainage FIXED SASH SIDE
RX08003	F+M	M+M	90° 45°	HM16.508	G13 G26	- Lavorazione Carter Laterale INTERNO ▶ Tooling for Lateral Carter INTERNAL
RX08005	F+M		90° 45°	HM16.508	G12 G25	- Lavorazione Carter Laterale ESTERNO ▶ Tooling for Lateral Carter EXTERNAL
RX08006	F+M		90° 45°	HM16.508	G12	- Lavorazione Carter INT/EXT ▶ Tooling for Lateral Carter INT/EXT
RX08007	F+M	M+M	90°	BX48	G31	- Lavorazione Montante Centrale Anta ▶ Tooling for Central Mullion on Sash
RX08008	F+M	M+M	90°	HM16.306	G34	- Lavorazione Carter Montante Centrale Anta ▶ Tooling for Central Mullion Carter on Sash
RX07001B	F+M	M+M	90° 45°	HM16.204	G29	- Lavorazione Squadretta ▶ Tooling for Corner Joint

■ **M+F** = Mobile + Fisso | Sliding + Fixed■ **M+M** = Mobile + Mobile | 2 Sliding■ **90°** = Anta 90° | 90° Sash■ **45°** = Anta 45° | 45° Sash



Nodi
Main Sections

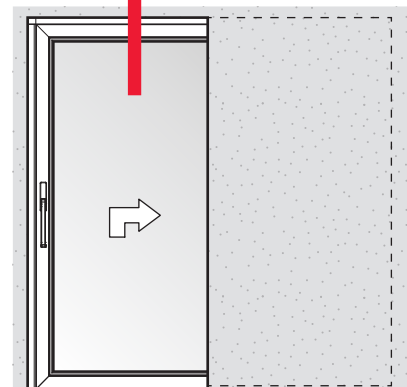
Gruppo D

Sezioni principali
e Accessori
Sc. 1:1

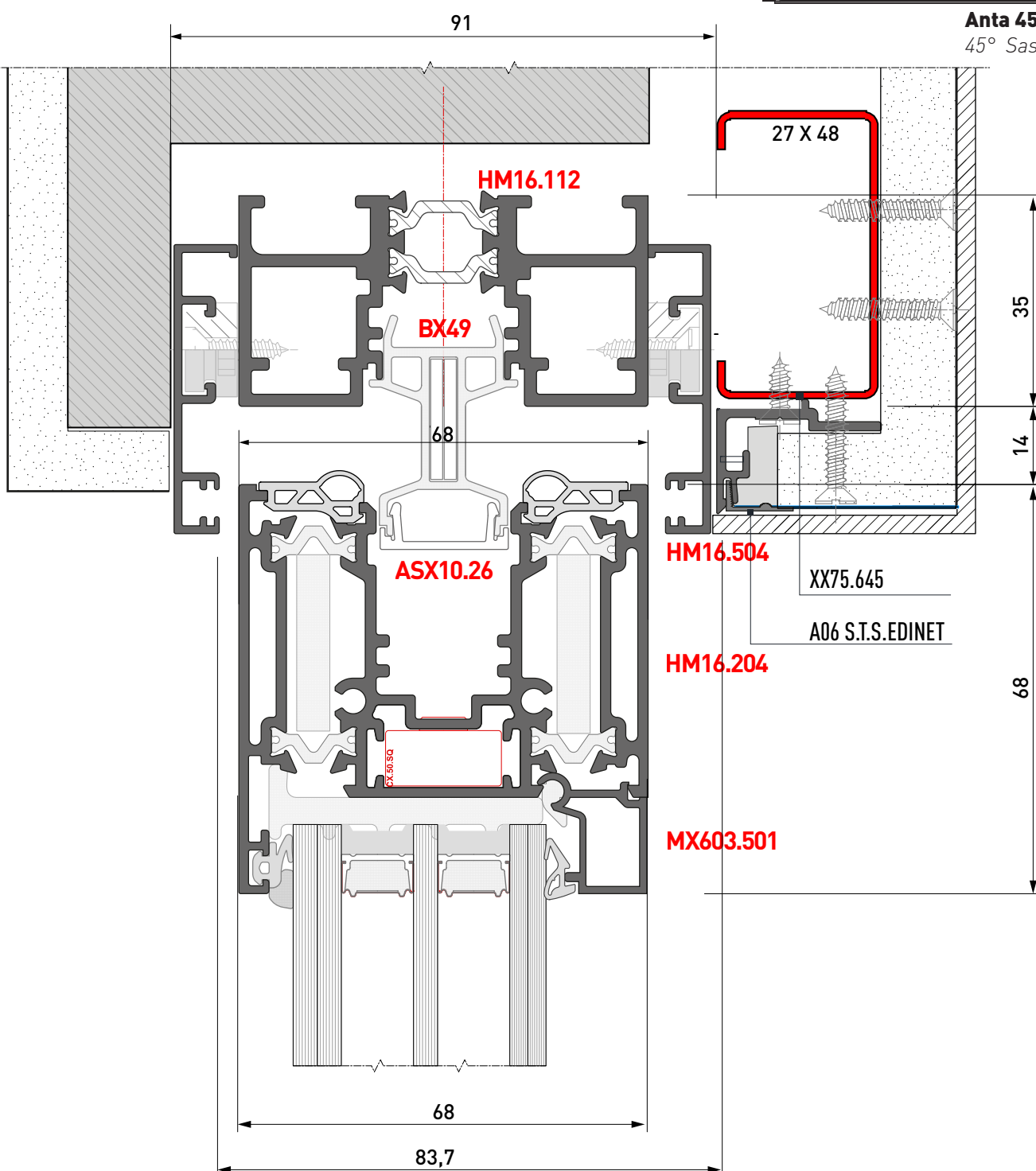
*Main Sections and
Accessories
Scale 1:1*



Anta mobile Incassata
Casket Door

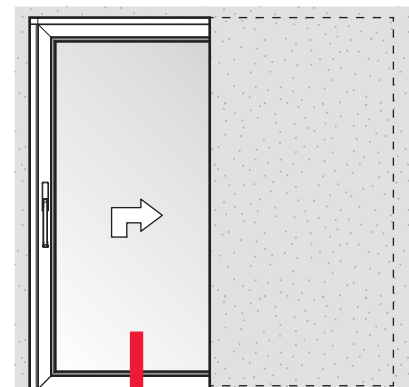


Anta 45°
45° Sash

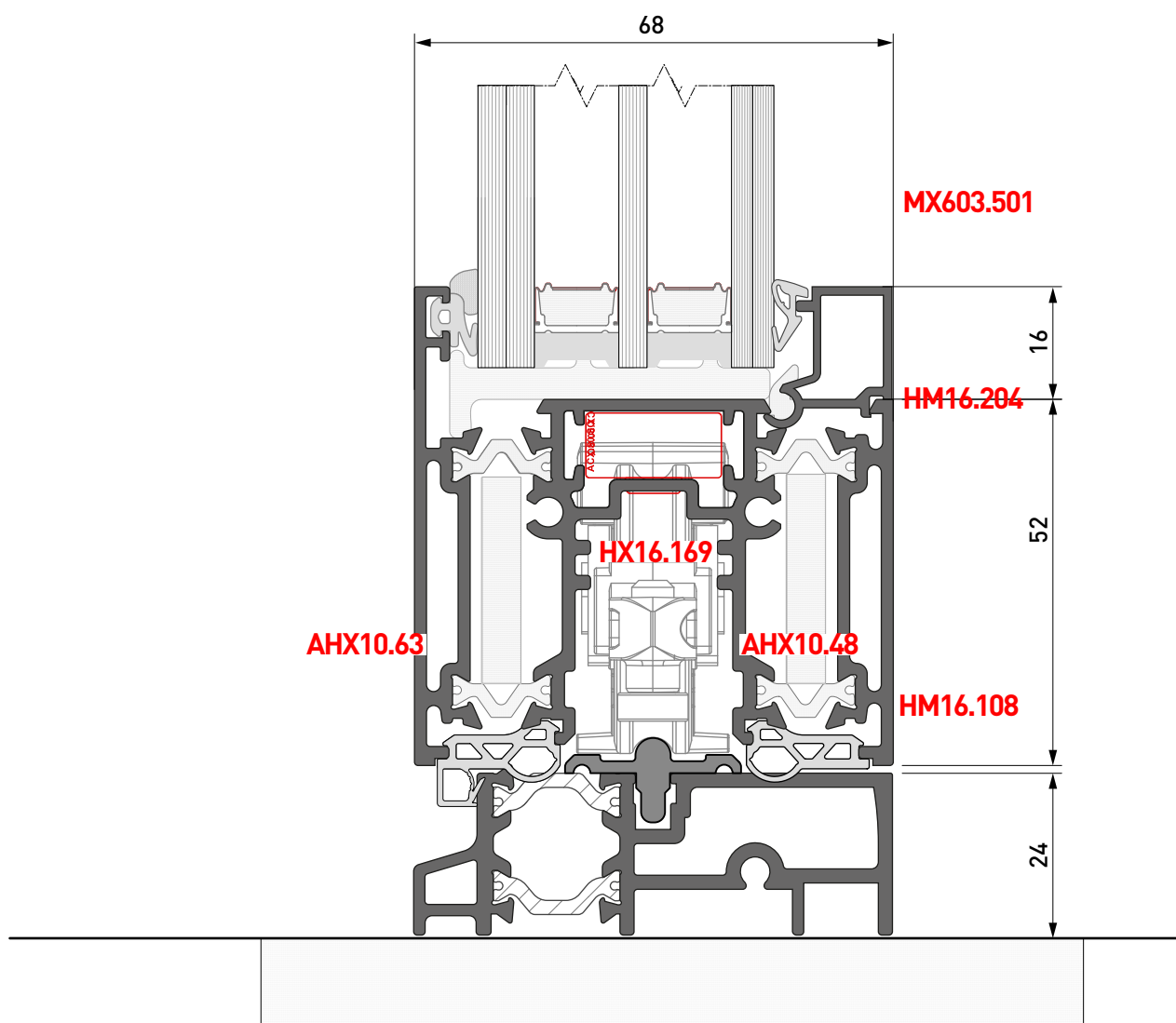




Anta mobile Incassata
Casket Door

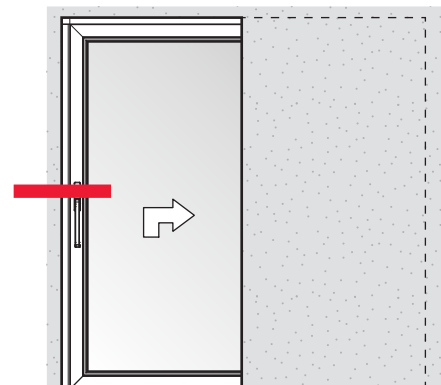


Anta 45°
45° Sash

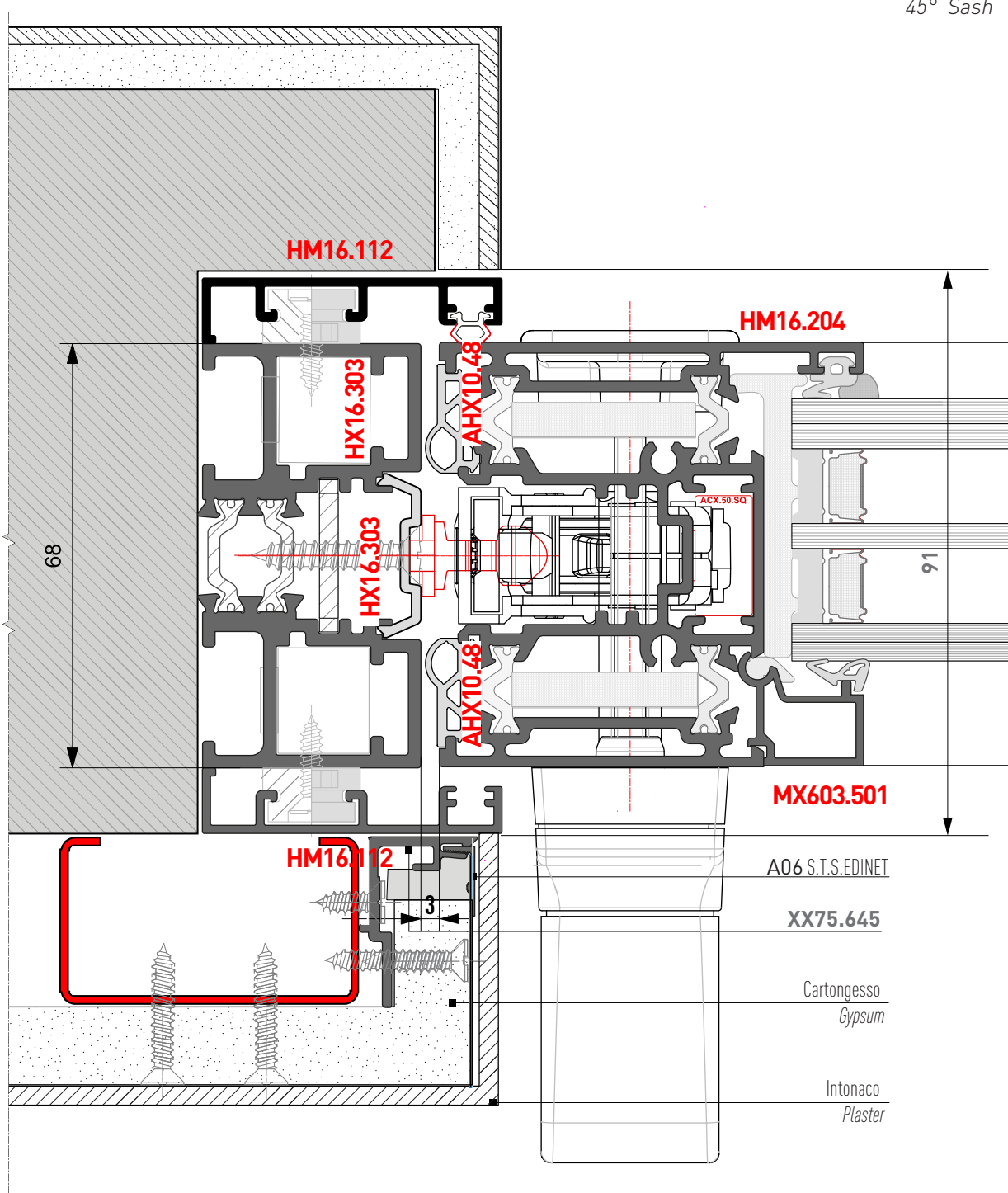




Anta mobile Incassata
Casket Door

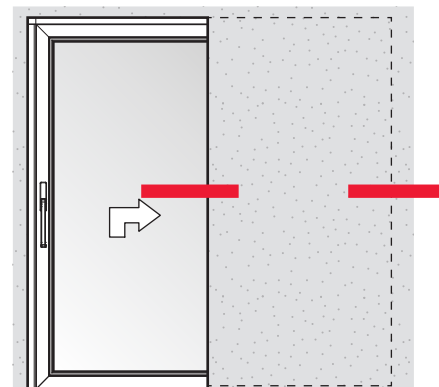


Anta 45°
45° Sash



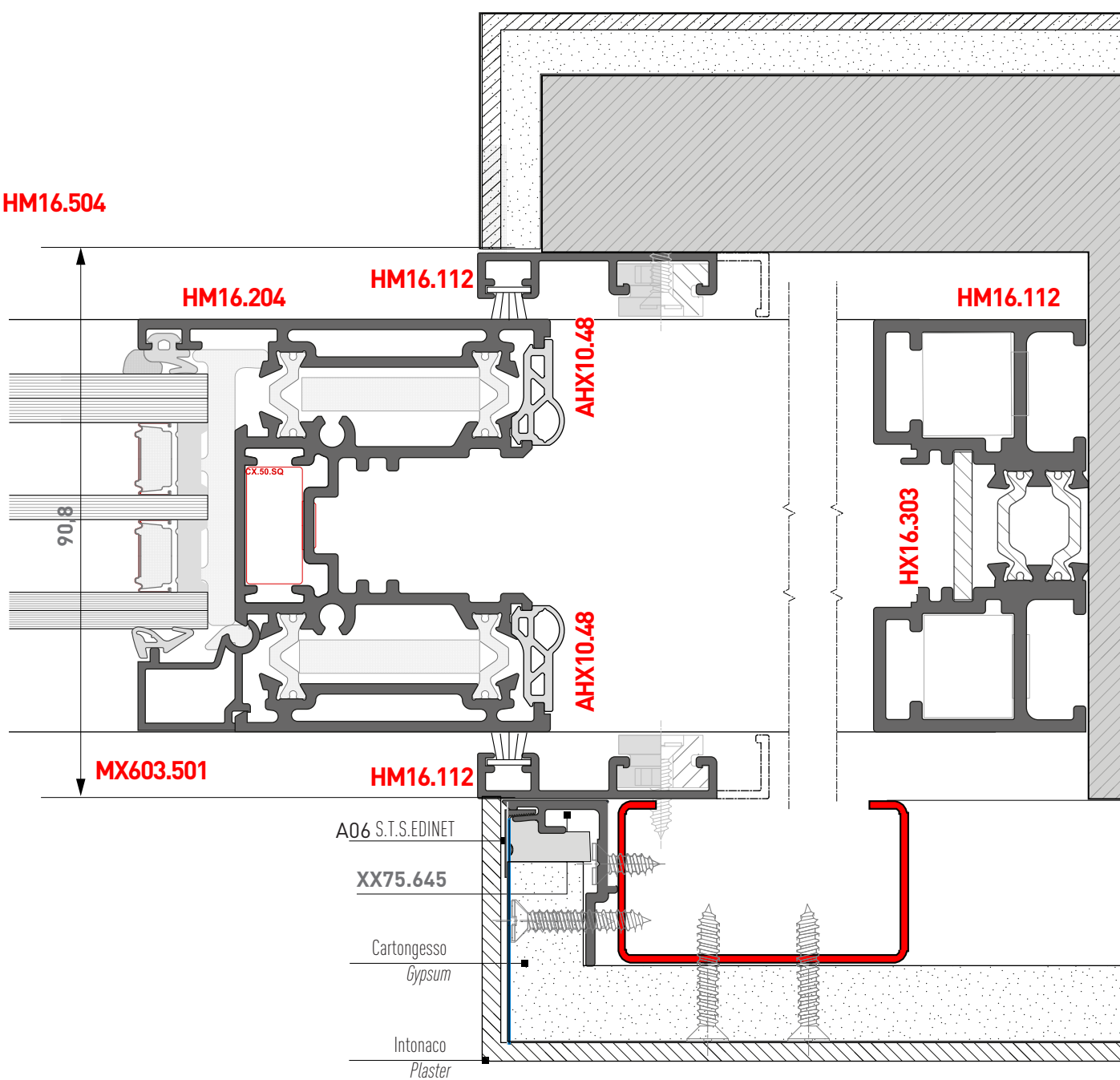


Anta mobile Incassata Casket Door



Anta 45°
45° Sash

HM16.504





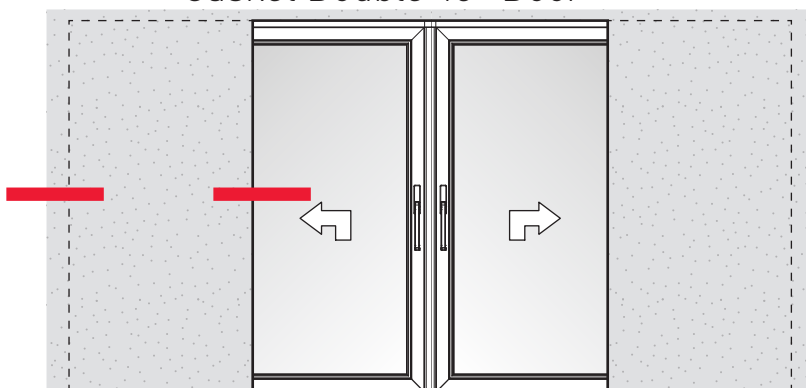
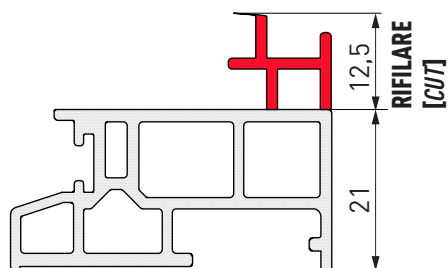
Vers 1.0

Serie | Series
HM160

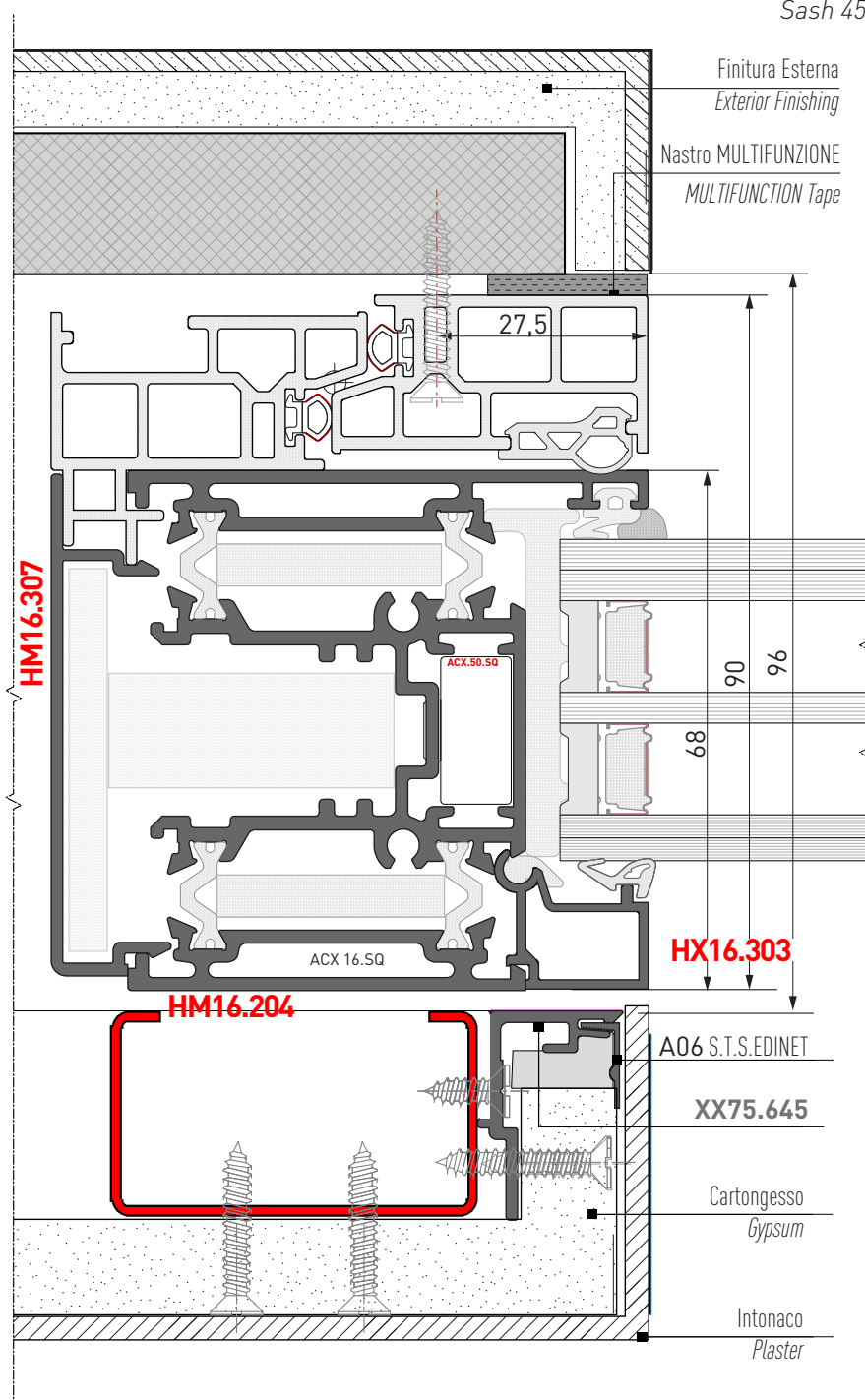
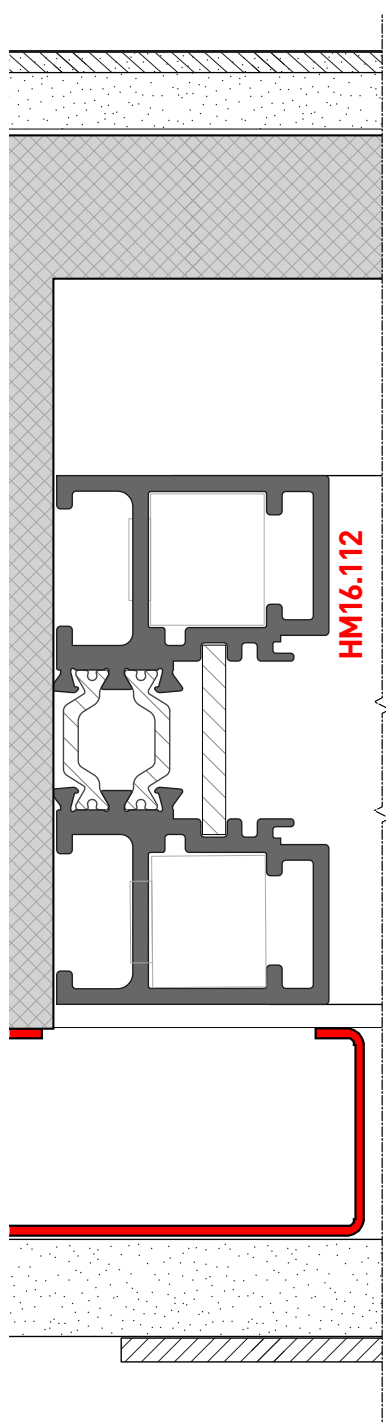
Gruppo | Group
D

Serie | Series
05

Doppia Anta 45° mobile Incassata
Casket Double 45° Door



Anta 45°
Sash 45°





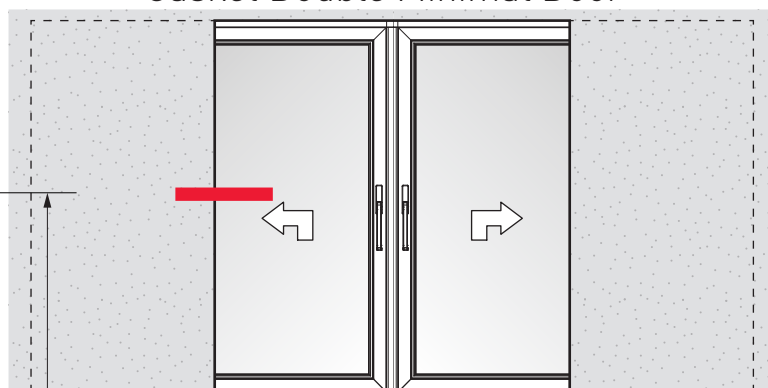
Vers 1.0

Serie | Series
HM160

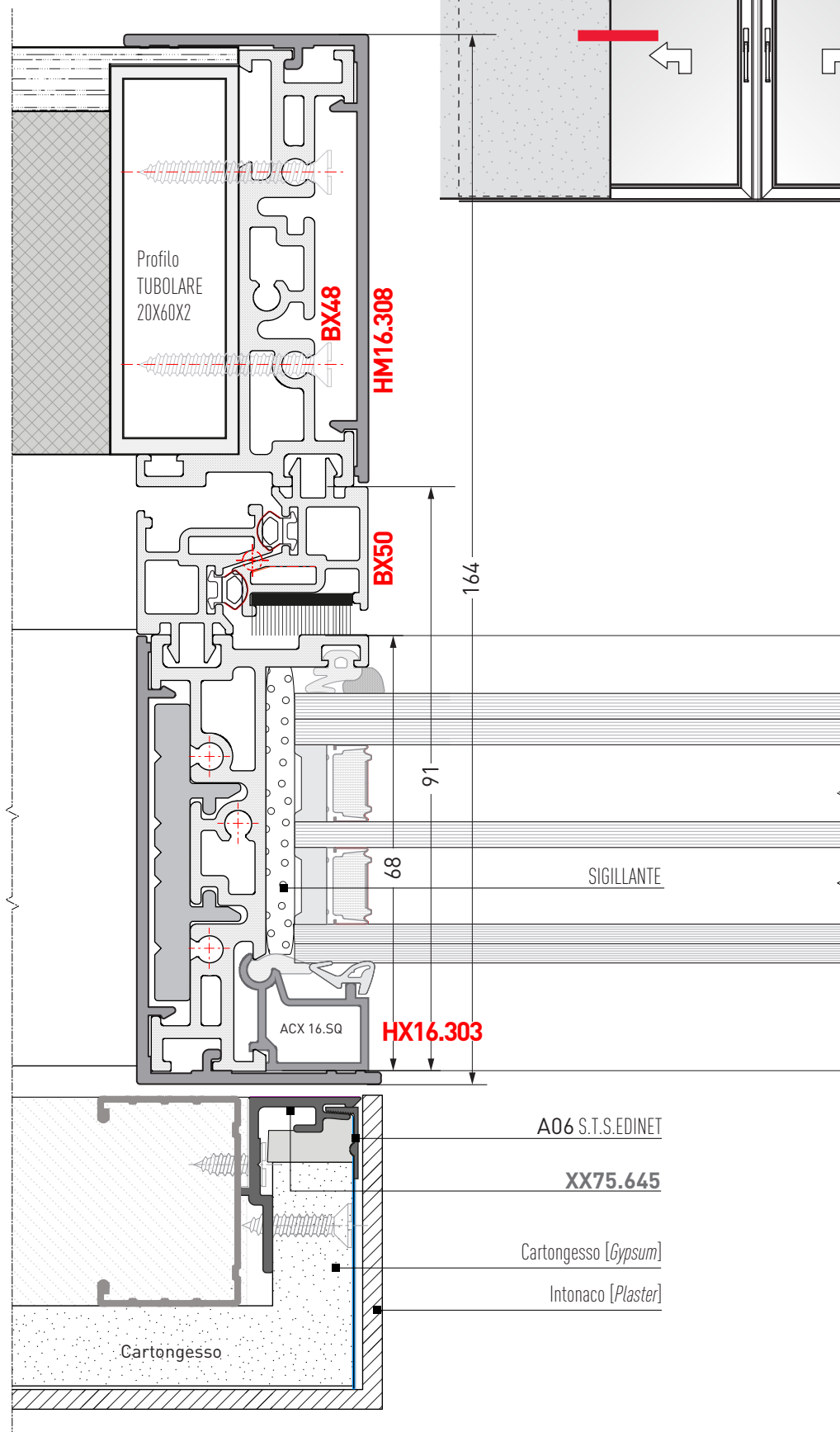
Gruppo | Group
D

Serie | Series
06

Doppia Anta 90° mobile Incassata
Casket Double Minimal Door



Anta90°
90° Sash





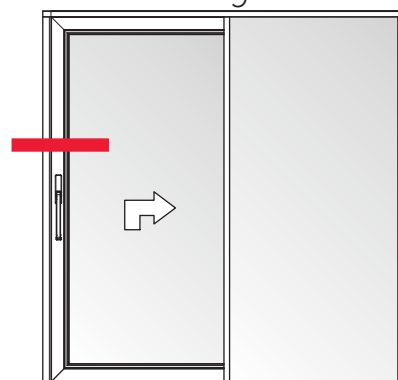
Vers **1.0**

Serie | Series
HM160

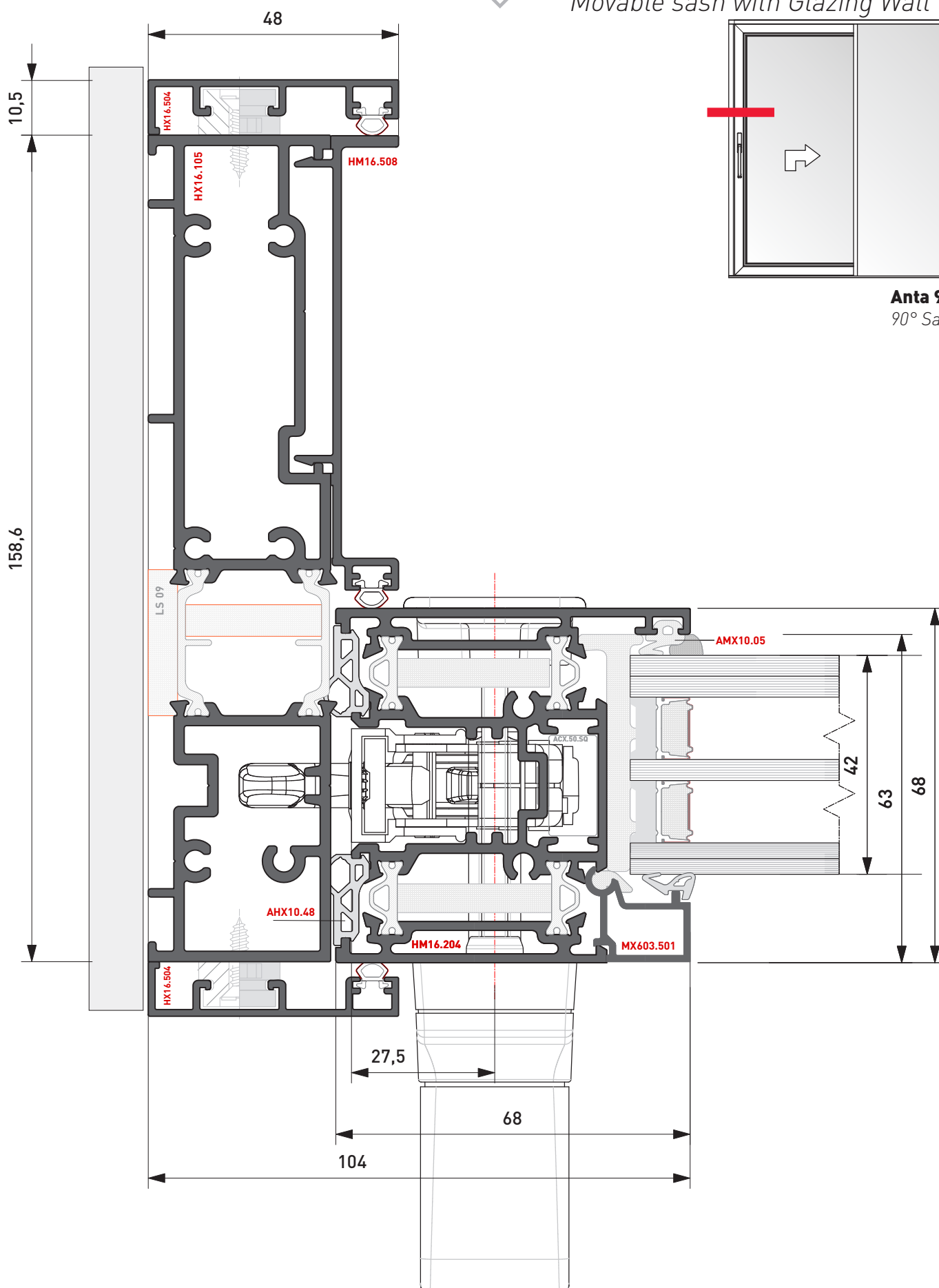
Gruppo | Group
D

Serie | Series
07

Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

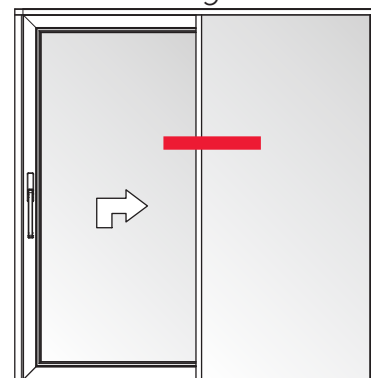
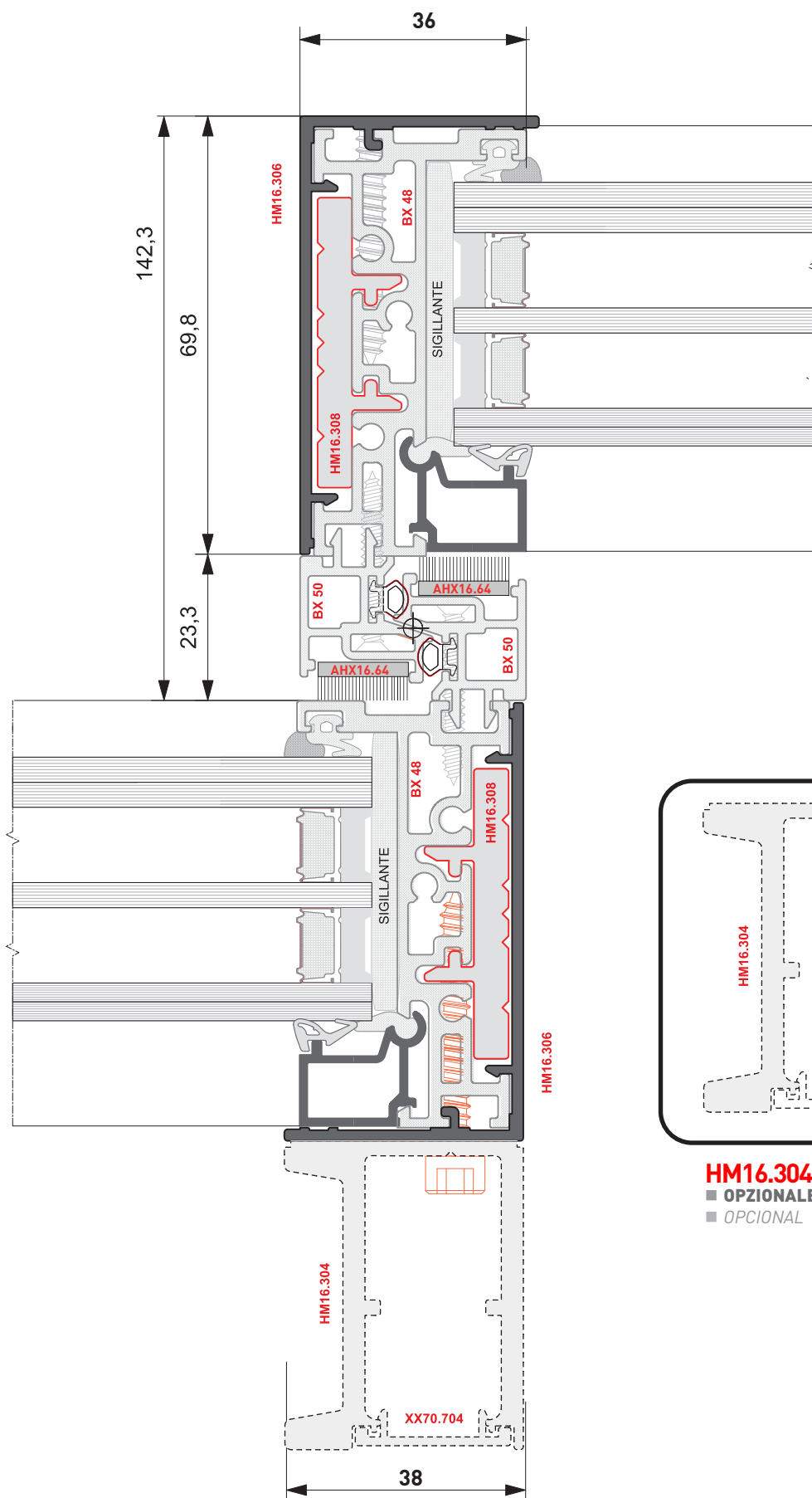


Anta 90°
90° Sash

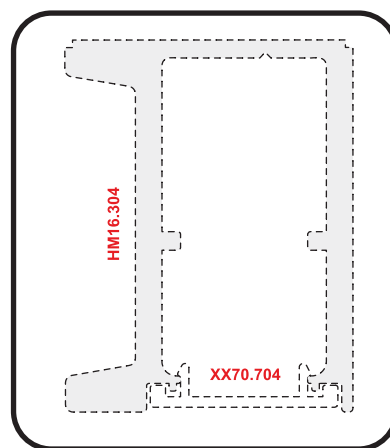




Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall



Anta 90°
90° Sash

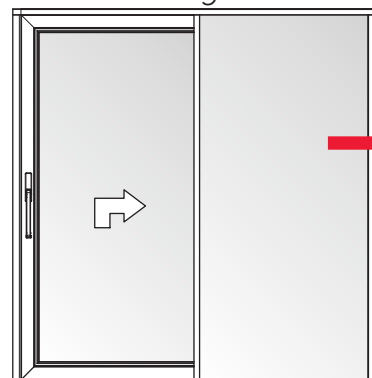


HM16.304 + XX70.704

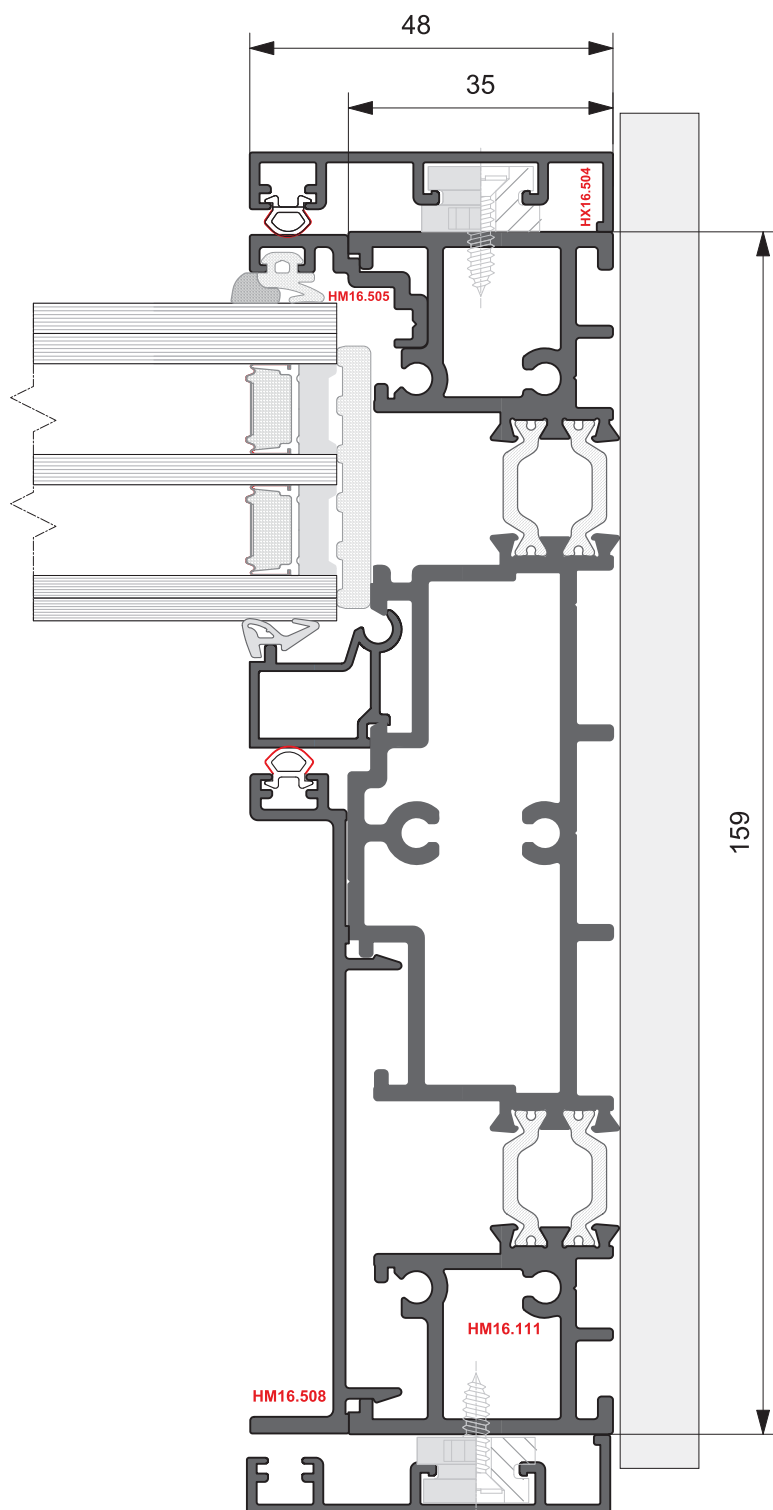
■ OPZIONALE
■ OPCIONAL



Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

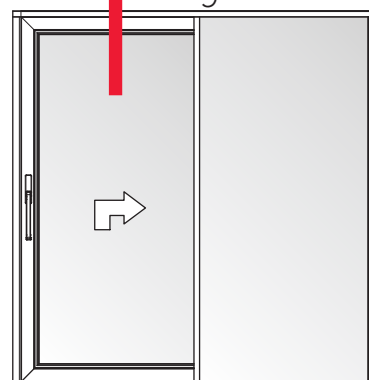


Anta 90°
90° Sash

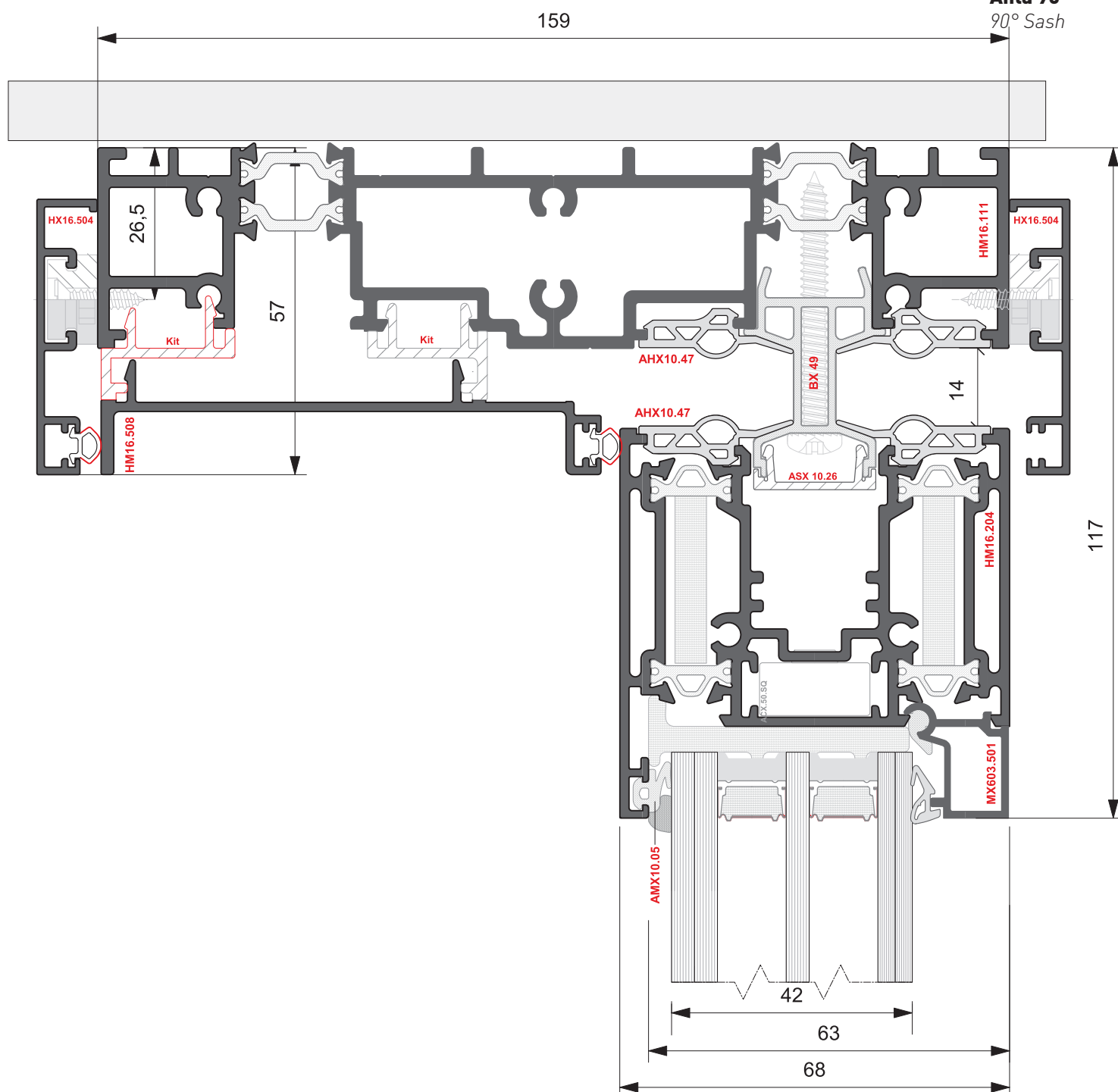




Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

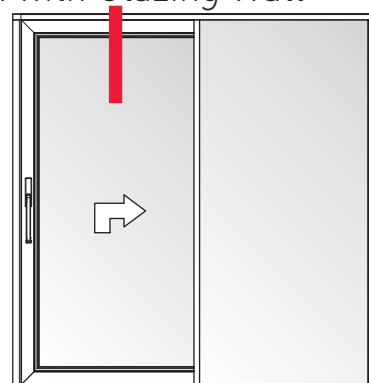


Anta 90°
90° Sash

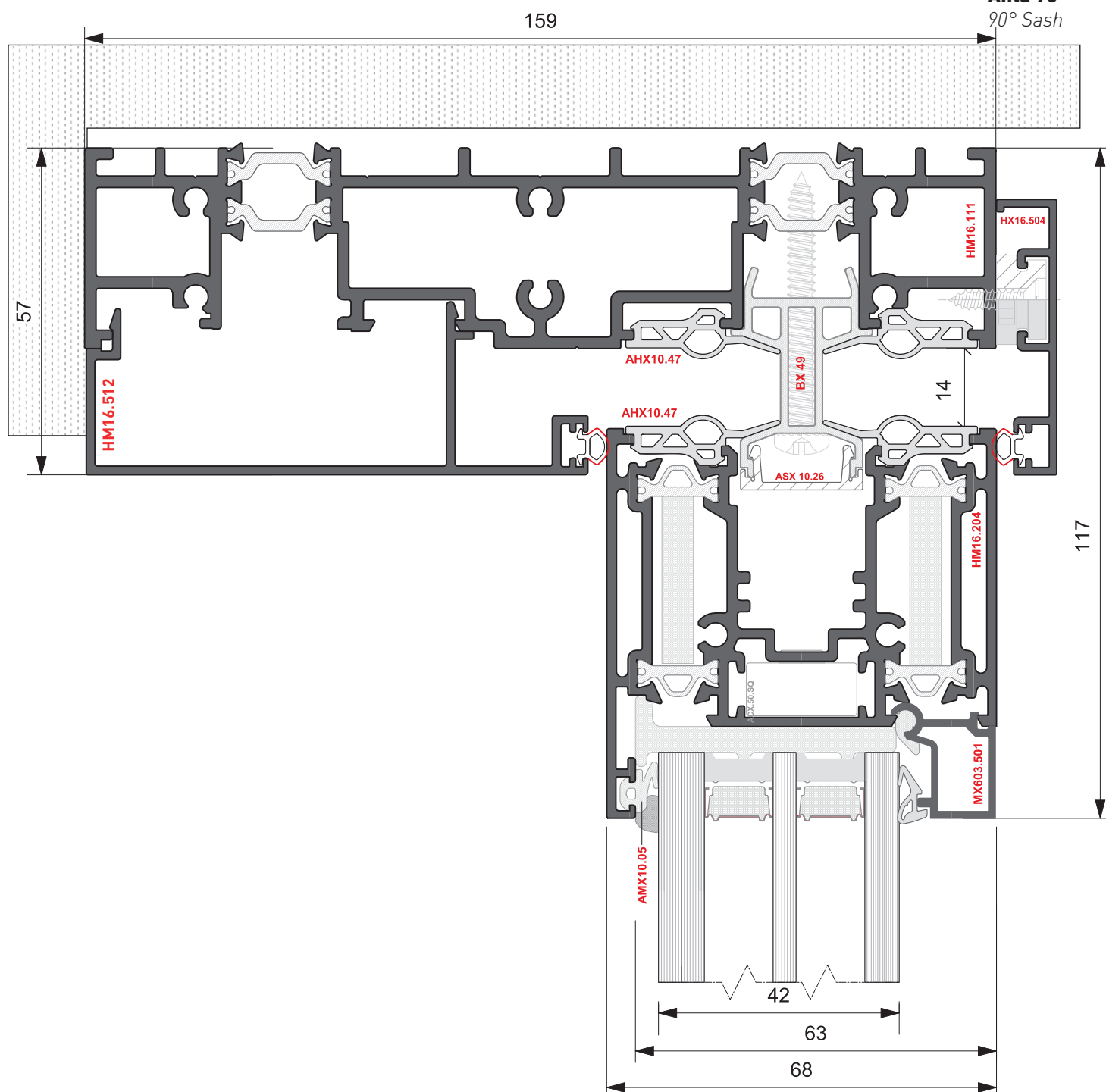




Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

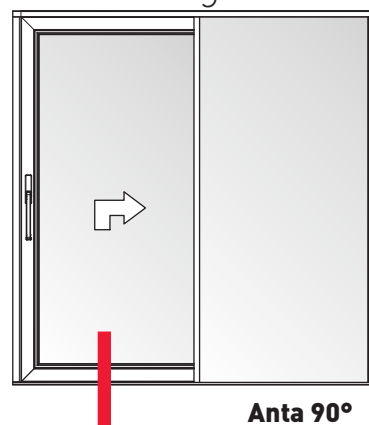


Anta 90°
90° Sash

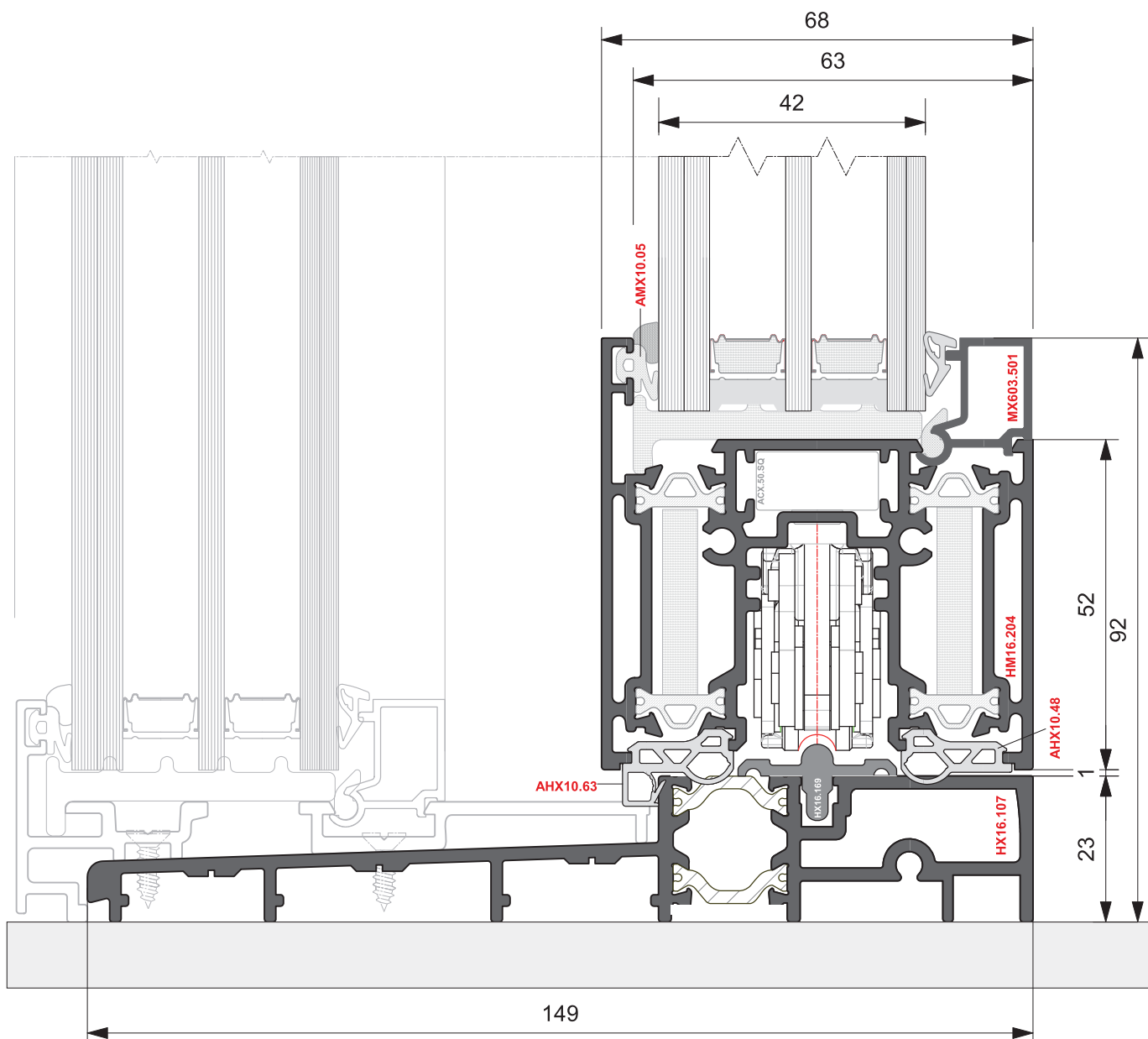




Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall



Anta 90°
90° Sash

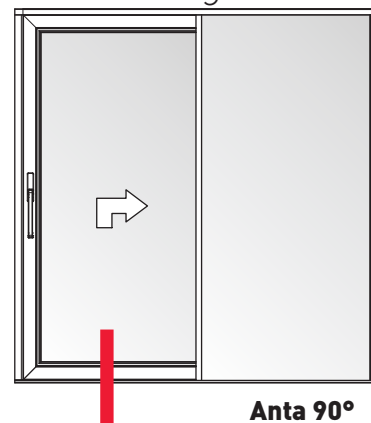




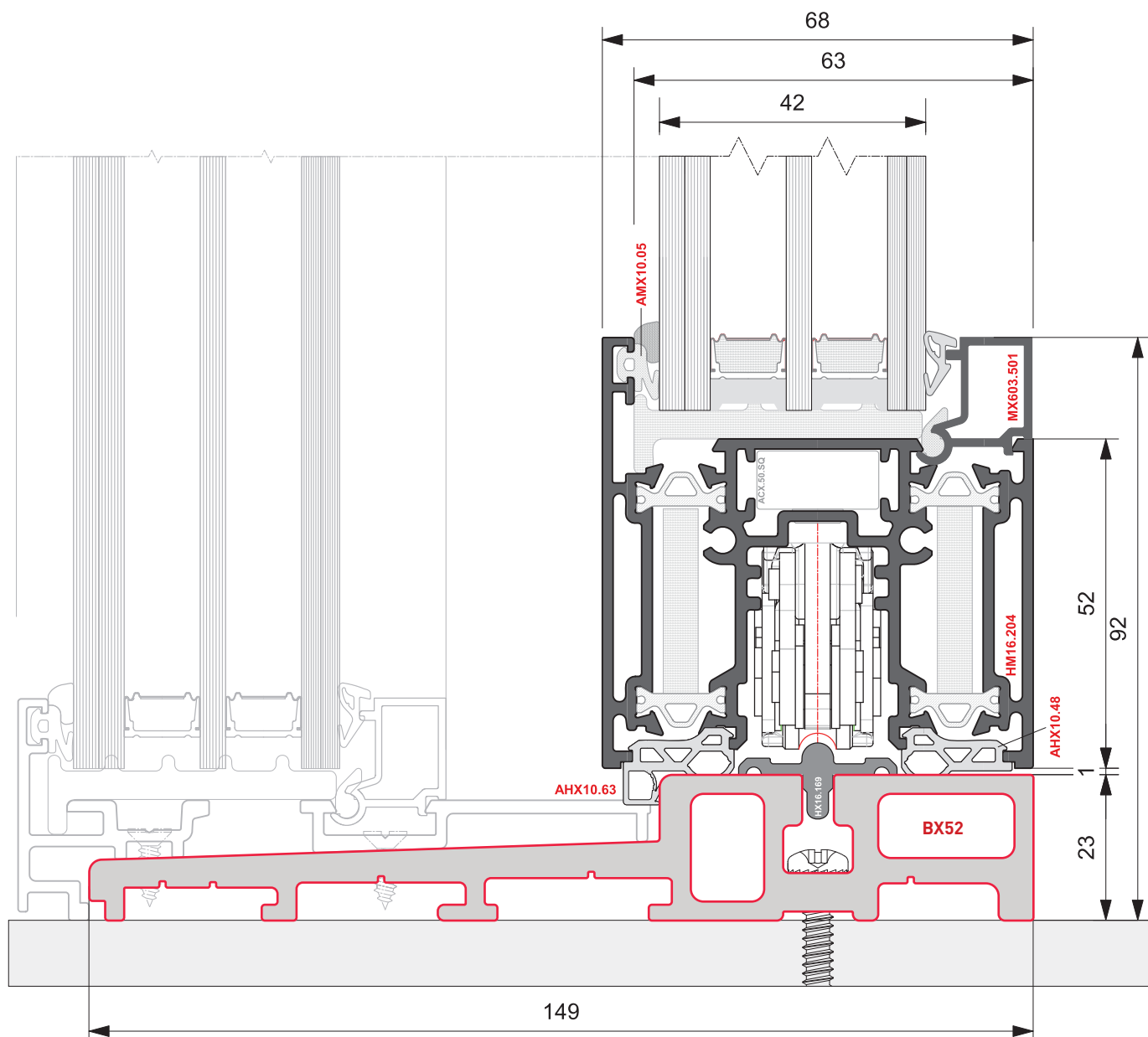
Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

Variante soglia BX52

BX52Threshold variant

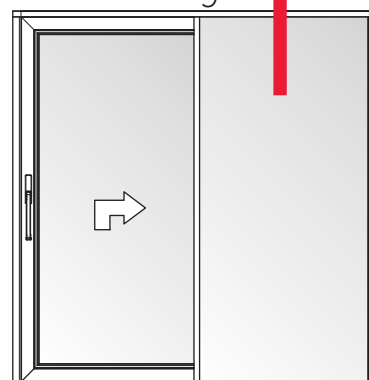


Anta 90°
90° Sash

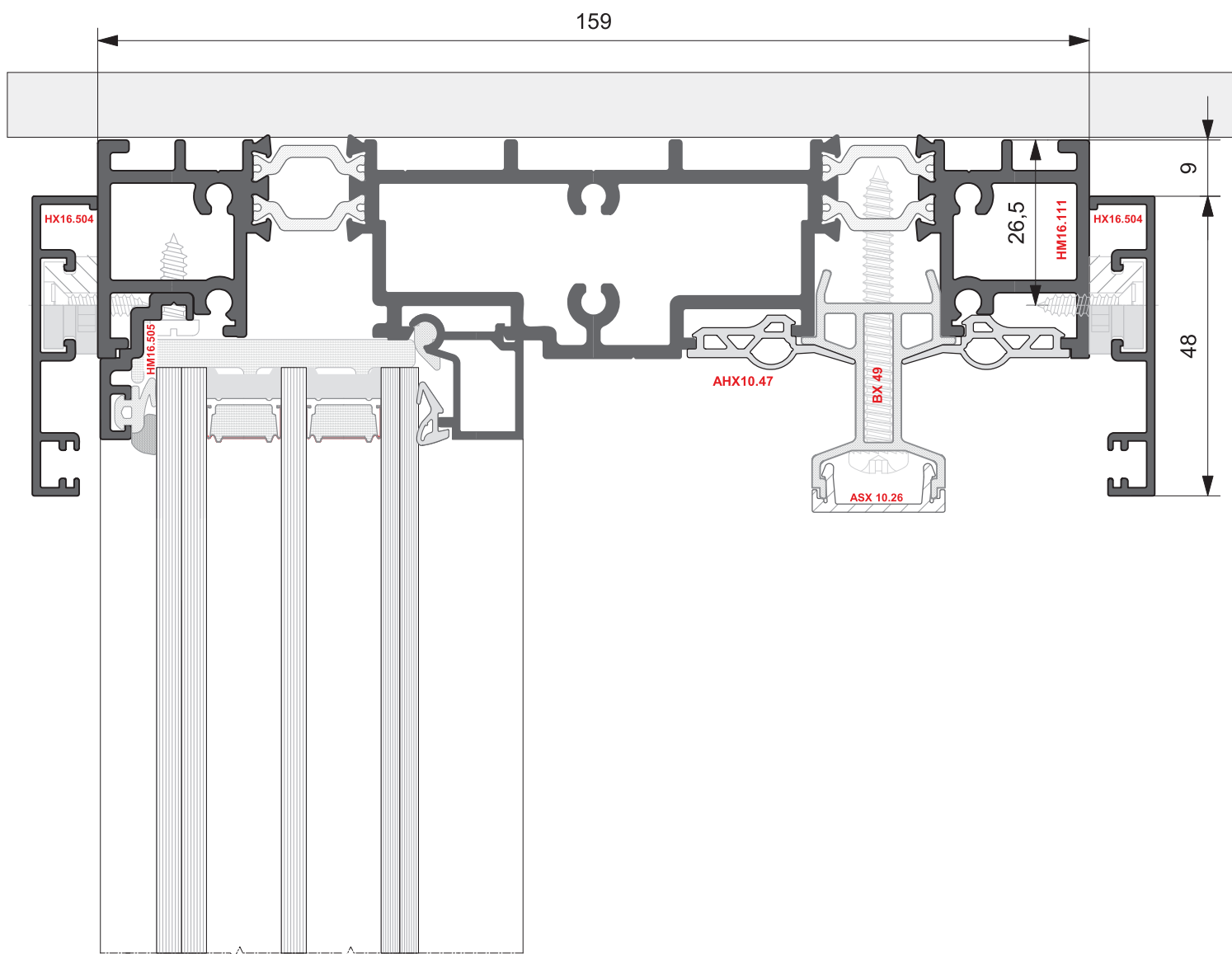




Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall

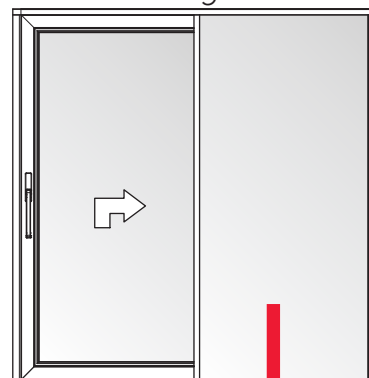


Anta 90°
90° Sash

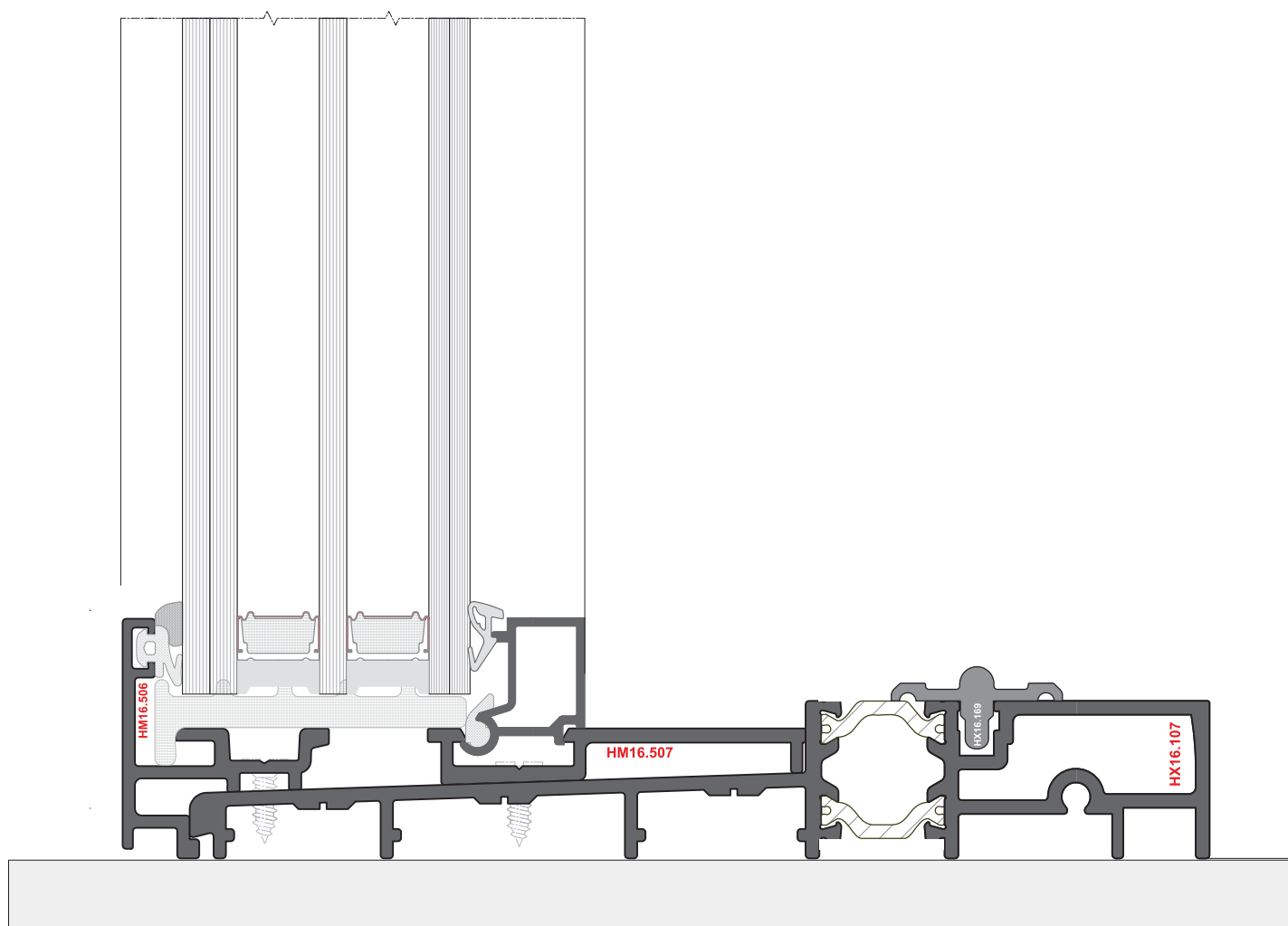


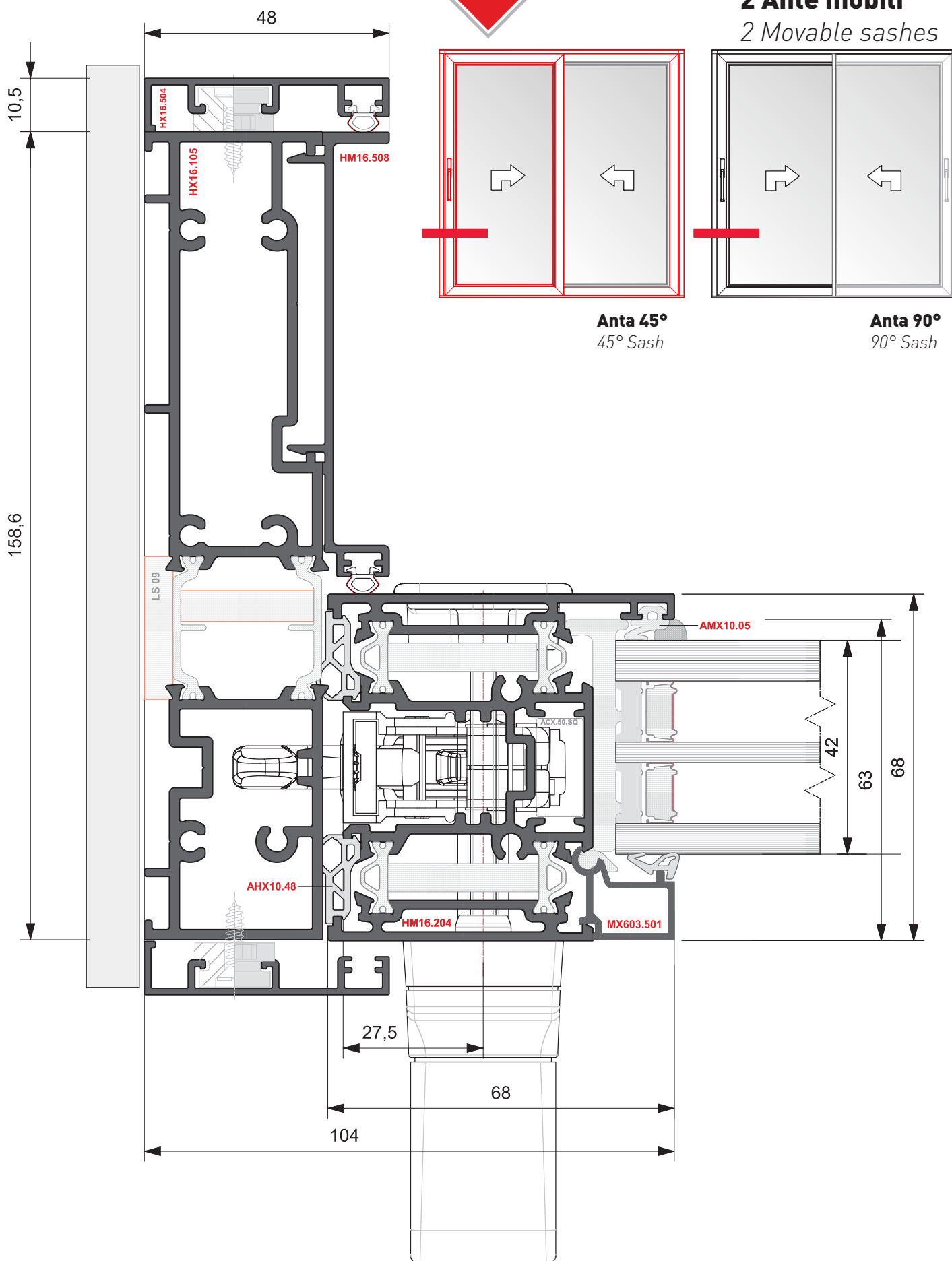


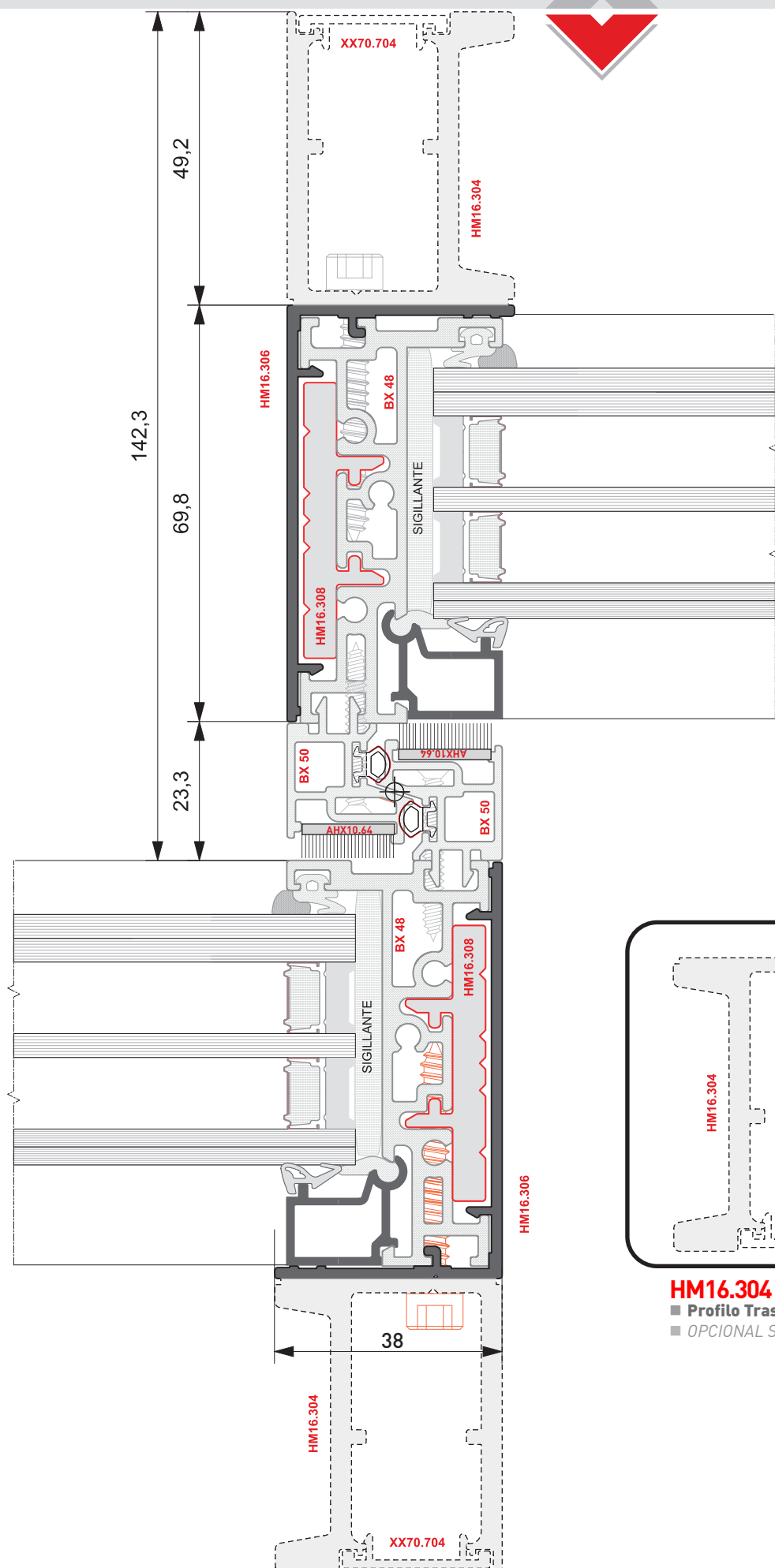
Anta mobile con Vetrata Fissa
Movable sash with Glazing Wall



