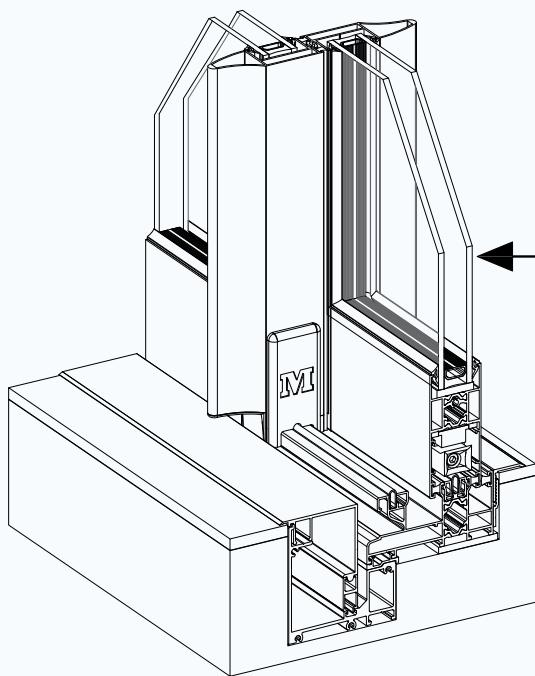


**hayatın her yerinde**  
*in every aspect of life*

# MİMARİ SİSTEM KATOLOĞU

ARCHITECTUR ALSYSTEM  
CATALOGUE

**FERMOSA**  
SYSTEM



## MAESTRO 89

*Sürme Sistemi / Sliding System*



# MAESTRO 89 Insulated Sliding

**MAESTRO 89**" 89,7mm kasa derinliği"; iki ve üç raylı normal sürme varyasyonları.kapsayan ısı yalıtımlı olarak sunan yeni nesil ekonomik bir sürme sistemidir.

## YENİLİKÇİ TASARIM

Sürme sistemler özellikle geniş vizyon alan görmek istenen yerlerde tercih edilen ve estetik olması büyük önem taşıyan ürünlerdir. **MAESTRO 89**'da kullanılan radyuslu tasarım dili, sistemin estetik ve modern yapısını ön plana çıkartmaktadır. Sistemin her detayında görülebilecek bu kıvrımlı yapı, görsel bütünlüğü bozabilecek kenet gibi bölümlerde ince kesitler kullanılmasıyla birleştiğinde sistemin yapıyla bir bütün oluşturmaya sağlanmaktadır. Mimari alüminyum sistemlerde estetiğin artması, imalat ve kullanım zorluğu manasına gelirken; bu tip zorluklar tasarım sürecinin en başında planlandığından,

**MAESTRO 89**'da imalat ve kullanım özelliklerden feragat edilmemiştir.

## EKONOMİKLİK

**MAESTRO 89**'da yüzey kalitesini ve imalat özelliklerini bozmayacak ölçüde ince et kalınlıkları tercih edilirken, taşıyıcılık yönünden önem arz eden kısımlarda geometrik tasarım özelliklerinden faydalalarak, hem hafiflik hem de rıjilik bir arada sağlanmıştır.

## İMALAT KOLAYLIĞI

Sistemin tüm aksesuarları ortak kullanım ve birbiriyile uyumlu çalışma mantığı çerçevesinde tasarlandığından, **MAESTRO 89** imalat kolaylığı yönünden benzersiz bir yapıdadır.

## ENERJİ TASARRUFU

Çevreye duyarlılık ve enerji tasarrufu konuları gün geçtikçe önem kazanmakta olduğundan

**MAESTRO 89**' da ısı yalıtım özelliklerine de önem verildi.

## GELİŞTİRİLEBİLİRLİK

**MAESTRO 89**, sistem konsepti olarak kolaylıkla geliştirilebilir yapıda dizayn edilmiştir. Bu sayede eklenecek yeni çözümlerinin sisteme adaptesi hızlı biçimde yapılabilmektedir.

**MAESTRO 89** "89,7mm case depth"; it is a new generation economic sliding system that offers two and three rails, normal and with covering thermal insulation. INNOVATIVE DESIGN

Sliding systems are products that are preferred especially in places where a wide vision area is desired to be seen and aesthetics are of great importance. The radius design language used in

**MAESTRO 89** highlights the aesthetic and modern structure of the system. When this curved structure, which can be seen in every detail of the system, is combined with the use of thin sections in sections such as seams that can disrupt the visual integrity, the system is provided to form a whole with the structure. While the increase of aesthetics in architectural aluminum systems means difficulty in manufacturing and use; Since such difficulties are planned at the very beginning of the design process, the

**MAESTRO 89** does not compromise the manufacturing and usage features.

## ECONOMY

in **MAESTRO 89**, thin wall thicknesses that do not impair the surface quality and manufacturing properties are preferred, while the geometric design features are used in the parts that are important in terms of bearing, and both lightness and rigidity are provided together.

## EASE OF MANUFACTURING

Since all the accessories of the system are designed within the framework of common use and working in harmony with each other, **MAESTRO 89** is unique in terms of ease of manufacture.

## ENERGY-SAVING

Since environmental awareness and energy saving issues are gaining importance day by day, thermal insulation features were also given importance in

## **MAESTRO 89**.

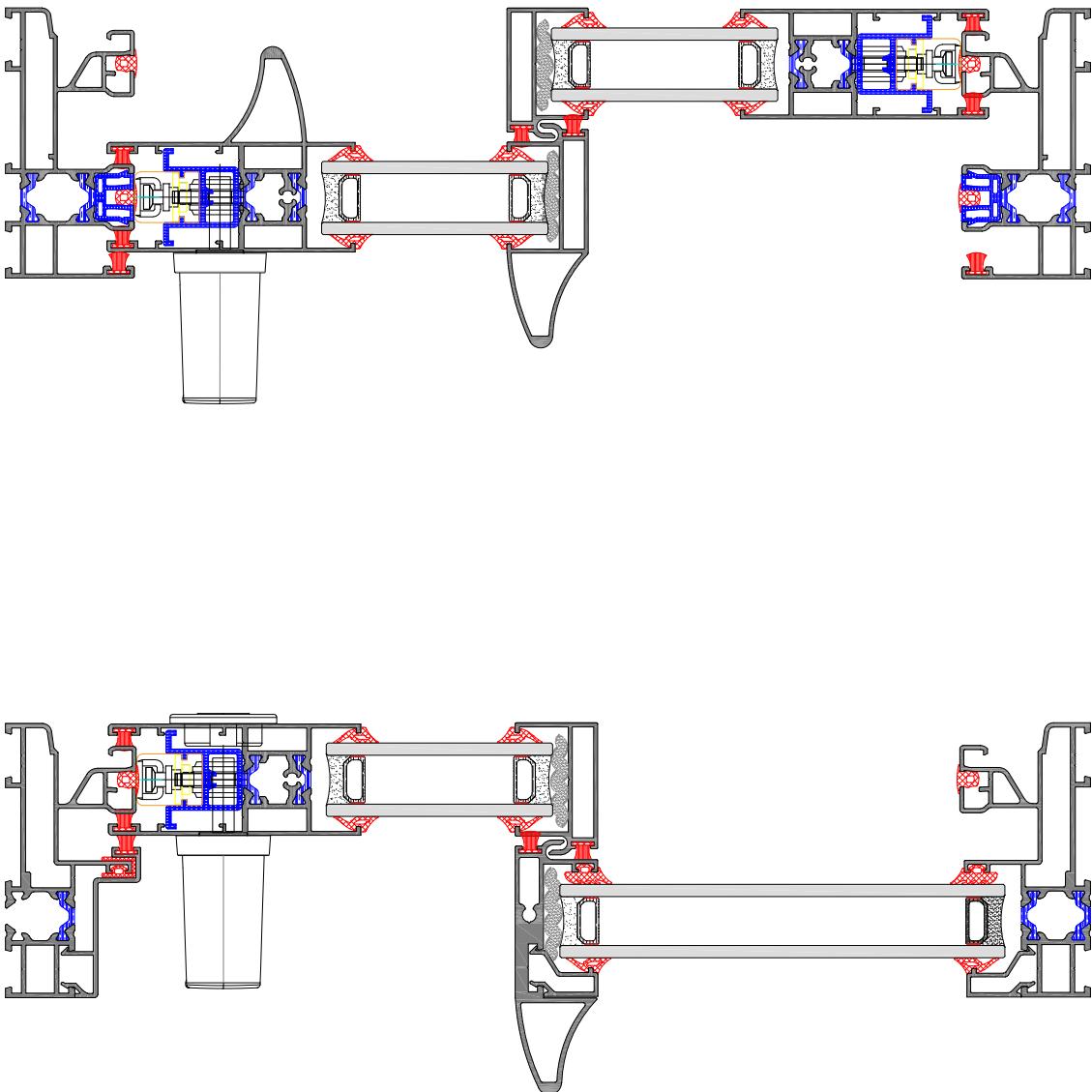
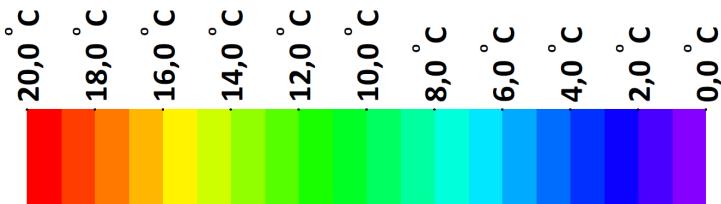
## IMPROVABILITY

**MAESTRO 89** has been designed to be easily developed as a system concept. in this way, new solutions to be added can be adapted to the system quickly.

**FERMOSA**  
SYSTEM

## PROFİL TERMAL RAPORLARI

### PROFILE THERMAL INSULATION VALUES

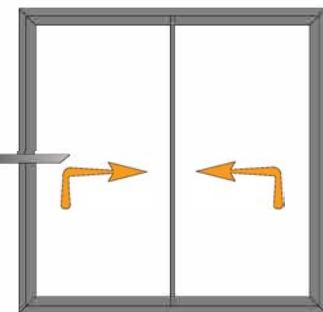
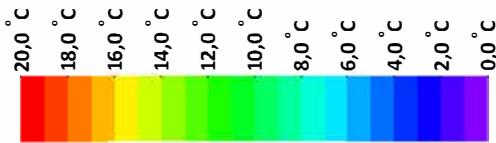


# MAESTRO 89 Insulated Sliding

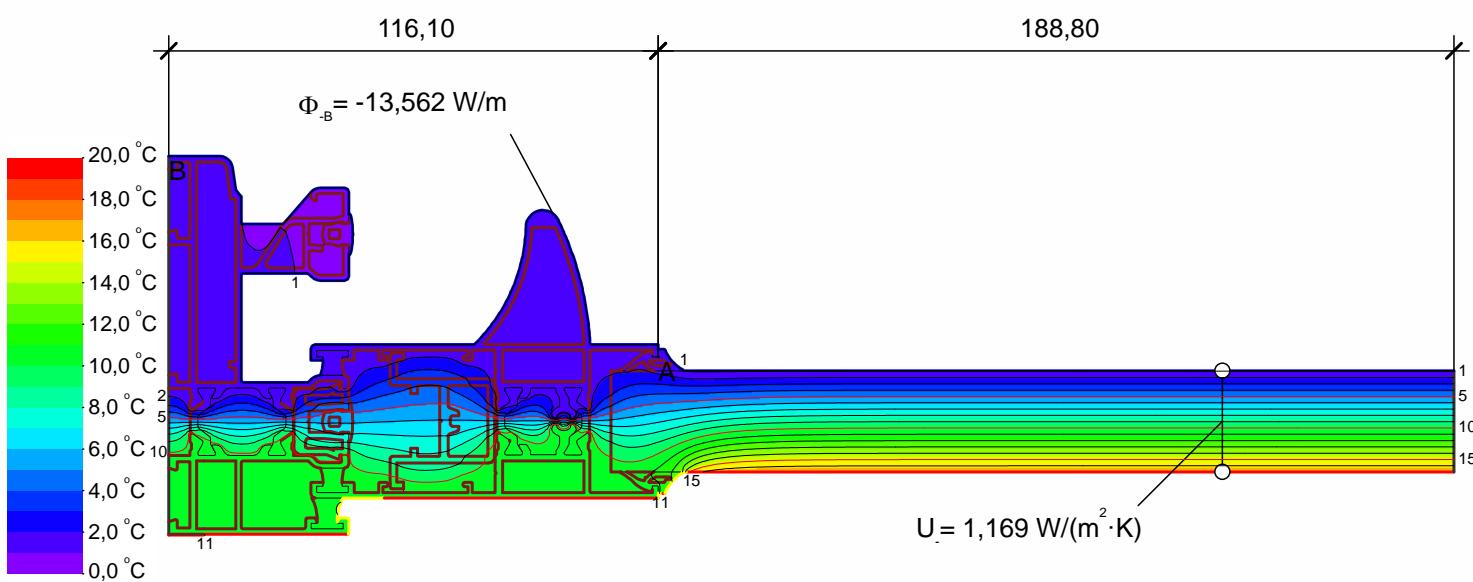
## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES

**TERMAL HESAP KOŞULLARI**  
**THERMAL CALCULATION CONDITIONS**

**DIŞ ORTAM SICAKLIĞI: 0°C**  
**{OUTER TEMPERATURE}**  
**İÇ ORTAM SICAKLIĞI : 20°**  
**(ROOM TEMPERATURE)**  
**BAĞIL NEM : %50**  
**(RELATIVE HUMIDITY)**



### KESİT-1



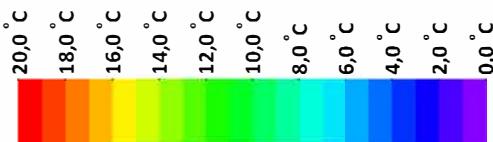
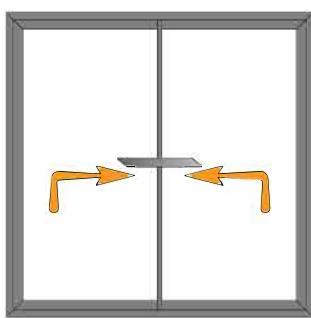
$$U_{TJ\ A,B} = \frac{\frac{\Phi}{\Delta T} - U_g \cdot b_g}{b_f} = \frac{\frac{13,562}{20,000} - 1,169 \cdot 0,189}{0,116} = 3,94 \text{ W}/(\text{m}^2 \cdot \text{K})$$

Material	$\lambda [\text{W}/(\text{m} \cdot \text{K})]$	$\epsilon$	Boundary Condition	$q [\text{W}/\text{m}^2]$	$\theta [{}^\circ\text{C}]$	$R [(\text{m}^2 \cdot \text{K})/\text{W}]$	$\epsilon$
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0,9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame	0,000		0,040	
Finli Kil Filit	0,250	0,900	Interior, frame, normal	20,000		0,130	
PVC (polyvinylchloride), rigid	0,170	0,900	Interior, frame, reduced	20,000		0,200	
Panel	0,035	0,900	Symmetry/Model section	0,000			
Polyamid 6.6 with 25% glass fibre	0,300	0,900					
Slightly ventilated air cavity							
Unventilated air cavity							

**FERMOSA**  
**SYSTEM**

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## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES



**TERMAL HESAP KOŞULLARI!**  
THERMAL CALCULATION CONDITIONS

**DİŞ ORTAM SICAKLIĞI: 0°C**

(OUTER TEMPERATURE)

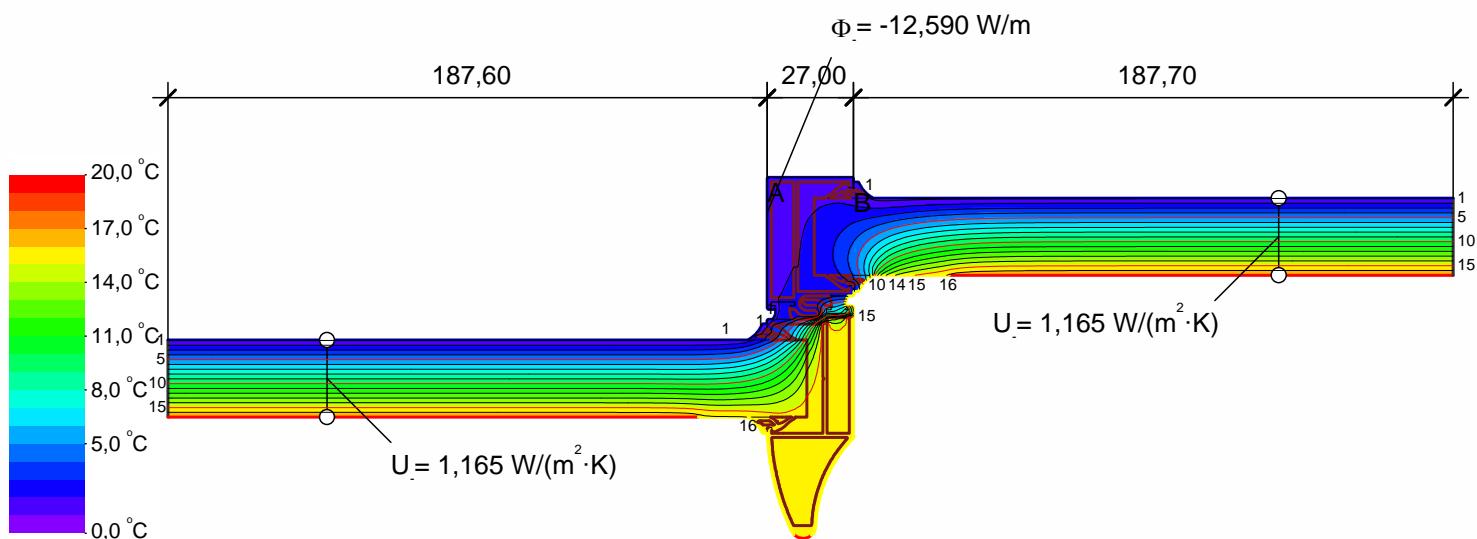
**İÇ ORTAM SICAKLIĞI : 20°**

(ROOM TEMPERATURE)

**BAĞIL NEM : %50**

(RELATIVE HUMIDITY)

### KESİT-2



$$U_{TJA,B} = \frac{\frac{\Phi}{\Delta T}}{b_f} = \frac{\frac{12,590}{20,000}}{0,027} = \frac{1,165 \cdot 0,188 - 1,165 \cdot 0,188}{0,027} = 7,13 \text{ W/(m}^2\text{·K)}$$

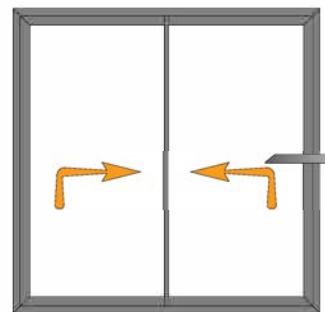
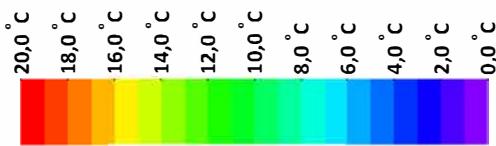
Material	$\lambda[\text{W}/(\text{m} \cdot \text{K})]$	$\varepsilon$	Boundary Condition	$q[\text{W}/\text{m}^2]$	$\theta[{}^\circ\text{C}]$	$R[(\text{m}^2 \cdot \text{K})/\text{W}]$	$\varepsilon$
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0,9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame		0,000	0,040	
Finli Kıl Filit	0,250	0,900	Interior, frame, normal		20,000	0,130	
Panel	0,035	0,900	Interior, frame, reduced		20,000	0,200	
Unventilated air cavity			Symmetry/Model section		0,000		

# MAESTRO 89 Insulated Sliding

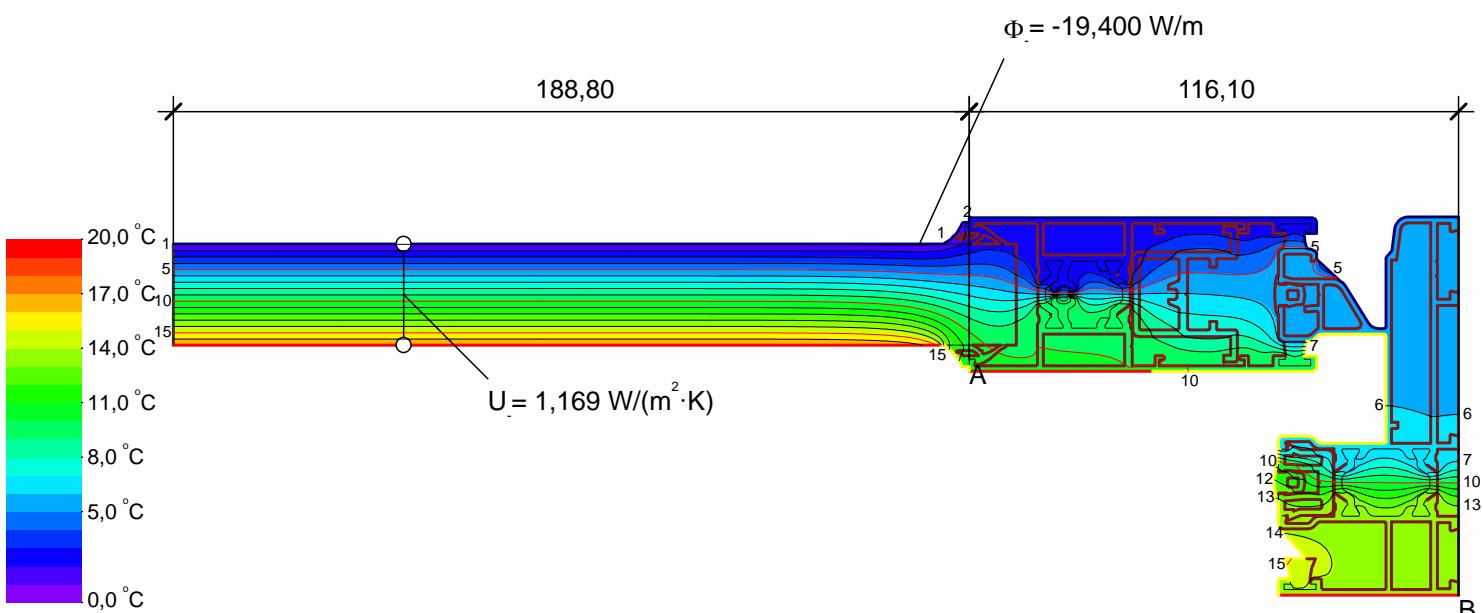
## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES

**TERMAL HESAP KOŞULLARI**  
**THERMAL CALCULATION CONDITIONS**

**DIŞ ORTAM SICAKLIĞI: 0°C**  
**{OUTER TEMPERATURE}**  
**İÇ ORTAM SICAKLIĞI : 20°**  
**(ROOM TEMPERATURE)**  
**BAĞIL NEM : %50**  
**(RELATIVE HUMIDITY)**



### KESİT-3



$$U_{TJ\ A,B} = \frac{\frac{\Phi}{\Delta T} - U_g \cdot b_g}{b_f} = \frac{\frac{19,400}{20,000} - 1,169 \cdot 0,189}{0,116} = 6,45 \text{ W}/(\text{m}^2 \cdot \text{K})$$

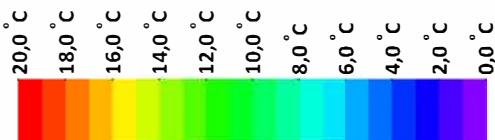
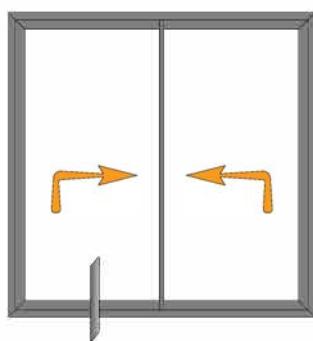
Material	$\lambda[\text{W}/(\text{m} \cdot \text{K})]$	$\varepsilon$	Boundary Condition	$q[\text{W}/\text{m}^2]$	$0^\circ\text{C}$	$R[(\text{m}^2 \cdot \text{K})/\text{W}]$	$\varepsilon$
Aluminum (Si Alloys)	160,000	0,900	Epsilon 0,9			0,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame			0,040	
Finli Kıl Filit	0,250	0,900	Interior, frame, normal	20,000		0,130	
PVC (polyvinylchloride), rigid	0,170	0,900	Interior, frame, reduced	20,000		0,200	
Panel	0,035	0,900	Symmetry/Model section	0,000			
Polyamid 6.6 with 25% glass fibre	0,300	0,900					
Slightly ventilated air cavity							
Unventilated air cavity							

**FERMOSA**  
**SYSTEM**

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# MAESTRO 89 Insulated Sliding

## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES



**TERMAL HESAP KOŞULLARI!**  
THERMAL CALCULATION CONDITIONS

**DİŞ ORTAM SICAKLIĞI: 0°C**

(OUTER TEMPERATURE)

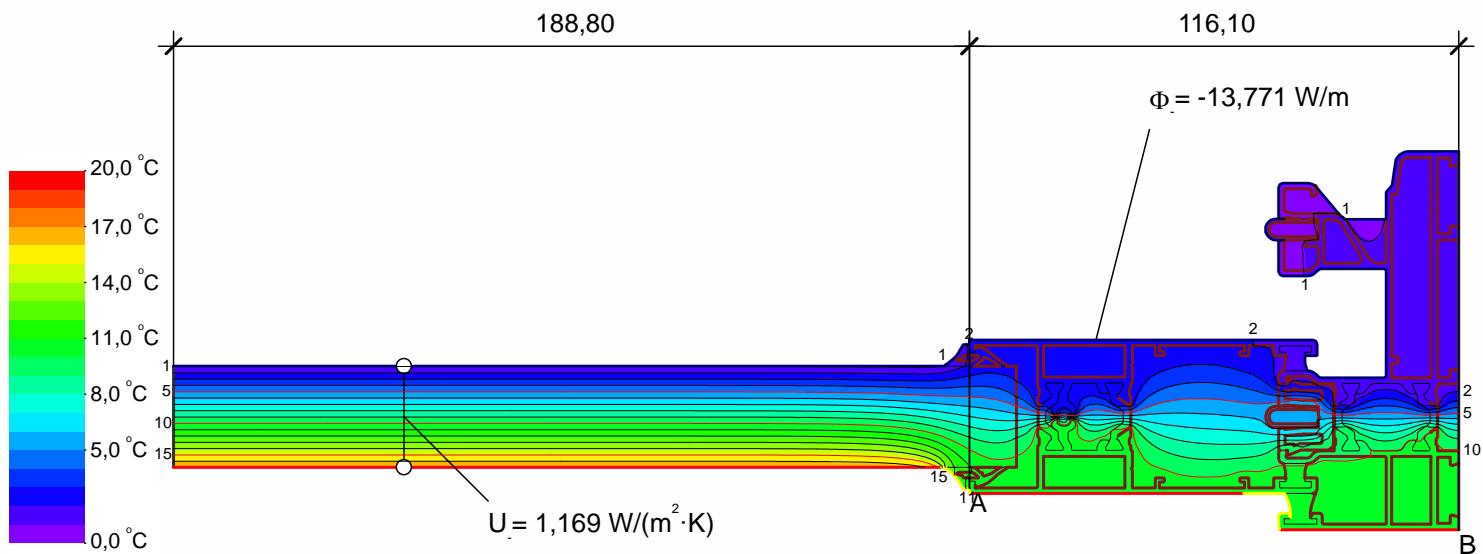
**İÇ ORTAM SICAKLIĞI : 20°**

(ROOM TEMPERATURE)

**BAĞIL NEM : %50**

(RELATIVE HUMIDITY)

### KESİT-4



$$U_{TJ\ A,B} = \frac{\frac{\Phi}{\Delta T} - U_g \cdot b_g}{b_f} = \frac{\frac{13,771}{20,000} - 1,169 \cdot 0,189}{0,116} = 4,03 \text{ W}/(\text{m}^2 \cdot \text{K})$$

Material	$\lambda[\text{W}/(\text{m} \cdot \text{K})]$	$\varepsilon$	Boundary Condition	$q[\text{W}/\text{m}^2]$	$\theta[\text{°C}]$	$R[(\text{m}^2 \cdot \text{K})/\text{W}]$	$\varepsilon$
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0,9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame		0,000	0,040	
Finli Kıl Fıtil	0,250	0,900	Interior, frame, normal		20,000	0,130	
PVC (polyvinylchloride), rigid	0,170	0,900	Interior, frame, reduced		20,000	0,200	
Panel	0,035	0,900	Symmetry/Model section		0,000		
Polyamid 6,6 with 25% glass fibre	0,300	0,900					
Slightly ventilated air cavity							
Unventilated air cavity							
Çelik Ray	50,000	0,900					

# MAESTRO 89 Insulated Sliding

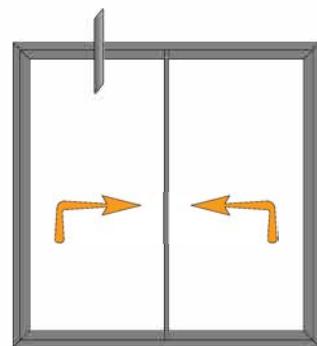
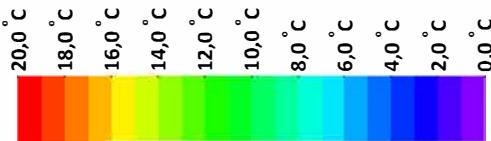
## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES

**TERMAL HESAP KOŞULLARI**  
**THERMAL CALCULATION CONDITIONS**

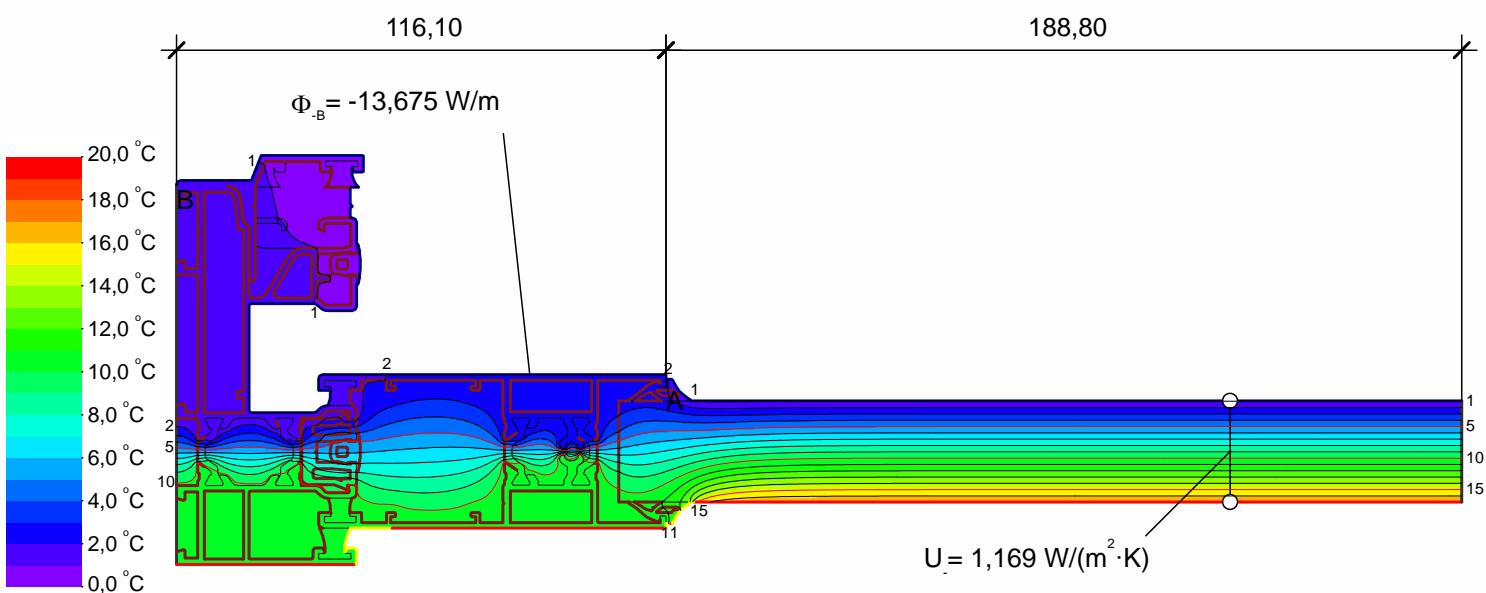
**DIŞ ORTAM SICAKLIĞI: 0°C**  
**{OUTER TEMPERATURE}**

**İÇ ORTAM SICAKLIĞI : 20°**  
**(ROOM TEMPERATURE)**

**BAĞIL NEM : %50**  
**(RELATIVE HUMIDITY)**



### KESİT-5

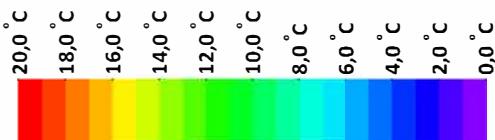
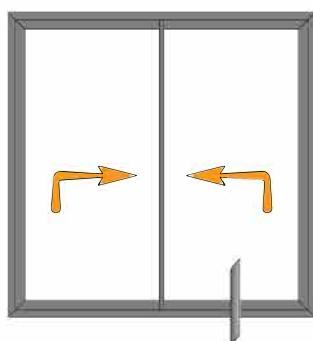


$$U_{TJA,B} = \frac{\frac{\Phi}{\Delta T} - U_g \cdot b_g}{b_f} = \frac{\frac{13,675}{20,000} - 1,169 \cdot 0,189}{0,116} = 3,99 \text{ W}/(\text{m}^2 \cdot \text{K})$$

Material	$\lambda[\text{W}/(\text{m} \cdot \text{K})]$	$\epsilon$	Boundary Condition	$q[\text{W}/\text{m}^2]$	$\theta[^\circ\text{C}]$	$R[(\text{m}^2 \cdot \text{K})/\text{W}]$	$\epsilon$
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0,9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame	0,000		0,040	
Finli Kıl Fili	0,250	0,900	Interior, frame, normal	20,000		0,130	
PVC (polyvinylchloride), rigid	0,170	0,900	Interior, frame, reduced	20,000		0,200	
Panel	0,035	0,900	Symmetry/Model section	0,000			
Polyamid 6.6 with 25% glass fibre	0,300	0,900					
Slightly ventilated air cavity							
Unventilated air cavity							

# MAESTRO 89 Insulated Sliding

## TERMAL PERFORMANS DEĞERLERİ THERMAL PERFORMANCE VALUES



**TERMAL HESAP KOŞULLARI!**  
THERMAL CALCULATION CONDITIONS

**DİŞ ORTAM SICAKLIĞI: 0°C**

(OUTER TEMPERATURE)

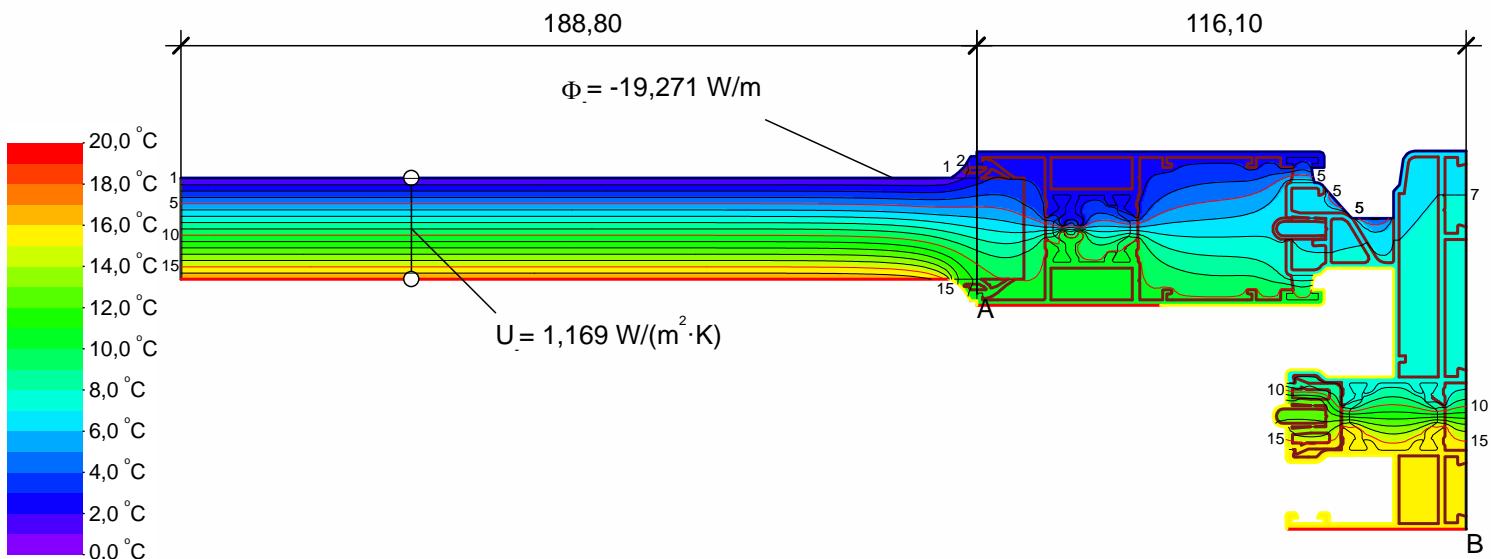
**İÇ ORTAM SICAKLIĞI : 20°**

(ROOM TEMPERATURE)

**BAĞIL NEM : %50**

(RELATIVE HUMIDITY)

### KESİT-6



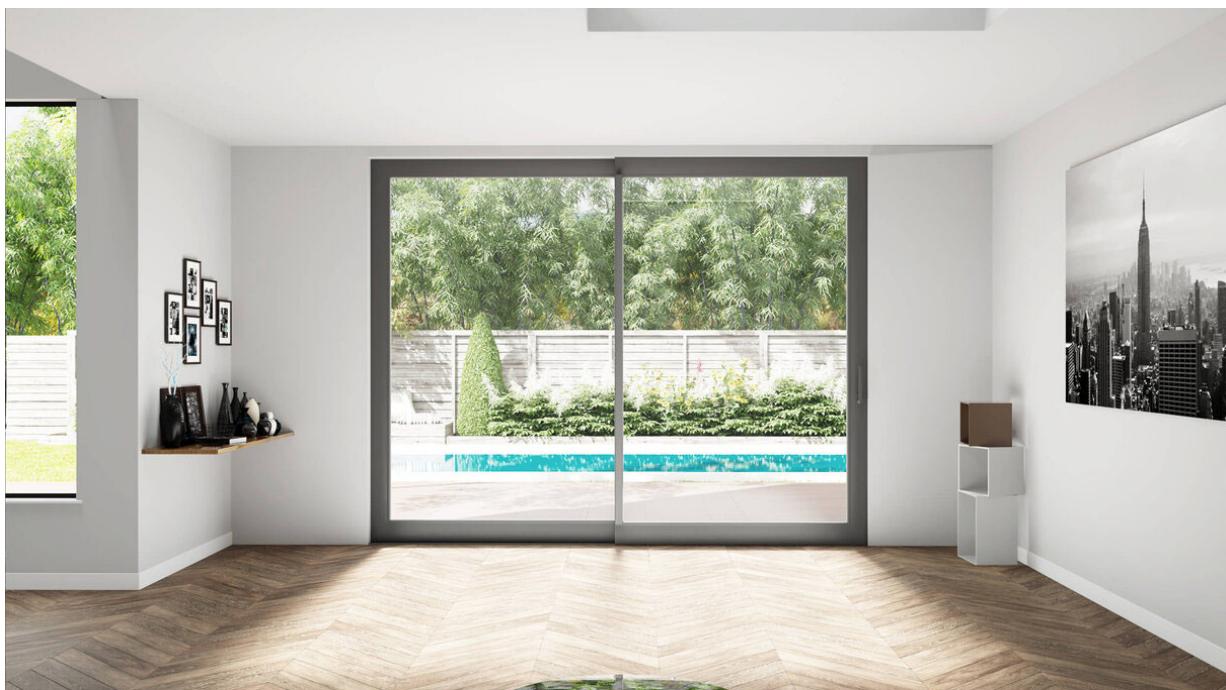
$$U_{TJ A,B} = \frac{\frac{\Phi}{\Delta T} - U_g \cdot b_g}{b_f} = \frac{\frac{19,271}{20,000} - 1,169 \cdot 0,189}{0,116} = 6,40 \text{ W/(m}^2\cdot\text{K)}$$

Material	$\lambda[\text{W}/(\text{m}\cdot\text{K})]$	$\varepsilon$	Boundary Condition	$q[\text{W}/\text{m}^2]$	$\theta[\text{°C}]$	$R[(\text{m}^2\cdot\text{K})/\text{W}]$	$\varepsilon$
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0,9			0,000	0,040
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame			0,000	0,130
Finli Kıl Fili	0,250	0,900	Interior, frame, normal	20,000		20,000	
PVC (polyvinylchloride), rigid	0,170	0,900	Interior, frame, reduced	20,000		20,000	0,200
Panel	0,035	0,900	Symmetry/Model section	0,000			
Polyamid 6,6 with 25% glass fibre	0,300	0,900					
Slightly ventilated air cavity							
Unventilated air cavity							
Çelik Ray	50,000	0,900					

# MAESTRO 89 Insulated Sliding

## EKONOMİK SÜRME DOĞRAMA SİSTEMİ

ECONOMICAL SLIDING DOOR SYSTEM



### TEKNİK ÖZELLİKLER / TECHNICAL PROPERTIES

#### TEKNİK ÖZELLİKLER

#### TECHNICAL PROPERTIES

KASA DERİNLİĞİ / FRAME DEPTH :	89,7 mm , 134,3mm
KANAT DERİNLİĞİ / VENT DEPTH :	36.4 mm
PROFİL ET KALINLIĞI / PROFILE WALL THICKNESS :	1,3 mm-1,5mm
MAX. CAM KALINLIĞI / MAX. GLASS THICKNESS :	24 mm
ISI BARIYERLERİ / INSULATION BARS :	16 mm
ISI YALITIM DEĞERİ (Uf)-EN1077-2 /THERMAL INSULATION VALUE (Uf) :	(Uf): < 3,60 W/m <sup>2</sup> K

#### KULLANIM SEÇENEKLERİ

#### APPLICATION ALTERNATIVES

	PENCERE WINDOW	KAPI DOOR
NORMAL SÜRME / SLIDING(HB) :	•	•
SABİT KASA / FIXED FRAME :	•	•
ÜÇ RAYLI KASA / THREE RAILED FRAME :	•	•
KENDİNDEN SİNEKLİKLİ KASA / SELF-INSECT SCREEN FRAME :	•	•