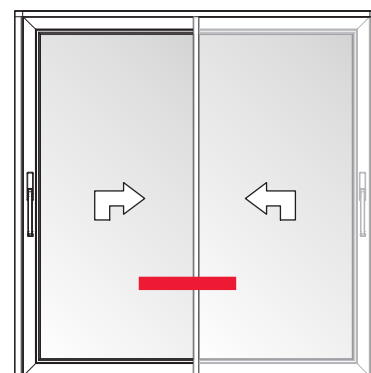
Anta 90°
90° Sash



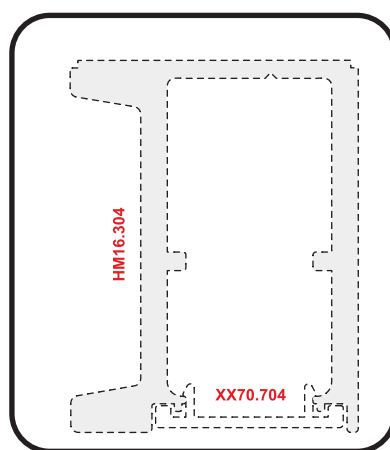




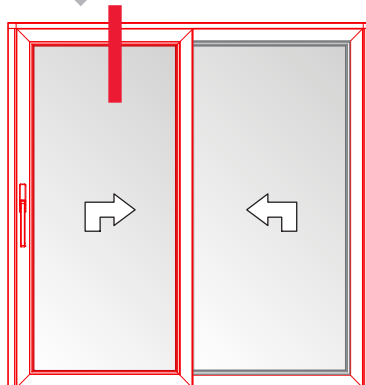
2 Ante mobili
2 Movable sashes



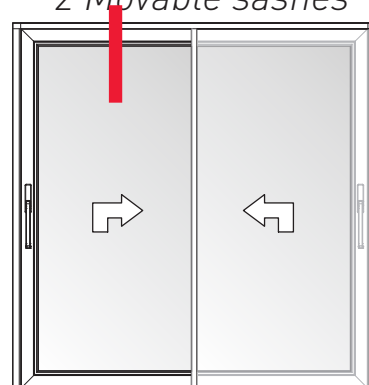
Anta 90°
90° Sash



HM16.304 + XX70.704
■ **Profilo Trascinavetro OPZIONALE**
■ *OPCIONAL Sash Handle*



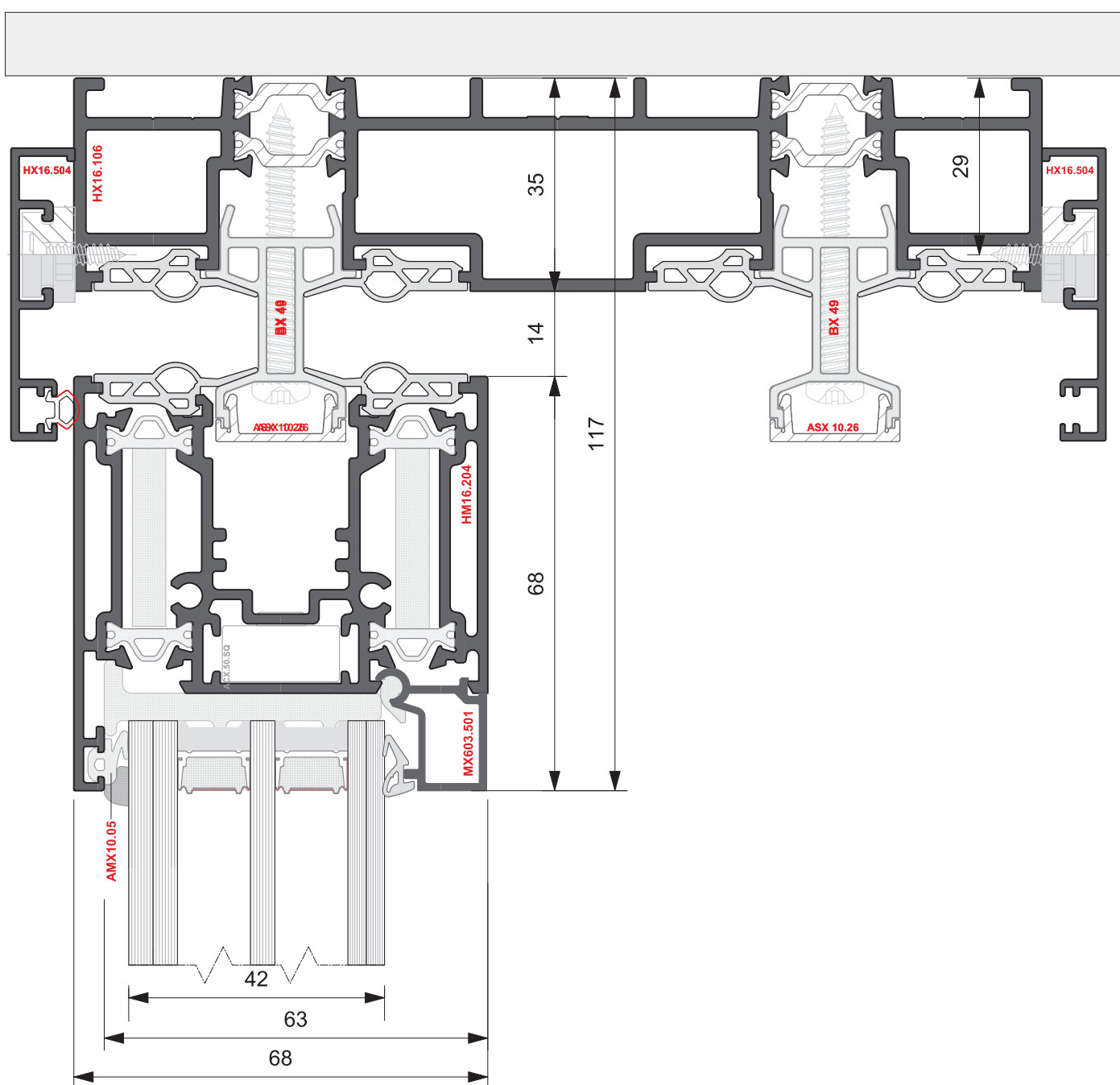
Anta 45°
45° Sash



Anta 90°
90° Sash

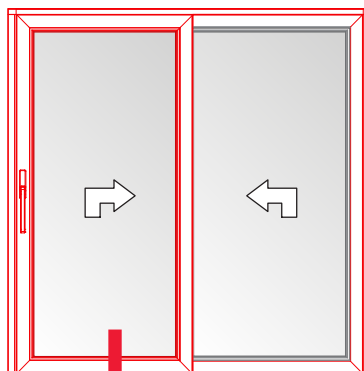
2 Ante mobili

2 Movable sashes

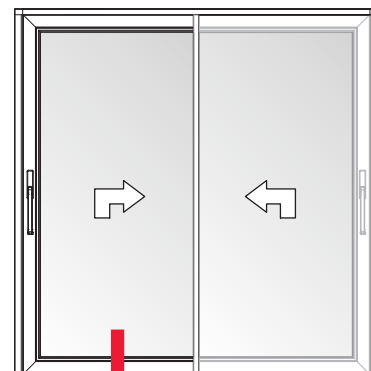




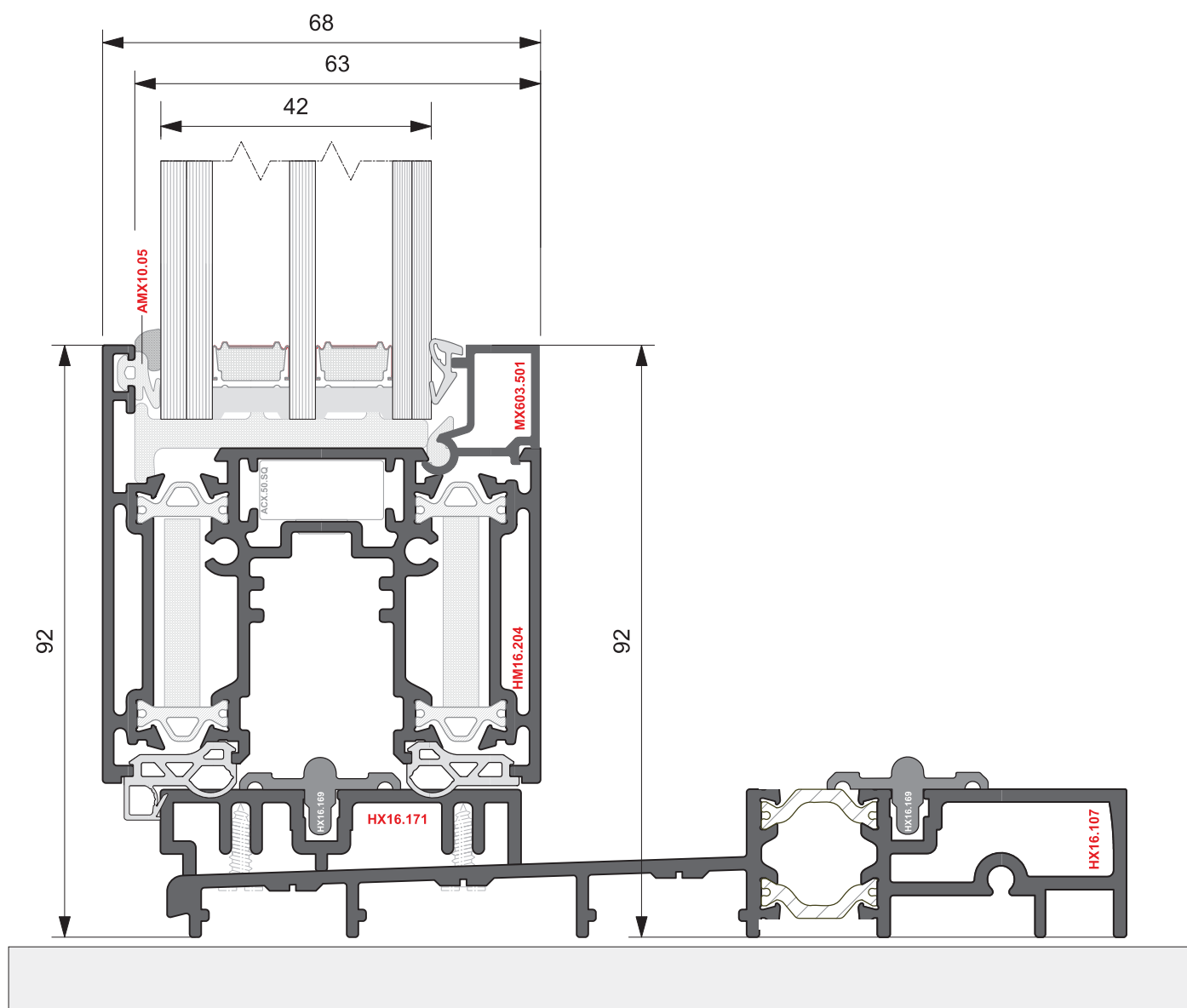
2 Ante mobili
2 Movable sashes



Anta 45°
45° Sash

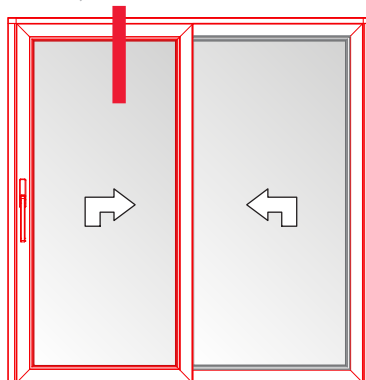


Anta 90°
90° Sash

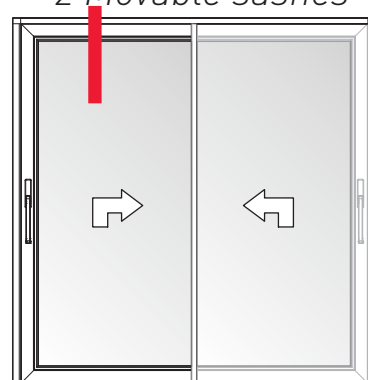




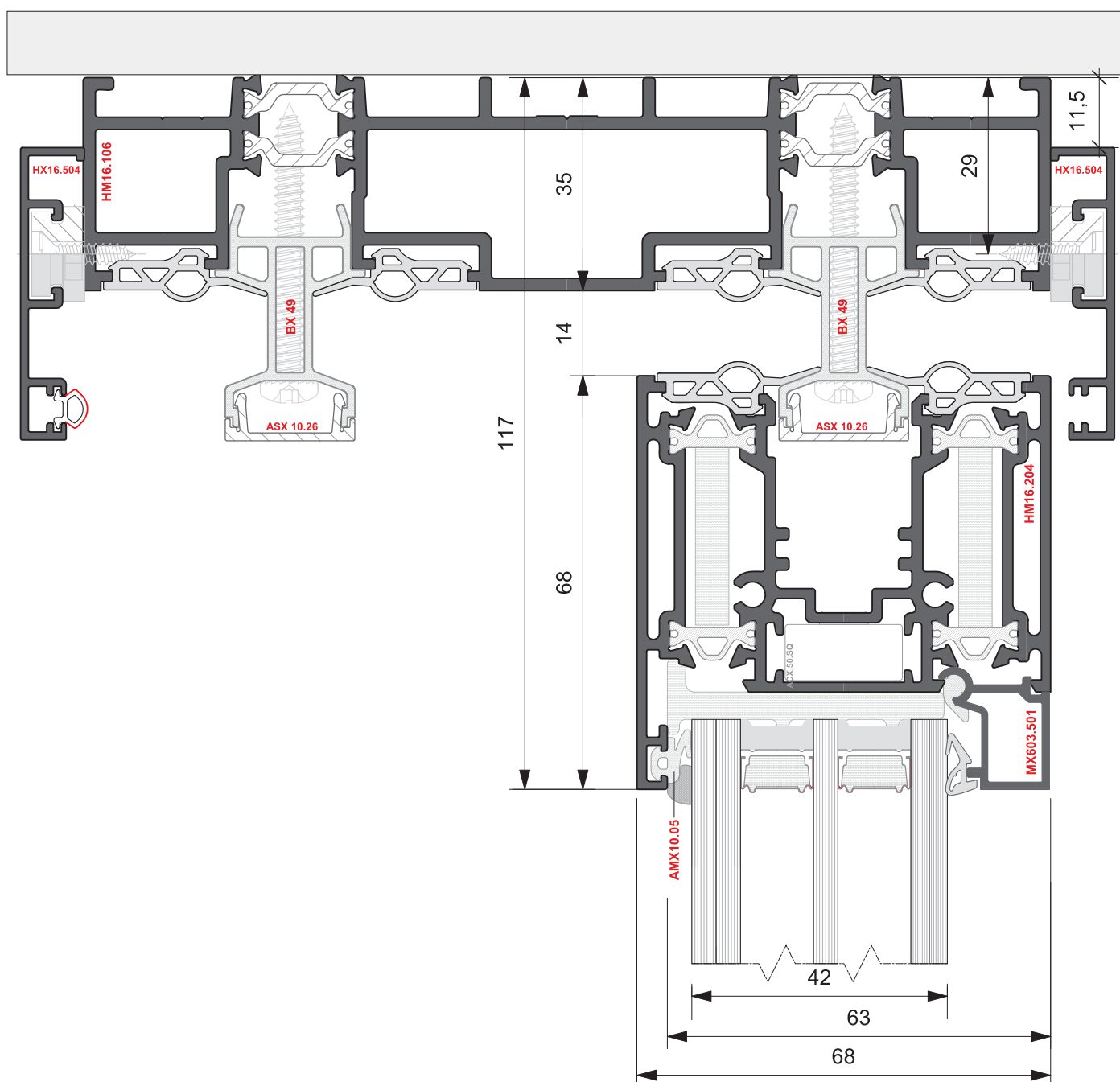
2 Ante mobili
2 Movable sashes



Anta 45°
45° Sash

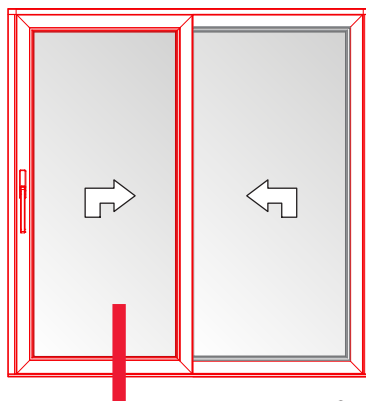


Anta 90°
90° Sash

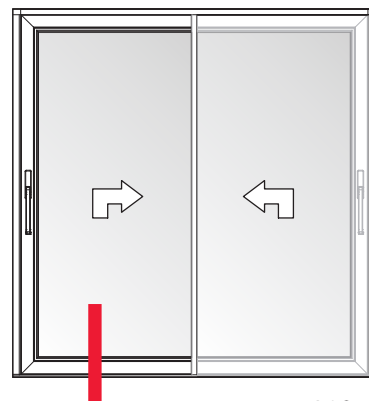




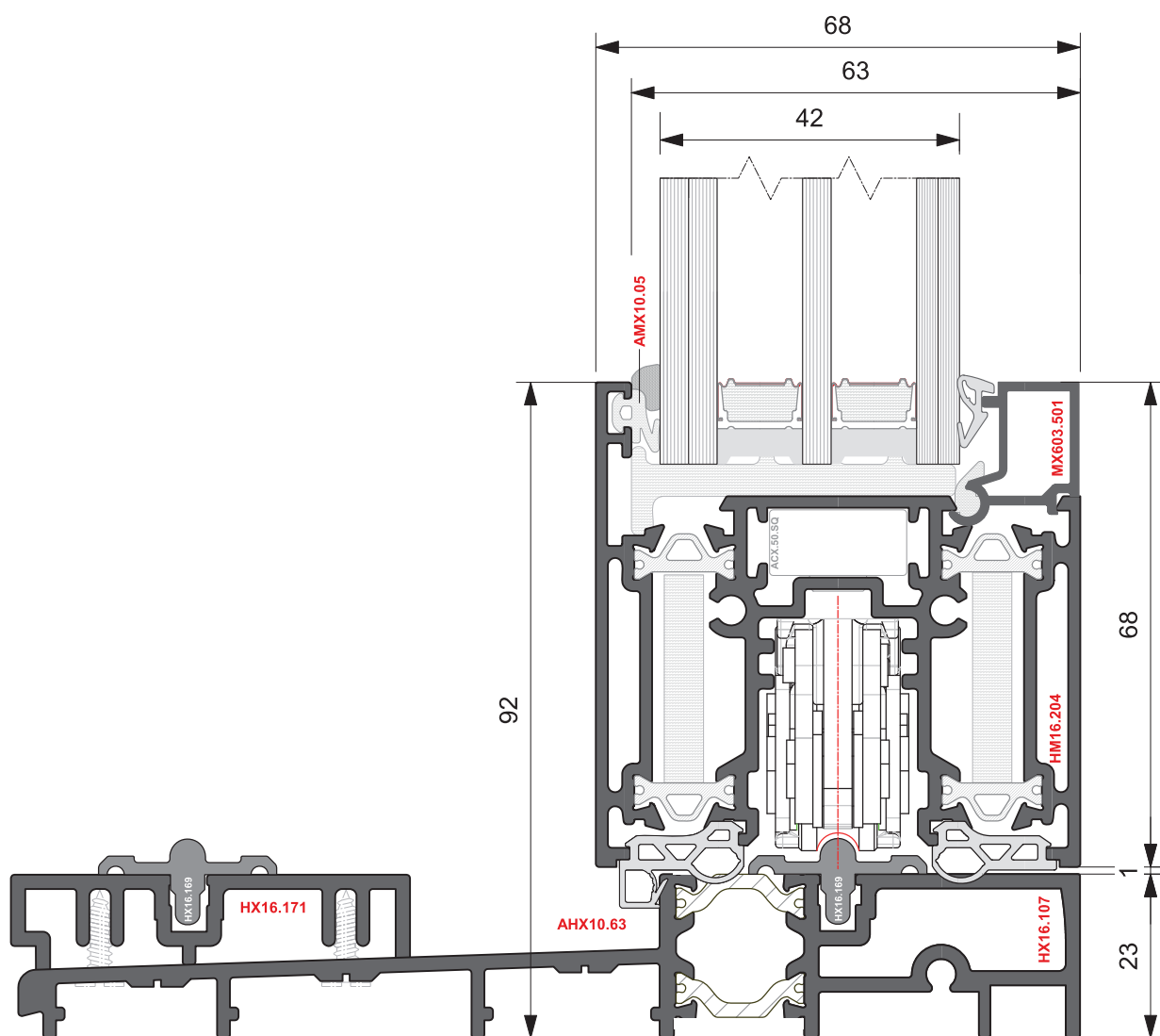
2 Ante mobili
2 Movable sashes



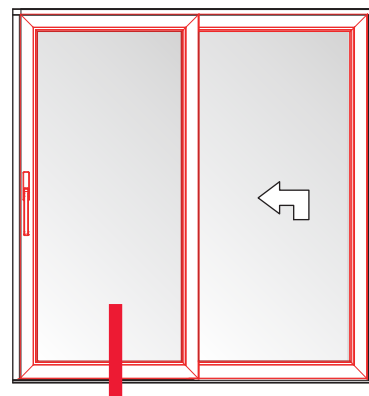
Anta 45°
45° Sash



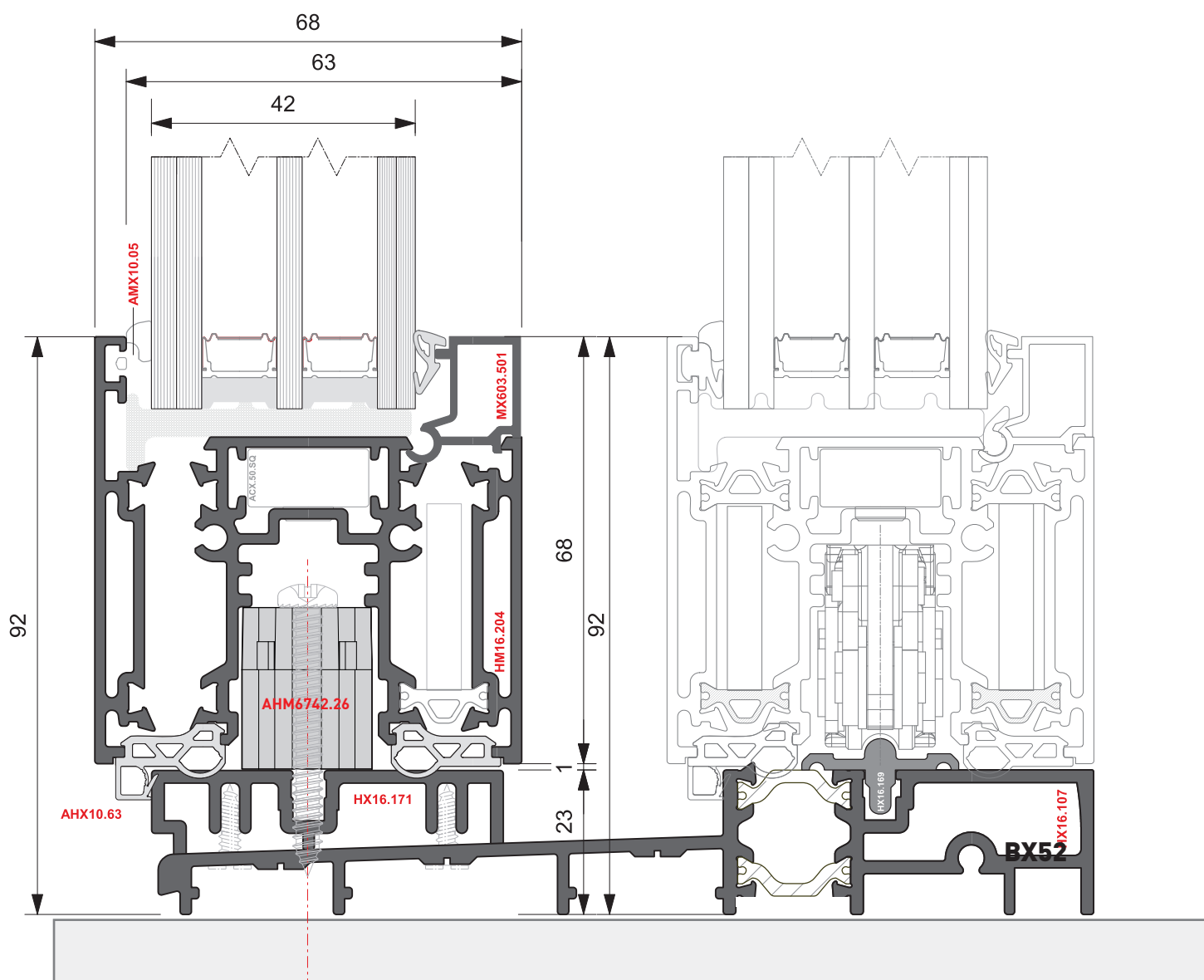
Anta 90°
90° Sash



Anta mobile con fisso
Movable sash with fixed



Anta 45°
45° Sash





Vers 1.0

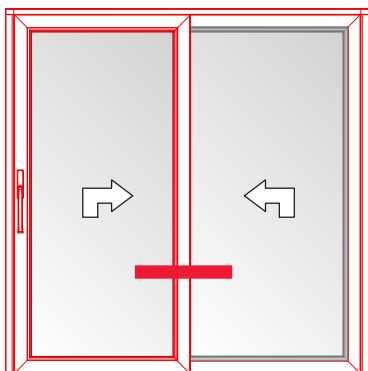
Serie | Series
HM160

Gruppo | Group
D

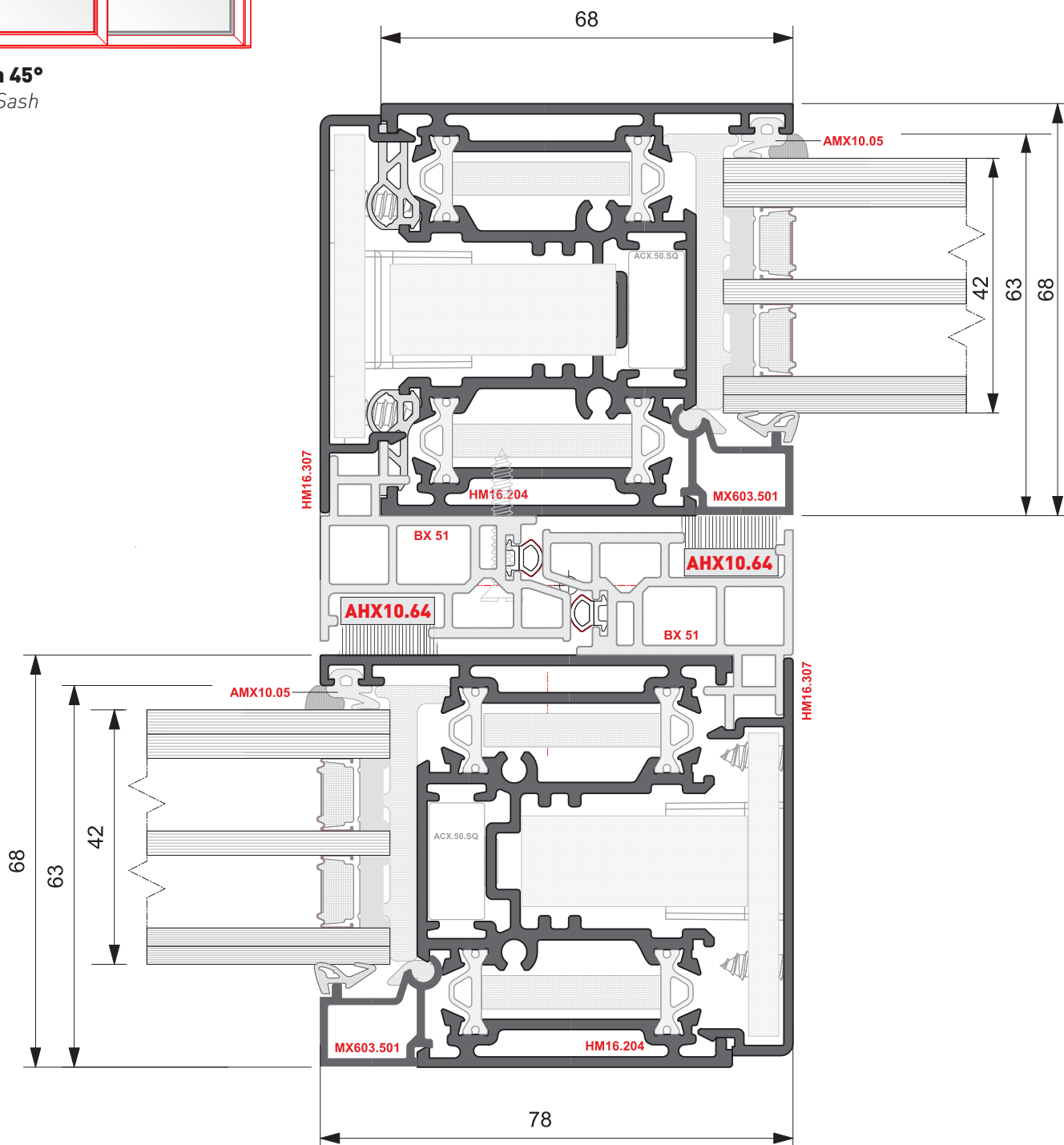
Serie | Series
23

2 Ante mobili

2 Movable sashes



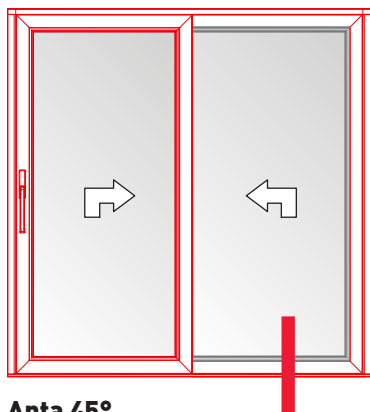
Anta 45°
45° Sash





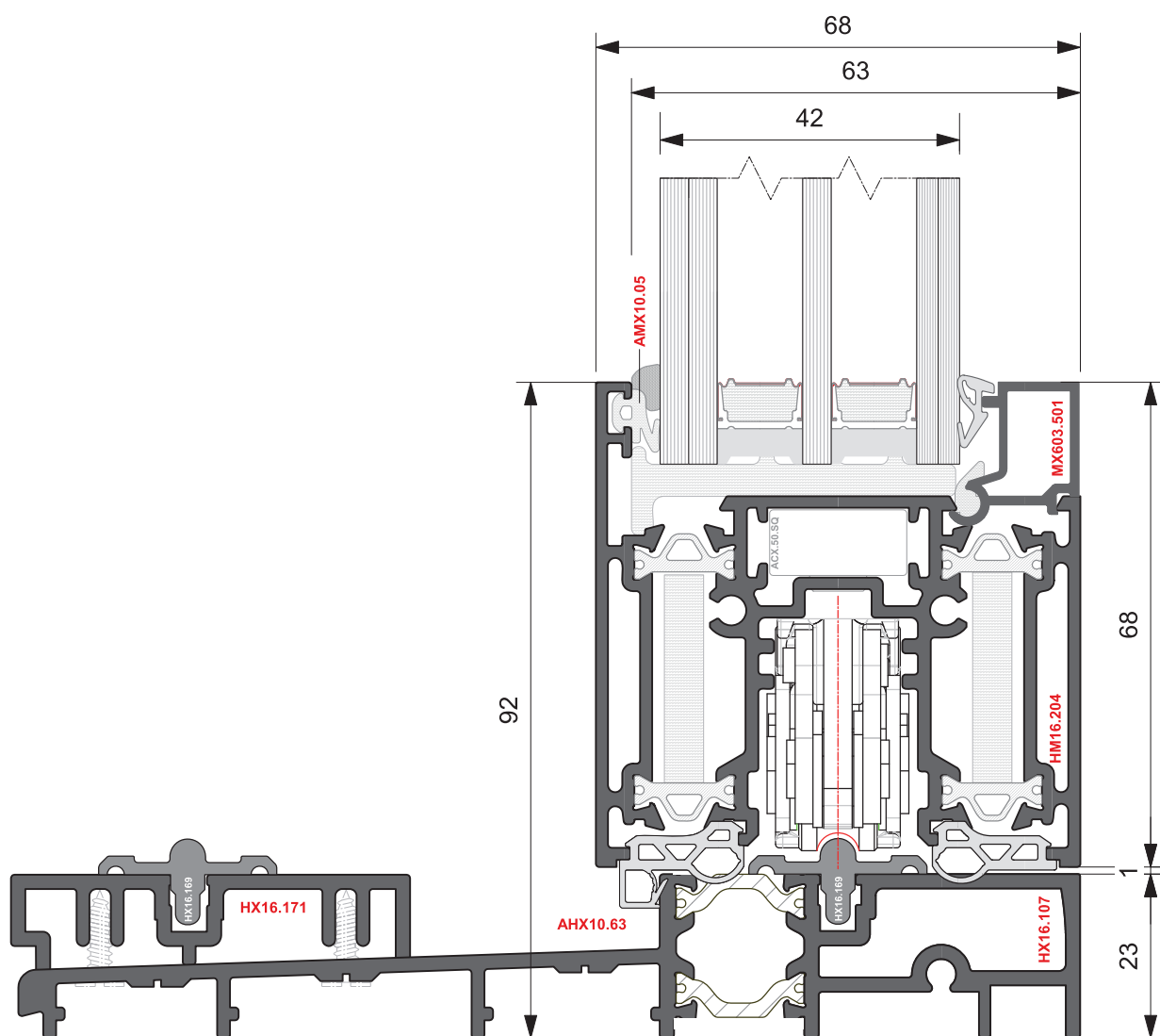
2 Ante mobili

2 Movable sashes



Anta 45°

45° Sash





Vers **1.0**

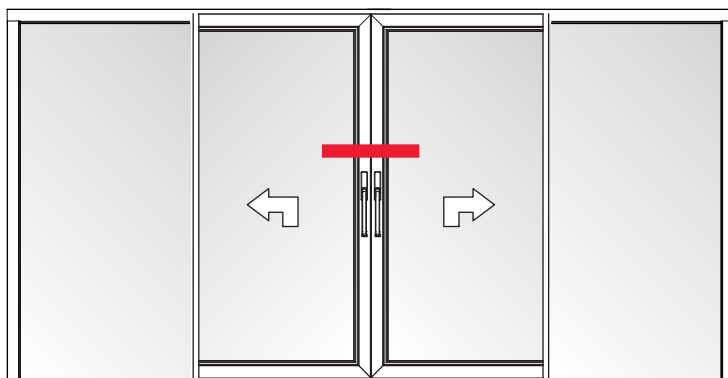
Serie | Series
HM160

Gruppo | Group
D

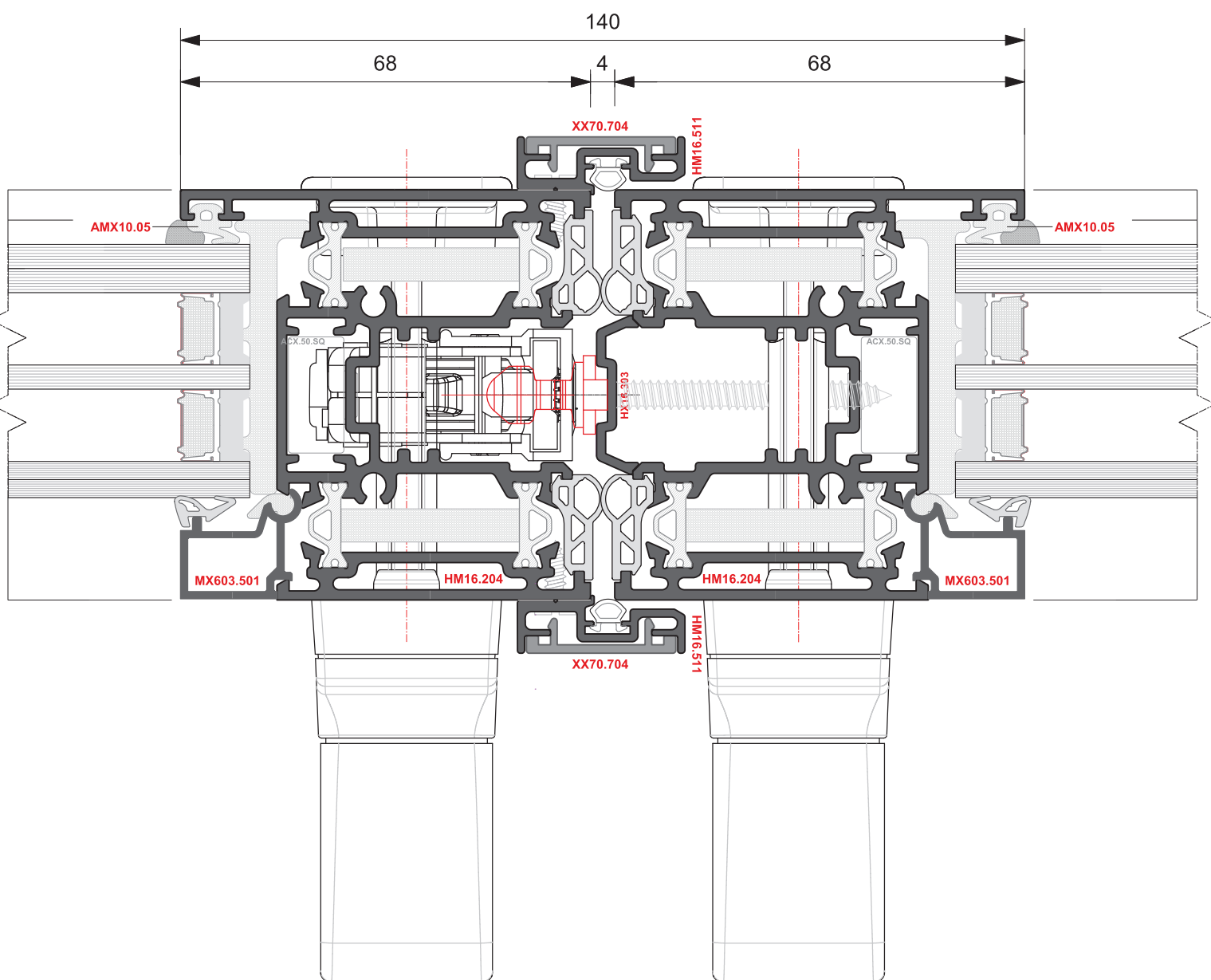
Serie | Series
25

2 Ante mobili + 2 Ante Fisse

2 Movable Sashes + 2 Fixes Sashes



Anta 90°
90° Sash





Vers 1.0

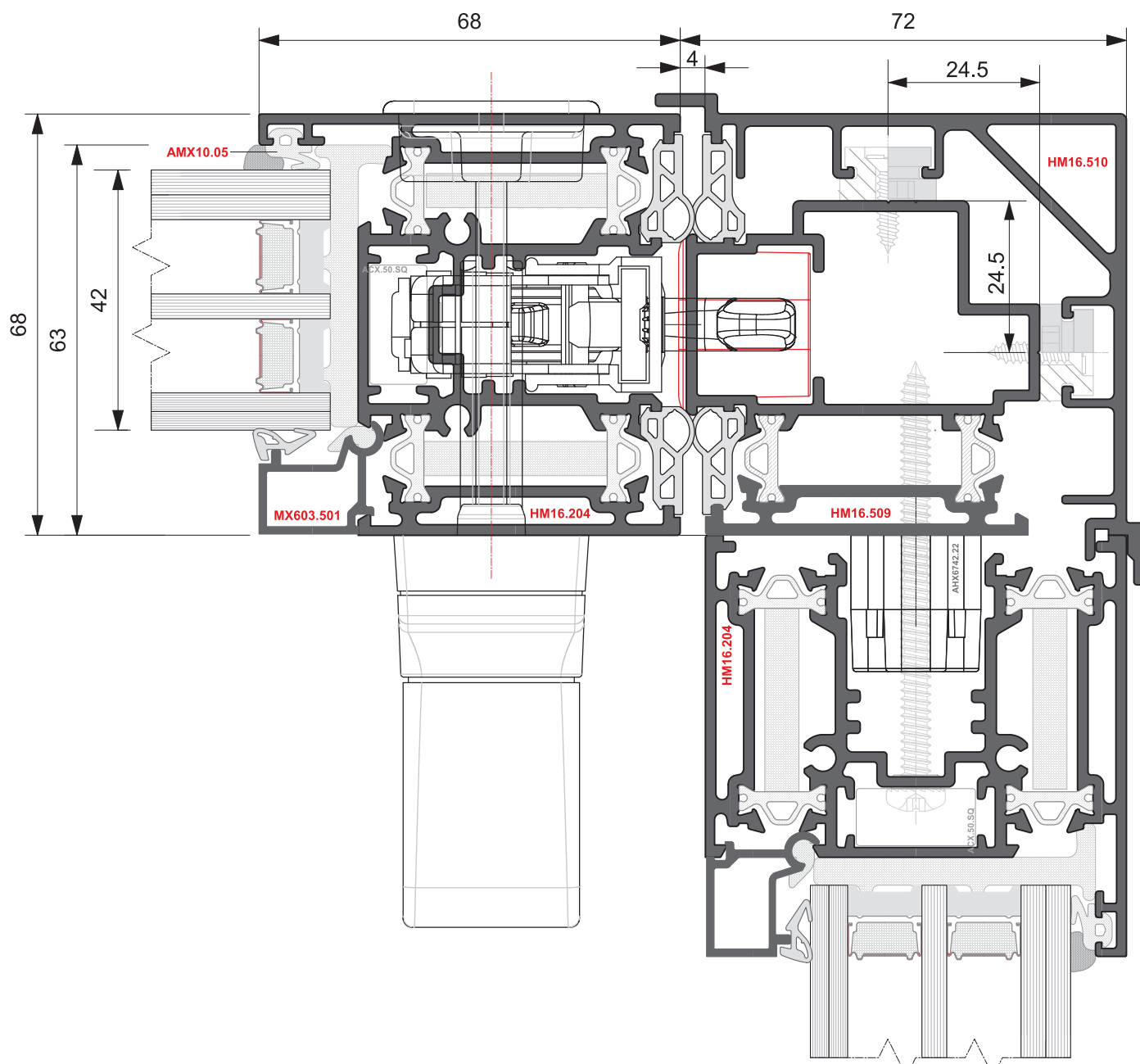
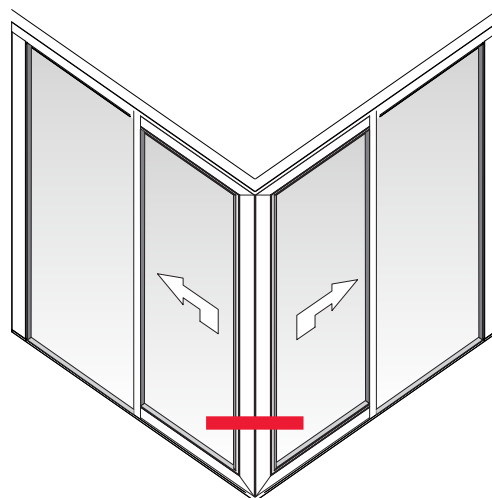
Serie | Series
HM160

Gruppo | Group
D

Serie | Series
26

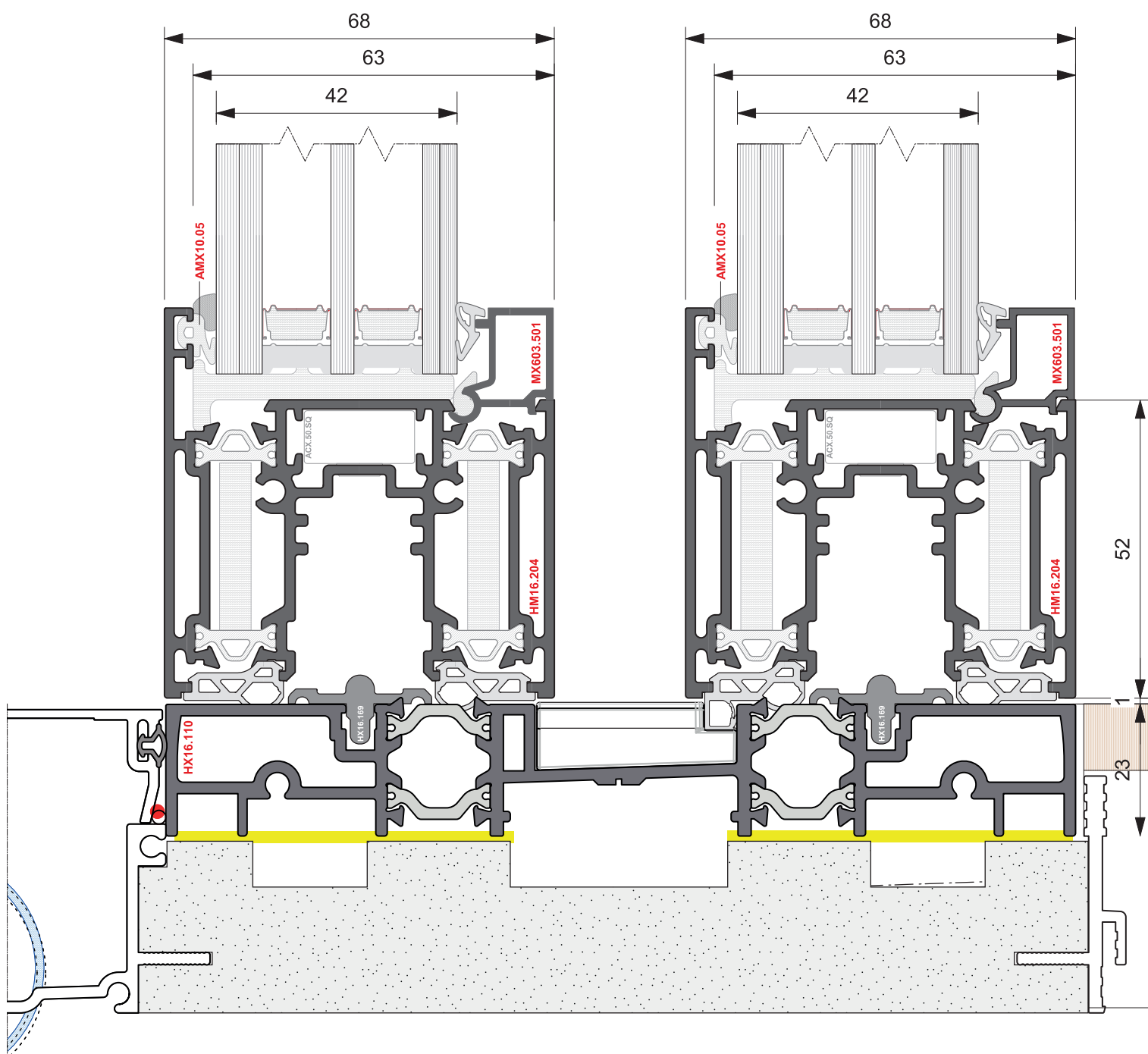
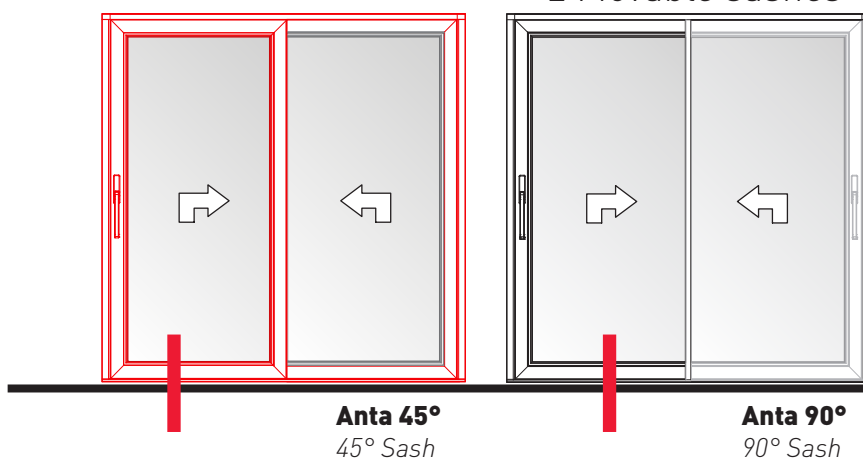
Soluzione d'Angolo
Corner Case

2 Ante mobili + 2 Ante Fisse
2 Movable Sashes + 2 Fixes Sashes



Soglia Filo Pavimento
Floor Lever Threshold

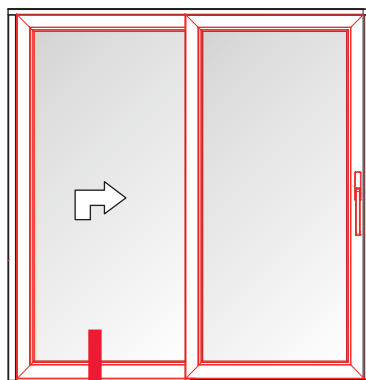
2 Ante mobili
2 Movable sashes



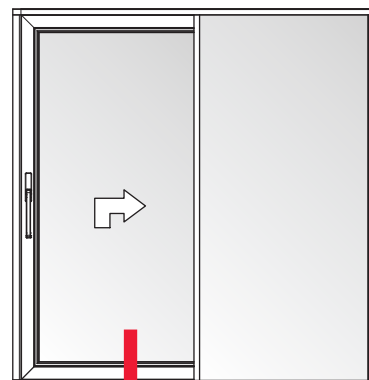
Soglia TERMICA
ThermicThreshold



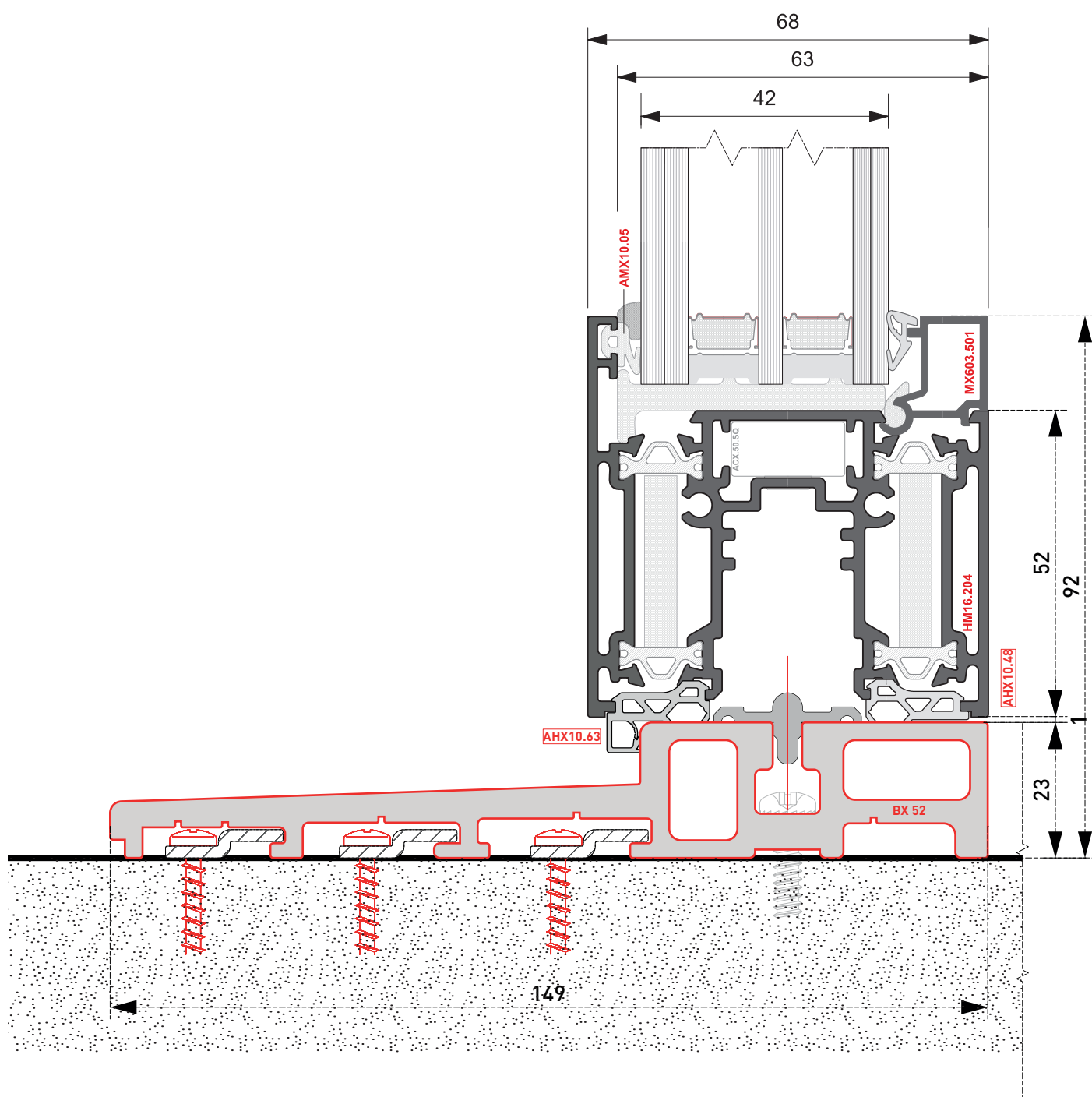
ANTA FISSA + Anta MOBILE
1 Fixed Sash + 1 Movable Sash



Anta 45°
45° Sash



Anta 90°
90° Sash



Soglia TERMICA

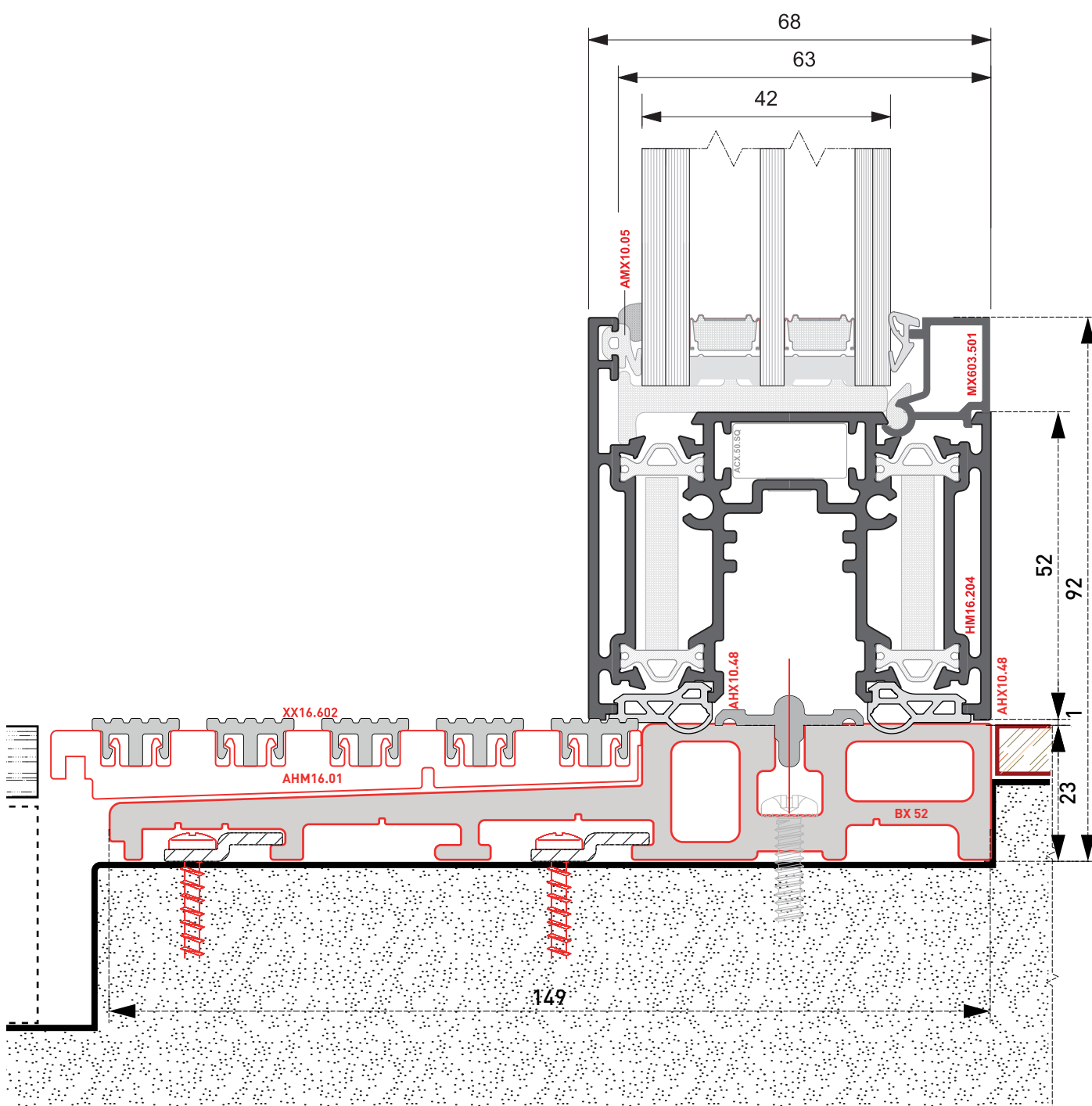
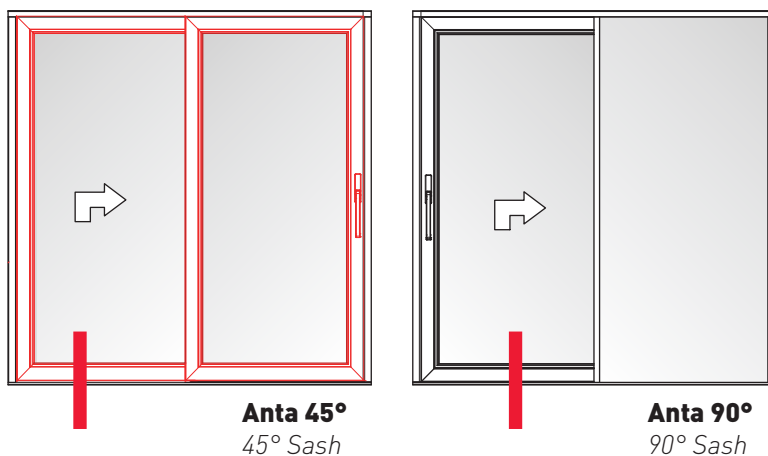
ThermicThreshold

■ VARIANTE 1 FILOPAVIMENTO

► VARIATION 1 FLOOR LEVEL

ANTA FISSA + Anta MOBILE

1 Fixed Sash + 1 Movable Sash



Soglia TERMICA

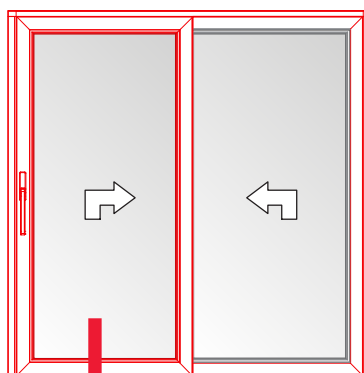
ThermicThreshold

■ VARIANTE 2 FILOPAVIMENTO

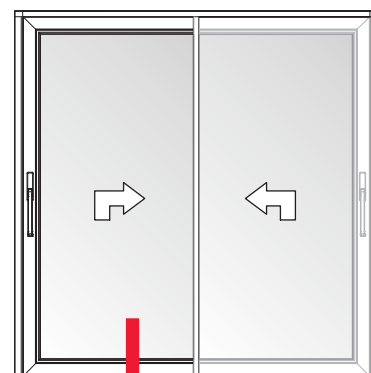
► VARIATION 2 FLOOR LEVEL

2 Ante mobili

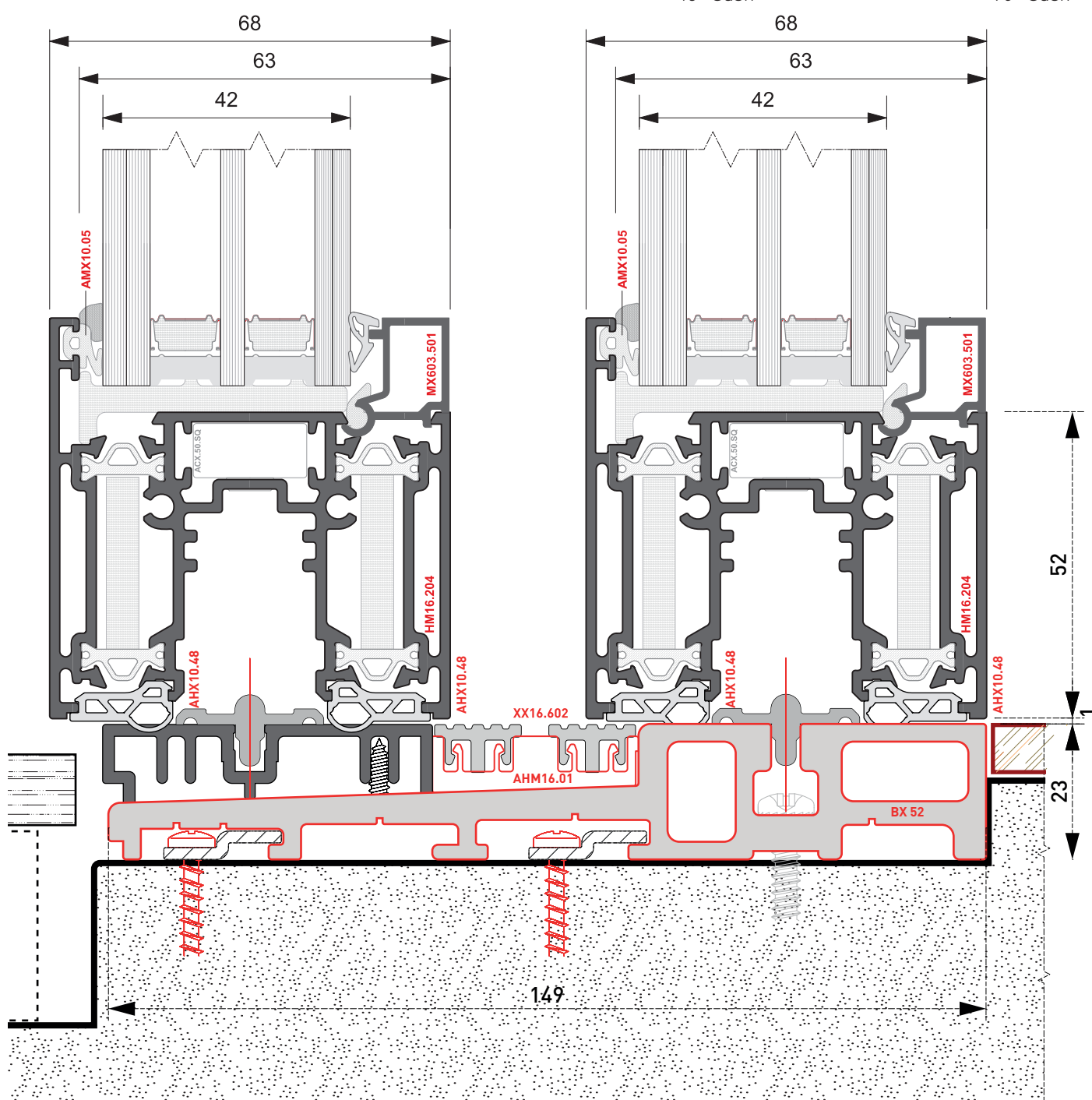
2 Movable sashes



Anta 45°
45° Sash

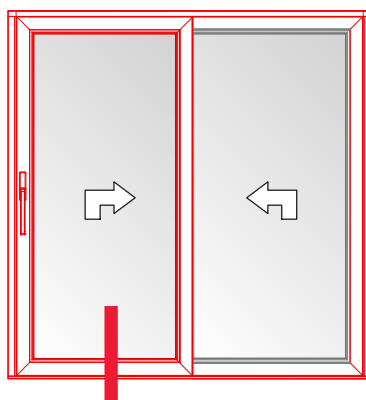


Anta 90°
90° Sash

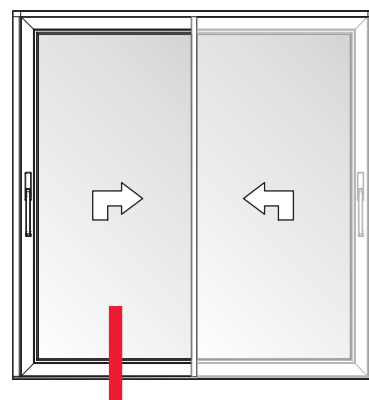




2 Ante mobili
2 Movable sashes



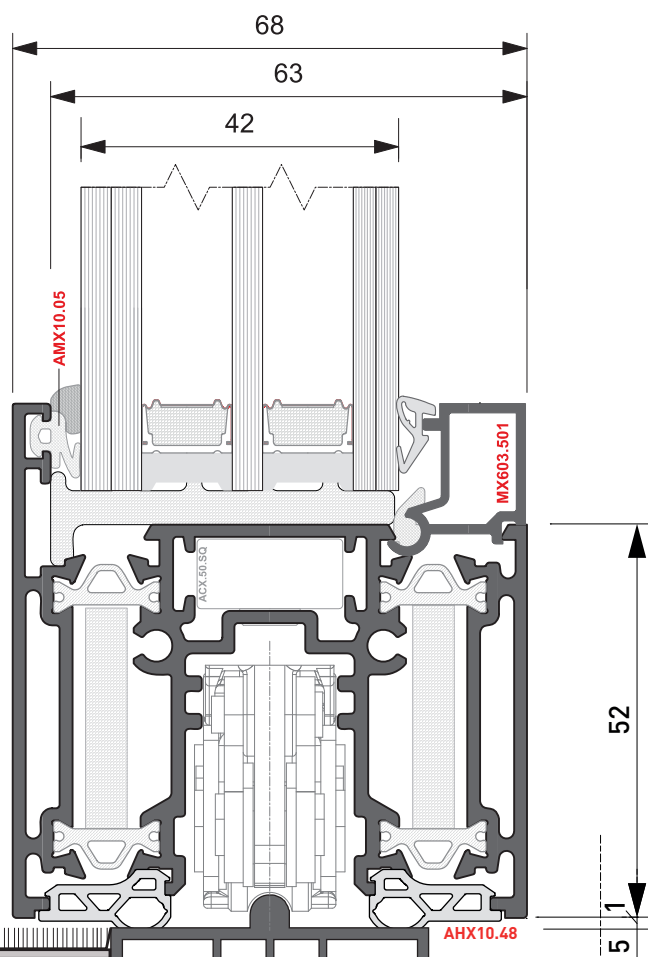
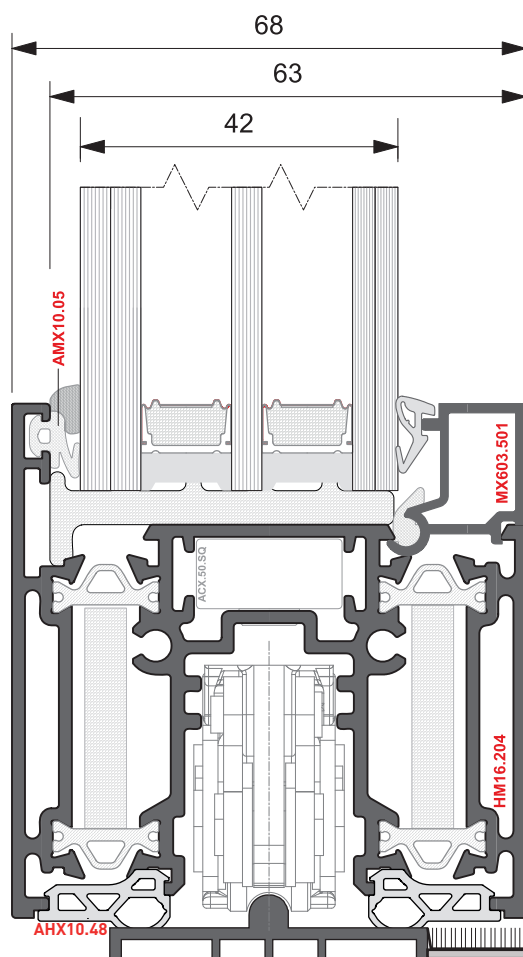
Anta 45°
45° Sash



Anta 90°
90° Sash

Utilizzare coppia di AHM10.93
[Ingombro nodo 78mm]
Use a couple of AHM10.93
[Node Dimension 78 mm.]

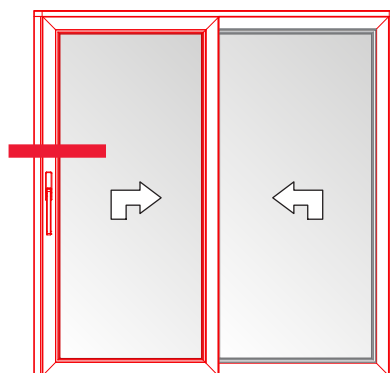
Utilizzare singolo AHM10.93
[Ingombro nodo 36 mm]
Use a couple of AHM10.93
[Node Dimension 36 mm.]



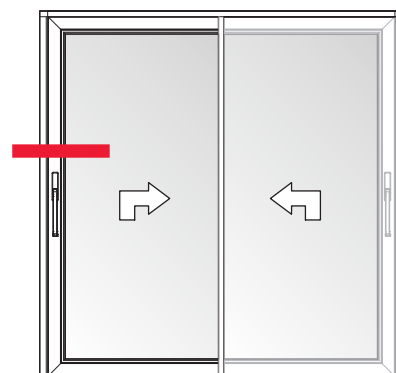
***Si RACCOMANDA l'utilizzo della soglia HX16.149 in presenza di copertura [tettoia pensilina etc..]. NON è PREVISTO DRENAGGIO**

*** Use HX16.149 threshold RECOMMENDED in the presence of a roof [canopy, shelter, etc.]. DRAINAGE IS NOT PROVIDED**

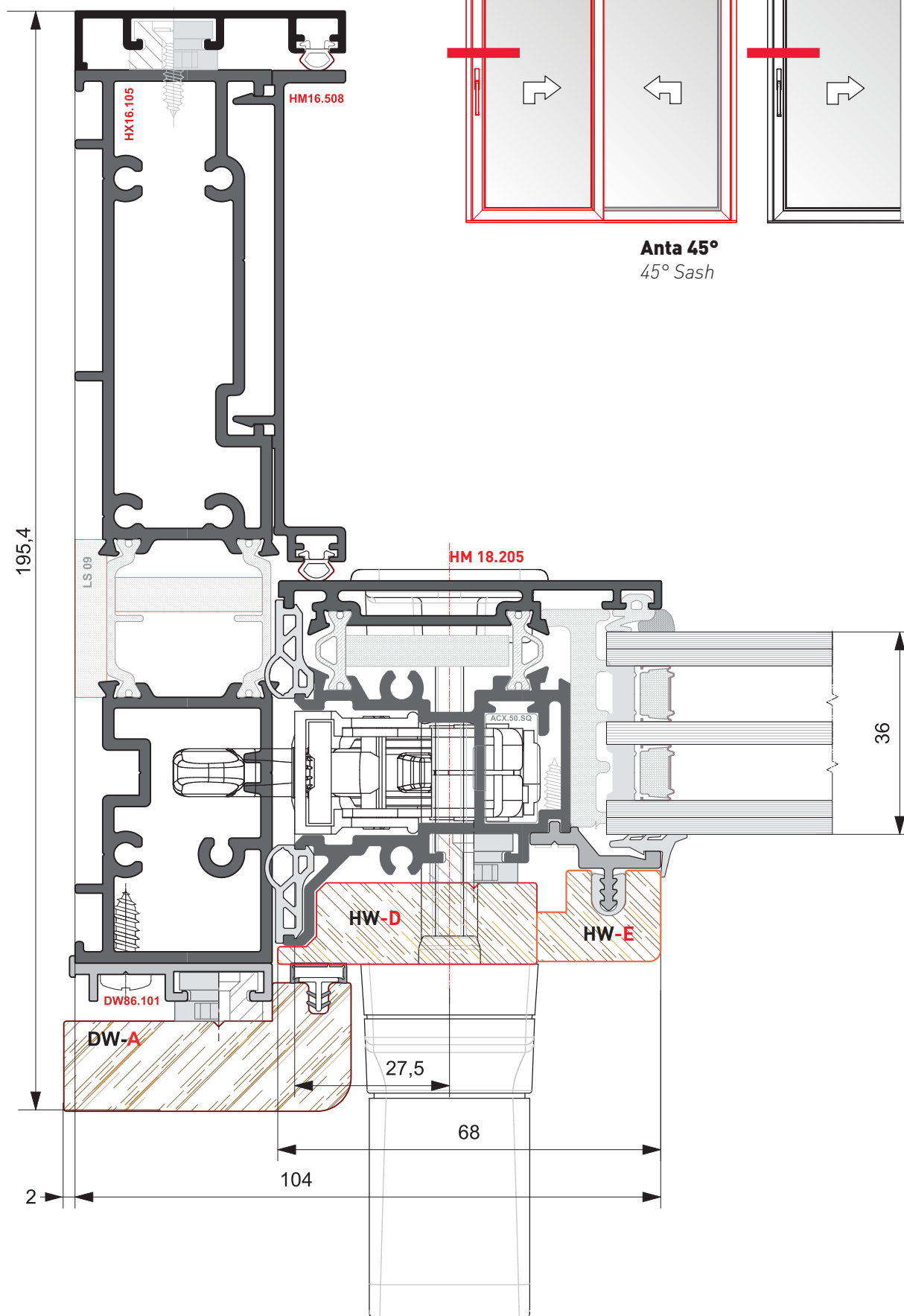
2 Ante mobili
2 Movable sashes



Anta 45°
45° Sash



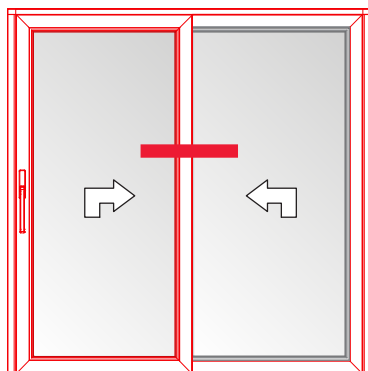
Anta 90°
90° Sash



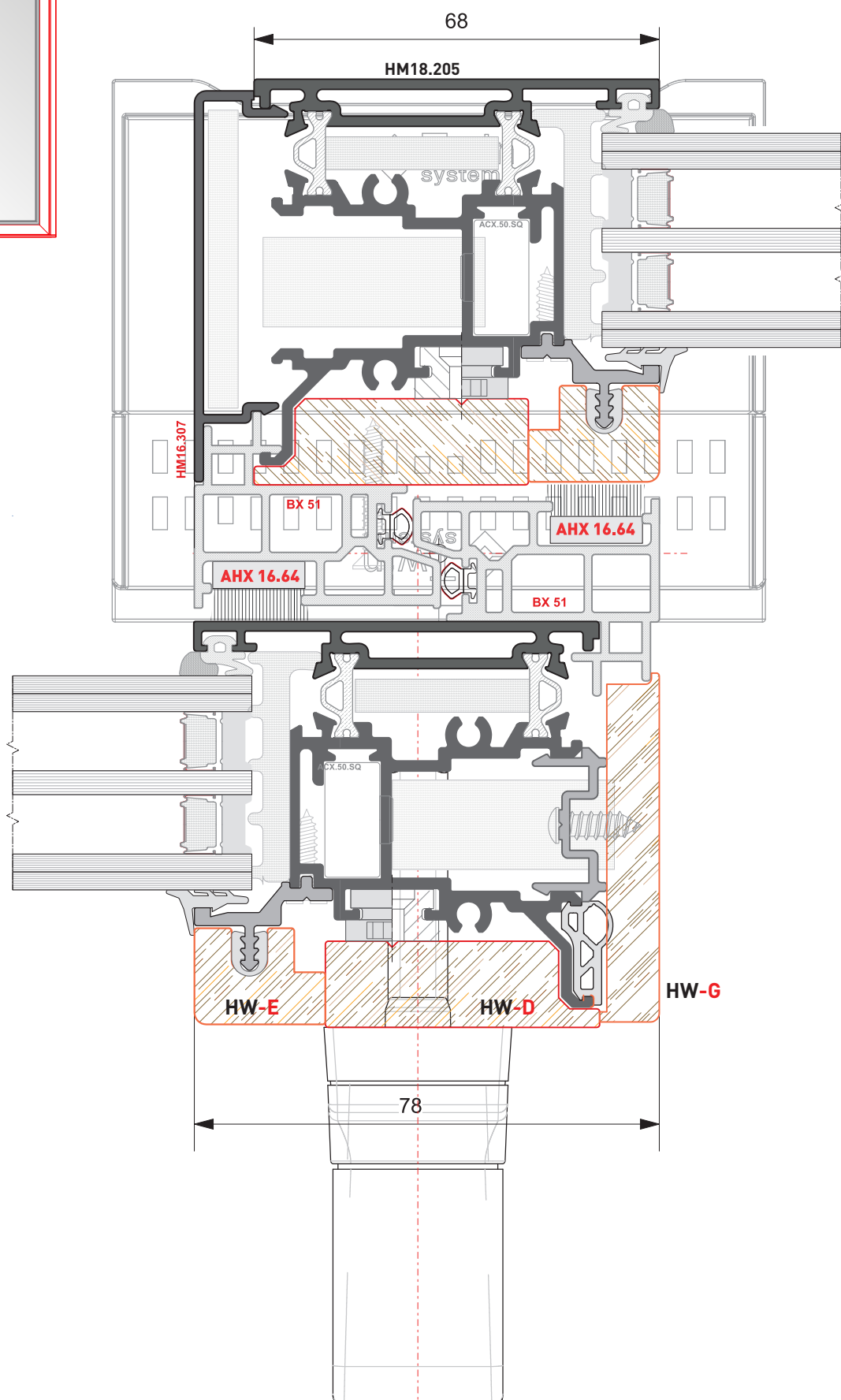


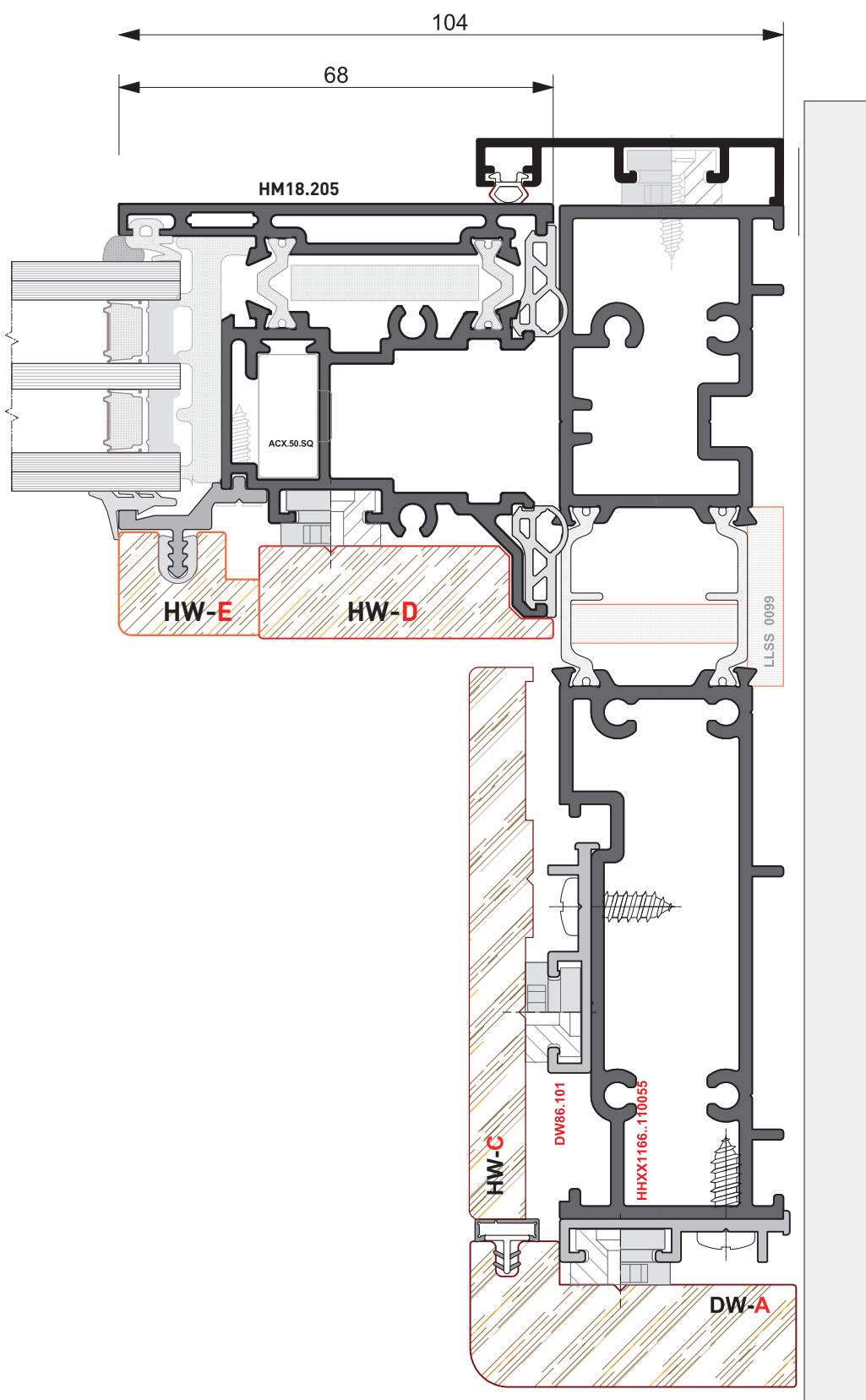
2 Ante mobili

2 Movable sashes

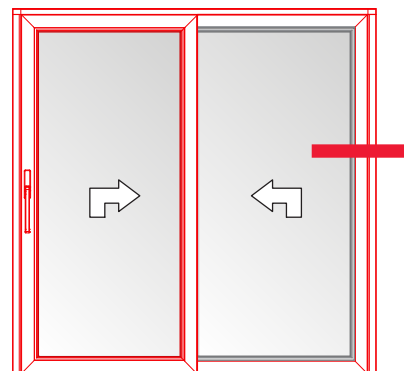


Anta 45°
45° Sash

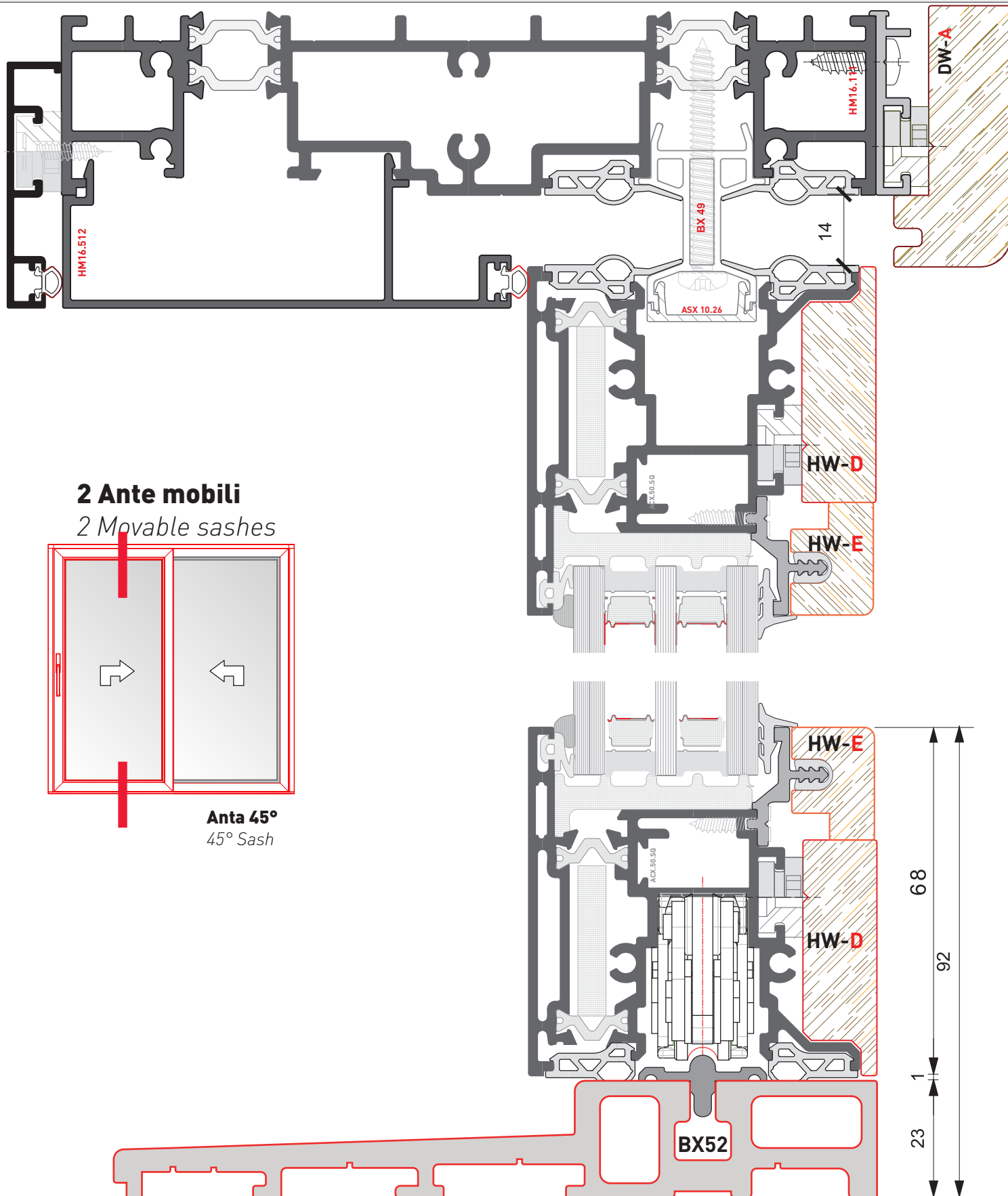




2 Ante mobili
2 Movable sashes

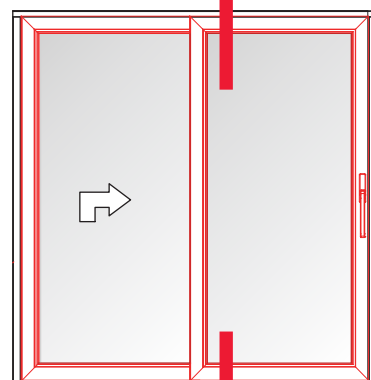


Anta 45°
45° Sash

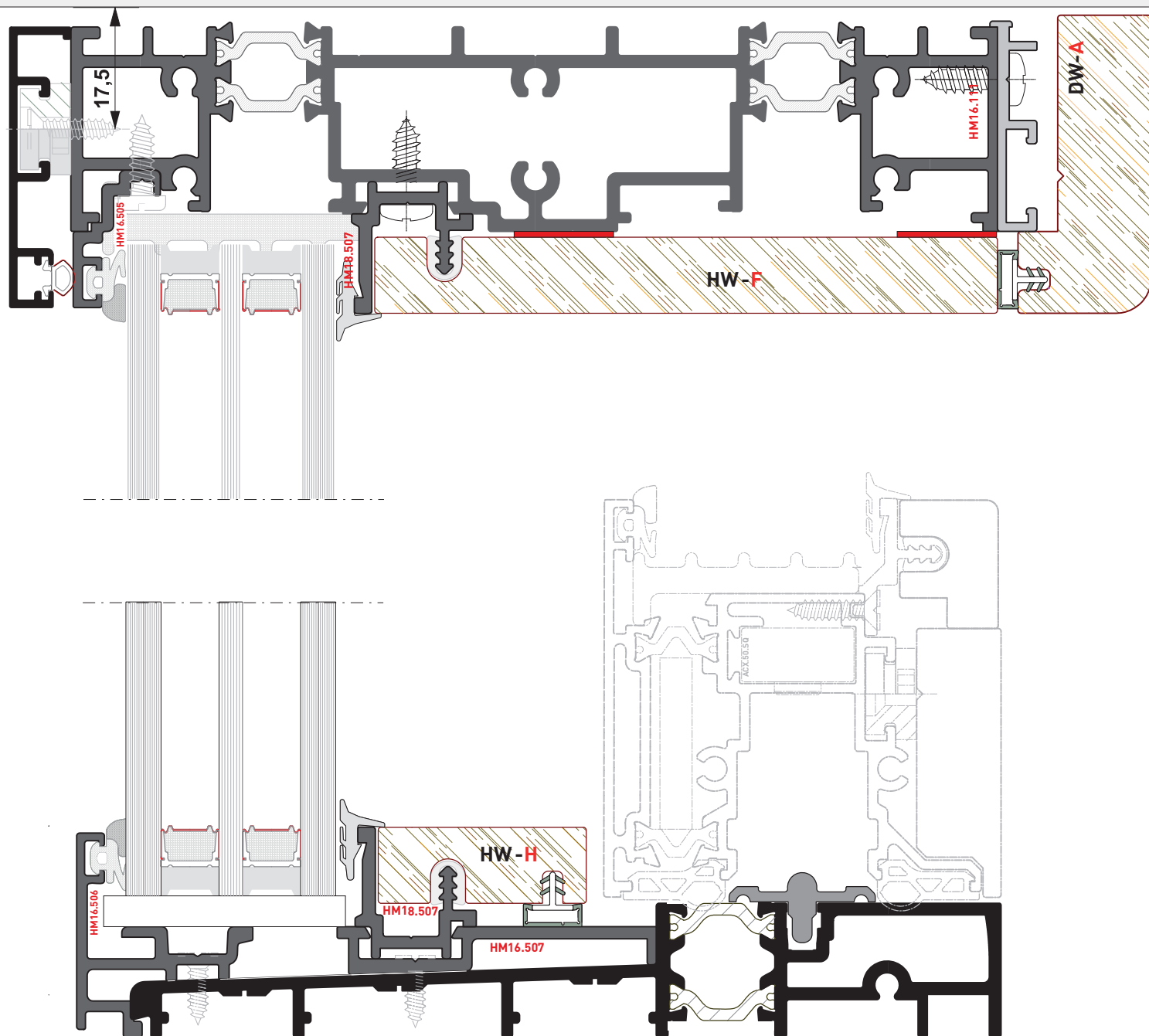




Anta mobile con fisso
Movable sash with fixed

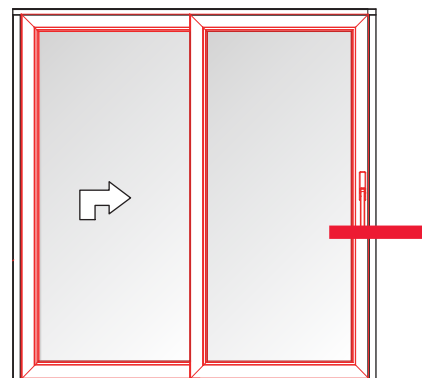


Anta 45°
45° Sash

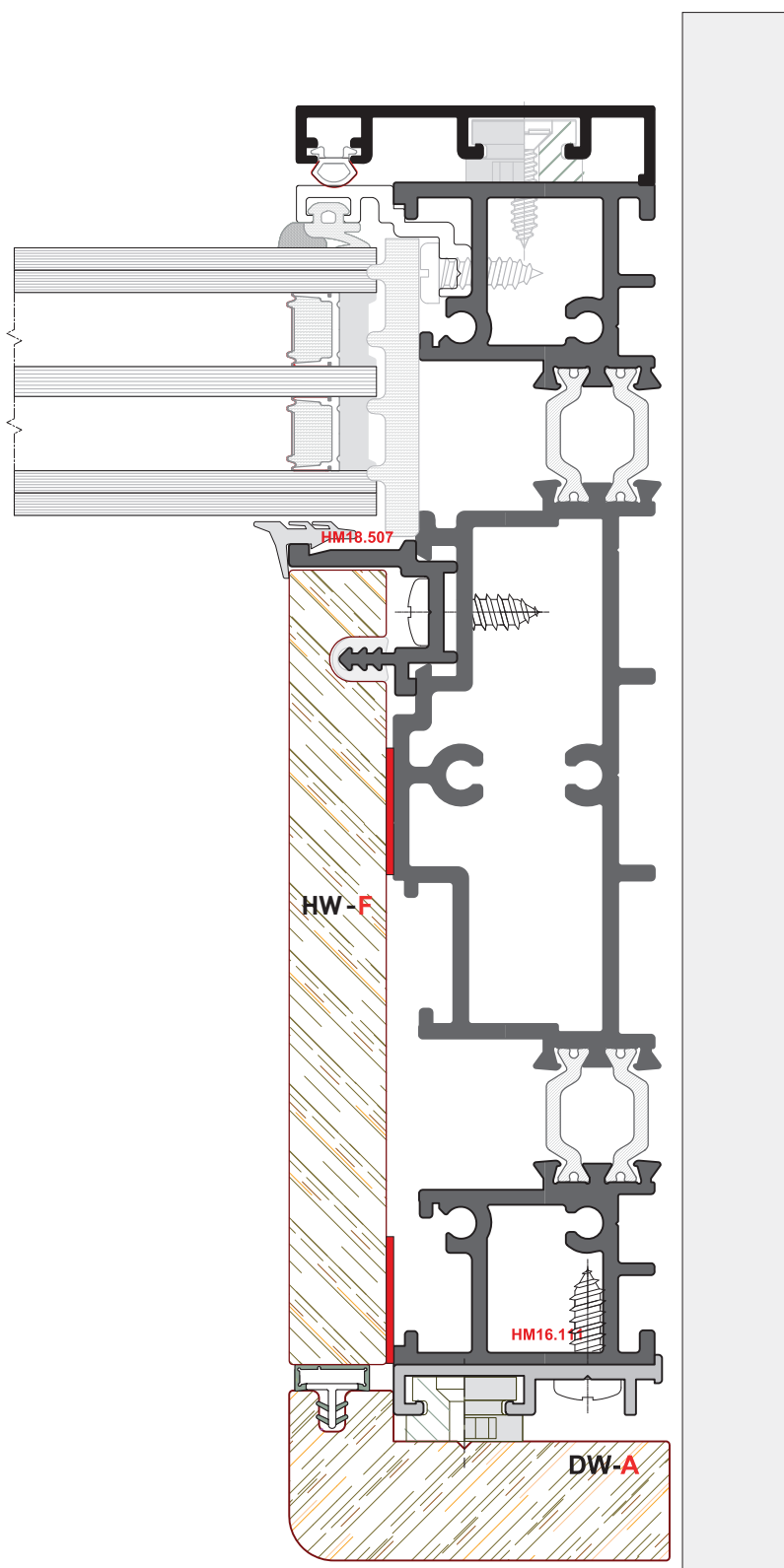




Anta mobile con fisso
Movable sash with fixed



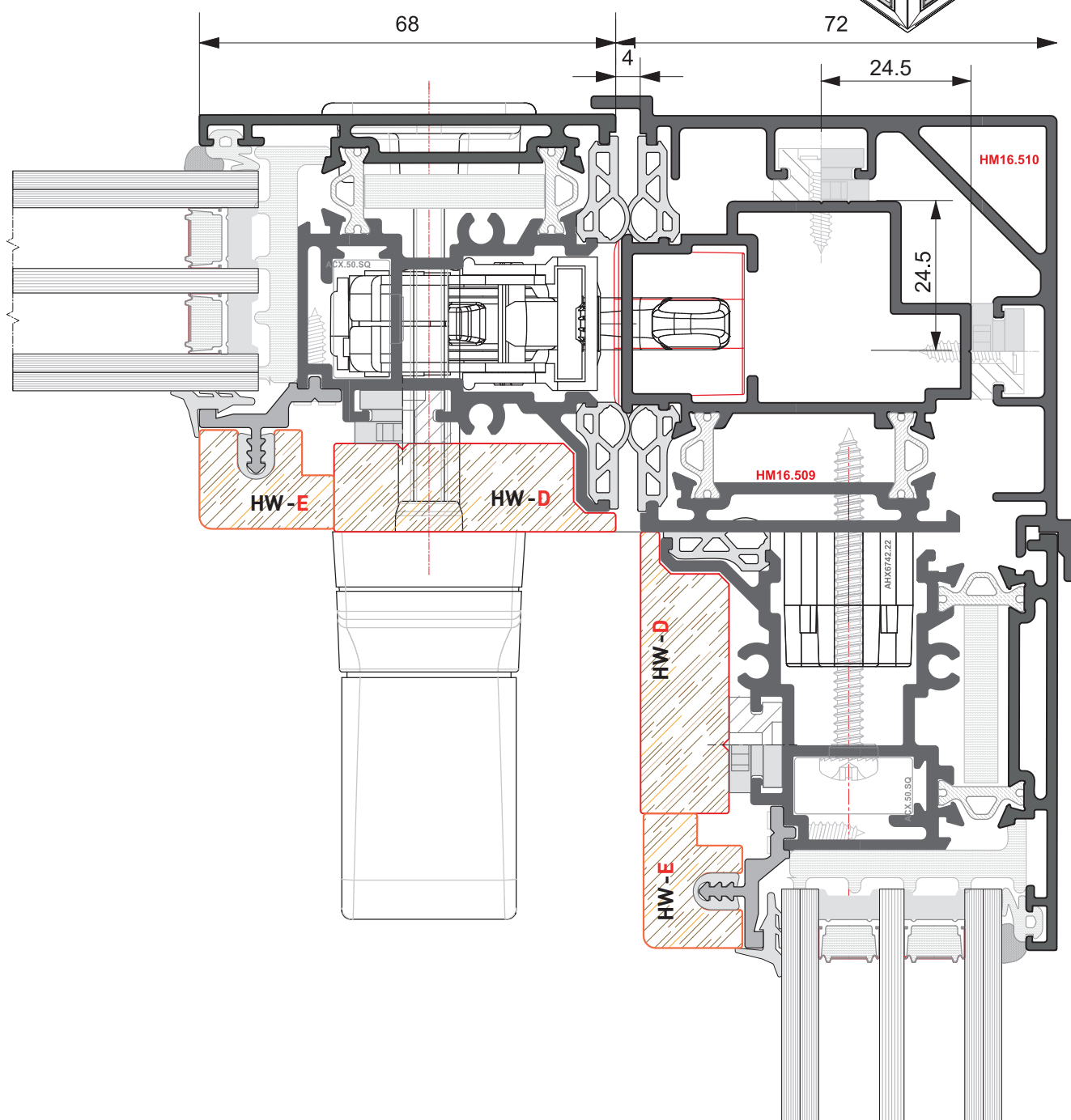
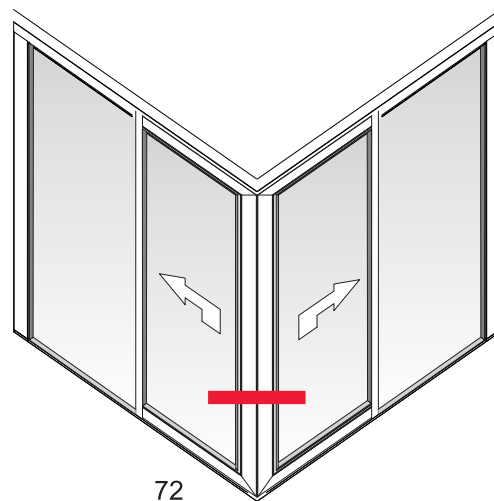
Anta 45°
45° Sash



Soluzione d'Angolo
Corner Case



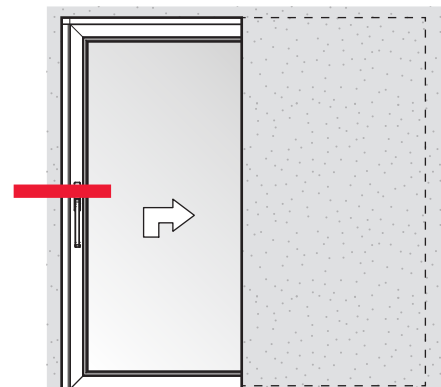
2 Ante mobili + 2 Ante Fisse
2 Movable Sashes + 2 Fixes Sashes



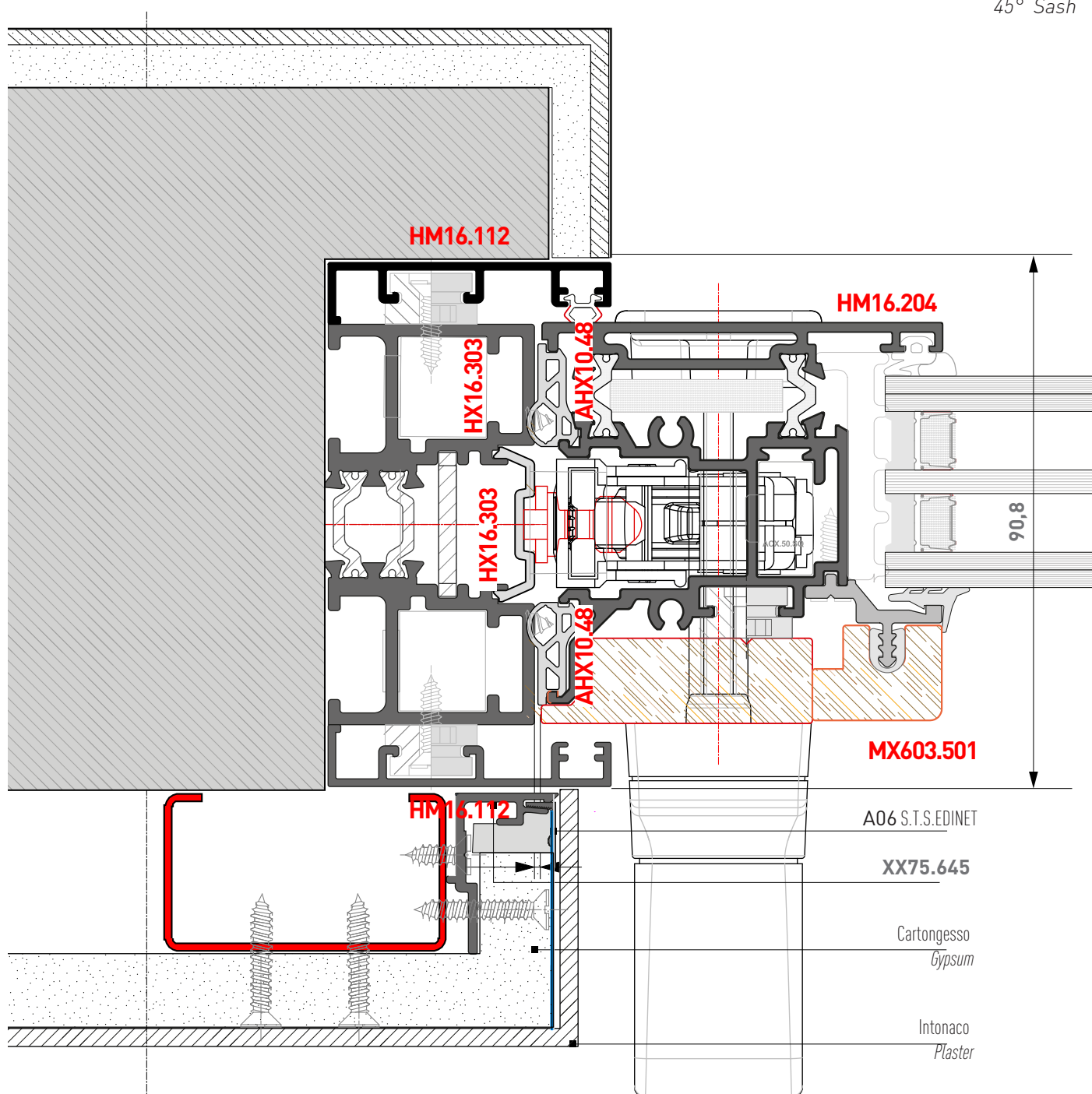


Anta mobile Incassata

Casket Door

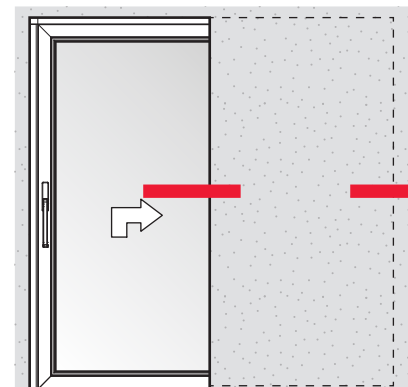


Anta 45°
45° Sash



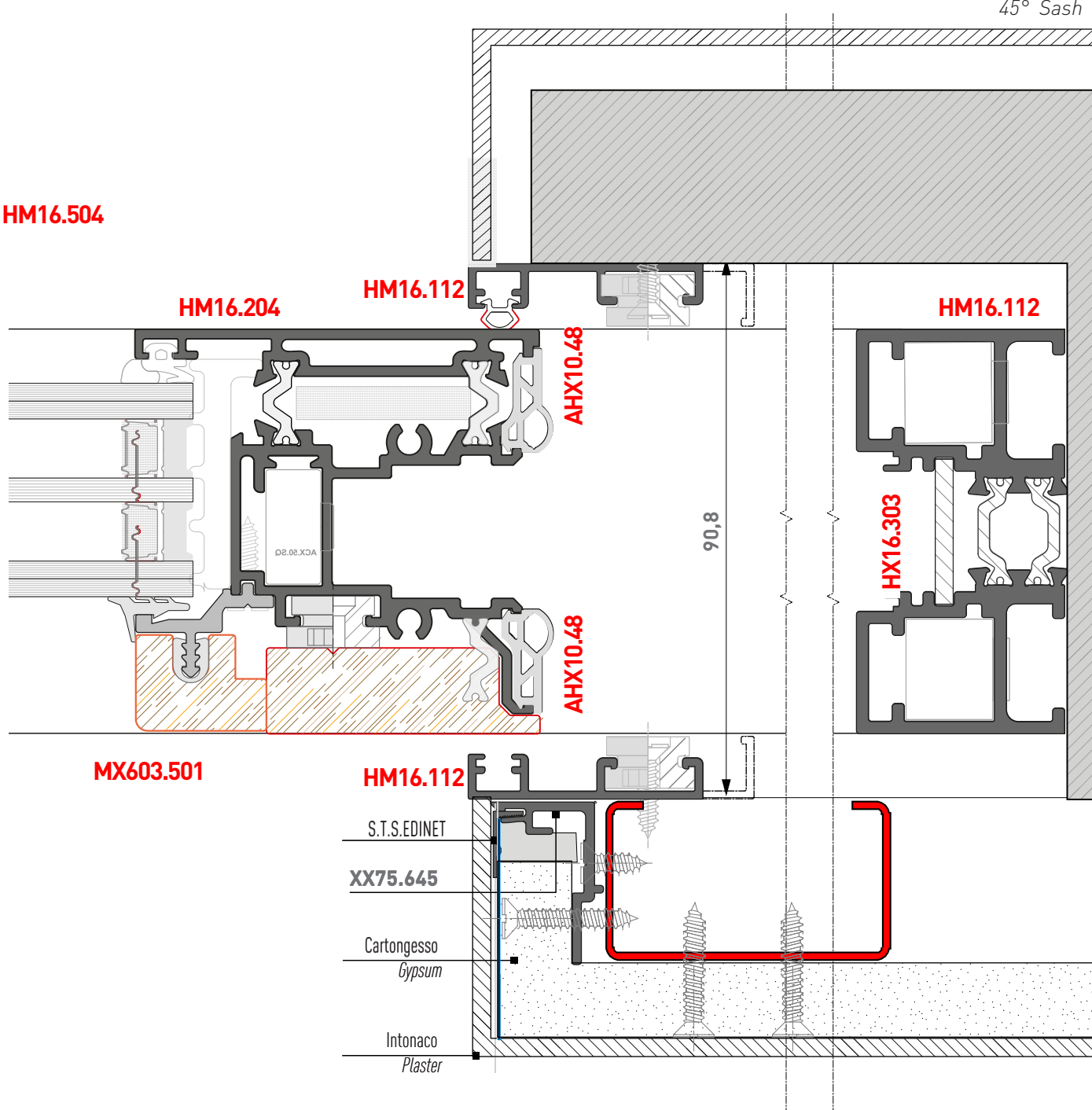


Anta mobile Incassata Casket Door



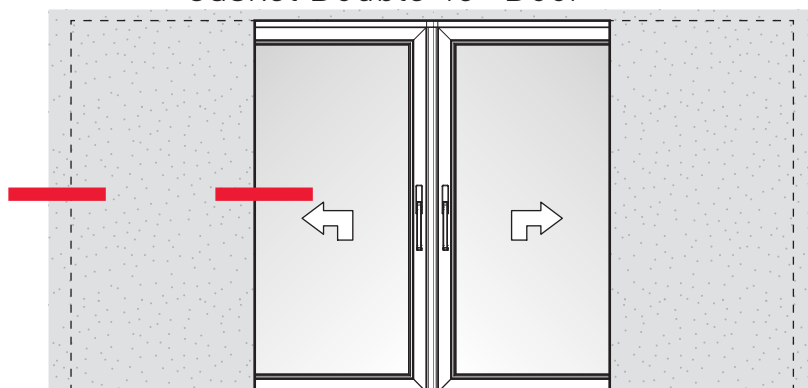
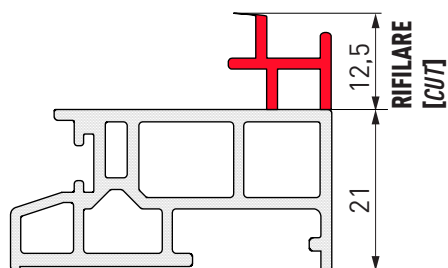
Anta 45°
45° Sash

HM16.504

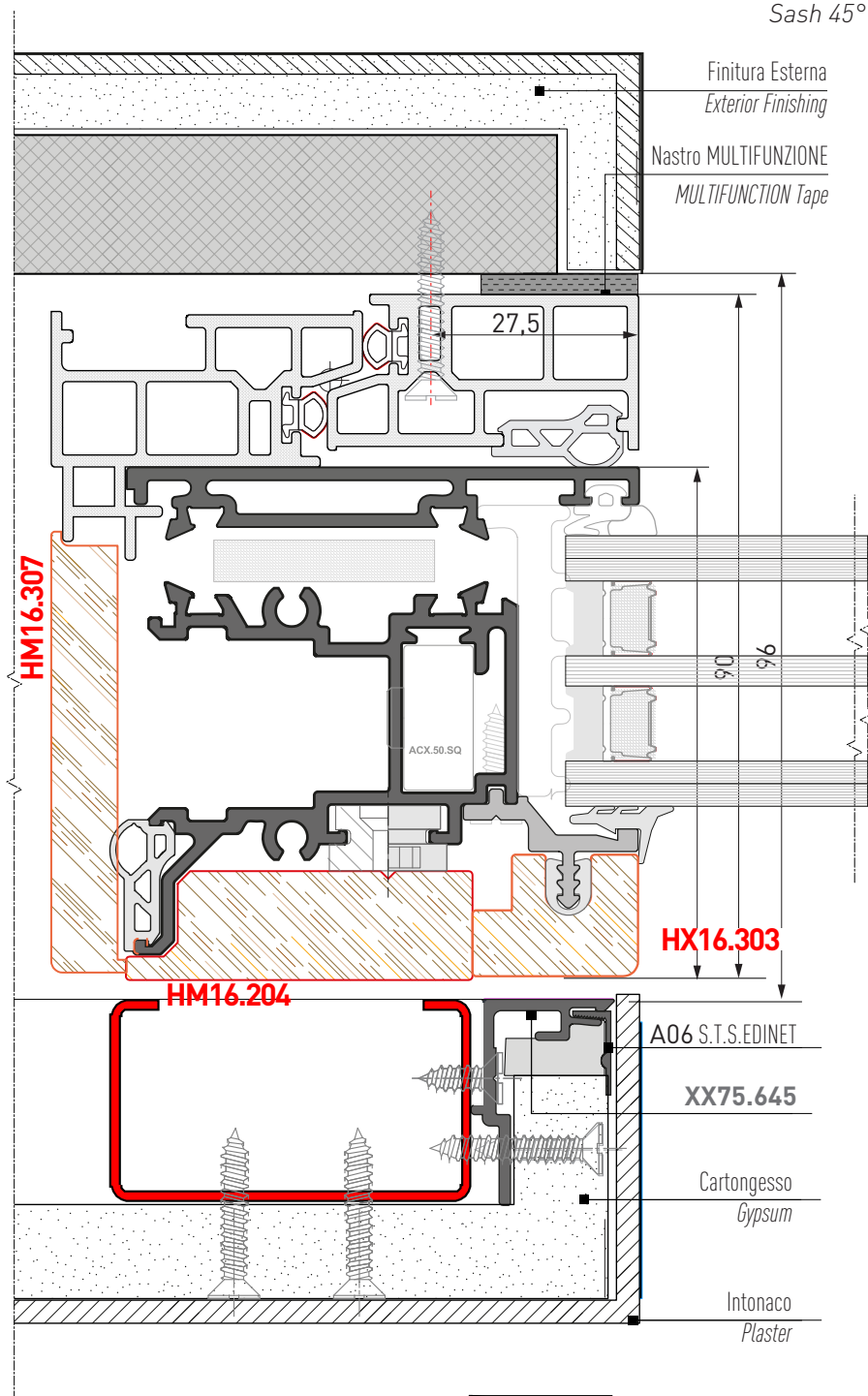
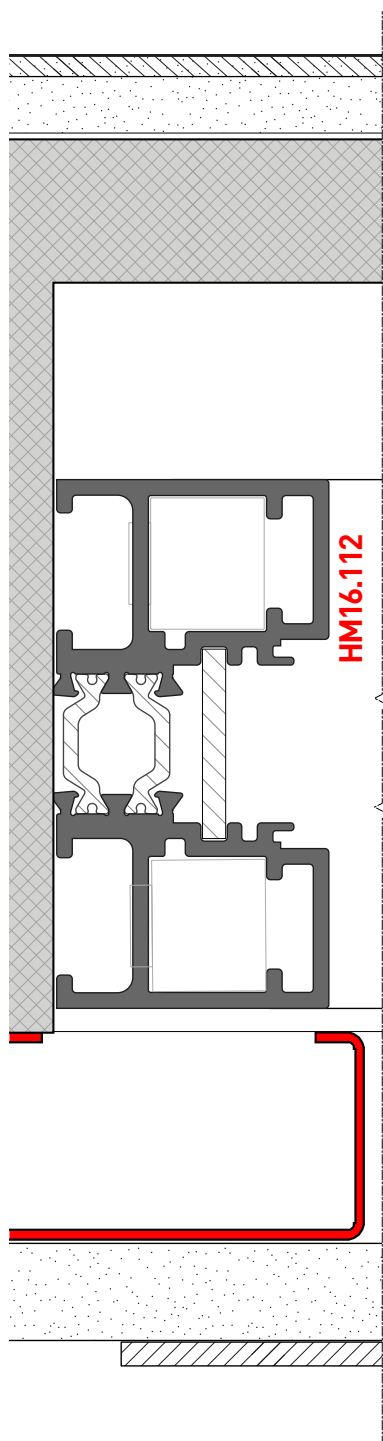




Doppia Anta 45° mobile Incassata
Casket Double 45° Door



Anta 45°
Sash 45°





Tipologie
Types

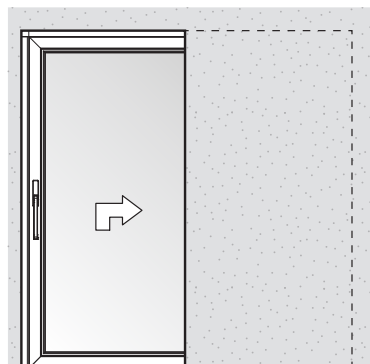
Gruppo **E**

Assiemi e
Distinte di Taglio

*Assemblies &
Cut Lists*

Tipo 0 | 0 Type**1 ANTA INCASSATA - Versione 45°**

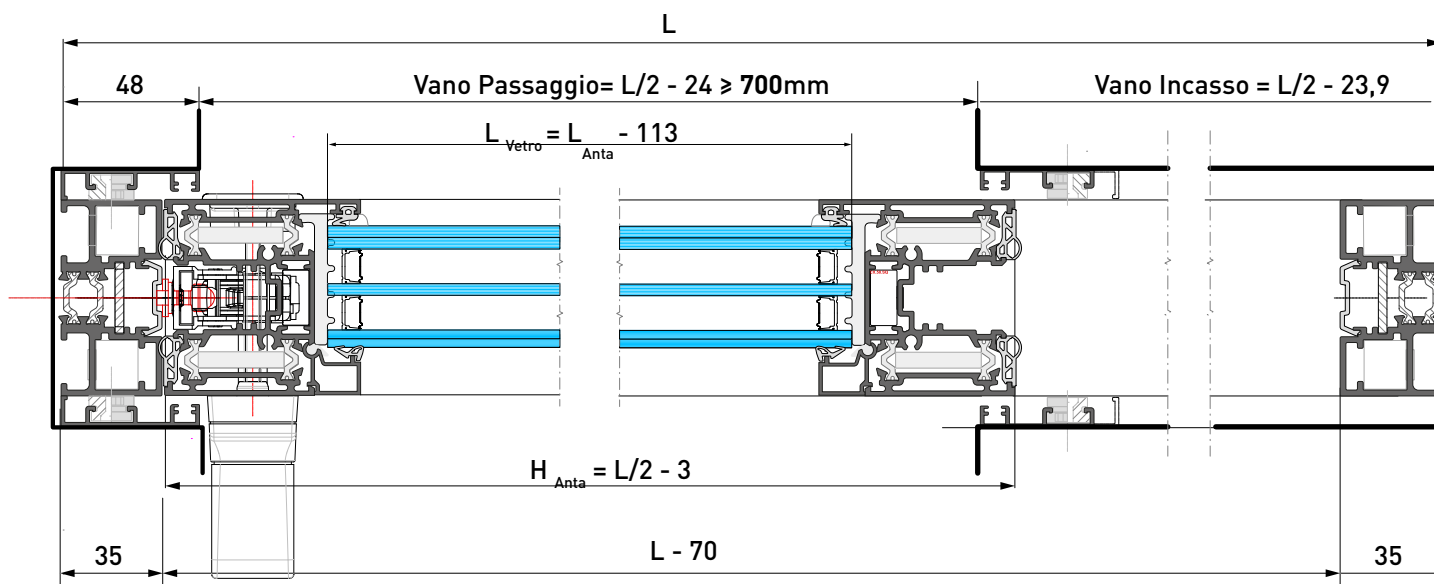
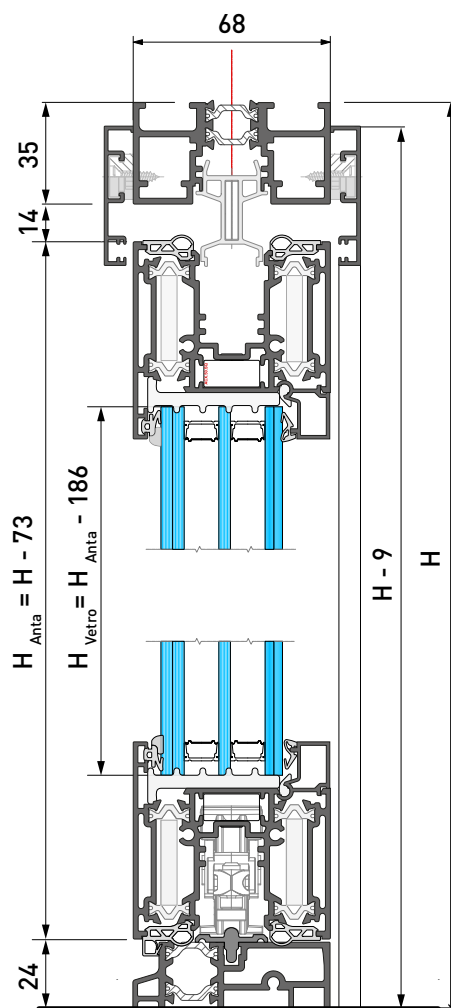
SLIDING Casket Sash - 45° Version

**(Monoanta)**

(Single Sliding Sash)

LISTA ACCESSORI | Accessories List

COMPLEMENTARI COMPLEMENTARIES	QT. QTY.	GUARNIZIONI GASKETS	QT. QTY.	KIT	QT. QTY.
AWX 06.04	L _{Anta} / 50 cm	AMX 10.05	=MX603.51	AHM 16.6745.72	1
LS 09	4L _{Anta}	ARX 10.1X	=MX603.51	AHM 16.6745.75	1
ACX 10.81	2L _{Anta}	AHX 10.47	2L	AHM 16.6744.2	1
AHX 6741.X	1	AHX 10.48	2H + 2L	AHM 16.6730.XX	1
ACX 06.04	1pz./50cm	AHX 10.63	2H		
		ASX 10.69	2H + 2L		
		ACX 10.71	2H + 2L		



**1 ANTA INCASSATA**

Casket Door 1 Sliding Sash

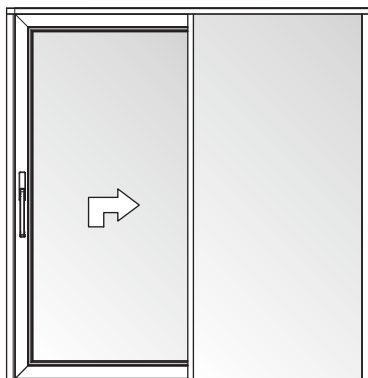
Tipo 0 | 0 Type
 (1 Anta Mobile)
 (1 Mobile Sash)

ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HM16.112		Telaio Frame	L		1
			H		2
HM16.108		Soglia Threshold	L - 70		1
HX16.169		Binario Rail	L - 70		1
BX49		Guida Superiore Upper Guide Rail	L - 70		1
ASX.10.26		Barretta Poliammide Polyamide Thermal Cut	L - 70		1
HX16.303		Profilo di Supporto Support Profile	H		2
HX16.504		Coprifilo INT/EXT Finishing Profile INT/EXT	L/2 - 24,1		2
			H - 48		4
HM16.204		Profilo Anta Sash Profile	L/2 - 3		2
			H - 82,5		2
MX603.501		Fermavetro Glass Holder	L/2 - 107		2
			H - 218,5		2

Tipo A | A Type

1 ANTA MOBILE - Versione 90°

SLIDING Sash + Glazing Wall - 90° Version



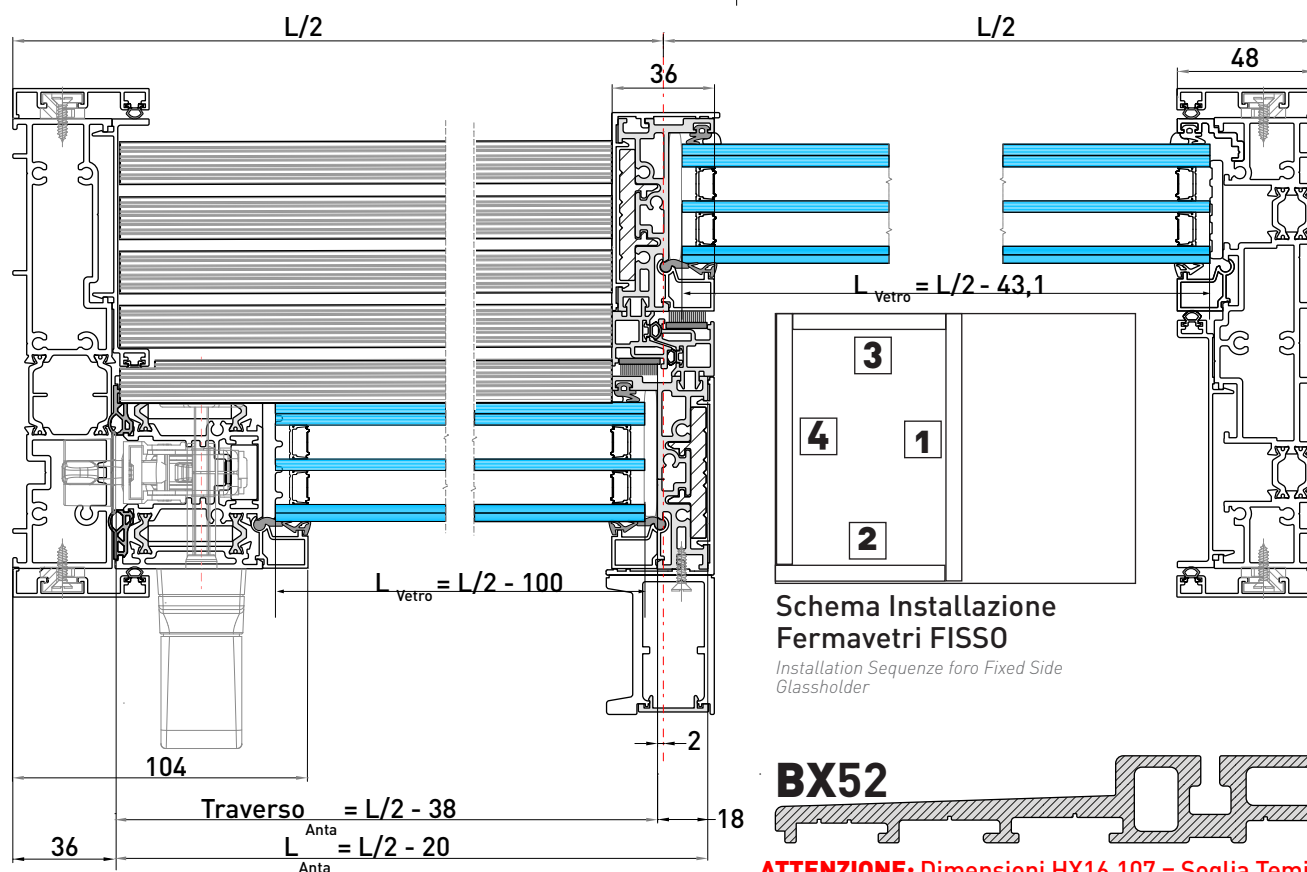
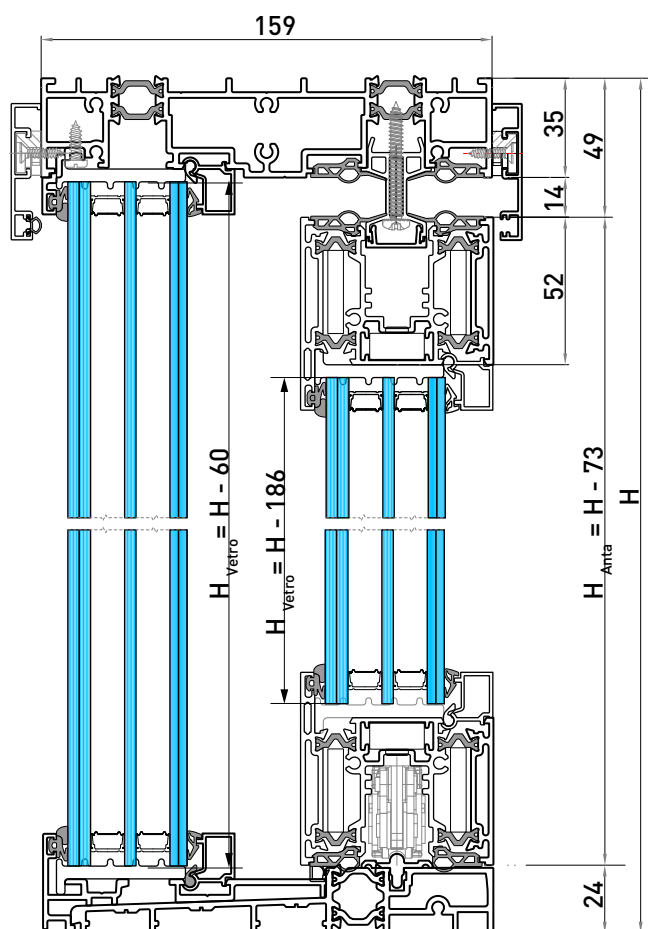
(Anta Mobile + Vetrata Fissa)

(Glazing Wall + Mobile Sash)

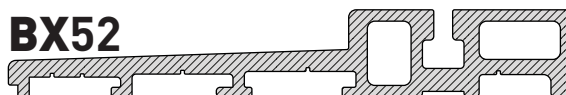
LISTA ACCESSORI | Accessories List

COMPLEMENTARI COMPLEMENTARIES	QT.	GUARNIZIONI GASKETS	QT.	KIT	QT.
AWX 06.04	L _{Anta} /50 cm	AMX 10.05	=MX603.51	AHM 16.6745.68	1
LS 09	4L _{Anta}	ARX 10.1X	=MX603.51	AHM 16.6745.72	1
ACX 10.81	2L _{Anta}	AHX 10.47	2L	AHM 16.6744.2	1
AHX 6741.X	1	AHX 10.48	2H + 2L	AHM 16.6732.XX	1
AHM 16.01	1L	AHX 10.63	2L _{Anta}	*Opzionale *Optional 	
ACX 06.04		AHX 10.64	2H		
		ASX 10.69	2H + 1L		
		ACX 10.71	=MX603.51		

*Opzionale
*Optional



BX52



ATTENZIONE: Dimensioni HX16.107 = Soglia Temica BX52
ATTENTION: Dimensions HX16.107 = BX52 Thermal Threshold

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1 ANTA MOBILE + Vetrata Fissa - Versione 90°

1 SLIDING Sash + 1 FIX Glazing - 90° Version



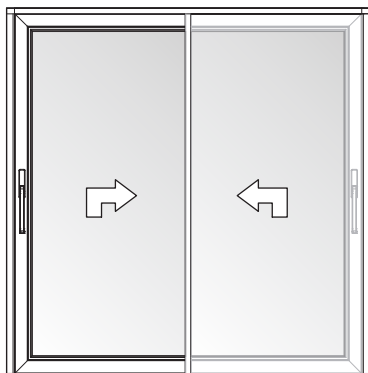
Tipo A | A Type
(Anta Mobile + Anta Fissa)
(Fixed Sash + Mobile Sash)

ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HM16.111		Telaio Frame	L		1
			H - 68		1
HX16.105		Telaio Frame	H - 68		1
HX16.107 BX52		Soglia Threshold	L		1
HX16.169		Binario Rail	L - 72		1
HX16.504		Carter Esterno Extrnal Carter	L - 96		2
			H - 9		4
BX49		Guida Superiore Upper Guide Rail	L - 72		1
BX48		Montante Centrale Central Transom	H - 40	Fisso 	1
			H - 121	Mobile 	1
HM16.308		Profilo di Rinforzo Reinforcement Profile	H - 48	Fisso 	1
			H - 165	Mobile 	1
BX50		Labirinto Centrale Central Labirinth	H - 48	Fisso 	1
			H - 75	Mobile 	1
MX603.501		Fermavetro Glass Holder	L/2 - 34	1 [Fisso T Sup] 	1
			L/2 - 50	3 [Fisso T Inf] 	1
			H - 51	4 [Fisso M Cntl] 	1
			H - 67	2 [Fisso M Lat] 	1
			L/2 - 90	Mobile 	2
			H - 209	Mobile 	2
HM16.306		Profilo di Finitura anta Sash Finishing Profile	H - 73	Mobile 	1
			H - 40	Fisso 	1
HM16.505		Fermavetro Glass Holder	L/2 - 53		1
			H - 83		1
HM16.304		*Opzionale *Optional Profilo Trascinamento ANTA Drive Profile for Sash	H - 99*	Mobile 	1
XX70.704		Coprifilo Finishing Profile	H - 99	Mobile 	2
ASX.10.26		Coprighida Rail Cover	L - 72		1
HM16.507		Fermavetro Interno Internal Glass Support	L/2 - 53		1
HM16.506		Fermavetro Esterno External Glass Support	L/2 - 53		1
HM16.204		Anta Sash	L/2 - 38	Mobile SUP 	1
			L/2 - 38	Mobile INF 	1
			H - 73	Mobile 	1
HM16.508		Carter Carter	H - 55	LATO INTERNO 	1
			H - 35	LATO ESTERNO 	1
HX16.503		Carter Carter	L/2 - 53		1
XX16.102		*Opzionale *Optional Barra Drenaggio Soglia Drainage Threshold Bar	L/2 - 52		5
AHM16.01		*Opzionale *Optional Supporto Barra Drenaggio Drainage Bar Support	Pz.		6pz./mt

Tipo B | B Type

2 ANTE SCORREVOLI - Versione 90°

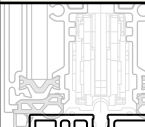
2 SLIDING Sashes - 90° Version



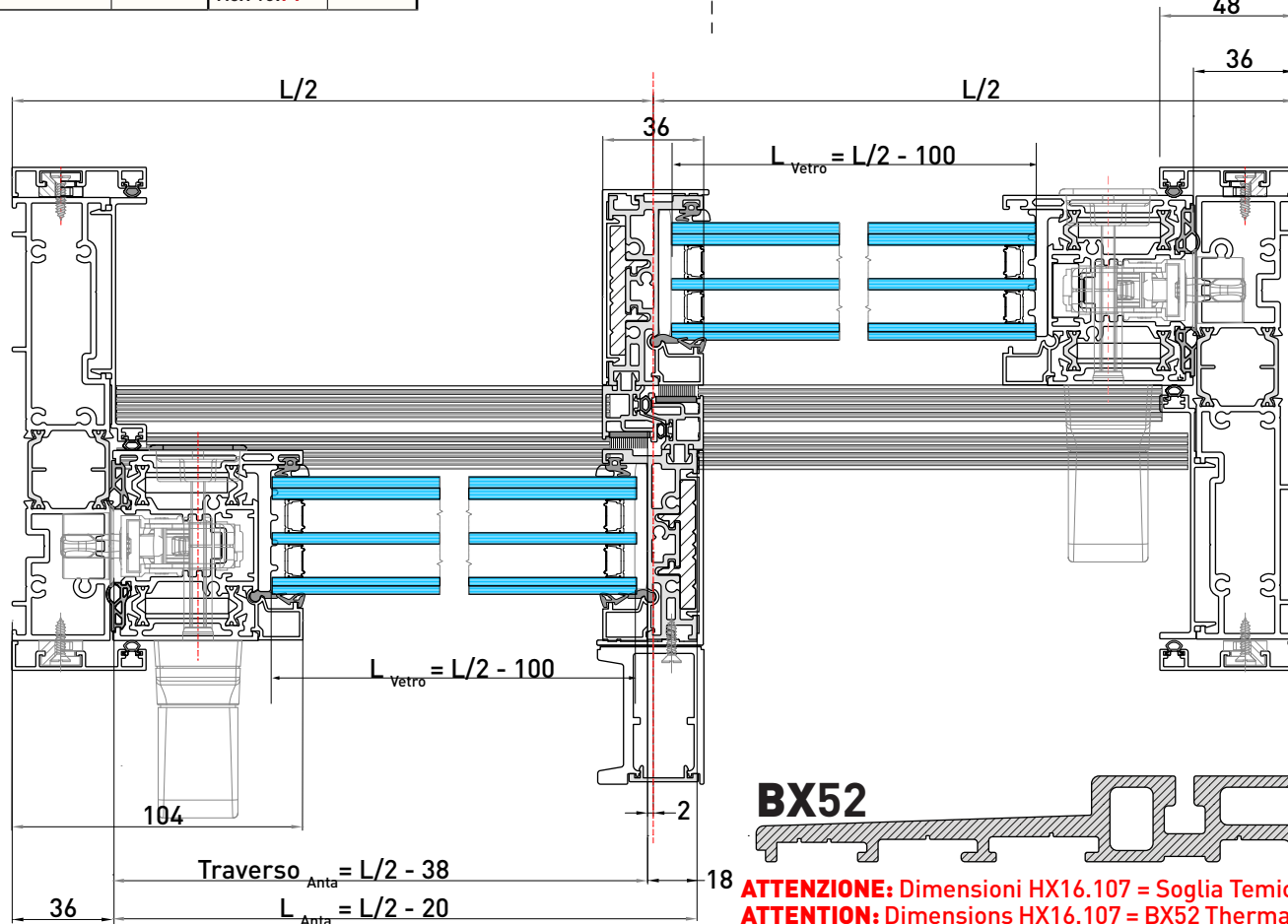
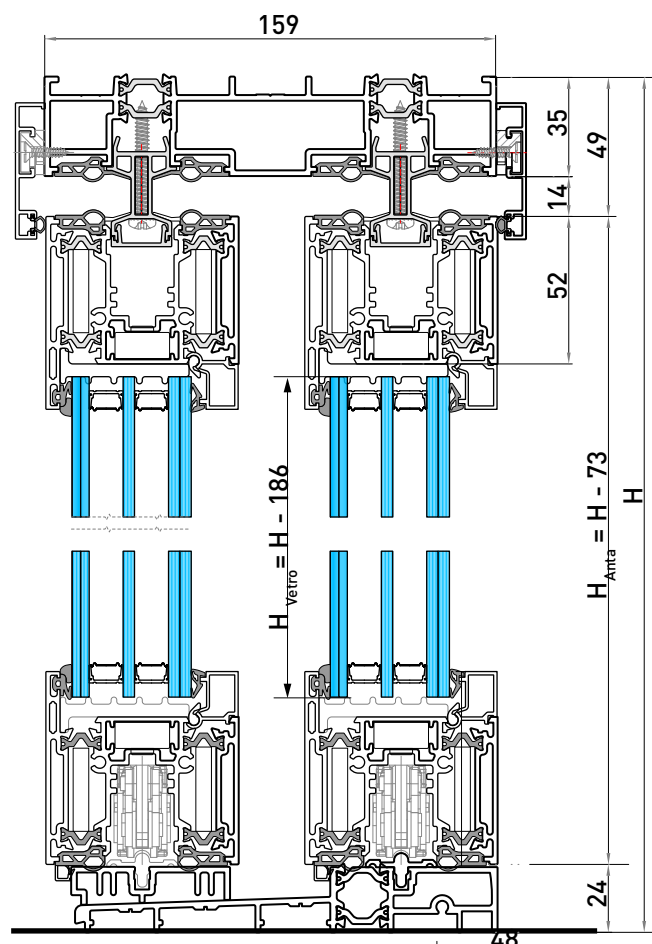
(Anta Mobile + Anta Mobile)

(Silding Sash + Sliding Sash)

LISTA ACCESSORI | Accessories List

COMPLEMENTARI COMPLEMENTARIES	QT.	GUARNIZIONI GASKETS	QT.	KIT	QT.
AWX 06.04	L _{Anta} /50 cm	AMX 10.05	=MX603.51	AHM 16.6745.69	1
LS 09	8L _{Anta}	ARX 10.1X	=MX603.51	AHM 16.6744.2	1
ACX 10.81	4L _{Anta}	AHX 10.47	4L	AHM 16.6732.XX	1
AHX 6741.X	1H	AHX 10.48	4H + 4L		*Opzione *Option
AHM 16.01	1L	AHX 10.63	4L _{Anta}		
ACX 06.04		AHX 10.64	2H		
		ASX 10.69	2H + 1L		
		ACX 10.71	=MX603.51		

*Opzionale
*Optional



BX52

ATTENZIONE: Dimensioni HX16.107 = Soglia Temica BX52
ATTENTION: Dimensions HX16.107 = BX52 Thermal Threshold

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SCORREVOLE A 2 ANTE - Versione 90°

SLIDING Sash WITH 2 SashS - 90° Version

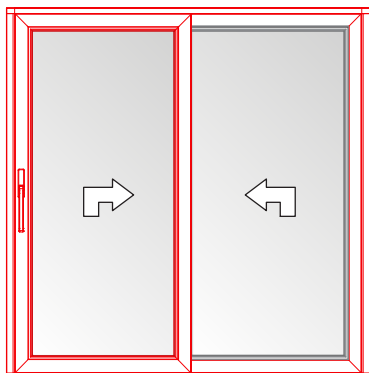


Tipo B | B Type
 (Anta Mobile + Anta mobile)
 (Fixed Sash + Mobile Sash)

ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HX16.106		Telaio Traverso Superiore Frame Upper Transom	L		1
HX16.105		Telaio Montante Frame Mullion	H - 68		2
HX16.107		Soglia Threshold	L		1
HX16.169		Binario Rail	L - 72		2
HX16.504		Carter Esterno Extrnal Carter	L - 96		2
			H - 9		4
BX49		Guida Superiore Upper Guide Rail	L - 72		2
BX48		Montante Centrale Central Transom	H - 121		2
MX603.501		Fermavetro Glass Holder	L/2 - 90		4
			H - 209		4
HM16.306		Profilo anta Sash Profile	H - 75		2
HM16.508		Carter Telaio Frame Carter	H - 35	LATO INTERNO	1
			H - 48	LATO ESTERNO	1
HM16.304	*Opzionale *Optional	Profilo Trascinamento ANTA Drive Profile for Sash	H - 99*		2
XX70.704		Coprifilo Finishing Profile	H - 99		2
ASX.10.26		Copriguia Rail Cover	L/2 - 36		4
HM16.308		Profilo di Rinforzo Reinforcement Profile	H - 165		2
HX16.171		SOTTOBINARIO Track Support Profile	L - 72		1
HM16.204		Anta Sash	L/2 - 38		2
			L/2 - 38		2
			H - 73		2
BX50		Labirinto Centrale Central Labirinth	H - 75		2
XX16.102		Barra Drenaggio Soglia Drainage Threshold Bar	L/2 - 52		5 + 5
AHM16.01		Supporto Barra Drenaggio Drainage Bar Support	Pz.		6pz./mt