**FERMOSA**  
SYSTEM

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## SİSTEM PROFİLLERİ

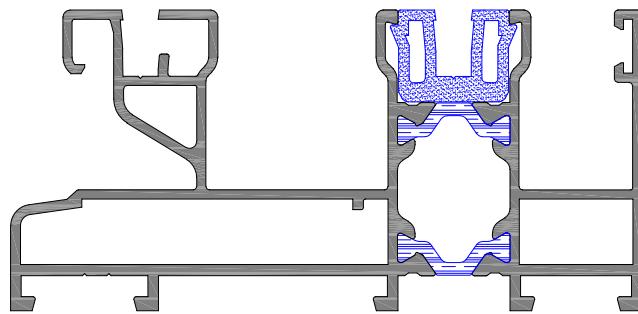
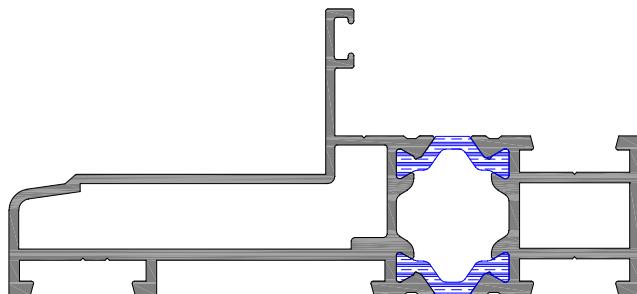
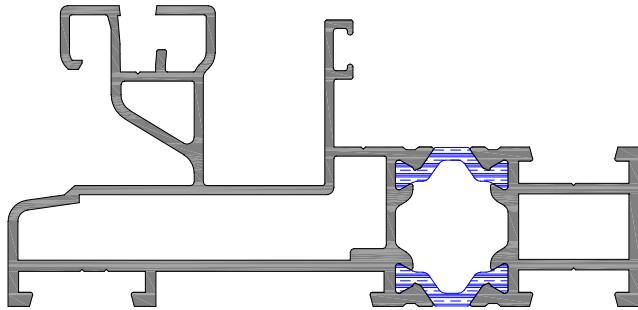
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## SYSTEM PROFILES

10

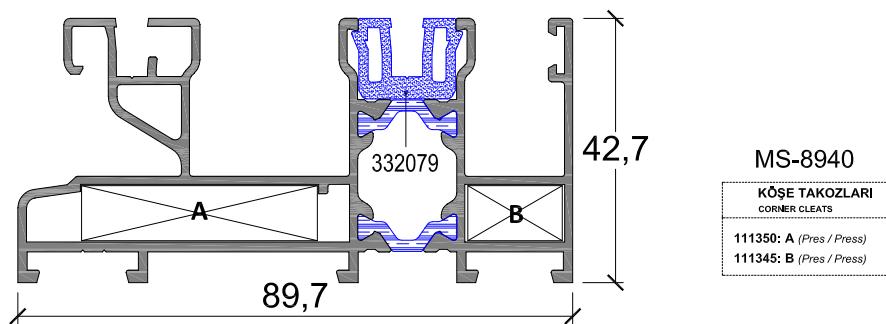
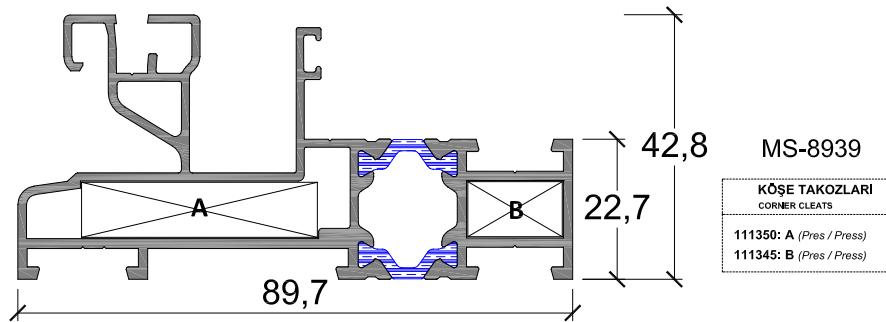
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

## SİSTEM PROFİLLERİ / SYSTEM PROFILE

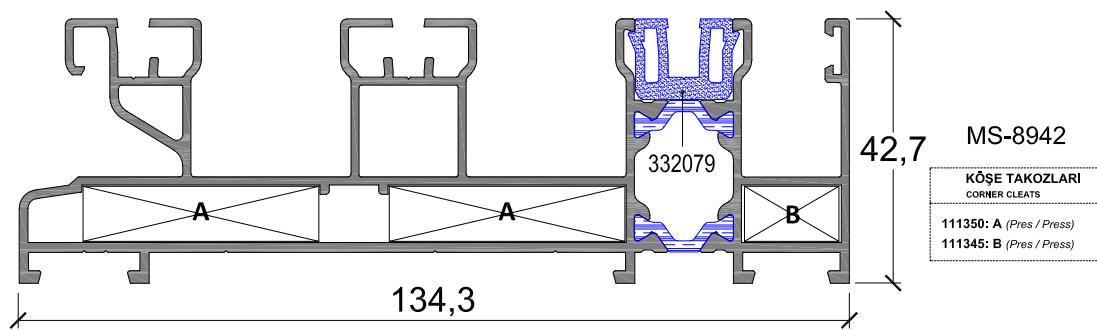
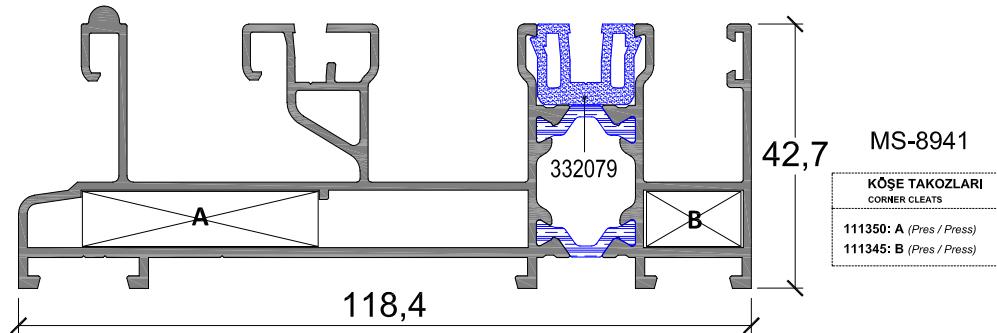


PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
MS-8939	49,81	5,98	1,528
MS-8940	10,57	46,13	1,814

**FERMOSA**  
SYSTEM

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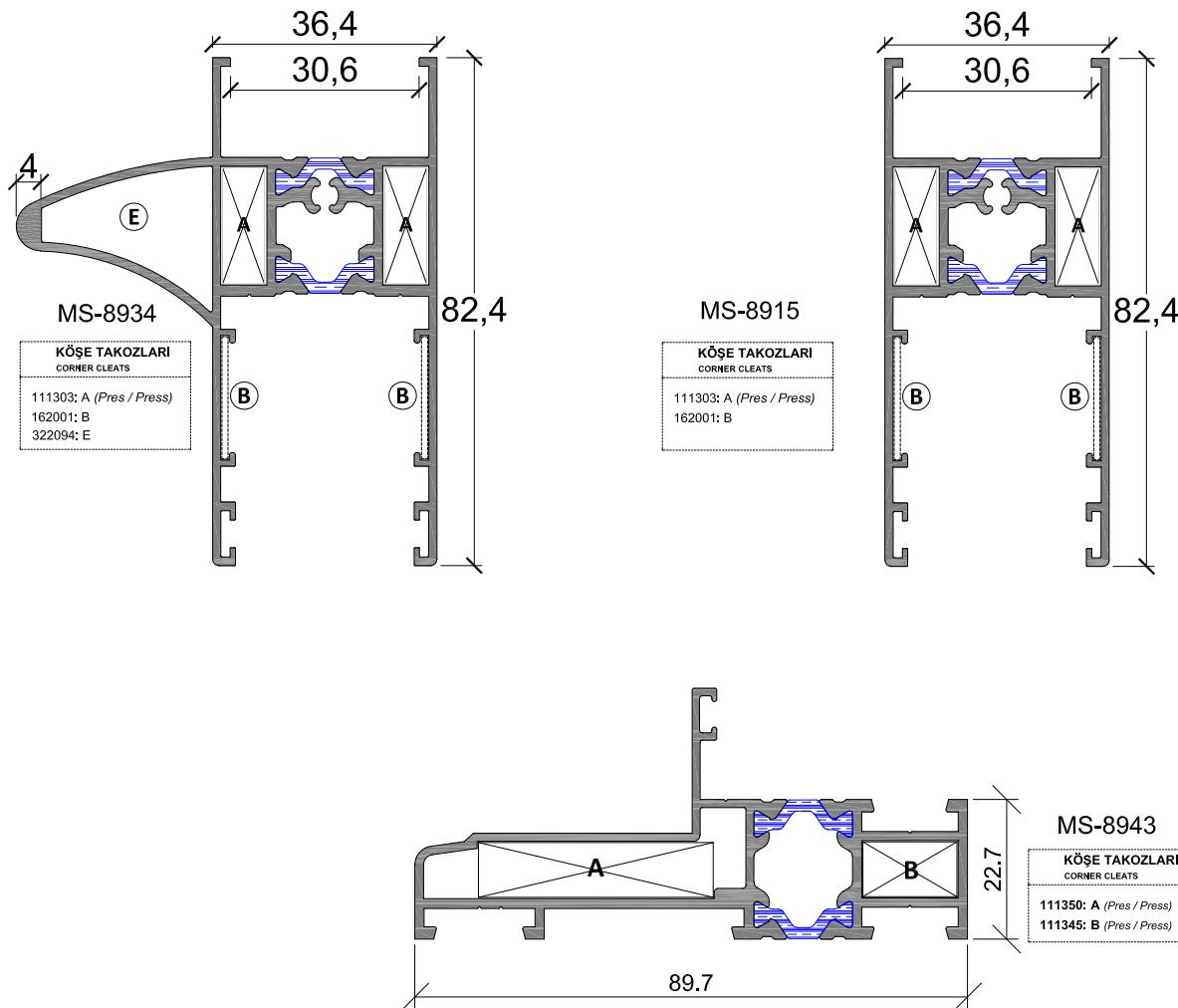
# MAESTRO 89 Insulated Sliding



PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
MS-8941	10,55	45,58	2,217
MS-8942	32,57	46,13	2,481

SİSTEM PROFİLLERİ / SYSTEM PROFILE

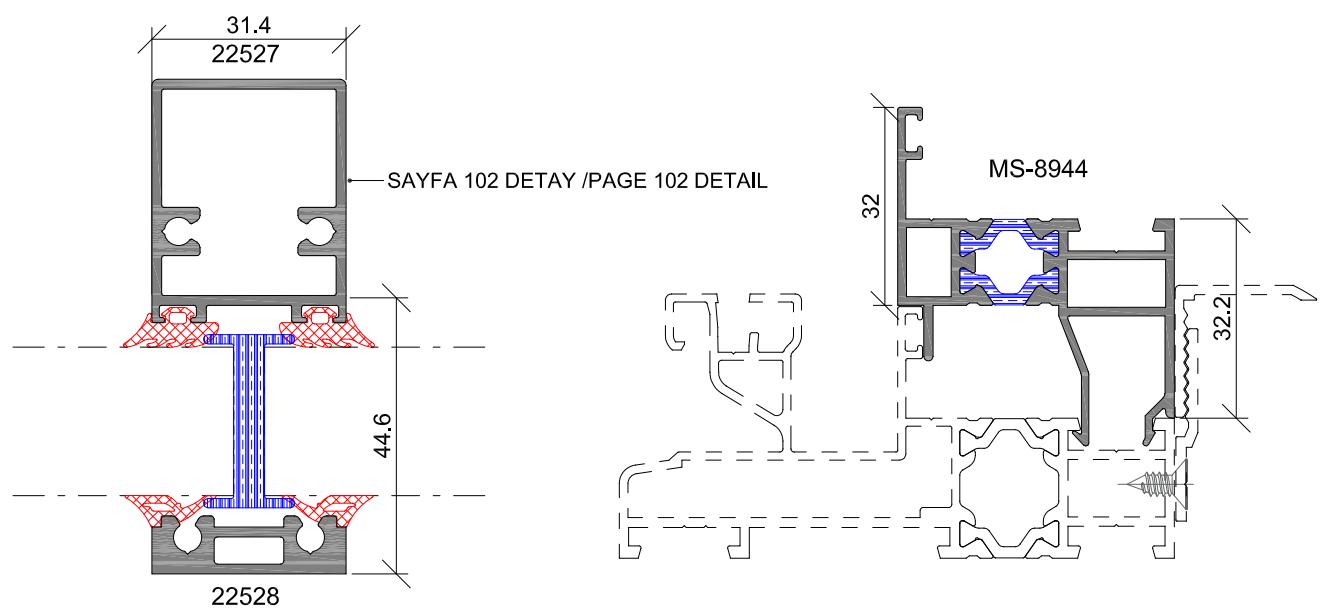
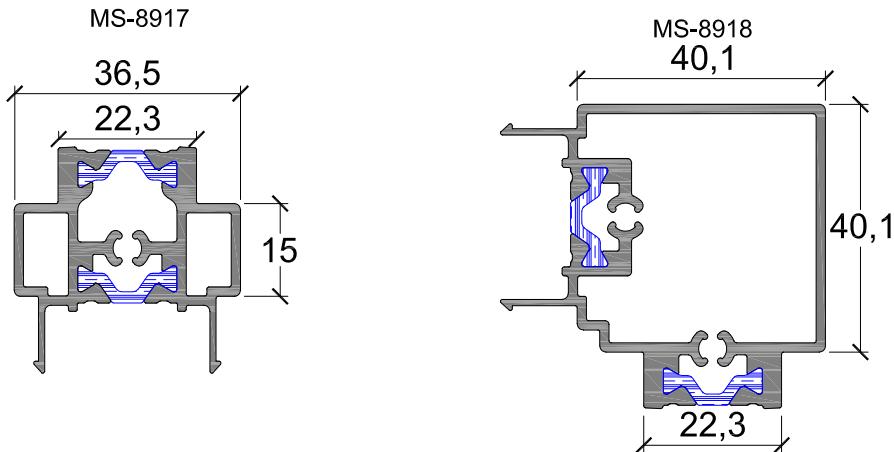
# MAESTRO 89 Insulated Sliding



PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
MS-8915	21,22	9,30	1,302
MS-8934	21,76	23,01	1,643
MS-8943	35,94	32,36	1,385

**FERMOSA**  
SYSTEM

# MAESTRO 89 Insulated Sliding

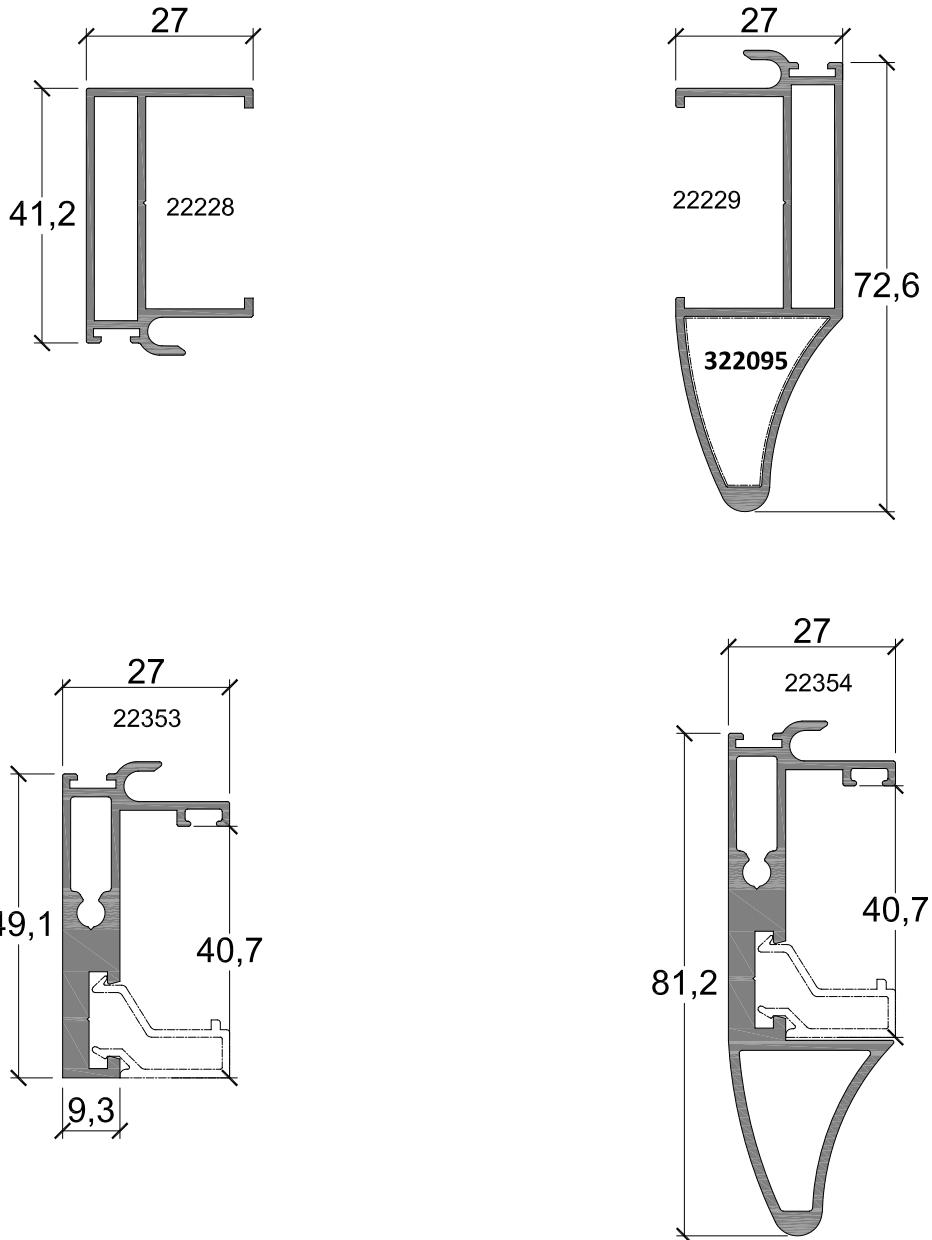


PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
MS-8917	59,98	4,63	1,223
MS-8918	10,15	16,20	1,331
MS-8944	-	-	0,988
22528	-	-	0,481
22527	-	-	0,761

SİSTEM PROFİLLERİ / SYSTEM PROFILE

# MAESTRO 89 Insulated Sliding

## SİSTEM PROFİLLERİ / SYSTEM PROFILE

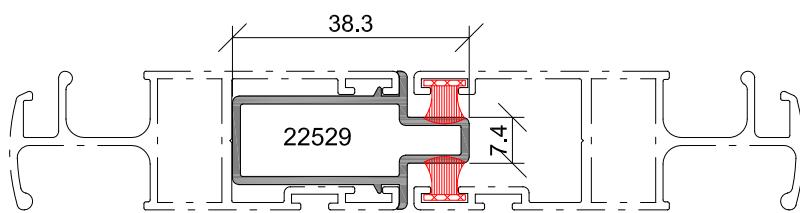
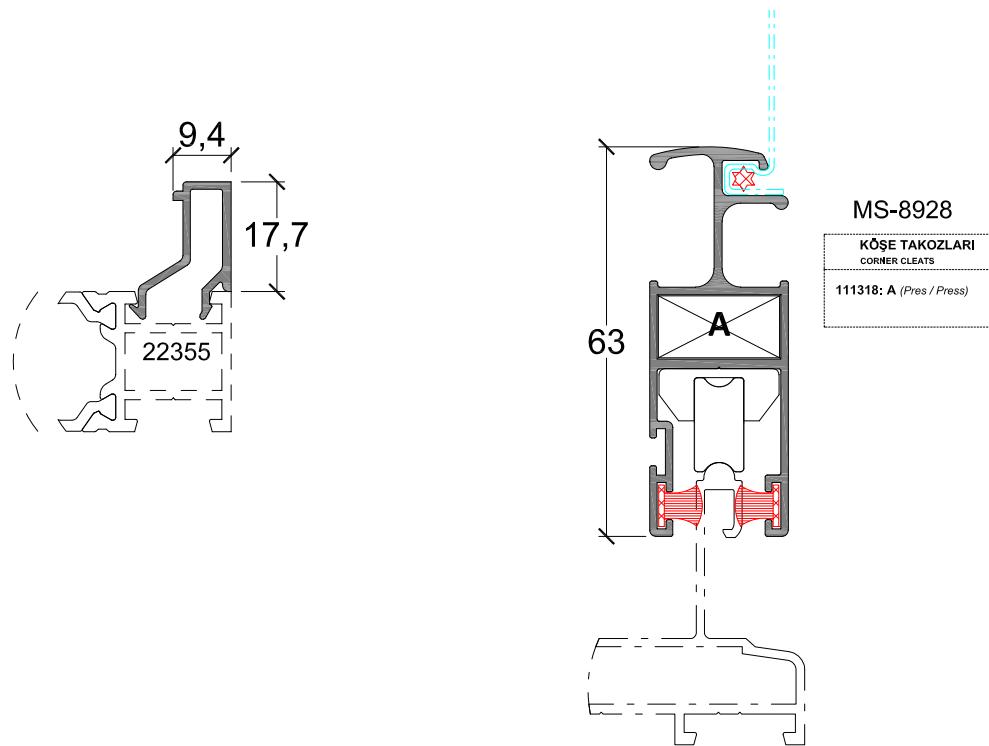


PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
22228	13,15	4,40	0,520
22229	16,74	15,60	0,798
22353	17,57	18,51	0,814
22354	59,98	4,63	1,267

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

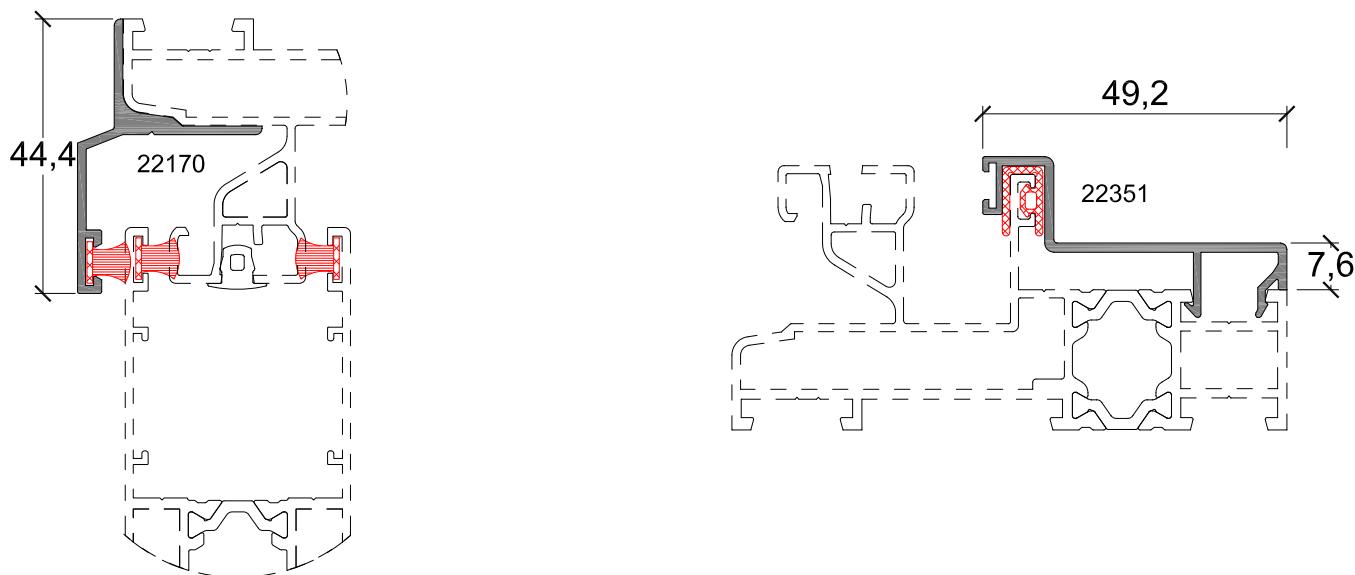
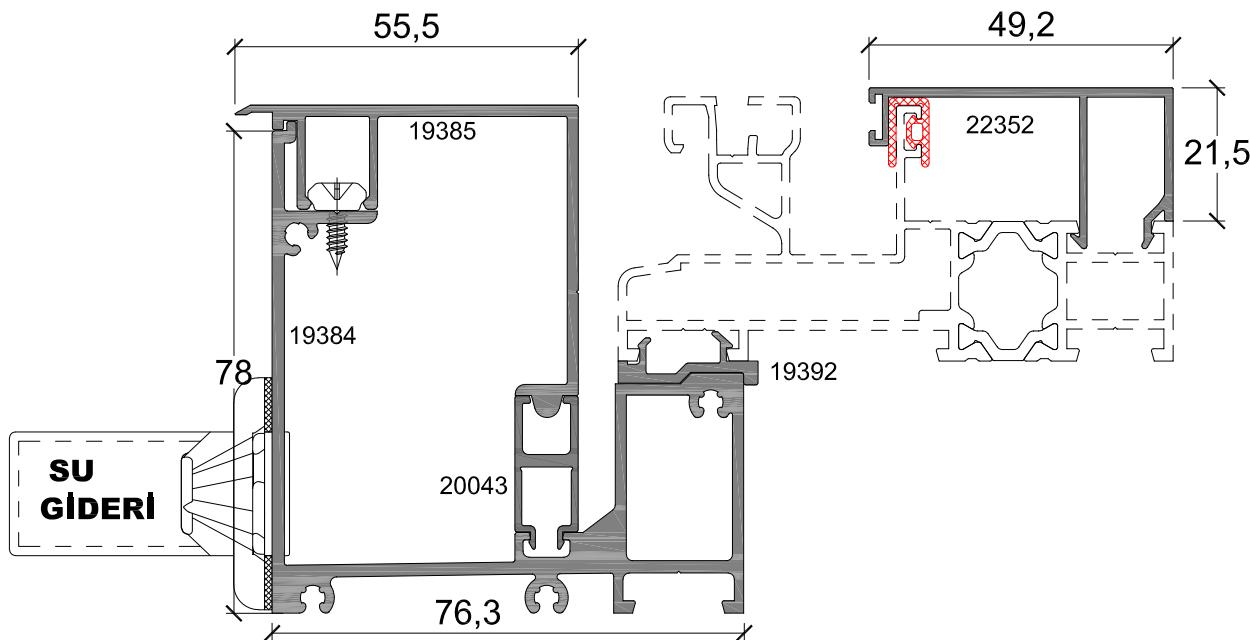


PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
22355	-	-	0,210
22529	-	-	0,384
MS-8928	-	-	0,703

SİSTEM PROFİLLERİ / SYSTEM PROFILE

# MAESTRO 89 Insulated Sliding

## SİSTEM PROFİLLERİ / SYSTEM PROFILE

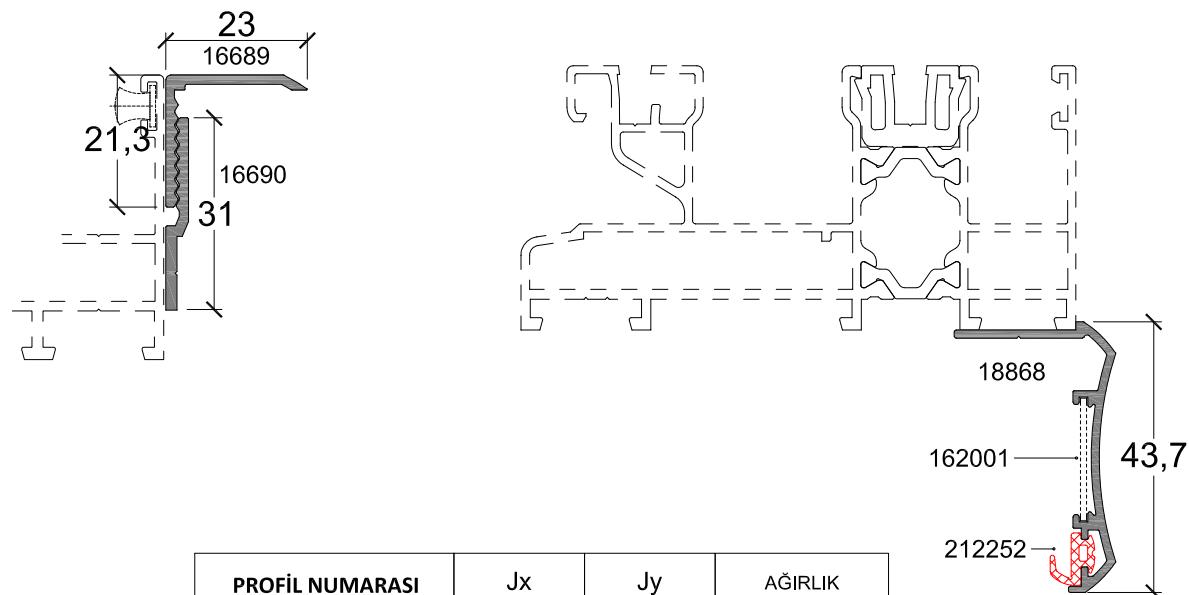
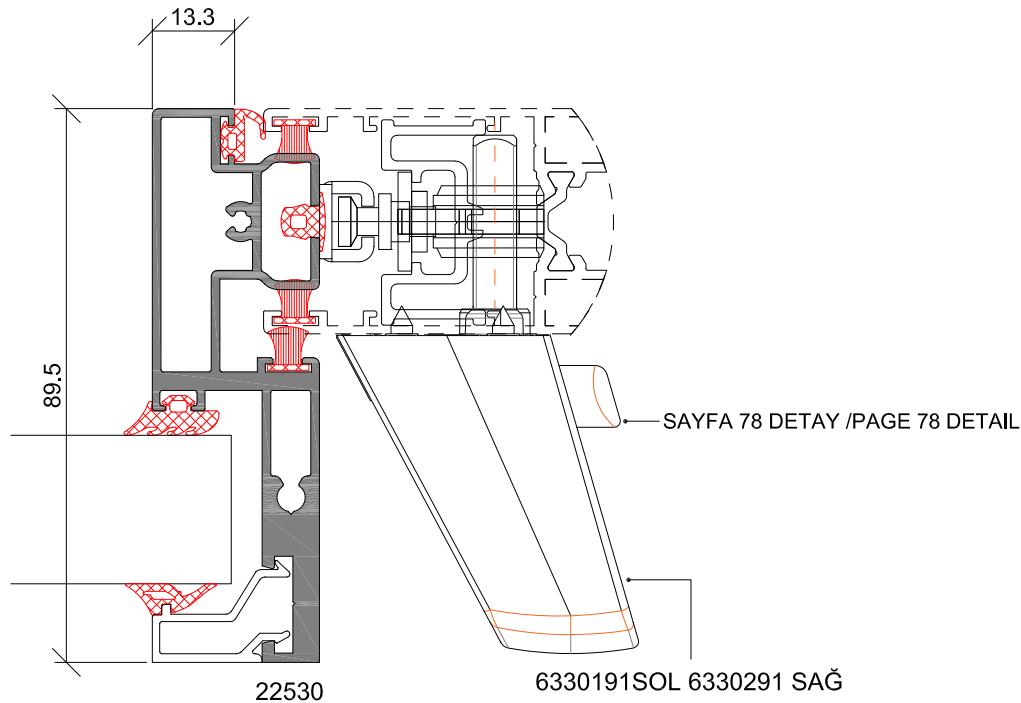


PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
22352	-	-	0,419
22351	-	-	0,374
22170	-	-	0,341
19385	-	-	0,662
19384	-	-	1,766
20043	-	-	0,551
19392	-	-	0,183

**FERMOSA**  
SYSTEM

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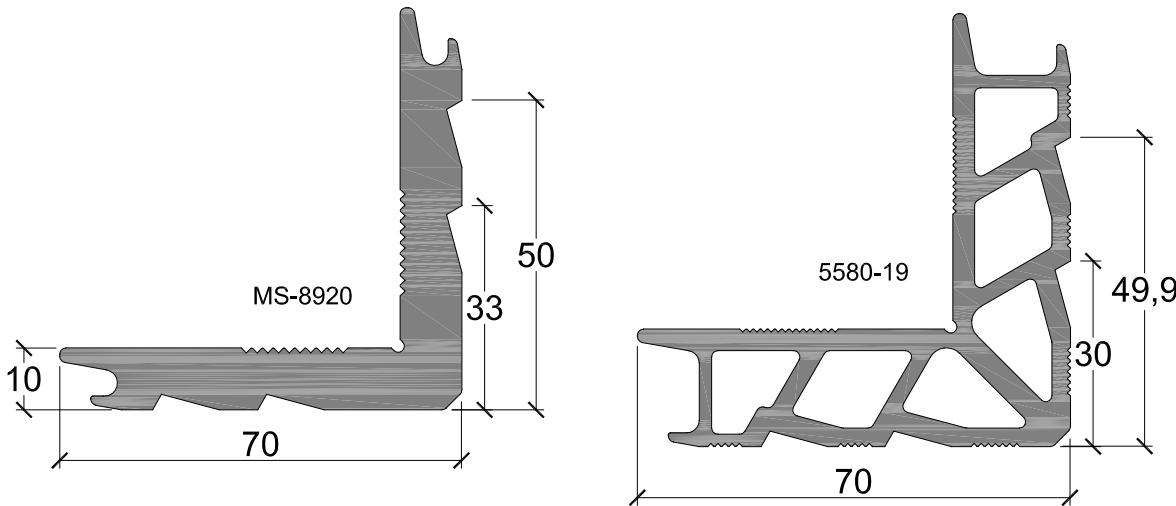
# MAESTRO 89 Insulated Sliding



PROFİL NUMARASI PROFILE NO.	Jx (cm <sup>4</sup> )	Jy (cm <sup>4</sup> )	AĞIRLIK WEIGHT (kg/m)
22530	47,82	4,54	1,588
18866	-	-	0,455
19689	-	-	0,184
19690	-	-	0,154

# MAESTRO 89 Insulated Sliding

## SİSTEM PROFİLLERİ / SYSTEM PROFILE



PROFİL NUMARASI PROFILE NO.	AĞIRLIK WEIGHT (kg/m)
5580-19	2,710
20234	2,553
MS-8920	2,748

**FERMOSA**  
SYSTEM

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## STATİK HESAPLAMALARDA KABULLER THE ACCEPTANCES OF STATIC CALCULATIONS

**STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):**

TS 498 (DIN 1055), TS EN 13830

**STATİK HESAPLARDA KULLANILAN YÜKLER (LOADS USING WITH STATIC CALCULATIONS):**

- 1-Yatay Rüzgar Yükleri (Horizontal Wind Load)
- 2-Düsey Cam Yükleri (Vertical Glass Load)
- 3-Kar Yükleri (Snow Load)

### Rüzgar Yükleri (Wind Load) :

Statik hesaba başlamadan önce rüzgar şekil katsayısı tayin edilerek binanın yüksekliğine göre aşağıdaki tablodan seçilen rüzgar yükü referans değer olarak alınır. (Before the static calculation, first determine the shape coefficient of wind and ! hen according ta the height of the building select the wind load value from the table below.)

### Rüzgar şekil katsayısı (Shape coefficient of wind) :

Binanın boyu (height of building) / binanın en dar eni (minimum width of building) < 5 : C = 1.2

Binanın boyu (height of building) / binanın en dar eni (minimum width of building) > 5 : C = 1.6

RÜZGAR ŞEKLİ KATSAYISI SHAPE COEFFICIENT OF WIND	ZEMİNİNDEN YÜKSEKLİK (m) GROUND ELEVATION	RÜZGAR HIZI (m/s) WIND SPEED	HİZ BASINCI (kg/m <sup>2</sup> ) ABSORPTION	RÜZGAR YÜKÜ (kg/m <sup>2</sup> ) WIND LOAD
1.2	0 - 8	28	50	60
	9 - 20	36	80	96
	21 - 100	42	110	132
	> 100	46	130	156
1.6	0 - 8	28	50	80
	9 - 20	36	80	128
	21 - 100	42	110	176
	> 100	46	130	208

**STATİK HESAPLARDA SEHİM KABULÜ (DEFLECTION ACCEPTANCE OF STATIC CALCULATIONS):**

### Tek camlarda (at single glass);

MESNET AÇIKLIĞI SUPPORT CLEARNESS	AZAMİ SEHİM MAXIMUM DEFLECTION
L < 3m	f = L / 200
L > 3m	f = L / 300

### Çift camlarda (at double glass);

**ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )**

L ≥ 3m	f = max. 0,8cm
L < 2m	f = L / 200

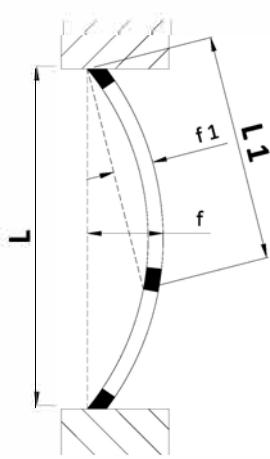
**ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )**

a) Camların boyları L1 ; ( If the glass height L1 )

L1 ≤ 2,4m	f1 ≤ L1 / 300
L1 > 2,4m	f1 ≤ 0,8cm

b) Profillerin boyları L ; ( If the profile length L )

L ≤ 3m	f1 ≤ L / 200
L > 2m	f1 ≤ L / 300



### KISALTMALARIN ANLAMLARI

EXPLANATIONS OF ABBREVIATIONS

**W:** Rüzgar yükü (Wind load)

**c:** Rüzgar şekil katsayısı (Wind shape c.)

**q:** Emme hız basıncı (Speed pressure)

**V:** Rüzgar hızı (Wind speed)

**L:** Düsey açıklık (Vertical clearance)

**E:** Elastisite modülü (Elasticity modulus)

**f:** Maksimum sehim (Max. deflection)

# FERMOSA

SYSTEM

## STATİK HESAPLAMALarda KABULLER THE ACCEPTANCES OF STATIC CALCULATIONS

STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):

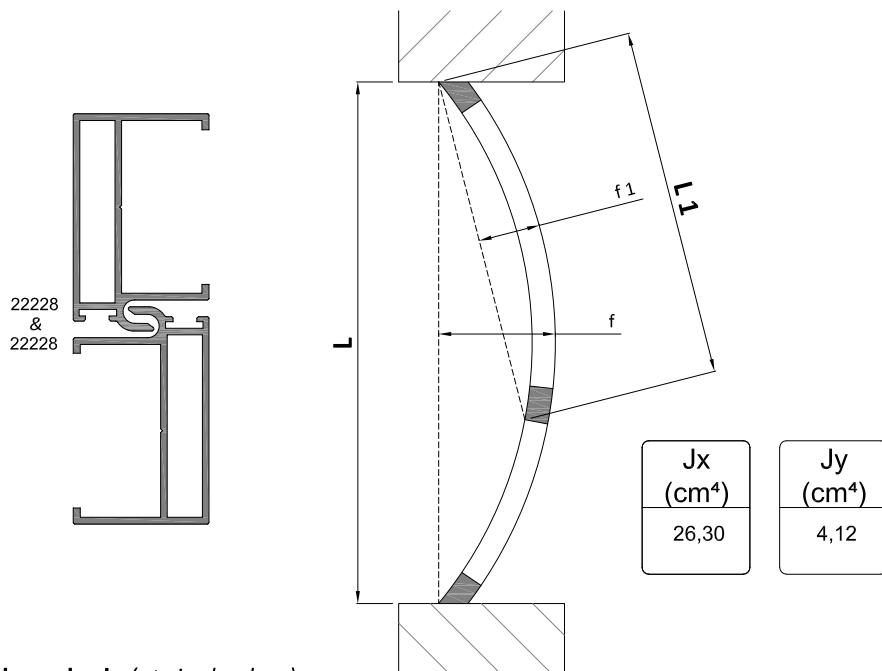
TS 498 (DIN 1055) , TS EN 13830

STATİK HESAPLARDA KULLANILAN YÜKLER (LOADS USING WITH STATIC CALCULATIONS):

1-Yatay Rüzgar Yükleri (Horizontal Wind Load)

2-Düsey Cam Yükleri (Vertical Glass Load)

3-Kar Yükleri (Snow Load)



**Çift camlarda (at double glass);**

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
$L \geq 3m$	$f = \text{max. } 0,8\text{cm}$
$L < 2m$	$f = L / 200$
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları $L_1$ ; ( If the glass height $L_1$ )	
$L_1 \leq 2,4m$	$f_1 \leq L_1 / 300$
$L_1 > 2,4m$	$f_1 \leq 0,8\text{cm}$
b) Profillerin boyları $L$ ; ( If the profile length $L$ )	
$L \leq 3m$	$f_1 \leq L / 200$
$L > 2m$	$f_1 \leq L / 300$

### KISALTMALARIN ANLAMLARI EXPLANATIONS OF ABBREVIATIONS

**W:** Rüzgar yükü (Wind load)

**c:** Rüzgar şekil katsayı (Wind shape c.)

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**V:** Rüzgar hızı (Wind speed)

**L:** Düsey açıklık (Vertical clearance)

**E:** Elastisite modülü (Elasticity modulus)

**f:** Maksimum sehim (Max. deflection)

# MAESTRO 89 Insulated Sliding

## STATİK HESAPLAMALarda KABULLER

### THE ACCEPTANCES OF STATIC CALCULATIONS

STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):

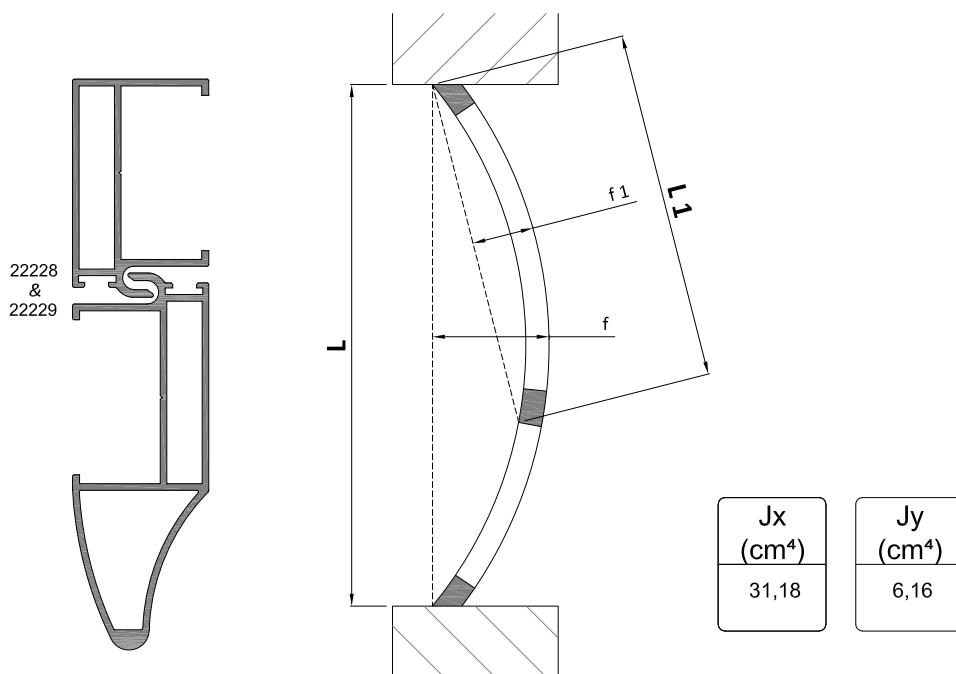
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3-Kar Yükleri (Snow Load)



Tek camlarda (at single glass);

MESNET AÇIKLIĞI SUPPORT CLEARNESS	AZAMI SEHİM MAXIMUM DEFLECTION
L < 3m	f = L / 200
L > 3m	f = L / 300

Çift camlarda (at double glass);