2 ANTE SCORREVOLI - Versione 45°

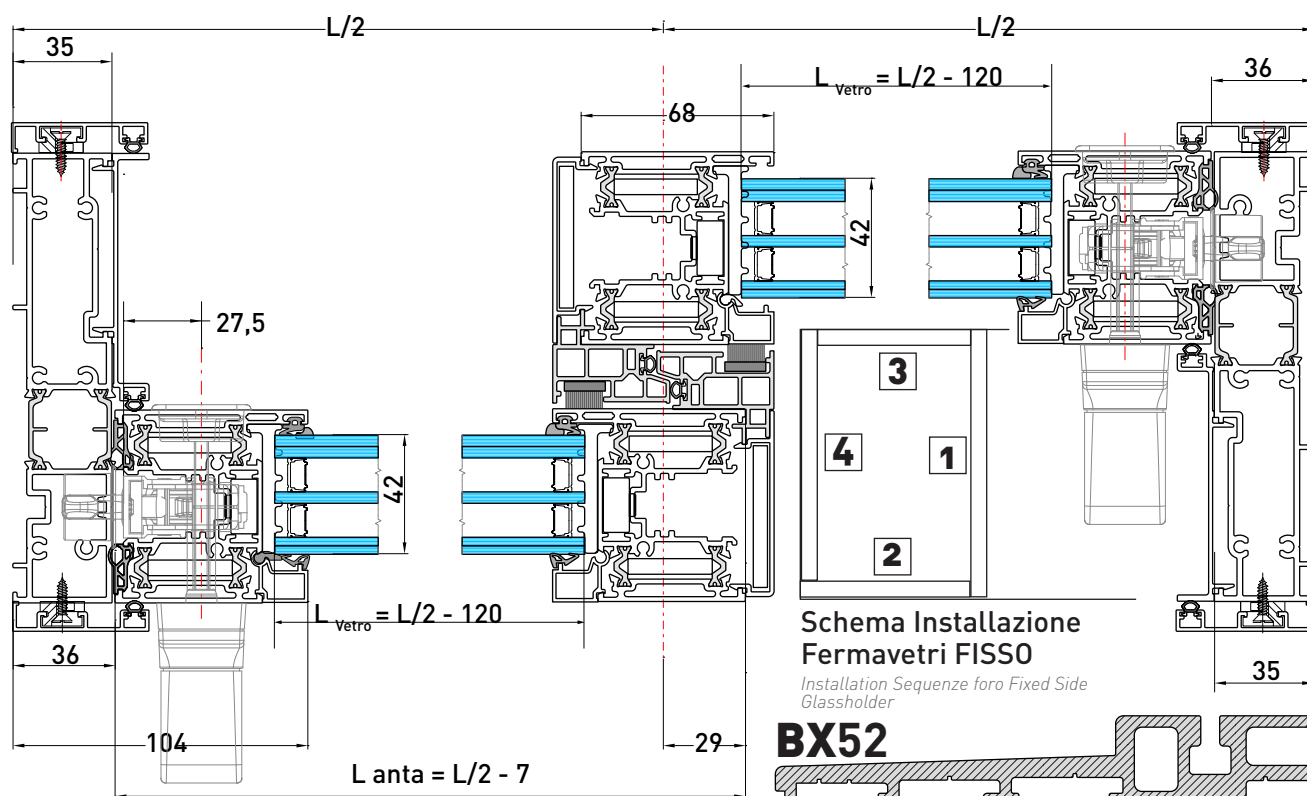
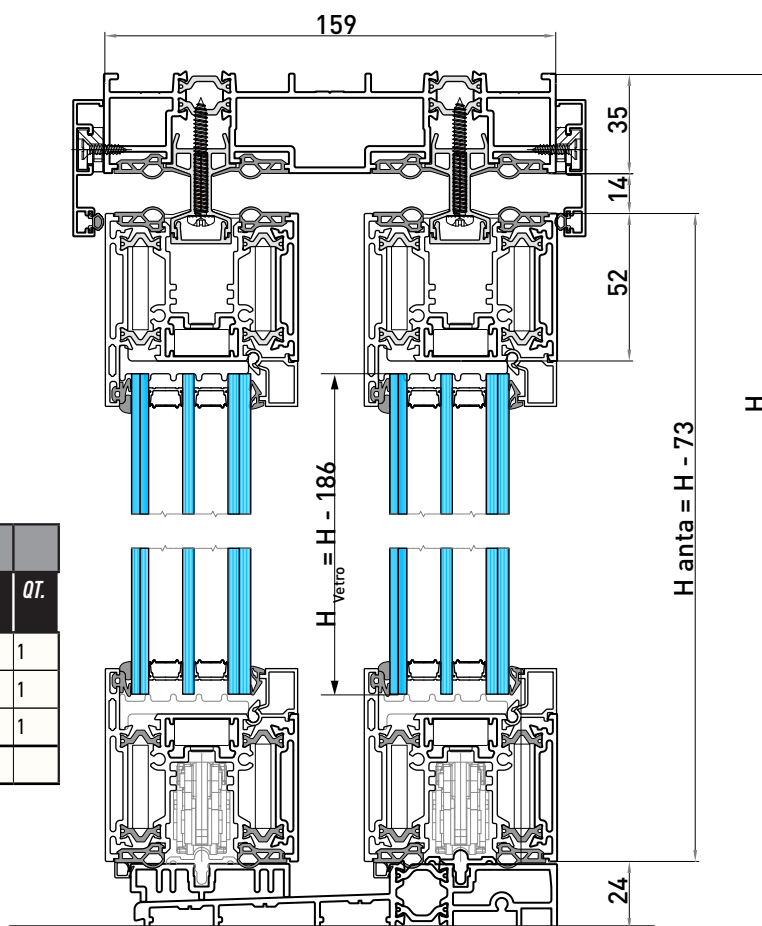
2 SLIDING Sashes - 45° Version

**(Anta Mobile + Anta Mobile)**

(Sliding Sash + Sliding Sash)

LISTA ACCESSORI | Accessories List

COMPLEMENTARI COMPLEMENTARIES	QT. QTY.	GUARNIZIONI GASKETS	QT. QTY.	KIT	QT. QTY.
AWX 06.04	L _{Anta} / 50 cm	AMX 10.05	=MX603.51	AHM 16.6745.70	1
LS 09	8L _{Anta}	ARX 10.1X	=MX603.51	AHM 16.6744.2	1
ACX 10.81	4L _{Anta}	AHX 10.47	4L	AHM 16.6732.XX	1
AHX 6741.X	1H	AHX 10.48	4H + 4L		
AHM 16.01	1L (0pz)	AHX 10.63	4L _{Anta}		
ACX 06.04		AHX 10.64	2H		
		ASX 10.69	2H + 1L		
		ACX 10.71	=MX603.51		

**ATTENZIONE: Dimensioni HX16.107 = Soglia Temica BX52**
ATTENTION: Dimensions HX16.107 = BX52 Thermal Threshold

SCORREVOLE A 2 ANTE - Versione 45°

SLIDING Sash WITH 2 SashS - 45° Version

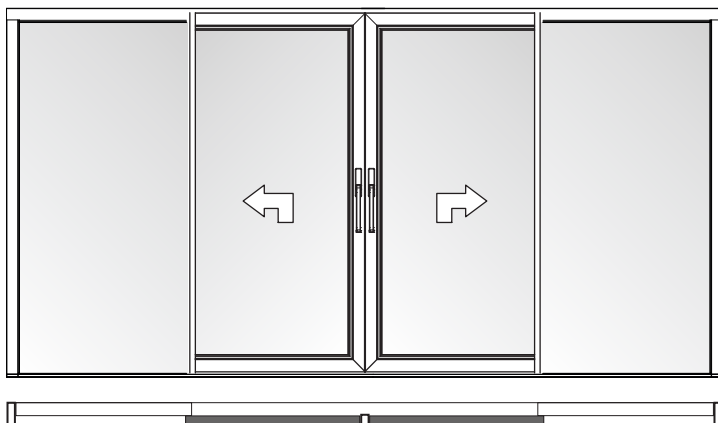


Tipo C | C Type
(Anta Mobile + Anta mobile)
(Fixed Sash + Mobile Sash)

ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HX16.106		Telaio Traverso Superiore Frame Upper Transom	L		1
HX16.105		Telaio Montante Frame Mullion	H - 68		2
HX16.107 BX52		Soglia Threshold	L		1
HX16.169		Binario Rail	L - 72		2
HX16.504		Telaio Frame	L - 96		2
			H - 9		4
BX49		Guida Superiore Upper Guide Rail	L - 72		2
BX51		Labirinto Centrale Central Labyrinth	H - 76		2
MX603.501		Fermavetro Glass Holder	L/2 - 111		4
			H - 209		4
HM16.508		Carter Telaio Frame Carter	H - 35		1
			H - 48		1
HM16.307		Carter Anta Sash Carter	H - 97		1
ASX.10.26		Copriguida Rail Cover	L/2 - 36		4
HX16.171		SOTTOBINARIO Track Support Profile	L - 72		1
HM16.204		Anta Sash	L/2 - 7		2
			H - 73		2

Tipo C | C Type**4 ANTE - Versione 90°**

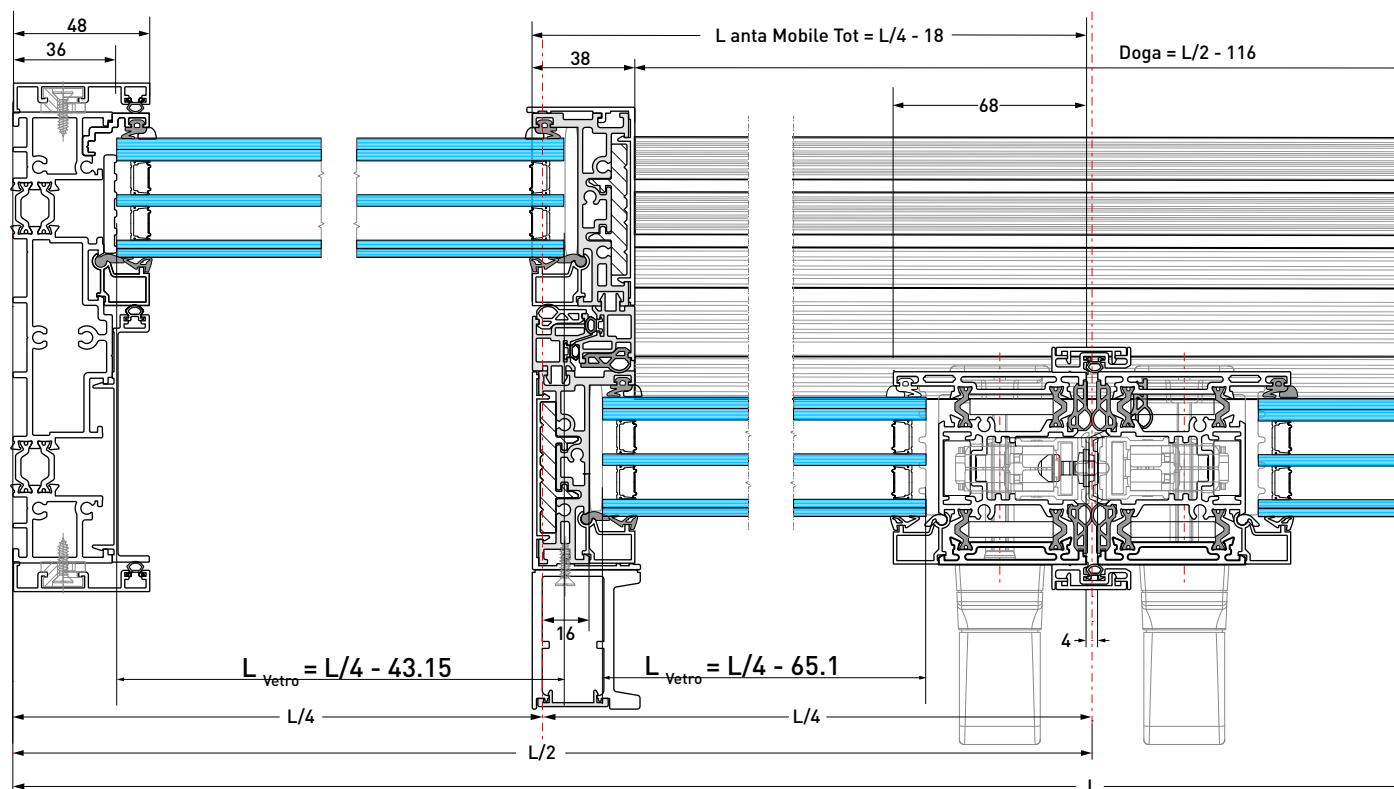
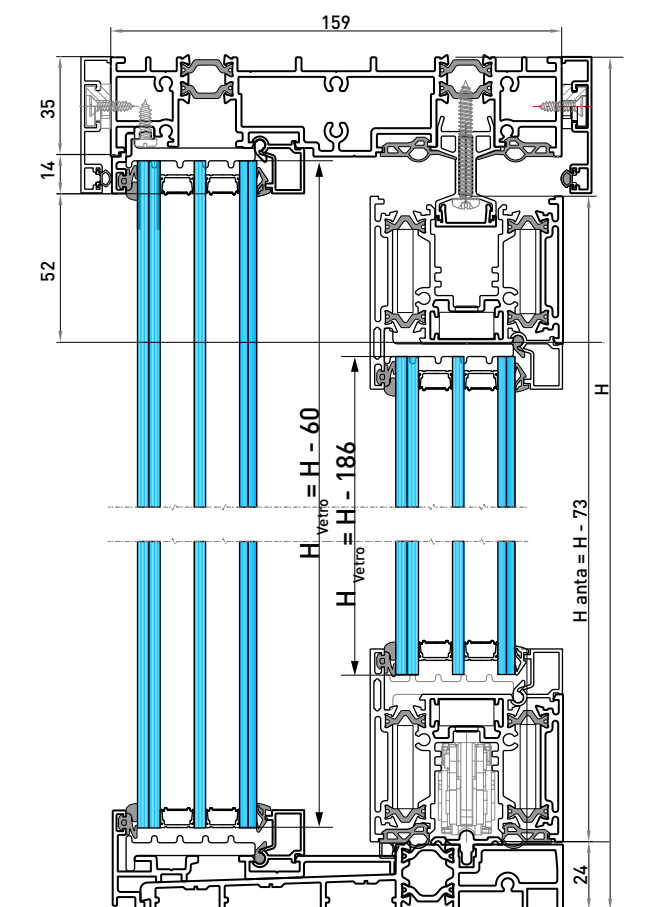
4 Sashes - 90° Version

**[2 Vetrate Fisse EXT + 2 Ante Scorrevoli INT]**

[2 Fixed EXT Sashes + 2 Sliding INT Sashes]

LISTA ACCESSORI | Accessories List

COMPLEMENTARI COMPLEMENTARIES	QT.	GUARNIZIONI GASKETS	QT.	KIT	QT.
AWX 06.04	$L_{\text{Anta}}/50 \text{ cm}$	AMX 10.05	=MX603.51	AHM 16.6745.68	2
LS 09	8L _{Anta}	ARX 10.1X	=MX603.51	AHM 16.6745.71	1
ACX 10.81	4L _{Anta}	AHX 10.47	L/2	AHM 16.6745.72	1
AHX 6741.X	1H	AHX 10.48	4H + 4L	AHM 16.6744.2	1
AHM 16.01	1L (Opz)	AHX 10.63	4L _{Anta}	AHM 16.6730.XX	1
ACX 06.04		AHX 10.64	2H		
		ASX 10.69	2H + 1L		
		ACX 10.71	=MX603.51		



ATTENZIONE: Dimensioni HX16.107 = Soglia Temica BX52
ATTENTION: Dimensions HX16.107 = BX52 Thermal Threshold

**SCORREVOLE A 2 ANTE + 2 Vetrate Fisse -
Versione 90°**

SLIDING Sash WITH 2 Sliding Sashes + 2 Fix GLAZING - 90° Version

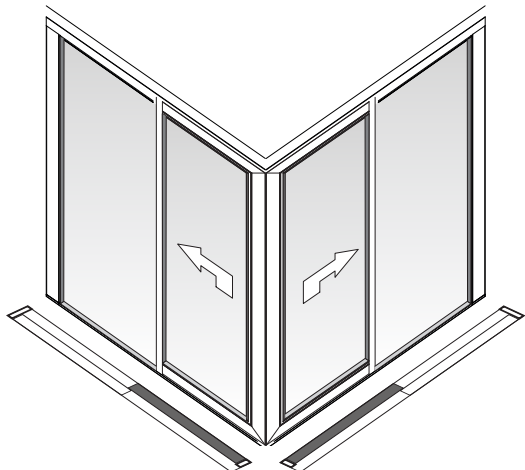


Tipo D | D Type
(2 Fissi EXT + 2 Ante mobili INT)
(2 Fixed EXT Sashes + 2 Mobile INT Sashes)

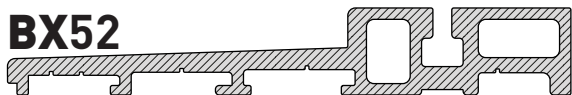
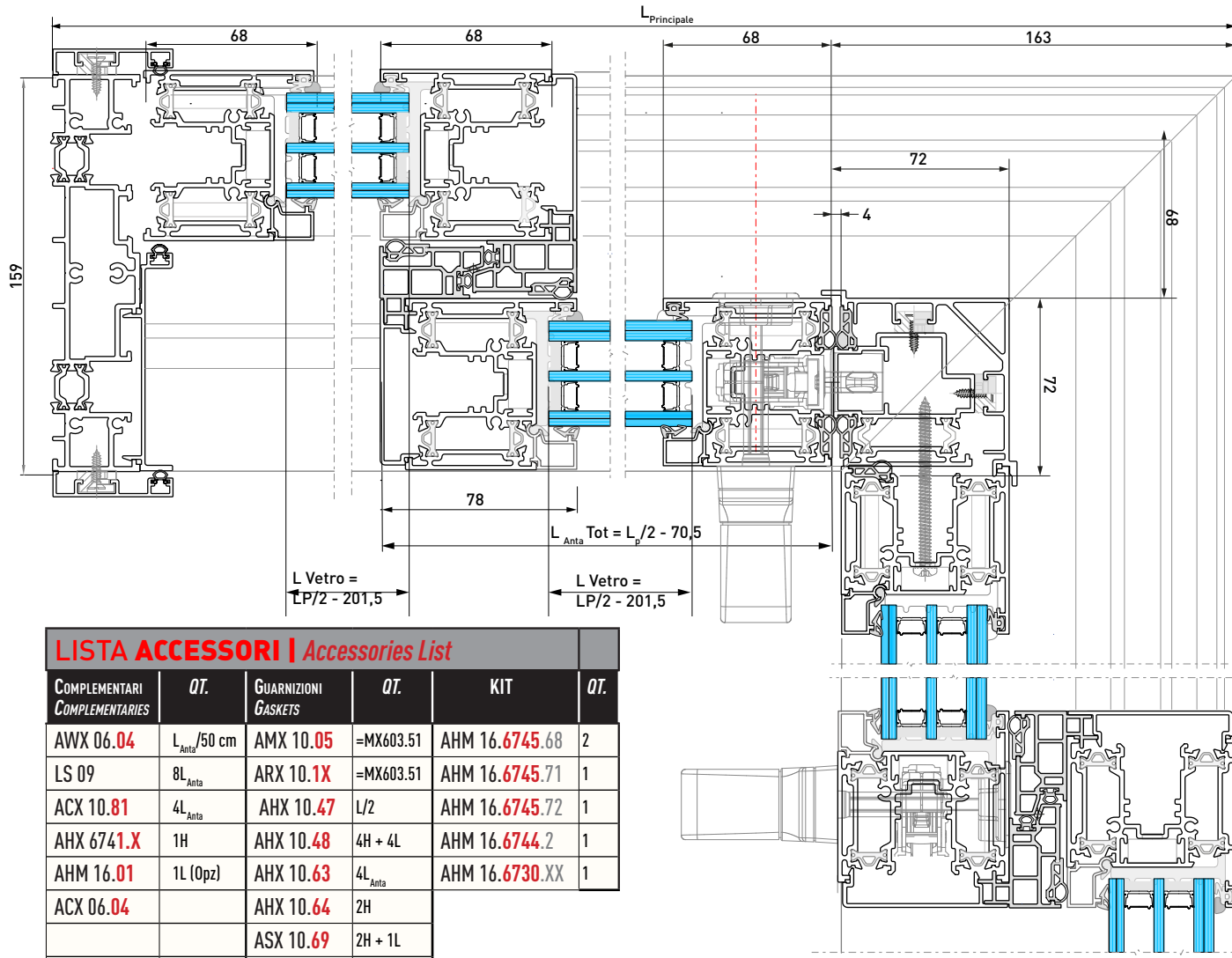
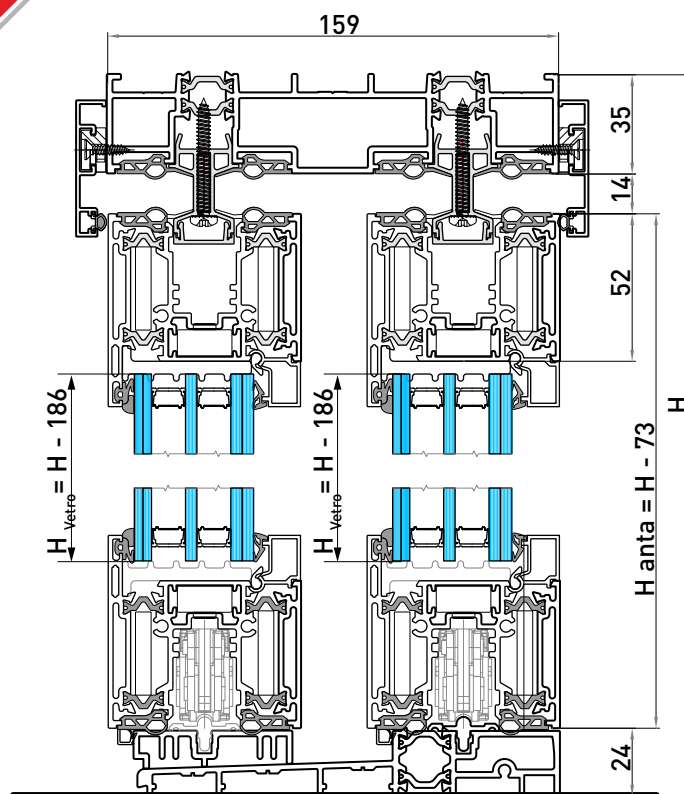
ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HM16.111		Telaio Traverso Superiore Frame Upper Transom	L		1
		Telaio Montante Frame Mullion	H - 68		2
HX16.107 BX52		Soglia Threshold	L		1
HX16.169		Binario Rail	L - 74		1
HX16.504		Carter Esterno Extrnal Carter	L - 96		2
			H - 9		4
BX49		Guida Superiore Upper Guide Rail	L - 74		1
BX48		Montante Centrale Central Transom	H - 40	LATO FISSO	2
			H - 121	LATO MOBILE	2
MX603.501		Fermavetro Glass Holder	L/4 - 34	1 [Fisso T Sup]	2
			L/4 - 50	3 [Fisso T Inf]	2
			H - 51	4 [Fisso M Cntl]	2
			H - 67	2 [Fisso M Lat]	2
			L/4 - 56	Mobile	4
			H - 209	Mobile	4
HM16.306		Profilo anta Sash Profile	H - 40	LATO FISSO	2
			H - 73	LATO MOBILE	
HM16.508		Carter Telaio Frame Carter	H - 35	LATO ESTERNO	2
HX16.503		Carter Carter	L/2 - 36		2
HM16.304		*Opzionale *Optional Profilo Trascinamento ANTA Drive Profile for Sash	H - 99*		2
XX70.704		Carter HM16.304 HM16.304 Carter	H - 99		2
HX16.303		Profilo Chiusure Enclosers Profile	H - 97		1
ASX.10.26		Coprighida Rail Cover	L - 74		1
HM16.308		Profilo di Rinforzo Reinforcement Profile	H - 48	LATO FISSO	2
			H - 165	LATO MOBILE	2
HM16.505		Fermavetro Glass Holder	L/4 - 53		2
			H - 83		2
HM16.506		Reggivetto Esterno External Glass Support	H - 83		2
			L/4 - 53		2
HM16.507		Reggivetto Interno Internal Glass Support	L/4 - 53		2
HM16.204		Anta Sash	L/4 - 4		2
			L/4 - 4		2
			H - 73		2
BX50		Labirinto Centrale Central Labirinth	H - 48	LATO FISSO	2
			H - 75	LATO MOBILE	2
XX16.102		*Opzionale *Optional Barra Drenaggio Soglia Drainage Threshold Bar	L/4 - 55		5 + 5
AHM16.01		*Opzionale *Optional Supporto Barra Drenaggio Drainage Bar Support	Pz.		6pz./mt

Tipo E | E Type**SCORREVOLE Angolo 4 ANTE - Versione 90°**

4 Sashes Corner SLIDING Window - 90° Version

**(2 Vetrate Fisse EXT + 2 Ante mobili INT)**

(2 Fixed EXT Sashes + 2 Mobile INT Sashes)

BX52**ATTENZIONE:** Dimensioni HX16.107 = Soglia Temica BX52**ATTENTION:** Dimensions HX16.107 = BX52 Thermal Threshold

SCORREVOLE Angolo 4 ANTE - Versione 90°

SLIDING Sash WITH 4 Sashes - 90° Version



Tipo E | E Type

(2 Ante Fisse EXT + 2 Ante mobili INT)

(2 Fixed EXT Sashes + 2 Mobile INT Sashes)

ART. Item	PROFILO Profile	DESCRIZIONE Description	MISURA Size	TIPO TAGLIO Cut Type	Qt.
HM16.111		Telaio Traverso Superiore Frame Upper Transom	L_p $L_s = L_p - 4$		1 1
		Telaio Montante Frame Mullion	H - 68		2
HX16.107 BX52		Soglia Threshold	$L_p - 10,5$		1
			$L_p - 14,5$		1
HX16.169		Binario Rail	$L_p - 193$		1
			$L_p - 197$		1
HX16.504		Carter di Finitura Finishing Carter	L_p	LATO ESTERNO	1
			$L_p - 4$	LATO ESTERNO	1
			$L_p - 159$	LATO INTERNO	1
			$L_p - 163$	LATO INTERNO	1
			H - 9		4
BX49		Guida Superiore Upper Guide Rail	$L_p - 190,5$		1
			$L_p - 194,5$		1
ASX.10.26		Copriguida Rail Cover	$L_p/2 - 2$		1
			$L_p/2 - 4$		1
MX603.501		Fermavetro Glass Holder	$L_p/2 - 169,5$		2
			$L_p/2 - 206,5$		2
			H - 104		2
HM16.508		Carter Telaio Frame Carter	H - 35	LATO INTERNO	1
			H - 48	LATO ESTERNO	1
HX16.503		Carter Carter	$L_p - 567$		1
			$L_p - 571$		1
HM16.204		Anta Sash	$L_p/2 - 70,5$		8
			H - 73		8
HM16.509		Incontro Angolare Corner Support	H - 107,5		1
HM16.509		Carter Angolare Corner Carter	H - 77		1

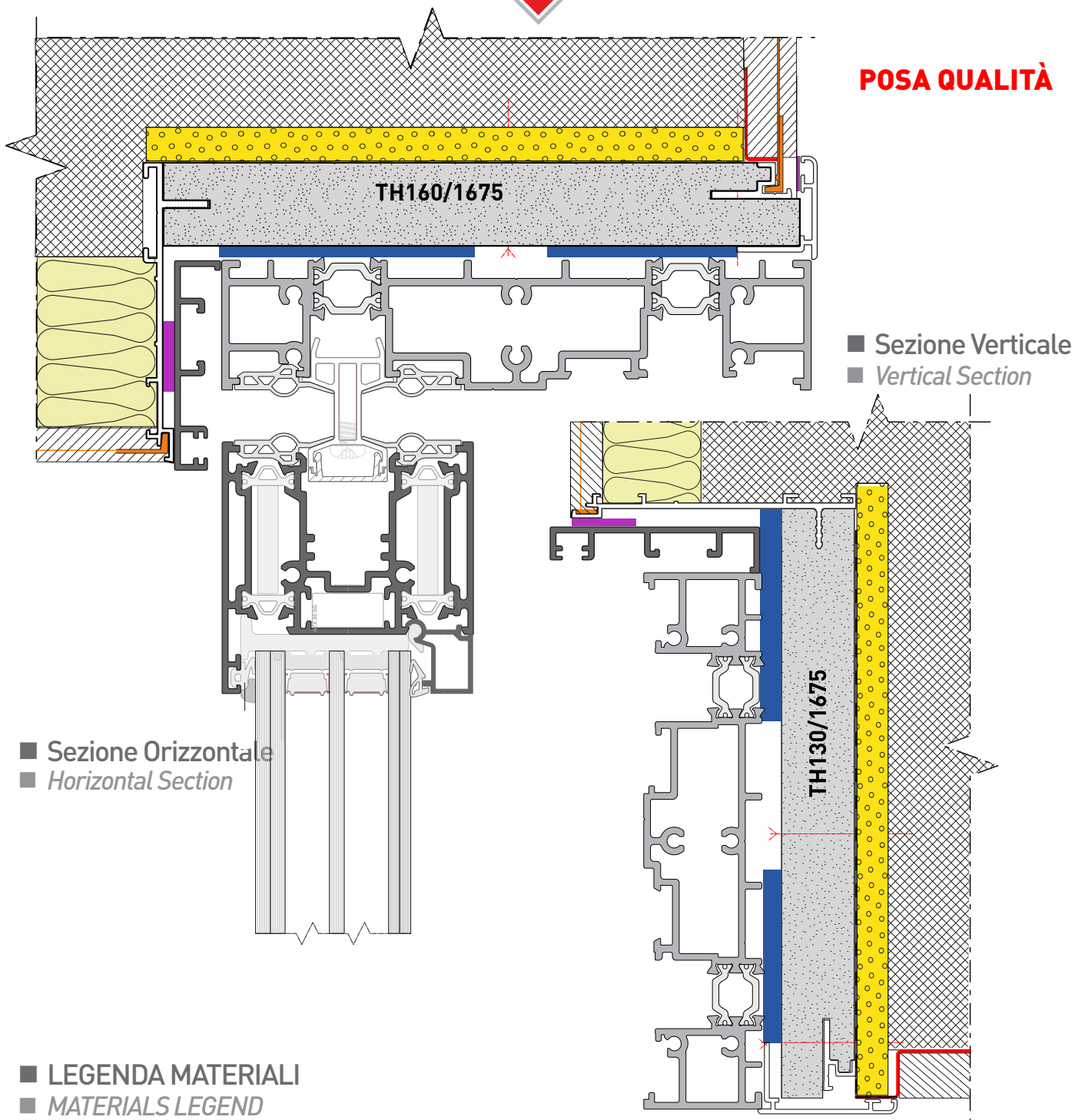


Attacco alla Muratura
Wall Joint

Gruppo F

Sezione particolareggiata
attacco alla muratura

Wall Joint Detail

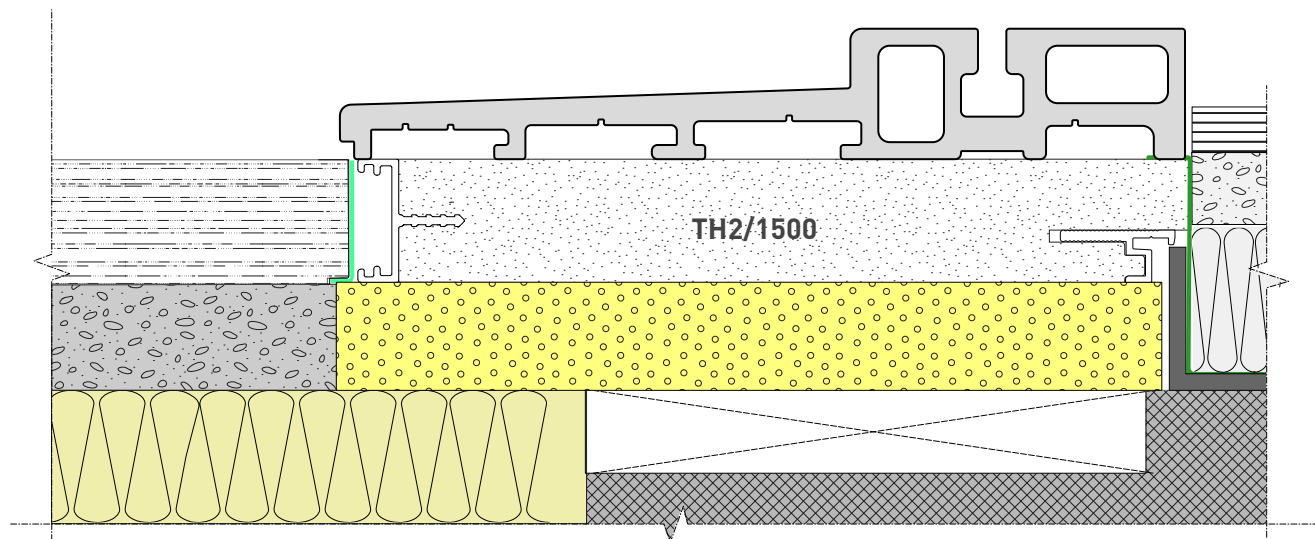
POSA QUALITÀ

LEGENDA MATERIALI
MATERIALS LEGEND

	Muratura Brickwall		PQ.1008 Nastro Autoadesivo 9x2 PQ.1008 Auto-Adhesive Tape 9x2		PQ.1003 Freno al Vapore [Pellicola Interna] 70 mm. PQ.1003 Steam Barrier [Internal Film] 70 mm.
	Intonaco Plaster		PQ.1007 Nastro 600Pa 15/1-4 PQ.1007 Tape 600Pa 15/1-4		PQ.1013 Profilo Portaintonaco Plaster net profile
	Isolamento Insulation		Nastro Multifunz. 54/2-10 PQ.1009.G Multifunc. Tape 54/10 PQ.1009.G		
	Controtelaio THERMAL Wall frame THERMAL		PQ.1012 Schiuma Poliuretanica PQ.1012 Polyurethane Foam		

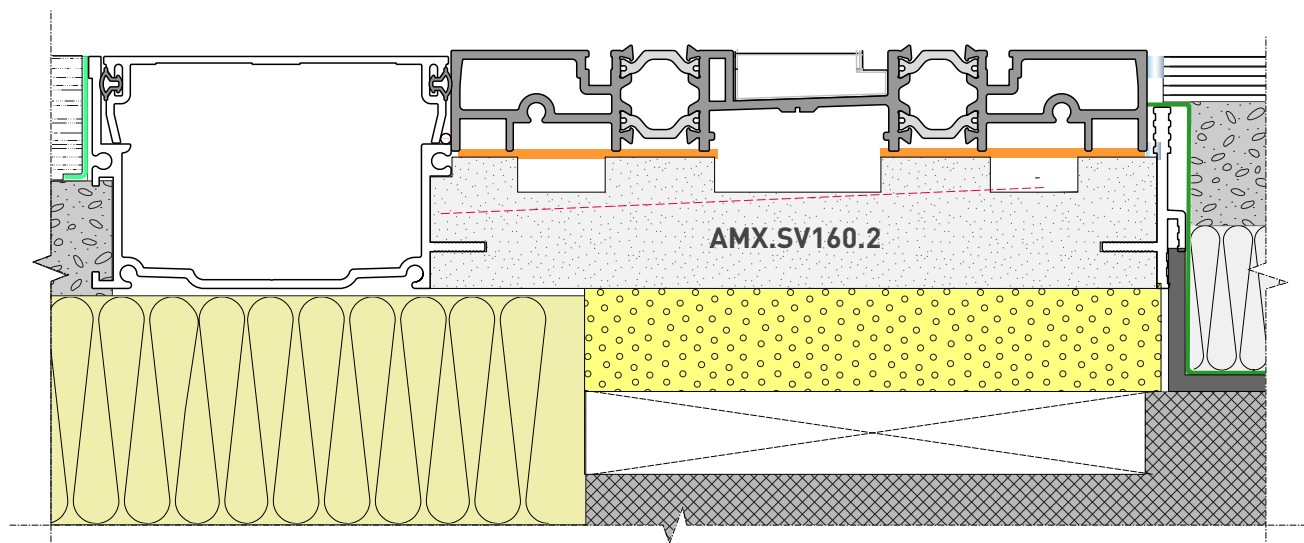
DETTAGLI, NORMATIVE DI RIFERIMENTO E LISTE MATERIALI SONO DISPONIBILI SUL CATALOGO POSA QUALITÀ SUL SITO TWIN SYSTEMS
 DETAILS, REFERENCE STANDARDS AND MATERIAL LISTS ARE AVAILABLE IN THE QUALITY INSTALLATION CATALOG ON THE TWIN SYSTEMS WEBSITE



SEZIONE VERTICALE



■ Soglia Termica
■ *Thermal Threshold*

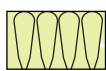


LEGENDA MATERIALI MATERIALS LEGEND

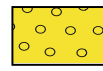
■ Filo Pavimento
■ *Floor Level*



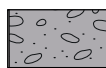
Paviment INT/EXT
INT/EXT Flooring



Isolamento Termico
Thermal Insulation



PQ.1012 Schiuma Poliuretanica
PQ.1012 Polyurethane Foam



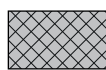
Massetto
Screed



PQ.1005 Guaina Esterna EPDM 80 mm.
PQ.1003 External Sheath EPDM 80 mm.



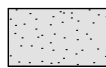
PQ.1010 Nastro PE 60x6
PQ.1010 Tape PE 60x6



Base Strutturale
Structure



PQ.1002/3/4 Freno al Vapore [Pellicola Interna] 70 mm.
PQ.1002/3/4 Steam Barrier [Inner Film] 70 mm.



Controtelaio THERMAL
Wall frame THERMAL



PQ.1002/3/4 Freno al Vapore [Pellicola Interna] 70 mm.
PQ.1002/3/4 Steam Barrier [Inner Film] 70 mm.



Soglia Termica
Thermal Threshold

DETTAGLI, NORMATIVE DI RIFERIMENTO E LISTE MATERIALI SONO DISPONIBILI SUL CATALOGO POSA QUALITÀ SUL SITO TWIN SYSTEMS
DETAILS, REFERENCE STANDARDS AND MATERIAL LISTS ARE AVAILABLE IN THE QUALITY INSTALLATION CATALOG ON THE TWIN SYSTEMS WEBSITE



Gruppo **G**

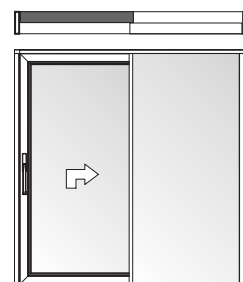
Schemi Lavorazioni
Frese
Attrezzatura

*Tooling Systems
Cutters Equipments
Milling*

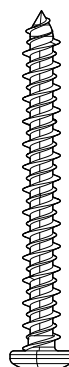
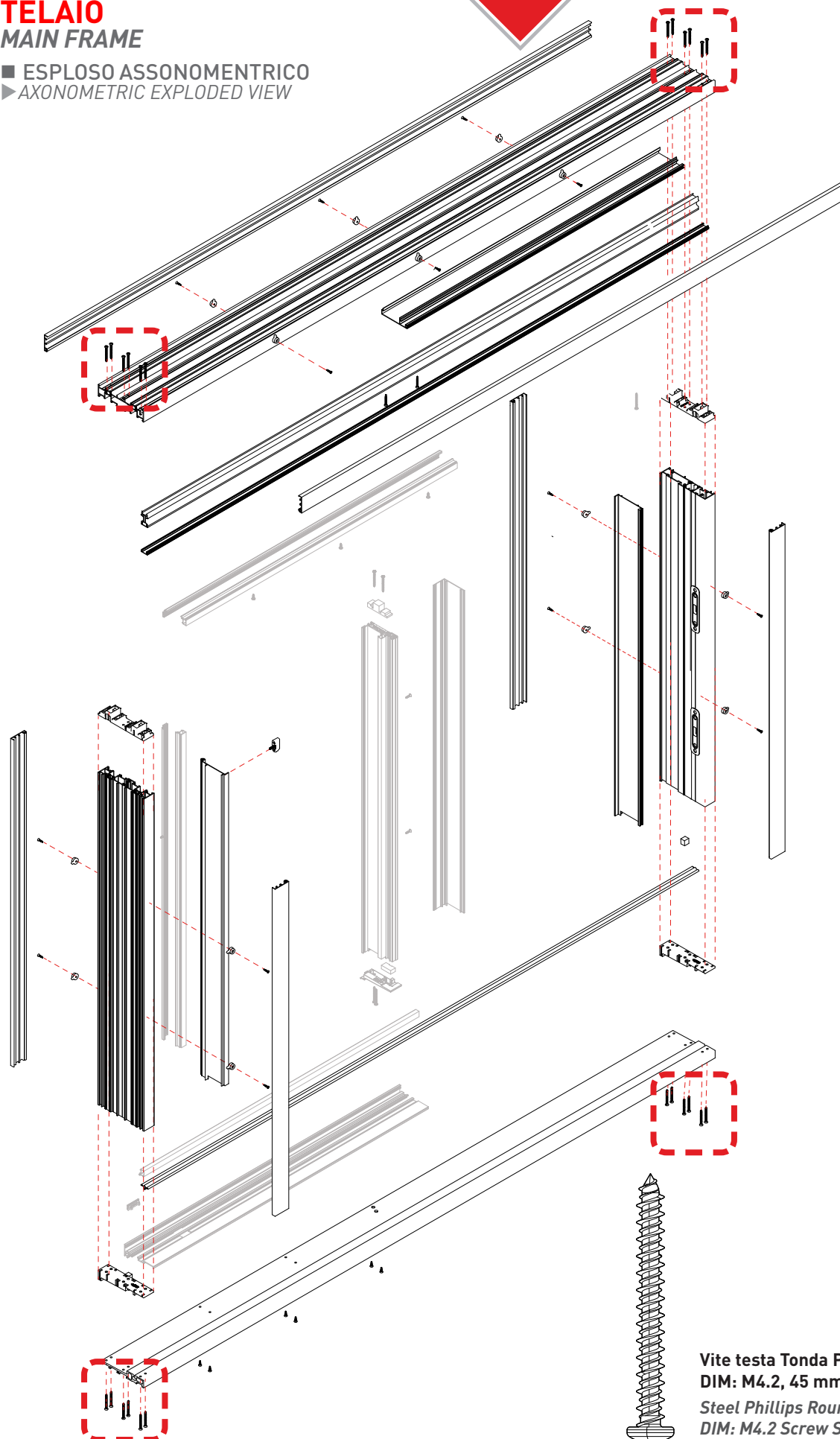
TELAIO
MAIN FRAME

■ ESPLOSO ASSONOMETRICO
► AXONOMETRIC EXPLODED VIEW

■ Mobile + Fisso
Sliding + Fixed



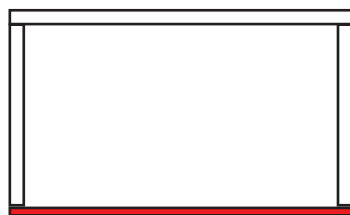
Anta | Sash 90°



Vite testa Tonda Phillips acciaio
DIM: M4.2, 45 mm

Steel Phillips Rounded Head Screws
DIM: M4.2 Screw Size, 45 mm

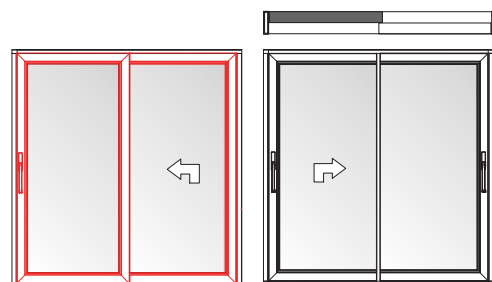
TELAIO
MAIN FRAME



■ Lavorazione SOGLIA HX16.107 DRENAGGIO LATO FISSO

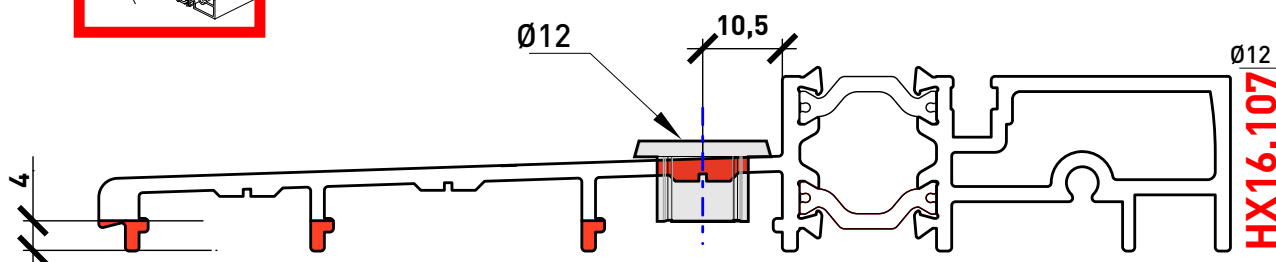
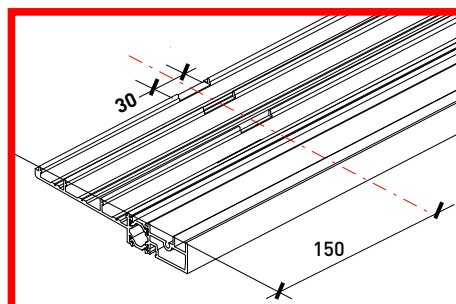
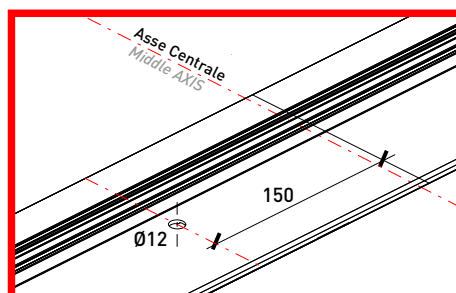
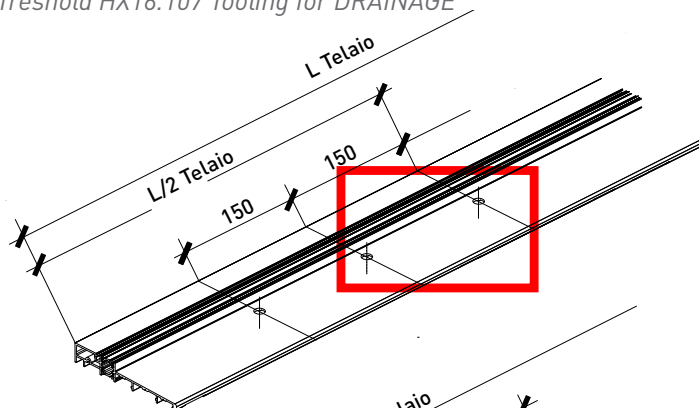
► Treshold HX16.107 Tooling for DRAINAGE

■ Mobile + Fisso
Sliding + Fixed

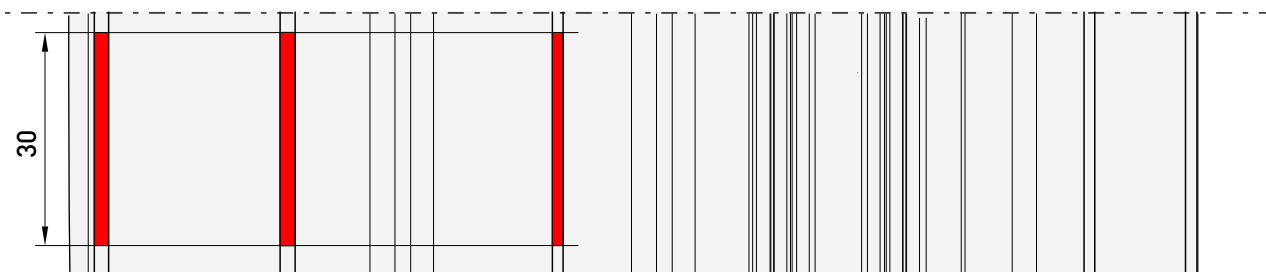


Anta | Sash **45°**

Anta | Sash **90°**

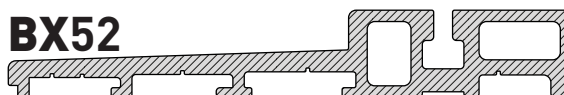


HX16.107



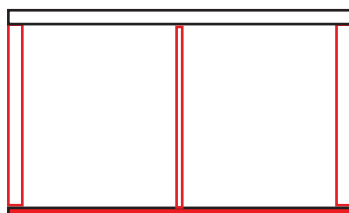
Vista INFERIORE | Bottom View

BX52



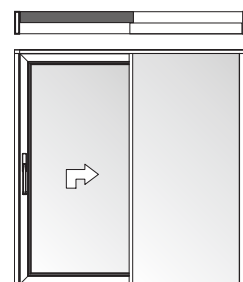
ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold

TELAIO
MAIN FRAME

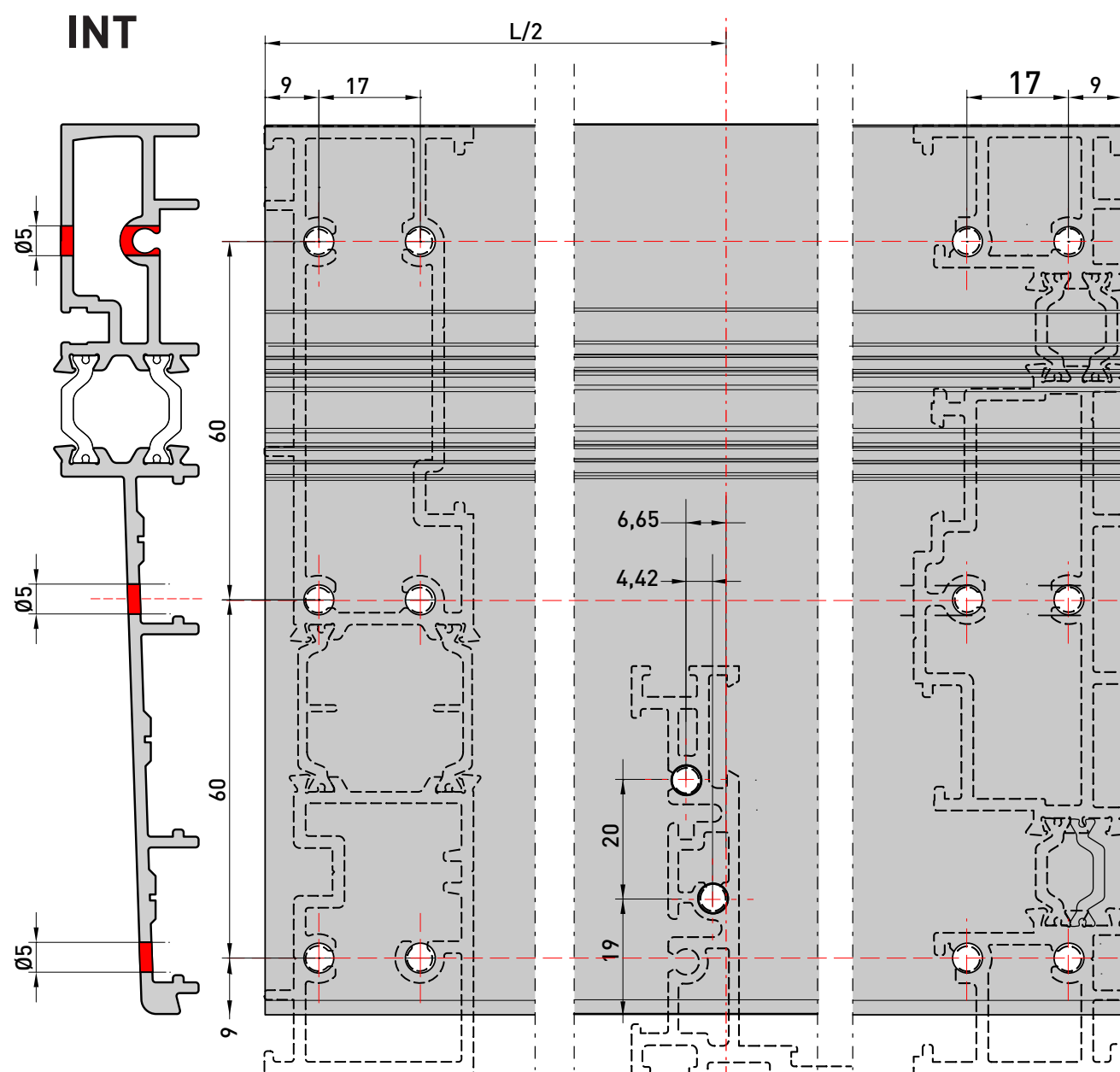


- Lavorazione SOGLIA HX16.107 Montanti Centrali + Lateralì
- Treshold HX16.107 Tooling for Lateral + Central Transoms

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash **90°**



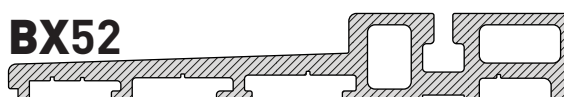
HX16.107
EXT

HX16.105

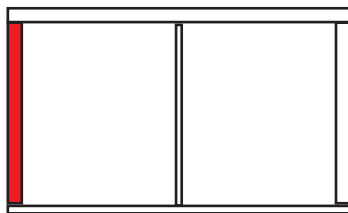
BX48

HM16.111

BX52



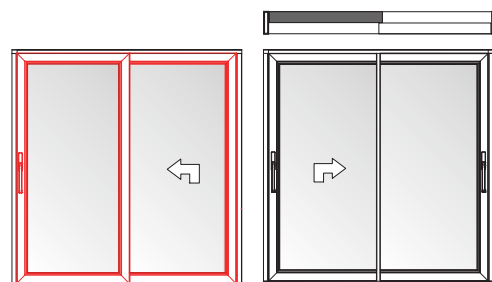
ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold

TELAIO
MAIN FRAME

■ Lavorazione Montante Laterale HX16.105

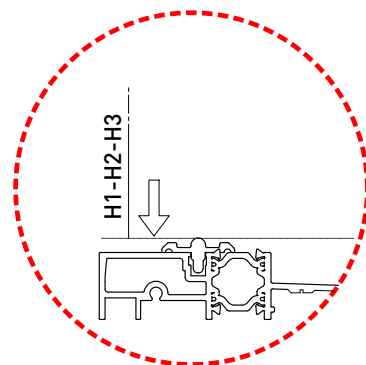
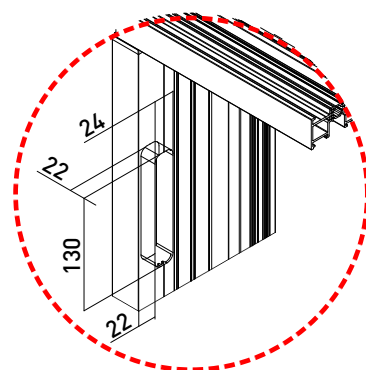
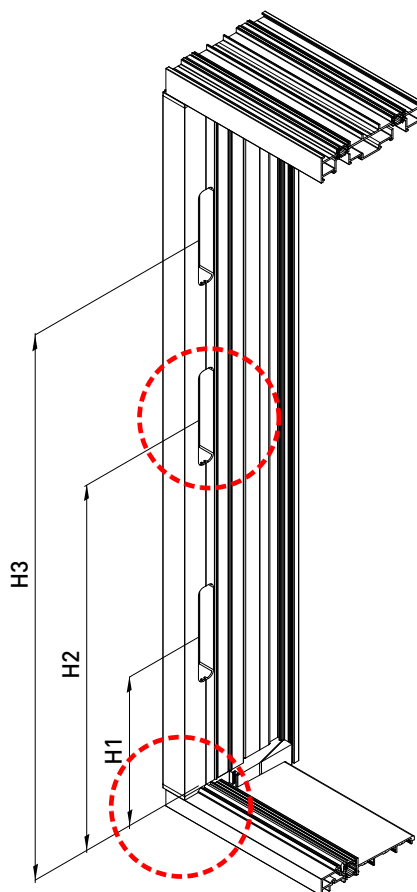
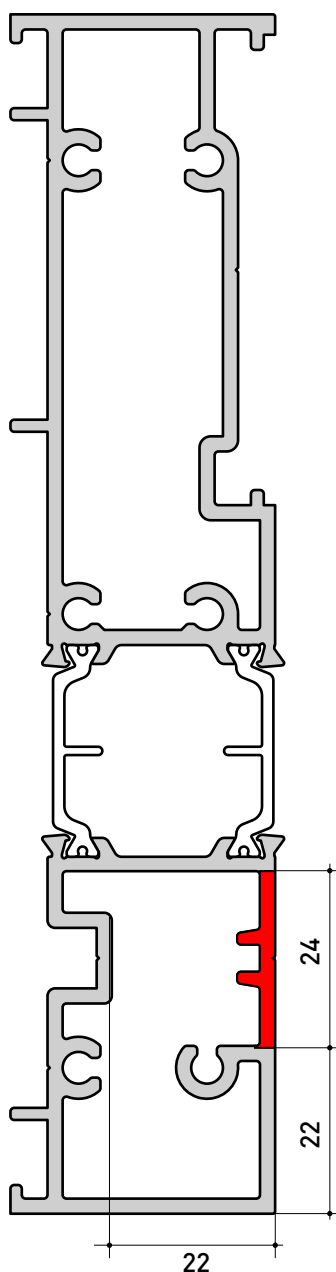
► Transom HX16.105 Tooling

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash **45°**

Anta | Sash **90°**

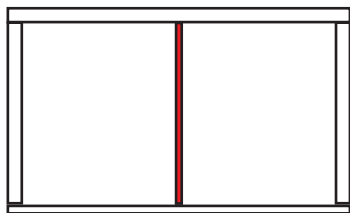
HX16.105

CODICE:	DESCRIZIONE:	H1	H2	H3
HM16.6732.2	Kit chiusure con ganci E27,5 - HM160 - 1305mm	210	580	
HM16.6732.3	Kit chiusure con ganci E27,5 - HM160 - 1900mm	210	1080	
HM16.6732.4	Kit chiusure con ganci E27,5 - HM160 - 2500mm	210	1678	
HM16.6732.5	Kit chiusure con ganci E27,5 - HM160 - 2800mm	210	1210	2510
HM16.6732.6	Kit chiusure con ganci E27,5 - HM160 - 3300mm	210	1410	2510
HM16.6732.7	Kit chiusure con ganci E27,5 - HM160 - 3800mm	210	1410	2510

NB. Per verificare l'Altezza dei Ganci vedi Tav G31

NB. To Check Hook Height Position see Tab. G31

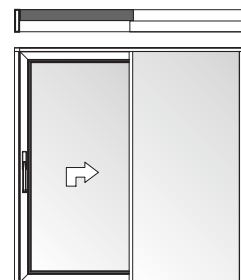
TELAIO
MAIN FRAME



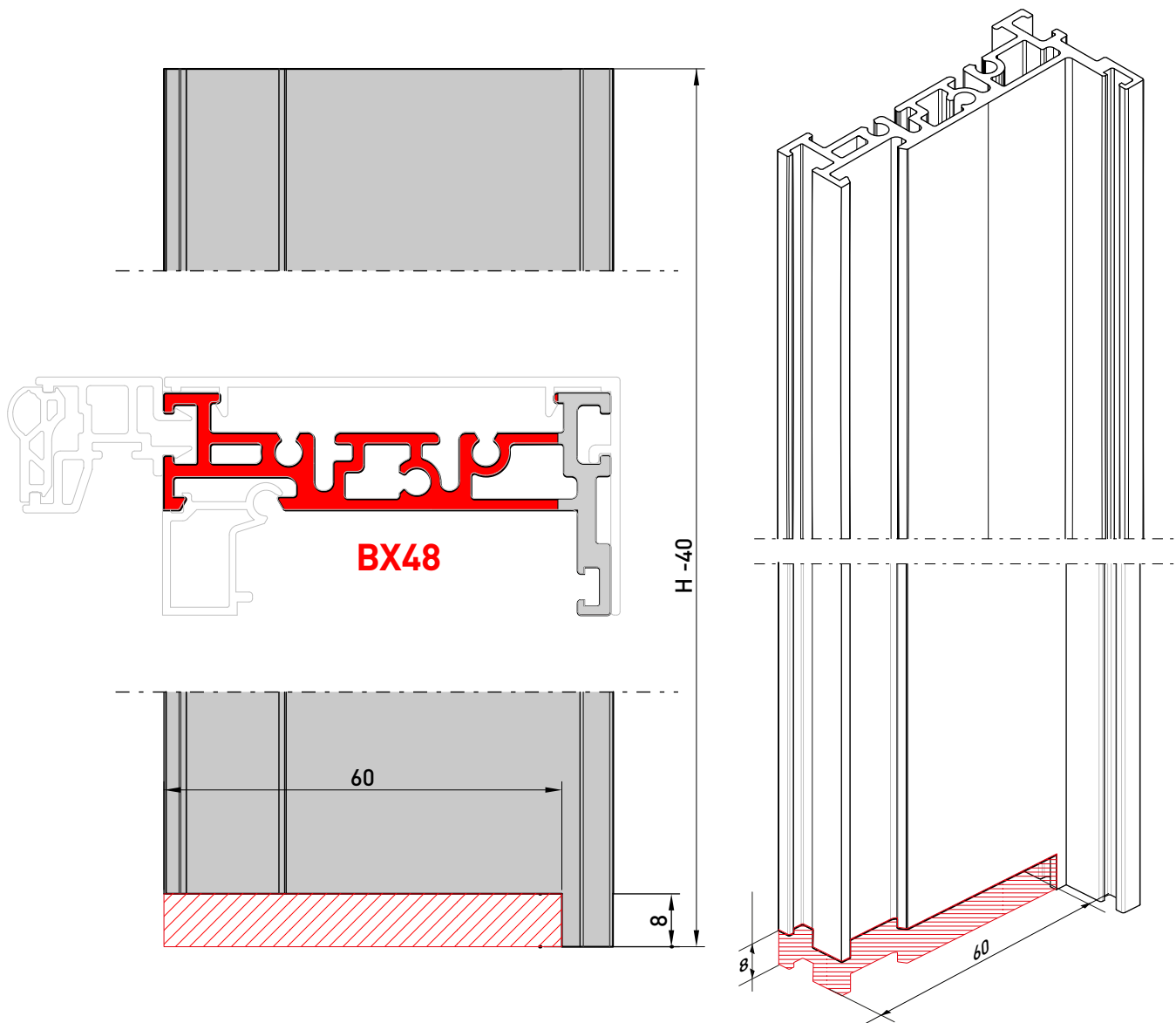
■ Lavorazione BX48

► BX48 Tooling

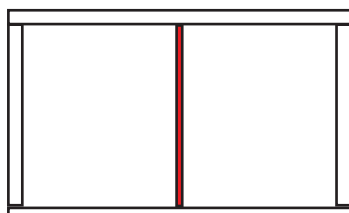
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

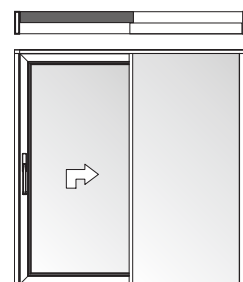


TELAIO
MAIN FRAME

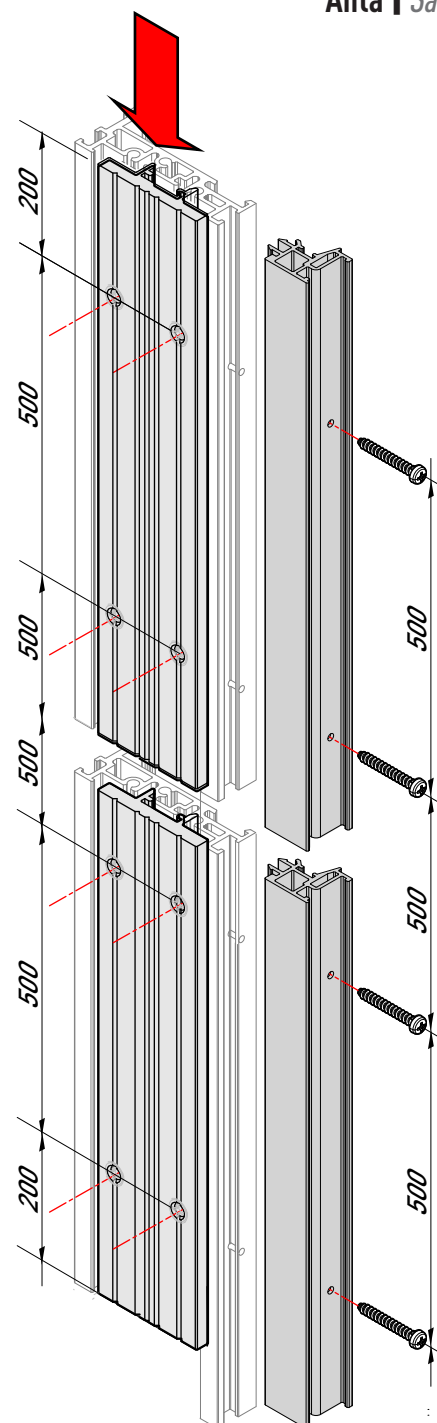
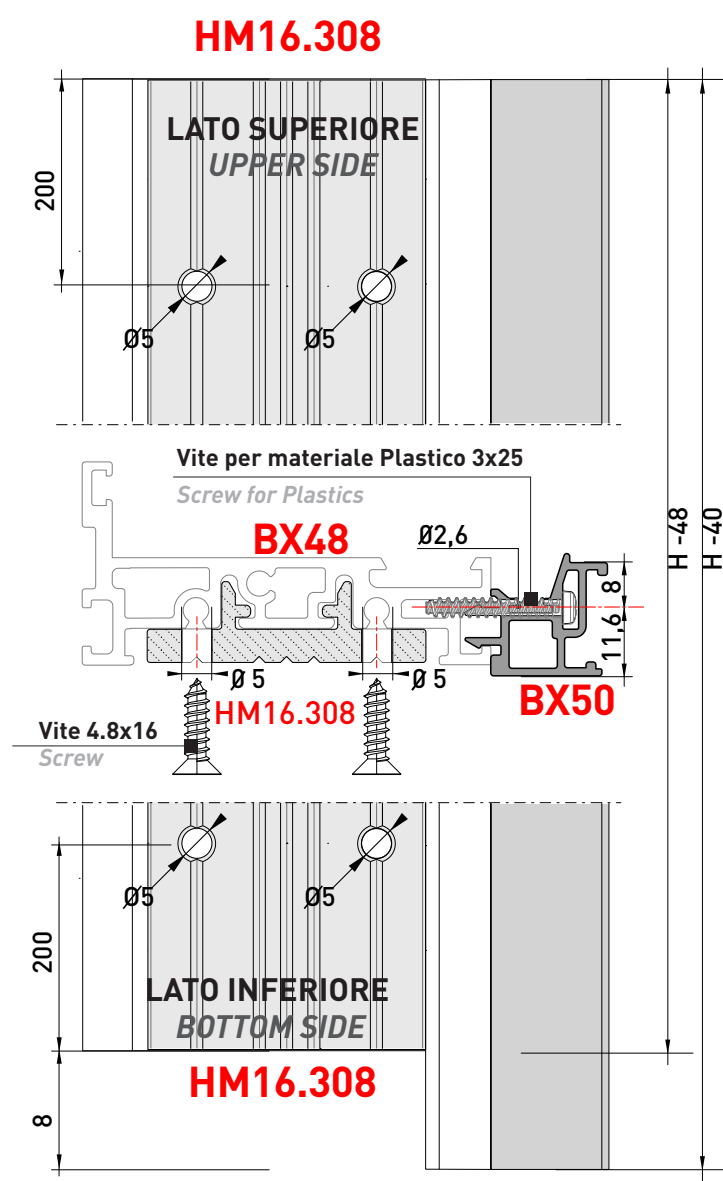


- Installazione Rinforzo Montante Centrale HM16.308 + BX50
- Central Mullion Reinforcement HM16.308 + BX50 Installing

■ Mobile + Fisso
Sliding + Fixed

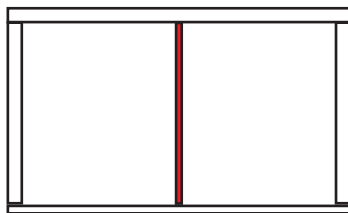


Anta | Sash 90°



Inserimento ad Infilare di HM16.308 su BX48
Insert HM16.306 on BX48

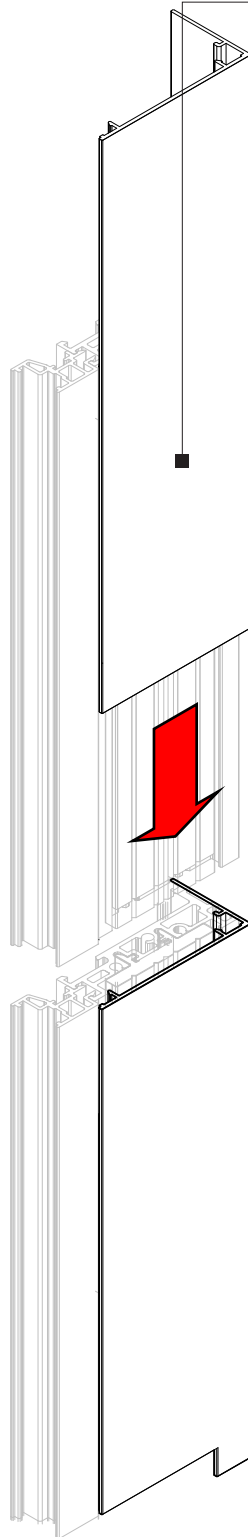
TELAIO
MAIN FRAME



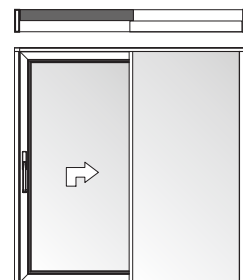
■ Lavorazione Carter HM16.306
Montante Centrale lato Fisso

► Tooling for Cenral Mullion Carter
HM16.306 for Fixed Side

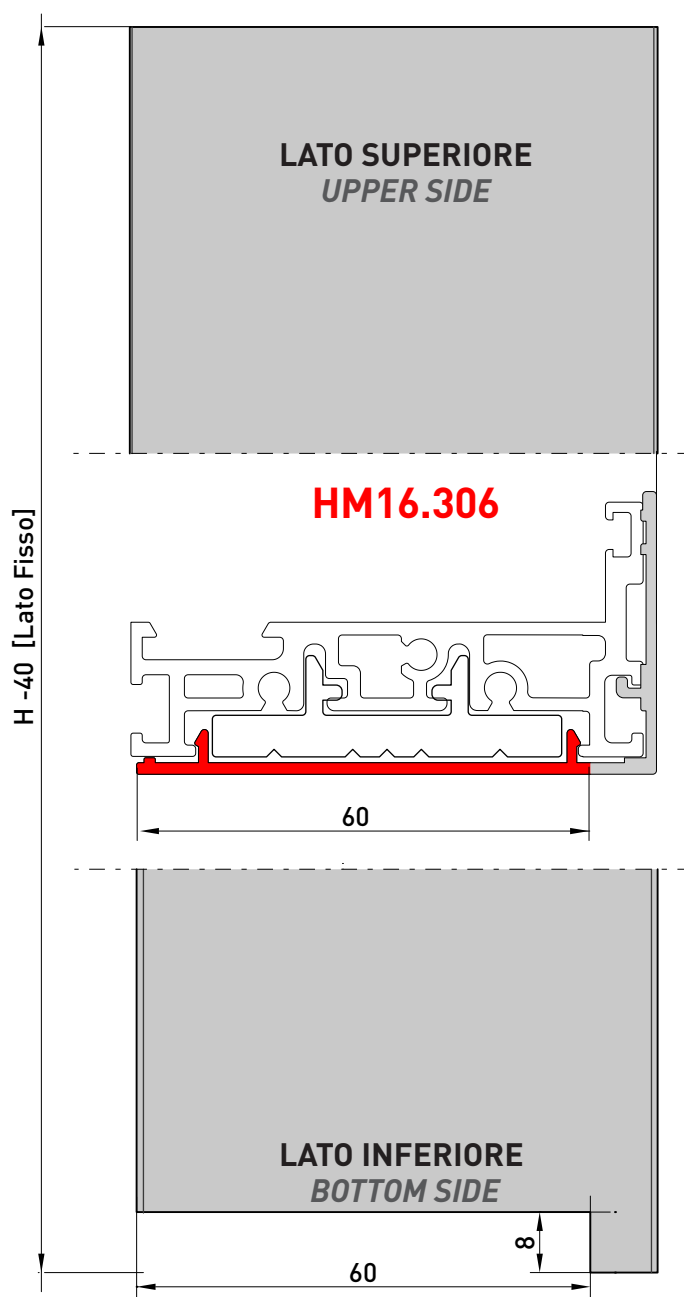
Assemblaggio ad Infilare di HM16.3.306
Insert HM16.306



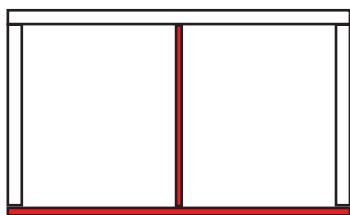
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

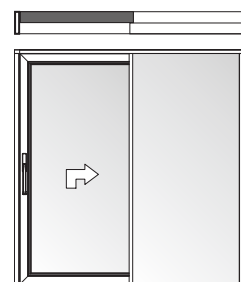


TELAIO
MAIN FRAME



- Installazione Tappo di tenuta Inferiore su HX16.107/BX52
► Bottom Sealing Item Installation on HX16.101/BX52

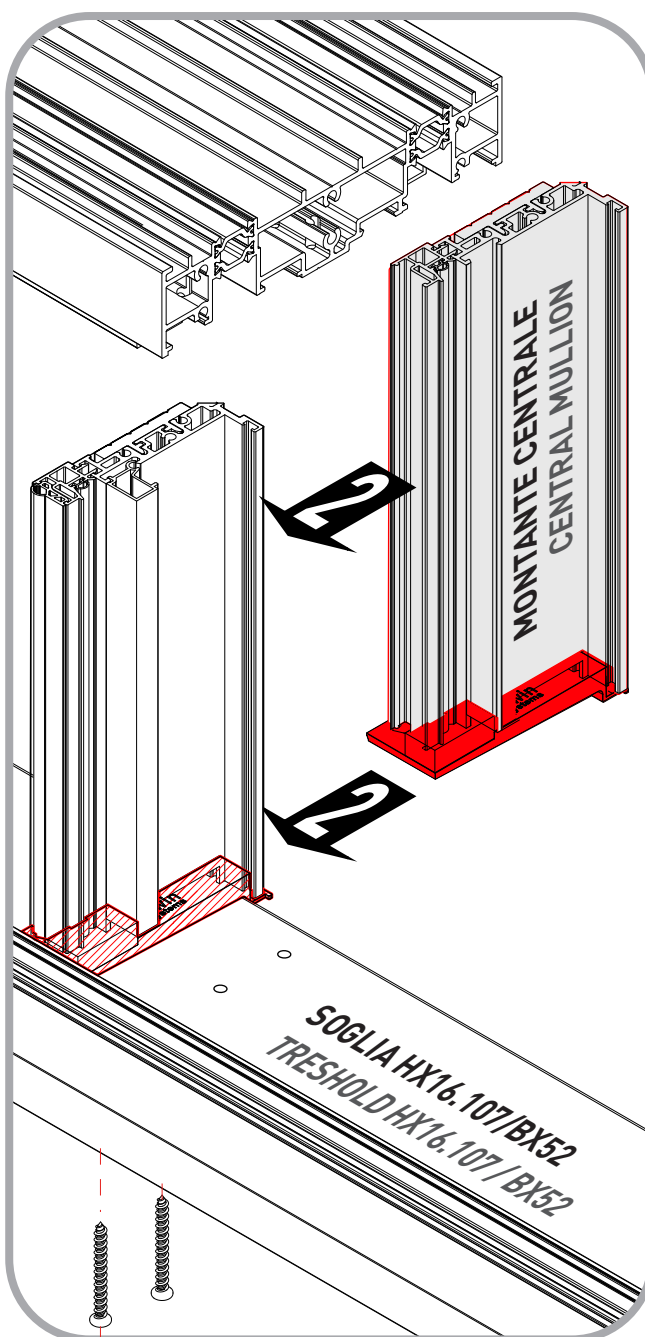
- Mobile + Fisso
Sliding + Fixed



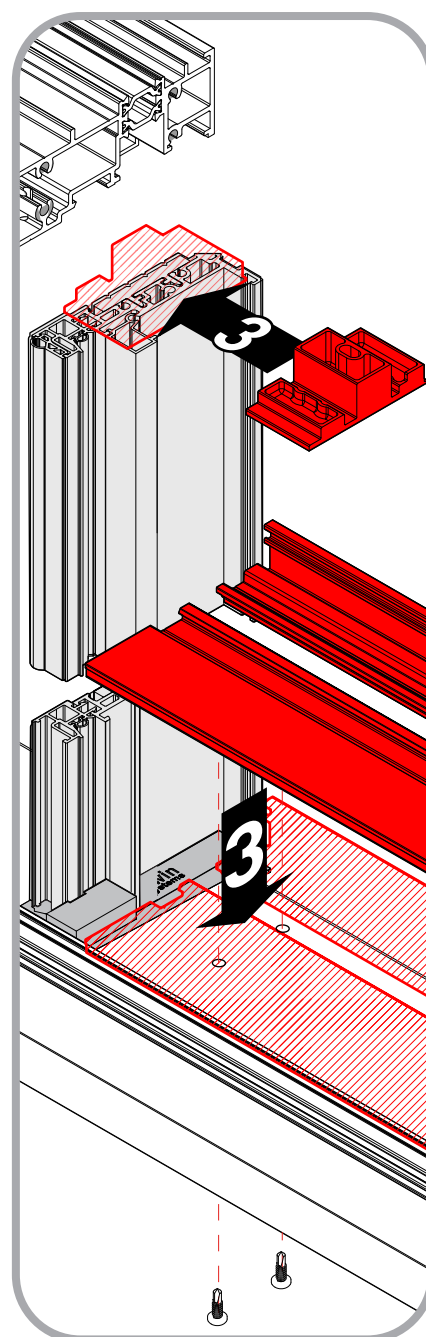
Anta | Sash 90°



- Montaggio Tappo di Tenuta Inferiore
*Bottom Sealing Cap
Assembling*

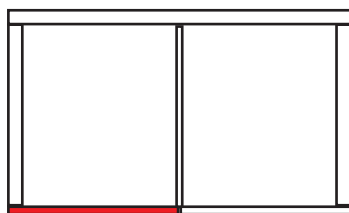


- Installazione Montante Centrale su Telaio
Central Mullion Installation on Main frame



- Montaggio Tappo di Tenuta Superiore e
Fermavetro inferiore su Soglia
*Upper Sealing Cap e Bottom Glass Holder
Installation*

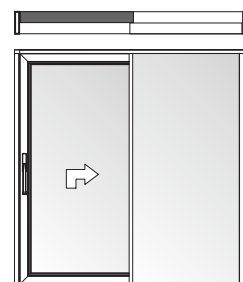
TELAIO
MAIN FRAME



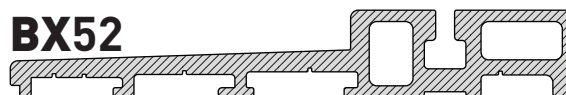
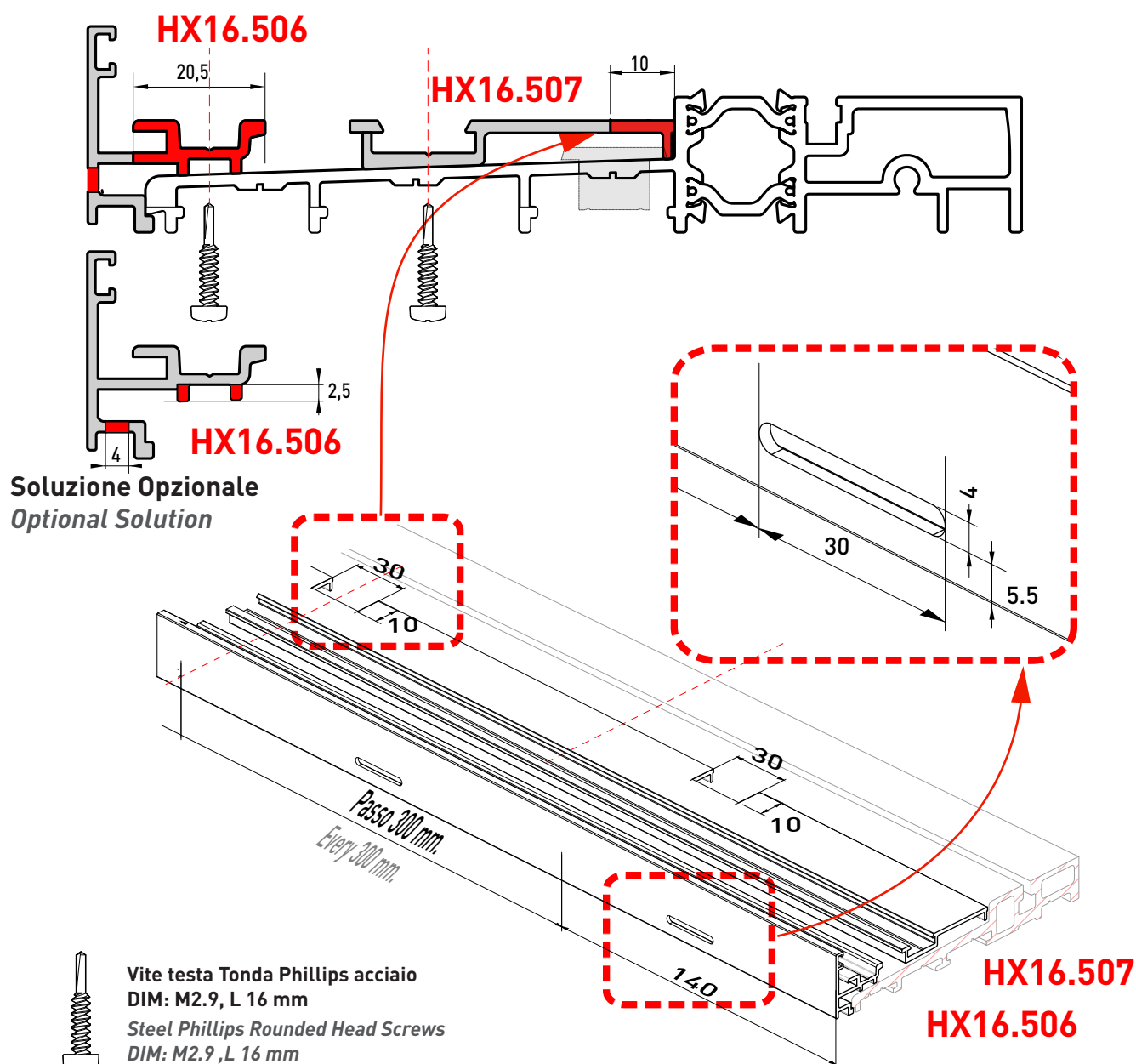
■ Drenaggio Soglia HX16.107 + HM16.506 e HM 16.507 LATO FISSO

► Treshold Drainage HX16.107 + HM 16.506 and HM16.507 FIXED SASH SIDE

■ Mobile + Fisso
Sliding + Fixed

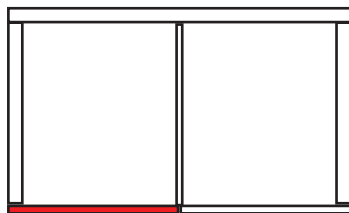


Anta | Sash **90°**



ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold

TELAIO
MAIN FRAME

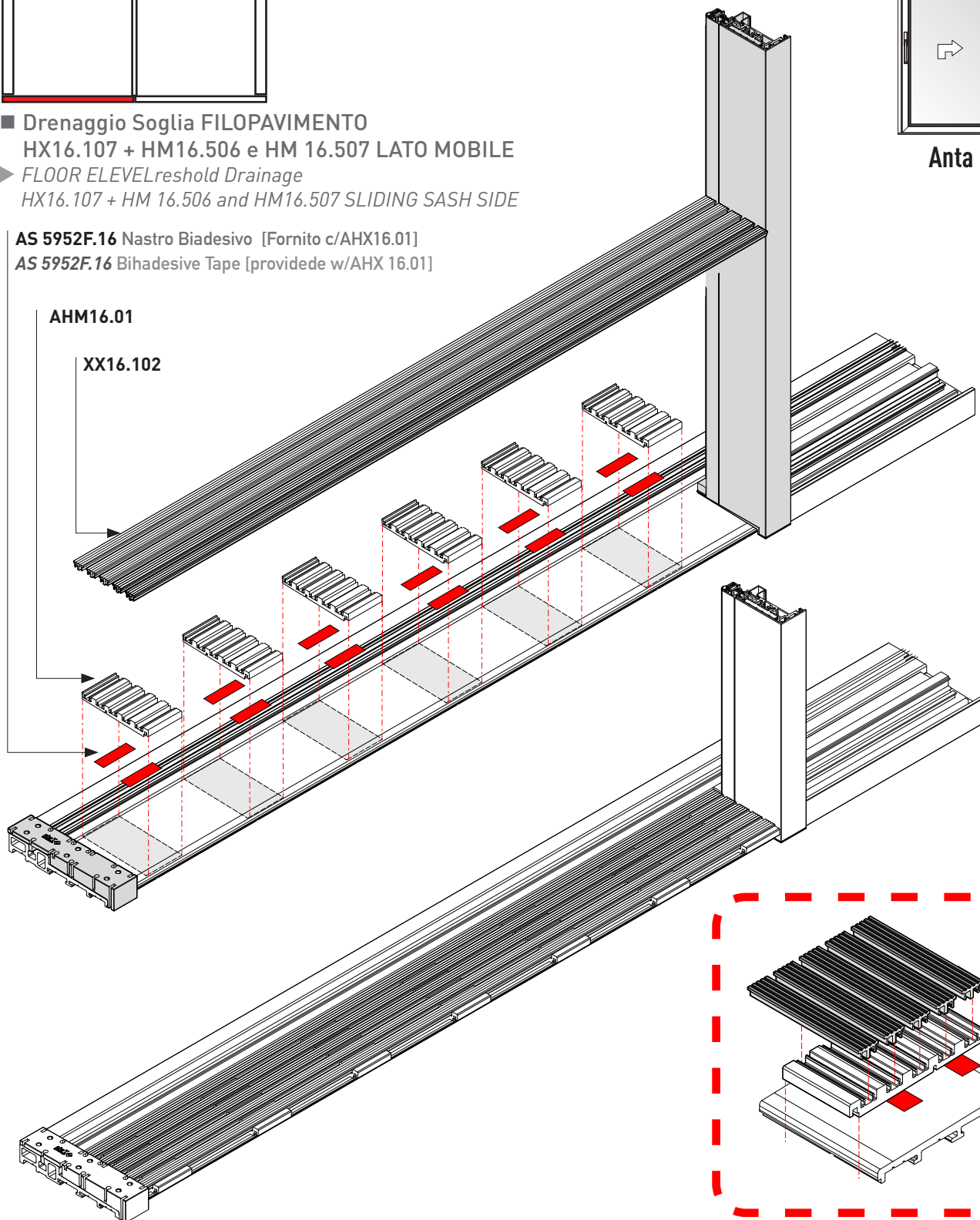


- Drenaggio Soglia FILOPAVIMENTO
HX16.107 + HM16.506 e HM 16.507 LATO MOBILE
- FLOOR LEVELreshold Drainage
HX16.107 + HM 16.506 and HM16.507 SLIDING SASH SIDE

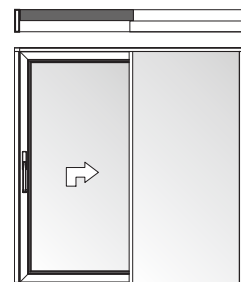
AS 5952F.16 Nastro Biadesivo [Fornito c/AHX16.01]
AS 5952F.16 Bihadesive Tape [providede w/AHX 16.01]

AHM16.01

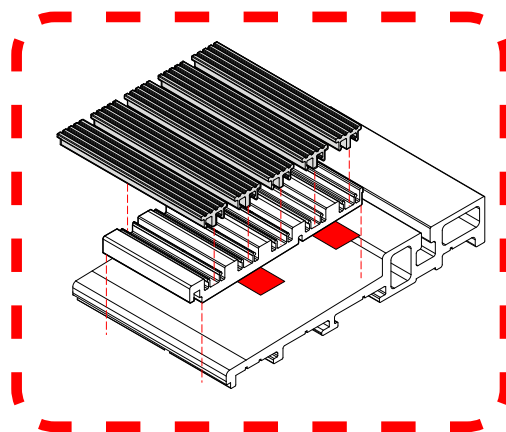
XX16.102



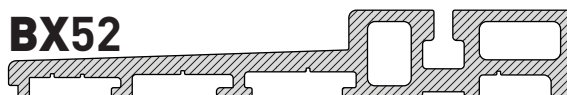
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

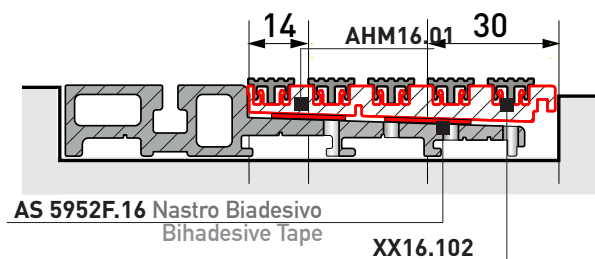
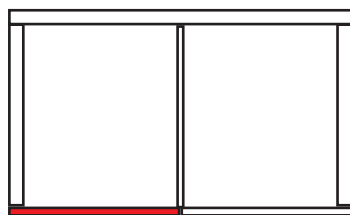


BX52

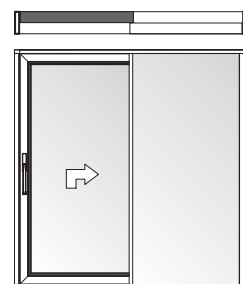


ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold

TELAIO
MAIN FRAME

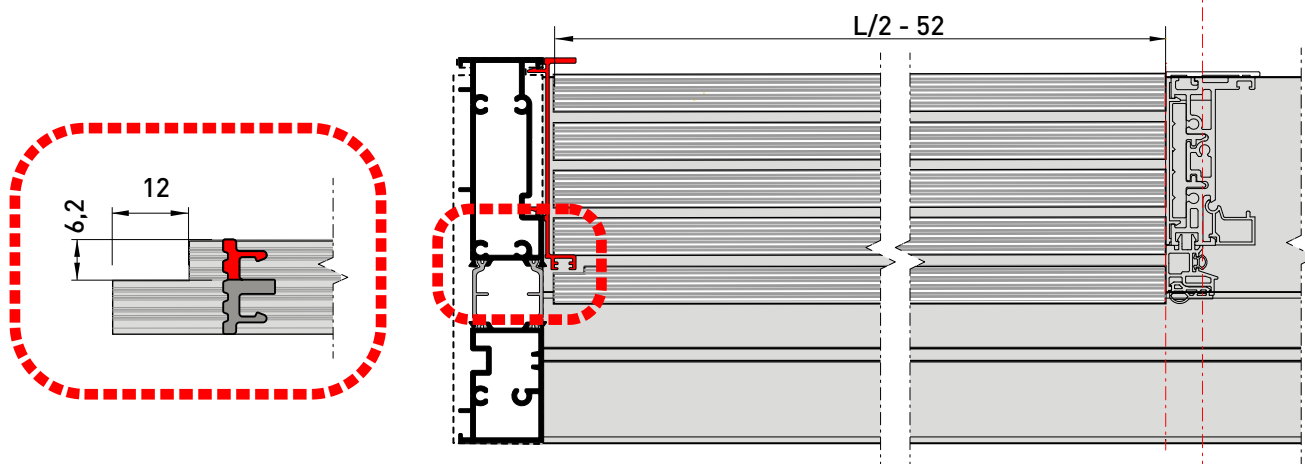
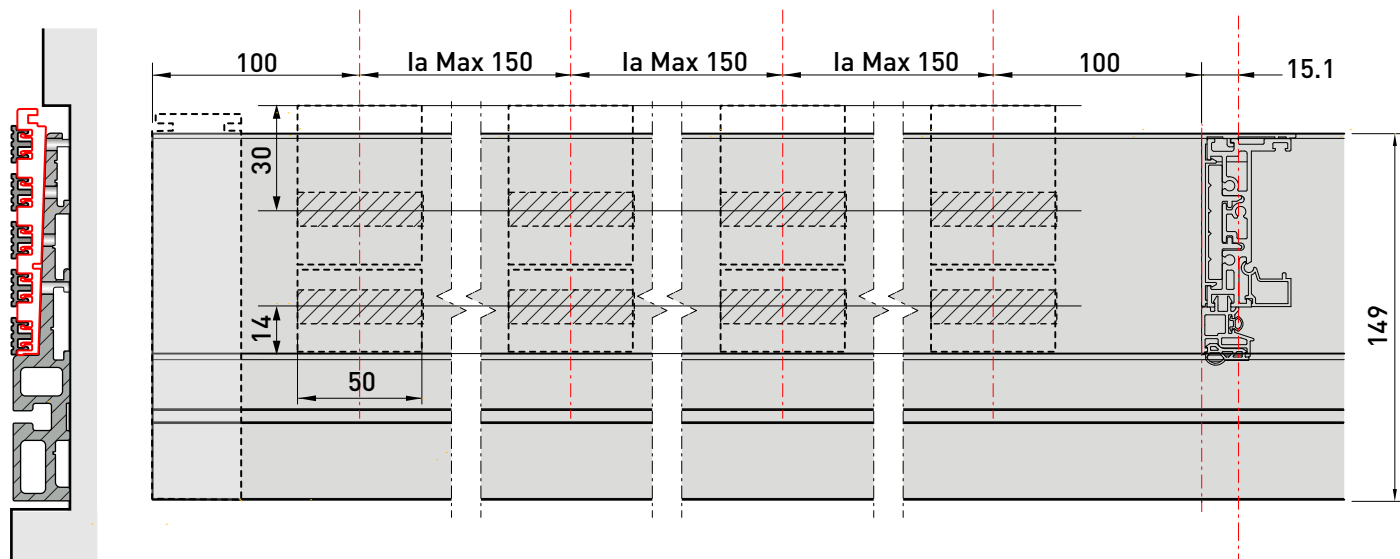
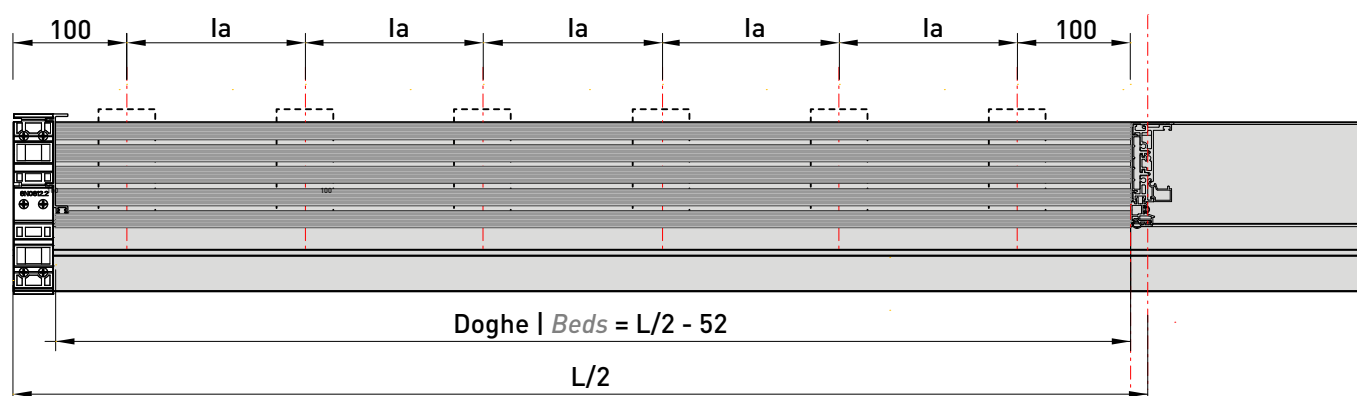


■ Mobile + Fisso
Sliding + Fixed

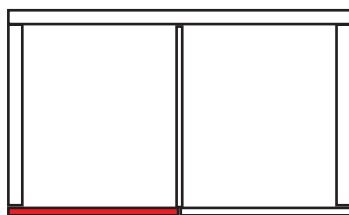


Anta | Sash 90°

■ Drenaggio Soglia FILOPAVIMENTO HX16.107 + HM16.506 e HM 16.507 LATO MOBILE
► FLOORLEVEL Threshold Drainage HX16.107 + HM 16.506 and HM16.507 SLIDING SASH SIDE



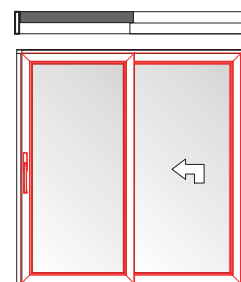
TELAIO
MAIN FRAME



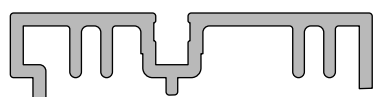
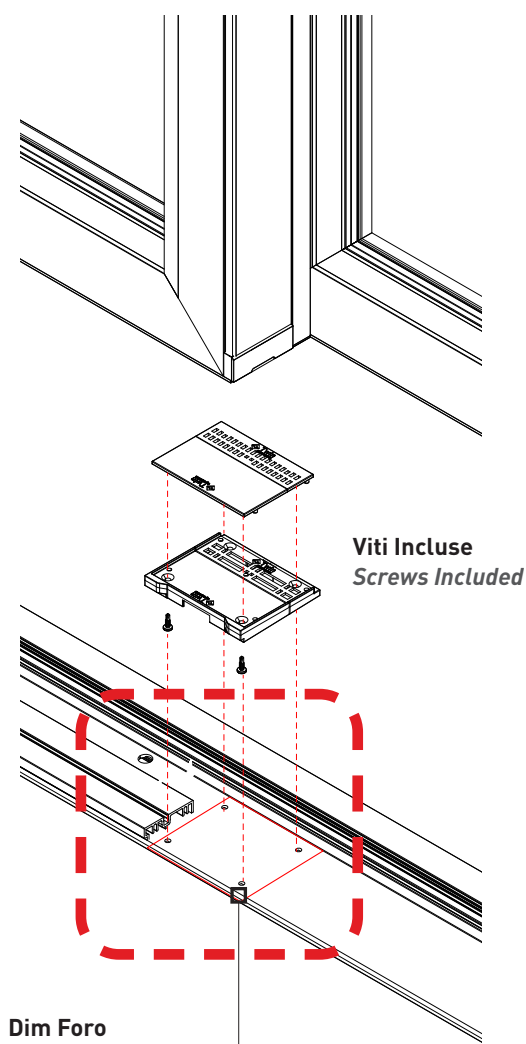
■ **Installazione Tappo di Tenuta Centrale**
Lato INTERNO [KIT 16.6745.76]

► *Central Sealing Plug Installation*
INTERNAL Side [KIT 16.6745.76]

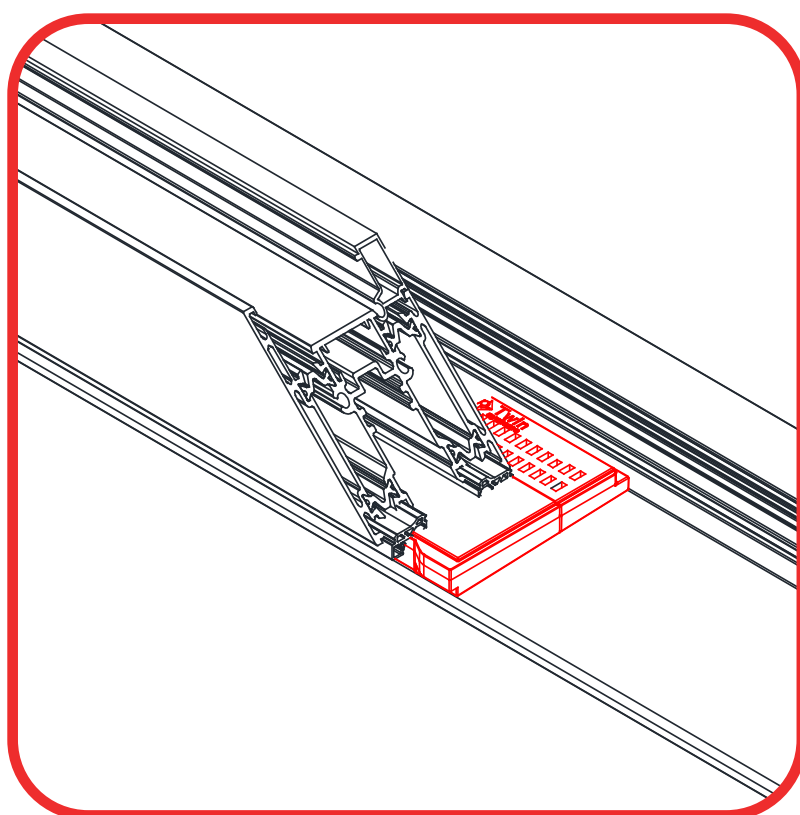
■ **Mobile + Fisso**
Sliding + Fixed



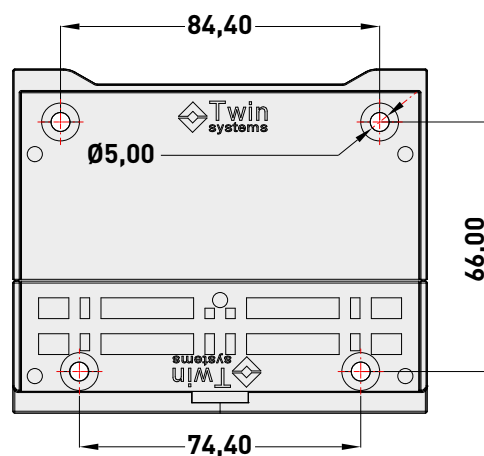
Anta | Sash 45°



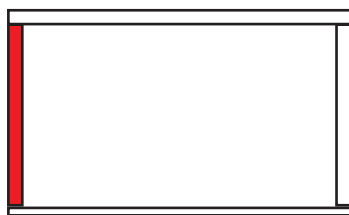
HX16.171



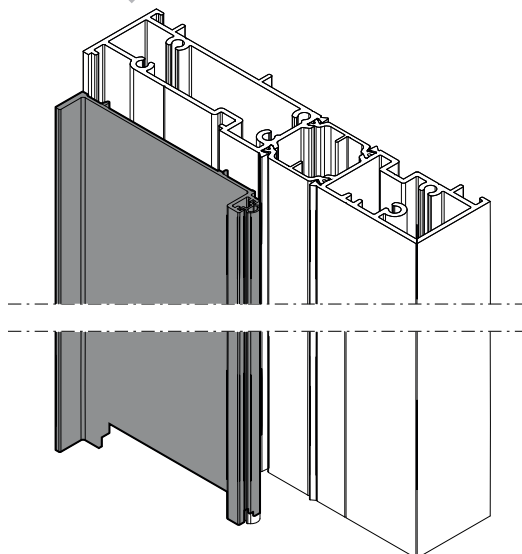
Tassello Tenuta Centrale Inferiore
Lower Central Sealing Raw Plug



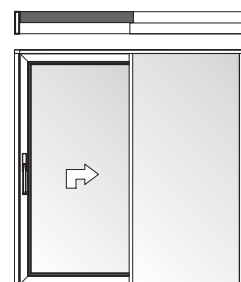
TELAIO
MAIN FRAME



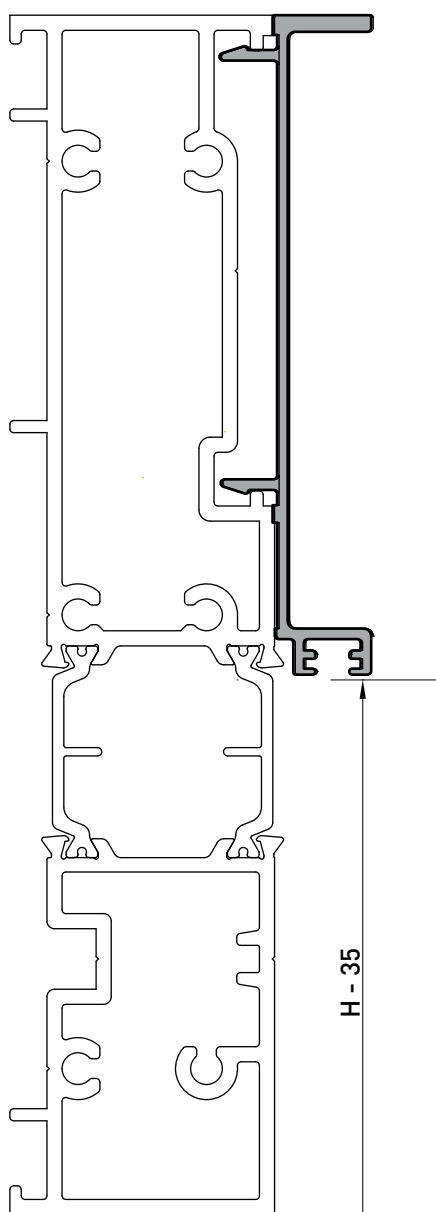
- Lavorazione Carter Laterale
HM16.508 ESTERNO
- Tooling for Lateral Carter
HM16.508 EXTERNAL



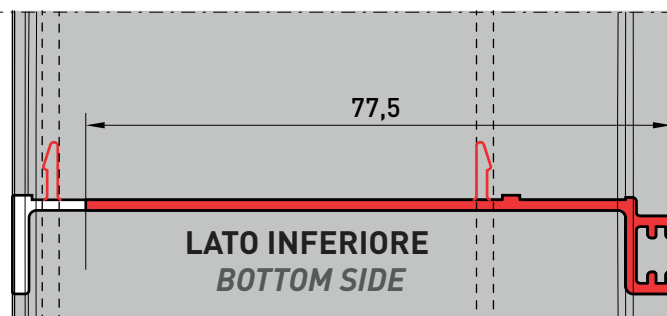
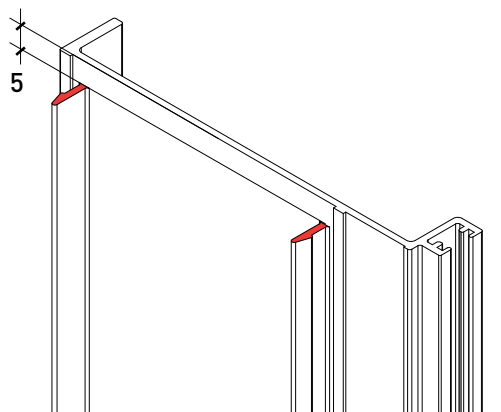
- Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

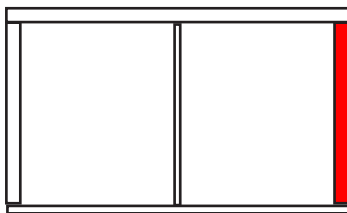


HX16.105



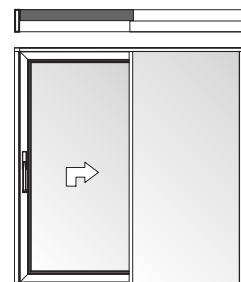
HM16.508

TELAIO
MAIN FRAME

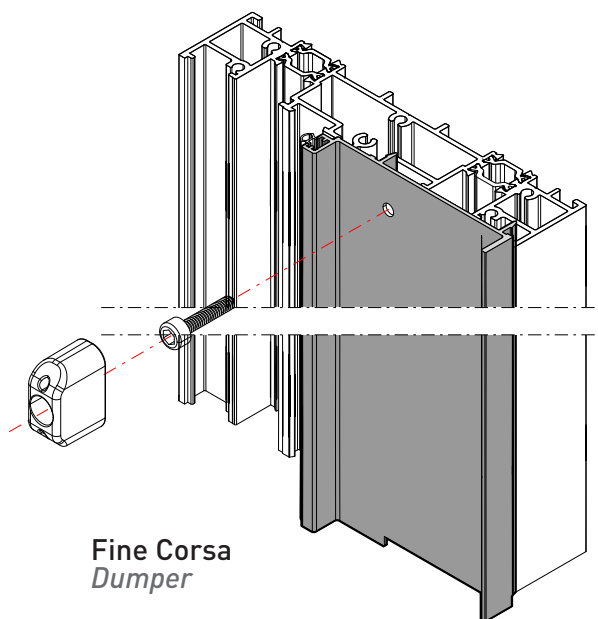


- Lavorazione Carter Laterale HM16.508 INTERNO
- Tooling for Lateral Carter HM16.508 INTERNAL

■ Mobile + Fisso
Sliding + Fixed

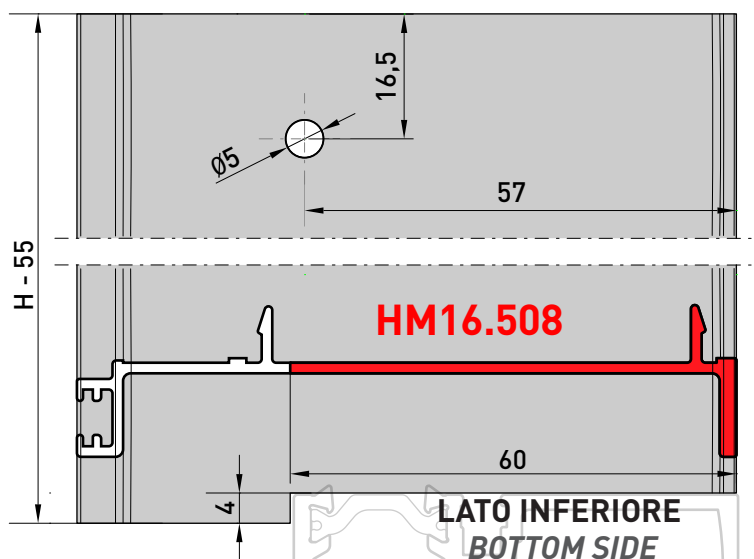


Anta | Sash 90°

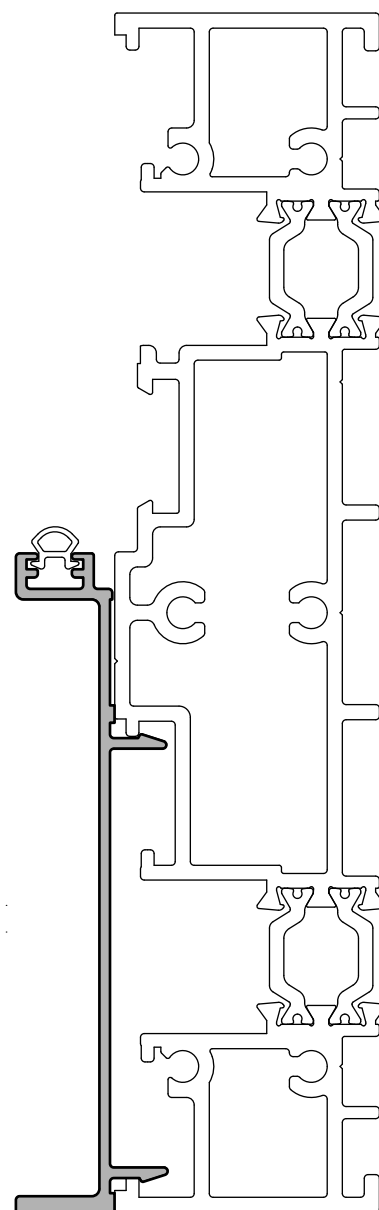


Fine Corsa
Dumper

LATO SUPERIORE
UPPER SIDE

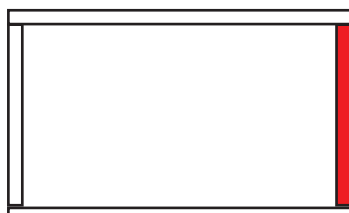


LATO INFERIORE
BOTTOM SIDE



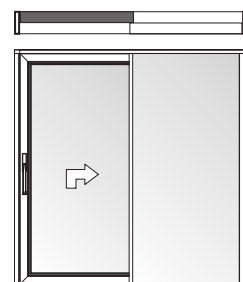
HM16.111

TELAIO
MAIN FRAME

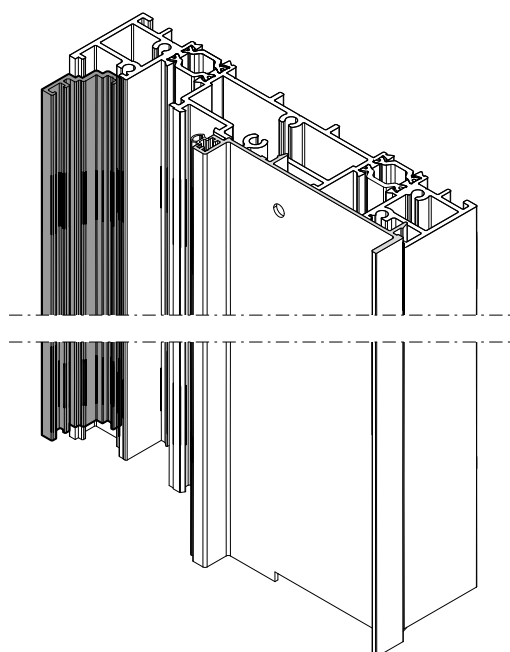


- Applicazione Battuta Vetro Fisso HM16.505 su Montante
- Assembling Glass Beading for Fixed Glazing HM16.505 on Mullion

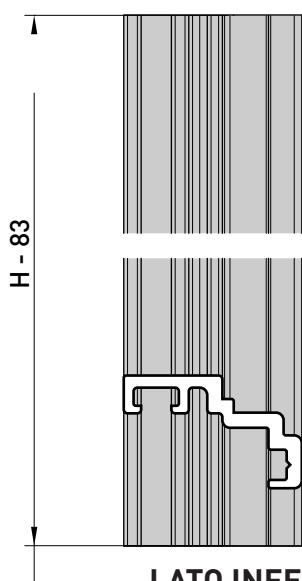
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

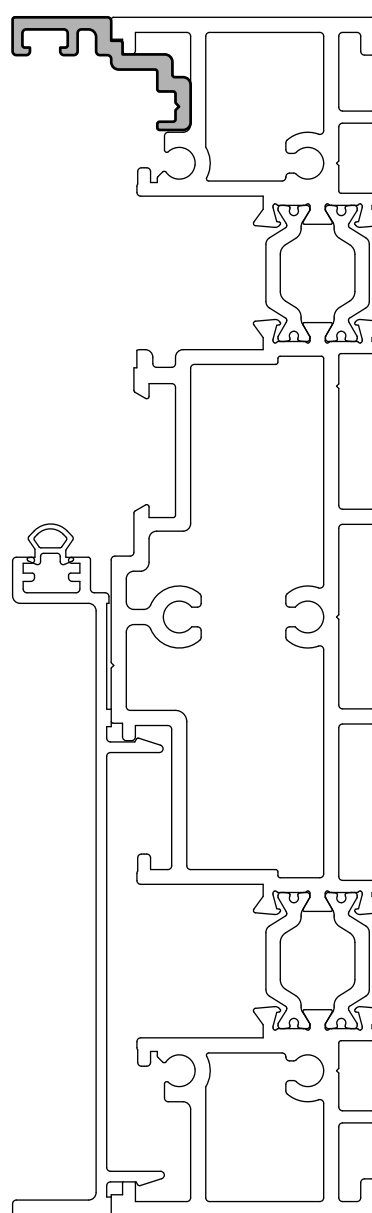


LATO SUPERIORE
UPPER SIDE



LATO INFERIORE
BOTTOM SIDE

HM16.505



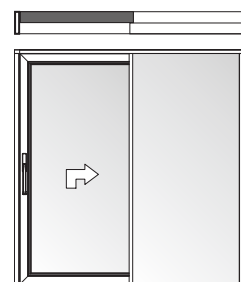
HM16.111

TELAIO
MAIN FRAME

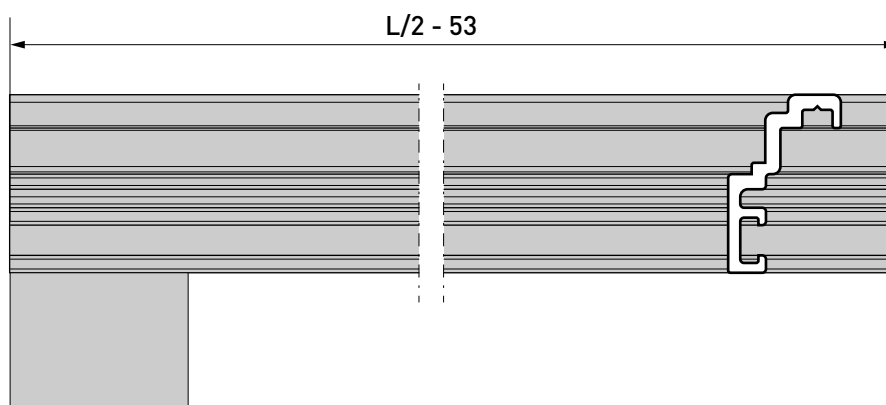
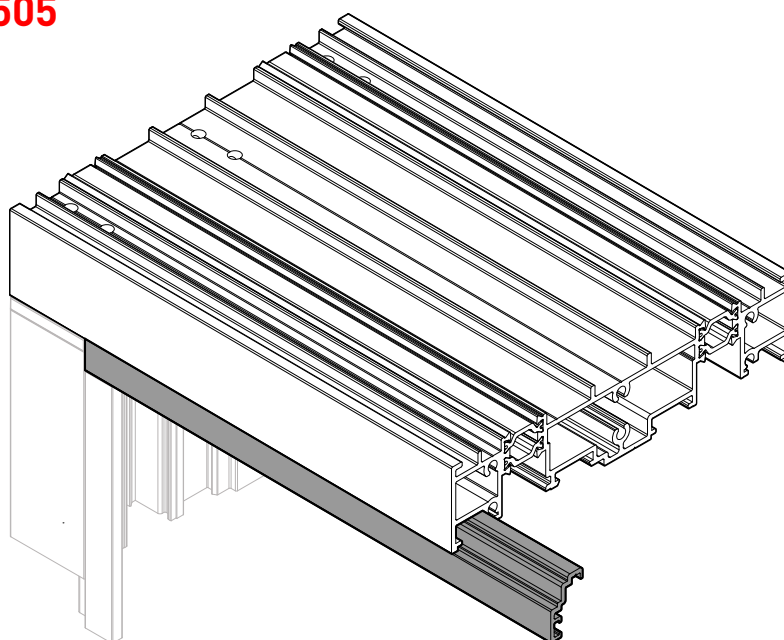
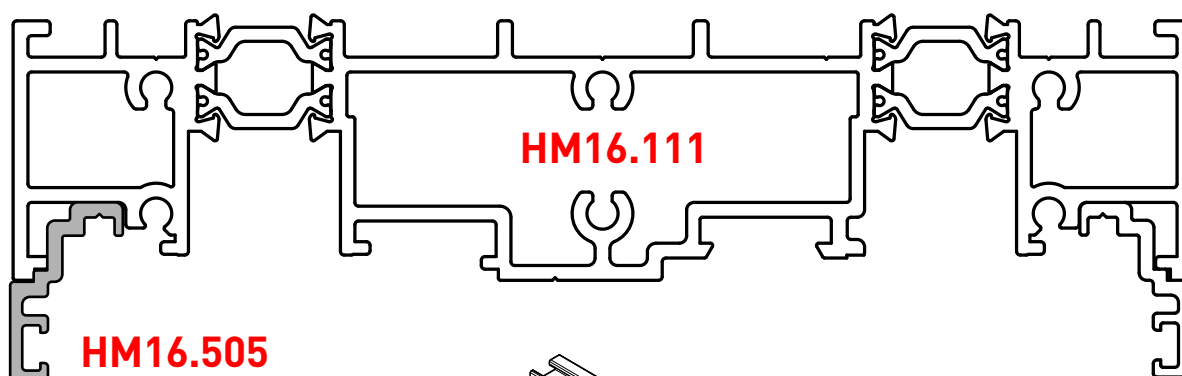


- Applicazione Battuta Vetro Fisso HM16.505 su Traverso
- Assembling Glass Beading for Fixed Glazing HM16.505 on Transom

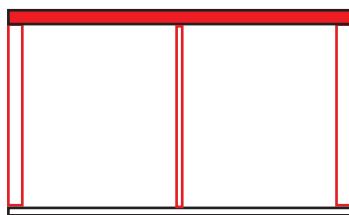
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°



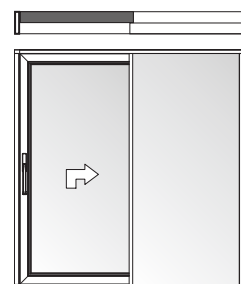
TELAIO
MAIN FRAME



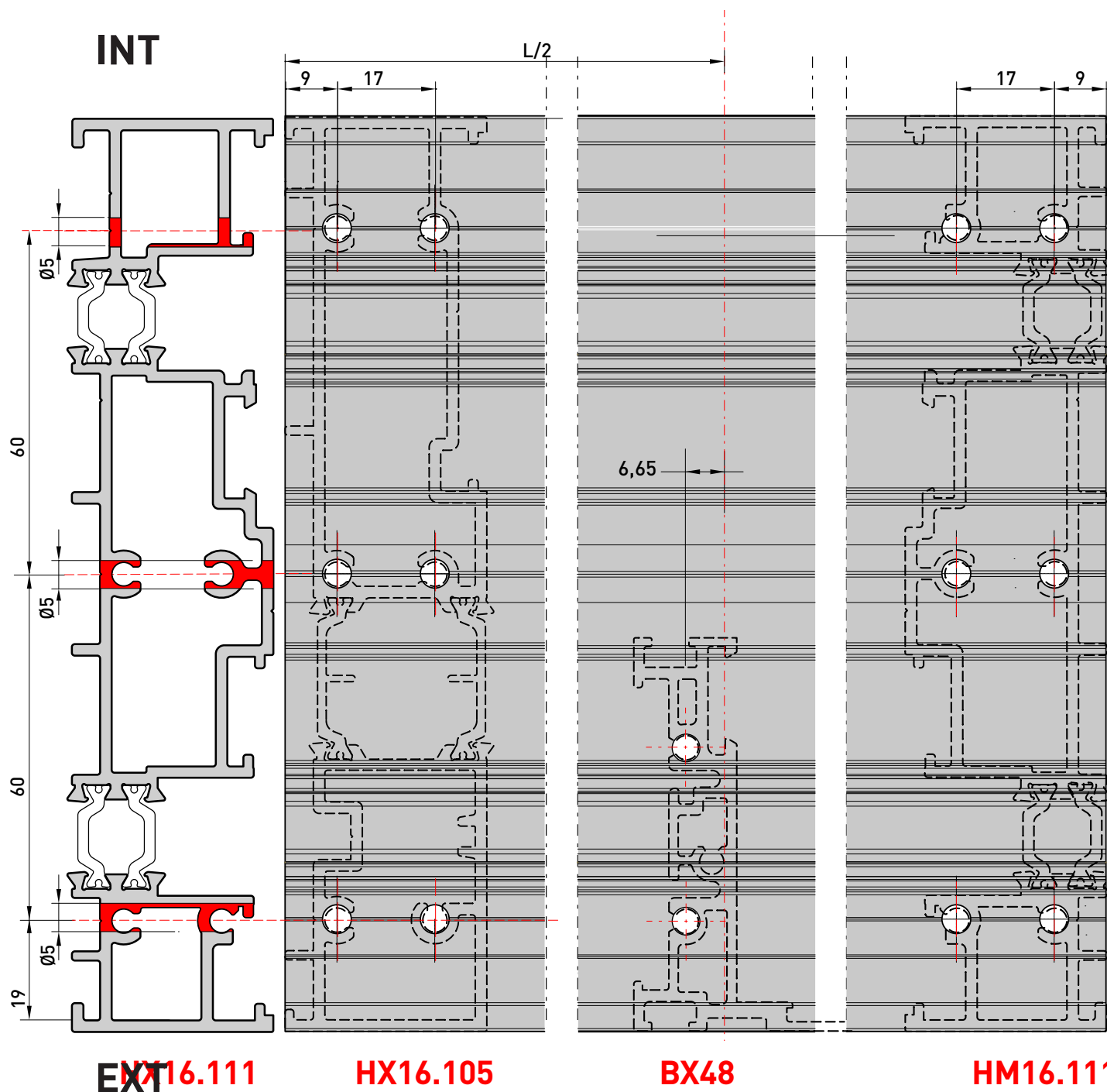
■ Lavorazione Traverso Superiore HX16.106

► Tooling Upper Transom HX16.106

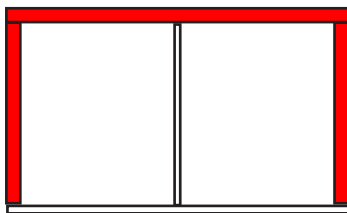
■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

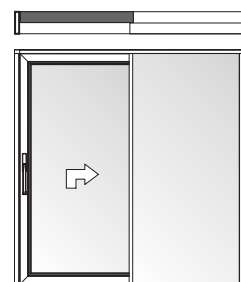


TELAIO
MAIN FRAME

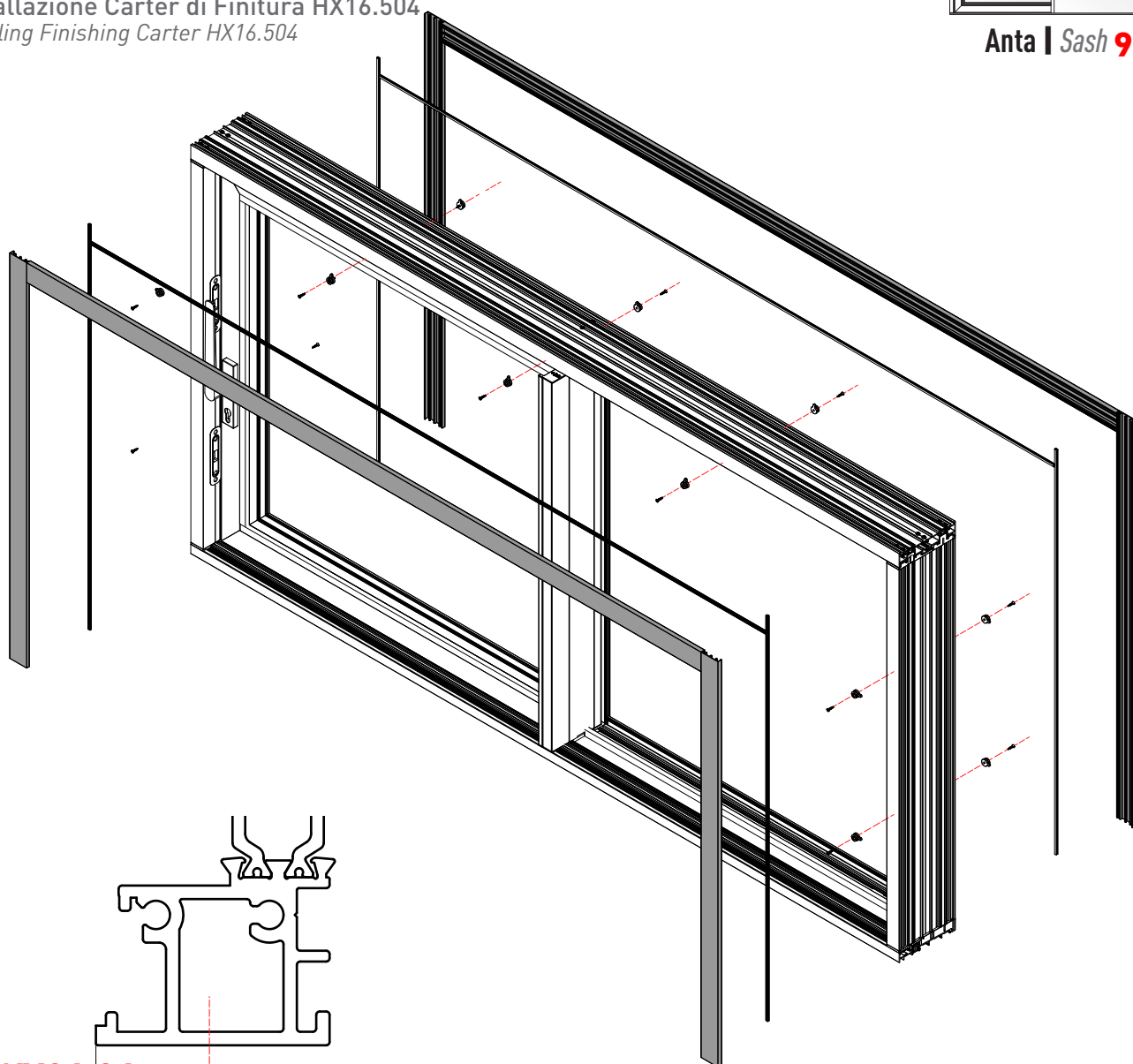


- Installazione Carter di Finitura HX16.504
- Installing Finishing Carter HX16.504

■ Mobile + Fisso
Sliding + Fixed



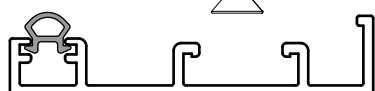
Anta | Sash 90°



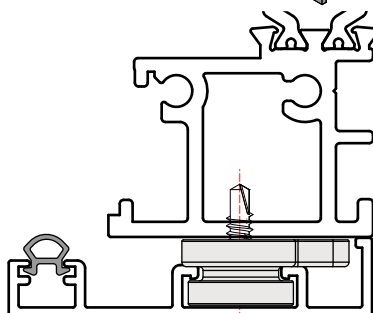
AWX06.04

17

ASX10.69

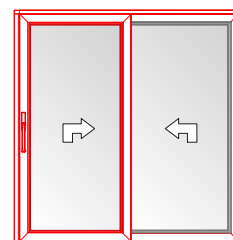


HX16.504

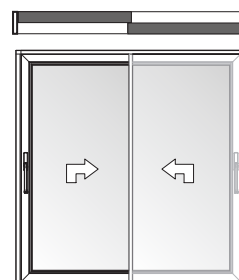


TELAIO
MAIN FRAME

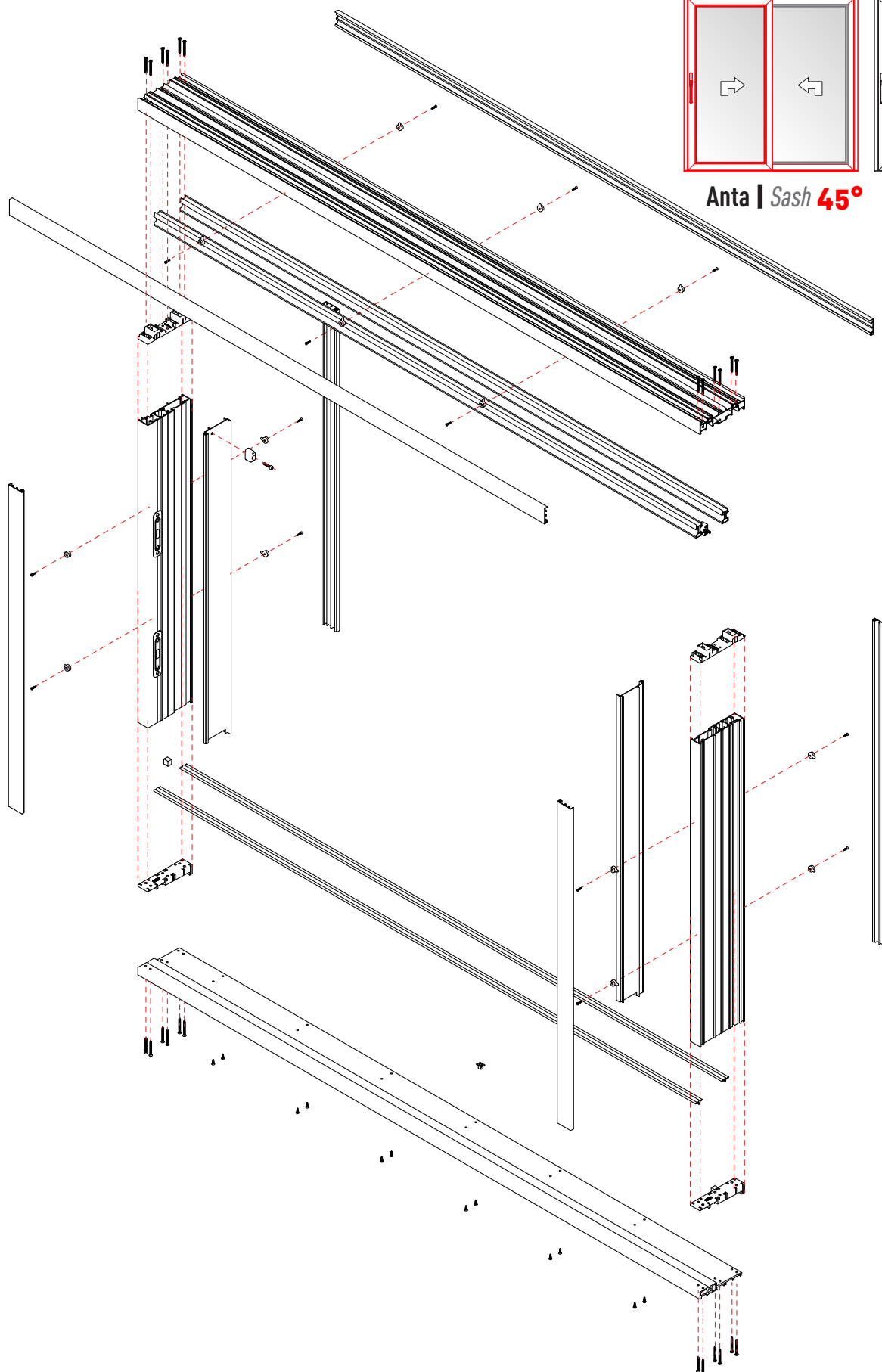
■ Mobile + Mobile
Sliding + Sliding



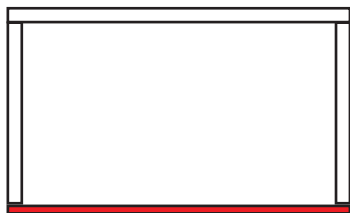
Anta | Sash **45°**



Anta | Sash **90°**

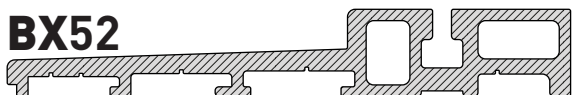


TELAIO

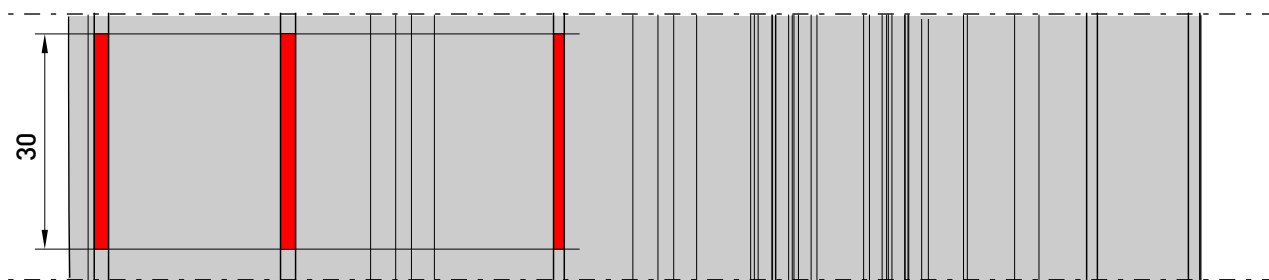
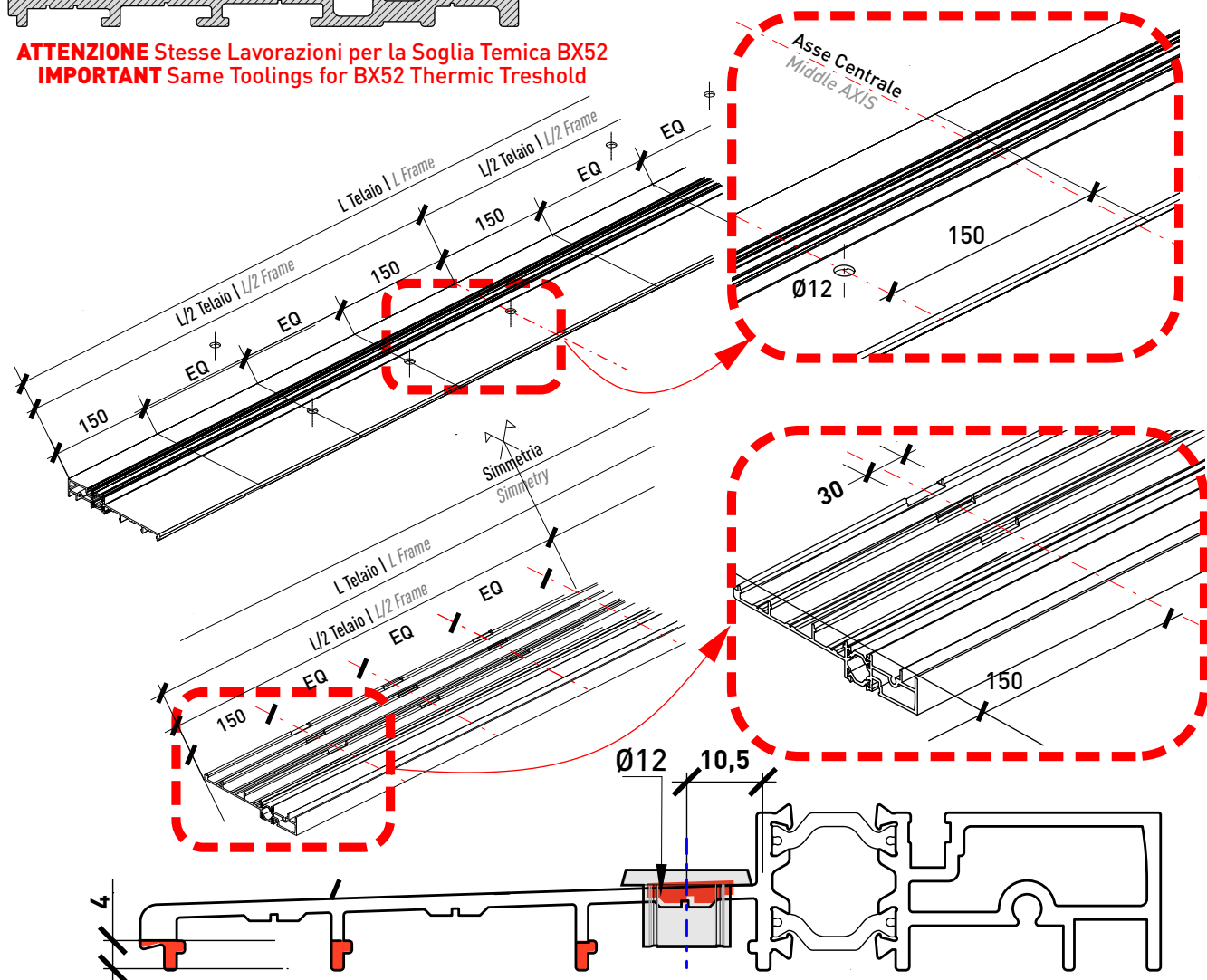


- **Lavorazione SOGLIA HX16.107 DRENAGGIO**
► *Treshold HX16.107 Tooling for DRAINAGE*

BX52



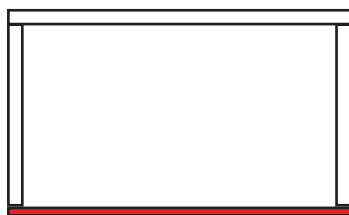
ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold



HX16.107

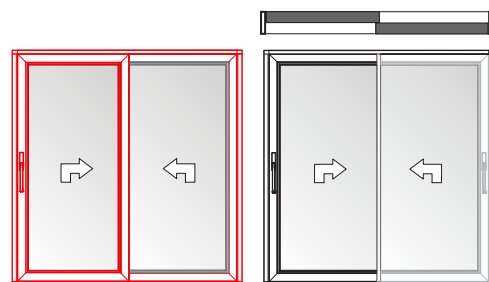
Vista INFERIORE | *Bottom View*

TELAIO
MAIN FRAME



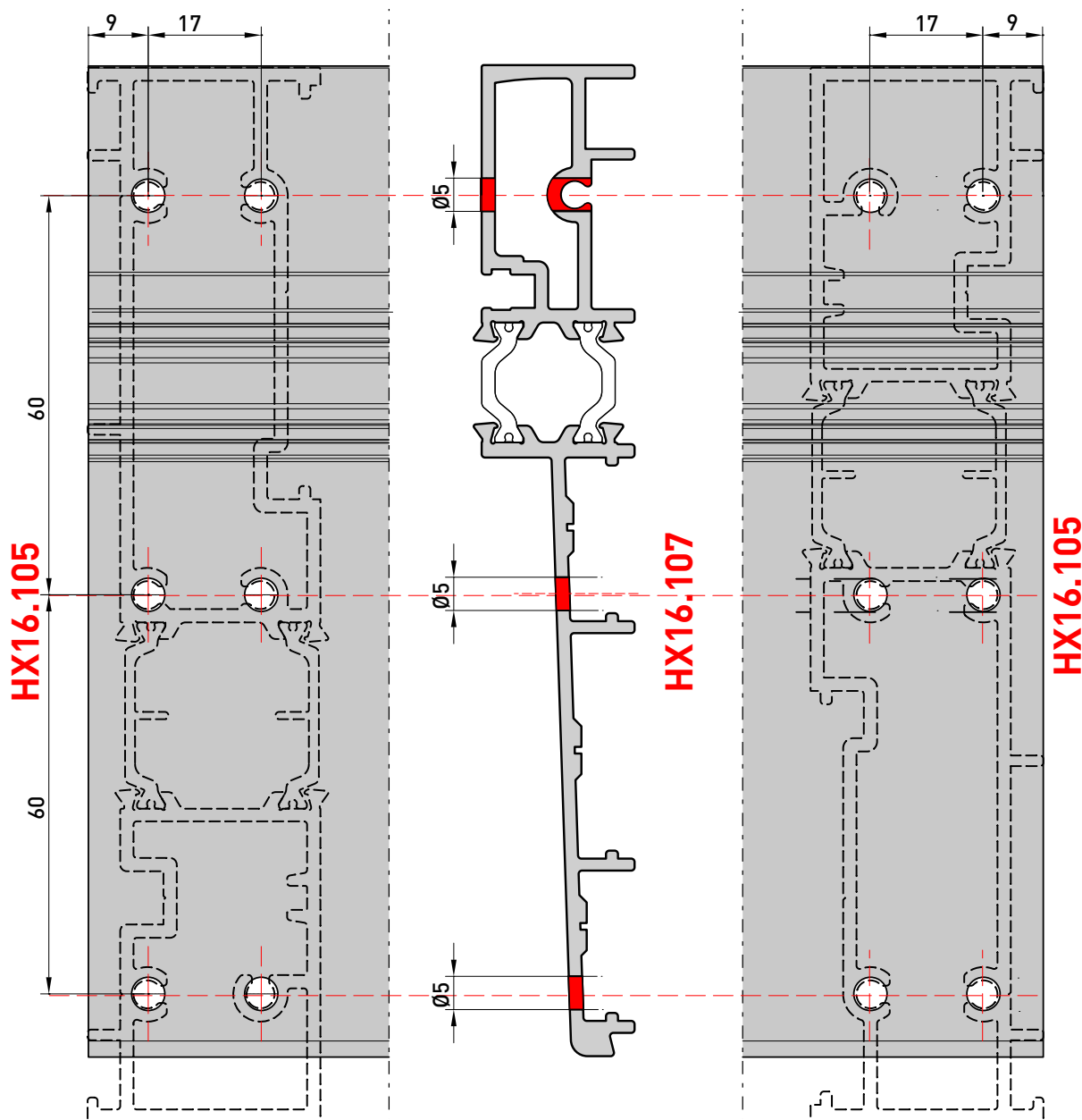
- Lavorazione SOGLIA HX16.107 Montanti Lateralali
- Treshold HX16.107 Tooling for Lateral Transoms