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
L ≥ 3m	f = max. 0,8cm
L < 2m	f = L / 200
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları L1 ; ( If the glass height L1 )	
L1 ≤ 2,4m	f1 ≤ L1 / 300
L1 > 2,4m	f1 ≤ 0,8cm
b) Profillerin boyları L ; ( If the profile length L )	
L ≤ 3m	f1 ≤ L / 200
L > 2m	f1 ≤ L / 300

## KISALTMALARIN ANLAMLARI

### EXPLANATIONS OF ABBREVIATIONS

**W:** Rüzgar yükü (Wind load)

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## STATİK HESAPLAMALarda KABULLER THE ACCEPTANCES OF STATIC CALCULATIONS

STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):

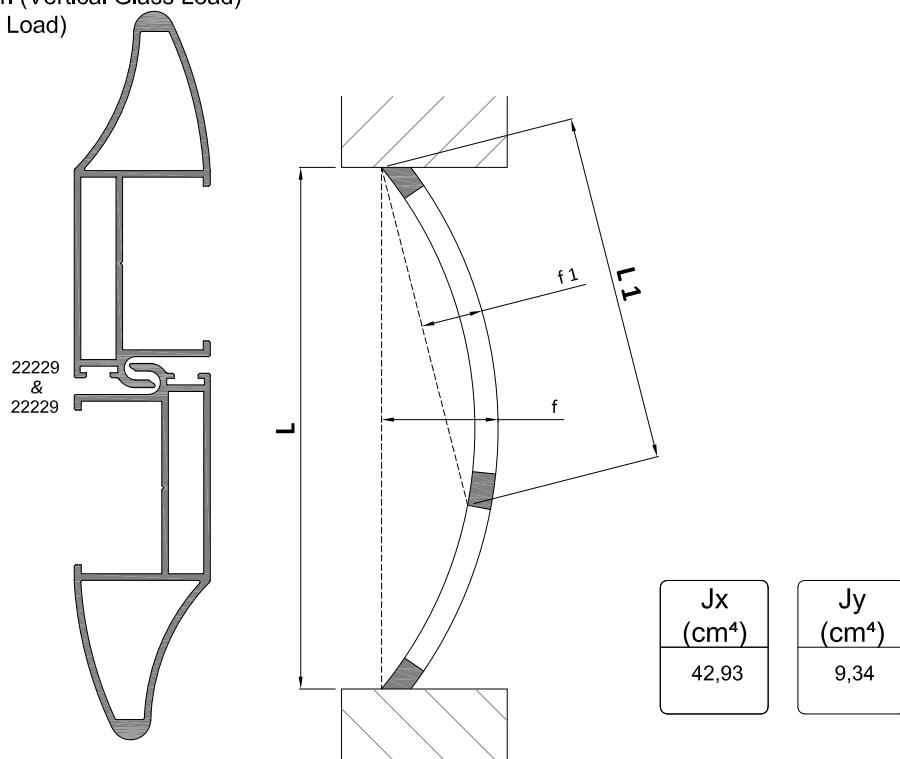
TS 498 (DIN 1055) , TS EN 13830

STATİK HESAPLARDA KULLANILAN YÜKLER (LOADS USING WITH STATIC CALCULATIONS):

1-Yatay Rüzgar Yükleri (Horizontal Wind Load)

2-Düşey Cam Yükleri (Vertical Glass Load)

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Tek camlarda (at single glass);

MESNET AÇIKLIĞI SUPPORT CLEARNESS	AZAMI SEHİM MAXIMUM DEFLECTION
$L < 3m$	$f = L / 200$
$L > 3m$	$f = L / 300$

Çift camlarda (at double glass);

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
$L \geq 3m$	$f = \text{max. } 0,8\text{cm}$
$L < 2m$	$f = L / 200$
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları L1 ; ( If the glass height L1 )	
$L1 \leq 2,4m$	$f1 \leq L1 / 300$
$L1 > 2,4m$	$f1 \leq 0,8\text{cm}$
b) Profillerin boyları L ; ( If the profile length L )	
$L \leq 3m$	$f1 \leq L / 200$
$L > 2m$	$f1 \leq L / 300$

### KISALTMALARIN ANLAMLARI

EXPLANATIONS OF ABBREVIATIONS

W: Rüzgar yükü (Wind load)

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## STATİK HESAPLAMALarda KABULLER

### THE ACCEPTANCES OF STATIC CALCULATIONS

STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):

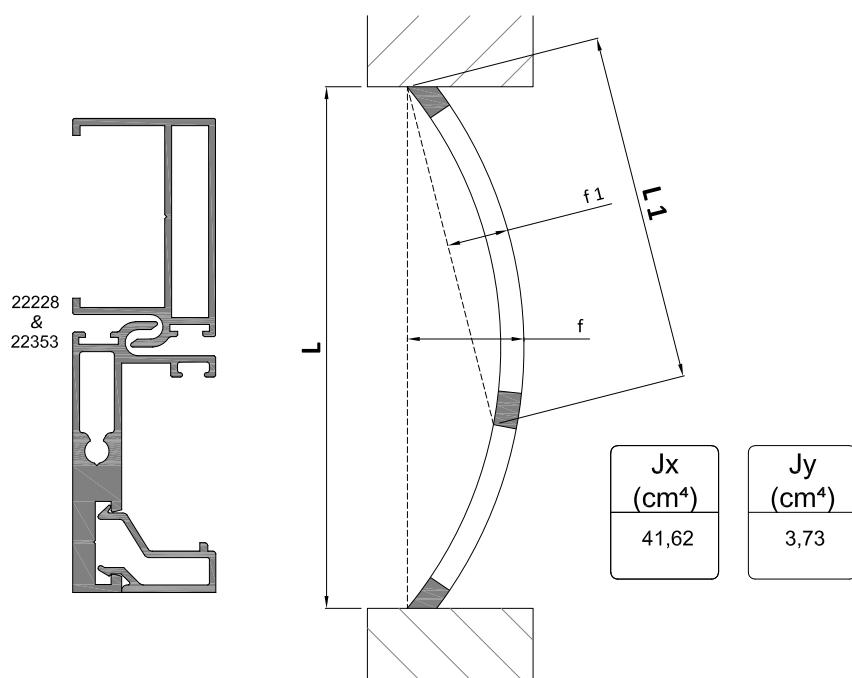
TS 498 (DIN 1055) , TS EN 13830

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Tek camlarda (at single glass);

MESNET AÇIKLIĞI SUPPORT CLEARNESS	AZAMI SEHİM MAXIMUM DEFLECTION
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Çift camlarda (at double glass);

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
$L \geq 3m$	$f = \text{max. } 0,8\text{cm}$
$L < 2m$	$f = L / 200$
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları L1 ; ( If the glass height L1 )	
$L_1 \leq 2,4m$	$f_1 \leq L_1 / 300$
$L_1 > 2,4m$	$f_1 \leq 0,8\text{cm}$
b) Profillerin boyları L ; ( If the profile length L )	
$L \leq 3m$	$f_1 \leq L / 200$
$L > 2m$	$f_1 \leq L / 300$

## KISALTMALARIN ANLAMLARI

### EXPLANATIONS OF ABBREVIATIONS

**W:** Rüzgar yükü (Wind load)

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**f:** Maksimum sehim (Max. deflection)

# MAESTRO 89 Insulated Sliding

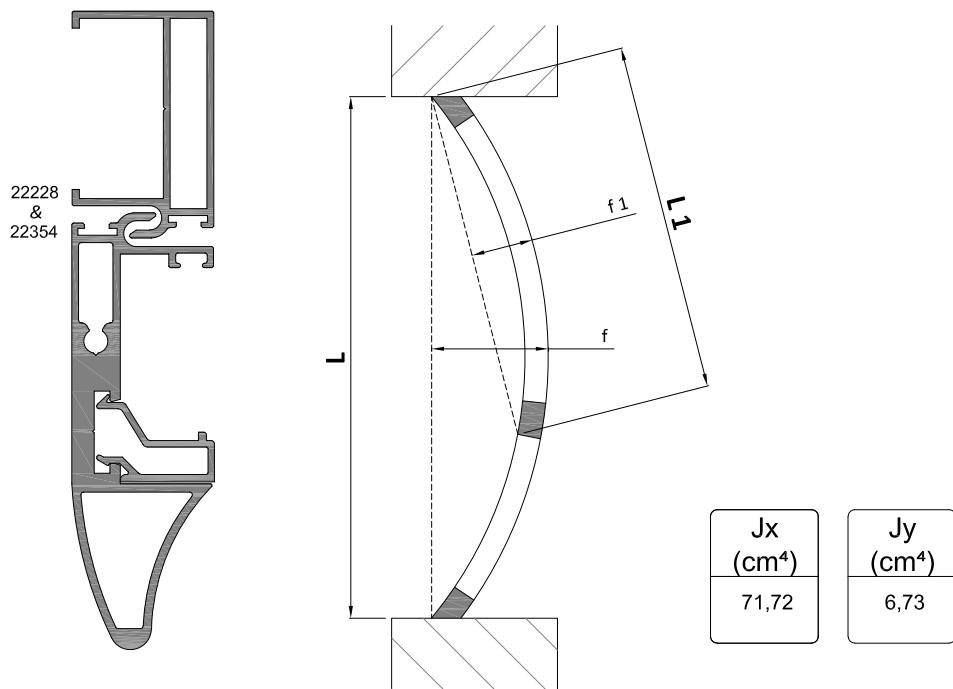
## STATİK HESAPLAMALarda KABULLER THE ACCEPTANCES OF STATIC CALCULATIONS

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Tek camlarda (at single glass):

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L < 3m	f = L / 200
L > 3m	f = L / 300

Çift camlarda (at double glass):

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
L ≥ 3m	f = max. 0,8cm
L < 2m	f = L / 200
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları L1 ; ( If the glass height L1 )	L1 ≤ 2,4m f1 ≤ L1 / 300
	L1 > 2,4m f1 ≤ 0,8cm
b) Profillerin boyları L ; ( If the profile length L )	L ≤ 3m f1 ≤ L / 200
	L > 2m f1 ≤ L / 300

### KISALTMALARIN ANLAMLARI

EXPLANATIONS OF ABBREVIATIONS

- W:** Rüzgar yükü (Wind load)  
**c:** Rüzgar şekil katsayı (Wind shape c.)  
**q:** Emme hız basıncı (Speed pressure)  
**V:** Rüzgar hızı (Wind speed)  
**L:** Düşey açıklık (Vertical clearance)  
**E:** Elastisite modülü (Elasticity modulus)  
**f:** Maksimum sehim (Max. deflection)

**FERMOSA**  
SYSTEM

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## STATİK HESAPLAMALarda KABULLER

### THE ACCEPTANCES OF STATIC CALCULATIONS

STATİK HESAPLARDA KULLANILAN STANDARTLAR (STANDARDS USING WITH STATIC CALCULATIONS):

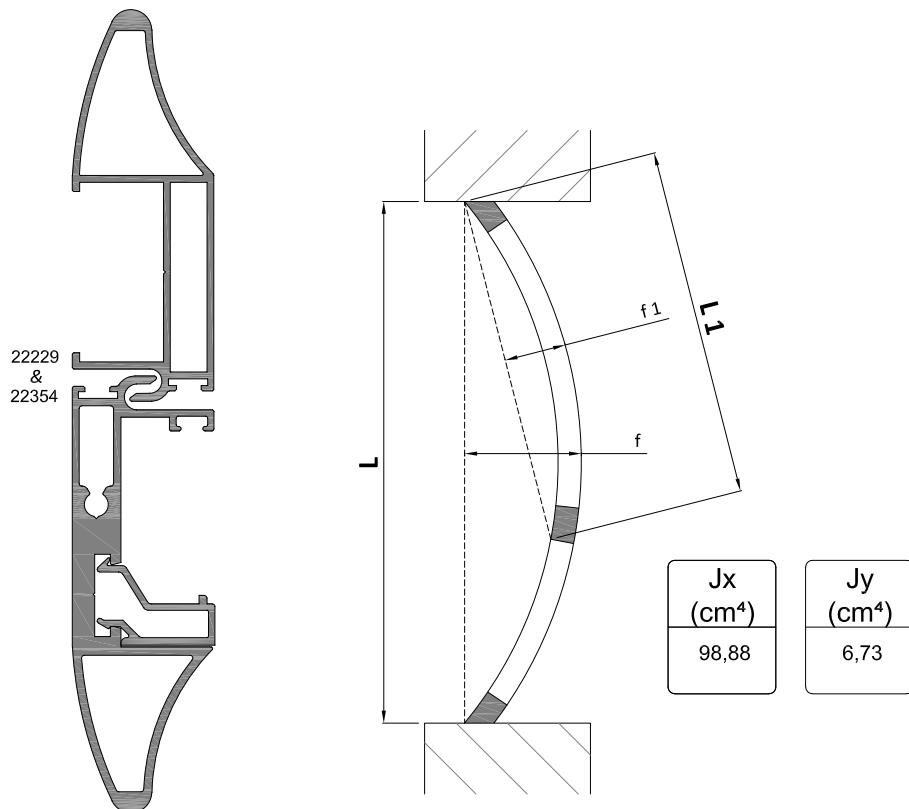
TS 498 (DIN 1055) , TS EN 13830

STATİK HESAPLARDA KULLANILAN YÜKLER (LOADS USING WITH STATIC CALCULATIONS):

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3-Kar Yükleri (Snow Load)



Tek camlarda (at single glass);

MESNET AÇIKLIĞI SUPPORT CLEARNESS	AZAMI SEHİM MAXIMUM DEFLECTION
$L < 3m$	$f = L / 200$
$L > 3m$	$f = L / 300$

Çift camlarda (at double glass);

ARA KAYIT YOKSA ; ( IF IT HAS NO TRANSOM )	
$L \geq 3m$	$f = \text{max. } 0,8\text{cm}$
$L < 2m$	$f = L / 200$
ARA KAYIT VARSA ; ( IF IT HAS TRANSOM )	
a) Camların boyları $L_1$ ; ( If the glass height $L_1$ )	
$L_1 \leq 2,4m$	$f_1 \leq L_1 / 300$
$L_1 > 2,4m$	$f_1 \leq 0,8\text{cm}$
b) Profillerin boyları $L$ ; ( If the profile length $L$ )	
$L \leq 3m$	$f_1 \leq L / 200$
$L > 2m$	$f_1 \leq L / 300$

#### KISALTMALARIN ANLAMLARI

EXPLANATIONS OF ABBREVIATIONS

W: Rüzgar yükü (Wind load)

c: Rüzgar şekil katsayı (Wind shape c.)

q: Emme hız basıncı (Speed pressure)

V: Rüzgar hızı (Wind speed)

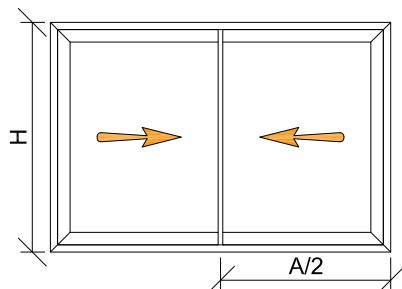
L: Düşey açıklık (Vertical clearance)

E: Elastisite modülü (Elasticity modulus)

f: Maksimum sehim (Max. deflection)

# MAESTRO 89 Insulated Sliding

## RÜZGAR YÜKÜNE BAĞLI KULLANIM LİMİTLERİ DİYAGRAMLARI USAGE LIMITS DIAGRAMS ACCORDING TO THE WIND LOAD



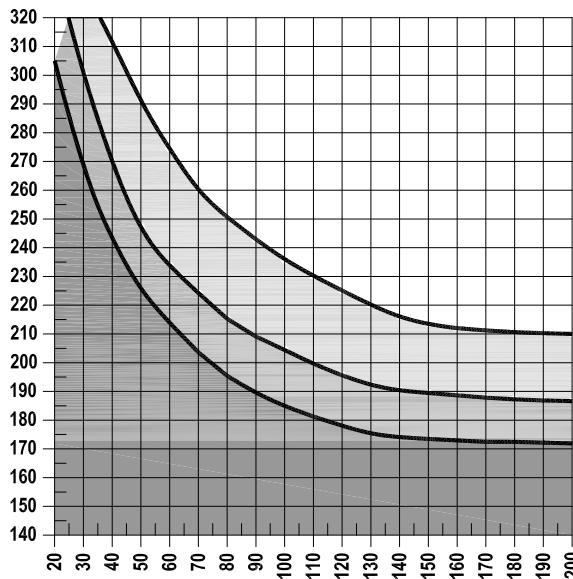
Diyagamlar Hakkında Bilgi (Information About The Diagrams) :

Tablolarda verilen eğriler; sağ tarafta belirtilen kenet profillerinin toplam atalet değerine ve 60, 96, 132 kg/m<sup>2</sup> olmak üzere 3 farklı rüzgar yüküne bağlı olarak ayrı ayrı çizilmiştir. Eğrilerin altında kalan taralı bölgeler o rüzgar yüküne göre "uygulanabilir" ebatları ifade etmektedir.

(The curves in the table; drew according to the inertia value of the clamp profiles and the wind loads of 60, 96, 132 kg/m<sup>2</sup>. The hatched area below the curves according to the selected wind load mean "applicable" dimensions.)

Sehim Kriteri (Deflection Criteria) : L / 300

L (cm)



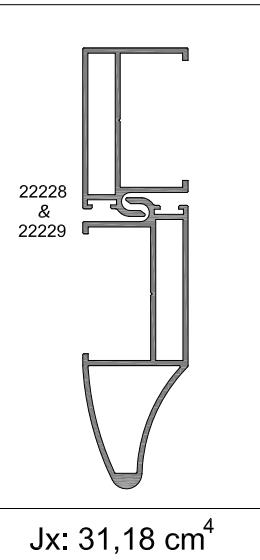
Max. Sehim = L / 300  
(Max. Deflection)

Rüzgar Hızı & Yükü  
(Wind Speed & Load)  
28 m/s & 60 kg/m<sup>2</sup>

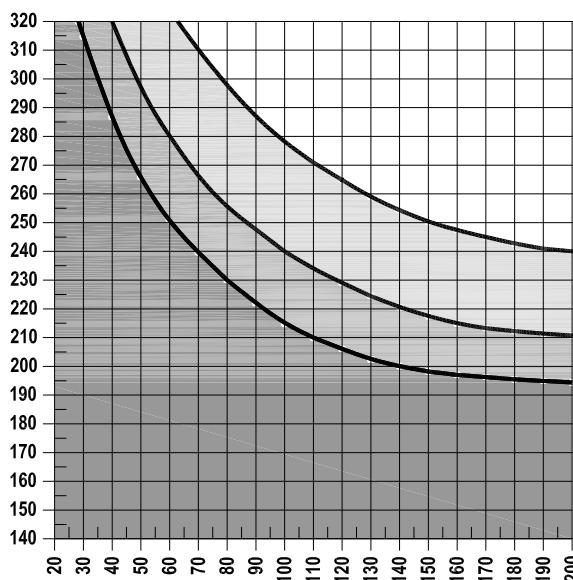
36 m/s & 96 kg/m<sup>2</sup>

42 m/s & 132 kg/m<sup>2</sup>

A/2 (cm)



L (cm)



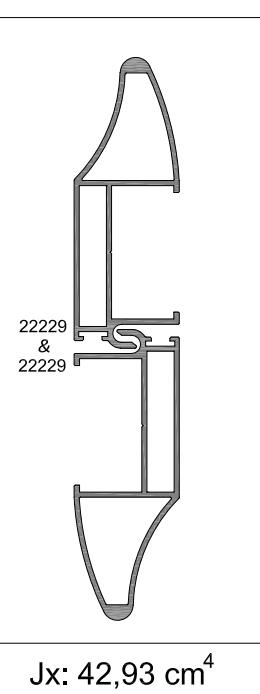
Max. Sehim = L / 300  
(Max. Deflection)

Rüzgar Hızı & Yükü  
(Wind Speed & Load)  
28 m/s & 60 kg/m<sup>2</sup>

36 m/s & 96 kg/m<sup>2</sup>

42 m/s & 132 kg/m<sup>2</sup>

A/2 (cm)



# FERMOSA

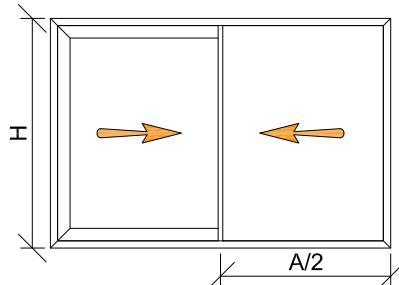
SYSTEM

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## RÜZGAR YÜKÜNE BAĞLI KULLANIM LİMİTLERİ DİYAGRAMLARI

### USAGE LIMITS DIAGRAMS ACCORDING TO THE WIND LOAD



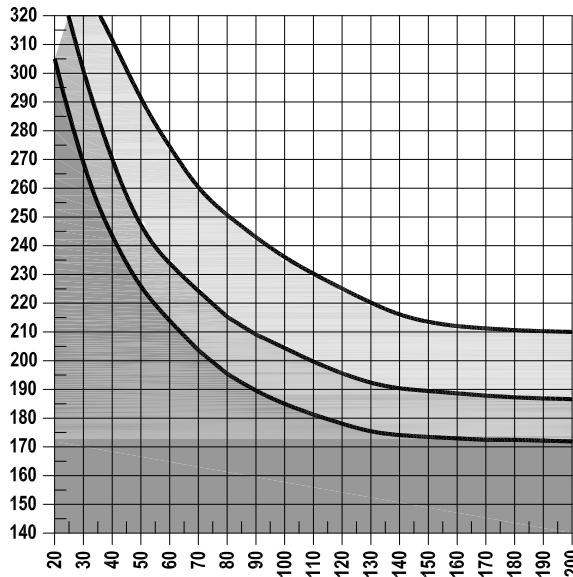
Diyagamlar Hakkında Bilgi (Information About The Diagrams) :

Tablolarda verilen eğriler; sağ tarafta belirtilen kenet profillerinin toplam atalet değerine ve 60, 96, 132 kg/m<sup>2</sup> olmak üzere 3 farklı rüzgar yüküne bağlı olarak ayrı ayrı çizilmiştir. Eğrilerin altında kalan taralı bölgeler o rüzgar yüküne göre "uygulanabilir" ebatları ifade etmektedir.

(The curves in the table; drew according to the inertia value of the clamp profiles and the wind loads of 60, 96, 132 kg/m<sup>2</sup>. The hatched area below the curves according to the selected wind load mean "applicable" dimensions.)

Sehim Kriteri (Deflection Criteria) : L / 300

L (cm)



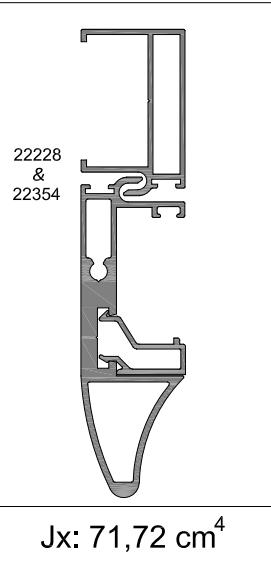
Max. Sehim = L / 300  
(Max. Deflection)

Rüzgar Hızı & Yükü  
(Wind Speed & Load)  
28 m/s & 60 kg/m<sup>2</sup>

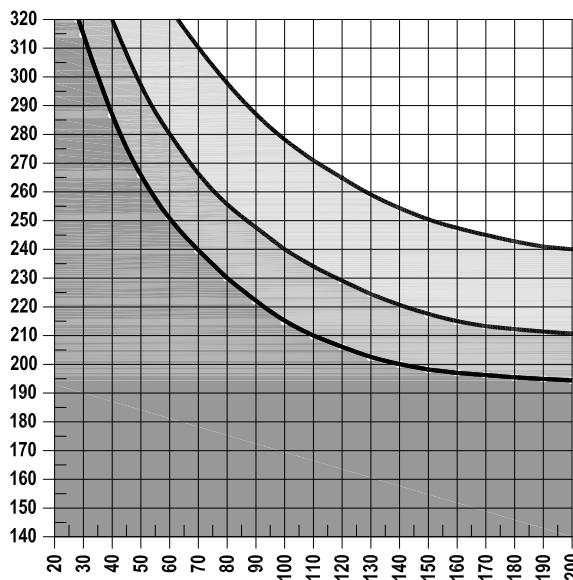
36 m/s & 96 kg/m<sup>2</sup>

42 m/s & 132 kg/m<sup>2</sup>

A/2 (cm)



L (cm)



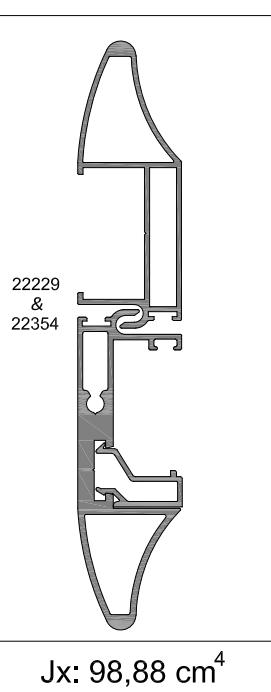
Max. Sehim = L / 300  
(Max. Deflection)

Rüzgar Hızı & Yükü  
(Wind Speed & Load)  
28 m/s & 60 kg/m<sup>2</sup>

36 m/s & 96 kg/m<sup>2</sup>

42 m/s & 132 kg/m<sup>2</sup>

A/2 (cm)

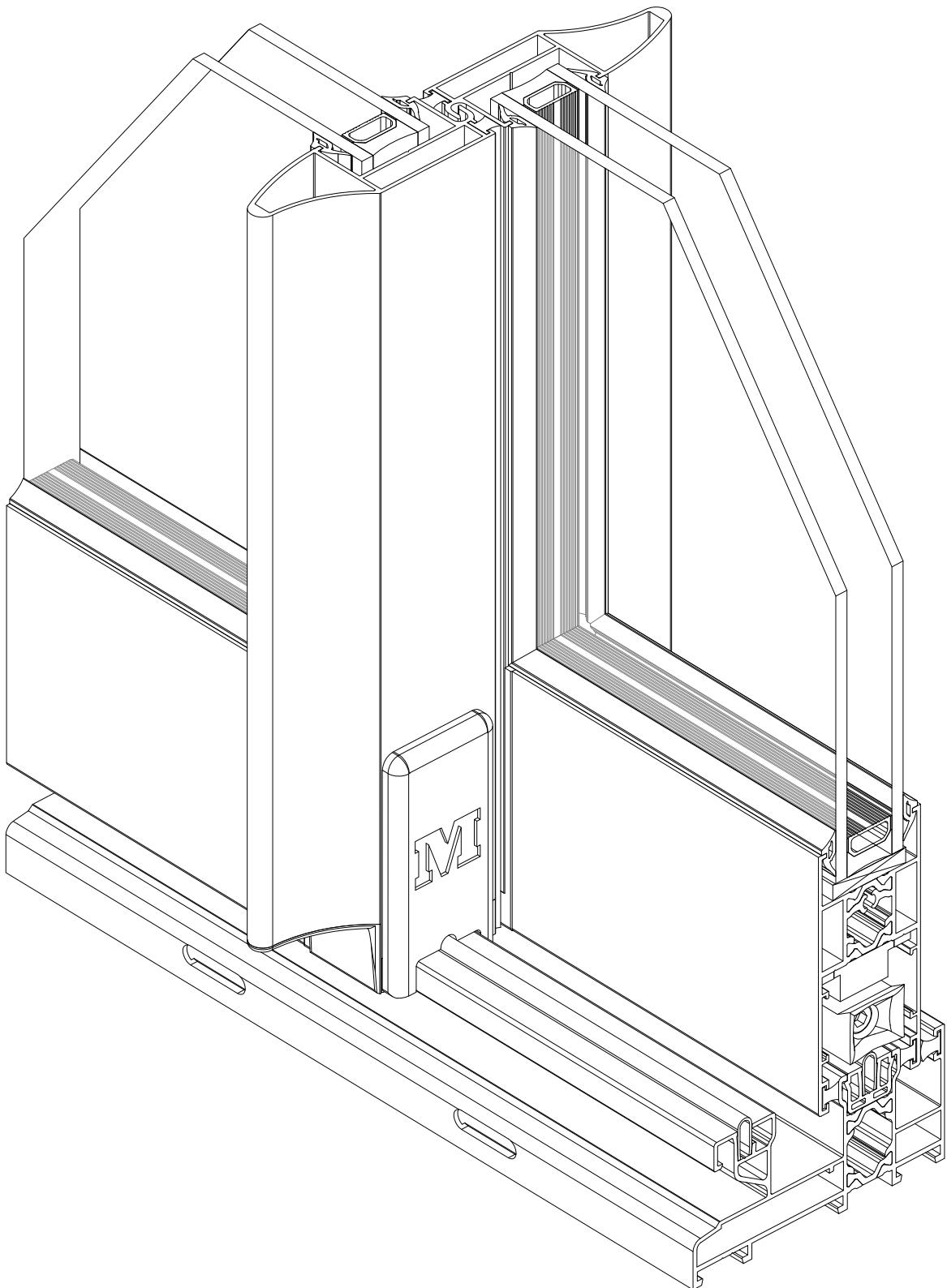


# **MAESTRO 89 Insulated Sliding**

## **SİSTEM KESİT DETAYLARI**

---

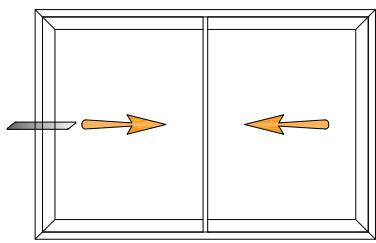
## **SYSTEM CROSS SECTION DETAILS**



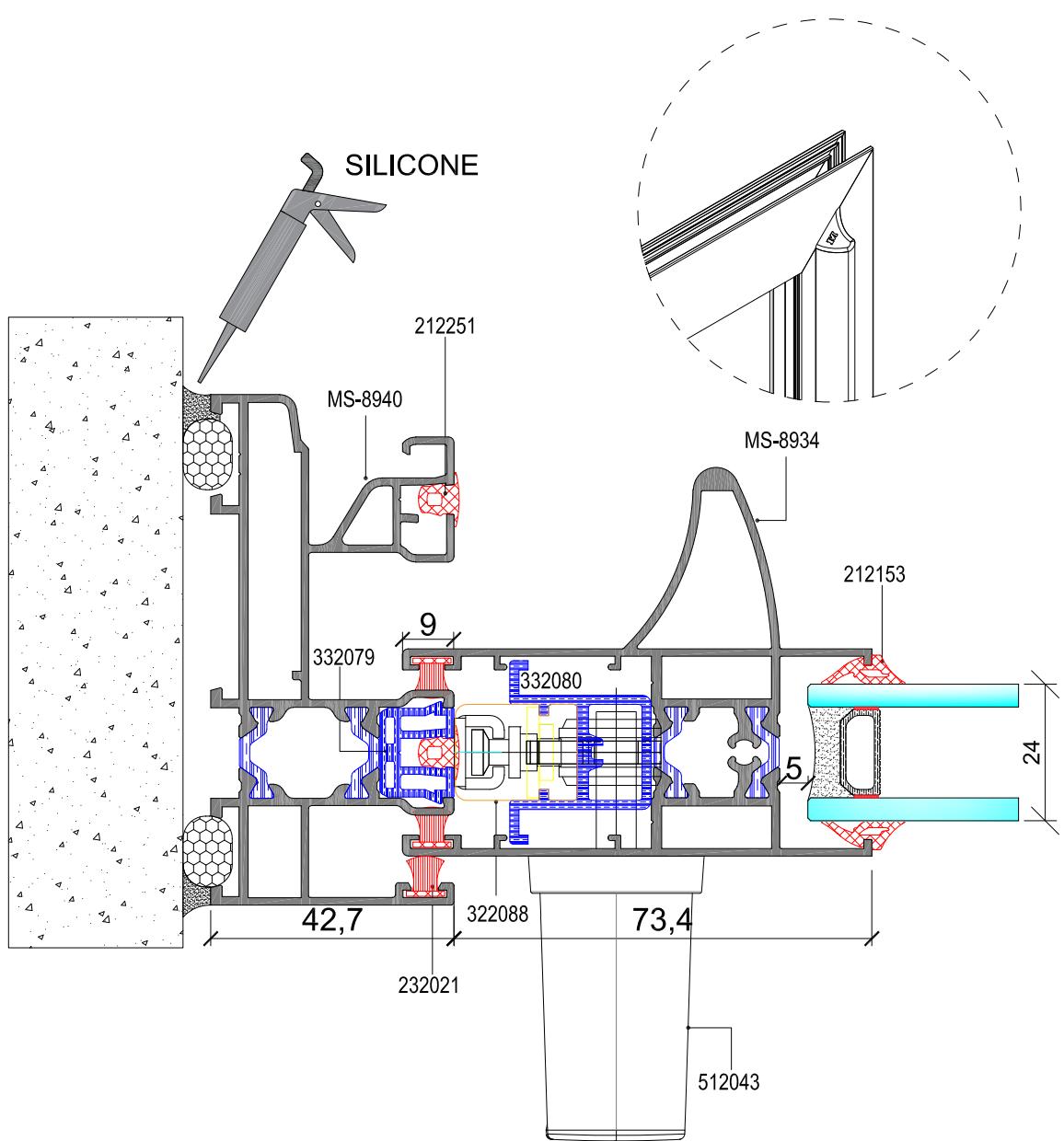
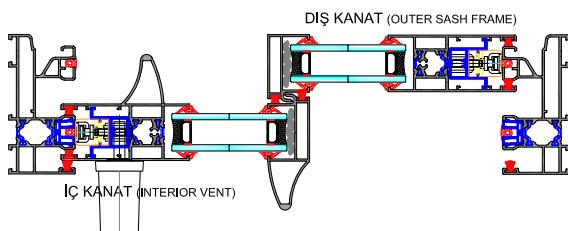
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

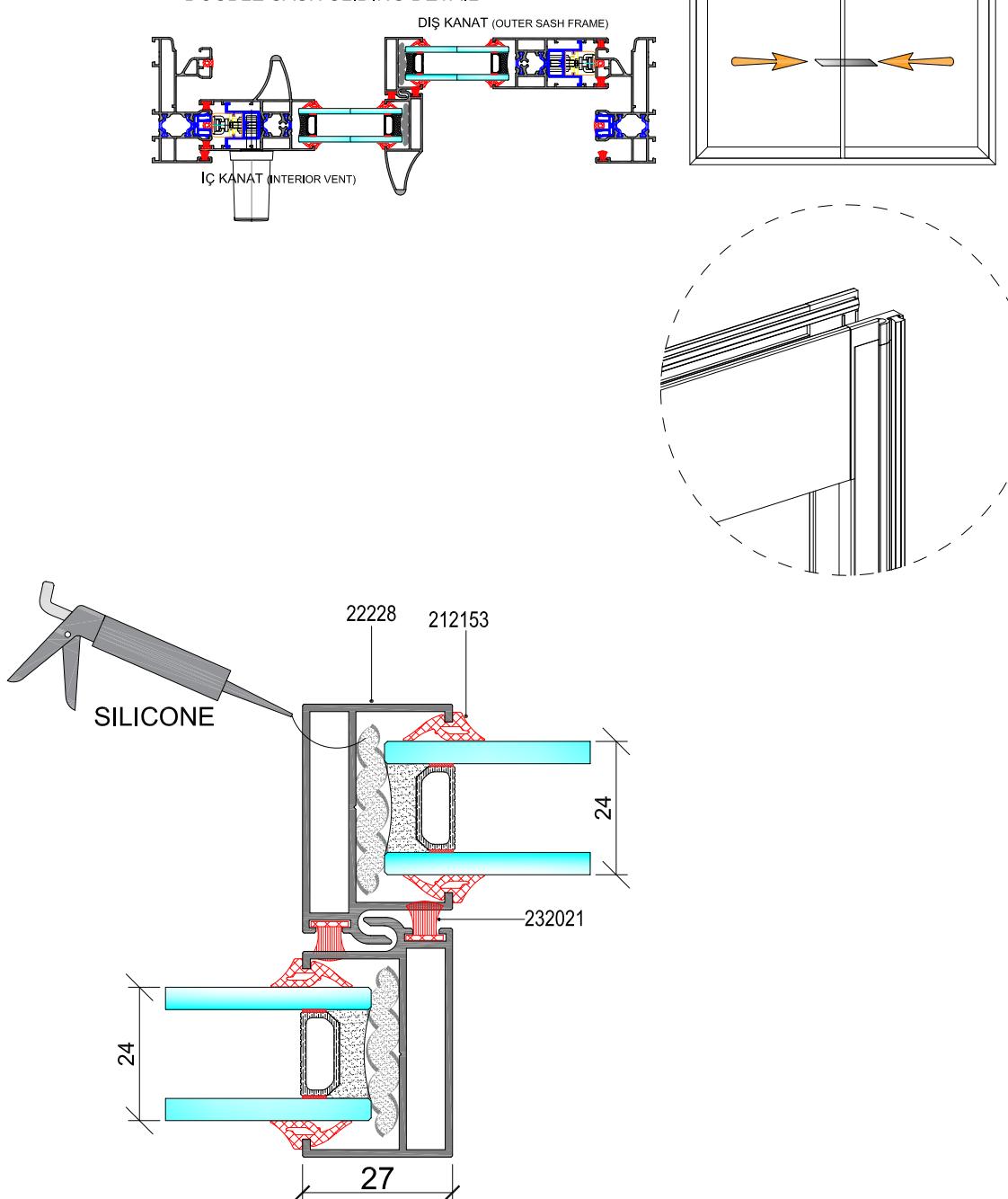


ÇİFT KANATLI SÜRME DETAYI  
DOUBLE SASH SLIDING DETAIL



# MAESTRO 89 Insulated Sliding

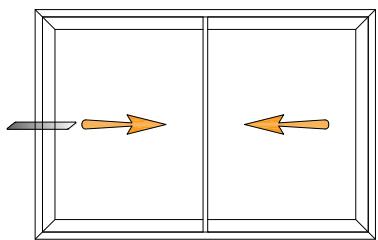
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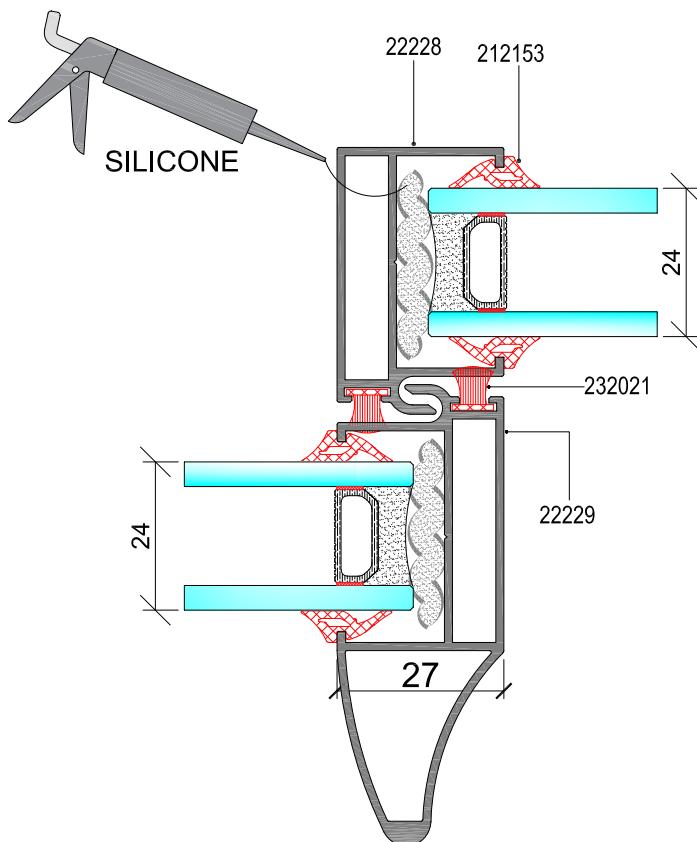
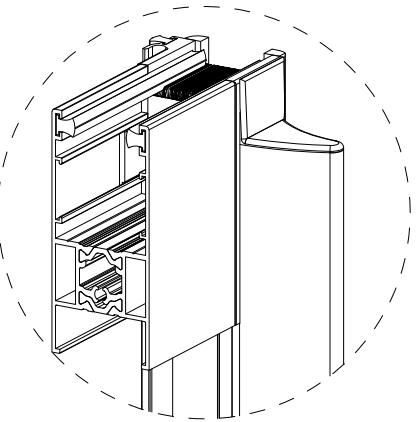
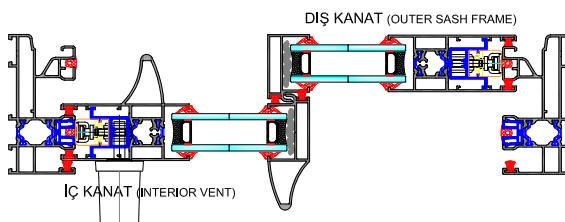
**FERMOSA**  
SYSTEM

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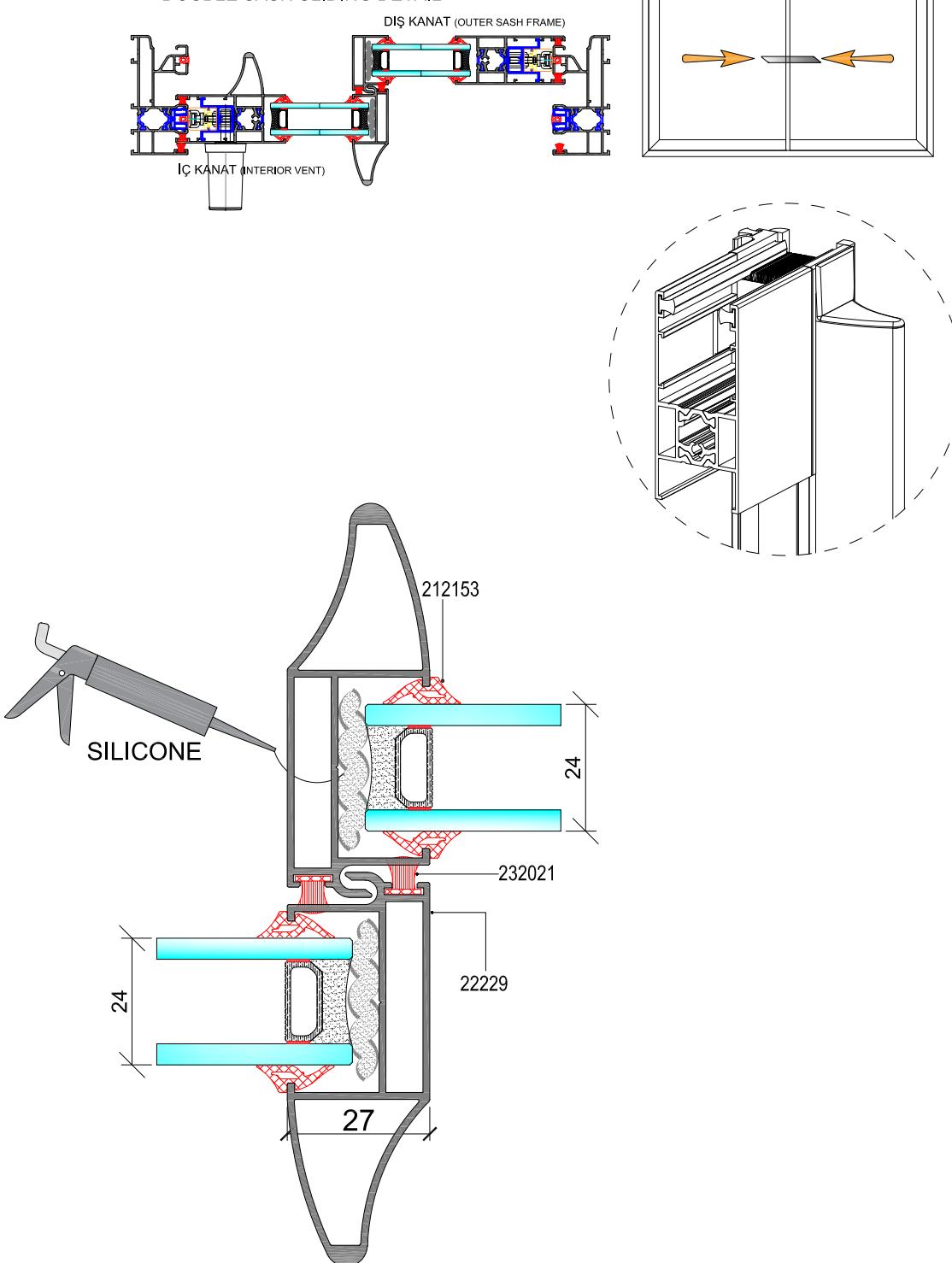