■ Mobile + Mobile
Sliding + Sliding

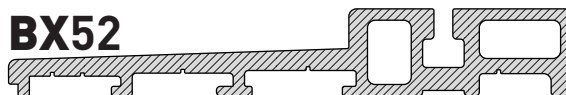


Anta | Sash **45°** Anta | Sash **90°**

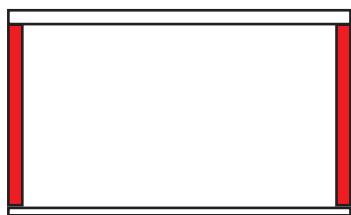
INT



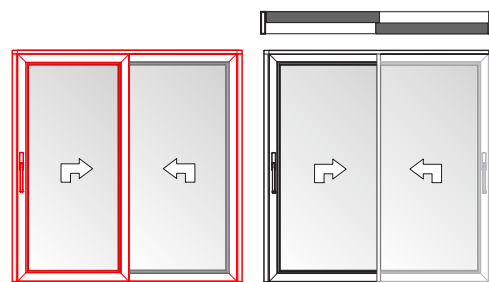
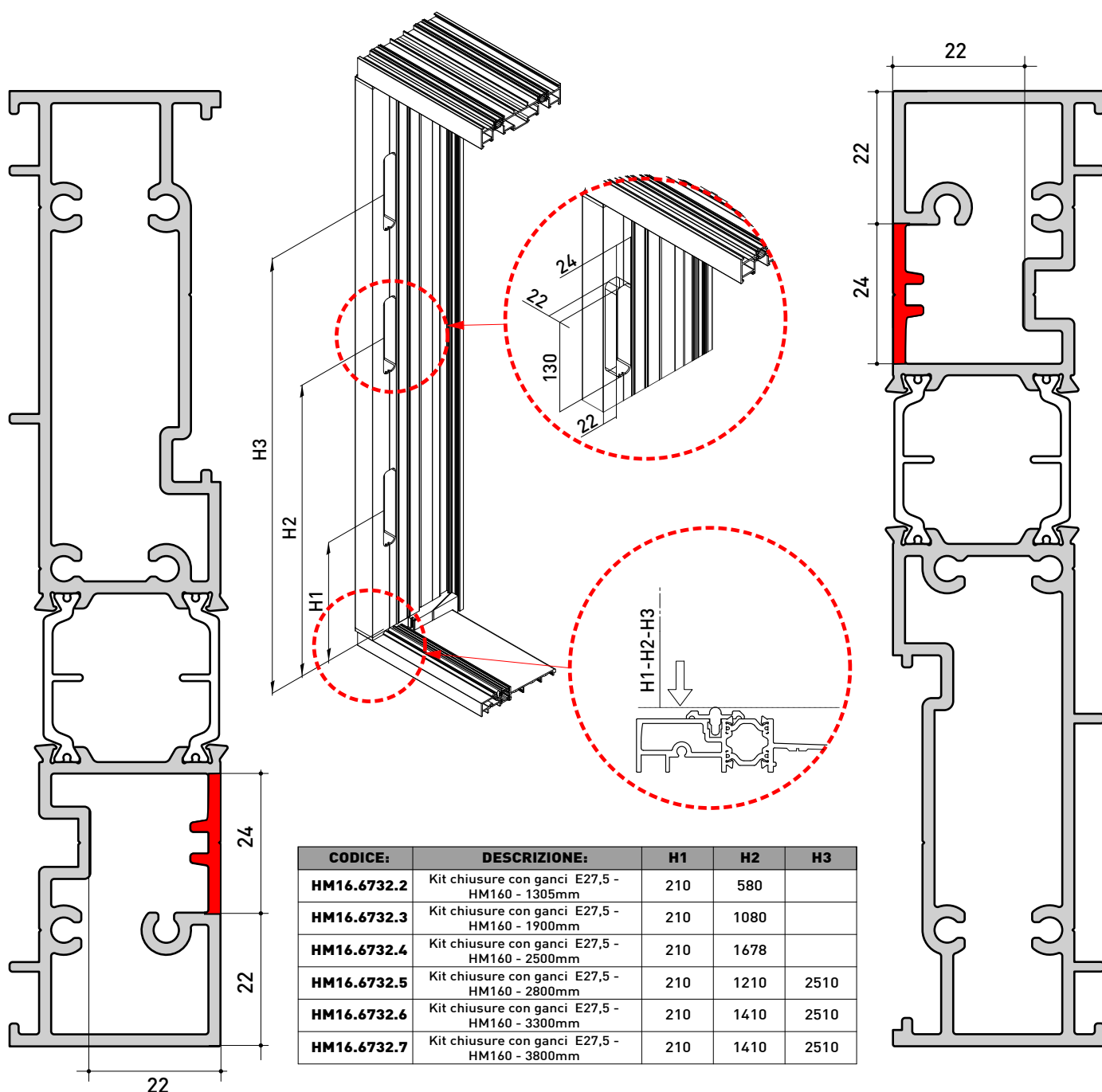
EXT



ATTENZIONE Stesse Lavorazioni per la Soglia Temica BX52
IMPORTANT Same Toolings for BX52 Thermic Treshold

TELAIO
MAIN FRAME

- Lavorazione Montante Laterale HX16.105
- Transom HX16.105 Tooling

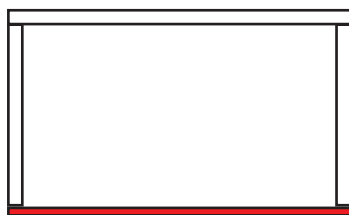
■ Mobile + Mobile
Sliding + SlidingAnta | Sash **45°** Anta | Sash **90°**

CODICE:	DESCRIZIONE:	H1	H2	H3
HM16.6732.2	Kit chiusure con ganci E27,5 - HM160 - 1305mm	210	580	
HM16.6732.3	Kit chiusure con ganci E27,5 - HM160 - 1900mm	210	1080	
HM16.6732.4	Kit chiusure con ganci E27,5 - HM160 - 2500mm	210	1678	
HM16.6732.5	Kit chiusure con ganci E27,5 - HM160 - 2800mm	210	1210	2510
HM16.6732.6	Kit chiusure con ganci E27,5 - HM160 - 3300mm	210	1410	2510
HM16.6732.7	Kit chiusure con ganci E27,5 - HM160 - 3800mm	210	1410	2510

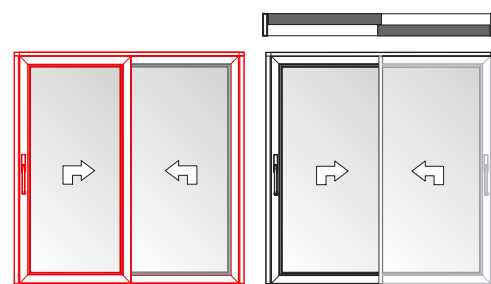
HX16.105
LATO INTERNO
INNER SIDE**NB.** Per verificare l'Altezza dei Ganci vedi Tav G31
NB. To Check Hook Height Position see Tab. G31**HX16.105**
LATO ESTERNO
EXTERIOR SIDE

TELAIO
MAIN FRAME

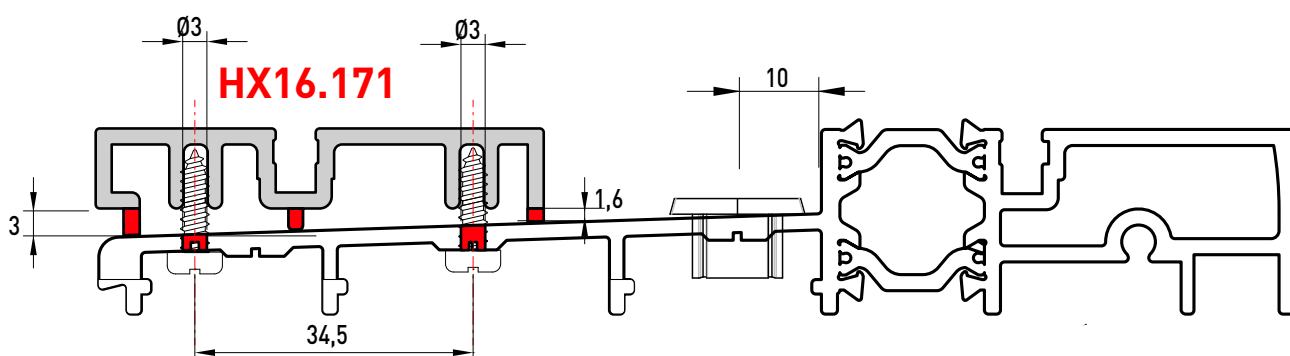
■ Mobile + Mobile
Sliding + Sliding



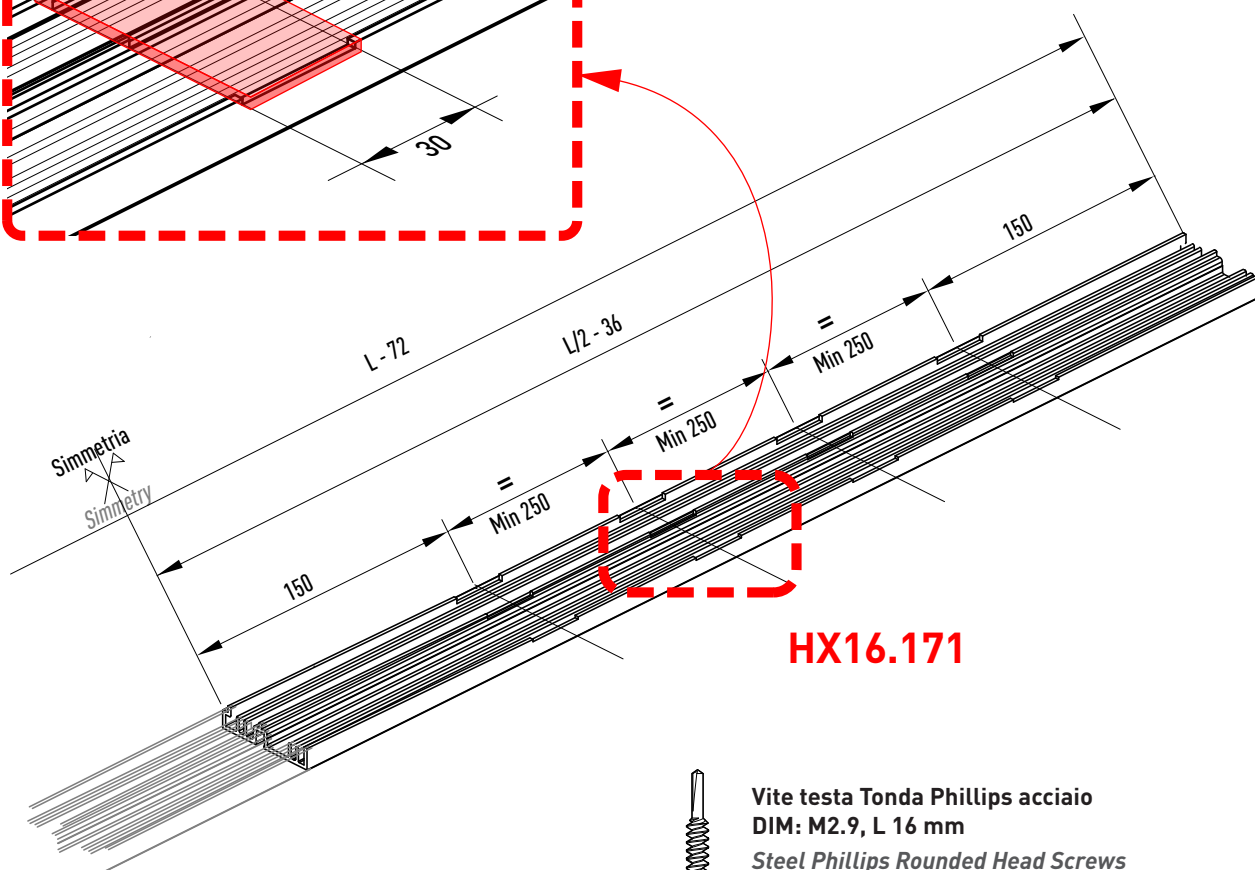
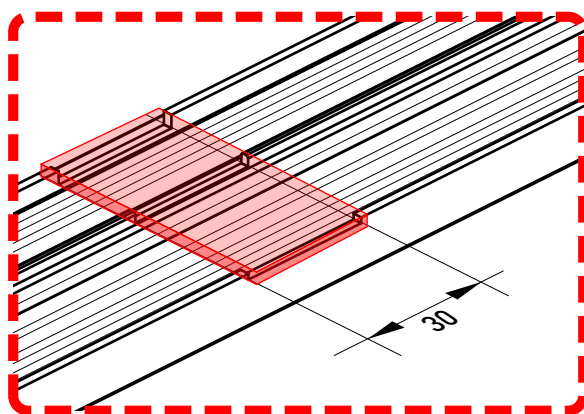
■ Drenaggio Soglia HX16.107 + HX16.171
► Water drains - Threshold HX16.107 + HX16.171



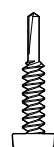
Anta | Sash **45°** Anta | Sash **90°**



HX16.107

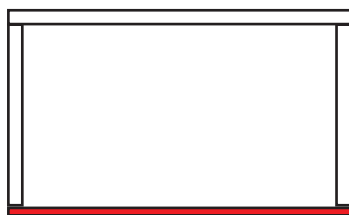


HX16.171



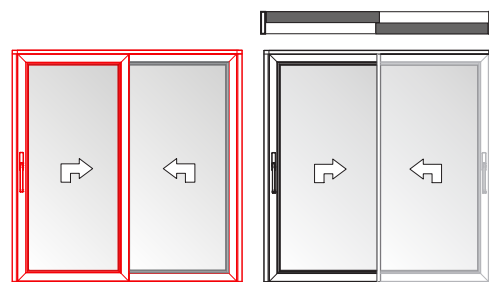
Vite testa Tonda Phillips acciaio
DIM: M2.9, L 16 mm
Steel Phillips Rounded Head Screws
DIM: M2.9, L 16 mm

TELAIO
MAIN FRAME



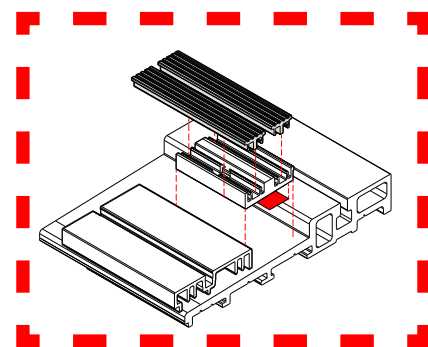
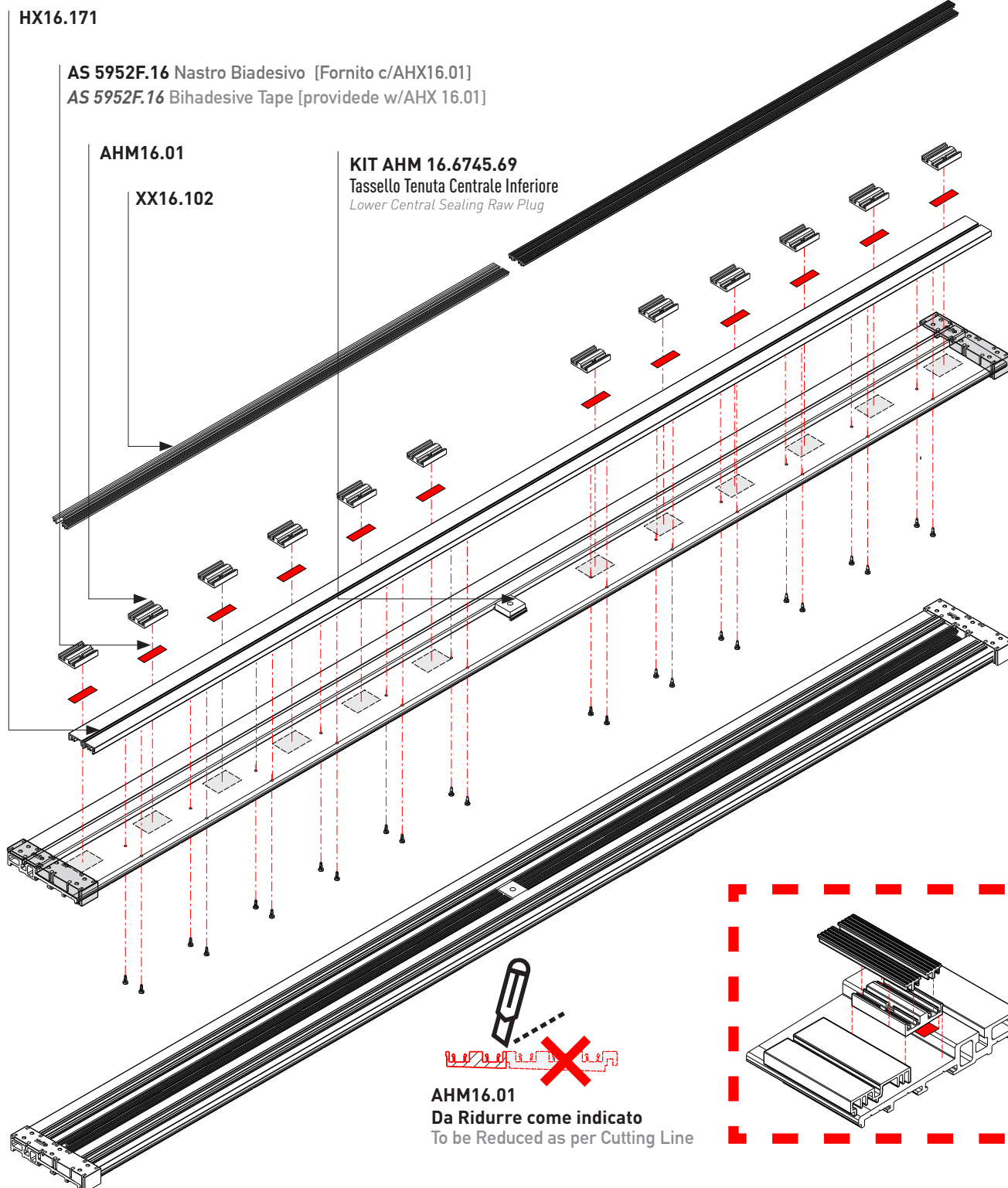
- Piano Calpestio FILOPAVIMENTO HX16.107 + HX16.171
- FLOORLEVEL Threshold Walking Plane HX16.107 + HX16.171

■ Mobile + Mobile
Sliding + Sliding



Anta | Sash **45°**

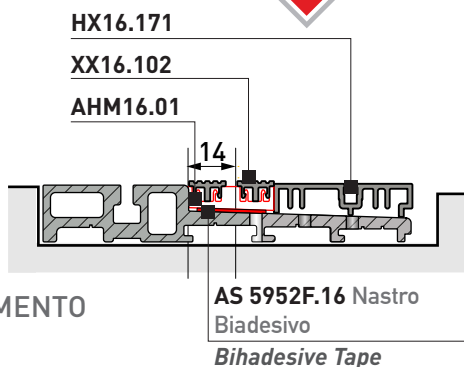
Anta | Sash **90°**



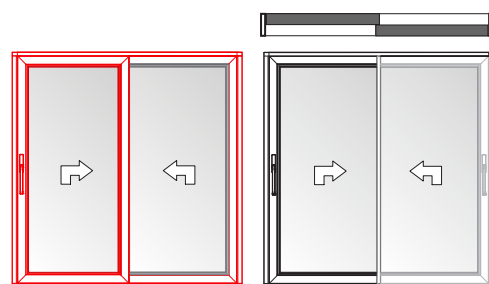
TELAIO
MAIN FRAME



- Drenaggio Soglia FILOPAVIMENTO
HX16.107 + HX16.171
- FLOORLEVEL Threshold Drainage
HX16.107 + HX16.171

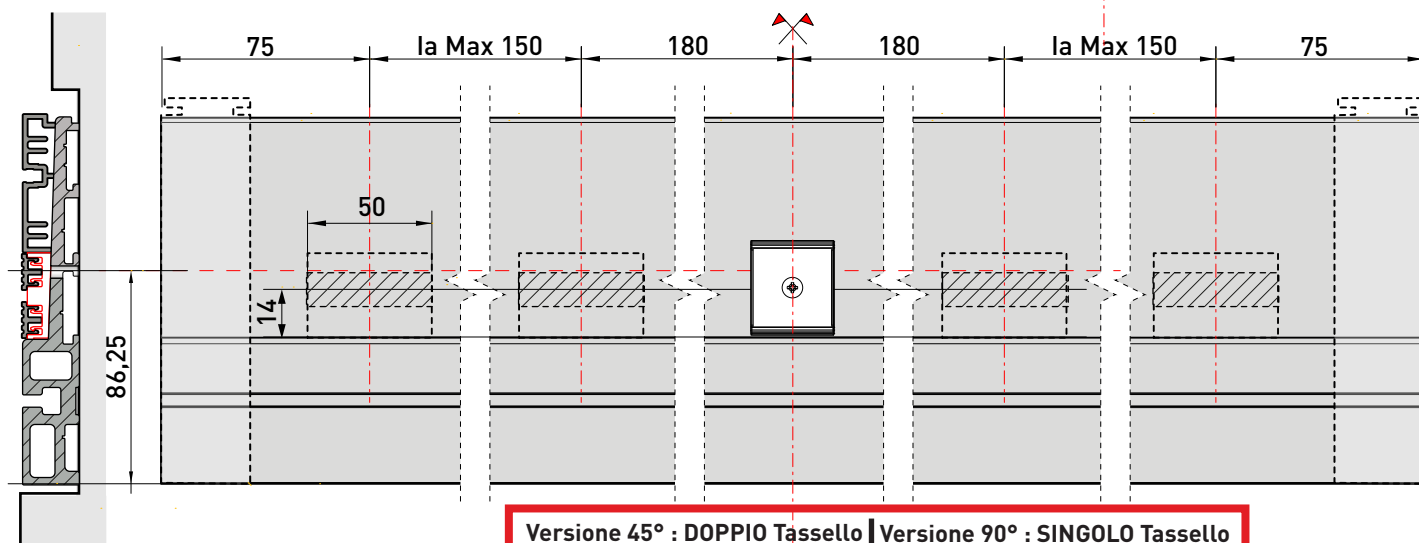
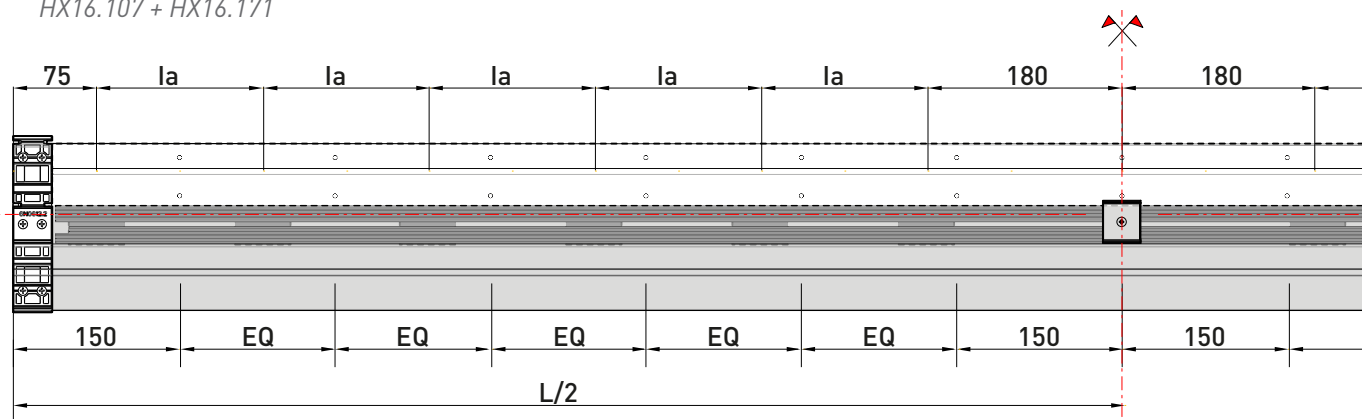


■ Mobile + Mobile
Sliding + Sliding

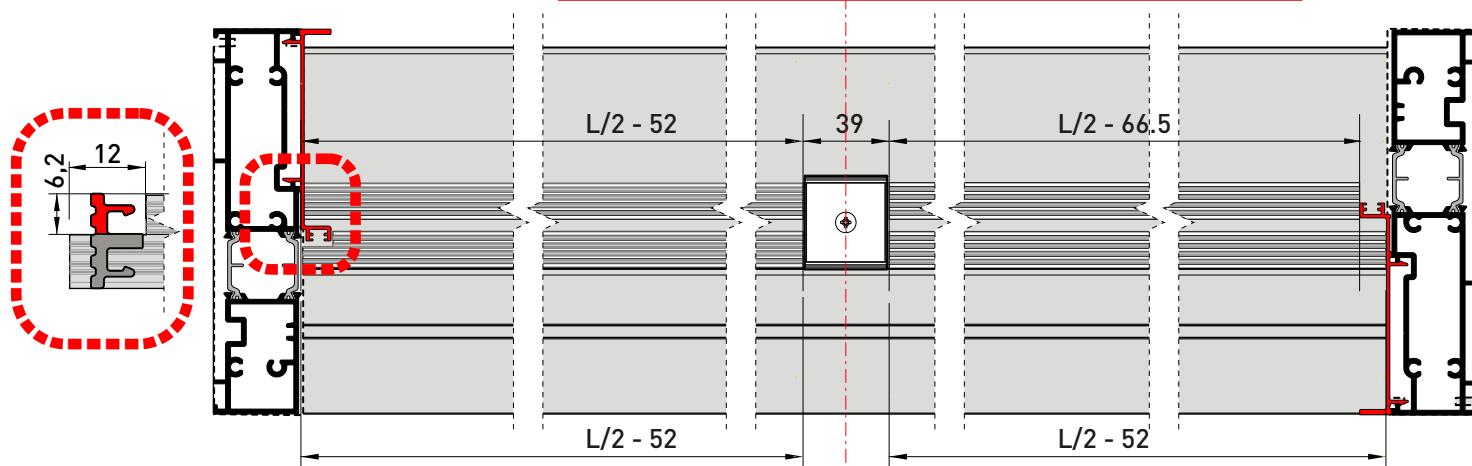


Anta | Sash 45°

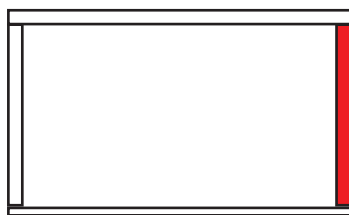
Anta | Sash 90°



Versione 45° : DOPPIO Tassello | Versione 90° : SINGOLO Tassello
45° Type: DOUBLE Piece | 90° Type: SINGLE Piece

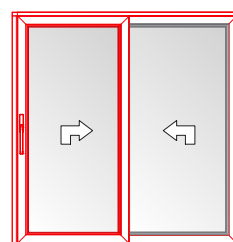


TELAIO
MAIN FRAME



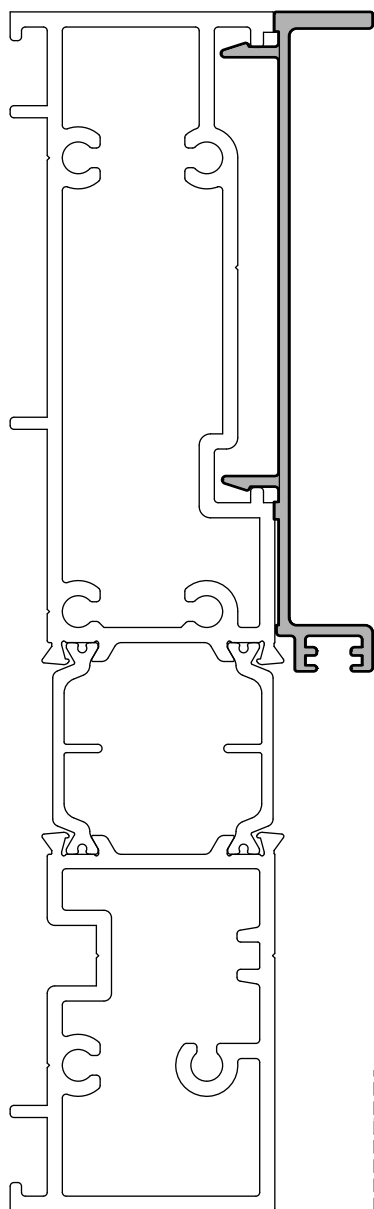
- Lavorazione Carter Laterale HM16.508 ESTERNO
- Tooling for Lateral Carter HM16.508 EXTERNAL

- Mobile + Mobile
Sliding + Sliding

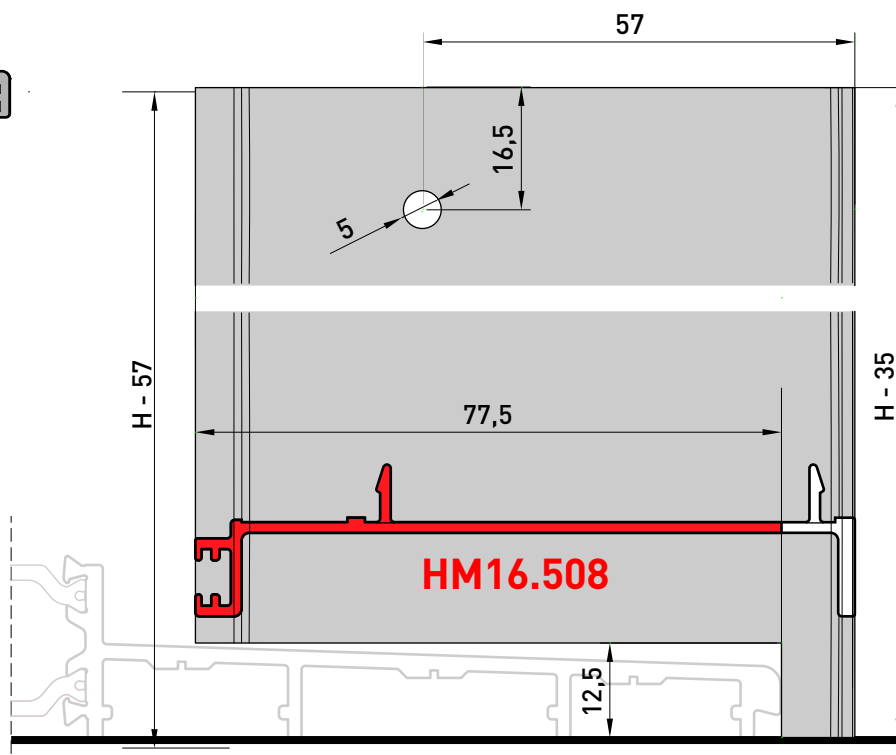
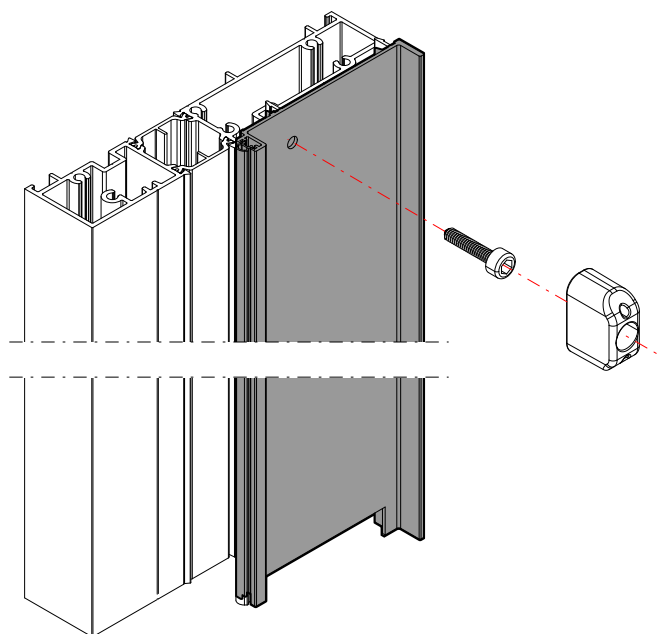


Anta | Sash **45°**

Anta | Sash **90°**

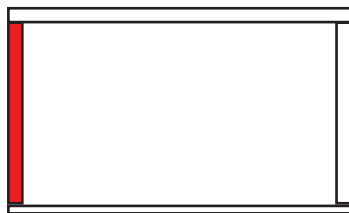


HM16.105



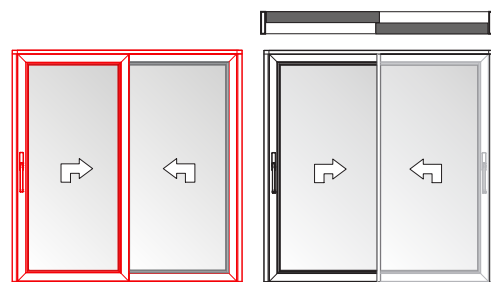
HM16.508

TELAIO
MAIN FRAME



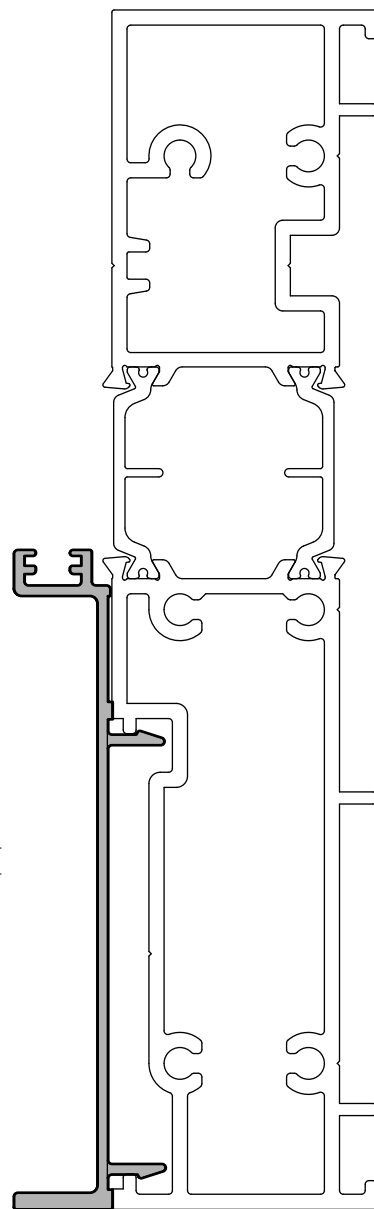
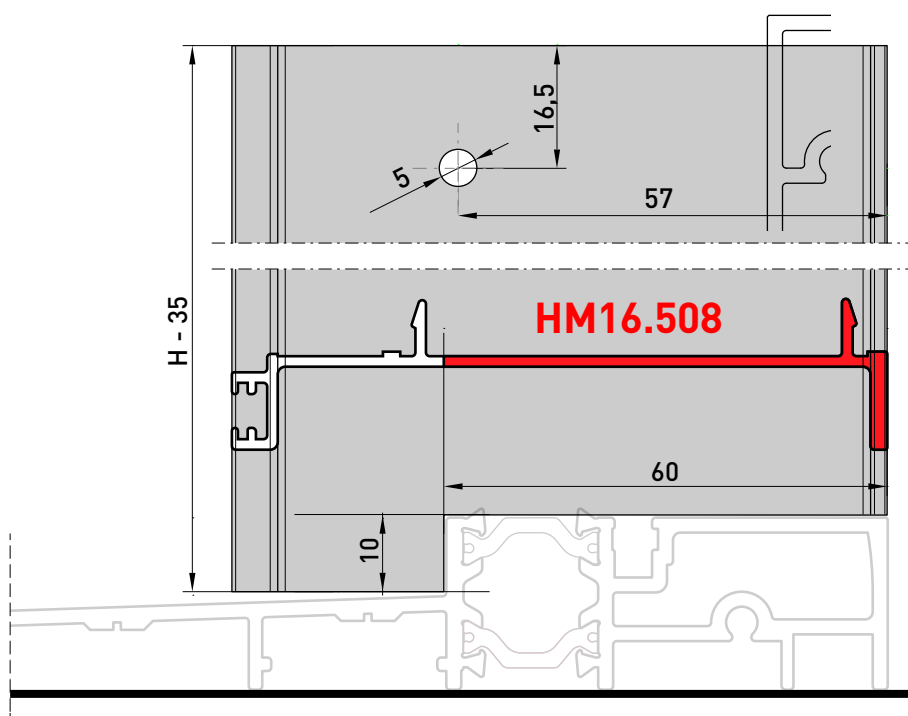
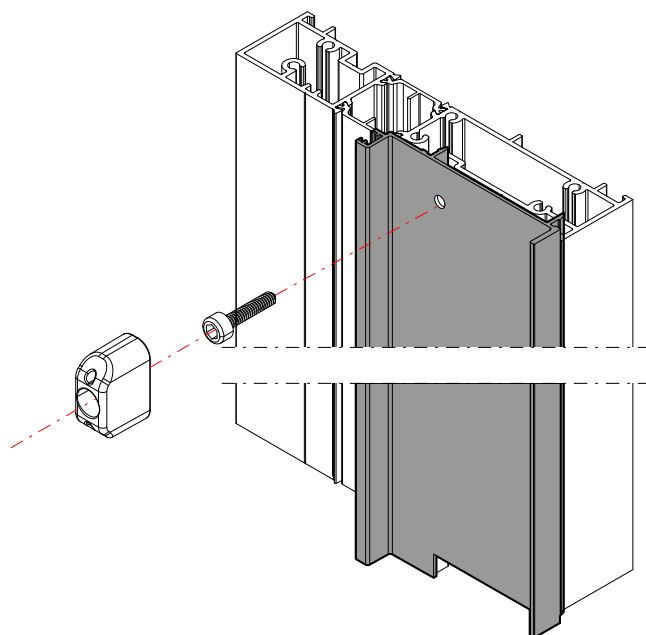
- Lavorazione Carter Laterale HM16.508 INTERNO
- Tooling for Lateral Carter HM16.508 INTERNAL

- Mobile + Mobile
Sliding + Sliding



Anta | Sash 45°

Anta | Sash 90°



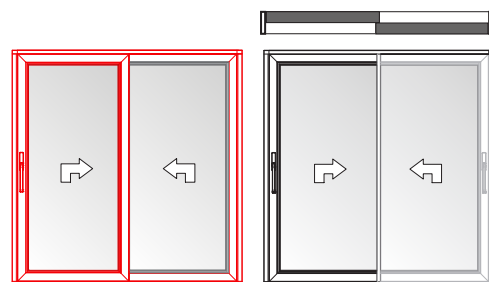
HM16.105

TELAIO
MAIN FRAME



- Lavorazione Traverso Superiore HX16.106
- Tooling Upper Transom HX16.106

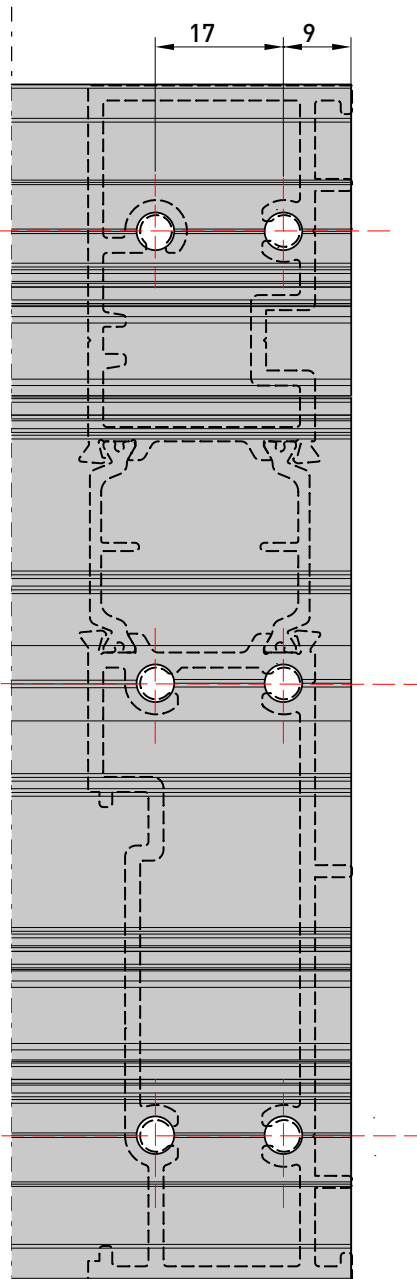
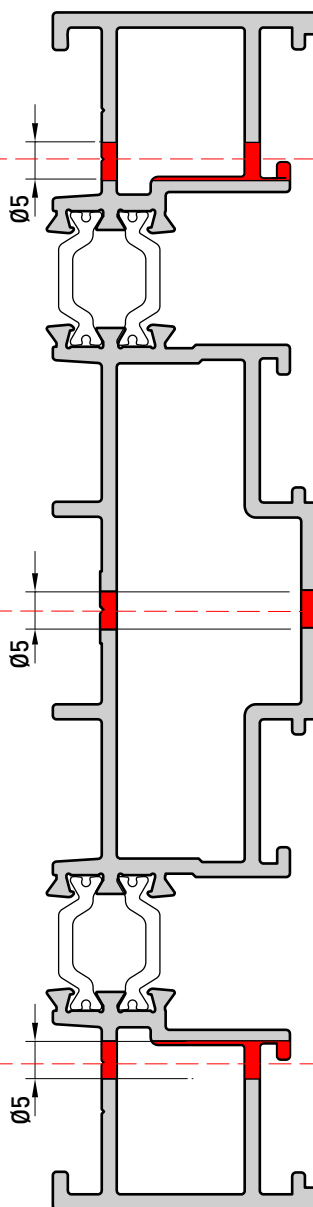
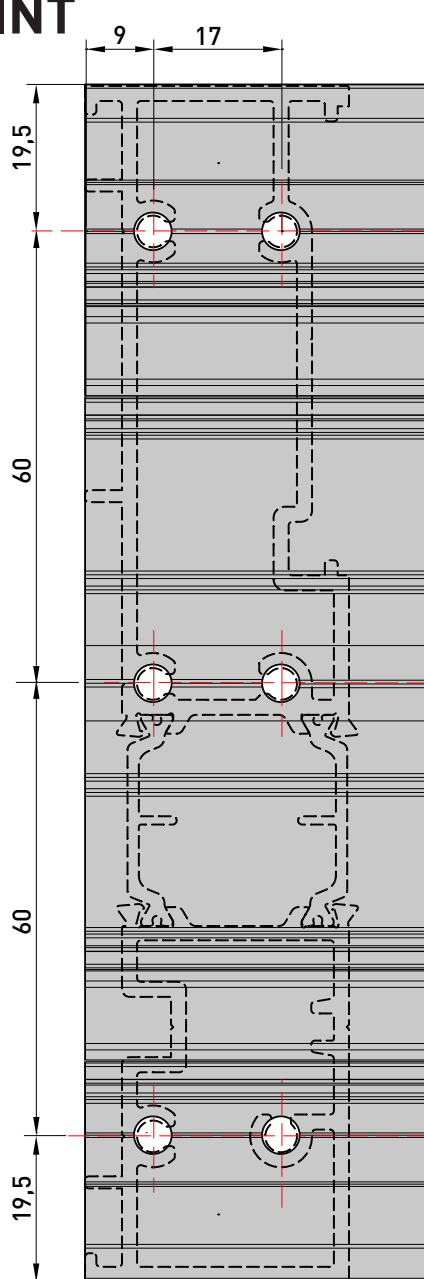
■ Mobile + Mobile
Sliding + Sliding



Anta | Sash **45°**

Anta | Sash **90°**

INT



EXT

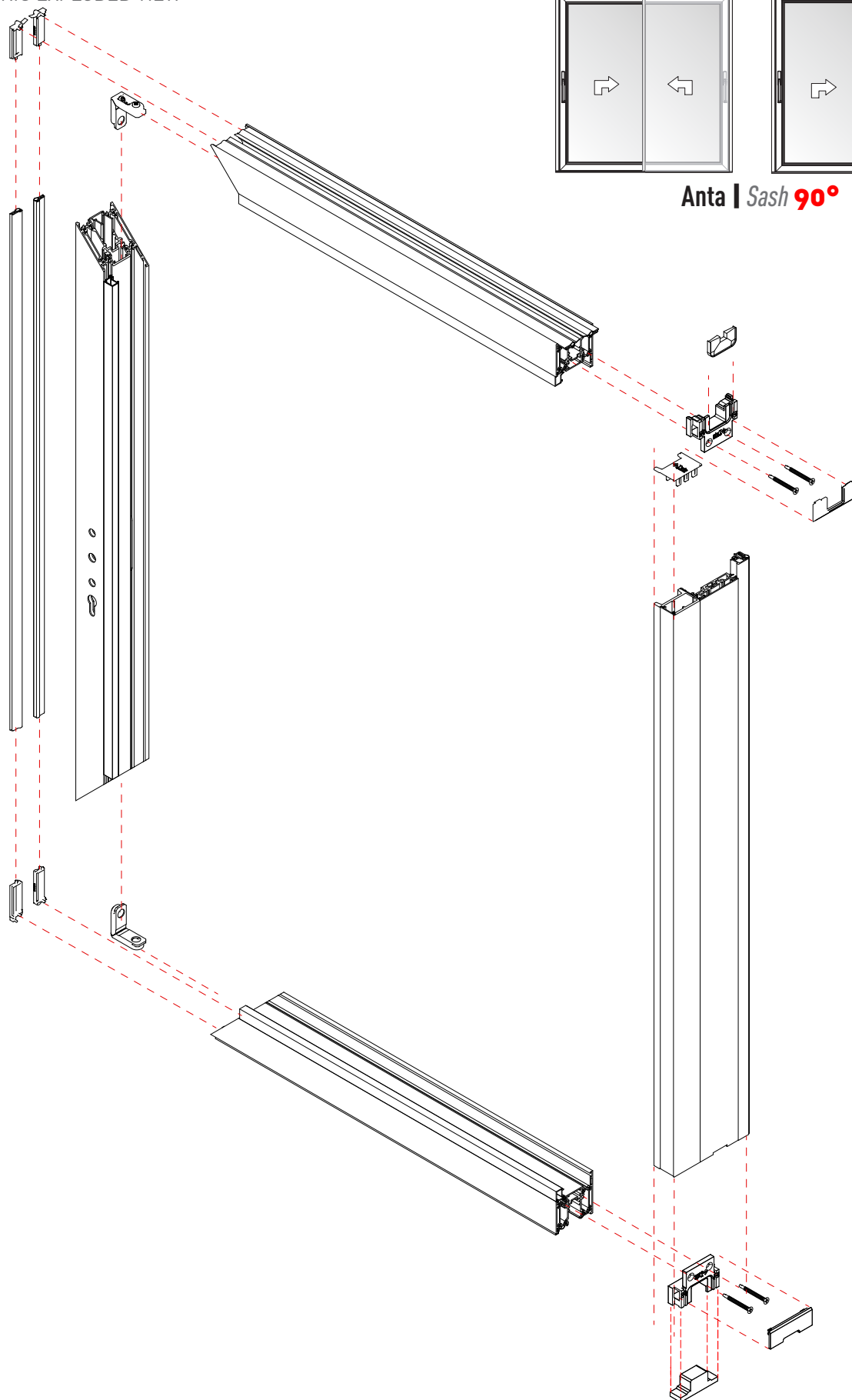
HX16.105

HX16.106

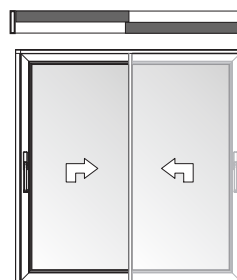
HX16.105

ANTA
SASH

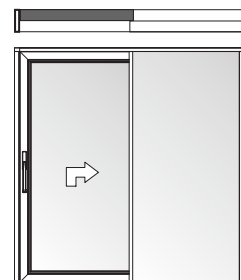
- ESPLOSO ASSONOMETRICO
- AXONOMETRIC EXPLODED VIEW



■ Mobile + Mobile
Sliding + Sliding



■ Mobile + Vetrata
Sliding + Glaze

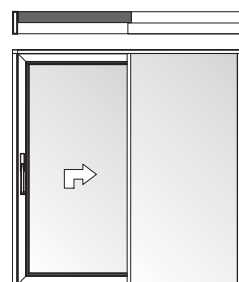
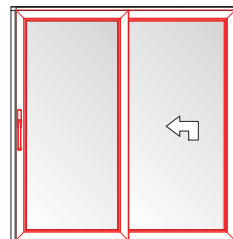
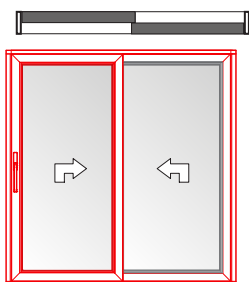
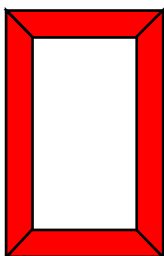
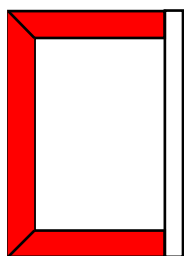


Anta | Sash 90°

ANTA
SASH

■ 2 Scorrevoli
2 Sliding

■ 1 Scorrevole
Sliding



■ Lavorazioni Squadretta
ACX50.SQ su HM16.204

► Tooling for Coner Joint
ACX50.SQ on MX16.204

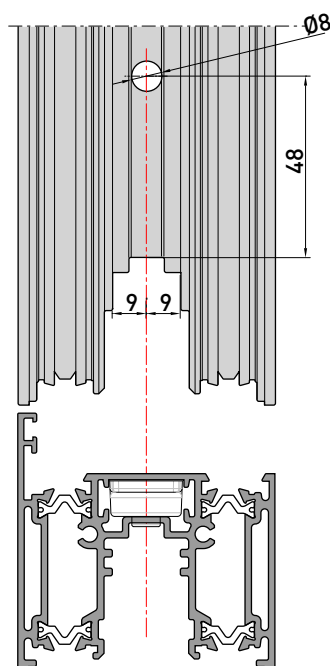
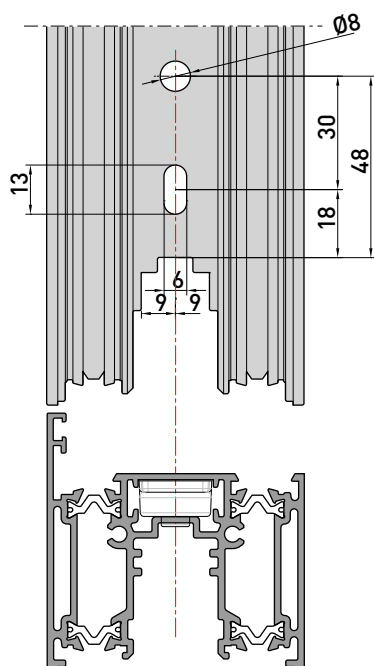
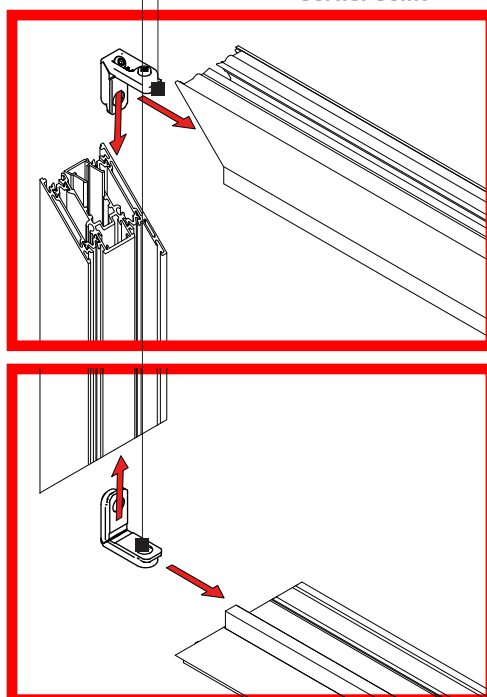
Anta | Sash **45°**

Anta | Sash **90°**

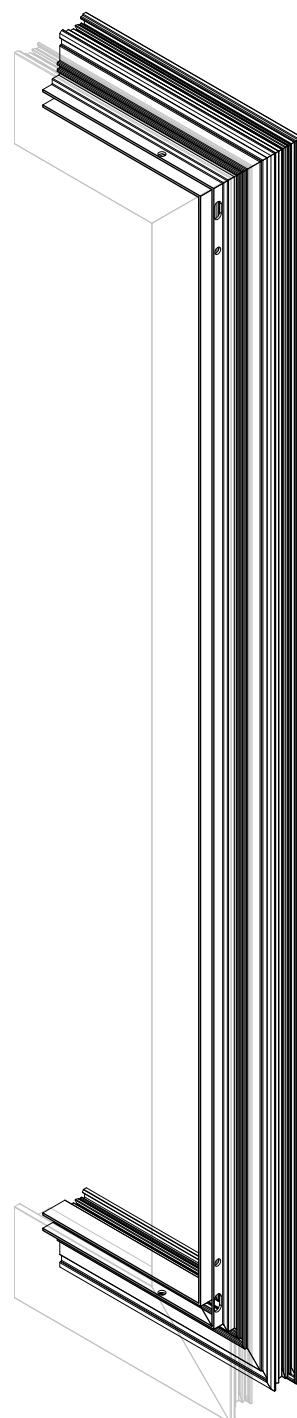
Anta | Sash **45°**

Anta | Sash **90°**

ACX50.SQ Squadretta di Serraggio
Corner Joint

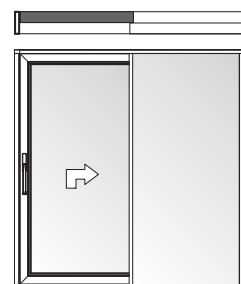
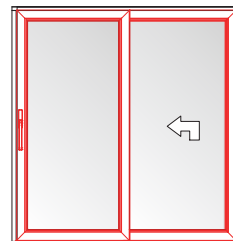
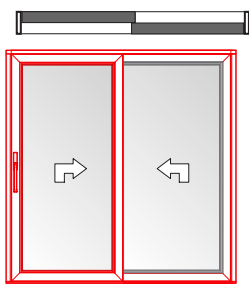
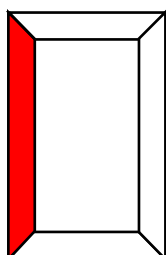
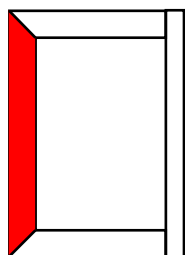


HM16.204



**ANTA
SASH**

■ 2 Scorrevoli
2 Sliding

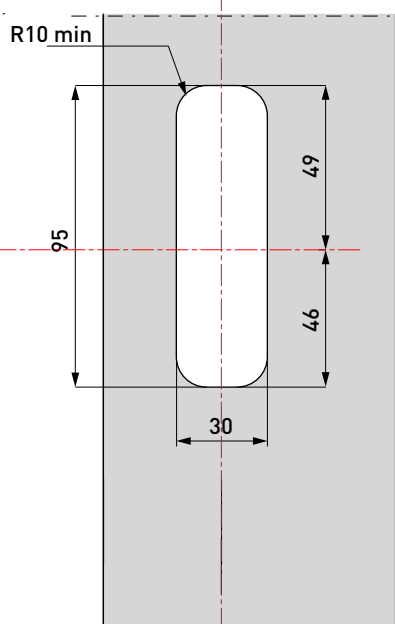
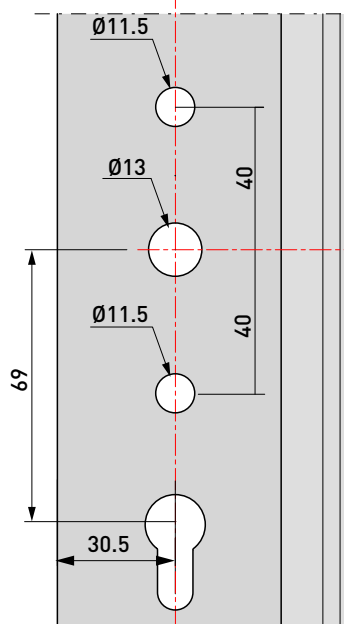
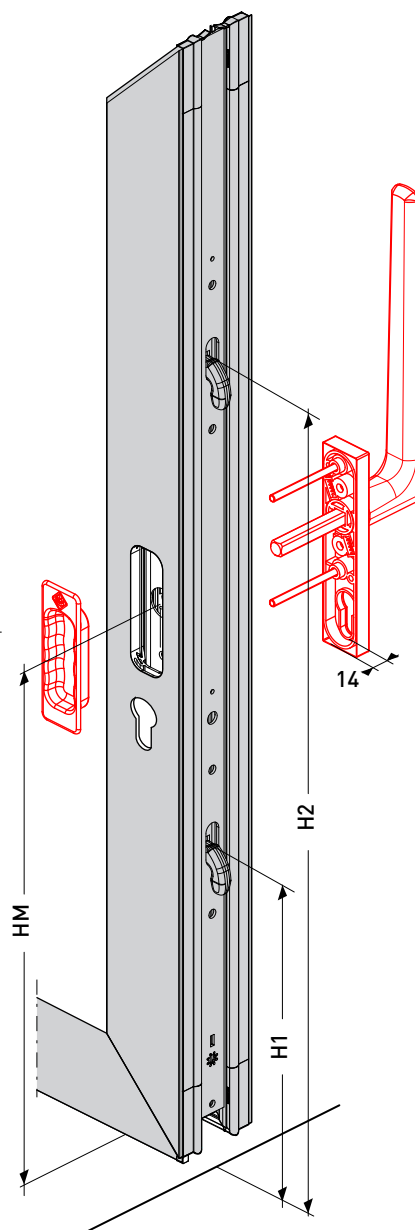
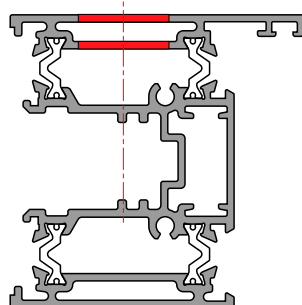
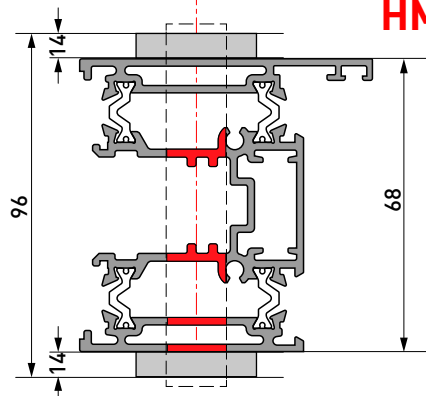
■ 1 Scorrevole
Sliding

■ Lavorazioni Maniglia
► Tooling Handle

Anta | Sash **45°**

Anta | Sash **90°**

Anta | Sash **45°**

Anta | Sash **90°**
INTERNO
Interior

ESTERNO
Exterior

HM16.204


CODICE	CODE	Kit Chiusure c/Ganci	Kit Latch w/Hooks	Hm
HM16.6732.2		E27,5 - HM160 - 1305 mm		400
HM16.6732.3		E27,5 - HM160 - 1900 mm		400
HM16.6732.4		E27,5 - HM160 - 2500 mm		1000
HM16.6732.5		E27,5 - HM160 - 2800 mm		1000
HM16.6732.6		E27,5 - HM160 - 3300 mm		1000
HM16.6732.7		E27,5 - HM160 - 3800 mm		1000

NB. Per verificare l'Altezza dei Riscontri Ganci vedi Tav G04

NB. To Check Hook Striker Height Position see Tab. G04

ITALIA

■ AHX3080.20

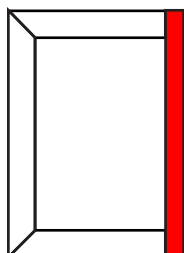
■ AHX3080.25

KARMA

■ AHM3081.20

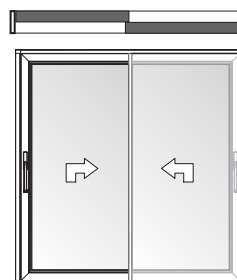
■ AHM3081.35

ANTA
SASH

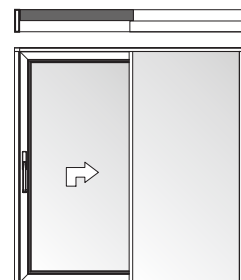


- Lavorazione Montante Centrale BX48
- Tooling for MIDDLE Mullion BX48

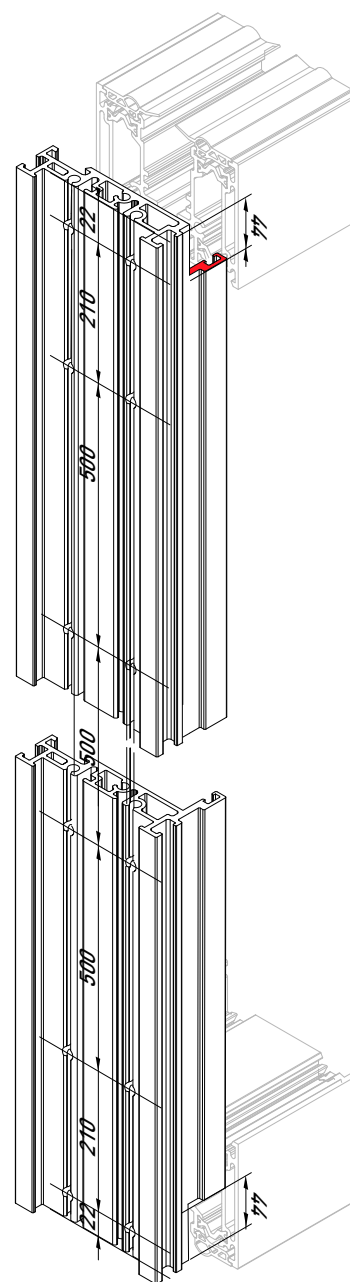
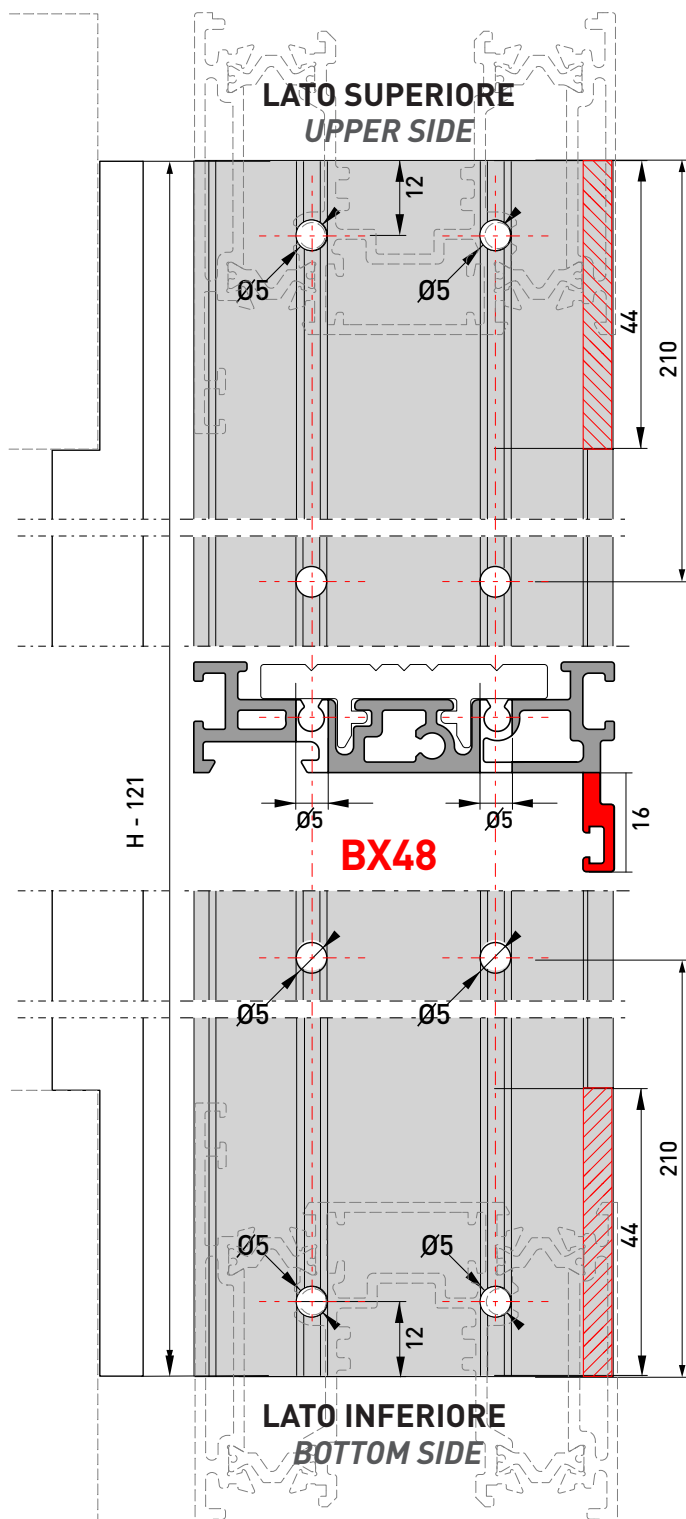
■ Mobile + Mobile
Sliding + Sliding



■ Mobile + Vetrata
Sliding + Glaze

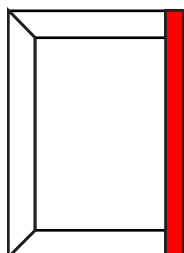


Anta | Sash 90°



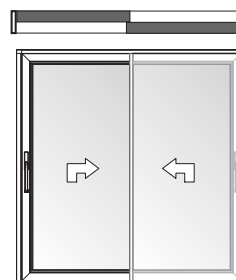
BX48

ANTA
SASH

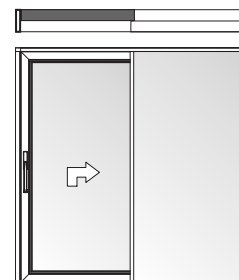


- **Lavorazione Rinforzo Montante Centrale HM16.308**
- *Tooling for Central Mullion Reinforcement HM16.308*

■ **Mobile + Mobile**
Sliding + Sliding

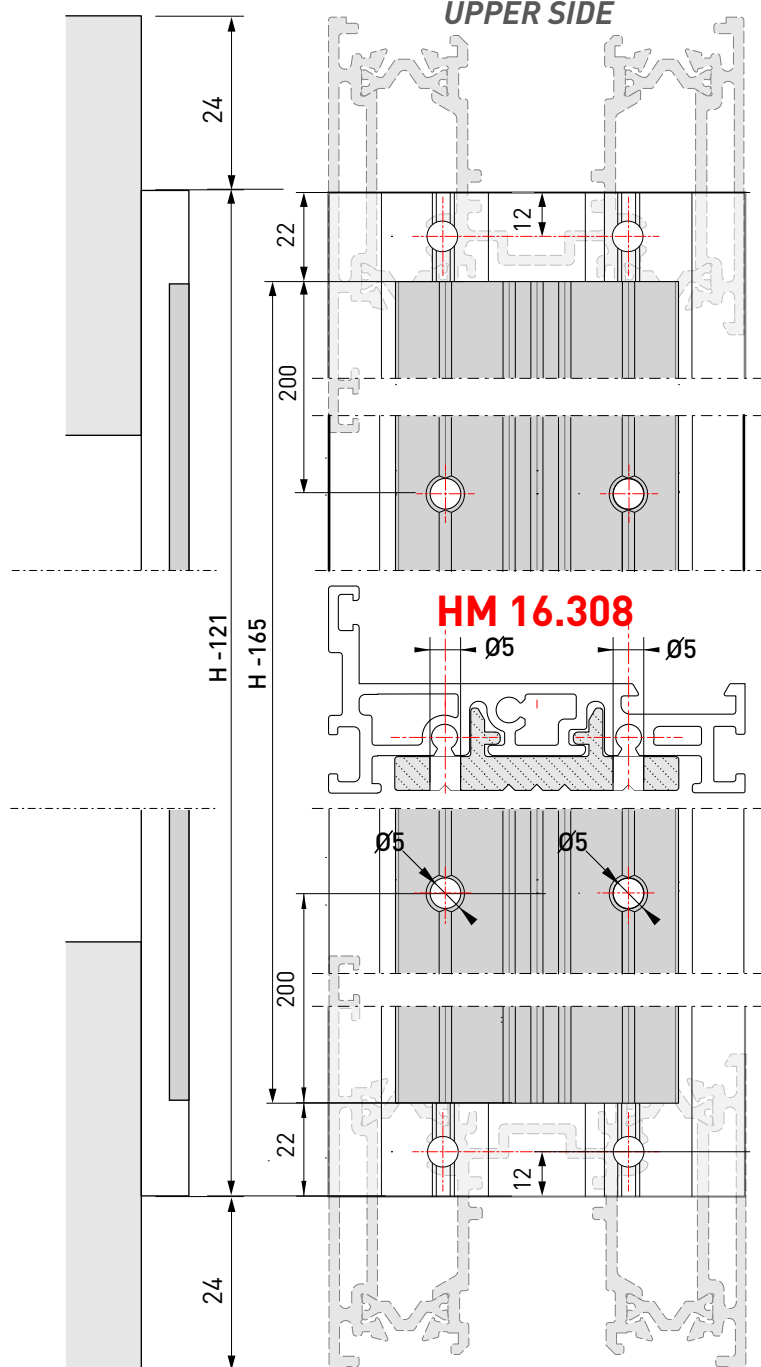


■ **Mobile + Vetrata**
Sliding + Glaze

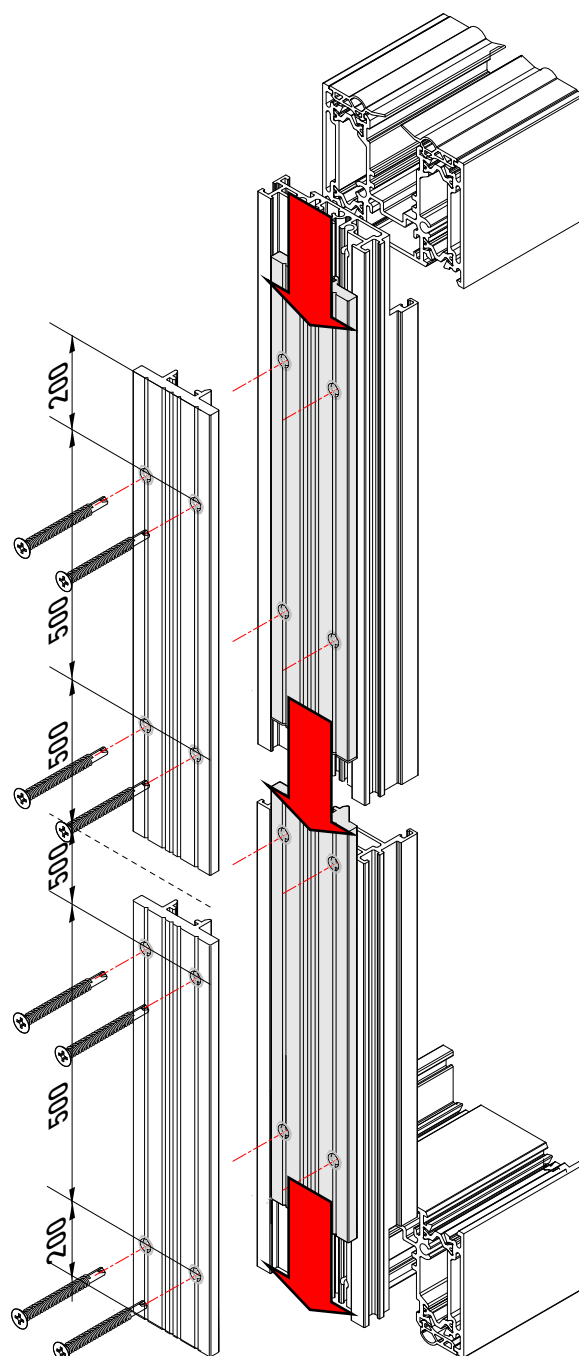


Anta | Sash 90°

LATO SUPERIORE
UPPER SIDE

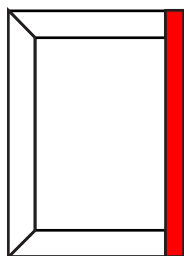


LATO INFERIORE
BOTTOM SIDE



Assemblaggio ad Infilare di HM16.308
Insert HM16.306

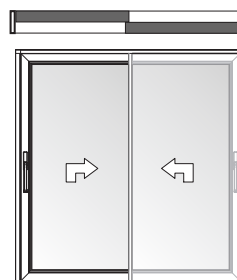
ANTA
SASH



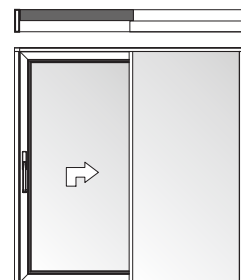
**Steel Pan Head Phil-
lips Screw, Zinc-Plated
Steel, M2.6 x 0.45 mm
Thread, 16 mm Long**