ÇİFT KANATLI SÜRME DETAYI  
DOUBLE SASH SLIDING DETAIL



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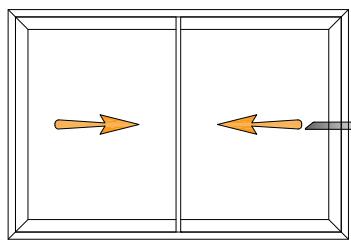
## ÇİFT KANATLI SÜRME DETAYI DOUBLE SASH SLIDING DETAIL



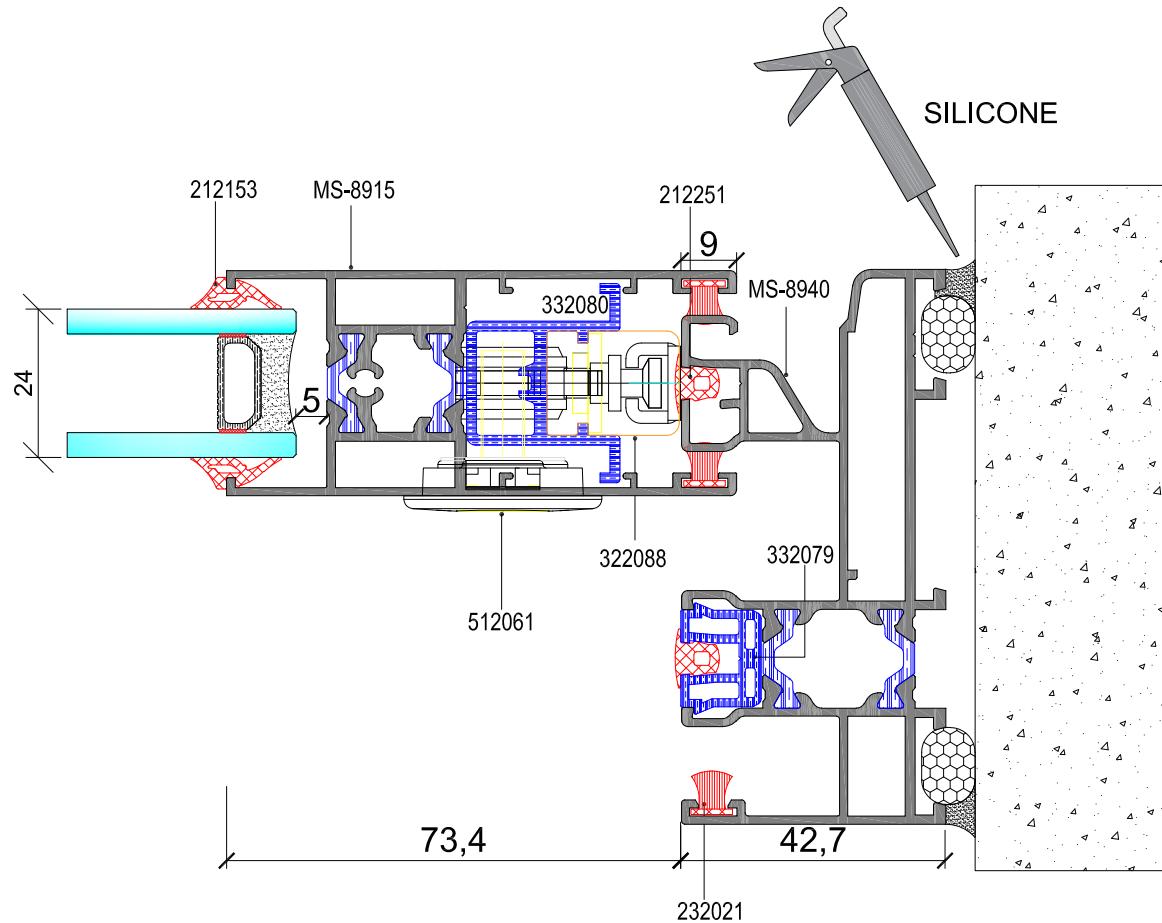
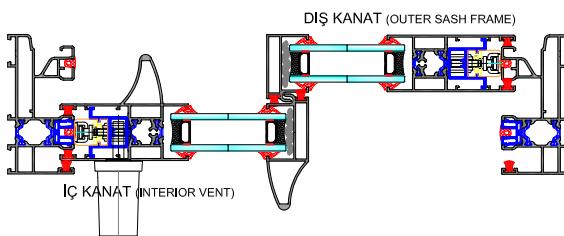
**FERMOSA**  
SYSTEM

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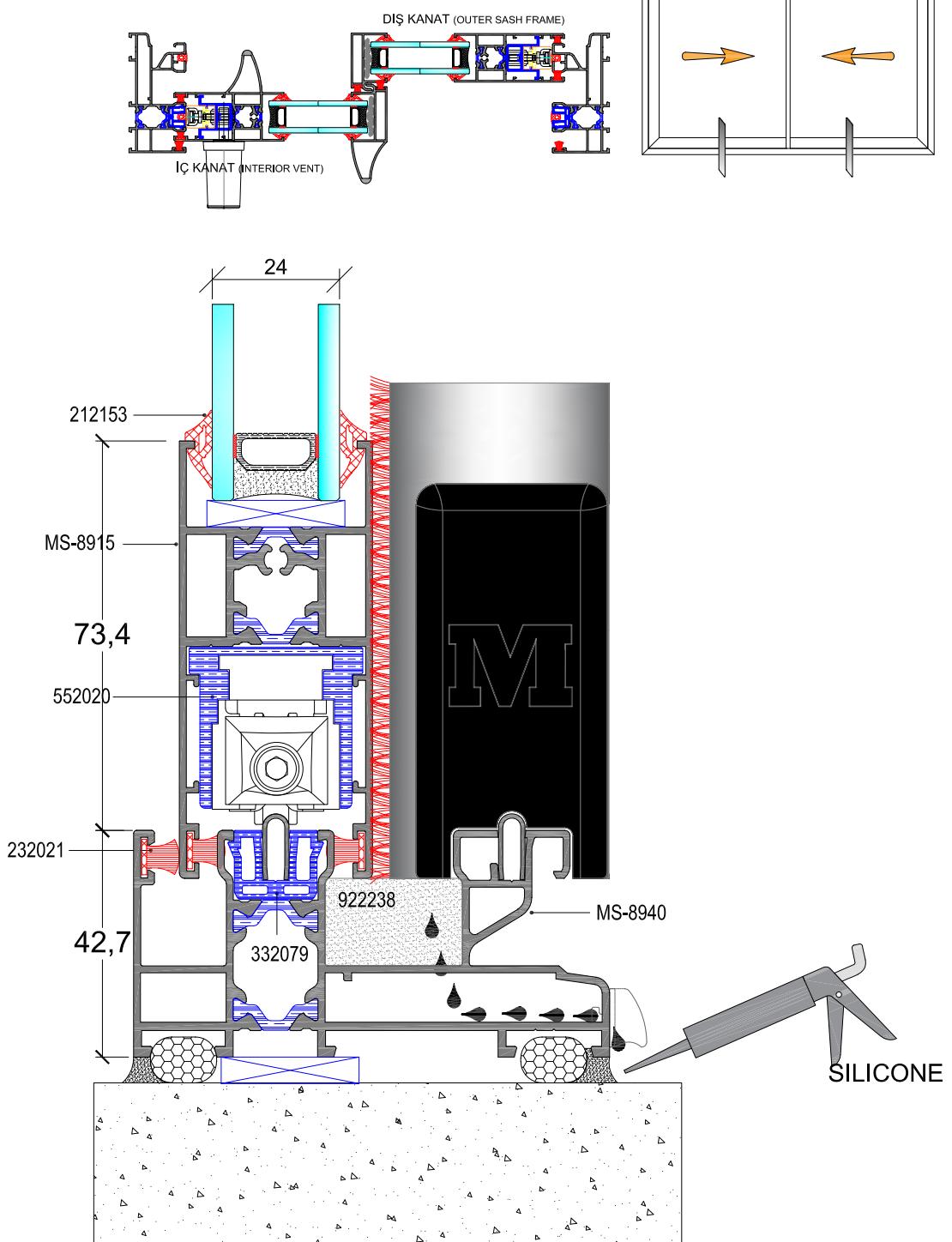


**ÇİFT KANATLI SÜRME DETAYI**  
DOUBLE SASH SLIDING DETAIL



# MAESTRO 89 Insulated Sliding

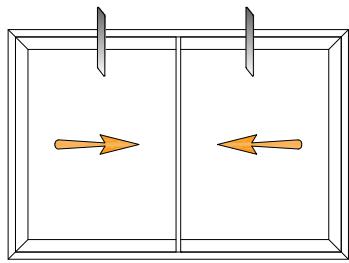
## ÇİFT KANATLI SÜRME DETAYI DOUBLE SASH SLIDING DETAIL



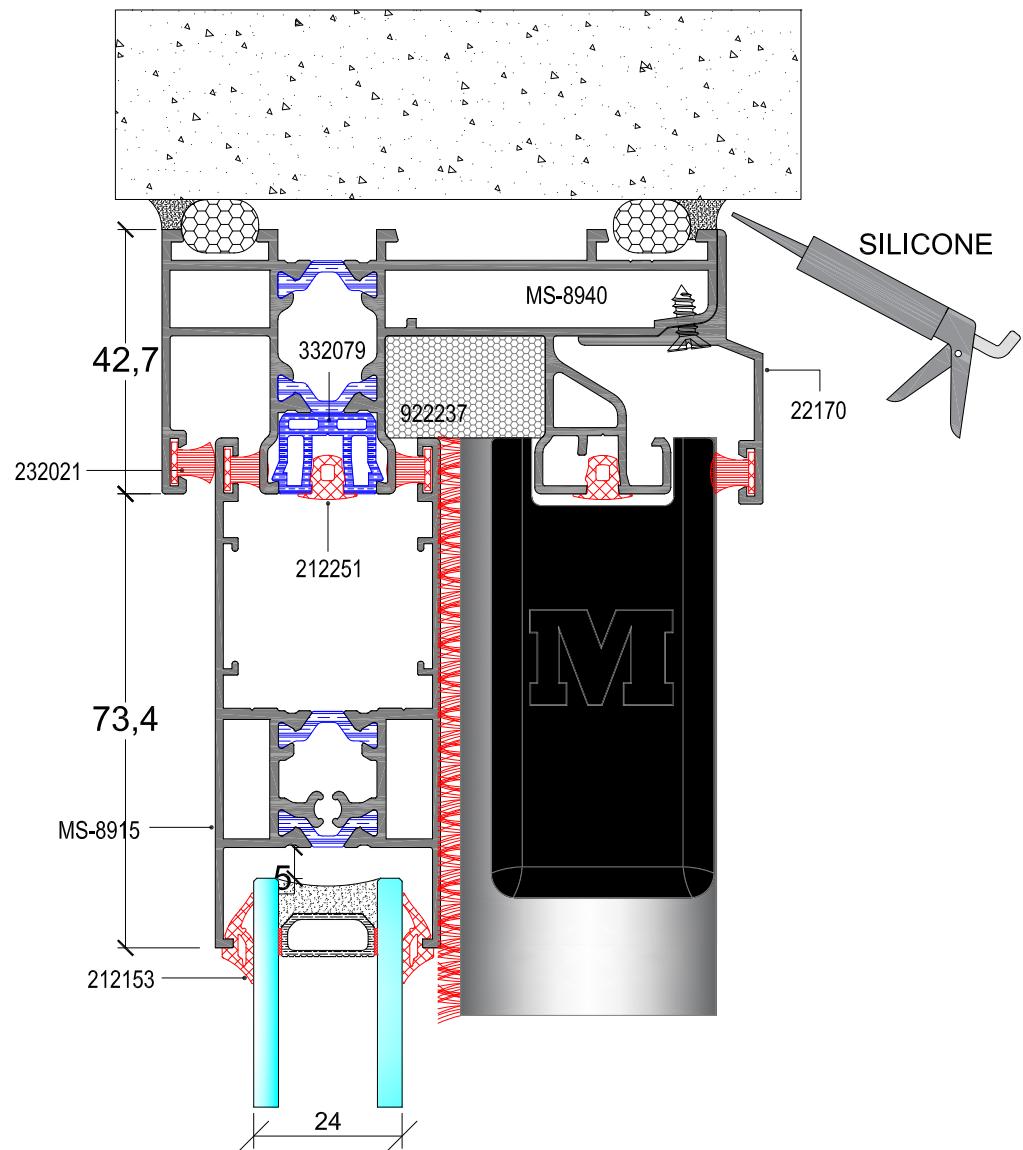
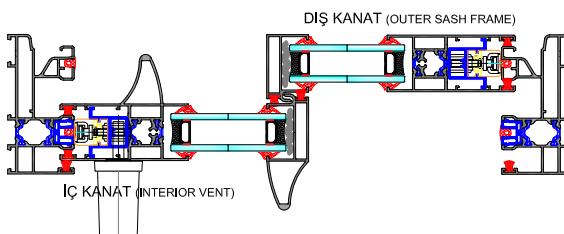
**FERMOSA**  
SYSTEM

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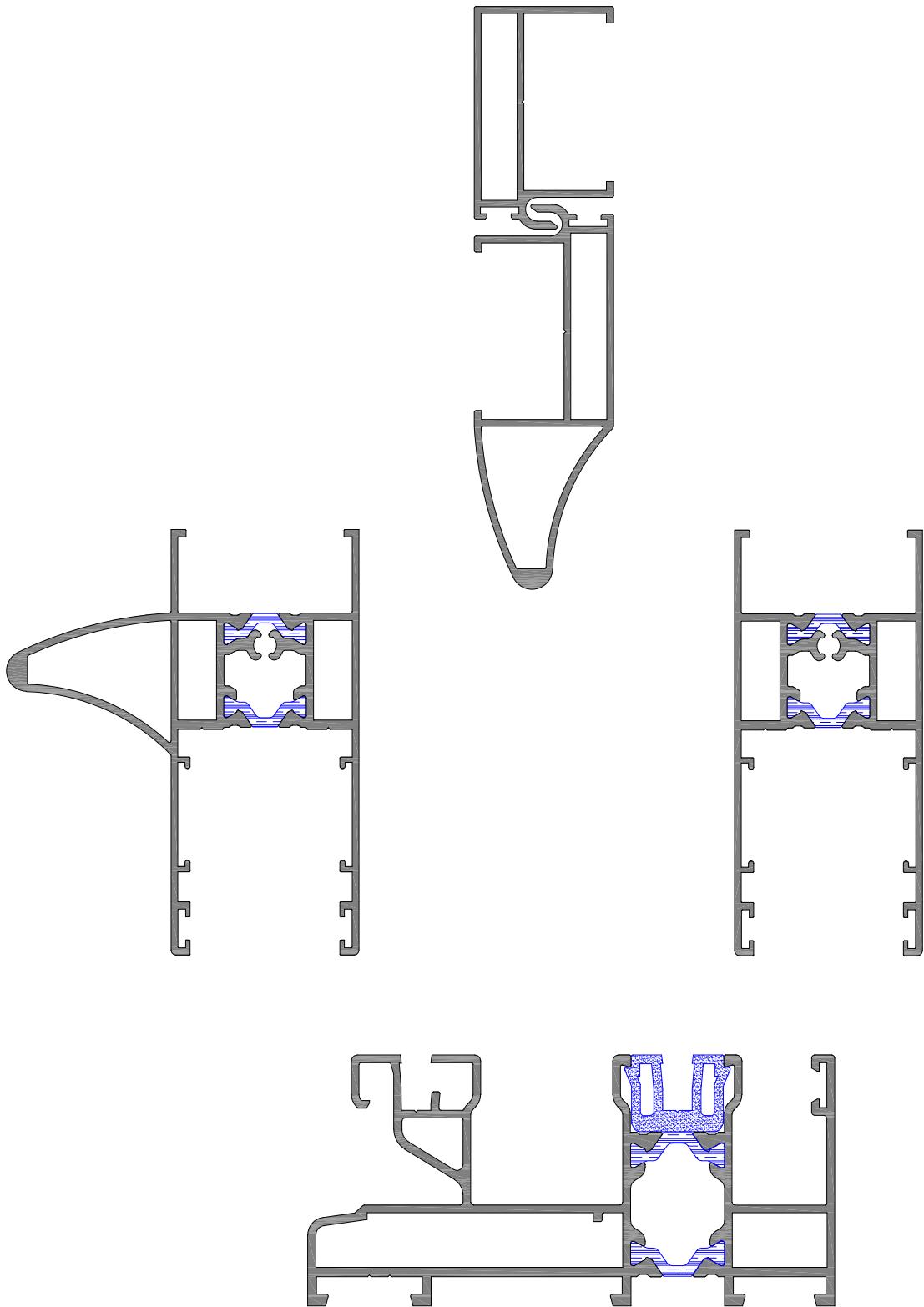
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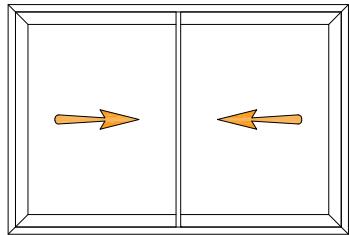
ÇİFT KANATLI SÜRME DETAYI  
DOUBLE SASH SLIDING DETAIL



## KESİM ÜRETİM ÖLÇÜLERİ MANUFACTURING DIMENSIONS



# MAESTRO 89 Insulated Sliding



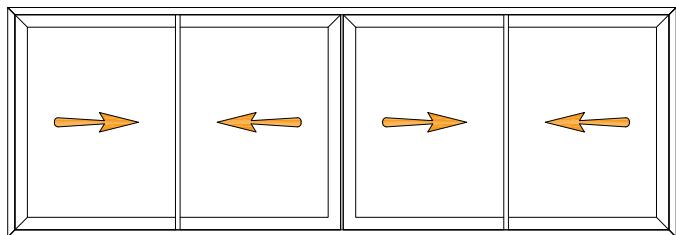
**ÇİFT KANATLI SÜRME**  
DOUBLE SASH SLIDING

<b>PROFİLLER / PROFILES</b>				
<b>ADET</b> <b>UNIT</b>	<b>KOD</b> <b>CODE</b>	<b>TANIM</b> <b>DESCRIPTION</b>	<b>KESİMLÖÇÜSÜ</b> <b>CUTTING SIZE</b>	<b>KESİM AÇISI</b> <b>CUTTING ANGLE</b>
2	MS-8940	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8940	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
2	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
1	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
4	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/2 - 49,6	45°/90°
1	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22170	DAMLALIK PR./DRIP WHEATHER PR.	L	90°/90°

<b>AKSESUARLAR / ACCESSORIES</b>				
<b>ADET</b> <b>UNIT</b>	<b>KOD</b> <b>CODE</b>	<b>TANIM</b> <b>DESCRIPTION</b>	<b>KESİMLÖÇÜSÜ</b> <b>CUTTING SIZE</b>	<b>KESİM AÇISI</b> <b>CUTTING ANGLE</b>
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
4	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372002	TAPA SETİ / PLUG KIT	-	
4	552020	RULMAN / PULLEY	-	
1	922237	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
1	922238	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
-	322079	PVC RAY PROFİLİ / PVC RAIL PROFILE	2L + 2H	45°/45°
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L + 1H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	4L + 6H	
-	332036	ÇELİK RAY / STEEL RAIL	2L	
-	332080	PVC İSPANYOLET PR. / PVC ESPAGNOLETTE PR.	1H	90°/90°
2	322088	KANAT STOPER / STOPPER FOR SASH	-	
1	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	

# MAESTRO 89 Insulated Sliding

## DÖRT KANATLI YALITIMLI SÜRME INSULATED QUADRUPLE SASH SLIDING



### PROFİLLER / PROFILES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
2	MS-8940	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8940	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
4	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
2	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
8	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/4 - 49,6	45°/90°
1	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22170	DAMLALIK PR. / DRIP WHEATHER PR.	L	90°/90°
1	MS-8917	DÖRTLÜ ORTA ADAPTÖR / ADAPTER	H - 67,4	90°/90°

### AKSESUARLAR / ACCESSORIES

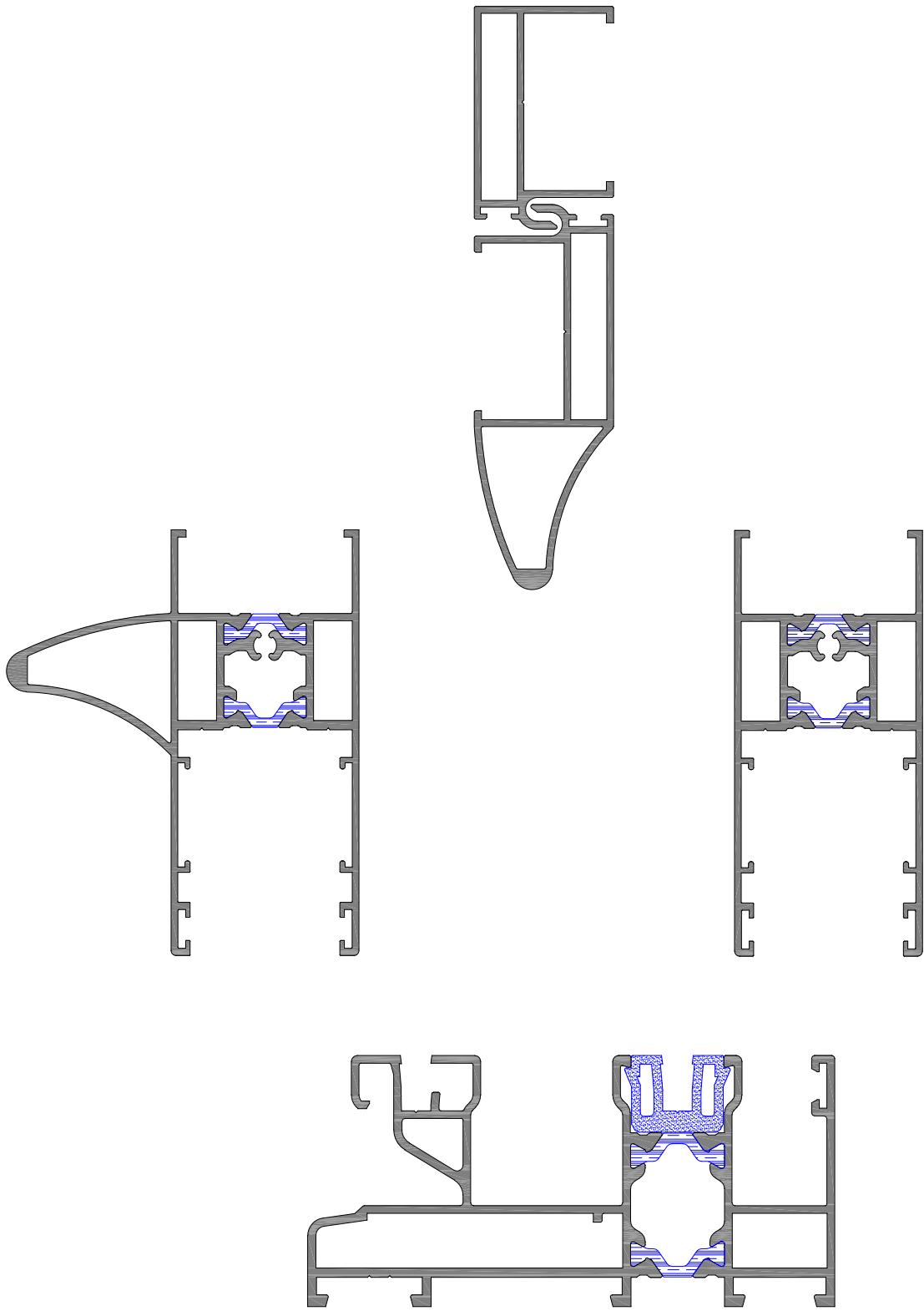
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
4	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372004	TAPA SETİ / PLUG KIT	-	
8	552020	RULMAN / PULLEY	-	
3	922237	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
3	922238	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
-	322079	PVC RAY PROFİLİ / PVC RAIL PROFILE	2L + 2H	45°/45°
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L + 1H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	4L + 6H	
-	332036	ÇELİK RAY / STEEL RAIL	2L	
-	332080	PVC İSPANYOLET PR. / PVC ESPAGNOLETTE PR.	1H	90°/90°
6	322088	KANAT STOPER / STOPPER FOR SASH	-	
2	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	

**FERMOSA**  
SYSTEM

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## İMALAT ÜRETİM DETAYLARI

## PRODUCTION APPLICATION DETAILS

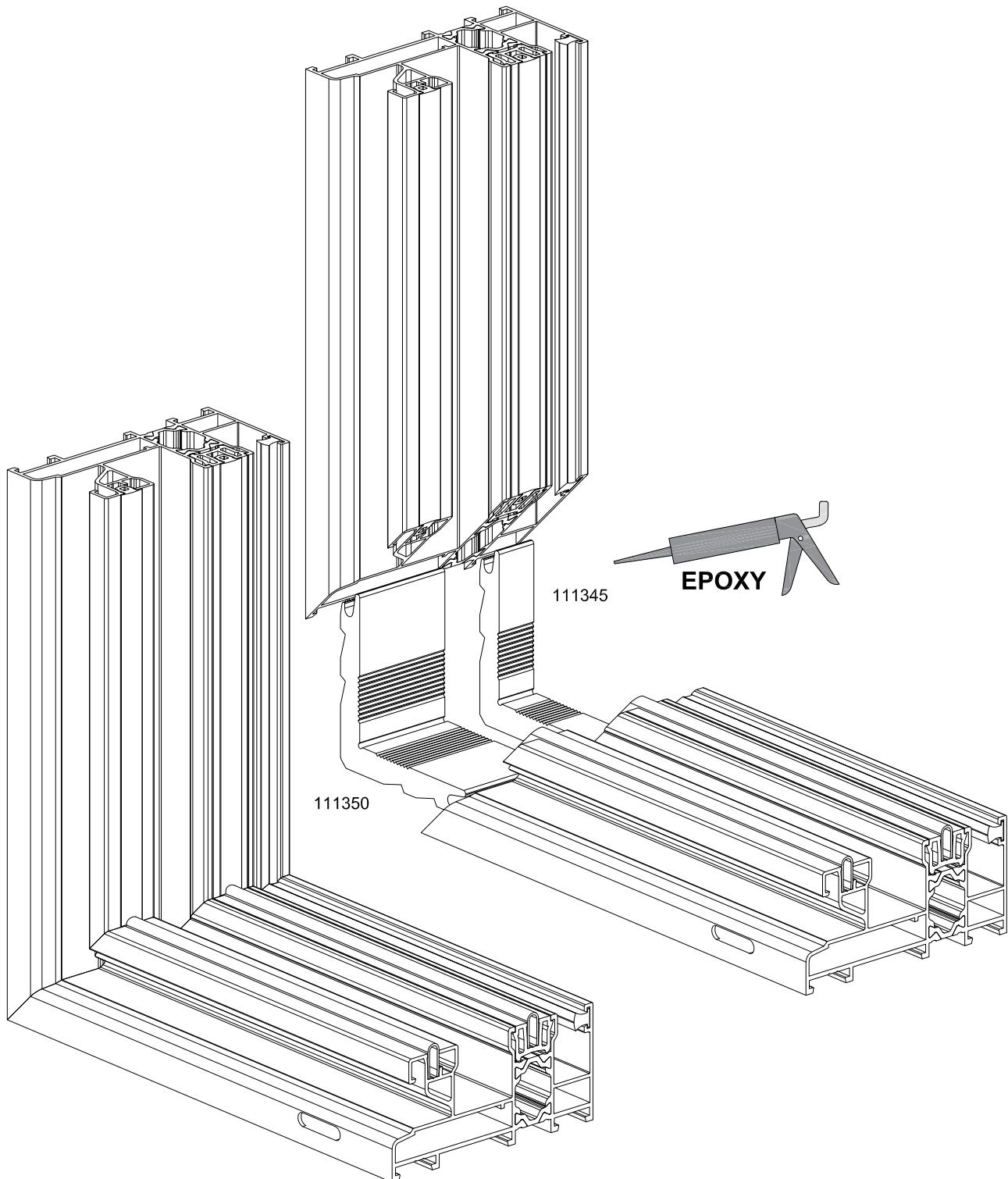


**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



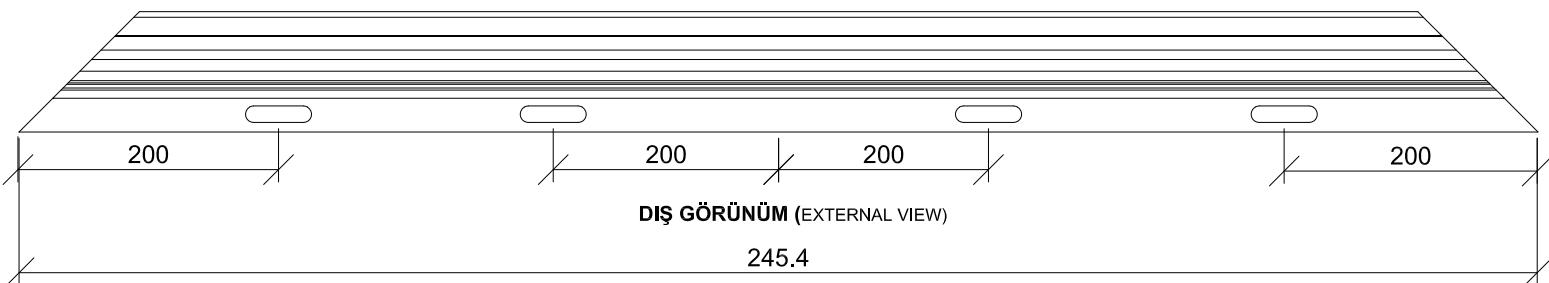
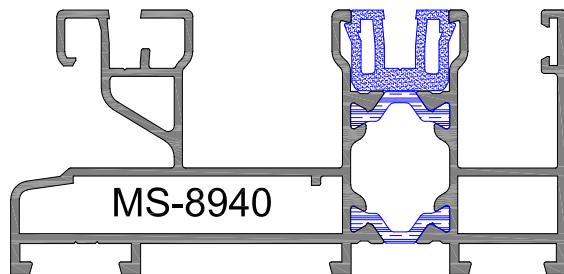
**FERMOSA**  
SYSTEM

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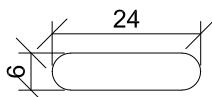
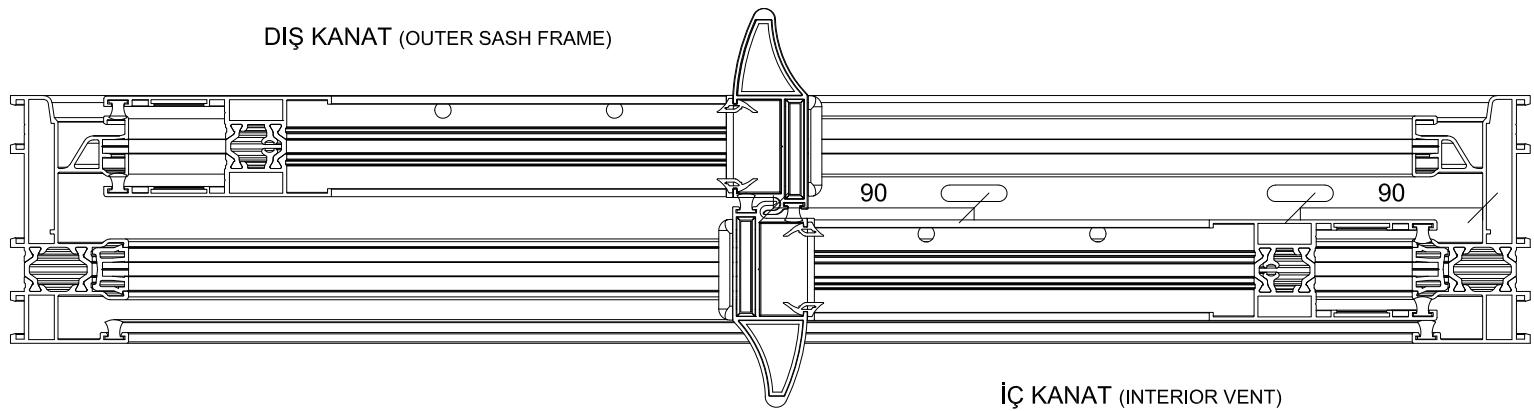
**41**

# MAESTRO 89 Insulated Sliding

KASA TAHLİYE DETAYI  
WATER DRAINAGE CHANNEL DETAIL



DİŞ KANAT (OUTER SASH FRAME)



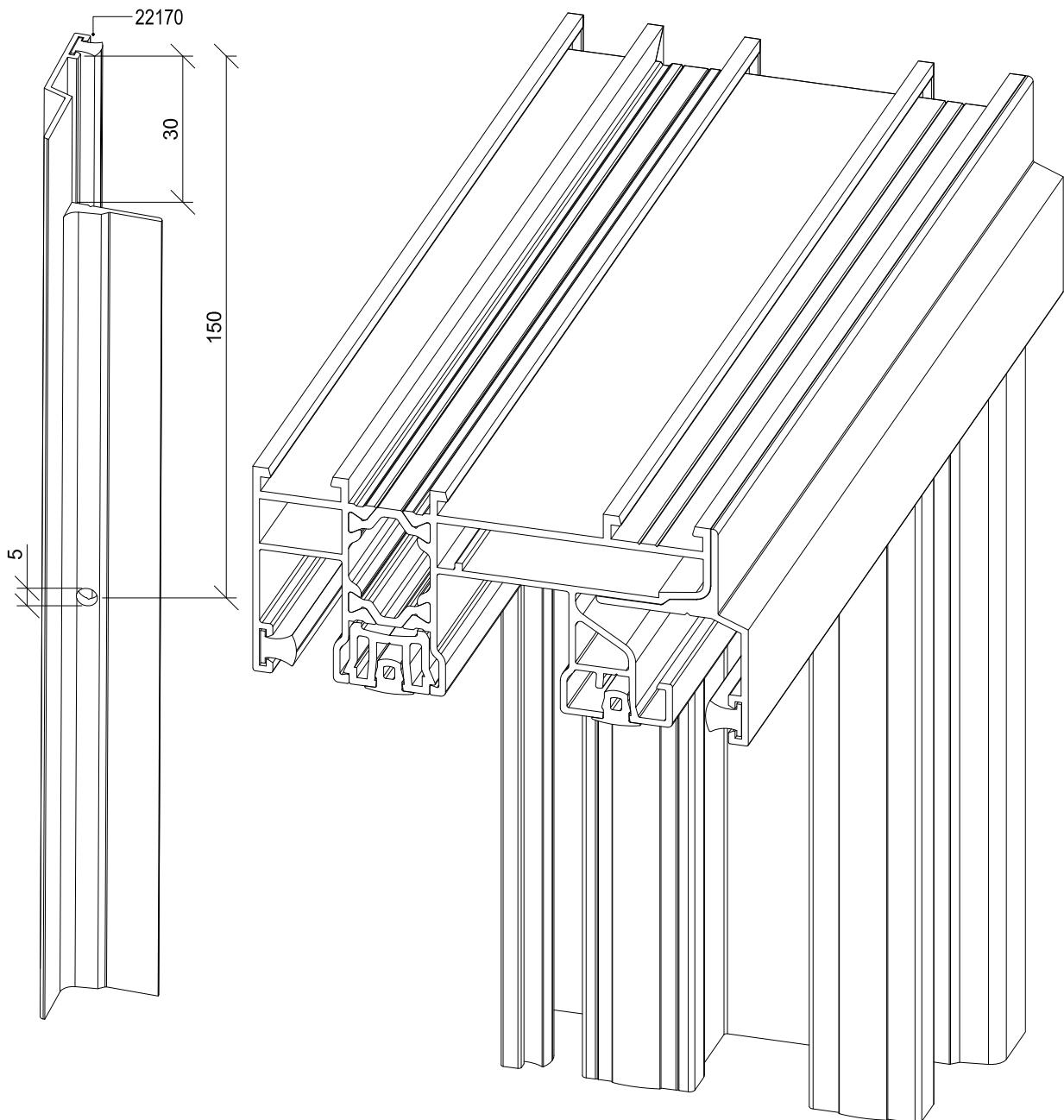
TAHLİYE DELİĞİNİN ÖLÇÜLERİ  
DRAINAGE HOLE DIMENSIONS

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



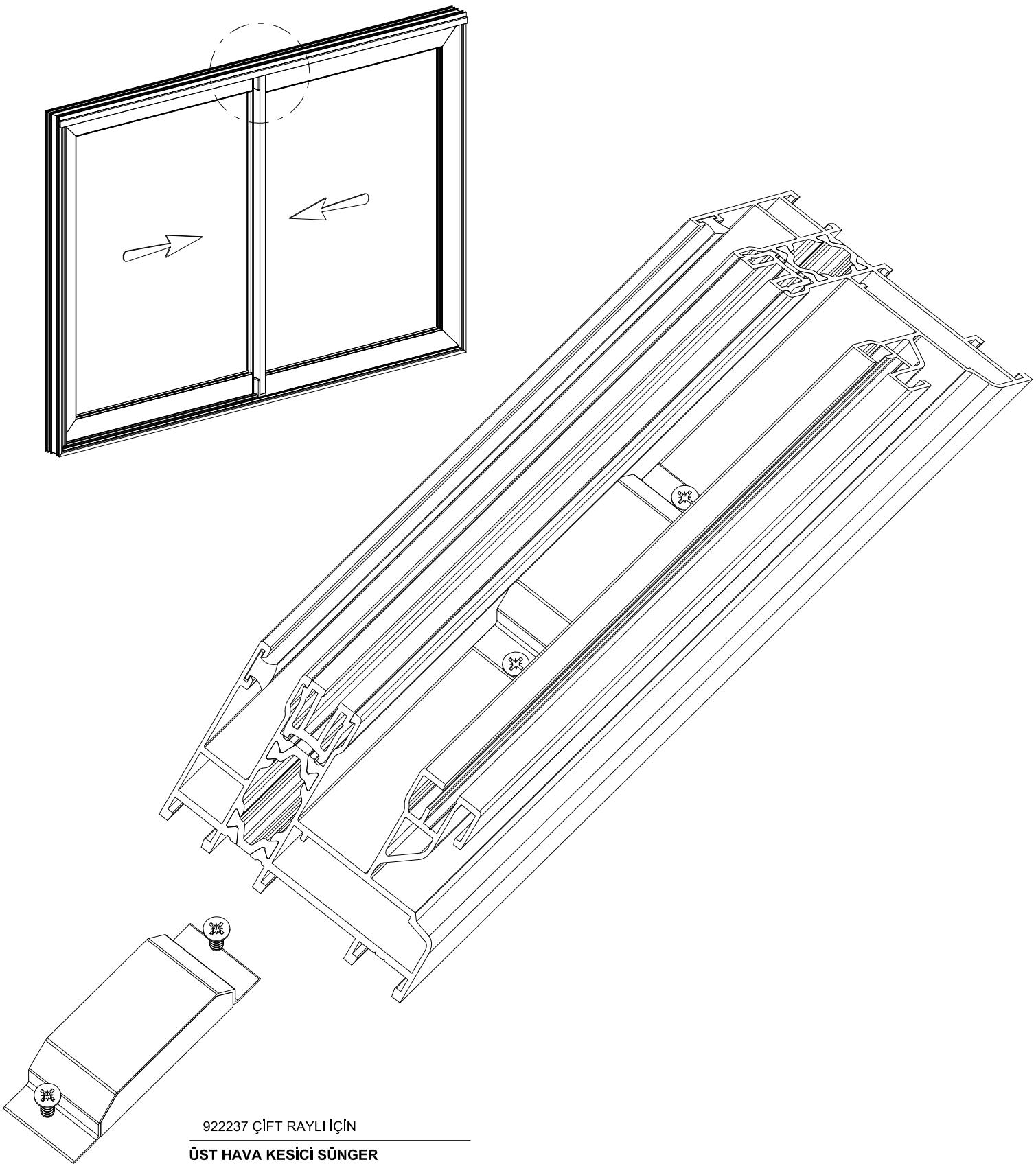
**FERMOSA**  
SYSTEM

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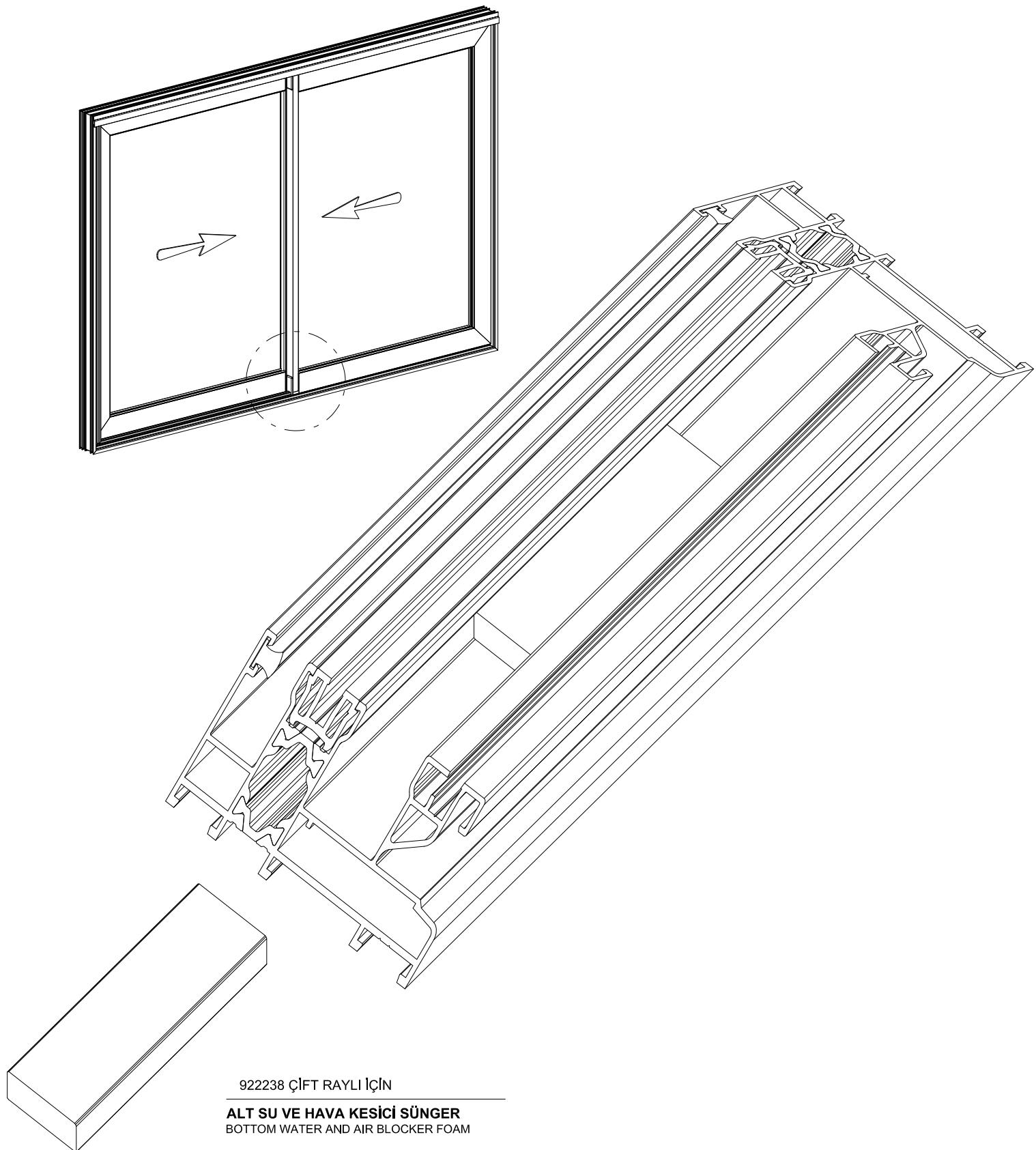
# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



**FERMOSA**  
SYSTEM

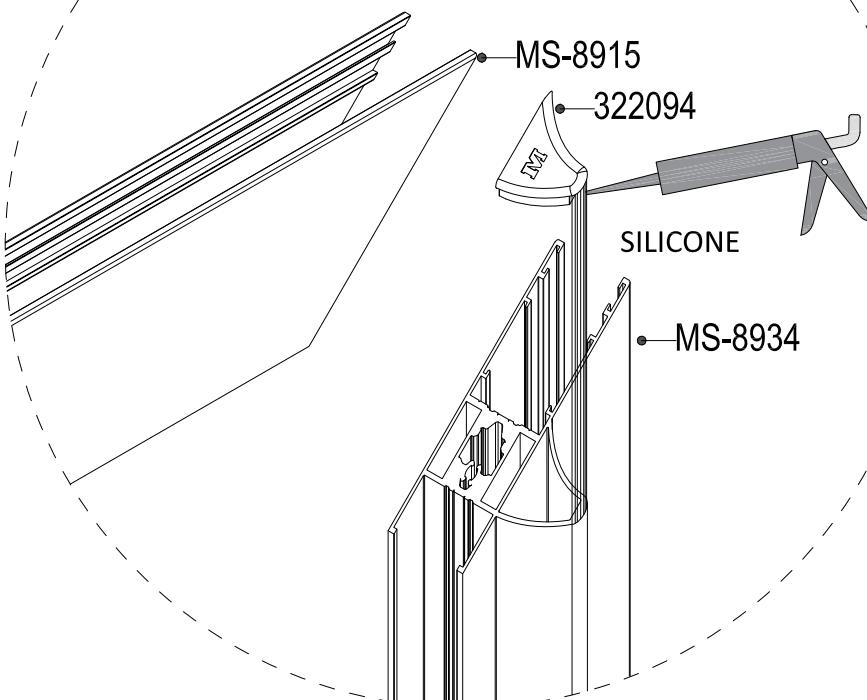
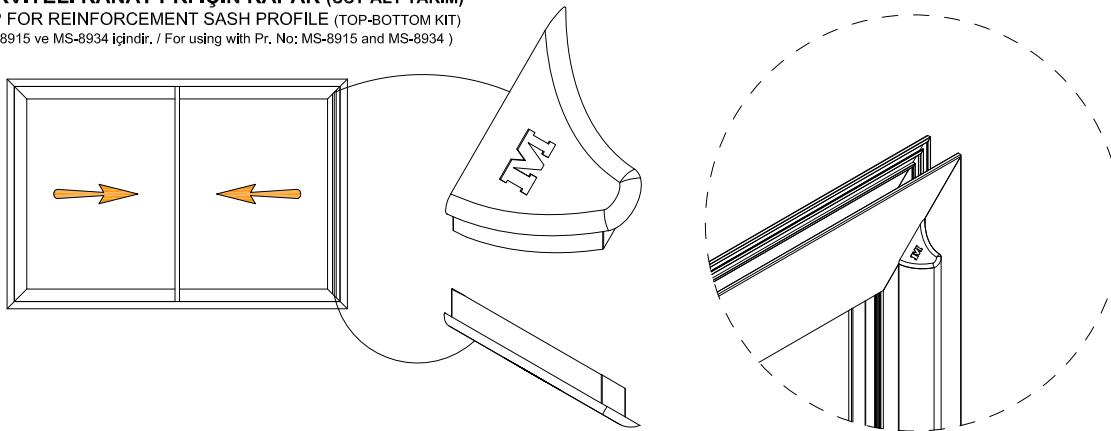
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# MAESTRO 89 Insulated Sliding

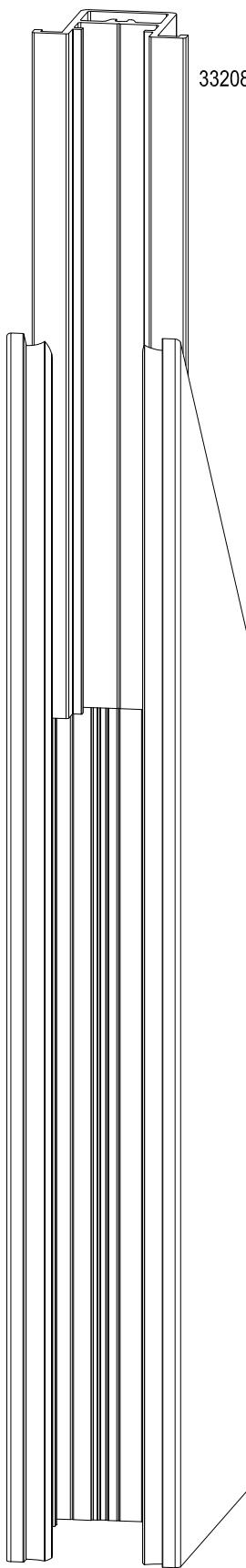
İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

322094

**TAKVİYELİ KANAT PR. İÇİN KAPAK (ÜST-ALT TAKIM)**  
CAP FOR REINFORCEMENT SASH PROFILE (TOP-BOTTOM KIT)  
( MS-8915 ve MS-8934 içindir. / For using with Pr. No: MS-8915 and MS-8934 )



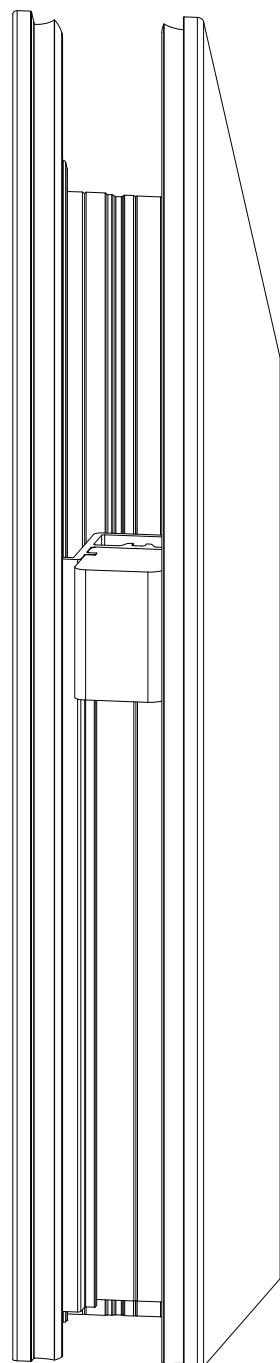
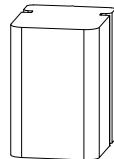
# MAESTRO 89 Insulated Sliding



332080 PVC İSPANYOLET PROFİLİ

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

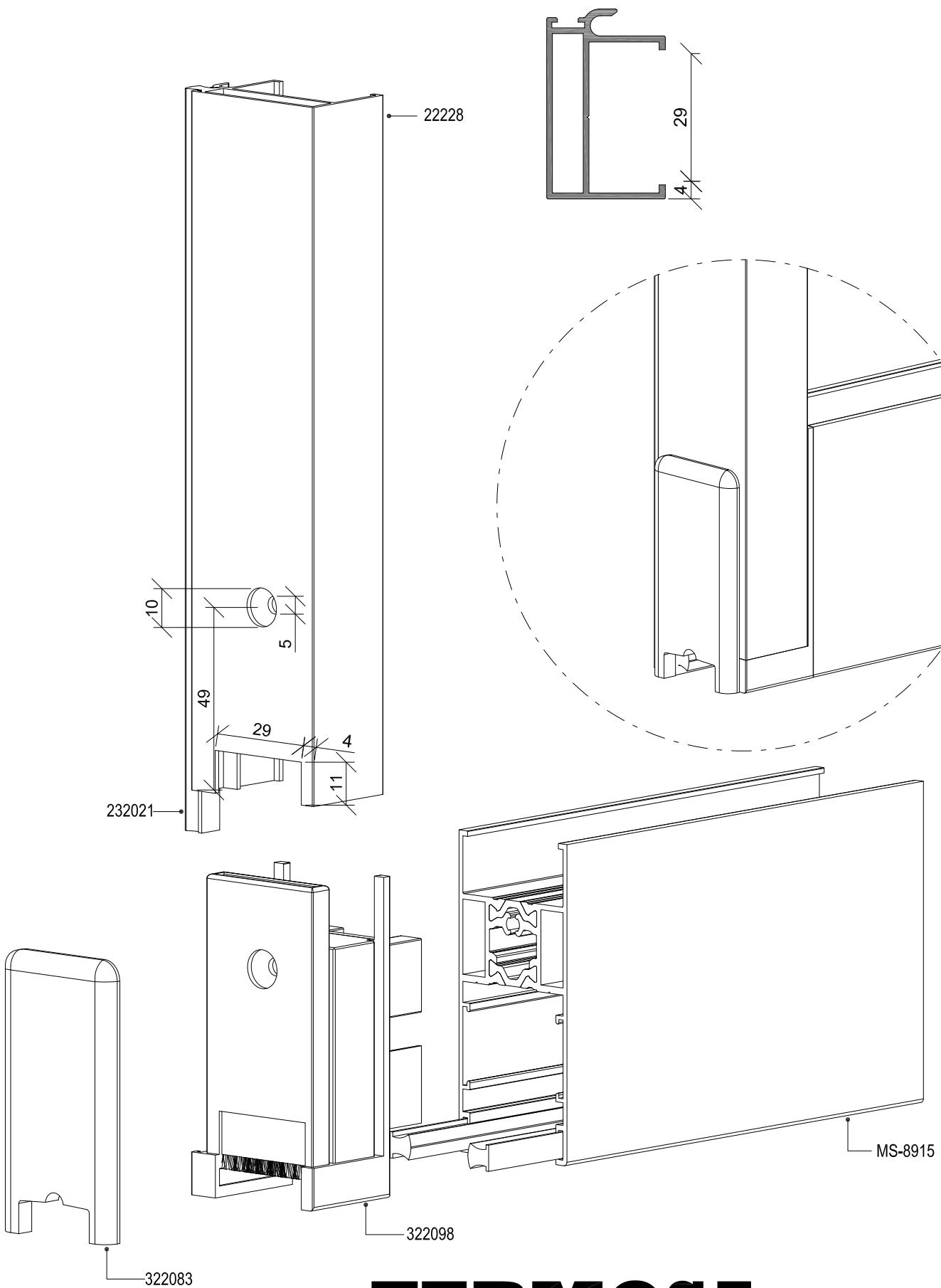
322088 STOPER



**FERMOSA**  
SYSTEM

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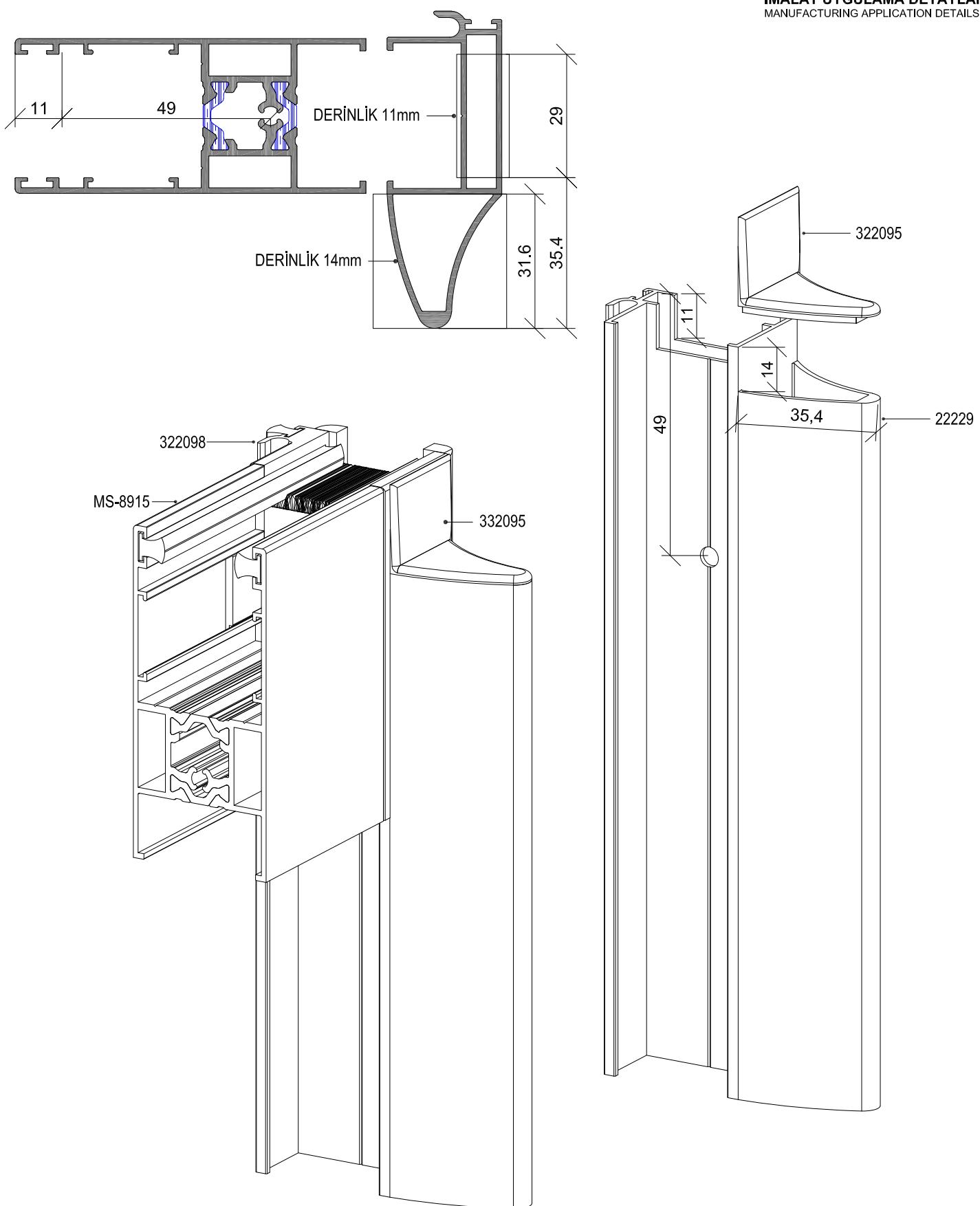


**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

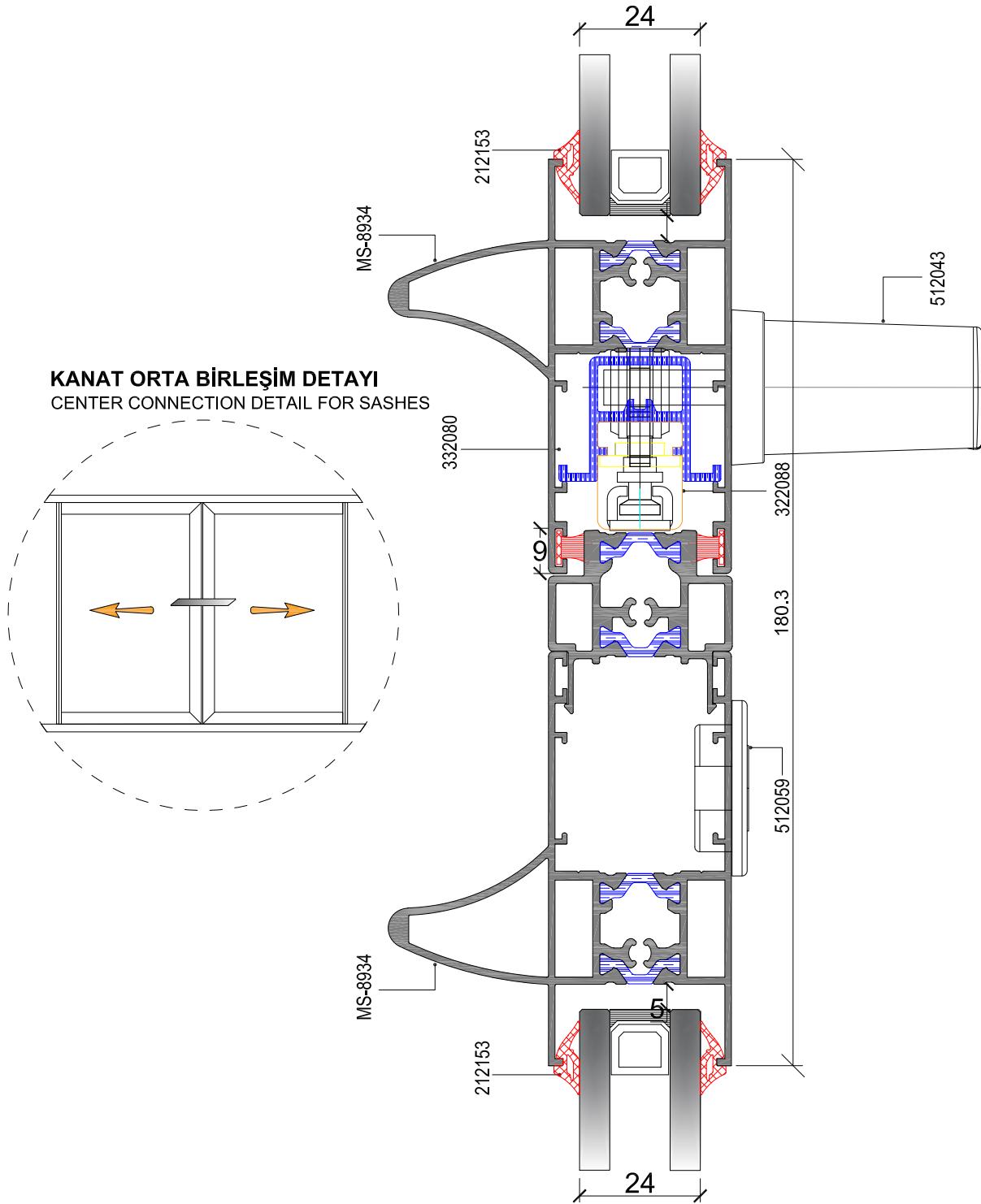


**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

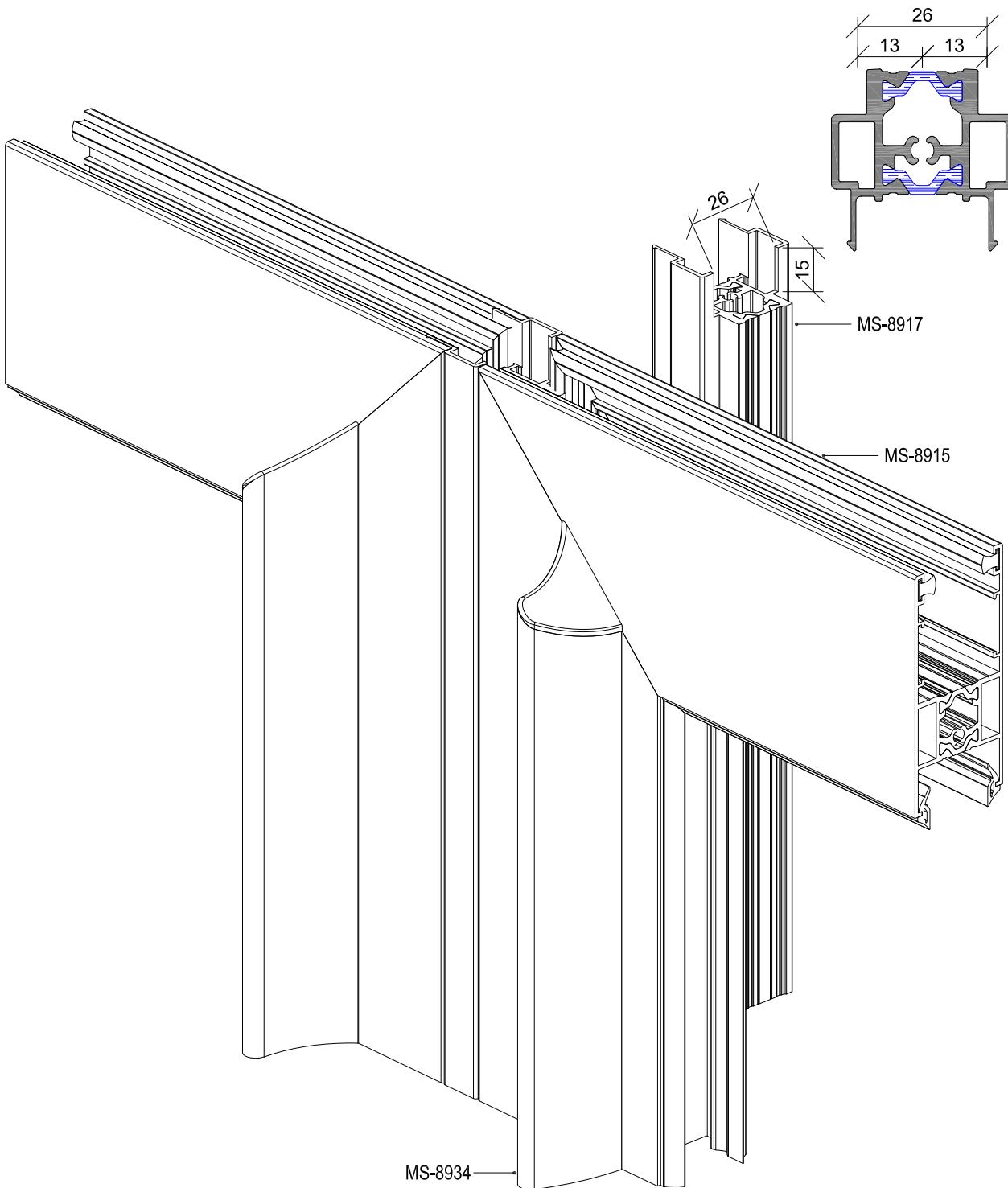
İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



KANAT ORTA BİRLEŞİM DETAYI  
CENTER CONNECTION DETAIL FOR SASHES

# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



**FERMOSA**  
SYSTEM

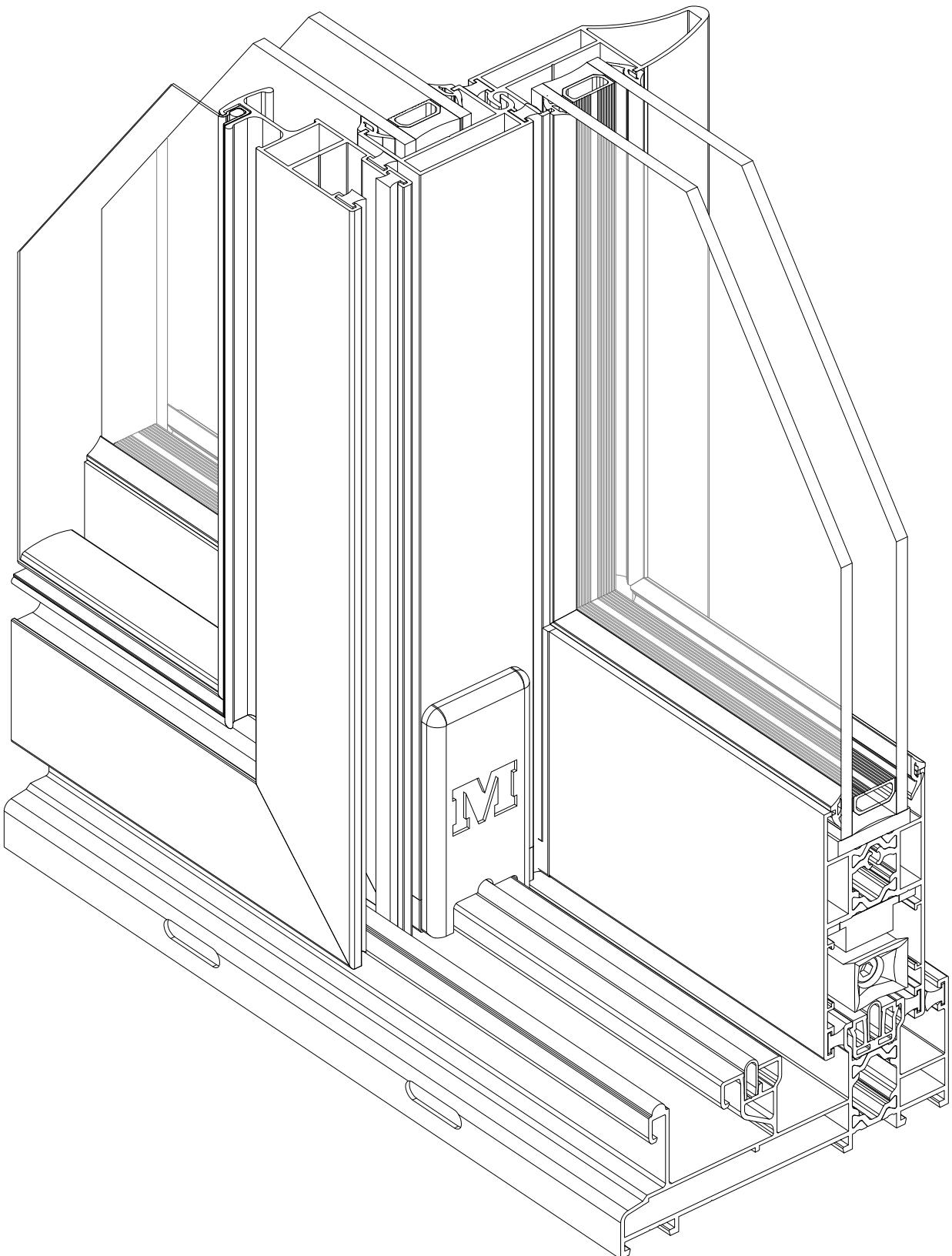
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# **MAESTRO 89 Insulated Sliding**

## **SİSTEM KESİT DETAYLARI**

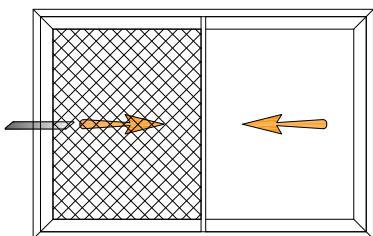
### **SYSTEM CROSS SECTION DETAILS**



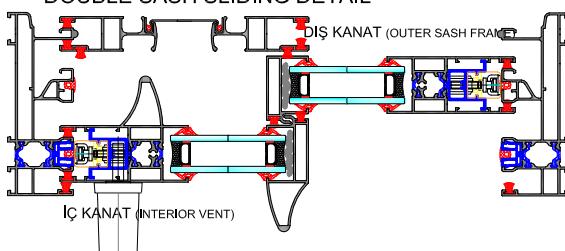
**FERMOSA**  
SYSTEM

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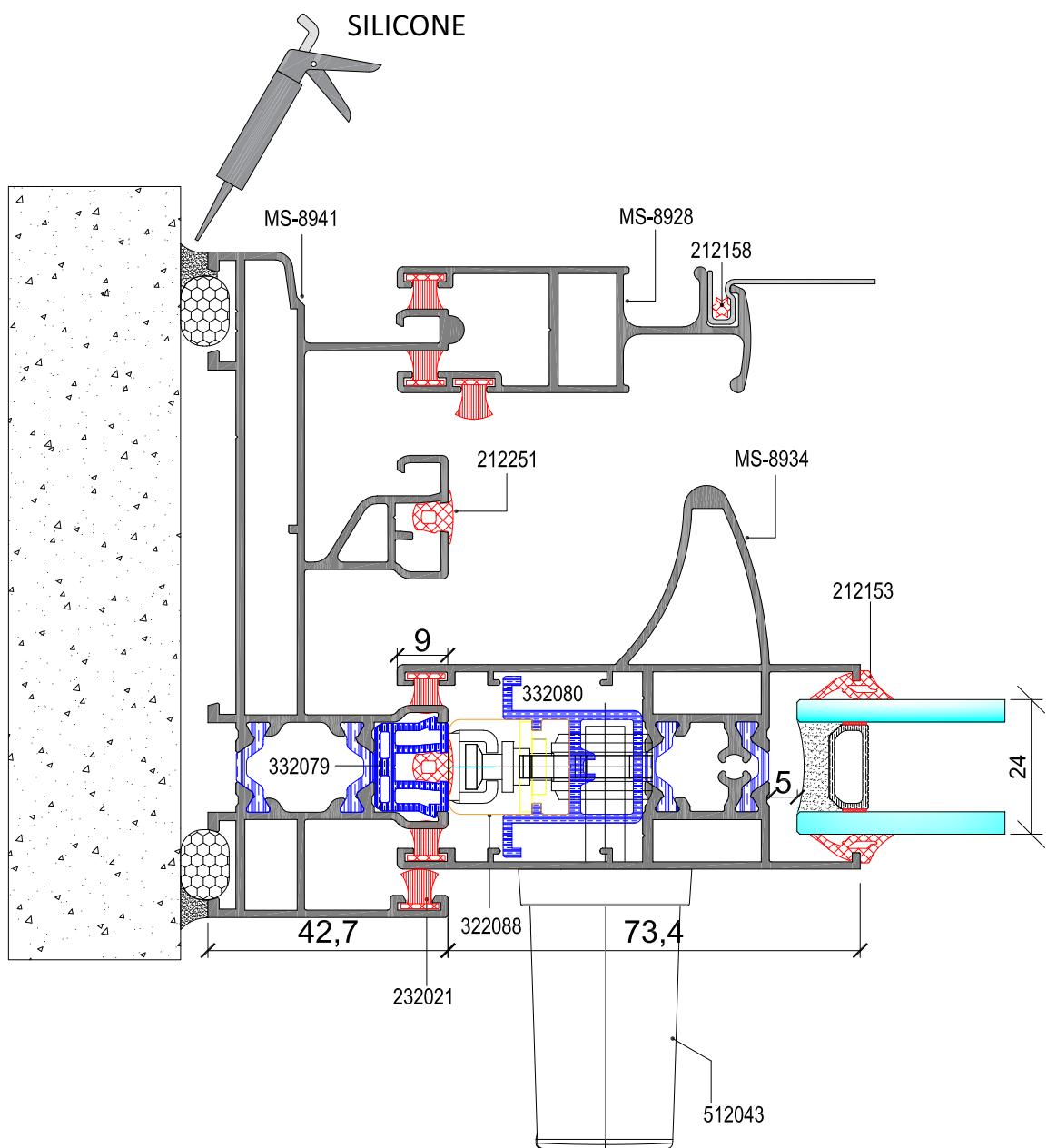
# MAESTRO 89 Insulated Sliding



**ÇİFT KANATLI SÜRME DETAYI**  
DOUBLE SASH SLIDING DETAIL



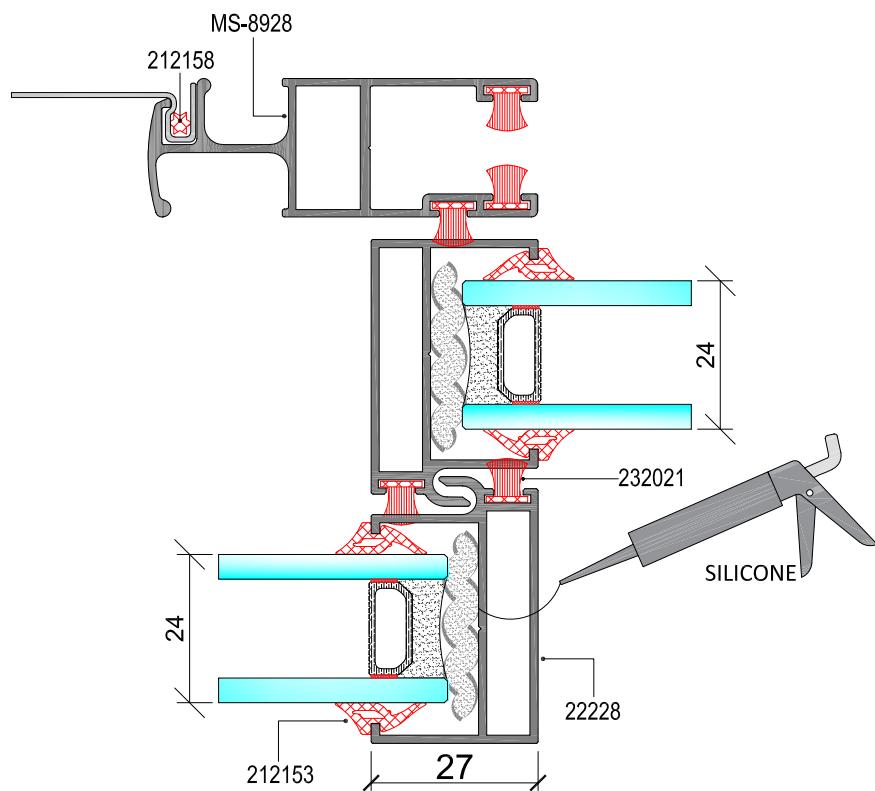
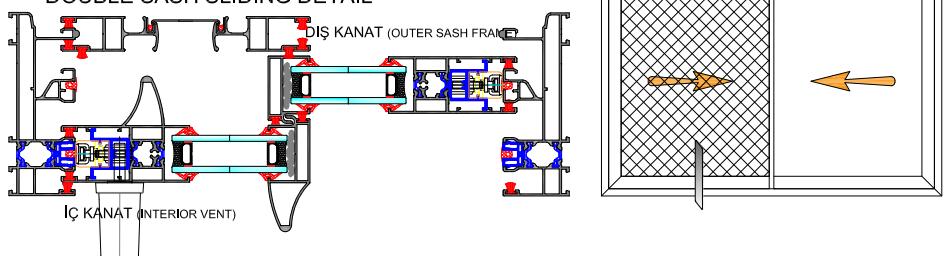
SILICONE



**FERMOSA**  
SYSTEM

# MAESTRO 89 Insulated Sliding

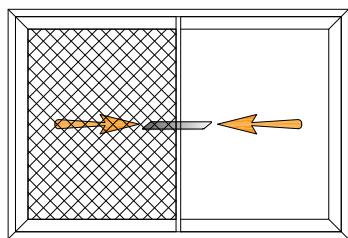
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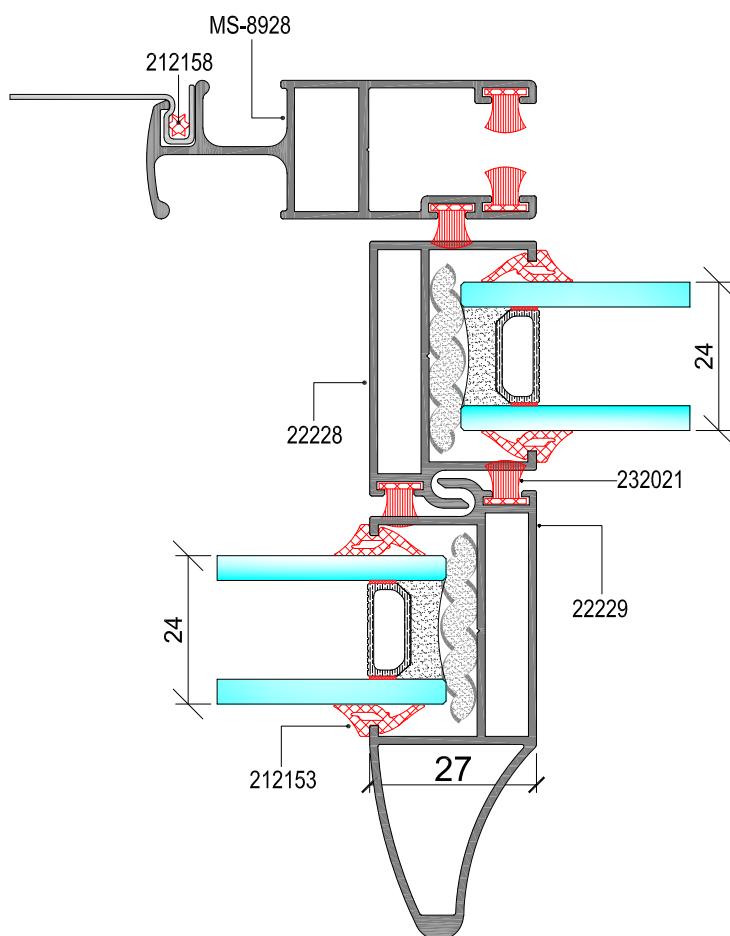
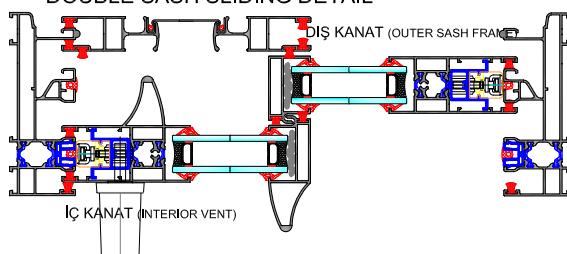
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding



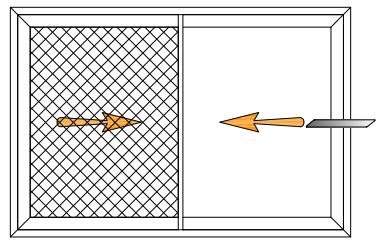
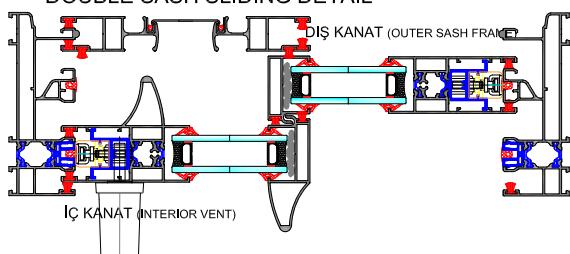
ÇİFT KANATLI SÜRME DETAYI  
DOUBLE SASH SLIDING DETAIL



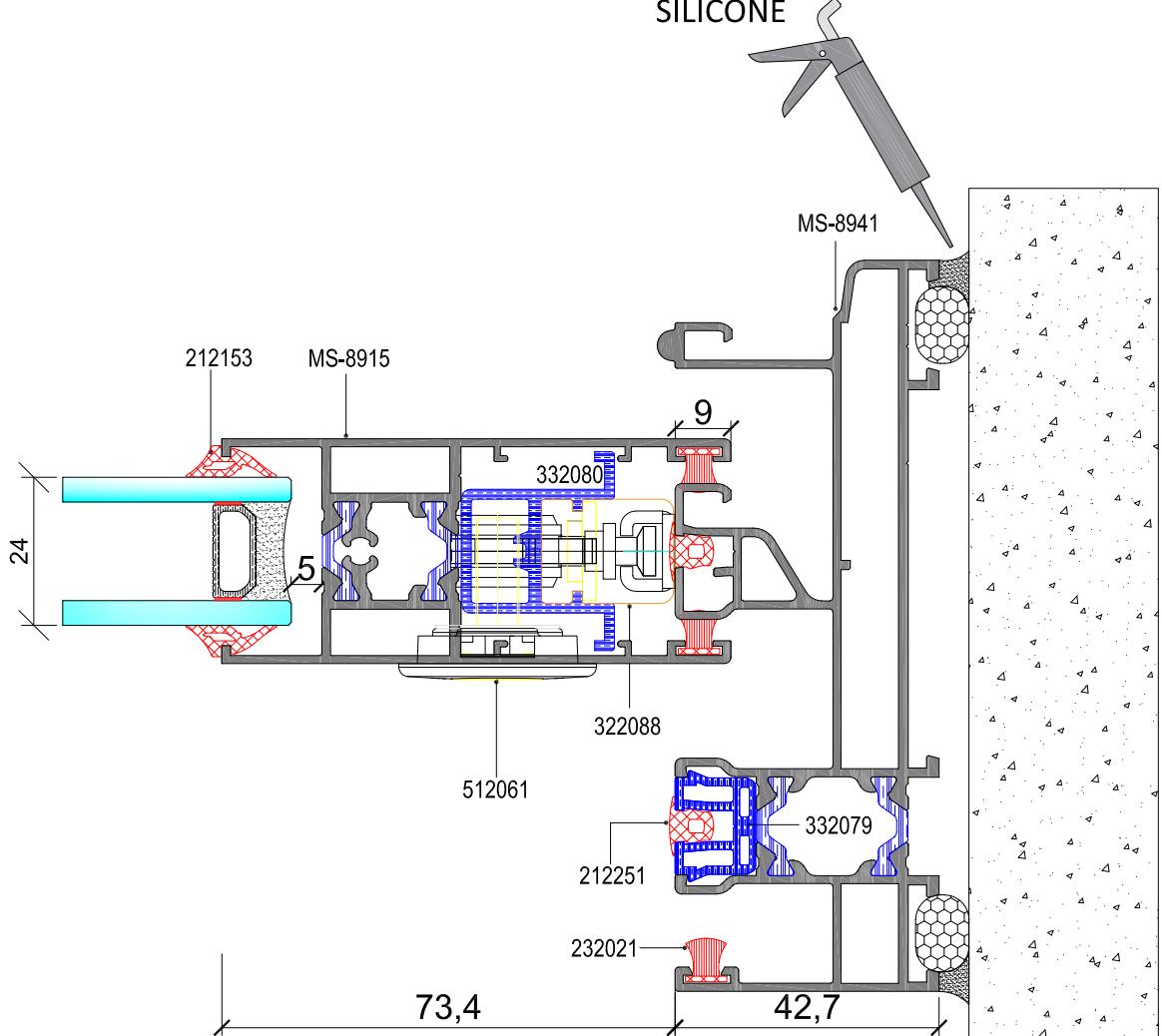
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SYSTEM