■ Lavorazione e Assemblaggio BX50
► Tooling an Assembling BX50

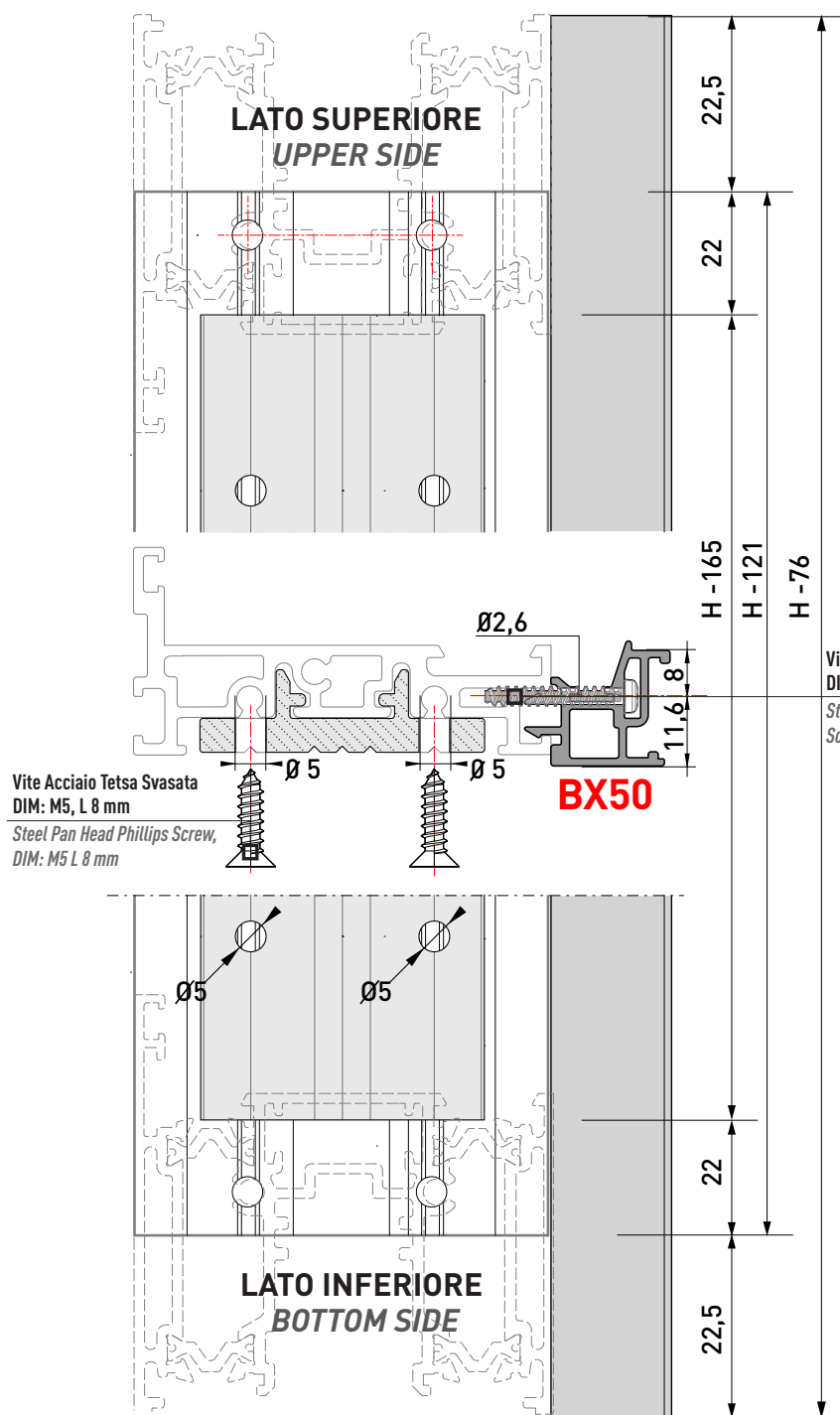
■ Mobile + Mobile
Sliding + Sliding



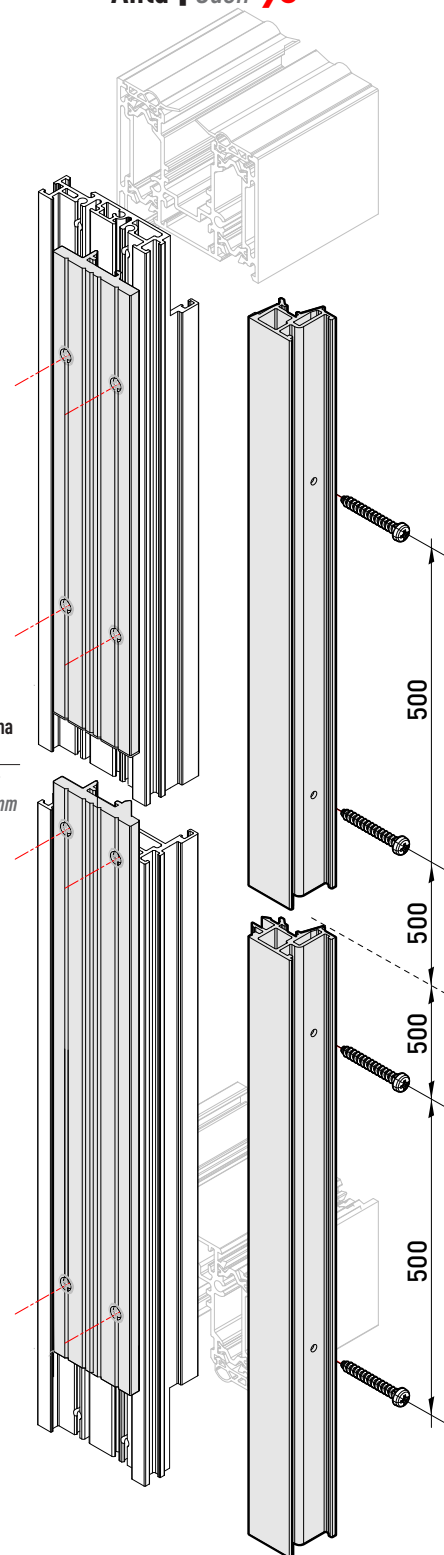
■ Mobile + Vetrata
Sliding + Glaze



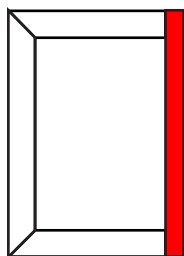
Anta | Sash 90°



Vite Acciaio Tetsa Piana
DIM: M2.6 L16 mm
Steel Pan Head Phillips
Screw, DIM: M2.6 L16 mm

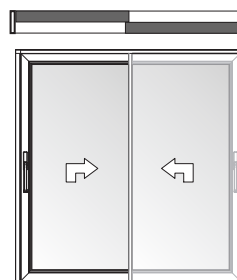


ANTA
SASH

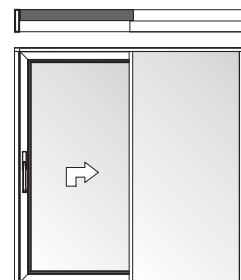


- Lavorazione Rinforzo Montante Centrale HM16.306
- Tooling for Central Mullion Reinforcement HM16.306

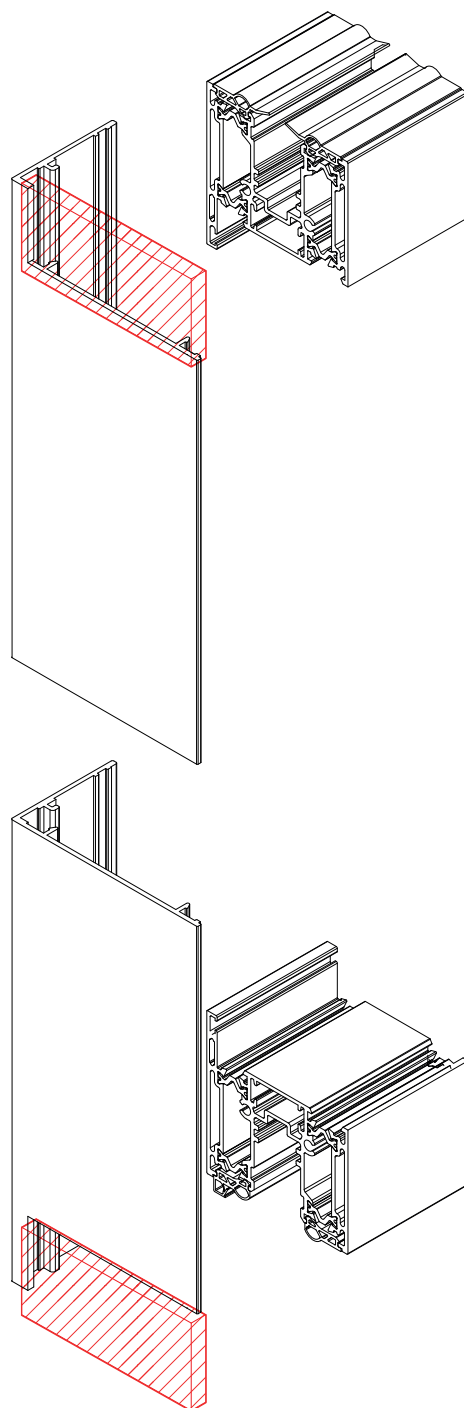
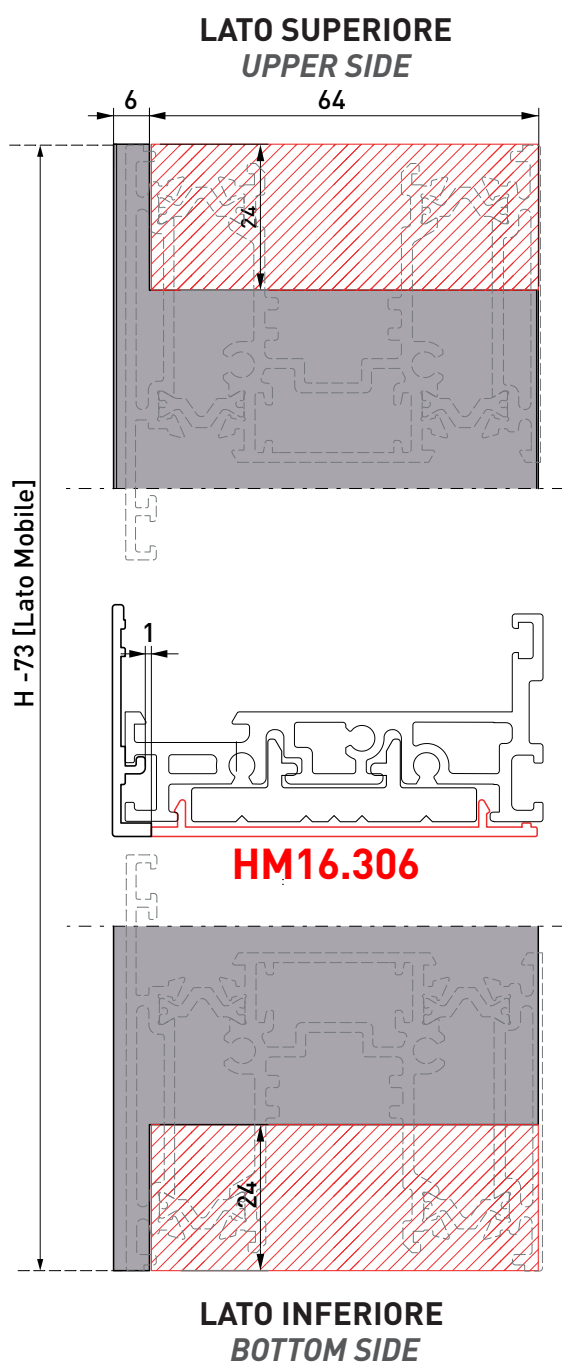
■ Mobile + Mobile
Sliding + Sliding



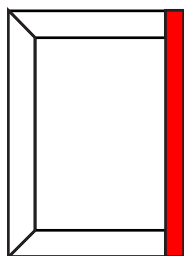
■ Mobile + Vetrata
Sliding + Glaze



Anta | Sash 90°

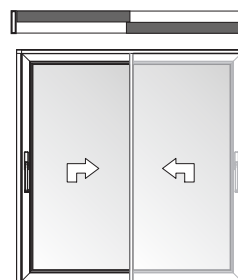


ANTA
SASH

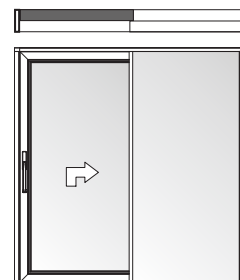


- Assemblaggio Montante Incontro Centrale
- Assembling for Central Mullion

■ Mobile + Mobile
Sliding + Sliding

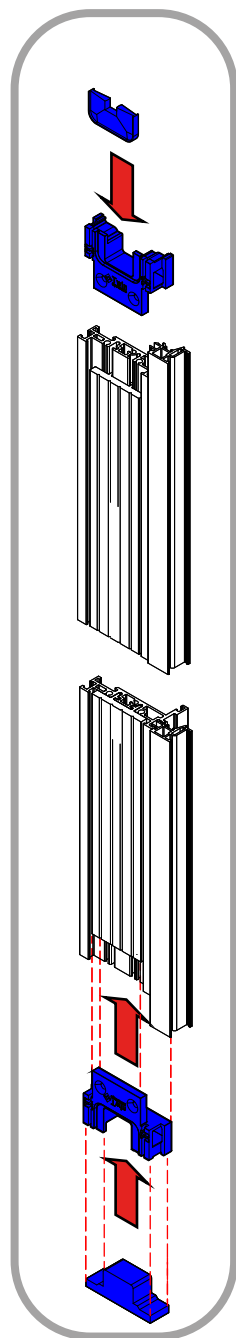


■ Mobile + Vetrata
Sliding + Glaze

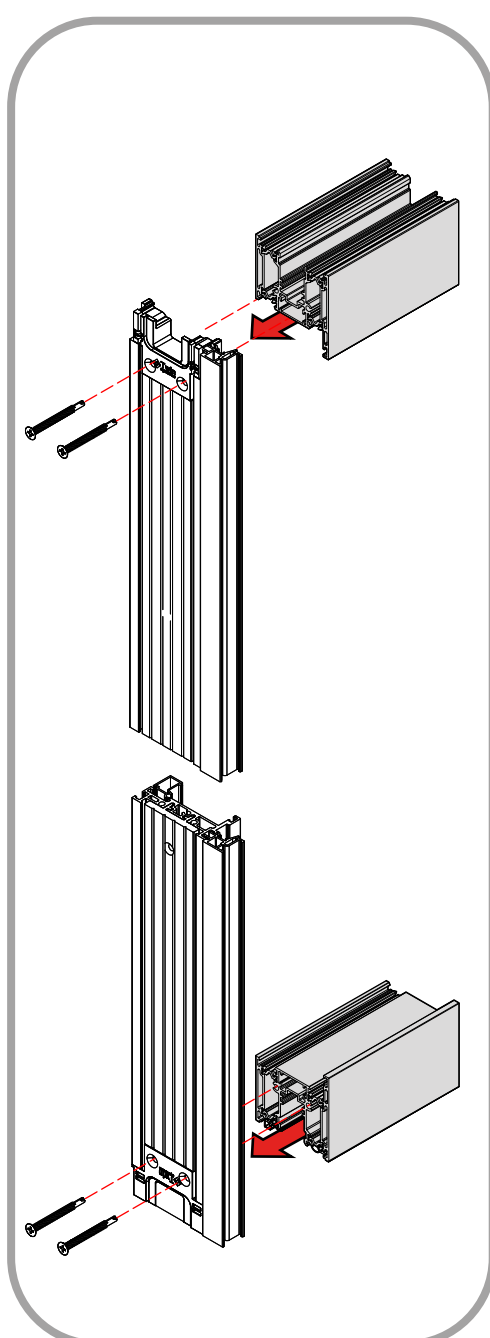


Anta | Sash 90°

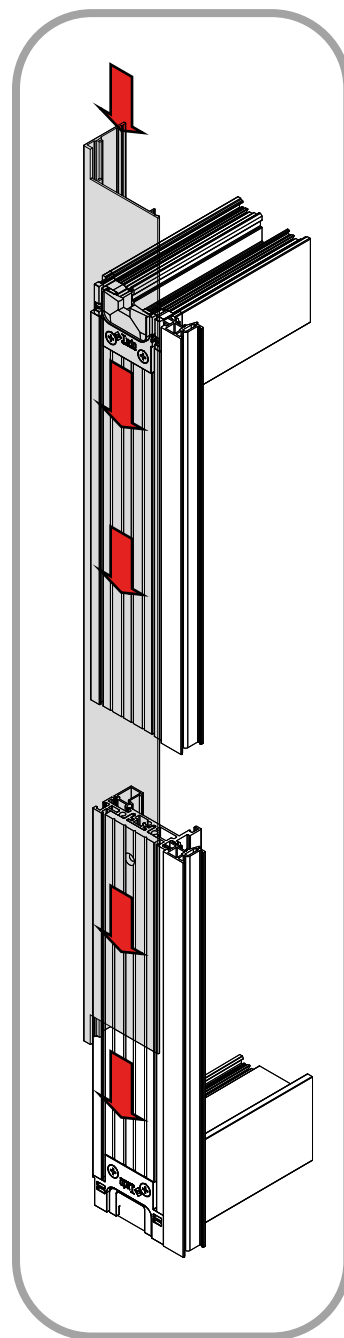
[KIT AHM 16.6745.68]



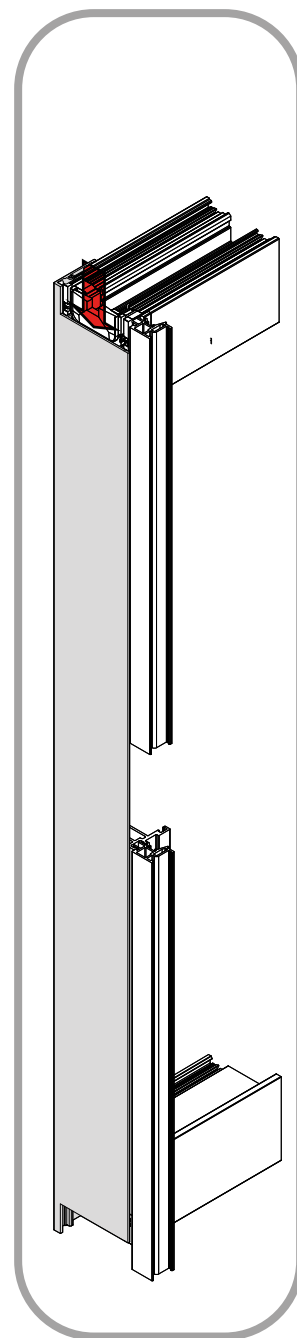
1 Tappo e Spugna Inferiore
Bottom Cap and Sponge



2 Installazione Traversi Sup. e Inf.
Upper and Bottom Transoms Assembling

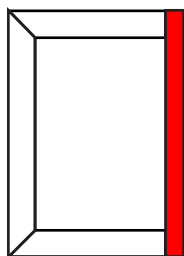


3 Inserimento del Carter HM16.308
Carter HM16.308 Inserting



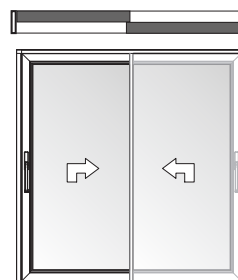
4 Tappo e Spazzolino Superiore
Upper Cap and Brush

ANTA
SASH

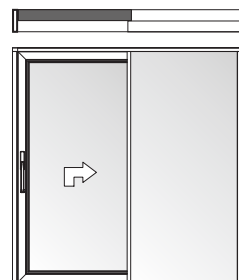


- Lavorazione CARTER Montante Centrale HM16.306
- Tooling for Central Mullion CARTER HM16.306

■ Mobile + Mobile
Sliding + Sliding

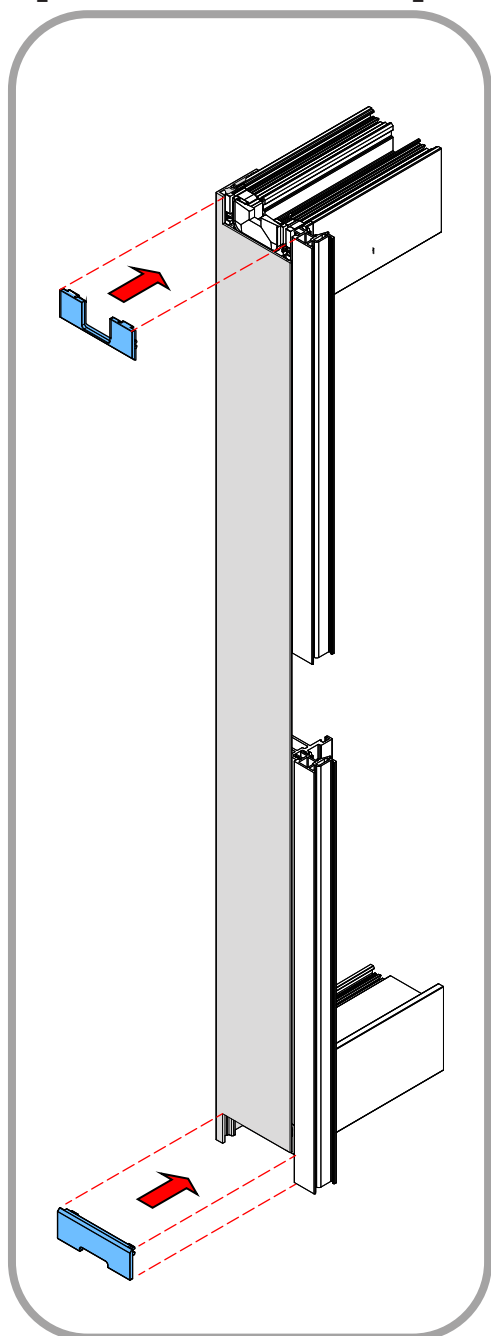


■ Mobile + Vetrata
Sliding + Glaze

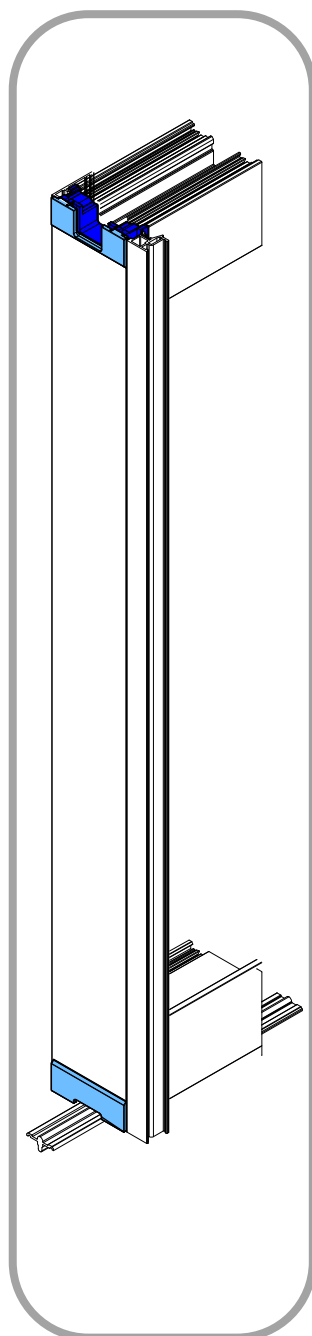


Anta | Sash 90°

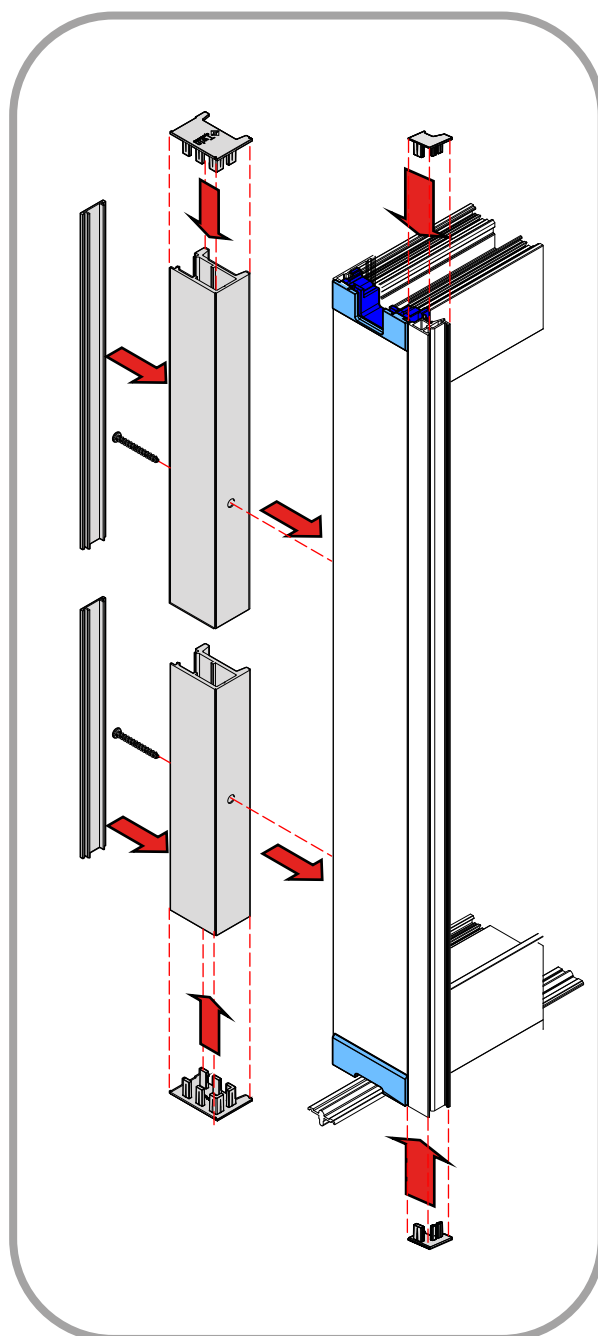
[KIT AHM 16.6745.68]



5 Applicazione Tappi Coprilavorazione Superiore e Inferiore
Upper and Bottom Finishing Caps Installation



6 Sequenza Completata
Sequence Completed

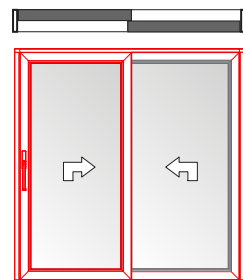


7 Installazione Tappi di Finitura +
Maniglione Trascinavetro con Viti e Cover di Finitura [OPZIONALE]
*Installing Finishing Caps +
Sash Mover Handle with screws and finishing Cover [OPTIONAL]*

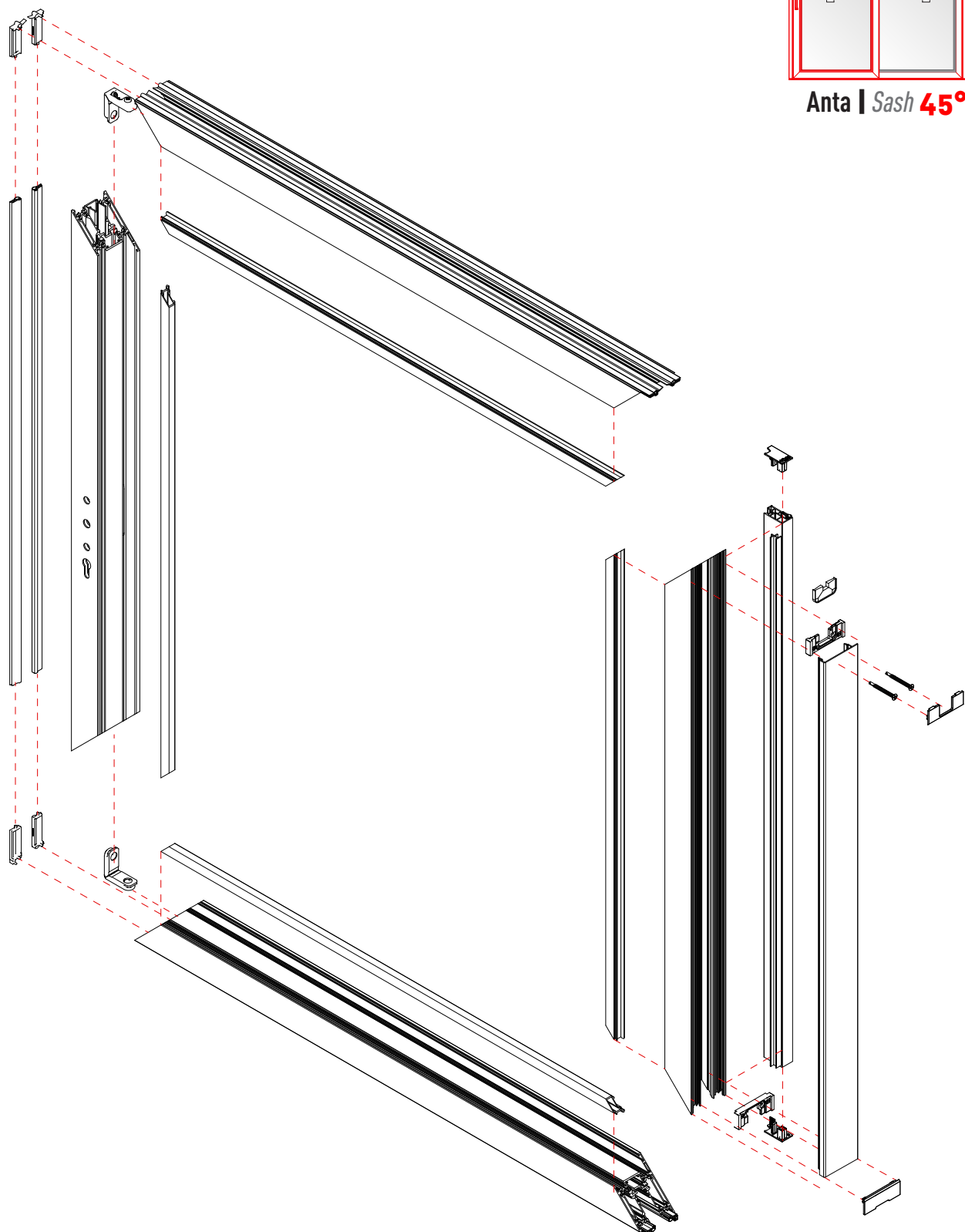
ANTA
SASH

- ESPLOSO ASSONOMETRICO
- AXONOMETRIC EXPLODED VIEW

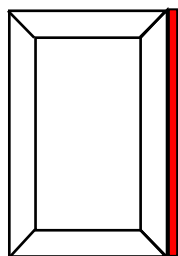
■ Mobile + Mobile
Sliding + Sliding



Anta | Sash 45°

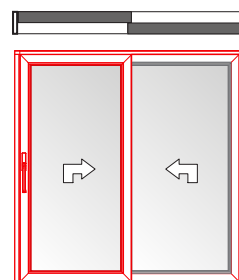


ANTA
SASH



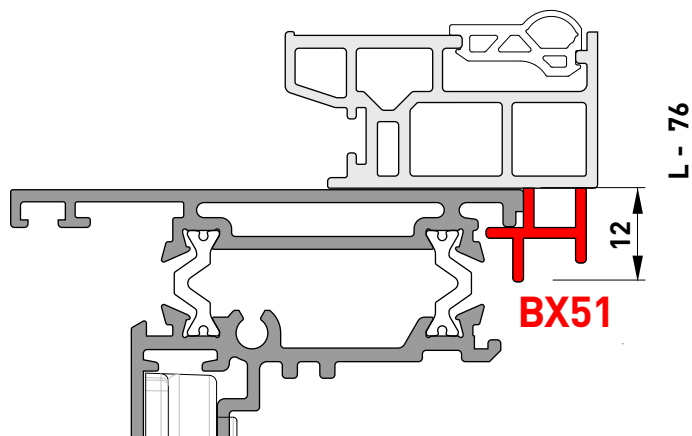
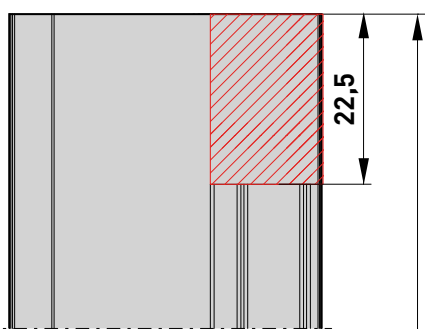
- Lavorazioni Incontro Centrale BX51
- Tooling for Central Profile BX51

- Mobile + Mobile
Sliding + Sliding

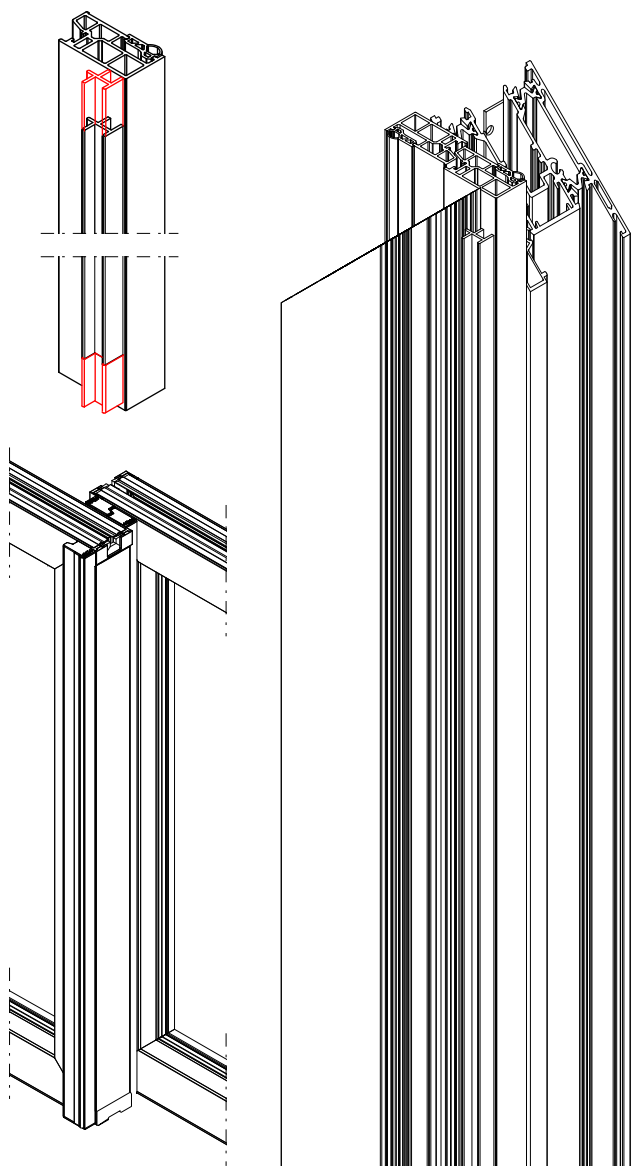
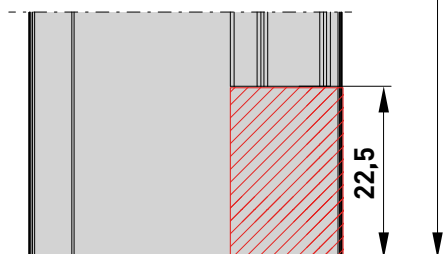


Anta | Sash 45°

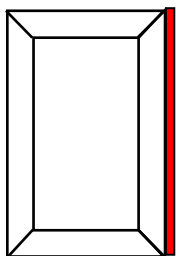
LATO SUPERIORE
UPPER SIDE



LATO INFERIORE
BOTTOM SIDE

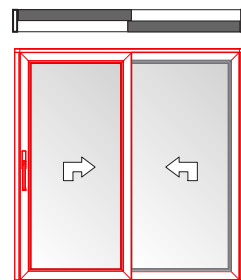


ANTA
SASH

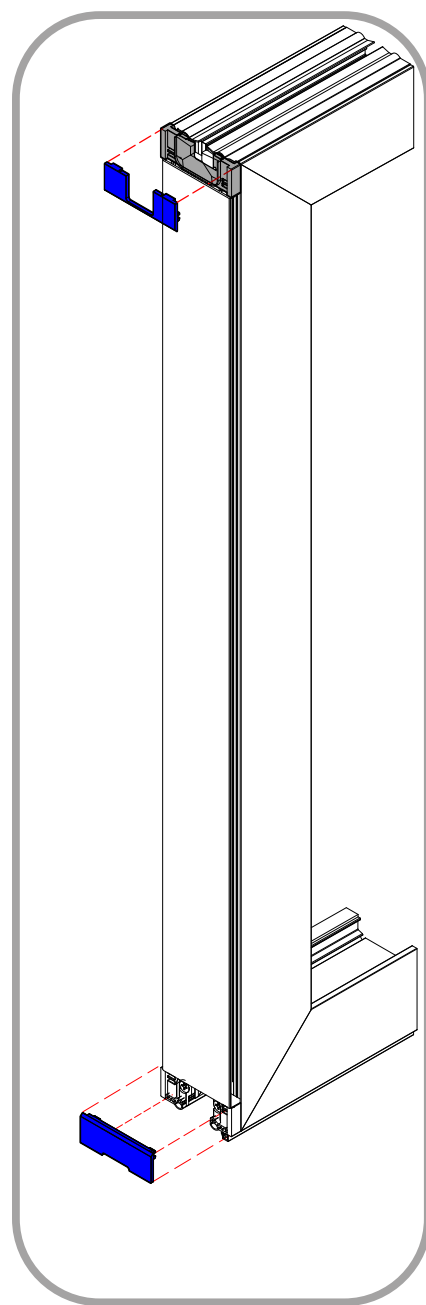
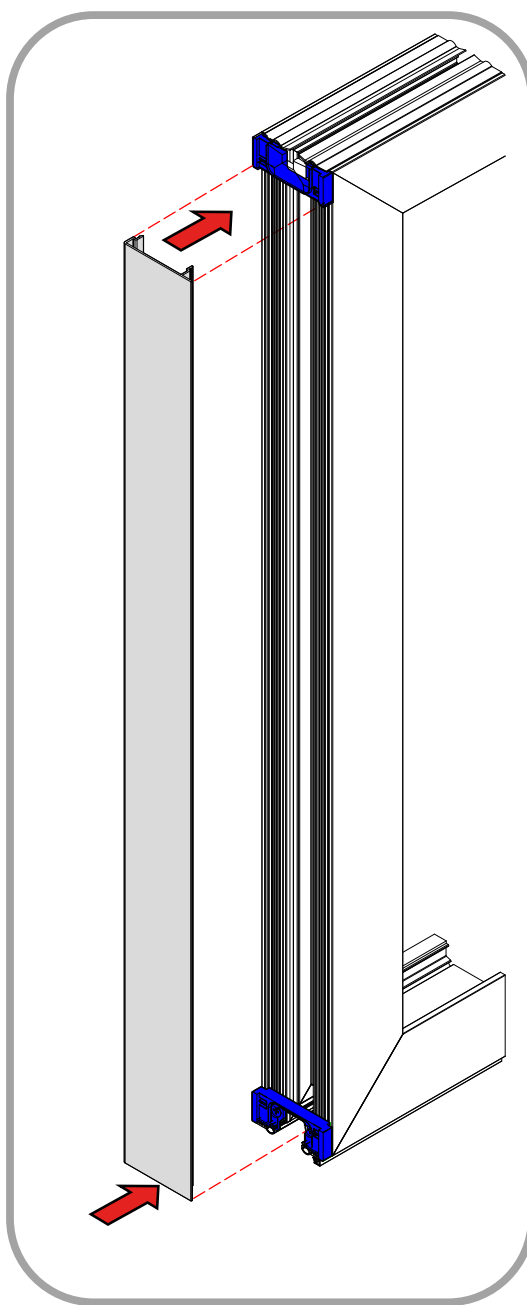
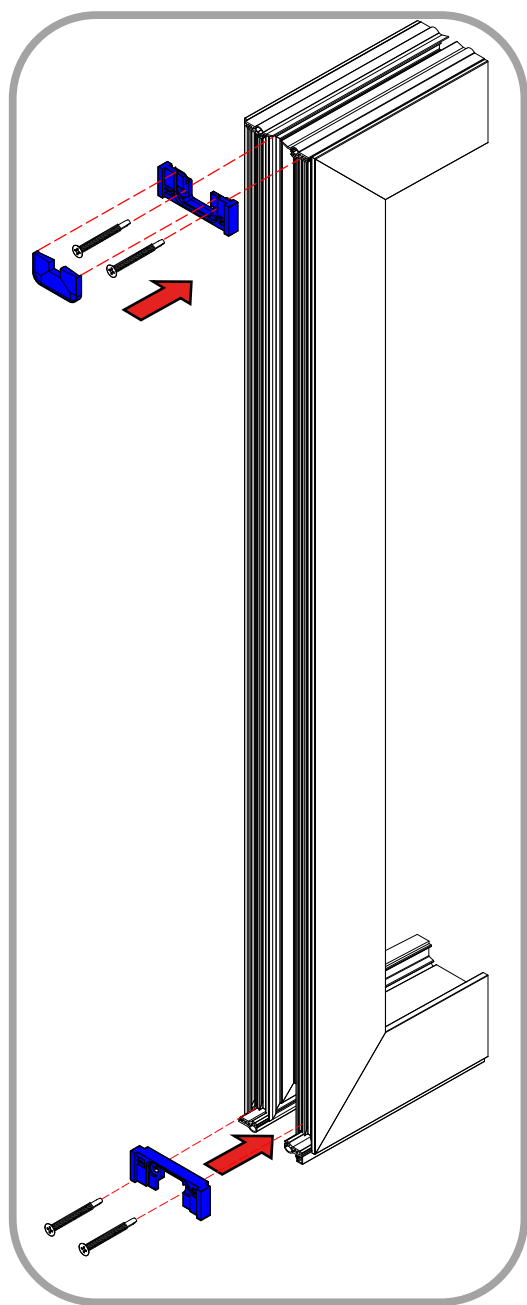


- Assemblaggio Carter Incontro Centrale
- Assembling Central Profile Carter

- Mobile + Mobile
- Sliding + Sliding

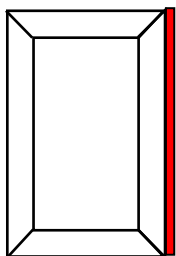


Anta | Sash 45°



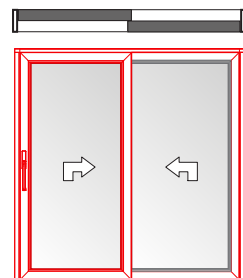
- 1** Applicazione Tappo e Spazzolino Superiore e Inferiore
Upper Cap with Brush and Bottom Cap Installation
- 2** Installazione Carter HX16.307
Carter Profile HX16.307 Installation
- 3** Tappo Superiore Coprilavorazione per Fissaggio Spazzolino e Tappo inferiore Coprilavorazione
Upper Finishing Cap to fix Upper Brush and Bottom Finishing Cap

ANTA
SASH

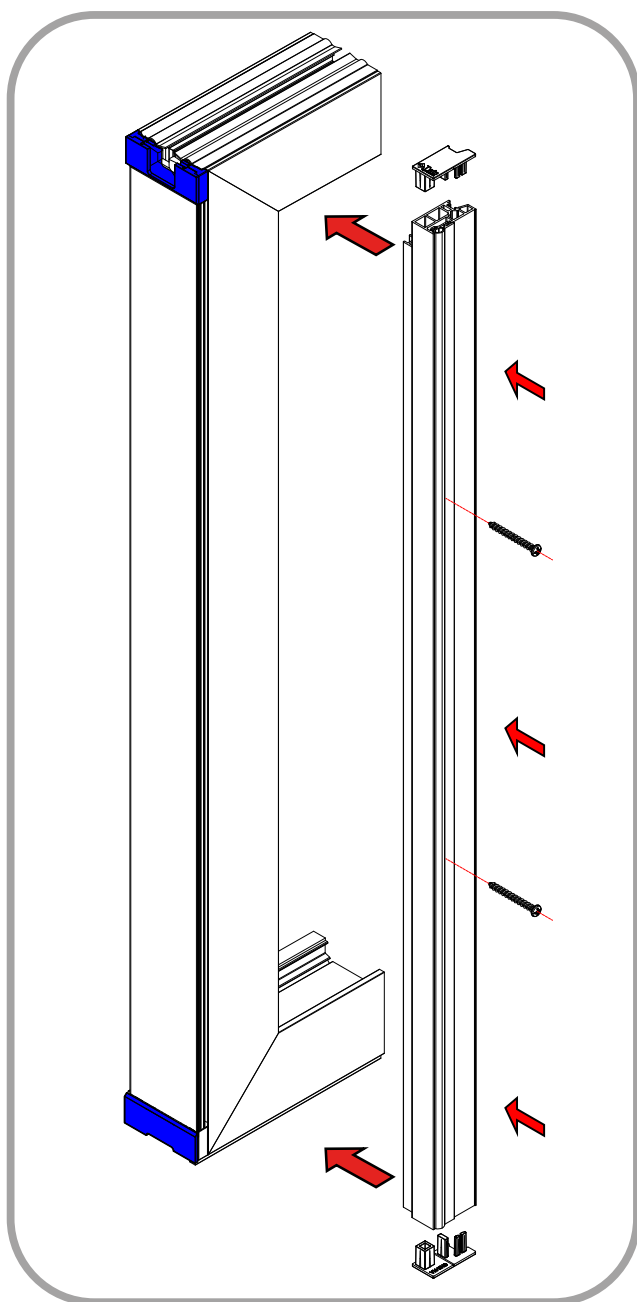


- Assemblaggio Carter Incontro Centrale
- Assemblingr Central Profile Carter

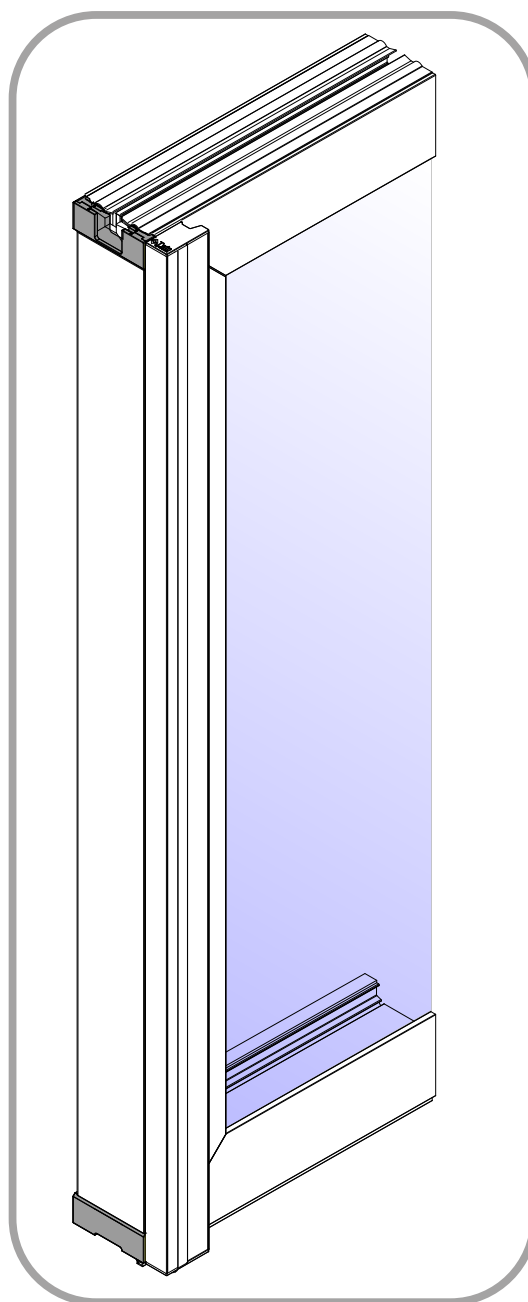
- Mobile + Mobile
- Sliding + Sliding



Anta | Sash 45°



4 Maniglione Trascinavetro con Viti e Cover di Finitura [OPZIONALE]
Sash Mover Handle with screws and finishing Cover [OPTIONAL]

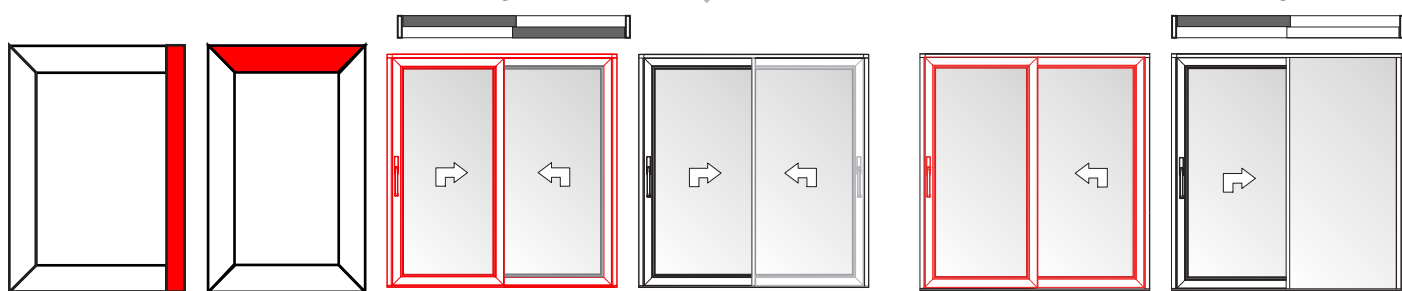


5 Sequenza Completa
Complete Sequence

ANTA
SASH

■ 2 Scorrevoli
2 Sliding

■ 1 Scorrevole
Sliding



■ RALLENTY Lavorazioni su
HM16.204

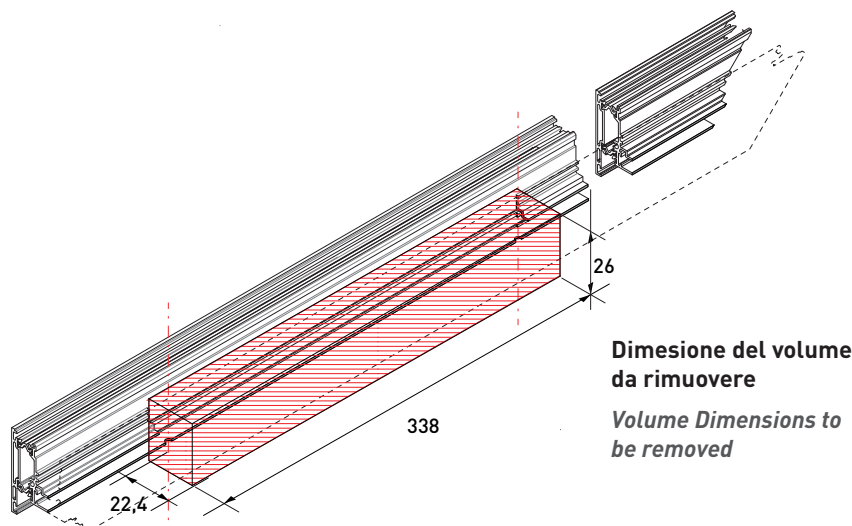
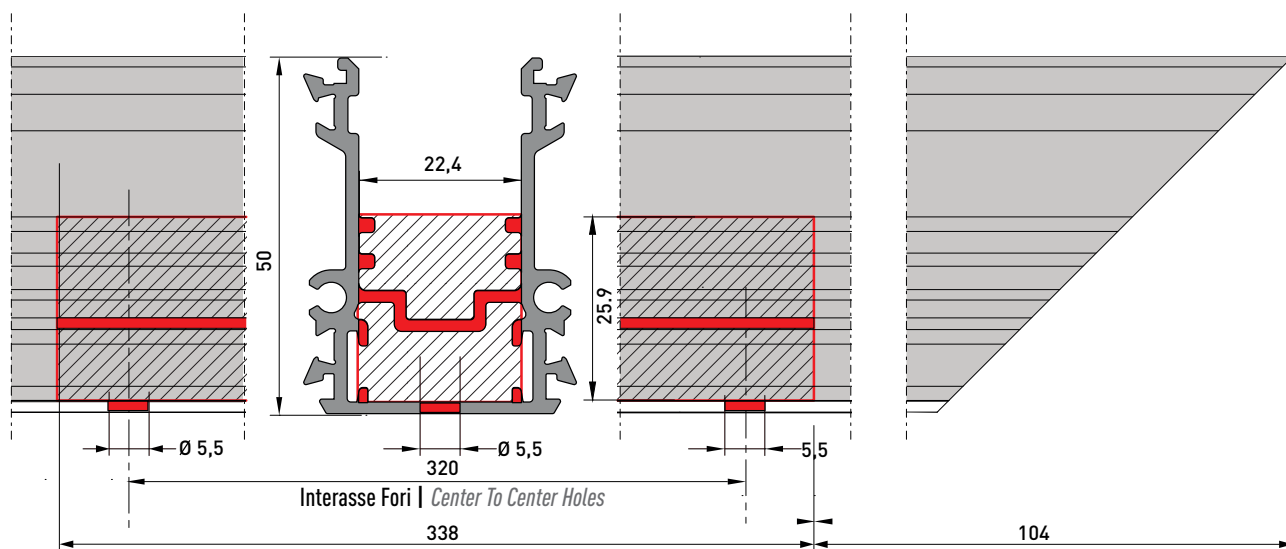
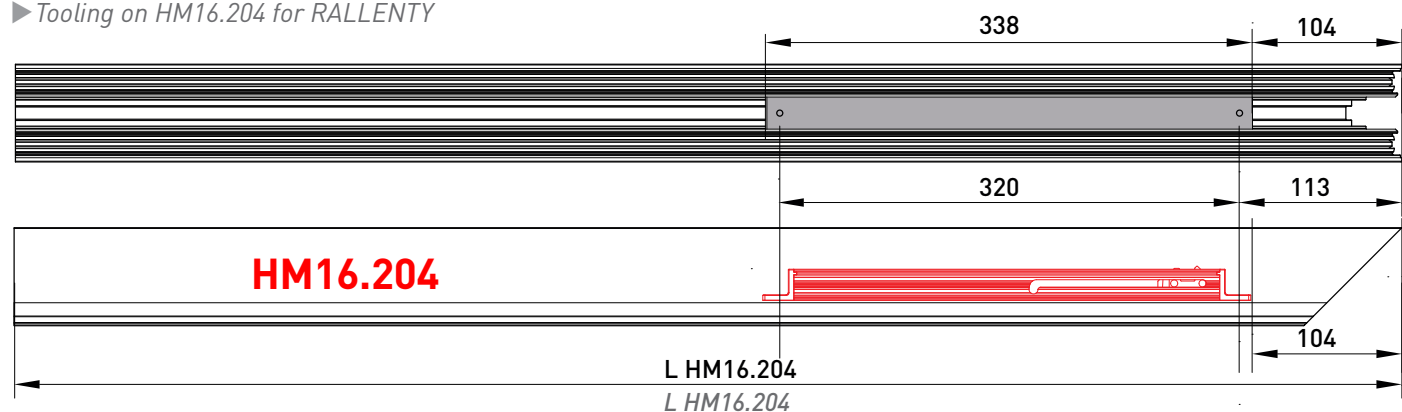
► Tooling on HM16.204 for RALLENTY

Anta | Sash 45°

Anta | Sash 90°

Anta | Sash 45°

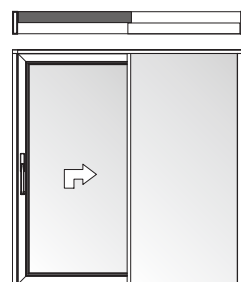
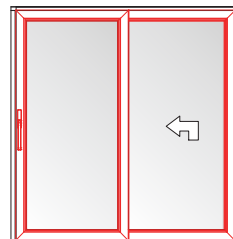
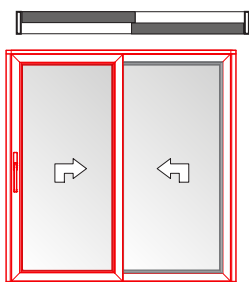
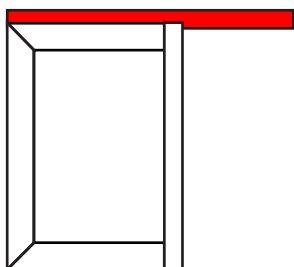
Anta | Sash 90°



ANTA
SASH

■ 2 Scorrevoli
2 Sliding

■ 1 Scorrevole
Sliding



■ RALLENTY Lavorazioni su
XX70.704 | BX49

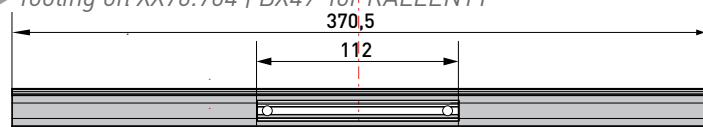
► Tooling on XX70.704 | BX49 for RALLENTY

Anta | Sash 45°

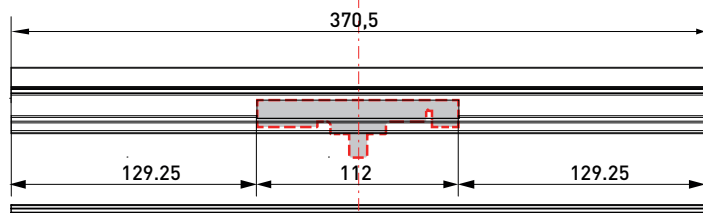
Anta | Sash 90°

Anta | Sash 45°

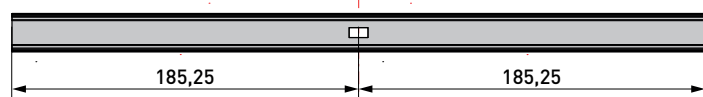
Anta | Sash 90°



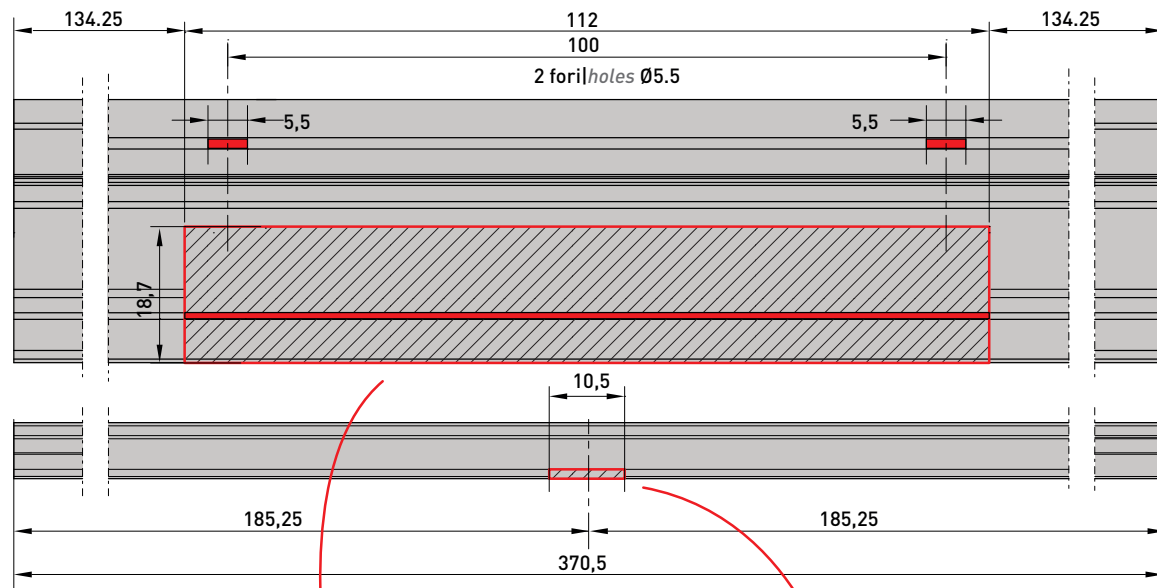
Vista Inferiore
Bottom View



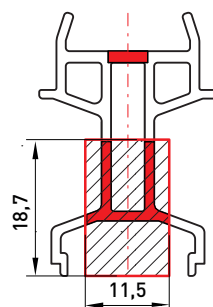
BX49



ASX10.26



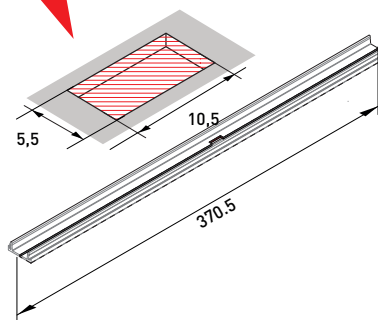
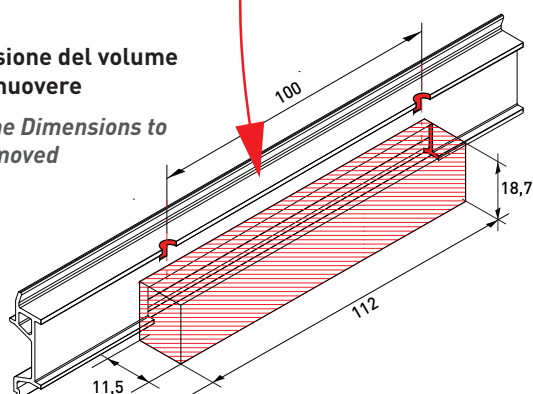
BX49



ASX10.26

Dimensione del volume
da rimuovere

Volume Dimensions to
be removed

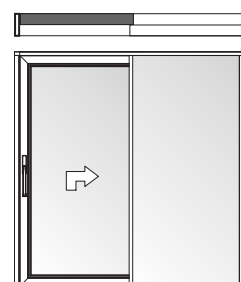
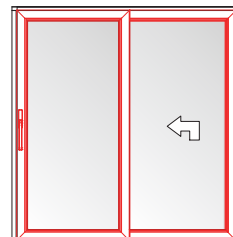
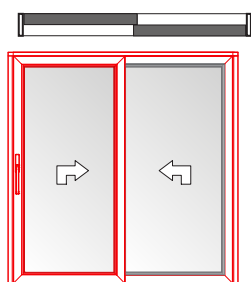


ANTA
SASH

■ RALLENTY Assemblaggio
► RALLENTY Assembling

■ 2 Scorrevoli
2 Sliding

■ 1 Scorrevole
Sliding

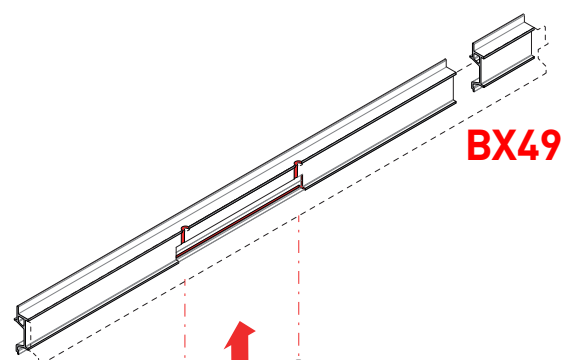
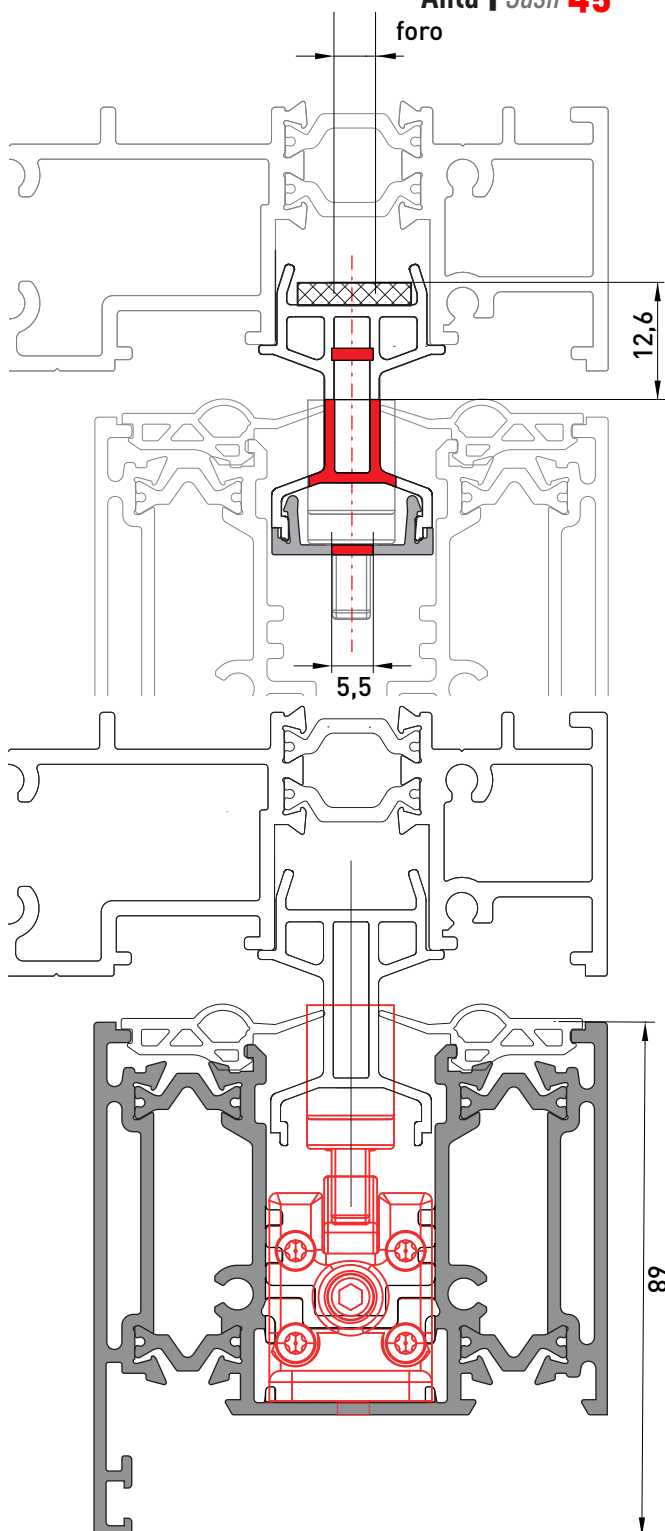


Anta | Sash **45°**

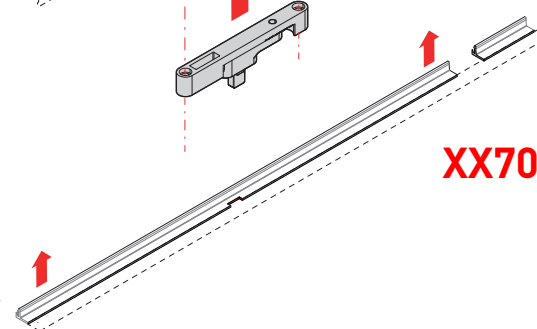
Anta | Sash **90°**

Anta | Sash **45°**

Anta | Sash **90°**



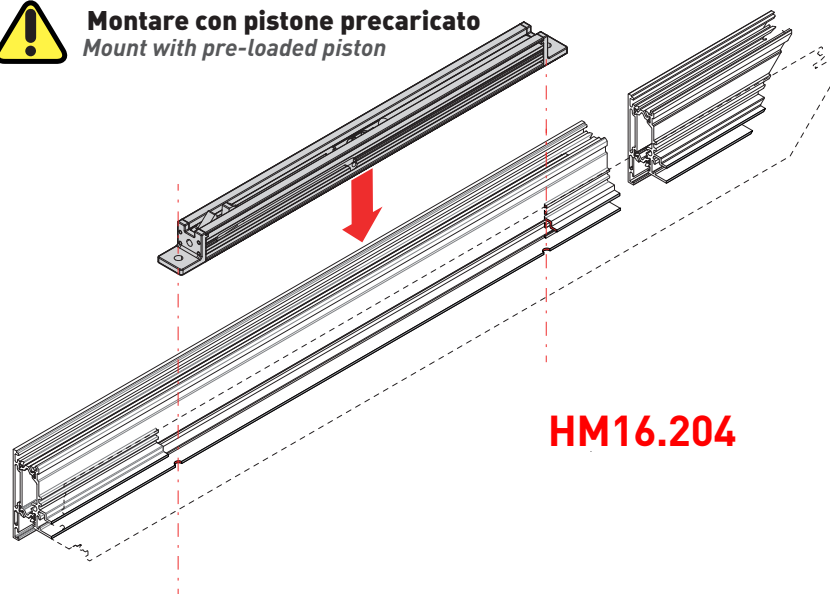
BX49



XX70.704



Montare con pistone precaricato
Mount with pre-loaded piston



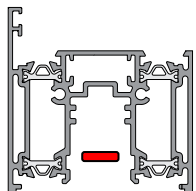
HM16.204



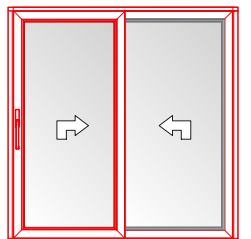
Posizione del riscontro rispetto ai profili della guida superiore in base alla loro lunghezza
Position of the striker with respect to the profiles of the upper guide based on their length

ANTA
SASH

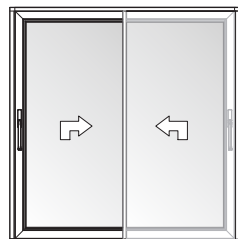
■ Asta di Collegamento |
Posizione VERTICALE
Connection Rod | VERTICAL
Position



■ 2 Scorrevoli
2 Sliding

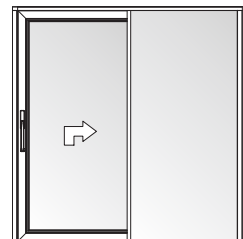


Anta | Sash **45°**



Anta | Sash **90°**

■ 1 Scorrevole
Sliding



Anta | Sash **45°**

Anta | Sash **90°**

Campo di applicazione HS Carrello 250kg Scope of application HS Trolley 250kg

Vite di fissaggio della serratura
Lock Fixing Screw

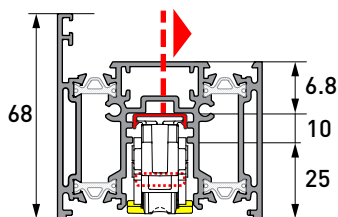
Vite di fissaggio della serratura
Lock Fixing Screw

Vite a testa svasata
Flared Head Screw
M5x10 DIN 965

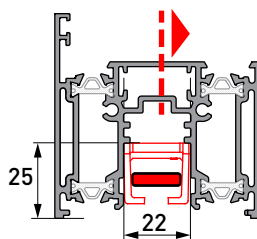


COLLEGAMENTO DEI CARRELLI ALLA SERRATURA:
Questo può essere fatto a scelta sia con la vite di fissaggio che con la vite a testa svasata in dotazione.
TROLLEY CONNECTION TO THE LOCK
This can be done either with the fixing screw or with the countersunk screw provided.

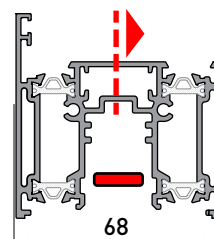
Spessore Fermavetro
Glass Holder GAP



Sezione AA
Section AA



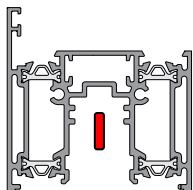
Sezione BB
Section BB



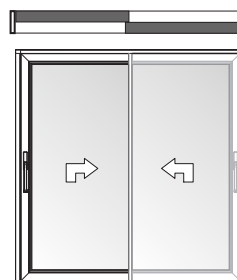
Sezione CC
Section CC

ANTA
SASH

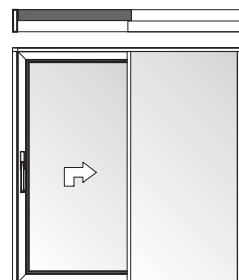
■ Asta di Collegamento | Posizione VERTICALE
Connection Rod | VERTICAL Position



■ Mobile + Mobile
Sliding + Sliding

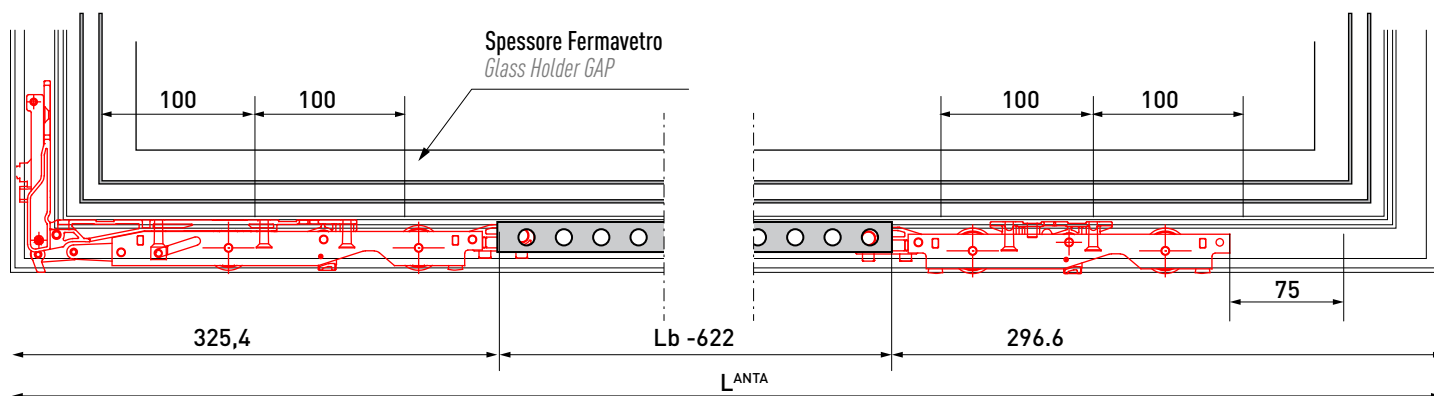


■ Mobile + Vetrata
Sliding + Glaze

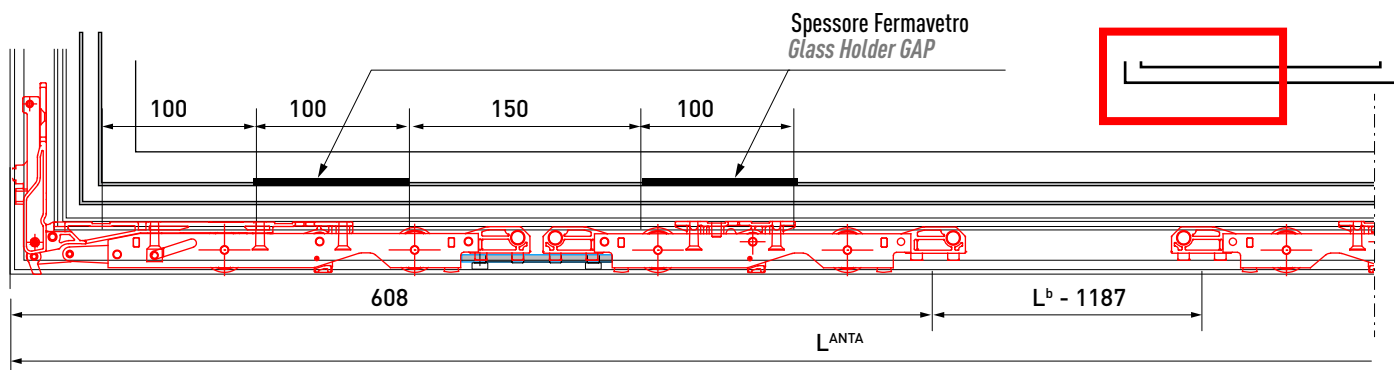


Anta | Sash 90°

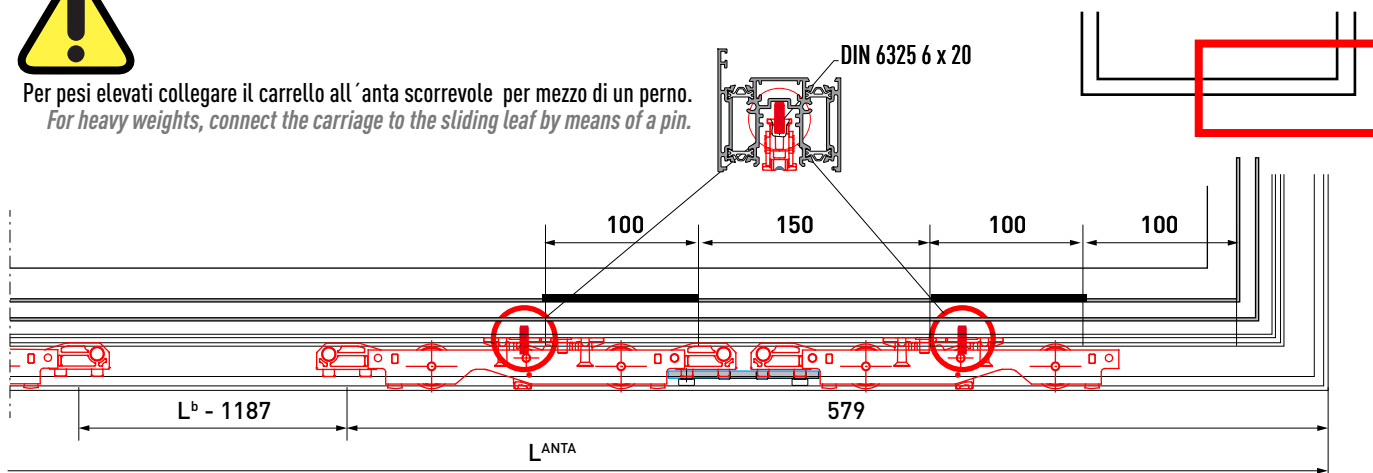
Campo di applicazione HS Carrello 250kg Scope of application HS Trolley 250kg



Campo di applicazione HS Carrello 400kg
Scope of application HS Trolley 400kg



Per pesi elevati collegare il carrello all'anta scorrevole per mezzo di un perno.
For heavy weights, connect the carriage to the sliding leaf by means of a pin.



**ANTA
SASH**

■ KIT AHM16.6745.73

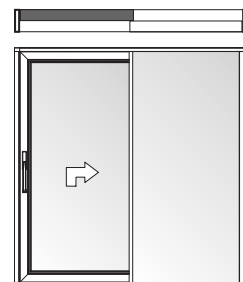
ANTIEFFRAZIONE

► KIT AHM16.6745.73

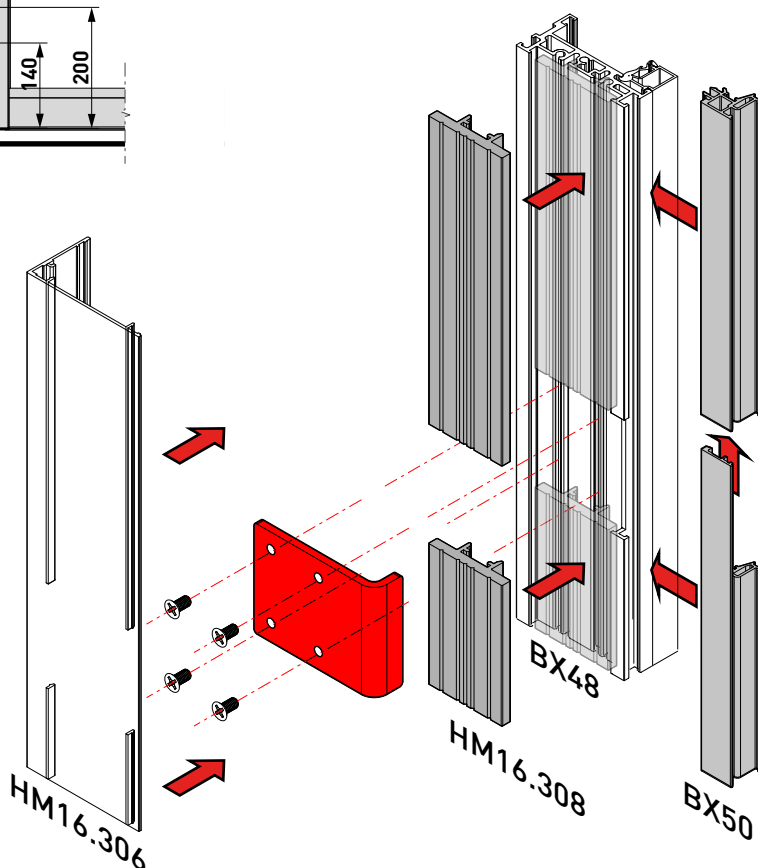
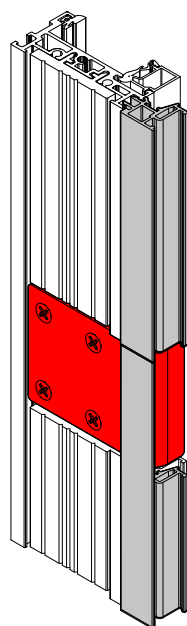
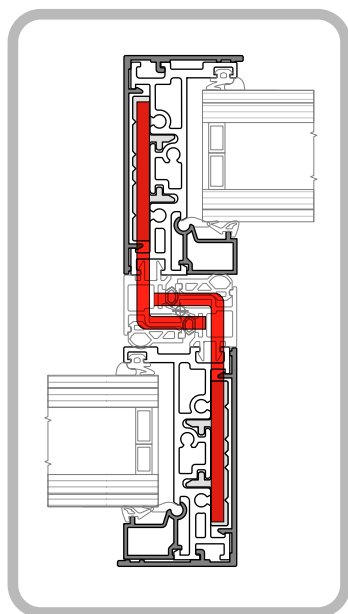
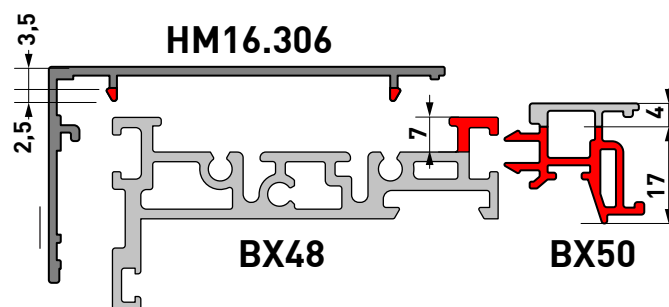
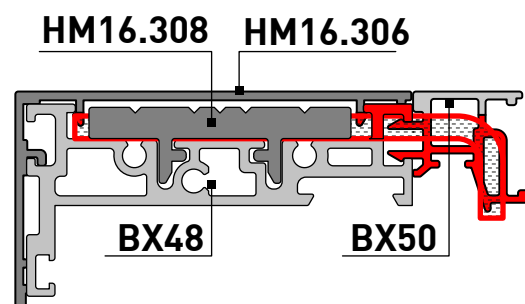
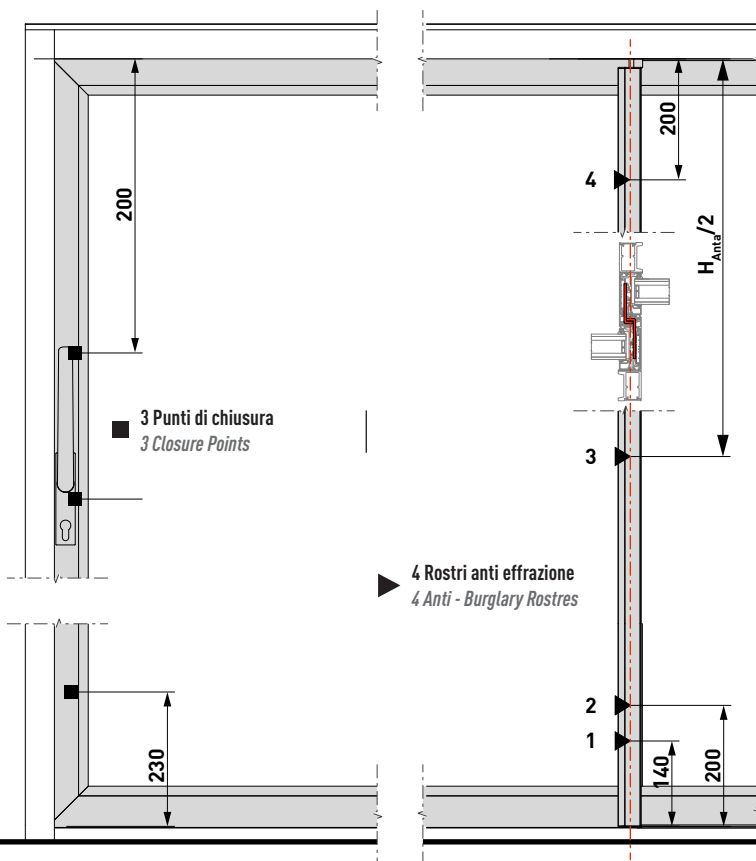
ANTI-BURGLARY

Rif cert. RC3 n° 0873RP

■ Mobile + Fisso
Sliding + Fixed



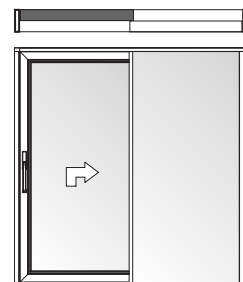
Anta | Sash **90°**



ANTA
SASH

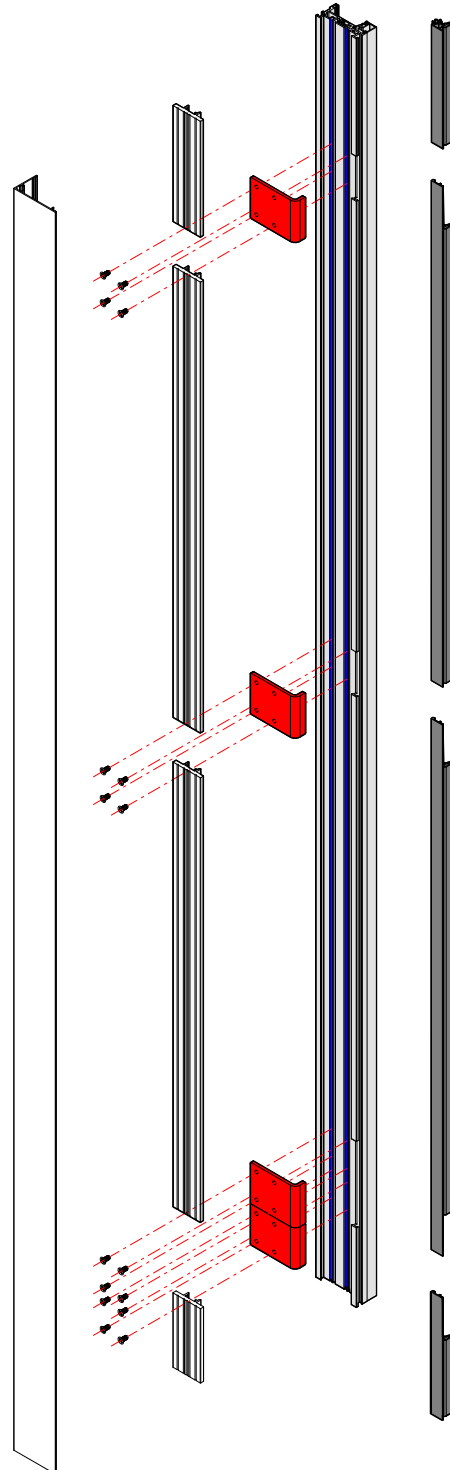
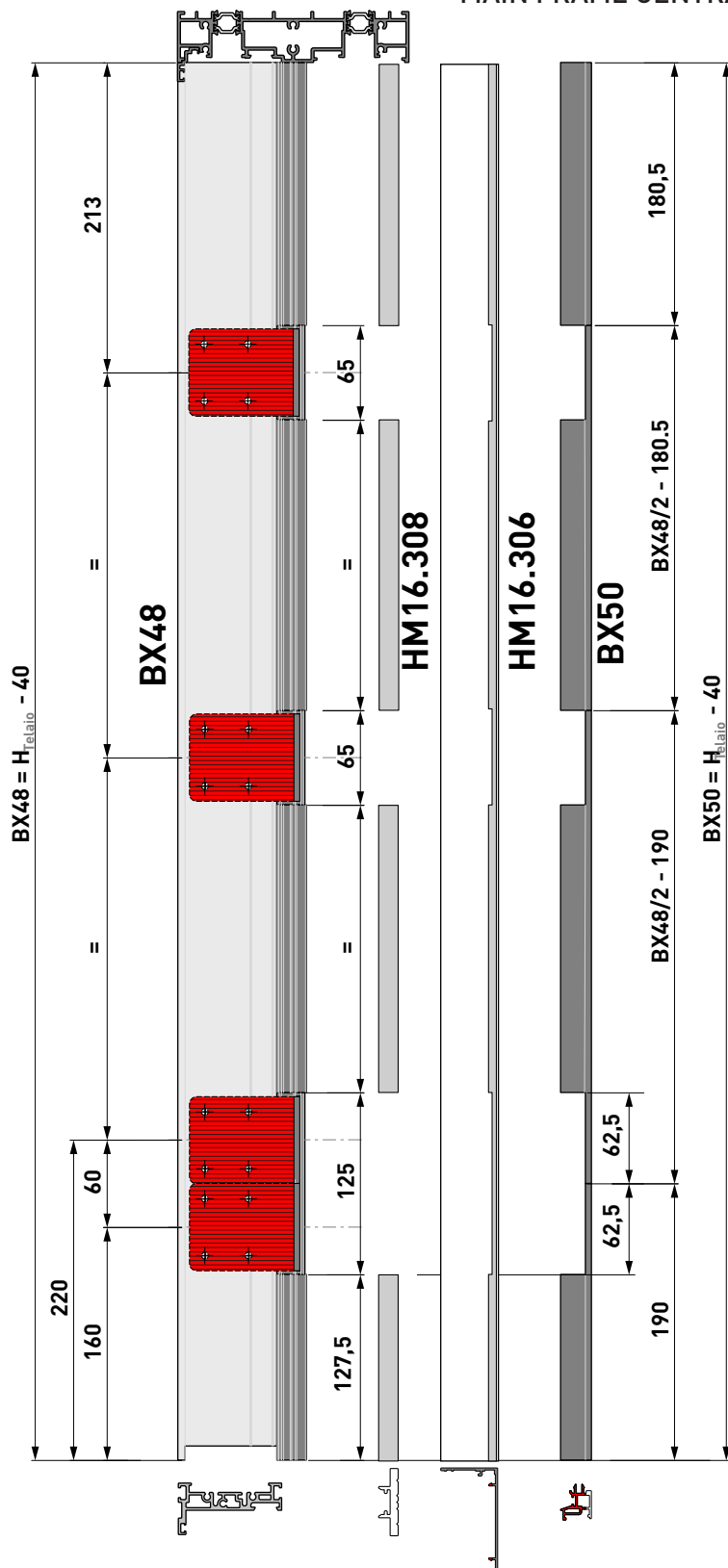
- KIT AHM16.6745.73
ANTIEFFRAZIONE
- KIT AHM16.6745.73
ANTI-BURGLARY

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash 90°

MONTANTE CENTRALE TELAIO
MAIN FRAME CENTRAL MULLION



ANTA
SASH

■ KIT AHM16.6745.73

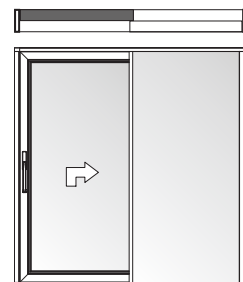
ANTIEFFRAZIONE

► KIT AHM16.6745.73

ANTI-BURGLARY

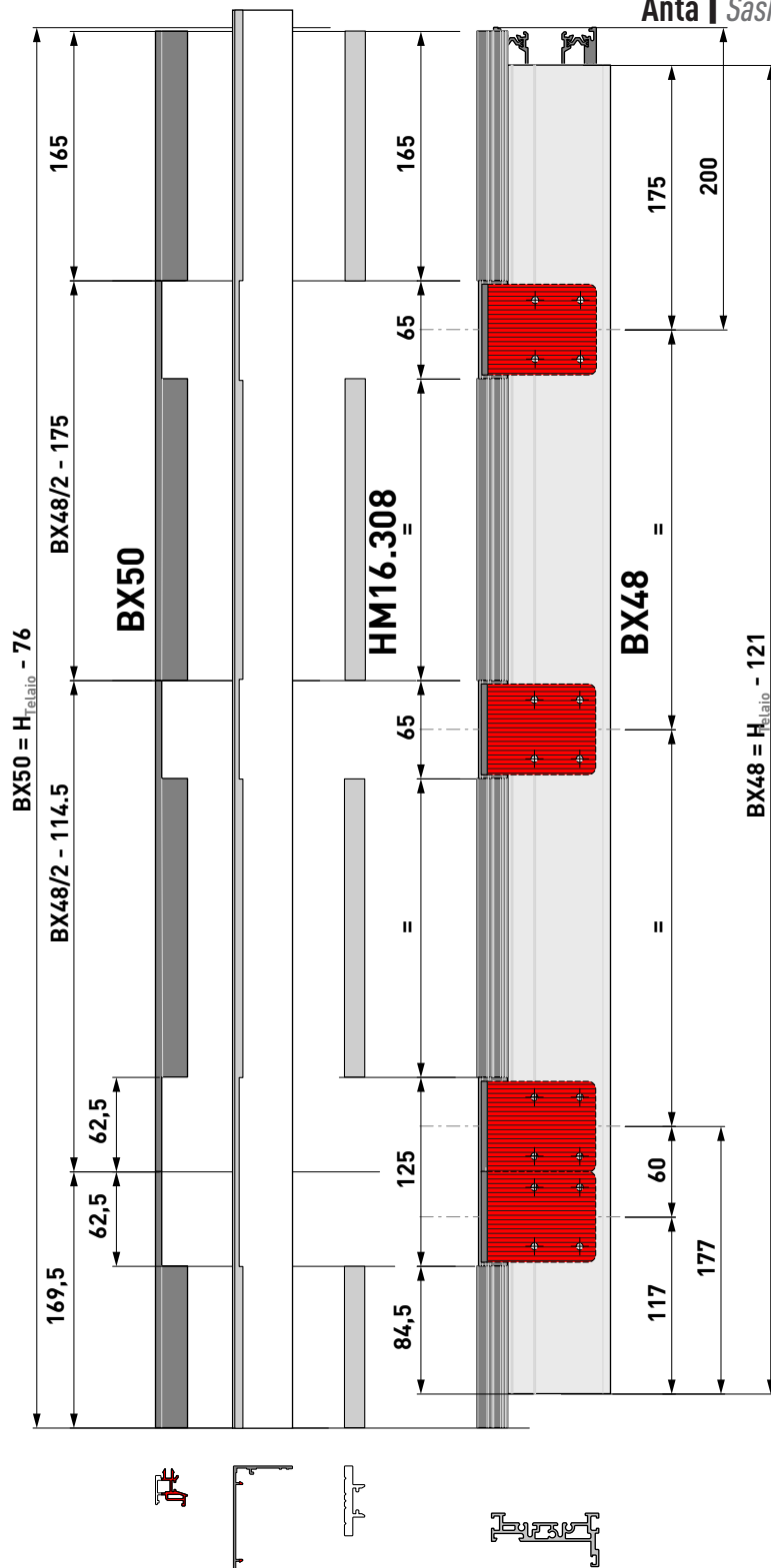
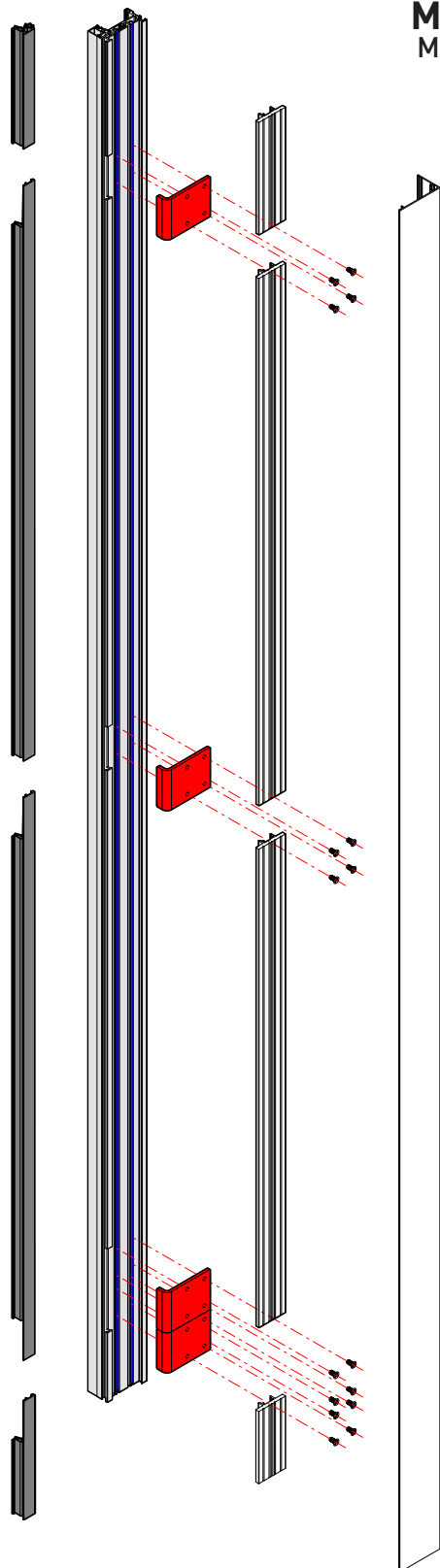
Rif cert. RC3 n° 0873RP

■ Mobile + Fisso
Sliding + Fixed

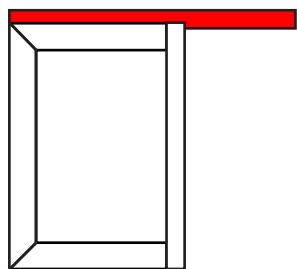


Anta | Sash 90°

MONTANTE CENTRALE ANTA
MOBILE SASH CENTRAL MULLION

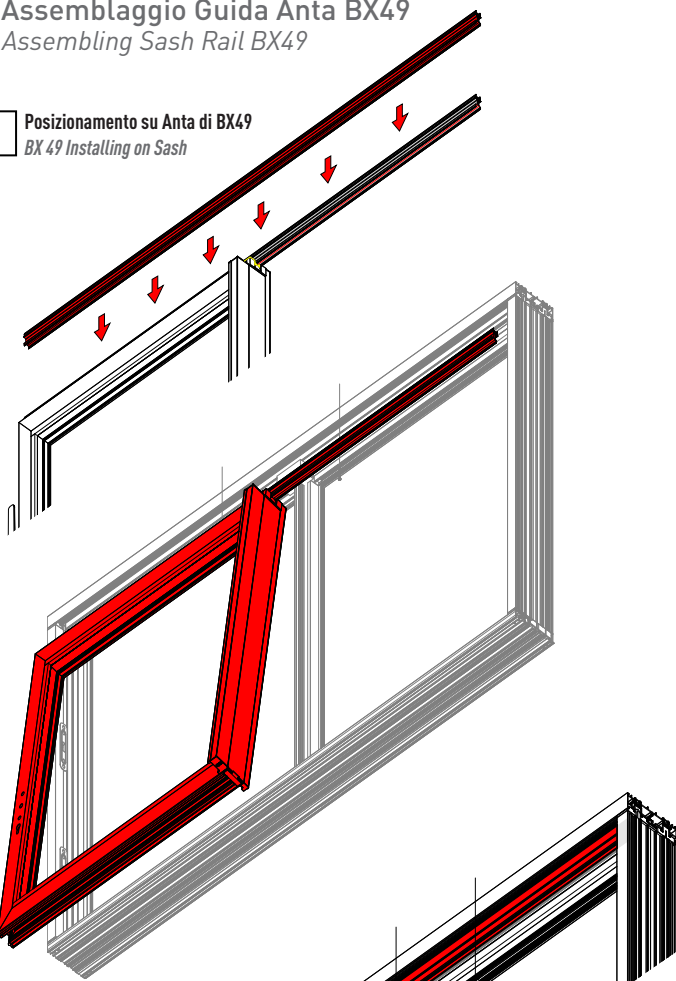


ANTA
SASH

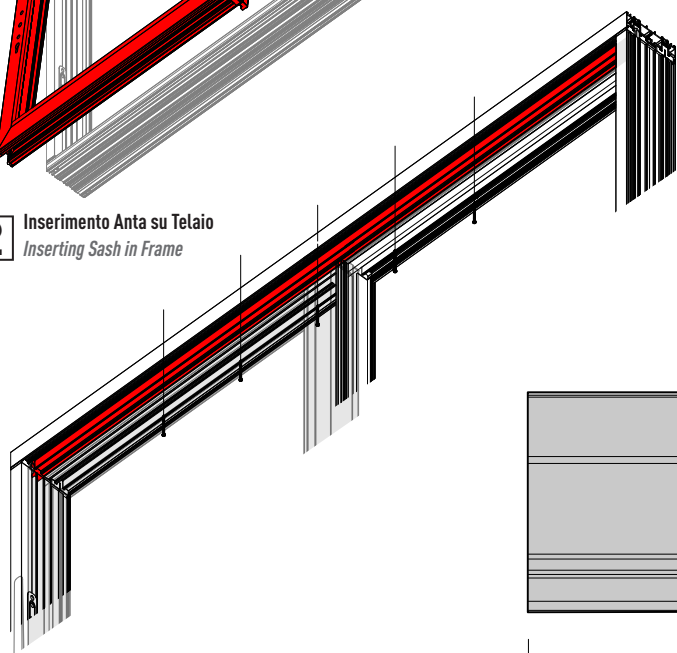


- Assemblaggio Guida Anta BX49
- Assembling Sash Rail BX49

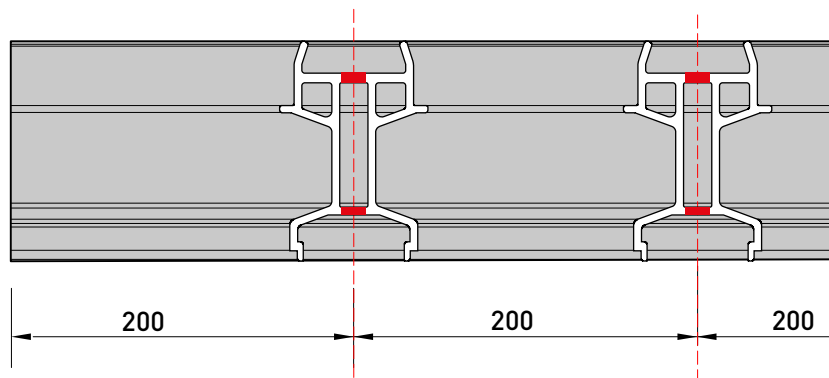
- 1** Posizionamento su Anta di BX49
BX 49 Installing on Sash



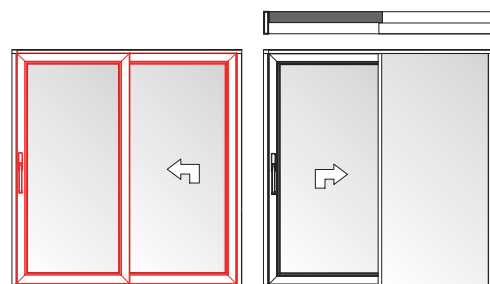
- 2** Inserimento Anta su Telaio
Inserting Sash in Frame



- 3** Fissaggio Guida BX49 su Telaio. Viti Passo 200 mm
Fixing Rail BX49 on Frame. Screw every 200 mm.

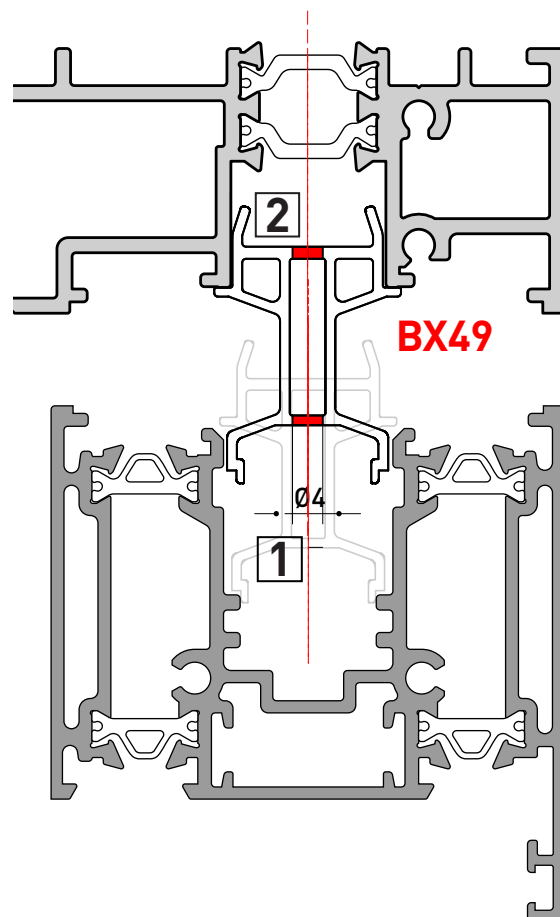


- Mobile + Fisso
Sliding + Fixed

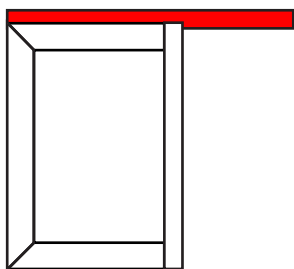


Anta | Sash **45°**

Anta | Sash **90°**

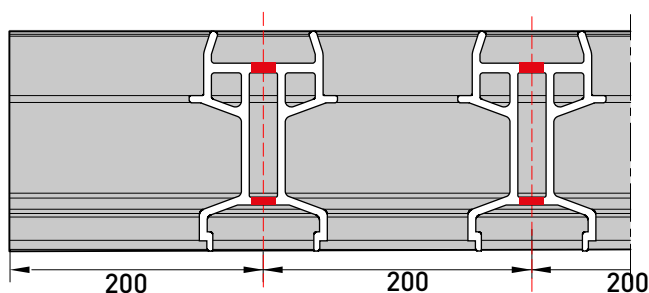


TELAIO
MAIN FRAME

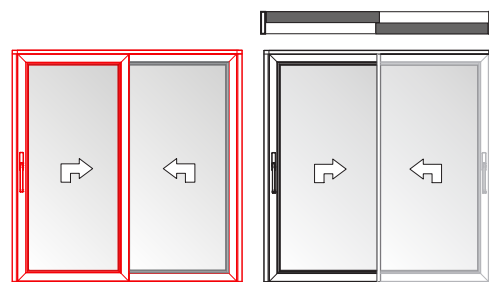


■ Inserimento Anta BX49

► Inserting Sash BX49

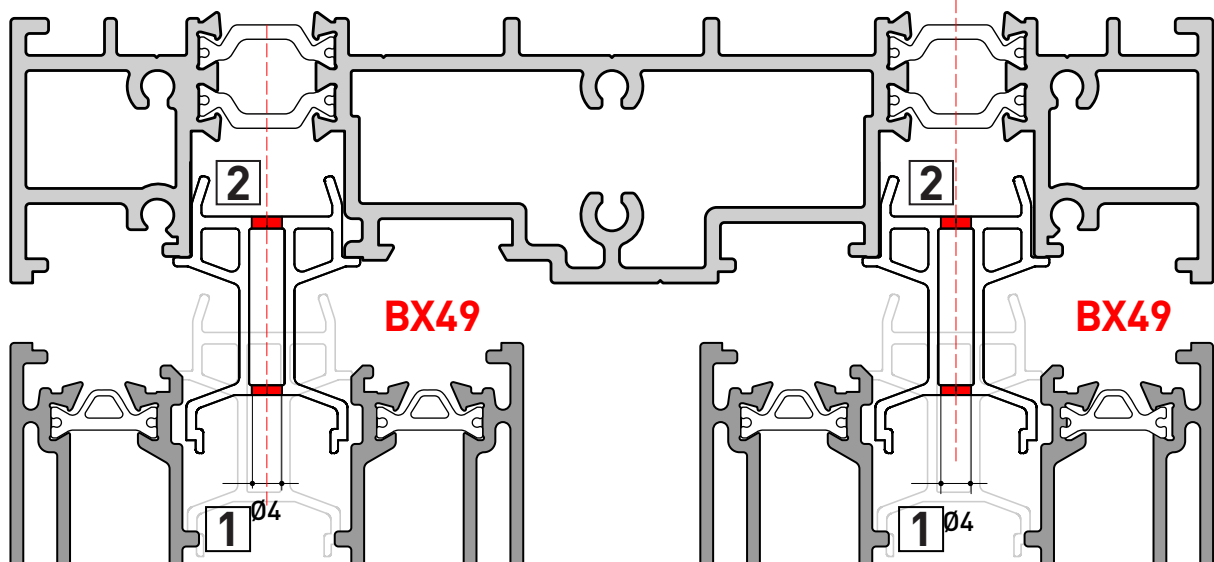


■ Mobile + Mobile
Sliding + Sliding



Anta | Sash **45°**

Anta | Sash **90°**

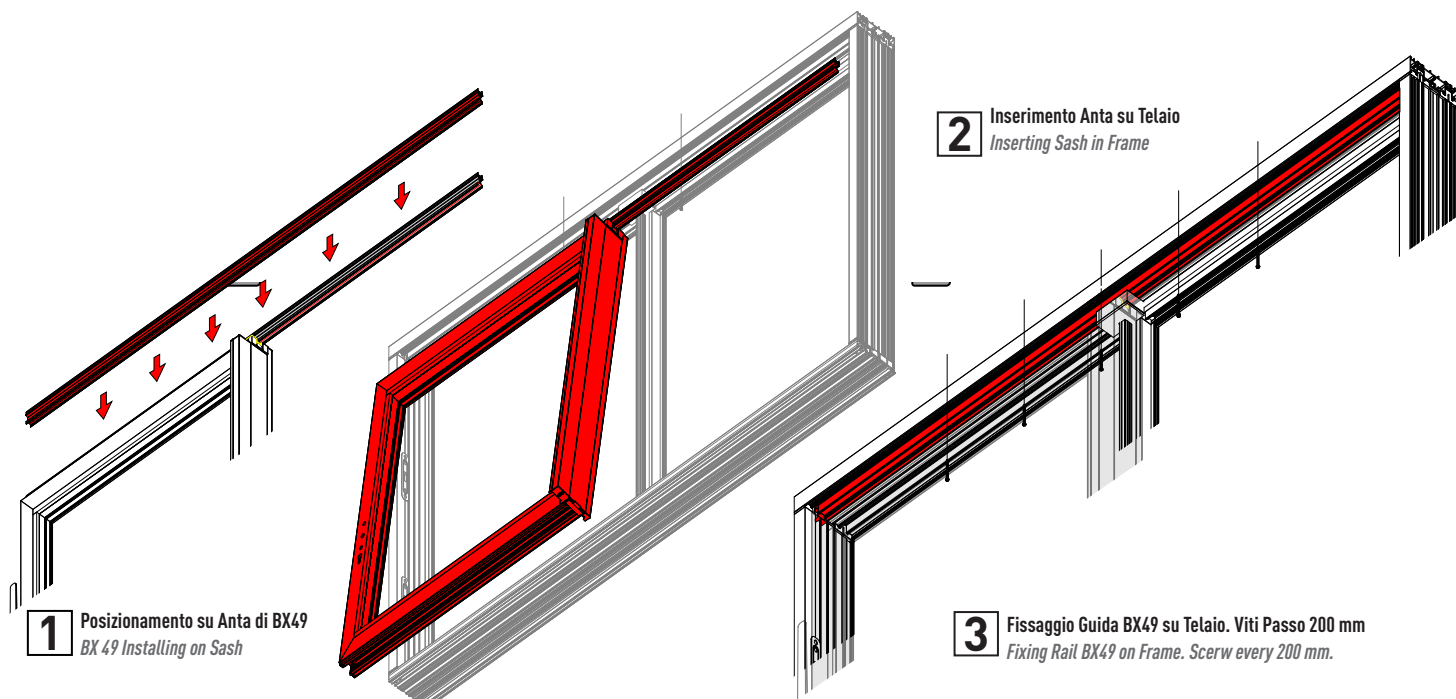


BX49

BX49

1 Ø4

1 Ø4



1 Posizionamento su Anta di BX49
BX 49 Installing on Sash

2 Inserimento Anta su Telaio
Inserting Sash in Frame

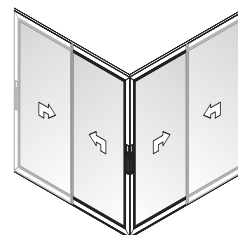
3 Fissaggio Guida BX49 su Telaio. Viti Passo 200 mm
Fixing Rail BX49 on Frame. Screw every 200 mm.

TELAIO ANGOLO 90°
MAIN FRAME 90° CORNER



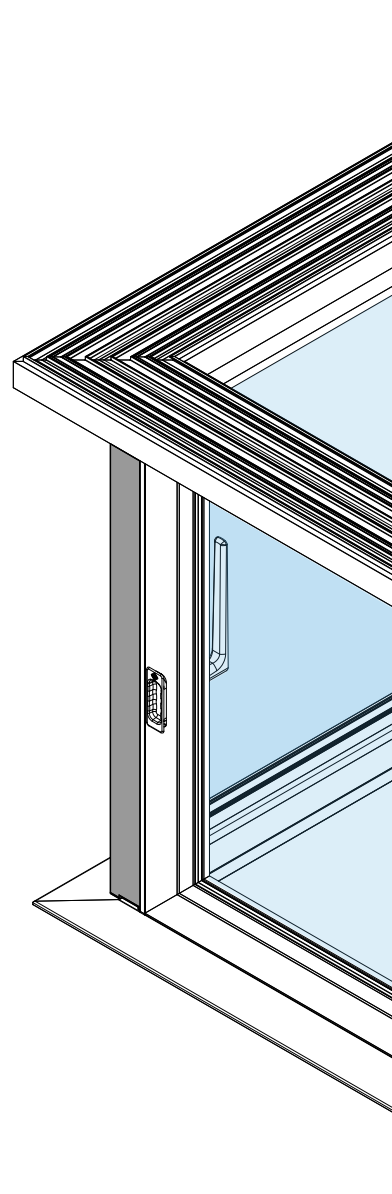
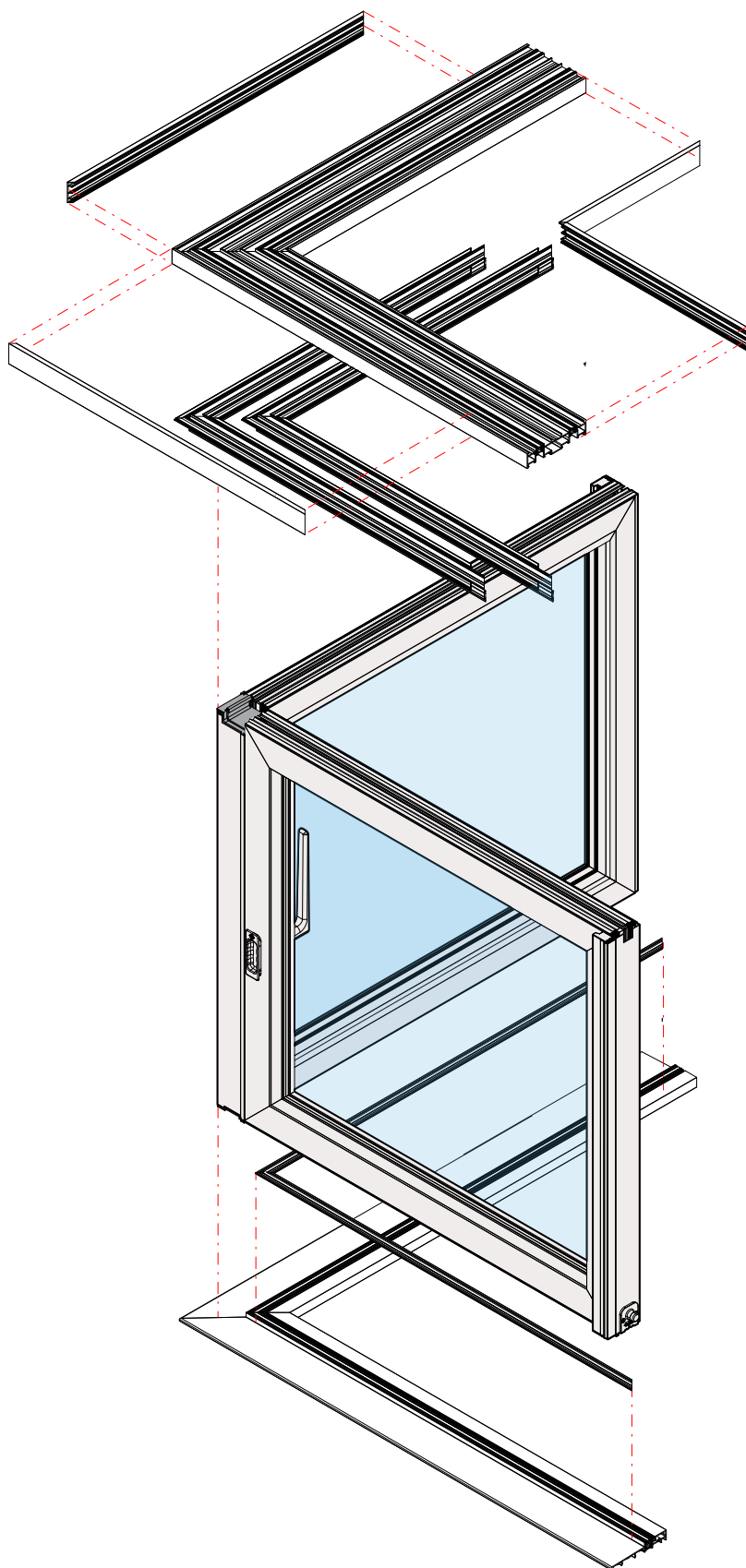
■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash **90°**

Anta | Sash **45°**

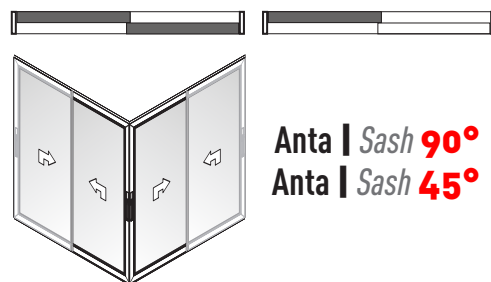


TELAIO ANGOLO 90°
MAIN FRAME 90° CORNER

- Lavorazioni su HM16.509
- Tooling on HM16.509

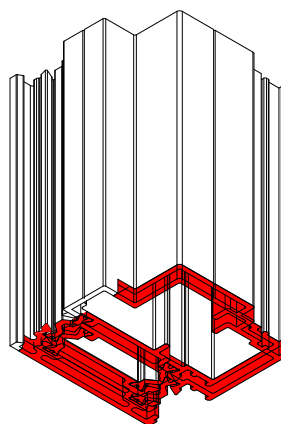
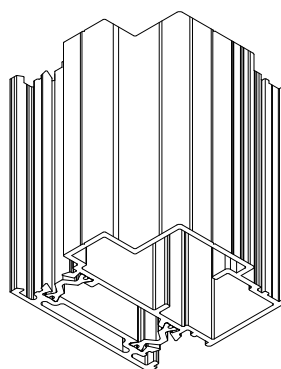
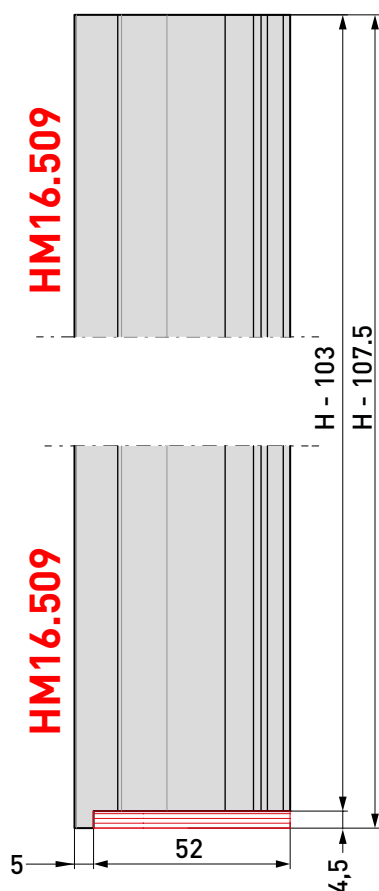
■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed

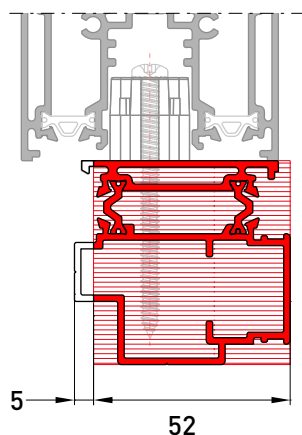


Anta | Sash **90°**
Anta | Sash **45°**

LATO SUPERIORE
UPPER SIDE



LATO INFERIORE
BOTTOM SIDE



HM16.204

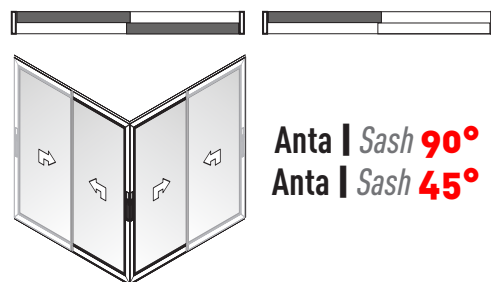
HM16.509

TELAIO ANGOLO 90°
MAIN FRAME 90° CORNER

- Lavorazioni su HM16.510
- Tooling on HM16.510

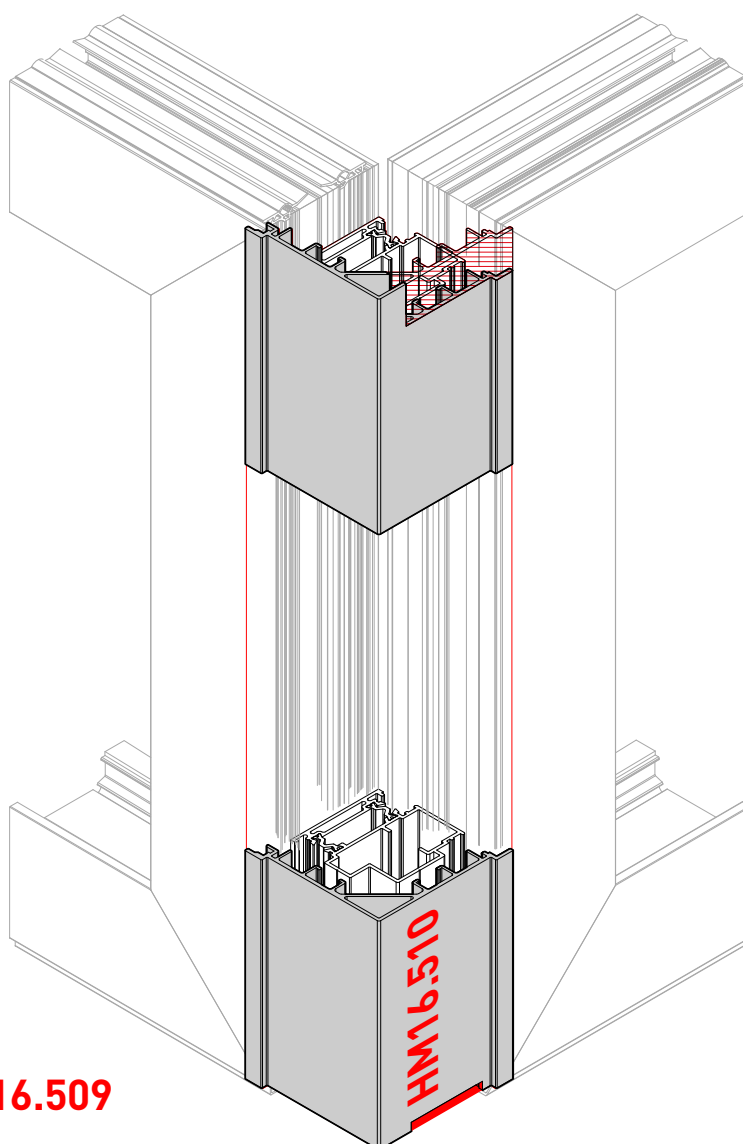
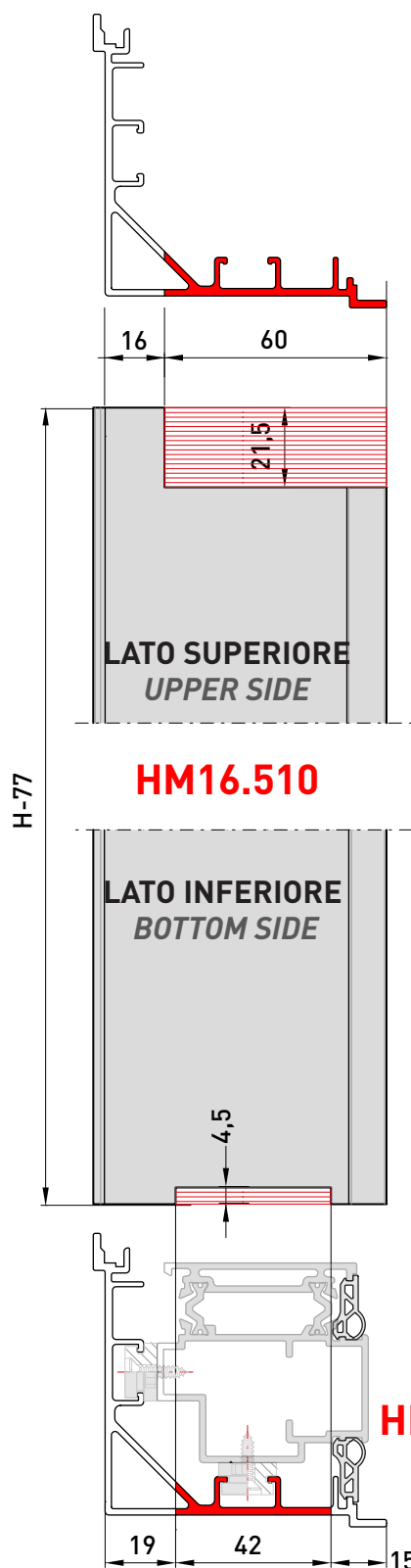
■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash **90°**

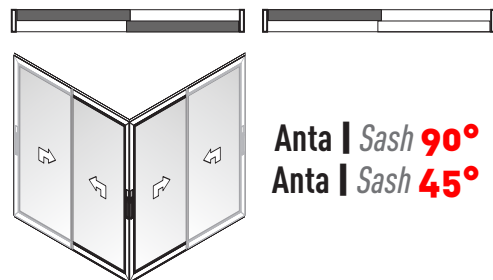
Anta | Sash **45°**



TELAIO ANGOLO 90°
MAIN FRAME 90° CORNER

■ Mobile + Mobile
Sliding + Sliding

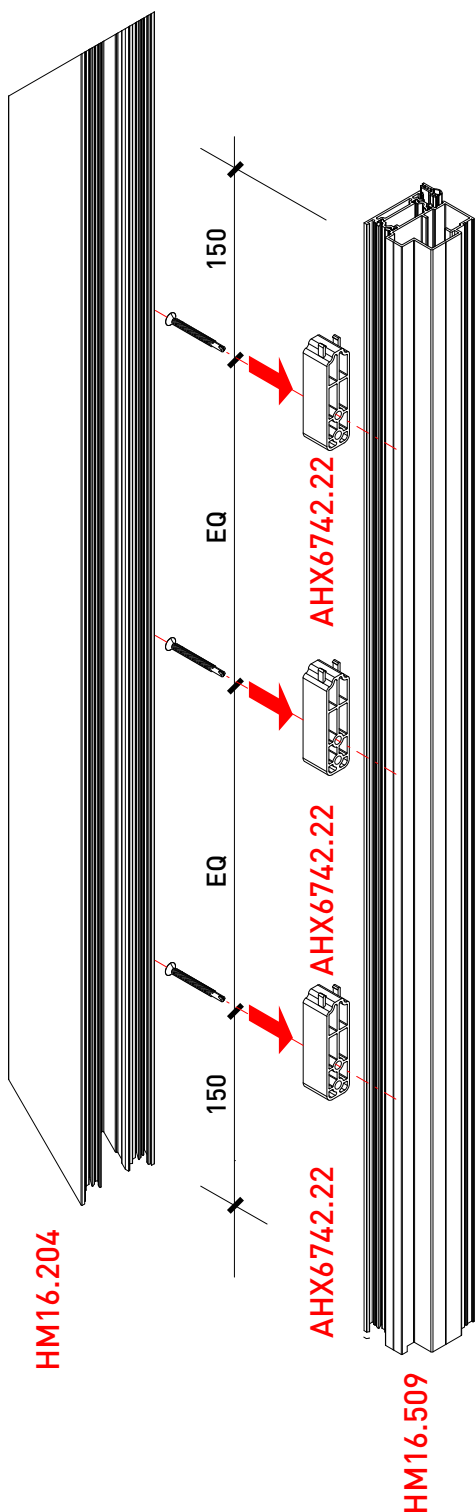
■ Mobile + Fisso
Sliding + Fixed



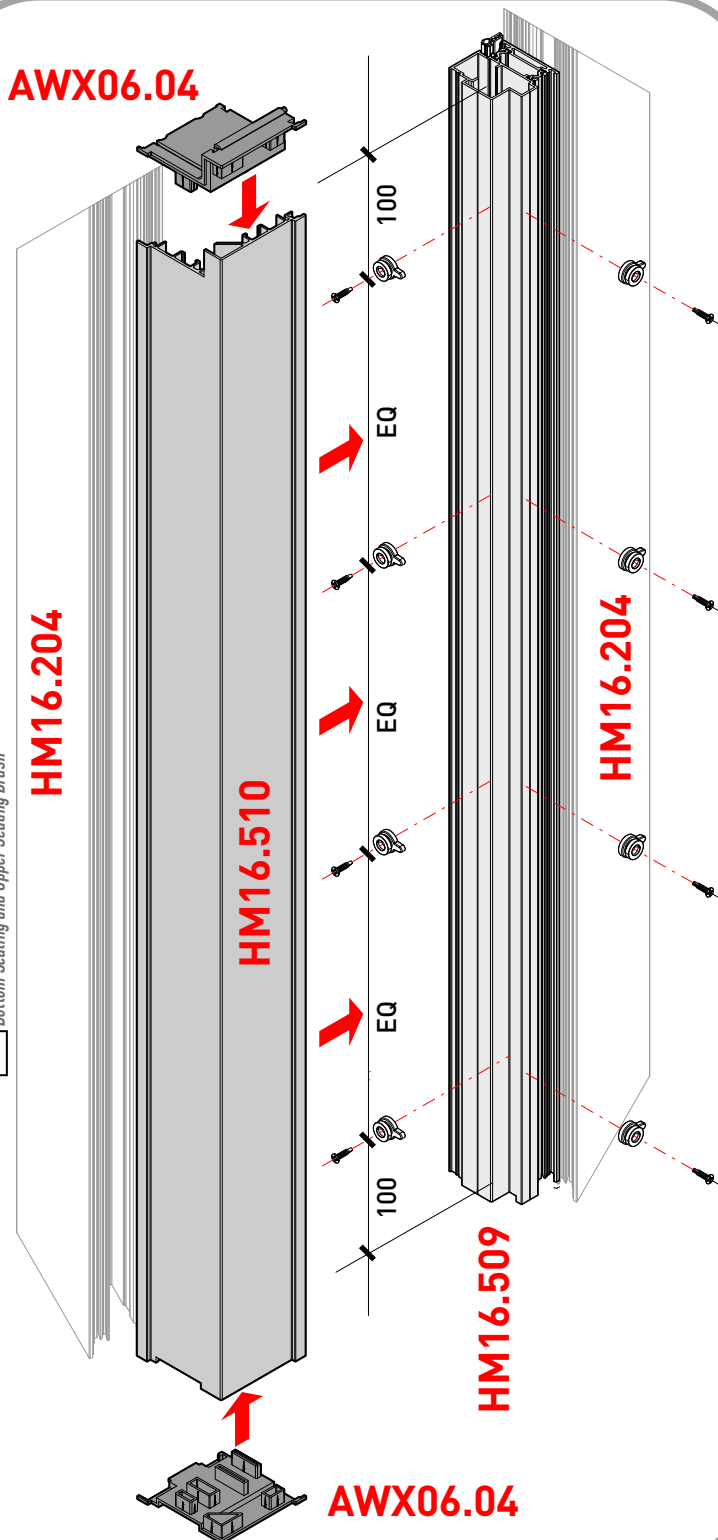
Anta | Sash **90°**

Anta | Sash **45°**

1 Assemblaggio Montante Anta HM16.204 con Montante Angolo HM16.509
Sash Mullion HM 16.204 and Corner Mullion HM16.509 Assembling



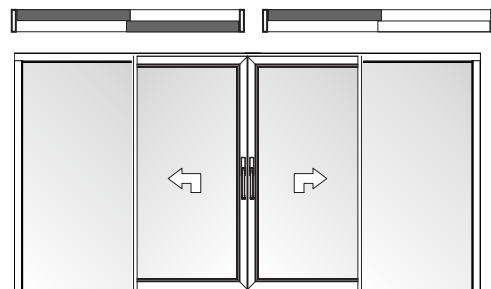
2 Assemblaggio Cover HM16.510 con Anta Mobile
Bottom Sealing and Upper Sealing Brush



RIPORTO CENTRALE 4 ANTE
4 SASHES CENTRAL MULLION

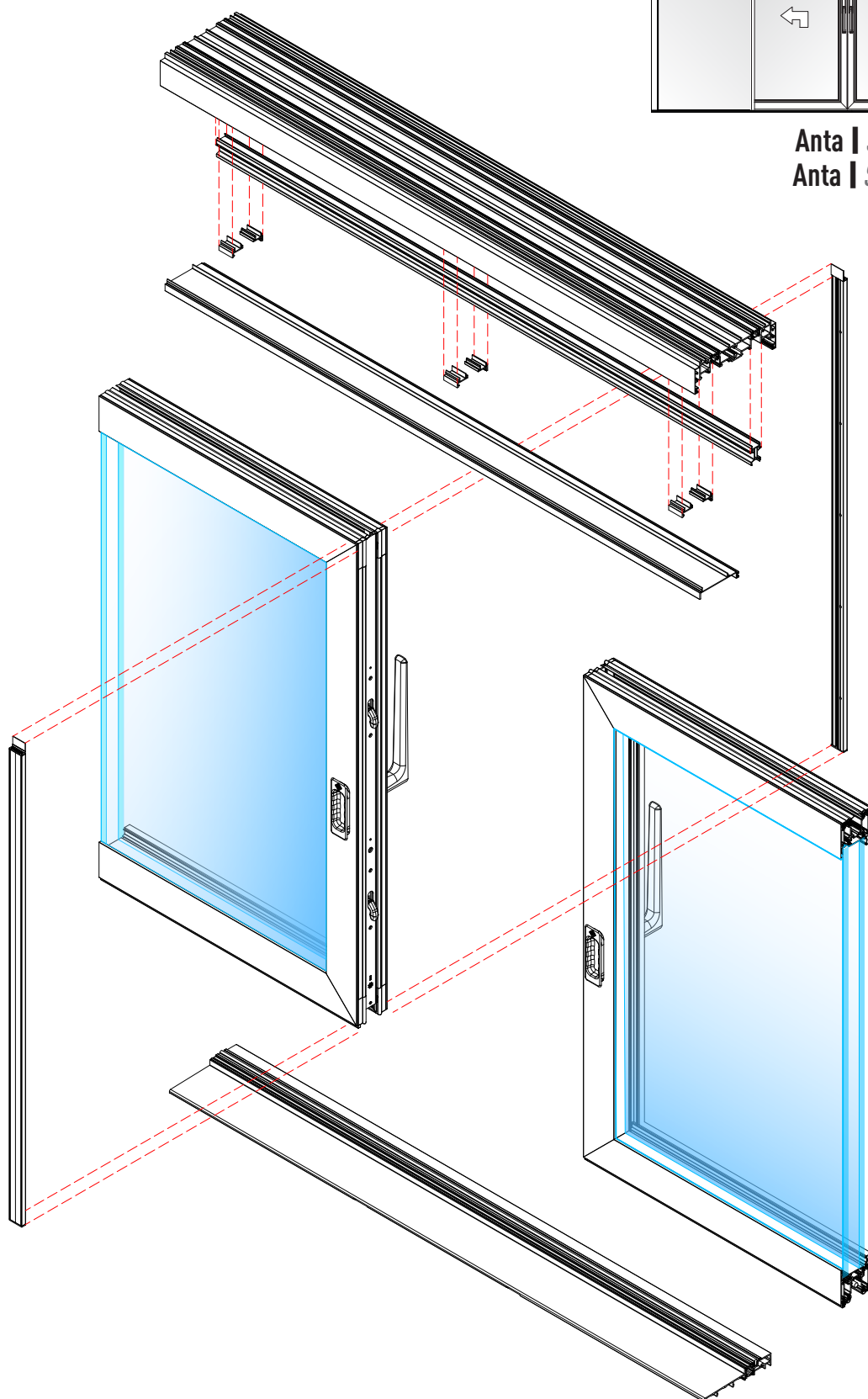
■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed



Anta | Sash **90°**

Anta | Sash **45°**



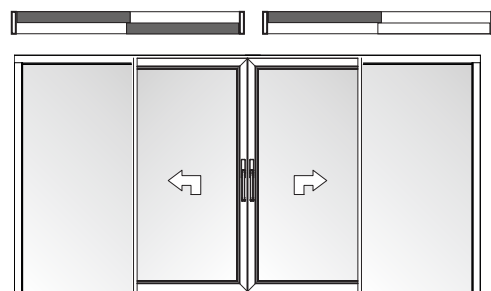
RIPORTO CENTRALE 4 ANTE
4 SASHES CENTRAL MULLION

■ Installazione HM16.511

► Installation HM16.511

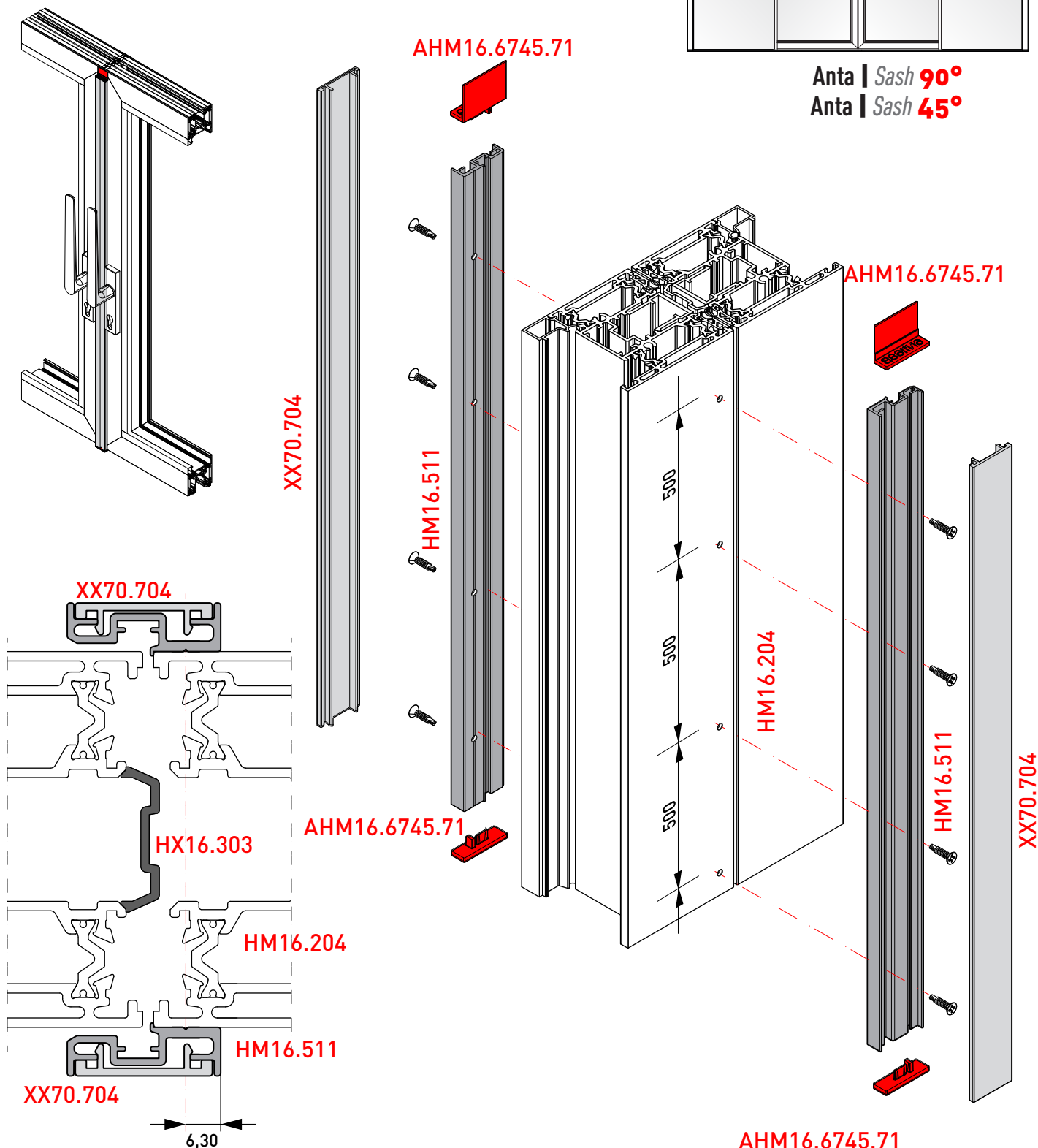
■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed



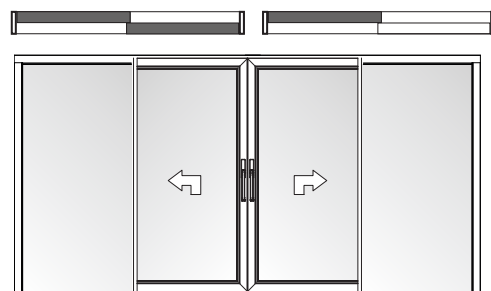
Anta | Sash **90°**

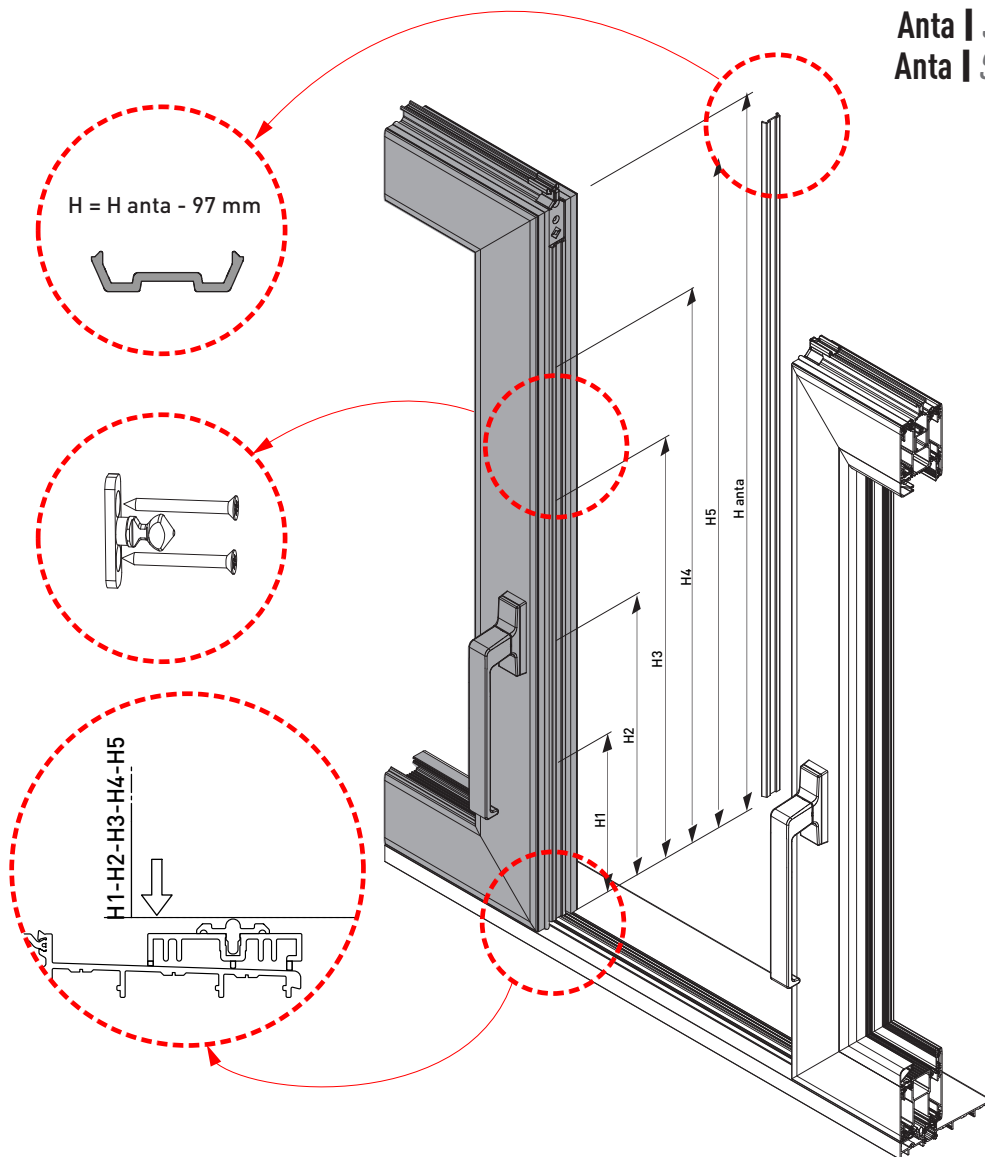
Anta | Sash **45°**



RIPORTO CENTRALE 4 ANTE
4 SASHES CENTRAL MULLION

■ Mobile + Mobile
Sliding + Sliding

■ Mobile + Fisso
Sliding + Fixed

Anta | Sash **90°**

Anta | Sash **45°**


CODICE CODE	SERRATURA ALZANTE Lock for Lifting Sash	H1	H2	H3	H4	H5
AHM16.6730.2	HM=400 / HBB=745-1360 / L=1300	195.5	585.5			
AHM16.6730.3	HM=400 / HBB=1260-1760 / L=1700	195.5	585.5	1100		
AHM16.6730.4	HM=1000 / HBB=1660-2160 / L=2100	195.5	695.5	1185	1500	
AHM16.6730.5	HM=1000 / HBB=2060-2560 / L=2500	195.5	695.5	1185	1900	
AHM16.6730.6	HM=1000 / HBB=2460-2860 / L=2800	195.5	695.5	1185	2300	
AHM16.6730.7	HM=1000 / HBB=2760-3360 / L=3300	195.5	695.5	1185	1900	2700
AHM16.6730.8	HM=1000 / HBB=3260-3860 / L=3800	195.5	695.5	1185	2300	3100

Gli archivi digitali dei prodotti TWIN SYSTEMS
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*The digital files of the TWIN SYSTEMS
products are available in the formats at:*

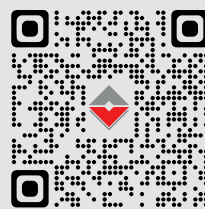


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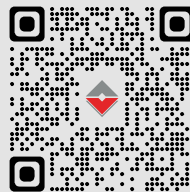
www.twinsystems.it/web/richiesta-dwg



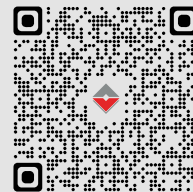
Il presente Catalogo assieme ai cataloghi di tutti i
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