# MAESTRO 89 Insulated Sliding

## ÇİFT KANATLI SÜRME DETAYI DOUBLE SASH SLIDING DETAIL



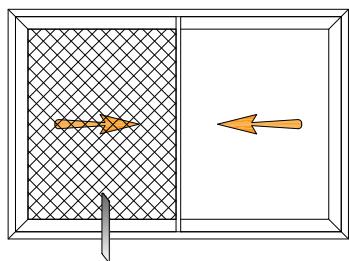
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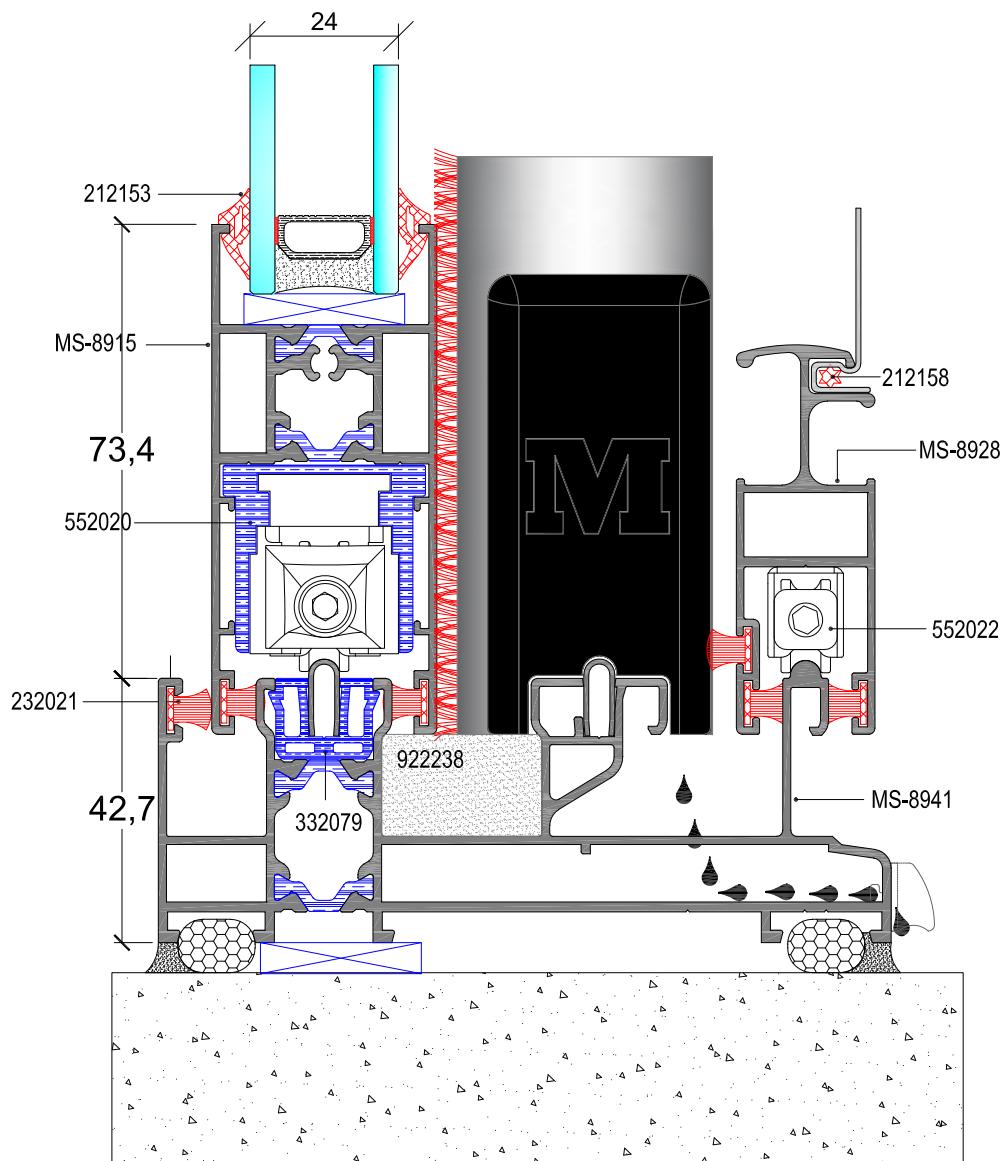
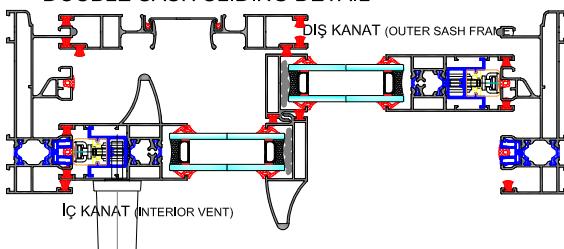
**FERMOSA**  
SYSTEM

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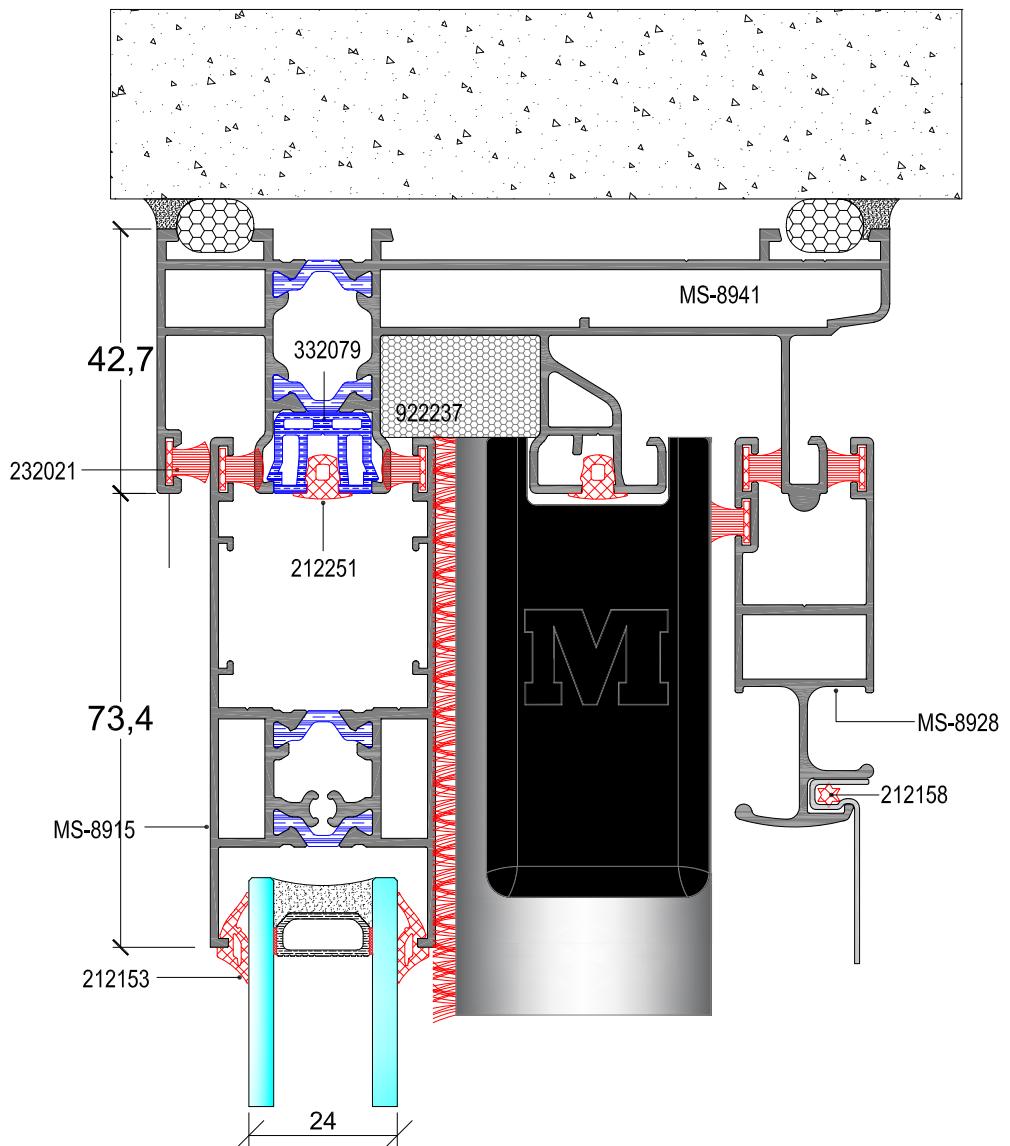
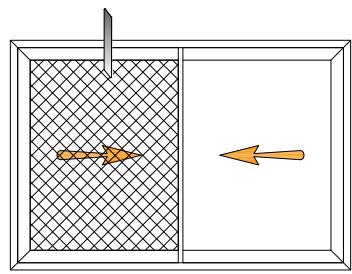
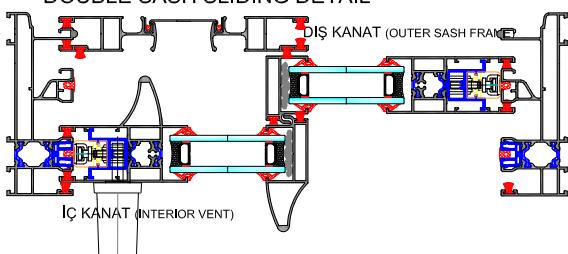


**ÇİFT KANATLI SÜRME DETAYI**  
DOUBLE SASH SLIDING DETAIL



# MAESTRO 89 Insulated Sliding

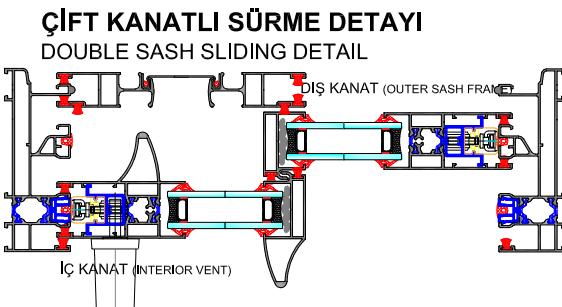
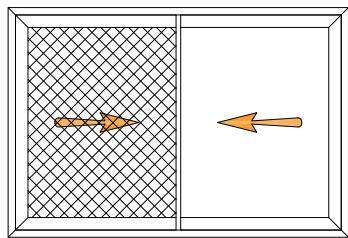
## ÇİFT KANATLI SÜRME DETAYI DOUBLE SASH SLIDING DETAIL



**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding



## PROFİLLER / PROFILES

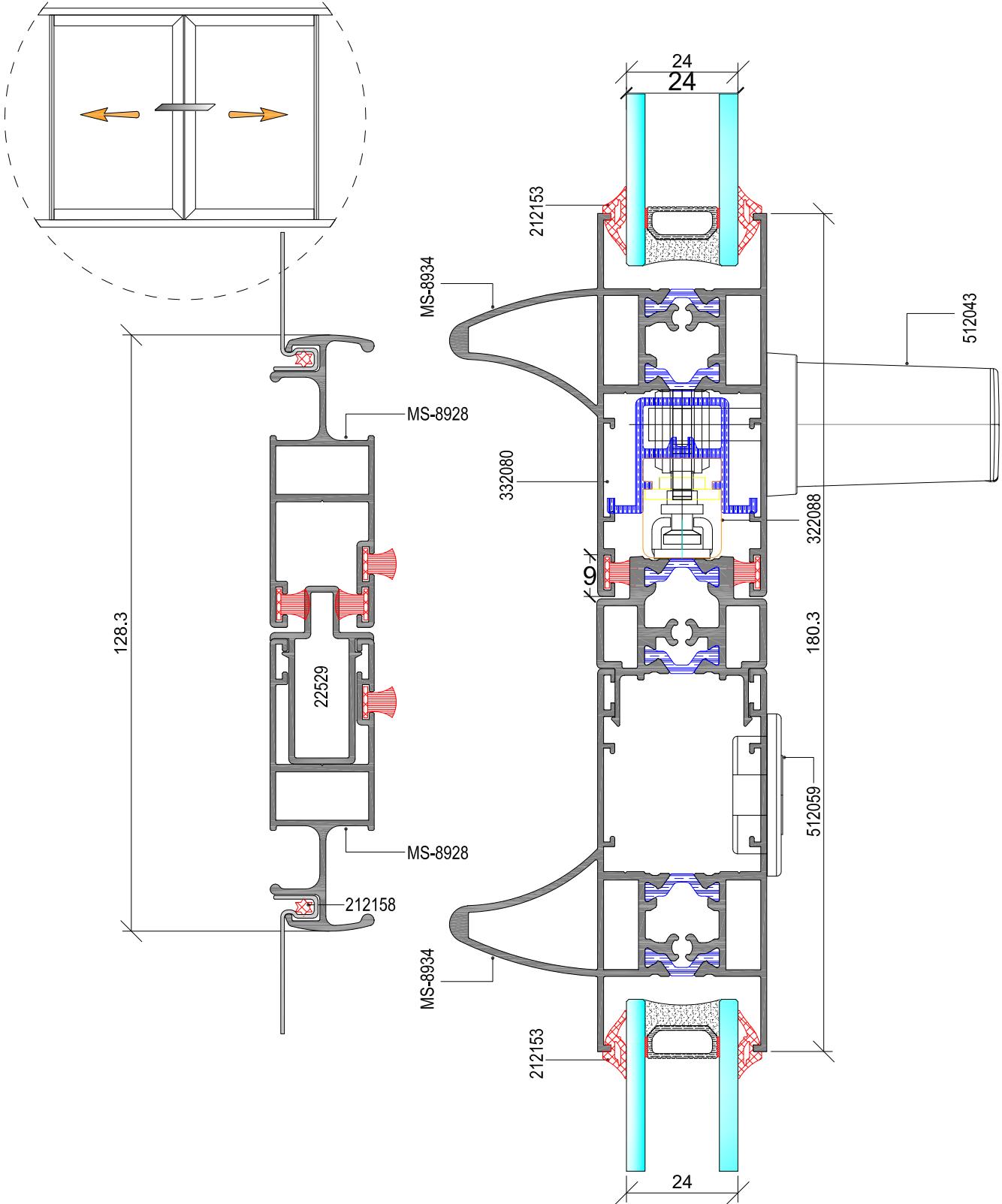
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
2	MS-8940	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8940	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
2	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
1	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
4	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/2 - 49,6	45°/90°
1	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
2	MS-8920	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
2	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/2 - 20	45°/45°

## AKSESUARLAR / ACCESSORIES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
4	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372002	TAPA SETİ / PLUG KIT	-	
4	552020	RULMAN / PULLEY	-	
1	922237	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
1	922238	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
-	322079	PVC RAY PROFİLİ / PVC RAIL PROFILE	2L + 2H	45°/45°
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L + 1H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	4L + 6H	
-	332036	ÇELİK RAY / STEEL RAIL	2L	
-	332080	PVC İSPANYOLET PR. / PVC ESPAGNOLETTE PR.	1H	90°/90°
2	322088	KANAT STOPER / STOPPER FOR SASH	-	
1	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	
2	552022	RULMAN / PULLEY	-	

# MAESTRO 89 Insulated Sliding

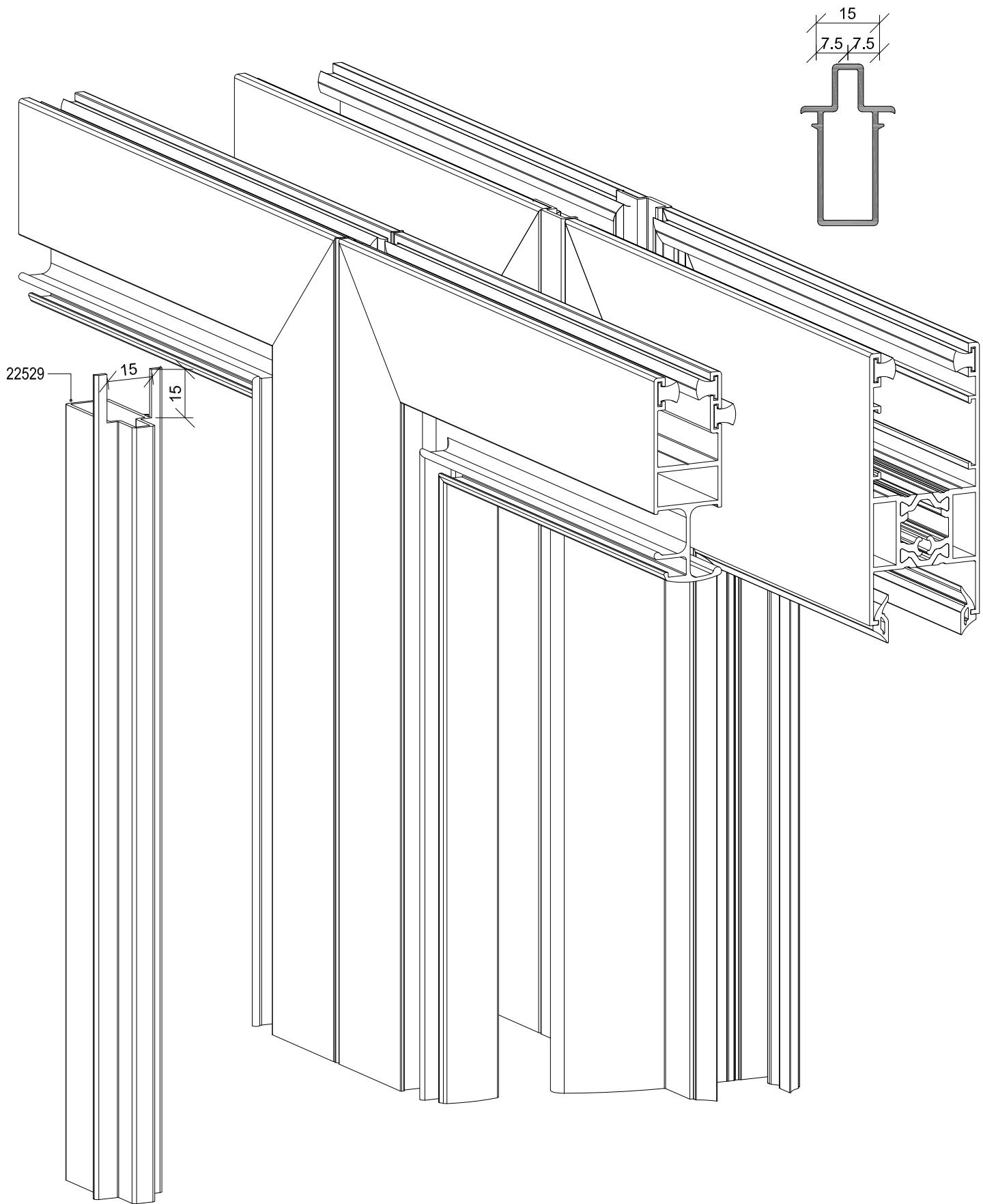
KANAT ORTA BİRLEŞİM DETAYI  
CENTER CONNECTION DETAIL FOR SASHES



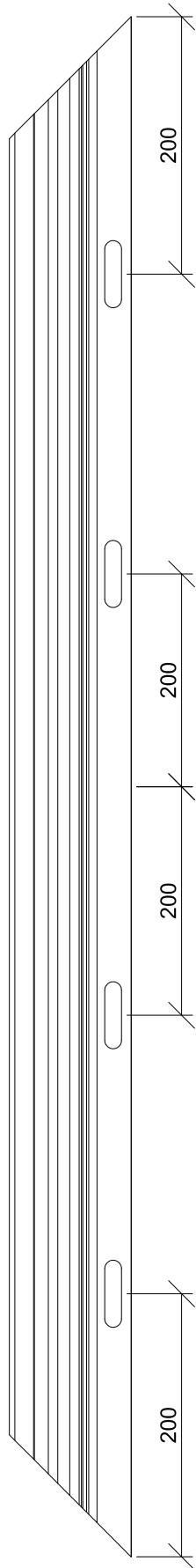
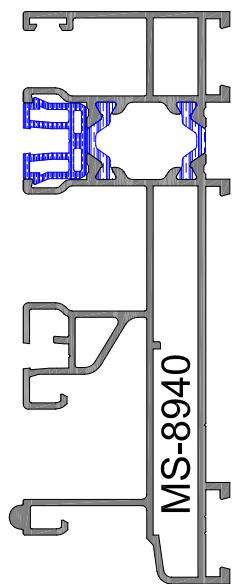
**FERMOSA**  
SYSTEM

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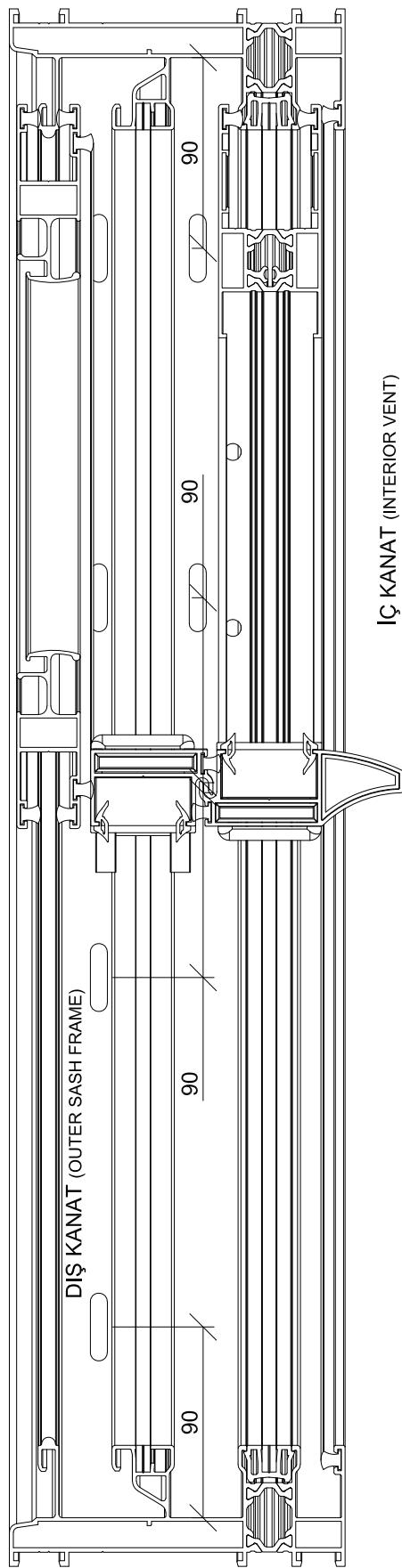
# MAESTRO 89 Insulated Sliding



# MAESTRO 89 Insulated Sliding



SİNÉKLİK KANAT (INSECT SASH)

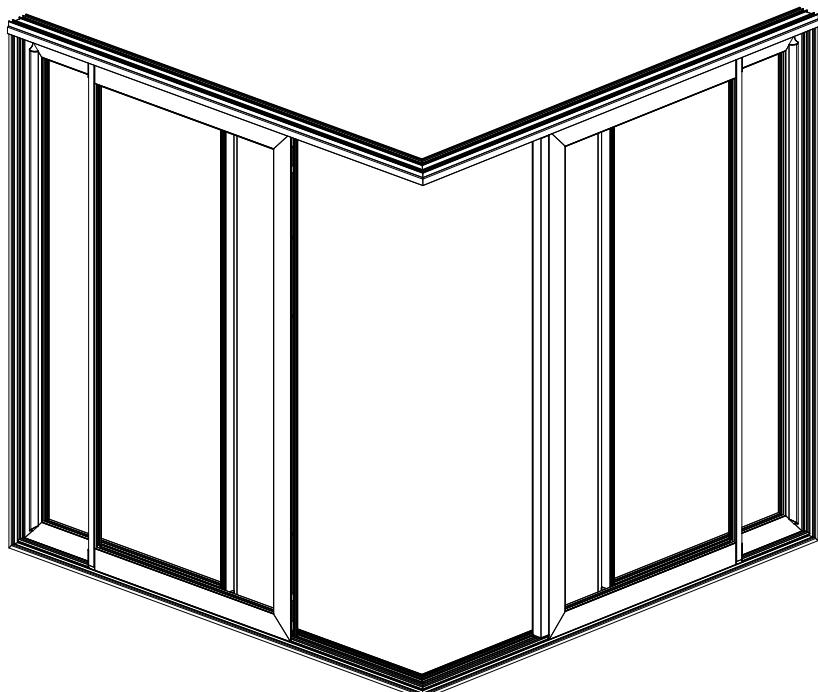


KASA TAHLİYE DETAYI  
WATER DRAINAGE CHANNEL DETAIL

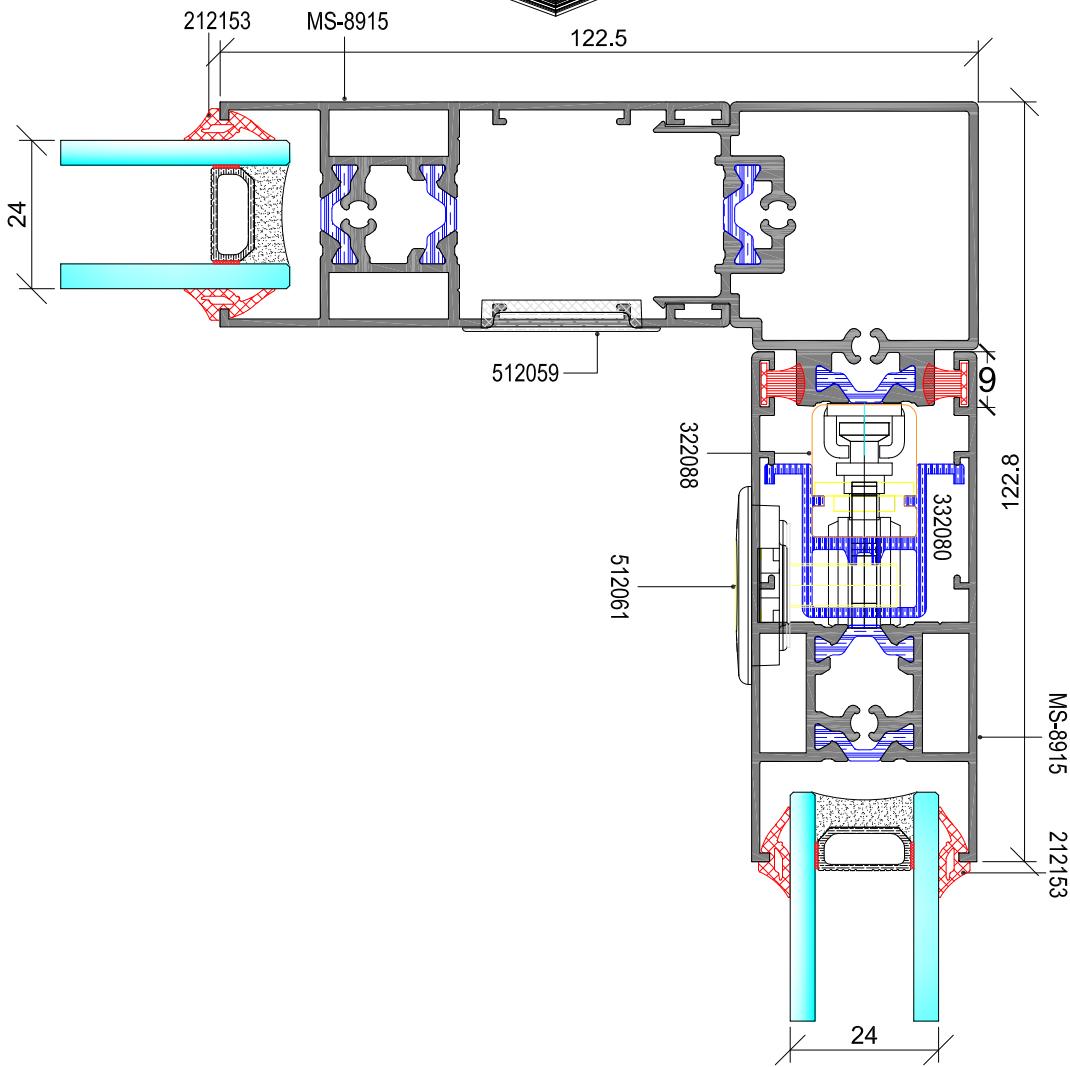
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SYSTEM

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# MAESTRO 89 Insulated Sliding



HAREKETLİ KÖŞE DETAYI  
MOVABLE CORNER DETAIL

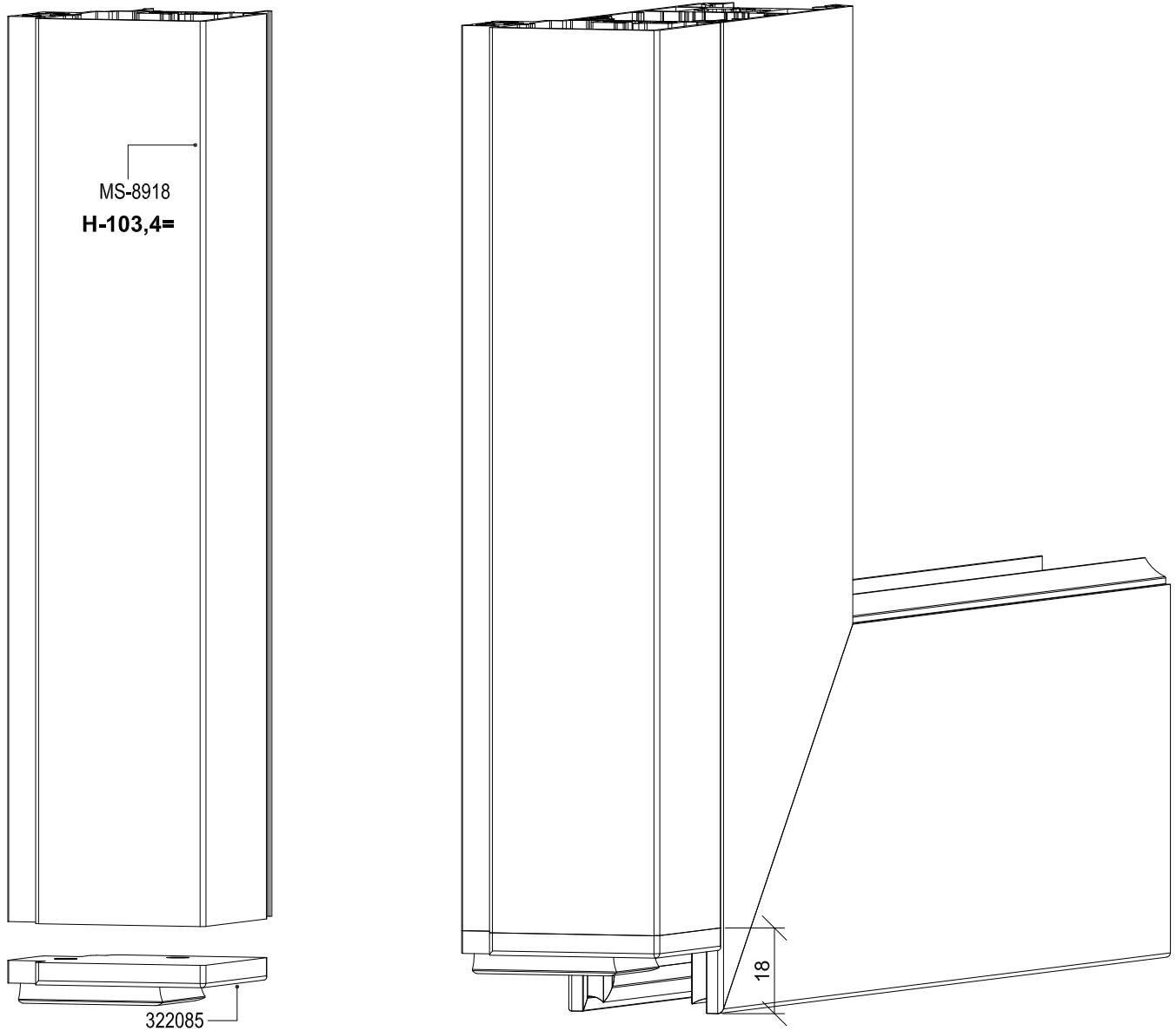


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# MAESTRO 89 Insulated Sliding

HAREKETLİ KÖŞE DETAYI  
MOVABLE CORNER DETAIL



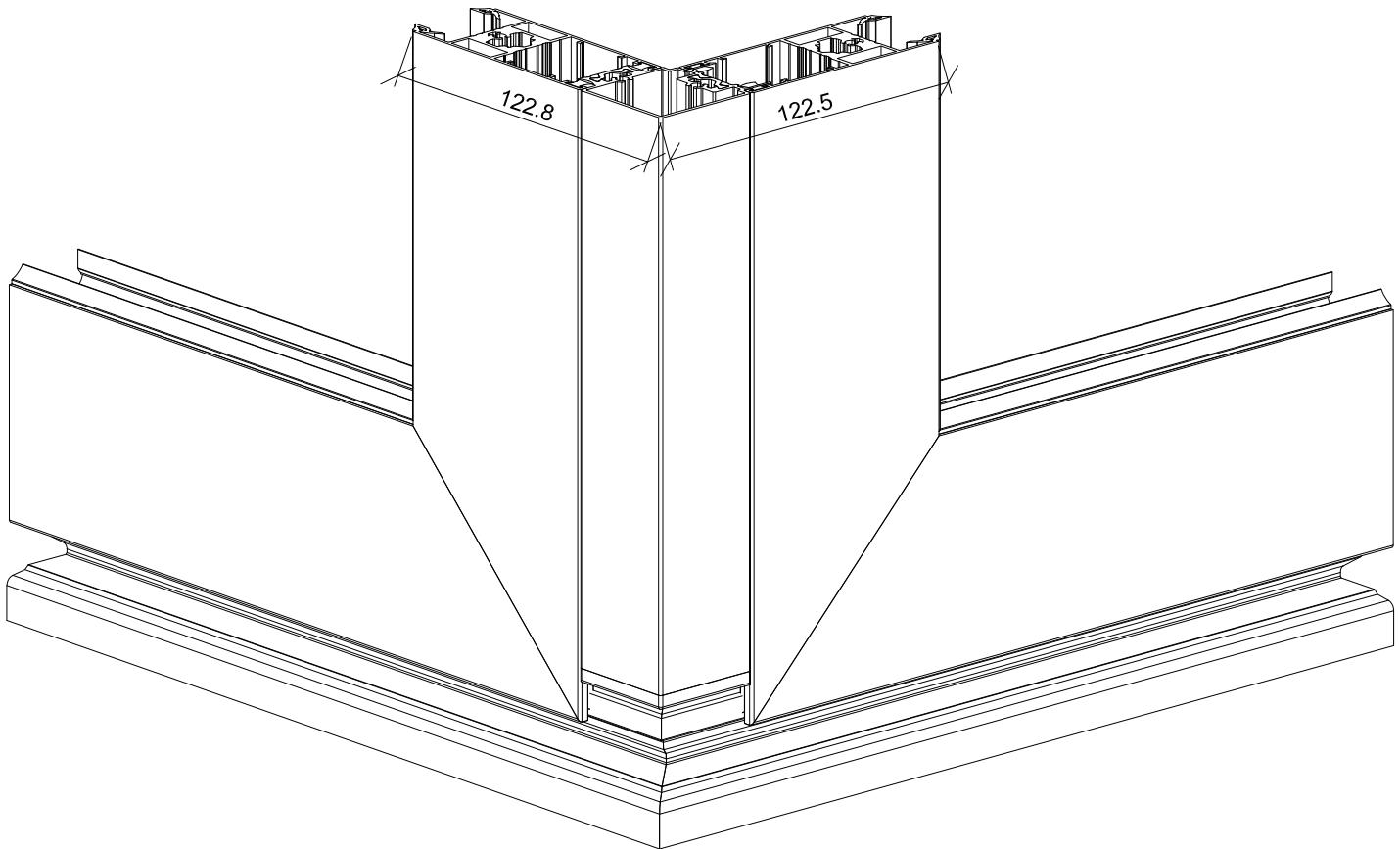
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SYSTEM

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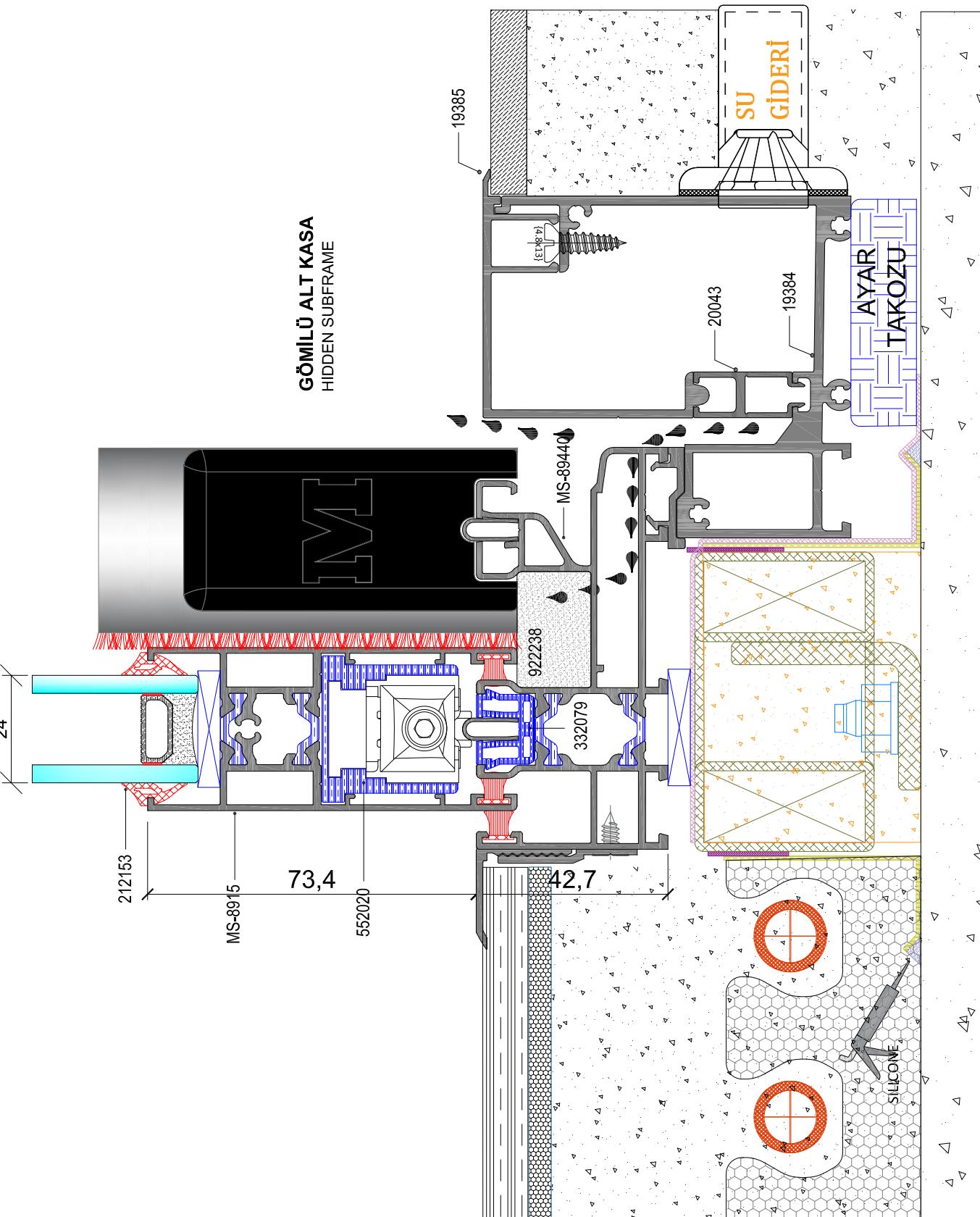
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# MAESTRO 89 Insulated Sliding

HAREKETLİ KÖŞE DETAYI  
MOVABLE CORNER DETAIL



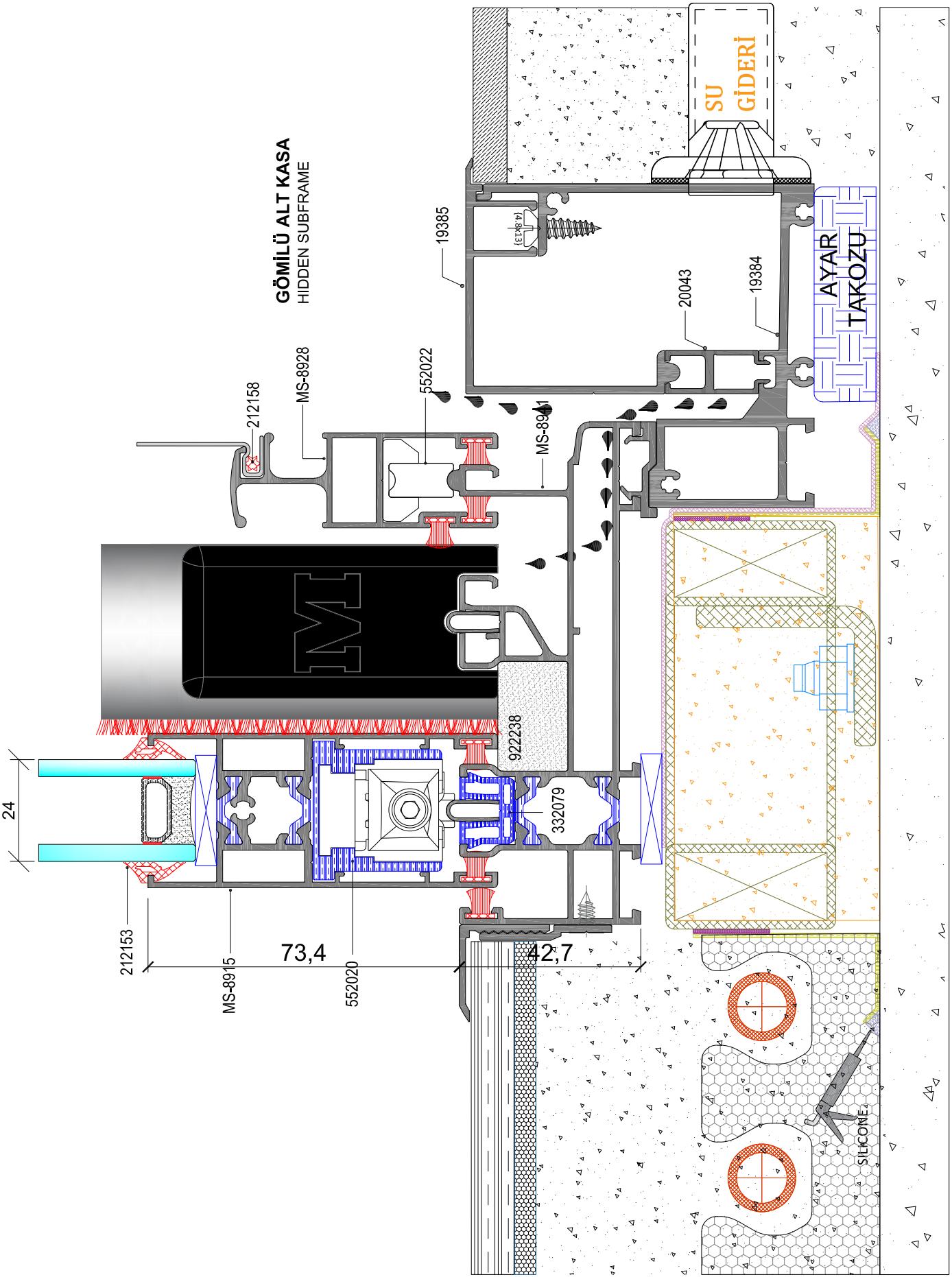
# MAESTRO 89 Insulated Sliding



**FERMOSA**  
SYSTEM

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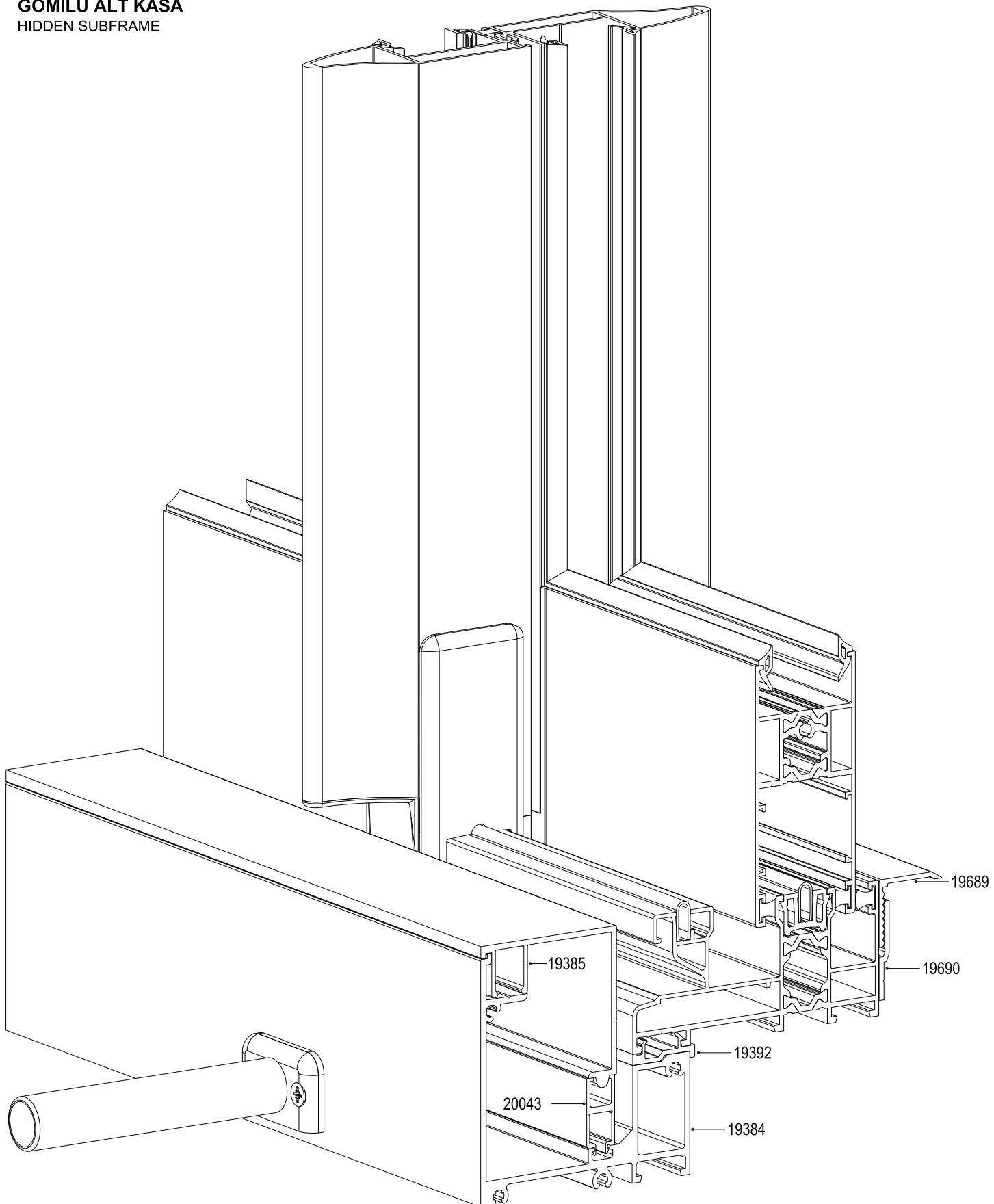


**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

GÖMİLÜ ALT KASA  
HIDDEN SUBFRAME



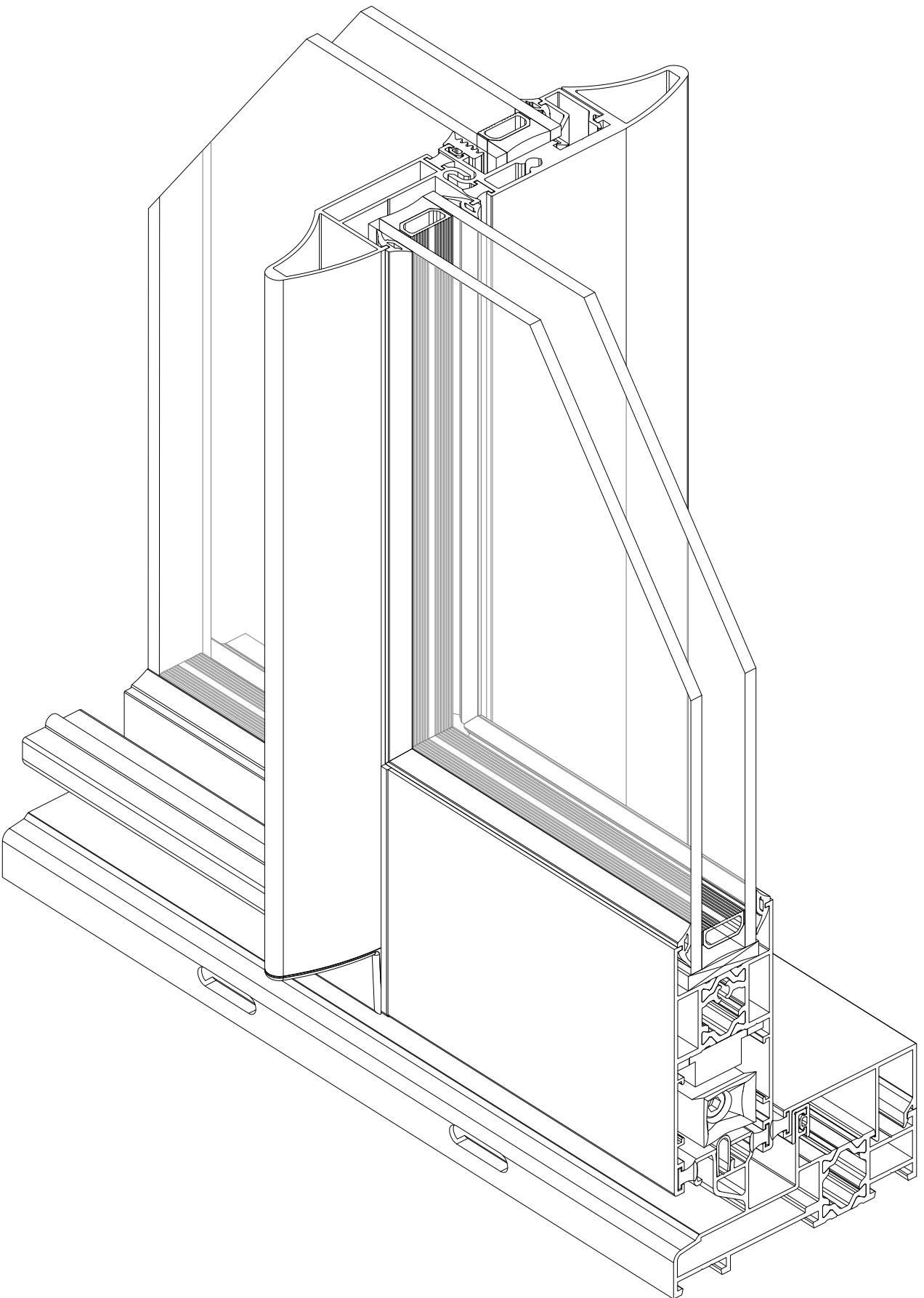
**FERMOSA**  
SYSTEM

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## SİSTEM KESİT DETAYLARI

## SYSTEM CROSS SECTION DETAILS

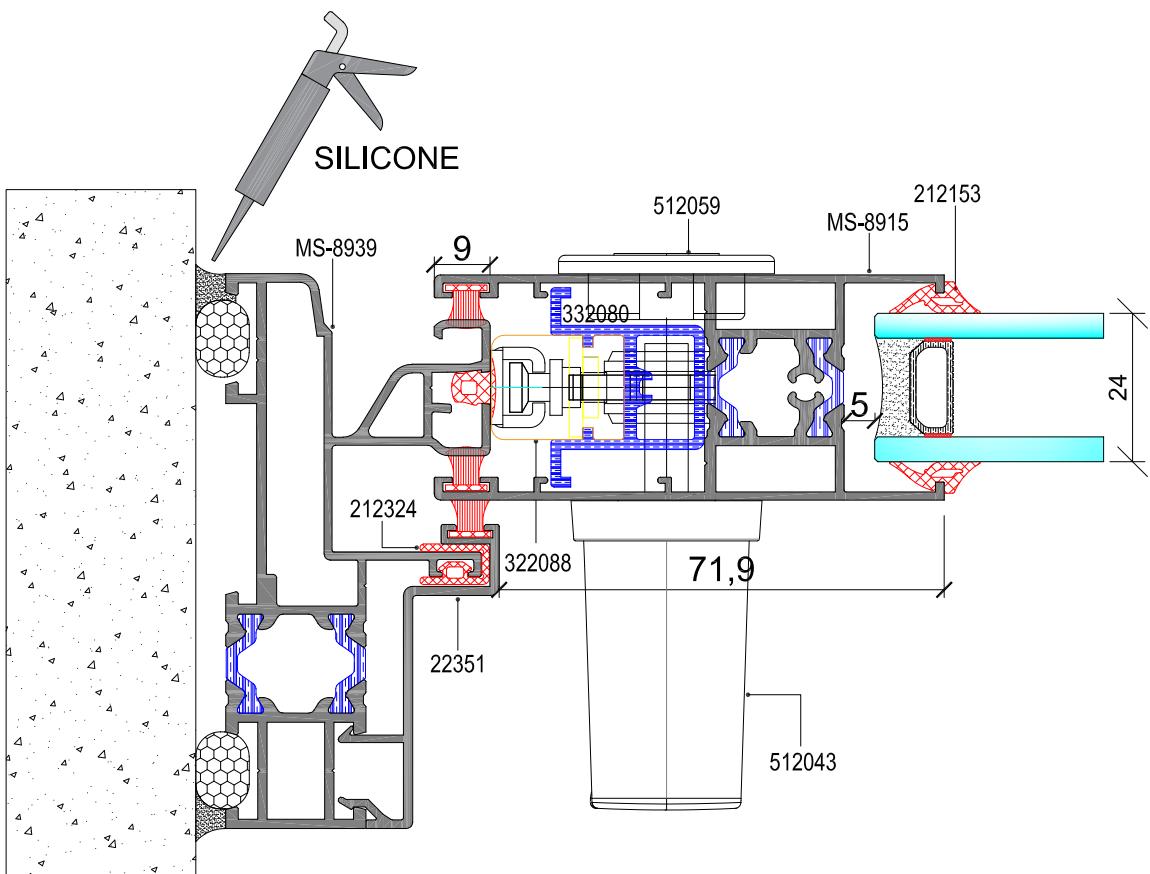
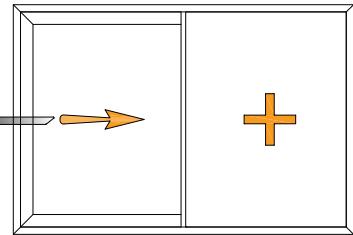
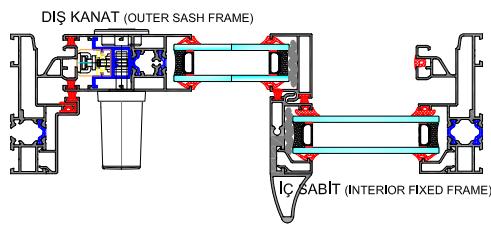


**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

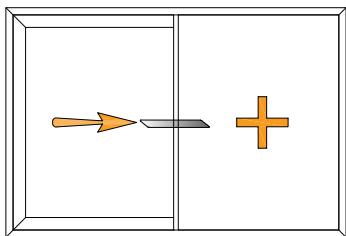
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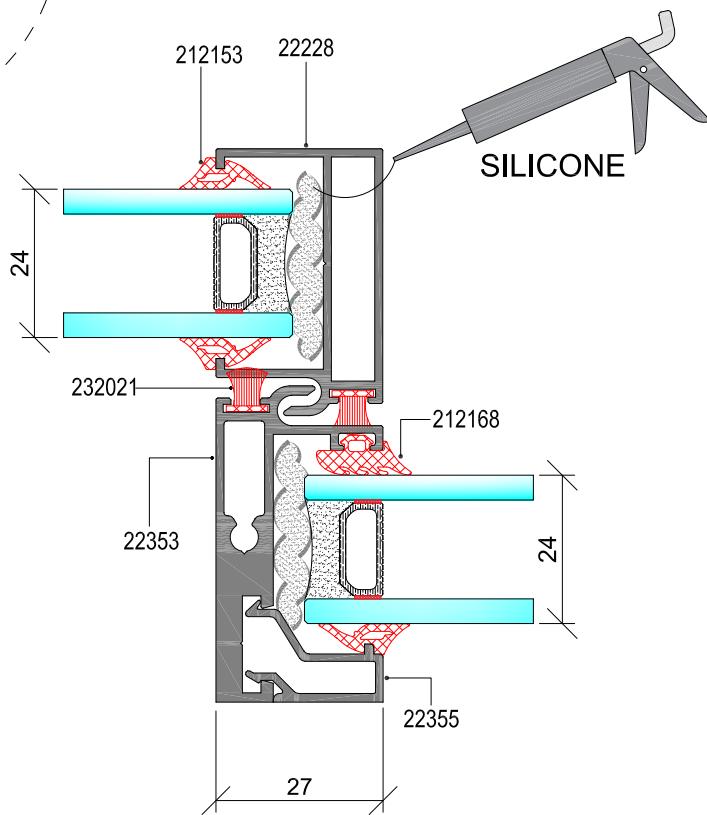
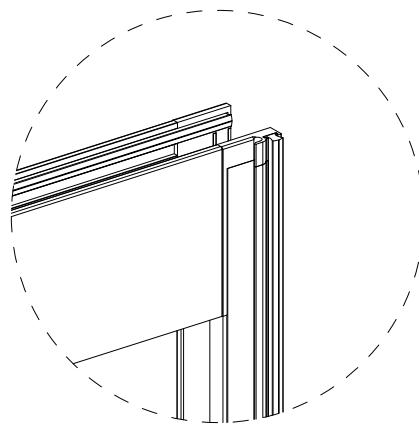
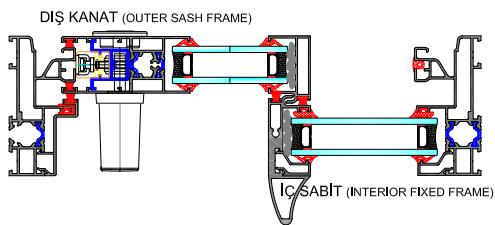
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

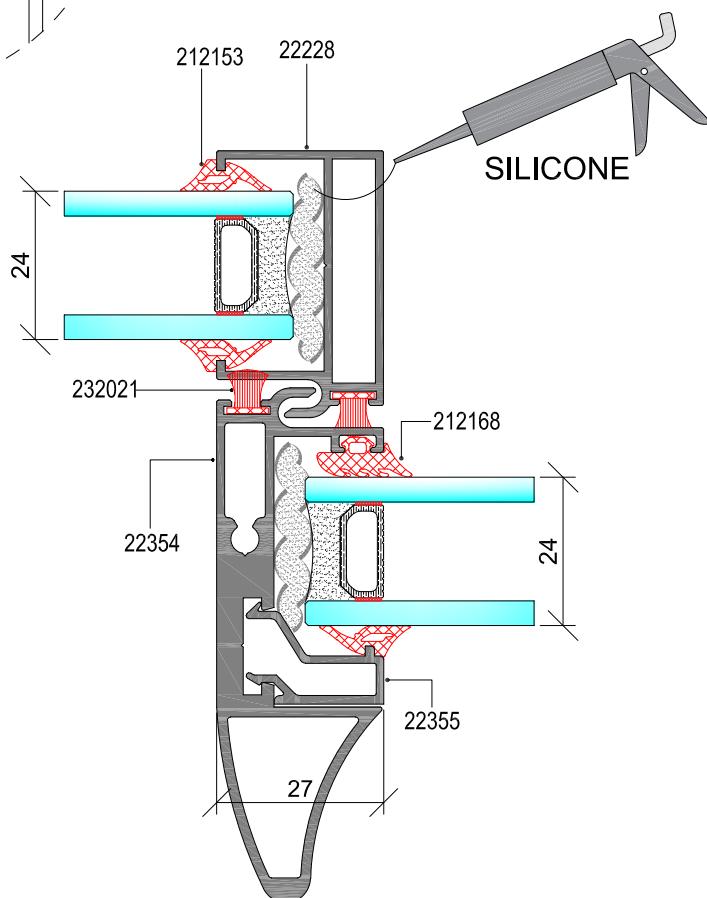
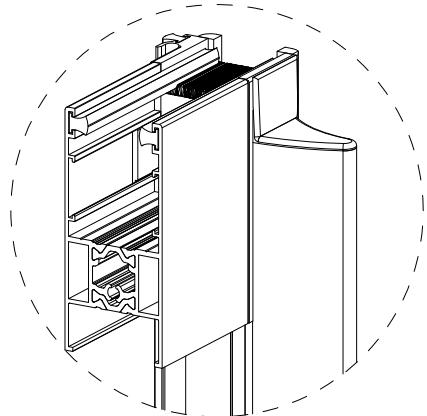
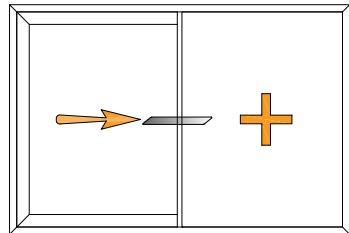
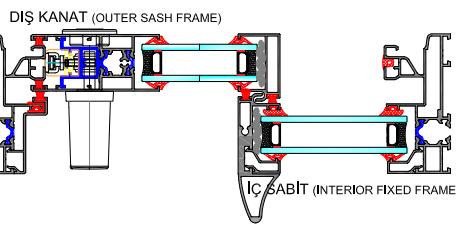


TEK KANAT HAREKETLİ SÜRME DETAYI  
MONORAIL SLIDING INSULATED DETAIL



# MAESTRO 89 Insulated Sliding

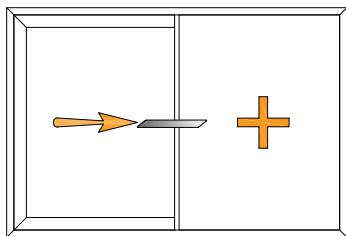
## TEK KANAT HAREKETLİ SÜRME DETAYI MONORAIL SLIDING INSULATED DETAIL



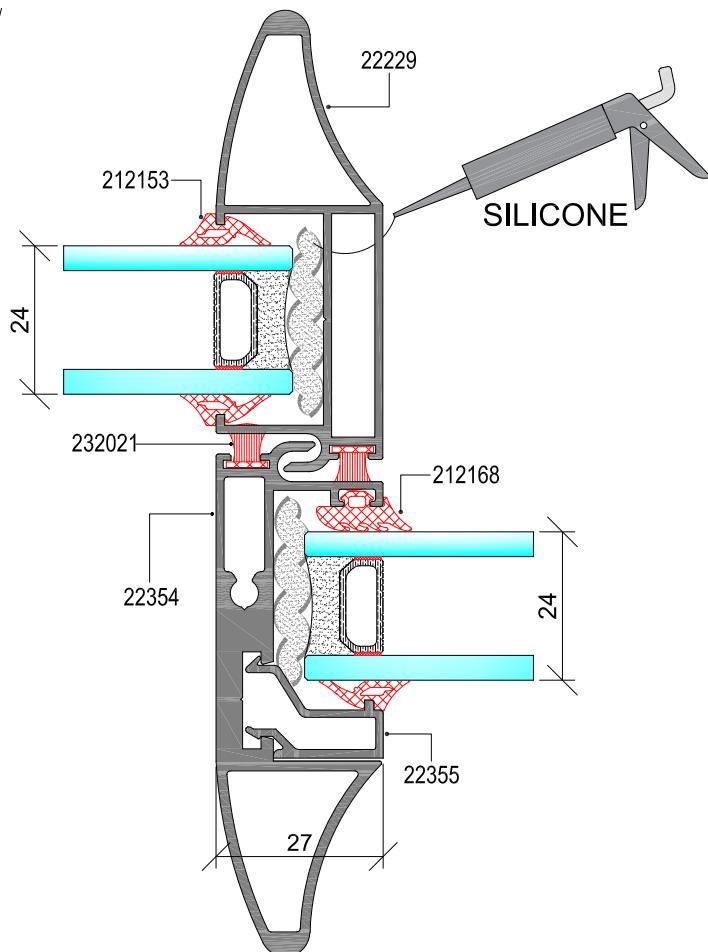
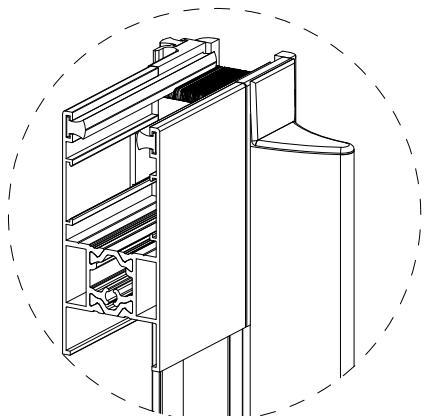
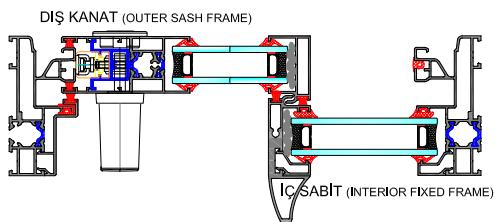
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

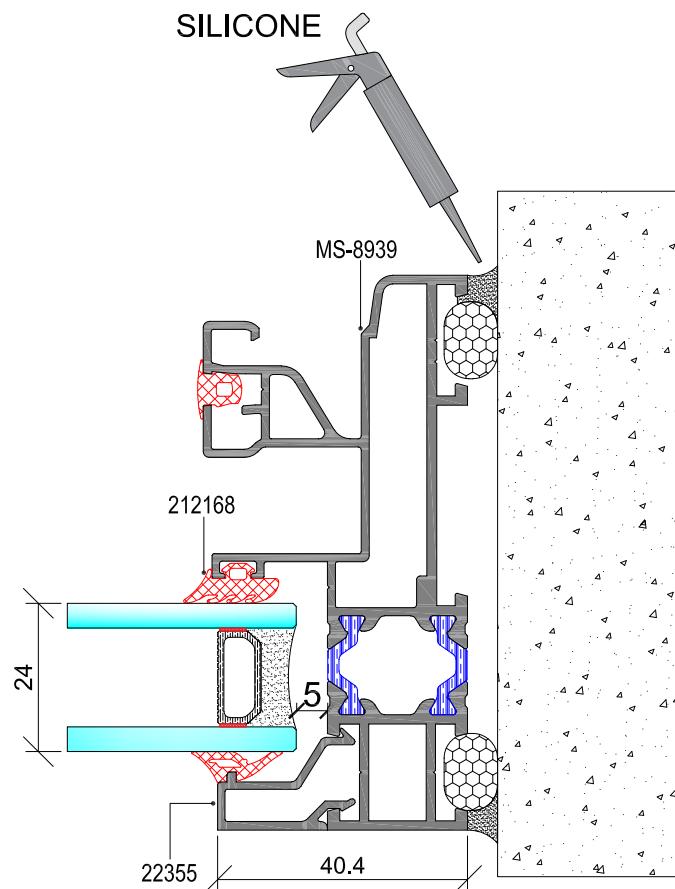
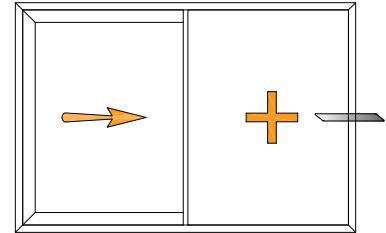
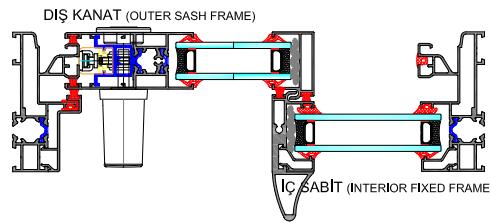


TEK KANAT HAREKETLİ SÜRME DETAYI  
MONORAIL SLIDING INSULATED DETAIL



# MAESTRO 89 Insulated Sliding

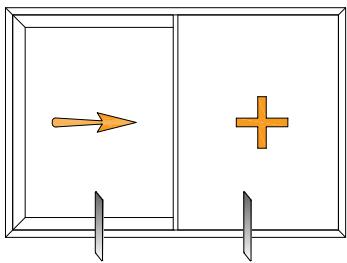
## TEK KANAT HAREKETLİ SÜRME DETAYI MONORAIL SLIDING INSULATED DETAIL



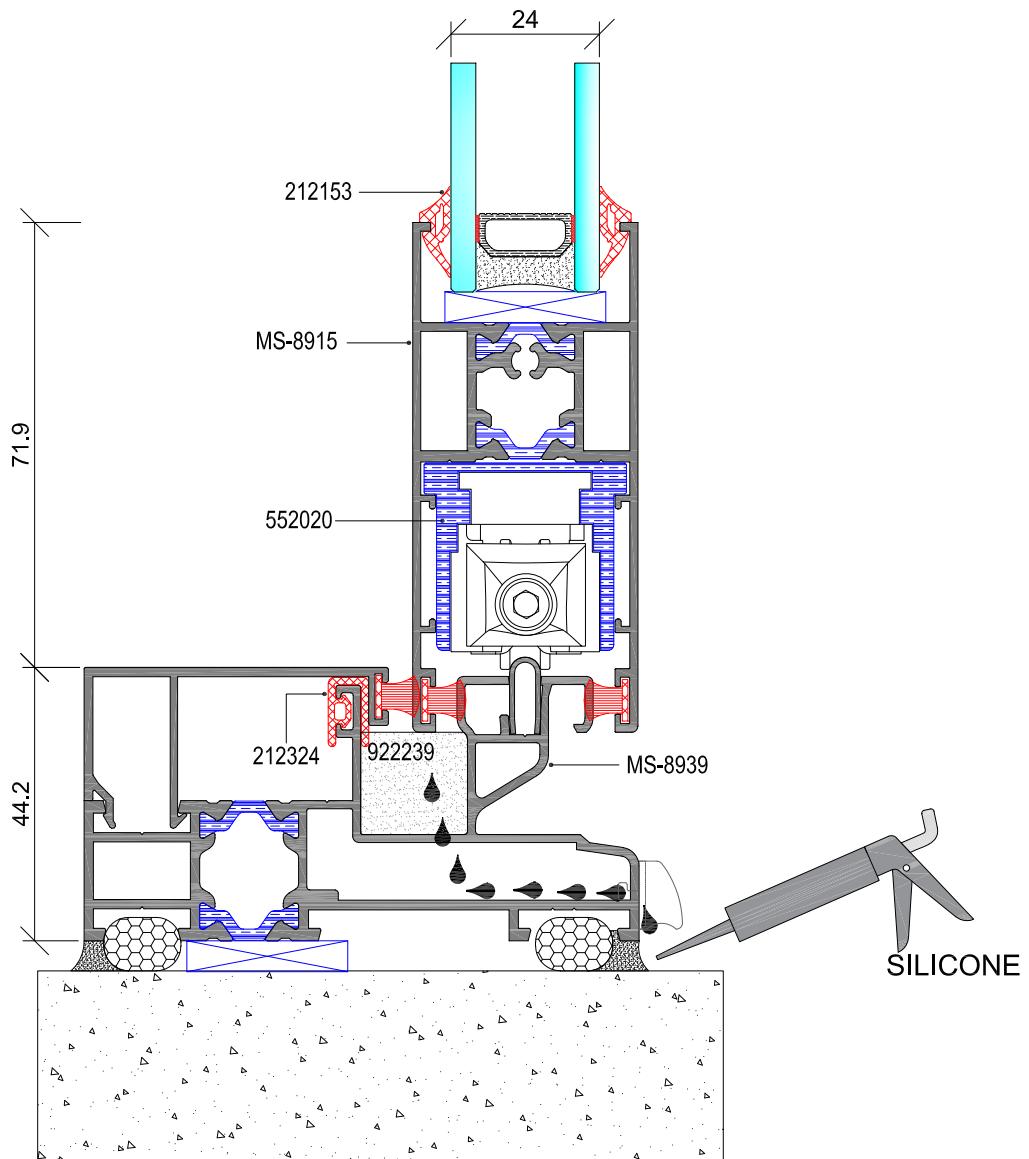
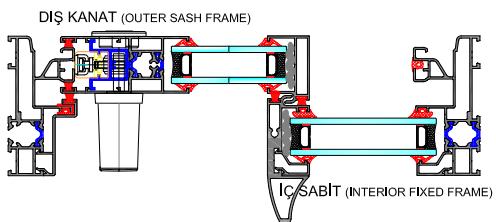
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

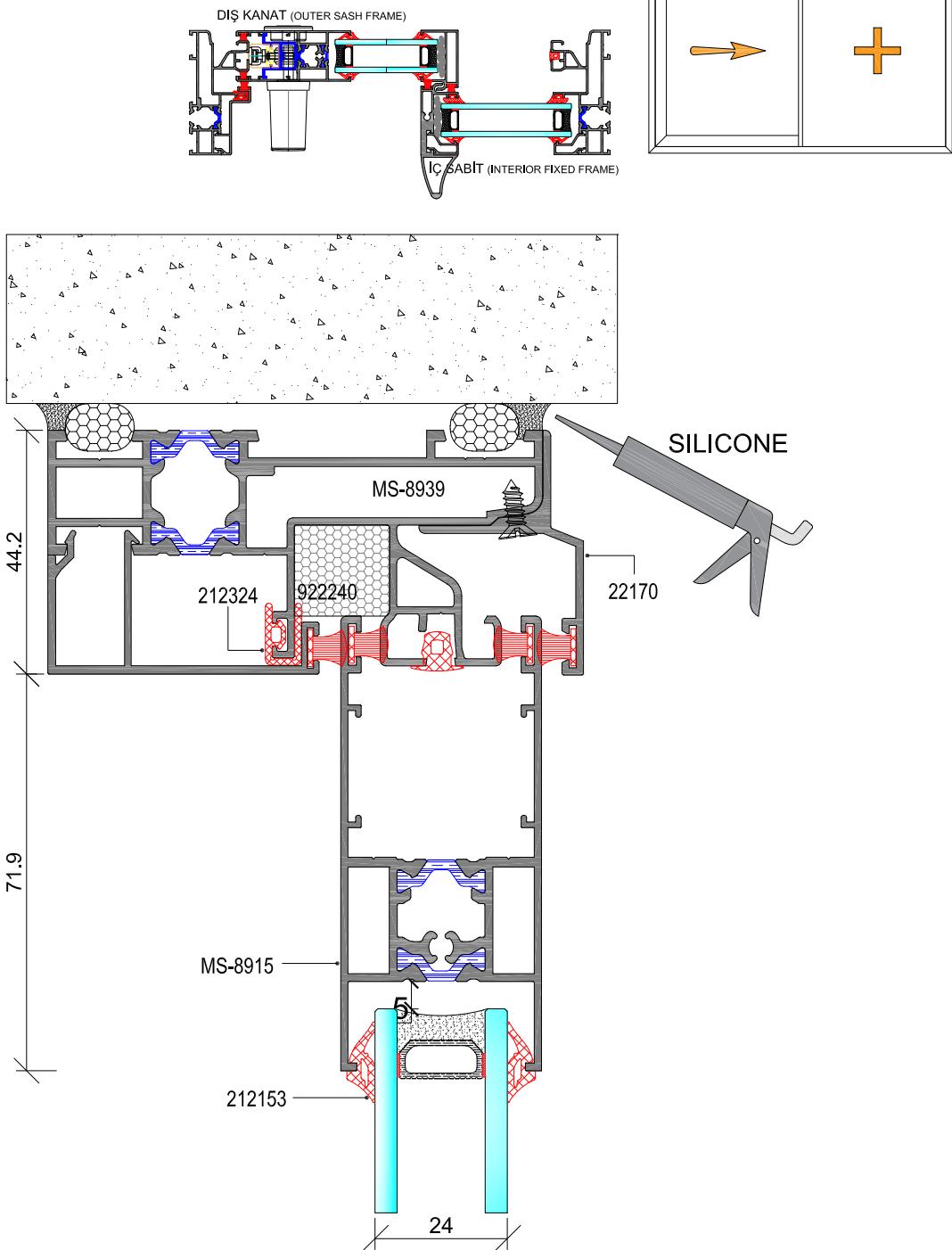


TEK KANAT HAREKETLİ SÜRME DETAYI  
MONORAIL SLIDING INSULATED DETAIL



# MAESTRO 89 Insulated Sliding

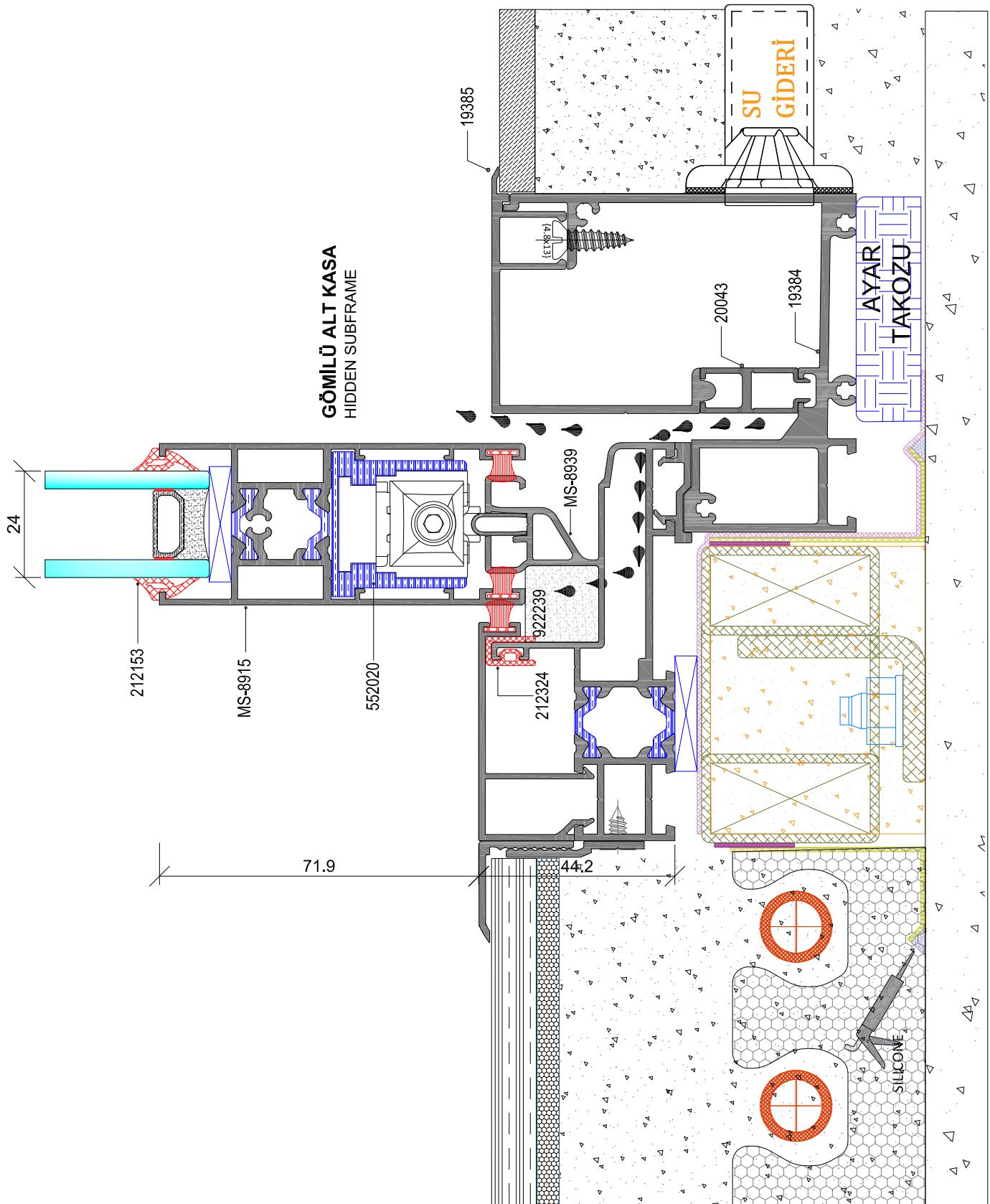
## TEK KANAT HAREKETLİ SÜRME DETAYI MONORAIL SLIDING INSULATED DETAIL



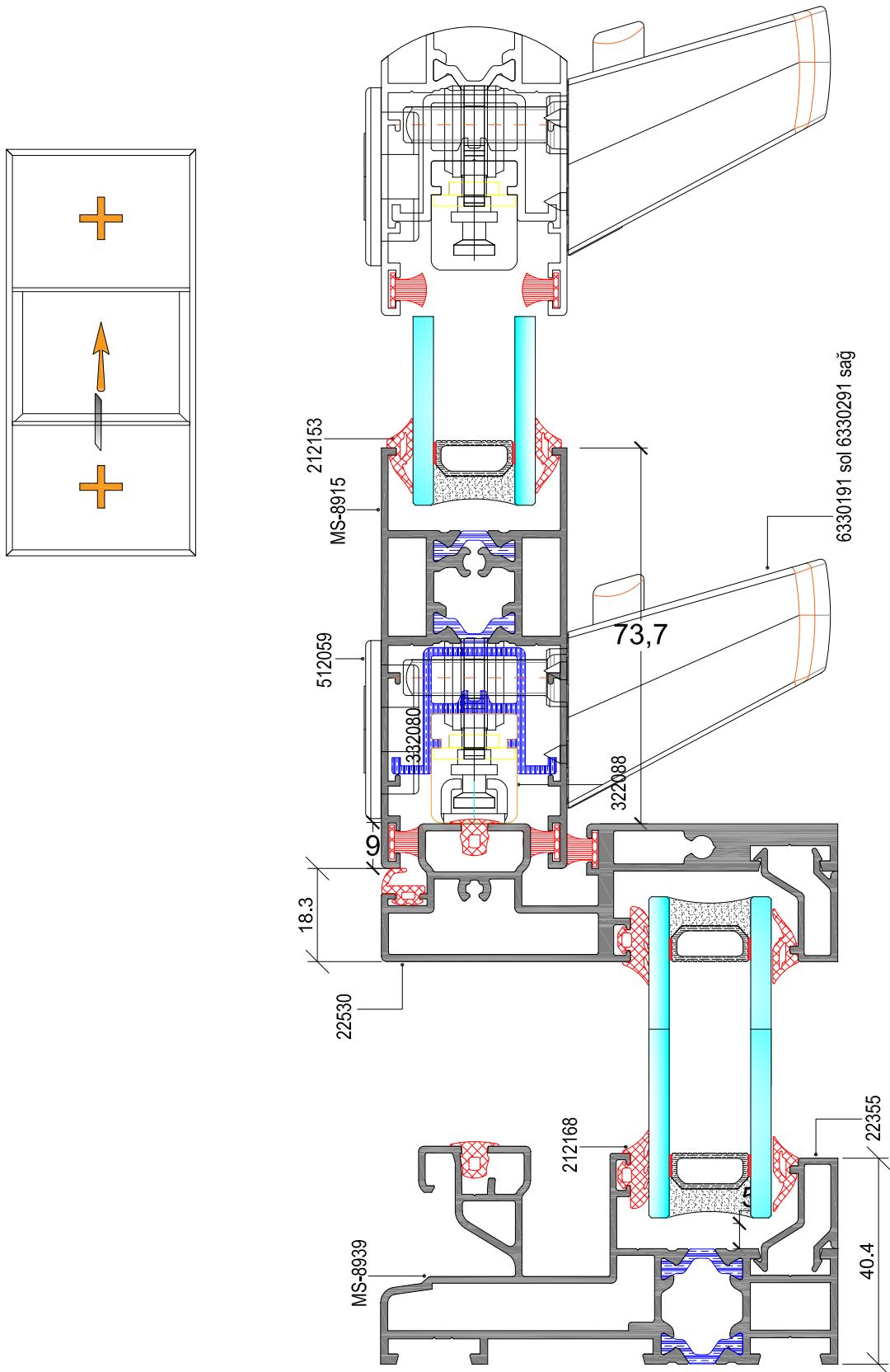
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding



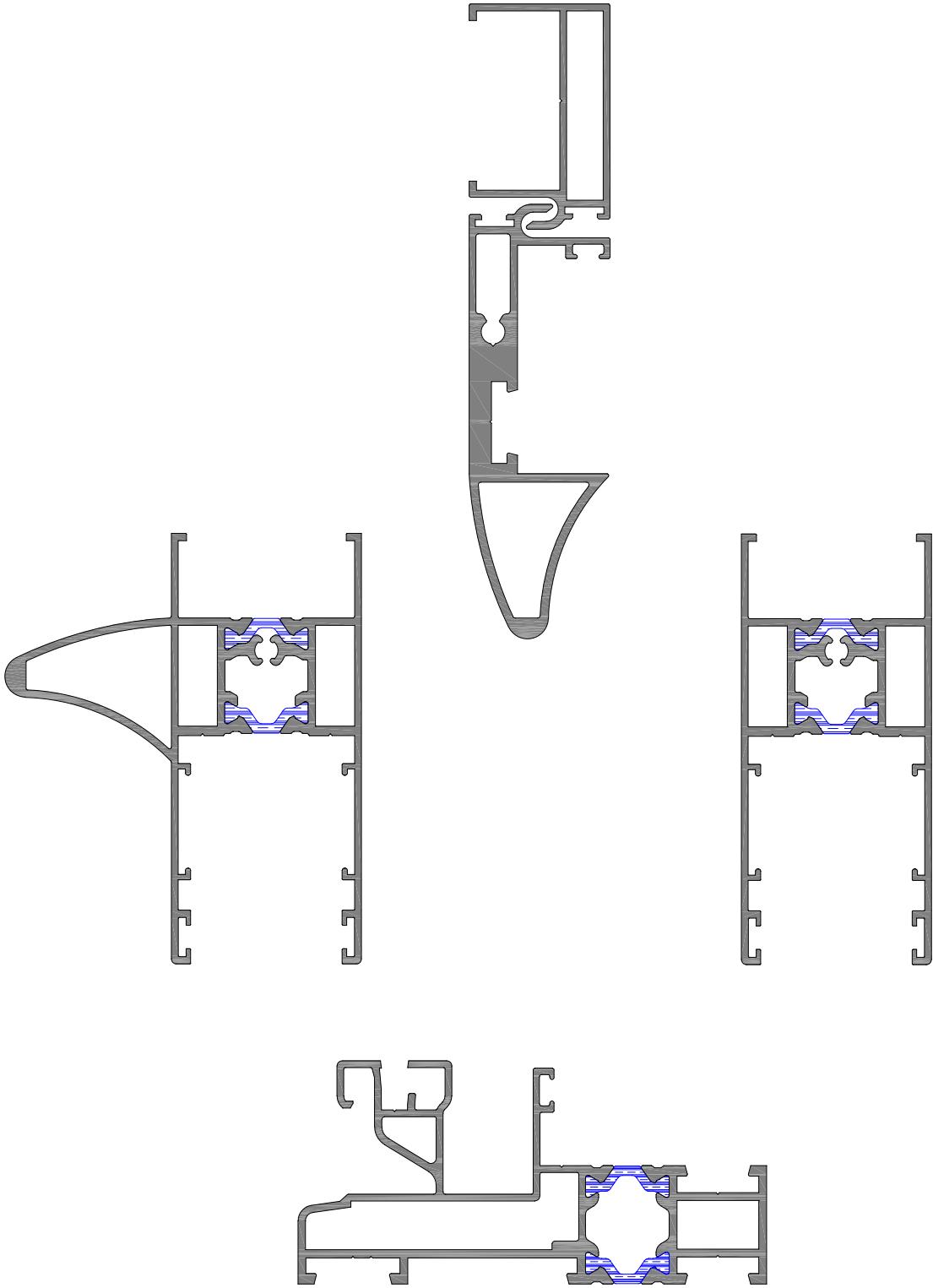
# MAESTRO 89 Insulated Sliding



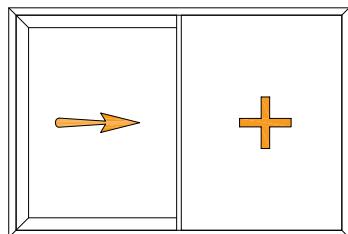
**FERMOSA**  
SYSTEM

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## KESİM ÜRETİM ÖLÇÜLERİ MANUFACTURING DIMENSIONS



# MAESTRO 89 Insulated Sliding



**TEK KANAT HAREKETLİ YALITIMLI SÜRME DETAYI**  
MONORAIL SLIDING INSULATED DETAIL

## PROFİLLER / PROFILES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
2	MS-8939	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8939	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
1	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
1	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
2	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/2 - 49,6	45°/90°
1	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
1	22353	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H - 45,4	90°/90°
1	22354	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H	90°/90°
1	22351	(B)DÜŞEY ADAPTÖR PR. / VERTICAL ADAPTER PR.	H-88,4	90°/90°
2	22352	(B)YATAY ADAPTÖR PR. / VERTICAL HORIZONTAL PR.	L/2 -36,1	90°/90°
2	22355	(B)DÜŞEY CAM ÇITASI / VERT. GLAZING BEAD	H - 80,8	90°/90°
2	22355	(B) YATAY CAM ÇITASI / HOR. GLAZING BEAD	L/2 -18,5	90°/90°
1	22170	DAMLALIK PR. / DRIP WHEATHER PR.	L	90°/90°

## AKSESUARLAR / ACCESSORIES

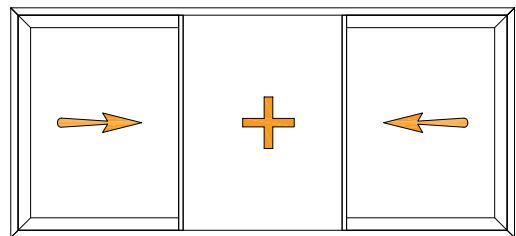
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ CUTTING SIZE	KESİM AÇISI CUTTING ANGLE
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
4	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372003	TAPA SETİ / PLUG KIT	-	
2	552020	RULMAN / PULLEY	-	
1	922237	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
1	922238	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
-	212168	DIŞ CAM FİTİLİ / OUTER GLAZING GASKET	1L +2H	
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L + 1H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	3L + 6H	
-	212324	ADAPTÖR FİTİLİ / ADAPTÖR GASKET	1L + 1H	
-	212021	PERDELİ FIRÇA FİTİL / WEATHERSTRIP BRUSH	3L + 6H	
-	332036	ÇELİK RAY / STEEL RAIL	1L	
-	332080	PVC İSPANYOLET PR./ PVC ESPAGNOLETTE PR.	1H	90°/90°
2	322088	KANAT STOPER / STOPPER FOR SASH	-	
2	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

**ORTA SABİT SAĞ SOL HAREKETLİ**  
MIDDLE FIXED RIGHT LEFT MOVABLE



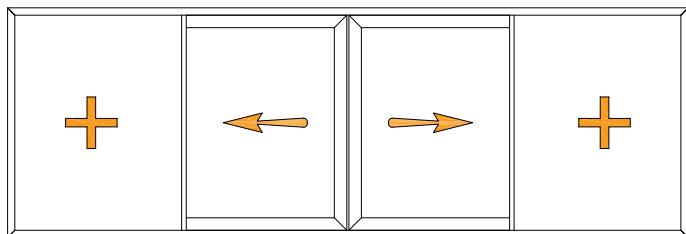
## PROFİLLER / PROFILES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ KESİM AÇISI	
			CUTTING SIZE	CUTTING ANGLE
2	MS-8939	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8939	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
2	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
2	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
4	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/3 - 49,6	45°/90°
2	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
2	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
2	22353	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H - 45,4	90°/90°
2	22354	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H	90°/90°
2	22351	(B)DÜŞEY ADAPTÖR PR. / VERTICAL ADAPTER PR.	H-88,4	90°/90°
4	22352	(B)YATAY ADAPTÖR PR. / VERTICAL HORIZONTAL PR.	L/3 -36,1	90°/90°
2	22355	(B)DÜŞEY CAM ÇITASI / VERT. GLAZING BEAD	H - 80,8	90°/90°
2	22355	(B)YATAY CAM ÇITASI / HOR. GLAZING BEAD	L/3-18,5	90°/90°
1	22170	DAMLALIK PR. / DRIP WHEATHER PR.	L	90°/90°

## AKSESUARLAR / ACCESSORIES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ KESİM AÇISI	
			CUTTING SIZE	CUTTING ANGLE
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
8	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
8	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372002	TAPA SETİ / PLUG KIT	-	
4	552020	RULMAN / PULLEY	-	
2	922237	SU VE HAVA KEŞİCİ ÜST / WATER AND AIR BREAKER	-	
2	922238	SU VE HAVA KEŞİCİ ÜST / WATER AND AIR BREAKER	-	
-	212168	DIŞ CAM FİTİLİ / OUTER GLAZING GASKET	1L +2H	
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L +2H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	3L + 10H	
-	212324	ADAPTÖR FİTİLİ / ADAPTÖR GASKET	1L +2H	
-	212021	PERDELİ FIRÇA FİTİLİ / WEATHERSTRIP BRUSH	4L + 8H	
-	332036	ÇELİK RAY / STEEL RAIL	1L	
-	332080	PVC İSPANYOLET PR./ PVC ESPAGNOLETTE PR.	2H	90°/90°
2	322088	KANAT STOPER / STOPPER FOR SASH	-	
2	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	

# MAESTRO 89 Insulated Sliding



**ORTA ÇİFT KANAT HAREKETLİ**  
MEDIUM DOUBLE WINGS MOVING

PROFİLLER / PROFILES					
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖLÇÜSÜ KESİM AÇISI		CUTTING ANGLE
			CUTTING SIZE	CUTTING ANGLE	
2	MS-8939	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°	
2	MS-8939	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°	
2	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°	
2	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°	
4	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/4 - 23,8	45°/90°	
2	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°	
2	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°	
2	22353	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H - 45,4	90°/90°	
2	22354	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H	90°/90°	
4	22352	(B)YATAY ADAPTÖR PR. / VERTICAL HORIZONTAL PR.	L/2 -27,1	90°/90°	
2	22355	(B) DÜŞEY CAM ÇITASI / VERT. GLAZING BEAD	H - 80,8	90°/90°	
2	22355	(B) YATAY CAM ÇITASI / HOR. GLAZING BEAD	L/4-18,5	90°/90°	
1	22170	DAMLALIK PR. / DRIP WHEATHER PR.	L	90°/90°	

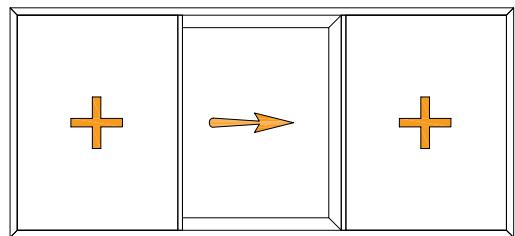
AKSESUARLAR / ACCESSORIES					
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖLÇÜSÜ		KESİM AÇISI CUTTING ANGLE
			CUTTING SIZE	CUTTING ANGLE	
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-		
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-		
8	111303	KÖŞE TAKOZU / CORNER CLEAT	-		
8	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-		
1	372002	TAPA SETİ / PLUG KIT	-		
4	552020	RULMAN / PULLEY	-		
2	922237	SU VE HAVA KEŞİCİ ÜST / WATER AND AIR BREAKER	-		
2	922238	SU VE HAVA KEŞİCİ ÜST / WATER AND AIR BREAKER	-		
-	212168	DIŞ CAM FİTİLİ / OUTER GLAZING GASKET	1L +2H		
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L +2H		
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	3L + 10H		
-	212324	ADAPTÖR FİTİLİ / ADAPTÖR GASKET	1L +2H		
-	212021	PERDELİ FIRÇA FİTİİL / WEATHERSTRIP BRUSH	4L + 8H		
-	332036	ÇELİK RAY / STEEL RAIL	1L		
-	332080	PVC İSPANYOLET PR./ PVC ESPAGNOLETTE PR.	2H	90°/90°	
2	322088	KANAT STOPER / STOPPER FOR SASH	-		
2	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-		

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

**ORTA HAREKETLİ SAĞ SOL SABİT**  
MEDIUM MOVABLE RIGHT LEFT FIXED



## PROFİLLER / PROFILES

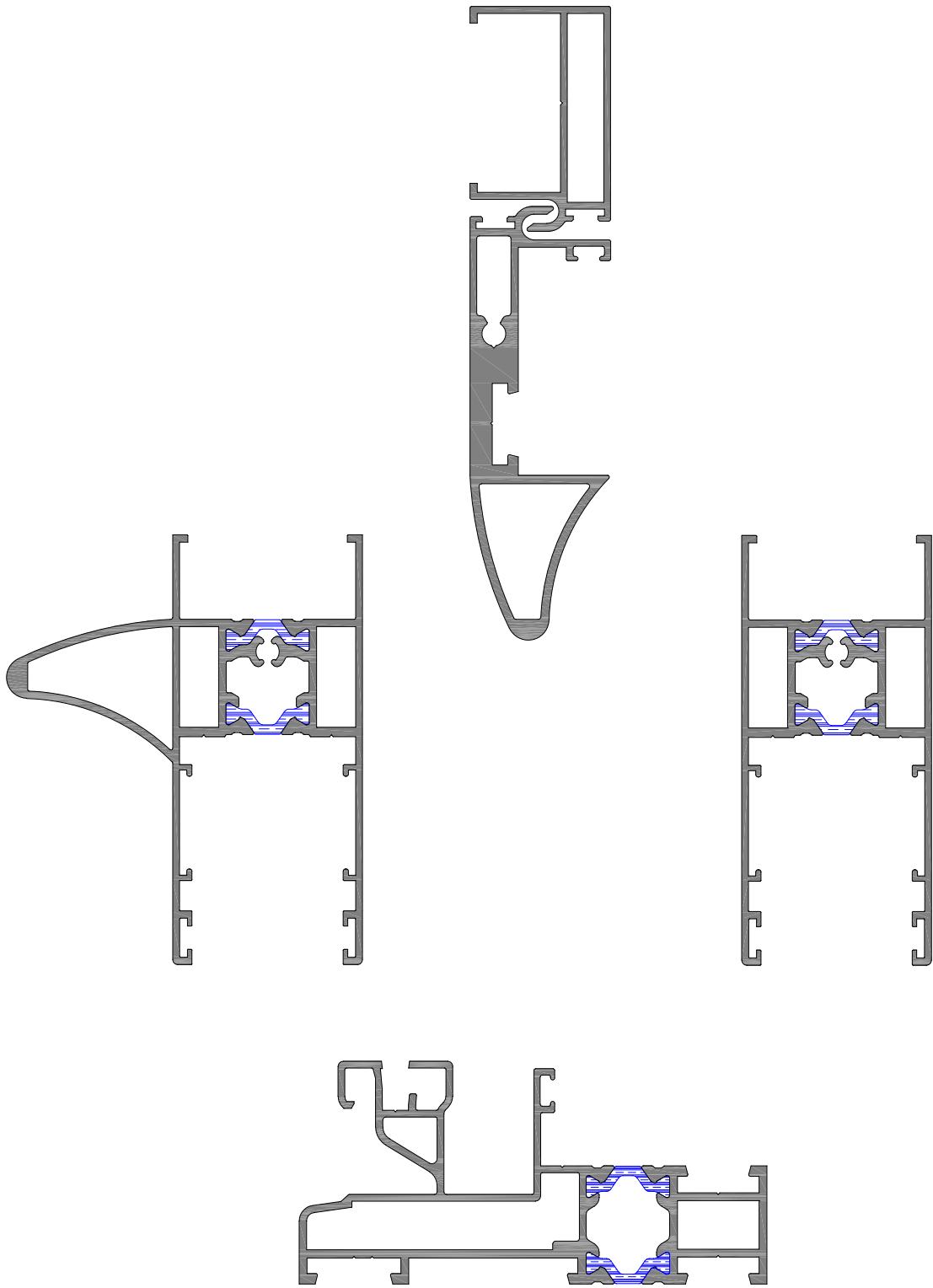
ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ KESİM AÇISI	
			CUTTING SIZE	CUTTING ANGLE
2	MS-8939	DÜŞEY KASA PR. / VERTICAL FRAME PR.	H	45°/45°
2	MS-8939	YATAY KASA PR. / HORIZONTAL FRAME PR.	L	45°/45°
2	MS-8915	DÜŞEY KANAT PR. / VERTICAL SASH PR.	H - 67,4	45°/45°
2	MS-8934	DÜŞEY KANAT PR. / VERTICAL SASH PR.(SEÇENEK)	H - 67,4	45°/45°
4	MS-8915	YATAY KANAT PR./ HORIZONTAL SASH PR.	L/3 - 49,6	45°/90°
2	22228	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
2	22229	(A)KENET PROFİLİ /CLAMP PROFILE	H - 89,4	90°/90°
2	22353	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H - 45,4	90°/90°
2	22354	(B)SABİT KENET PROFİLİ /CLAMP PROFILE	H	90°/90°
2	22351	(B)DÜŞEY ADAPTÖR PR. / VERTICAL ADAPTER PR.	H-88,4	90°/90°
4	22352	(B)YATAY ADAPTÖR PR. / VERTICAL HORIZONTAL PR.	L/3 -36,1	90°/90°
2	22355	(B) DÜŞEY CAM ÇITASI / VERT. GLAZING BEAD	H - 80,8	90°/90°
2	22355	(B) YATAY CAM ÇITASI / HOR. GLAZING BEAD	L/3-18,5	90°/90°
1	22170	DAMLALIK PR. / DRIP WHEATHER PR.	L	90°/90°

## AKSESUARLAR / ACCESSORIES

ADET UNIT	KOD CODE	TANIM DESCRIPTION	KESİMLÖÇÜSÜ KESİM AÇISI	
			CUTTING SIZE	CUTTING ANGLE
4	111350	KÖŞE TAKOZU / CORNER CLEAT	-	
4	111345	KÖŞE TAKOZU / CORNER CLEAT	-	
8	111303	KÖŞE TAKOZU / CORNER CLEAT	-	
8	162001	KÖŞE ÇAVUŞU / CORNER ALIGNMENT	-	
1	372002	TAPA SETİ / PLUG KIT	-	
4	552020	RULMAN / PULLEY	-	
2	922237	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
2	922238	SU VE HAVA KESİCİ ÜST / WATER AND AIR BREAKER	-	
-	212168	DIŞ CAM FİTİLİ / OUTER GLAZING GASKET	1L +2H	
-	212251	RAY KAPATMA FİTİLİ / GASKET	1L +2H	
-	212153	KAMA FİTİLİ / GASKET FOR GLAZING	3L + 10H	
-	212324	ADAPTÖR FİTİLİ / ADAPTÖR GASKET	1L +2H	
-	212021	PERDELİ FIRÇA FİTİLİ / WEATHERSTRIP BRUSH	4L + 8H	
-	332036	ÇELİK RAY / STEEL RAIL	1L	
-	332080	PVC İSPANYOLET PR./ PVC ESPAGNOLETTE PR.	2H	90°/90°
2	322088	KANAT STOPER / STOPPER FOR SASH	-	
2	322094	TAKVİYELİ KANAT TAPA SETİ TAKIM.	-	

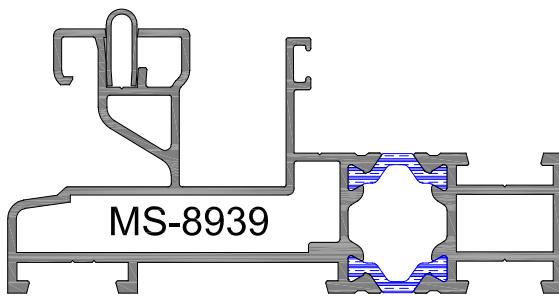
## İMALAT ÜRETİM DETAYLARI

## PRODUCTION APPLICATION DETAILS



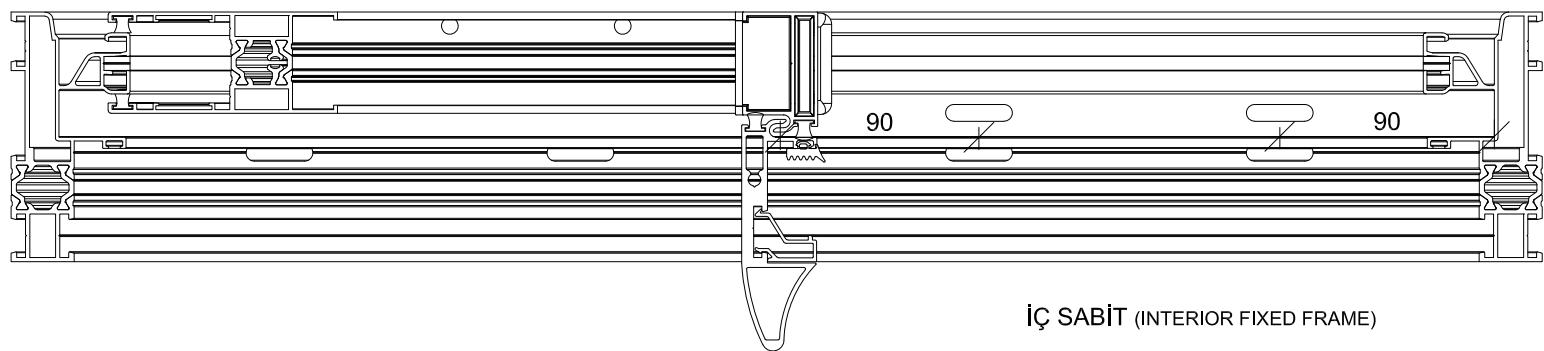
# MAESTRO 89 Insulated Sliding

KASA TAHLİYE DETAYI  
WATER DRAINAGE CHANNEL DETAIL

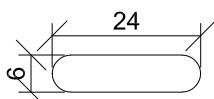


DIŞ GÖRÜNÜM (EXTERNAL VIEW)

DIŞ KANAT (OUTER SASH FRAME)



İÇ SABİT (INTERIOR FIXED FRAME)

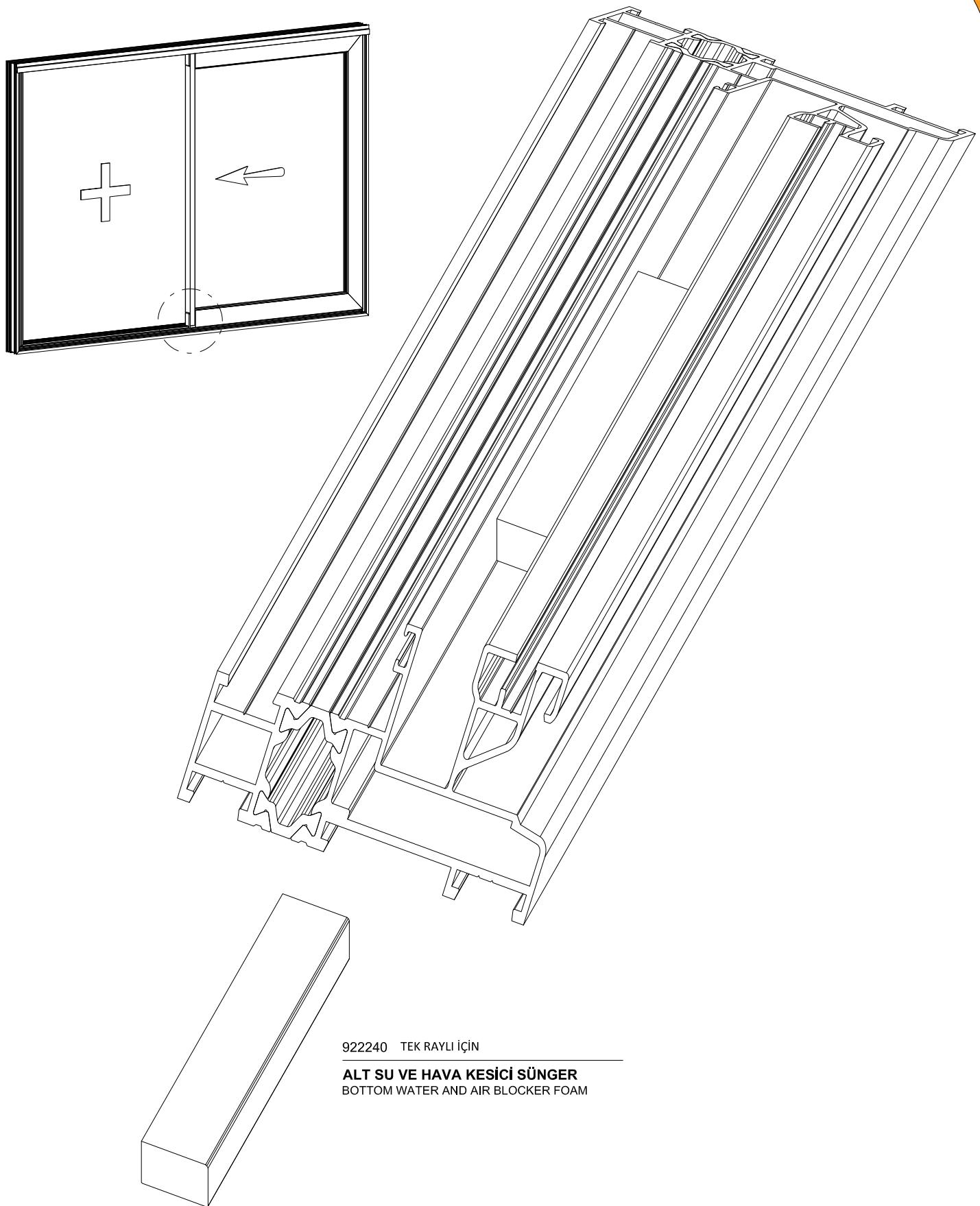


TAHLİYE DELİĞİNİN ÖLÇÜLERİ  
DRAINAGE HOLE DIMENSIONS

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

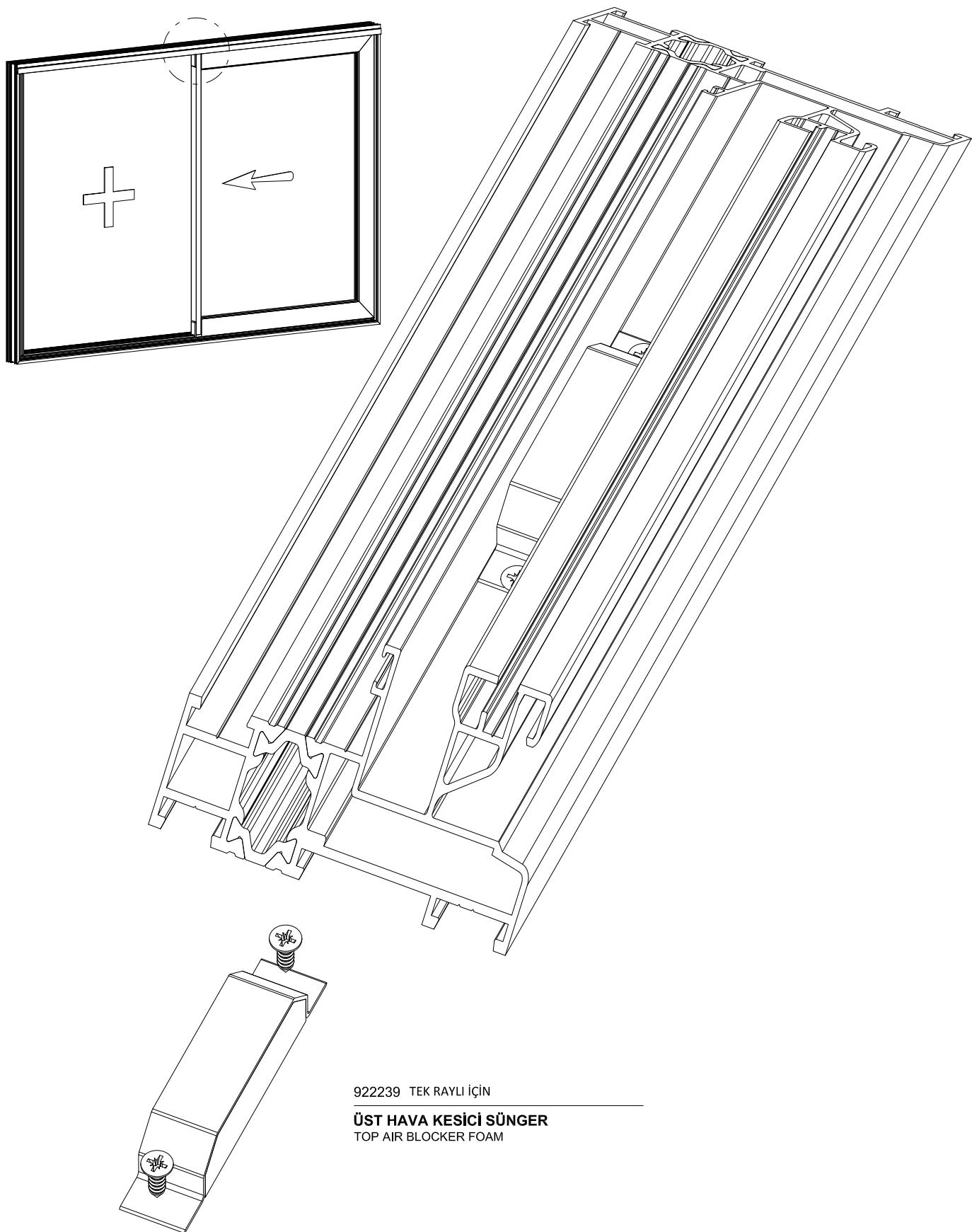


**FERMOSA**  
SYSTEM

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**86**

# MAESTRO 89 Insulated Sliding

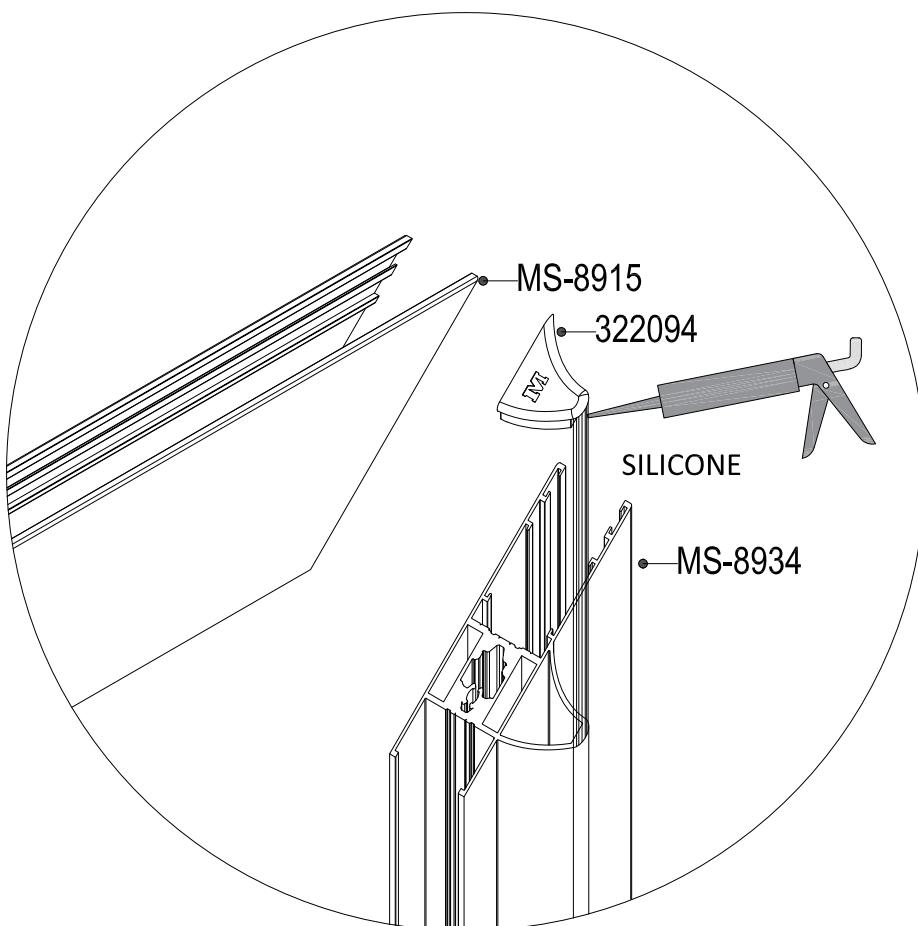
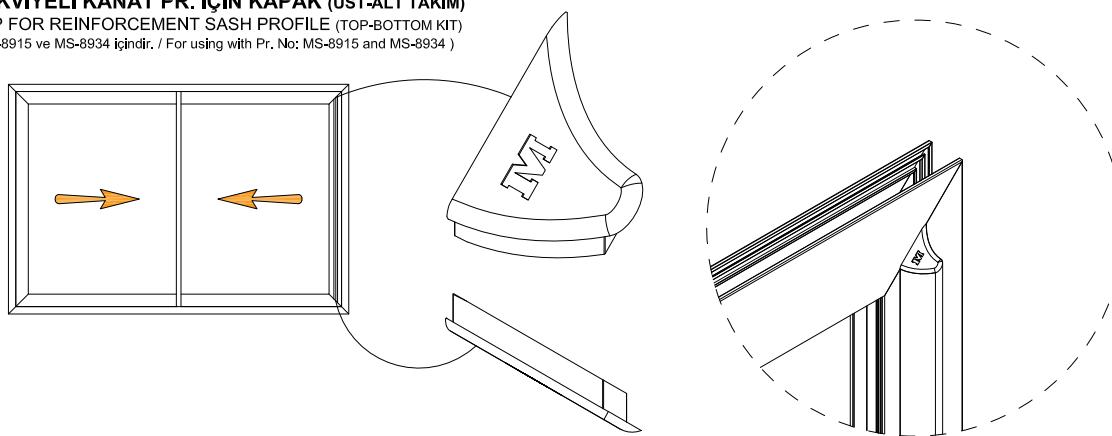


# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

322094

**TAKVİYELİ KANAT PR. İÇİN KAPAK (ÜST-ALT TAKIM)**  
CAP FOR REINFORCEMENT SASH PROFILE (TOP-BOTTOM KIT)  
( MS-8915 ve MS-8934 içindir. / For using with Pr. No; MS-8915 and MS-8934 )



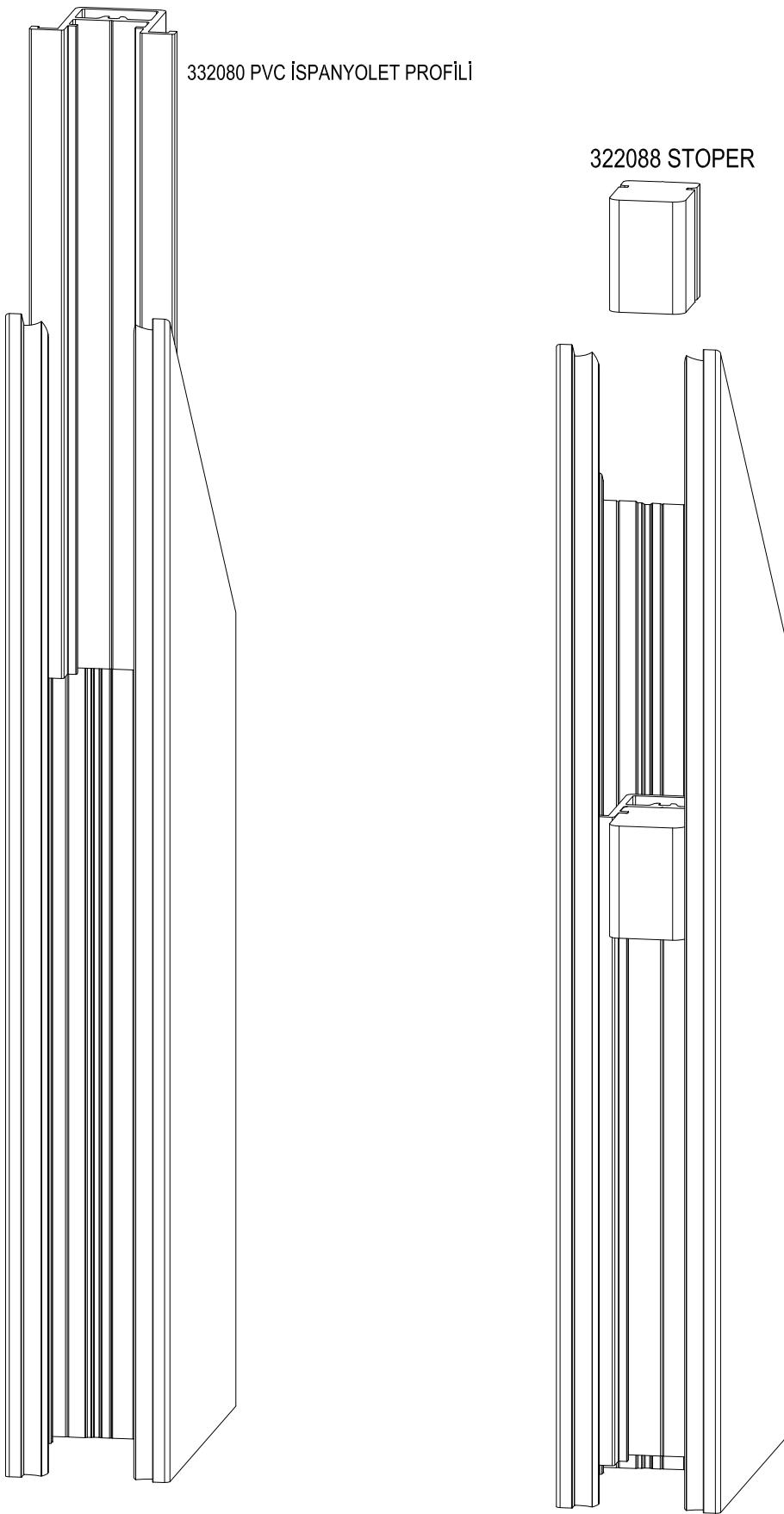
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SYSTEM

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**88**

# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

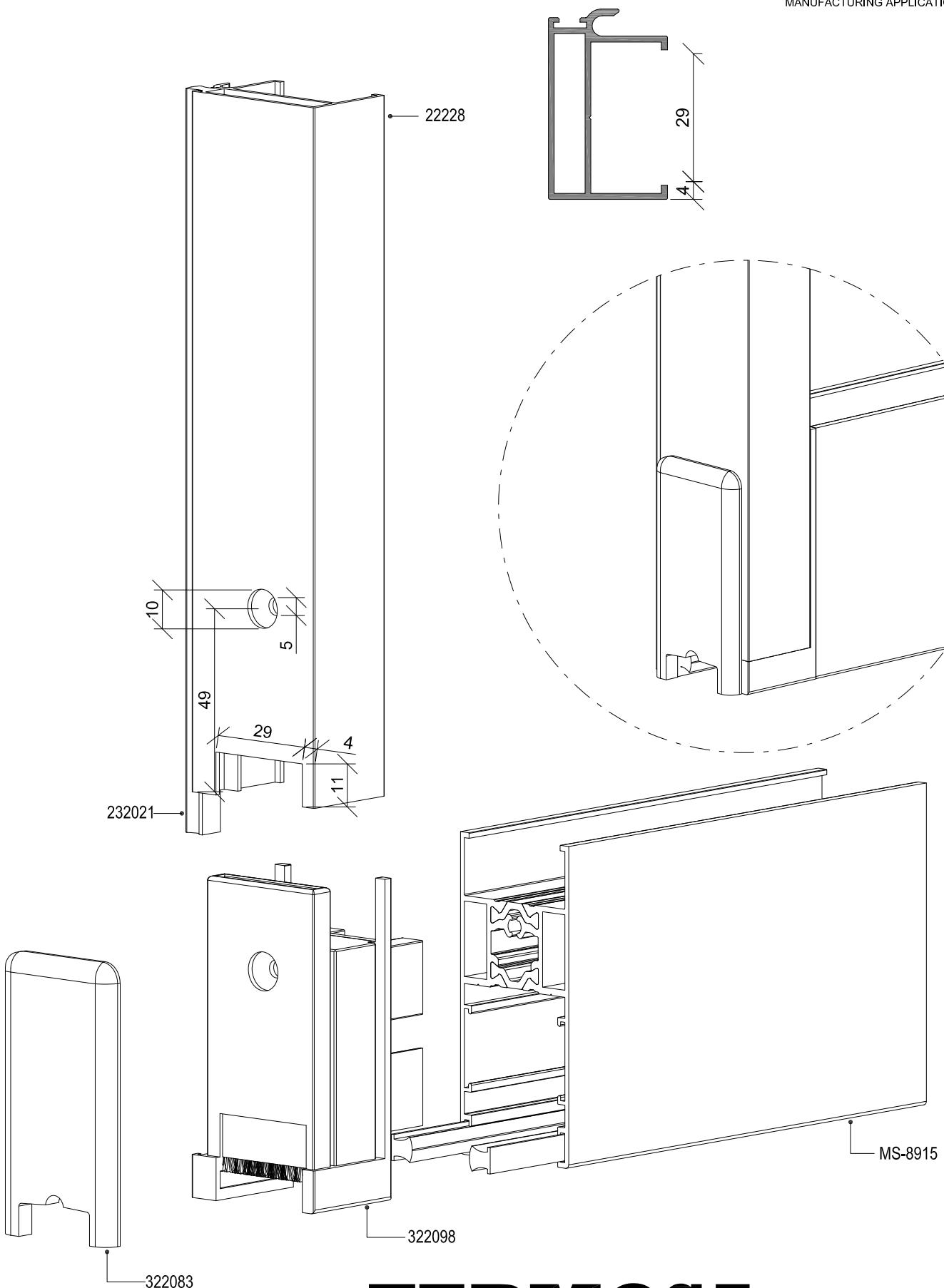


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SYSTEM

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# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



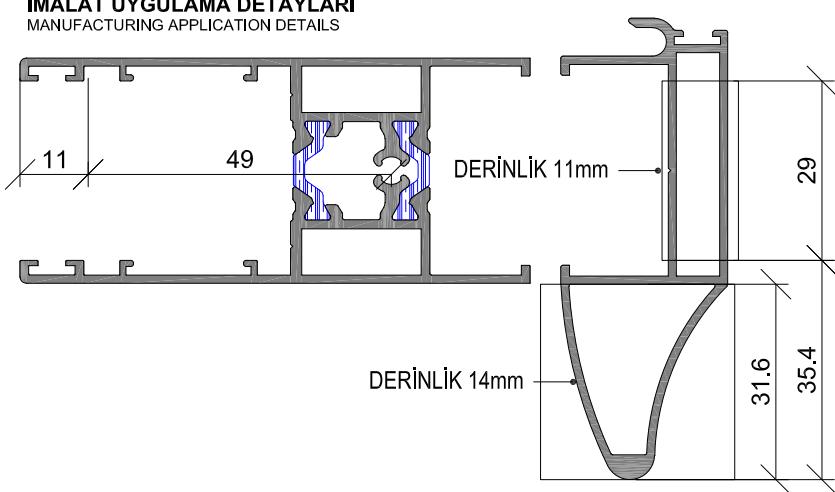
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SYSTEM

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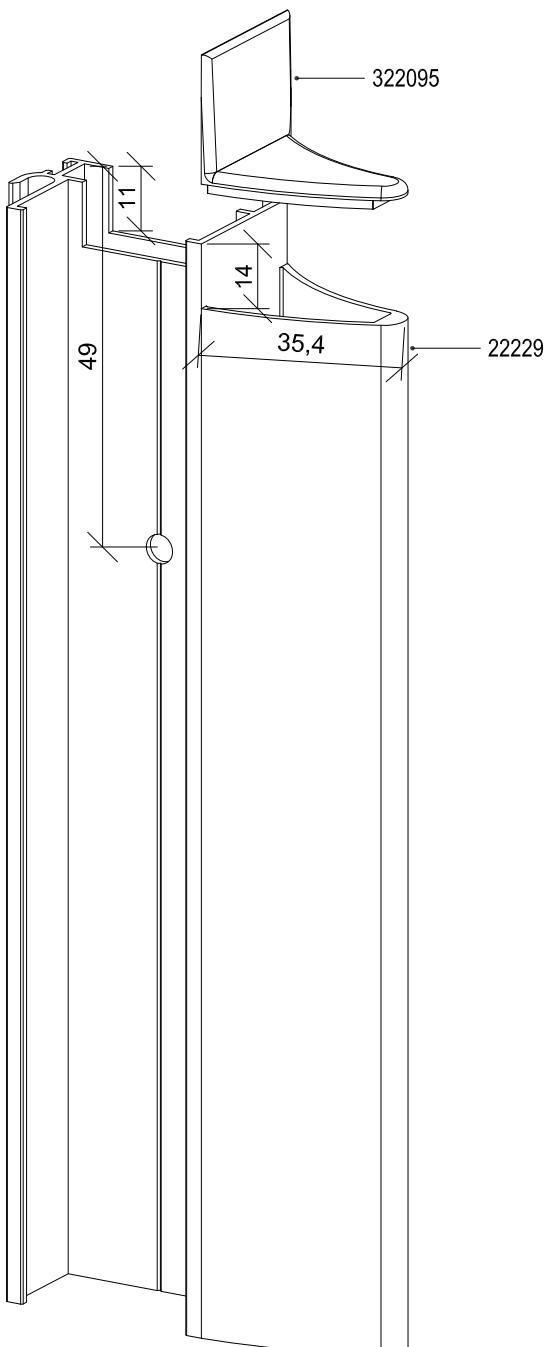
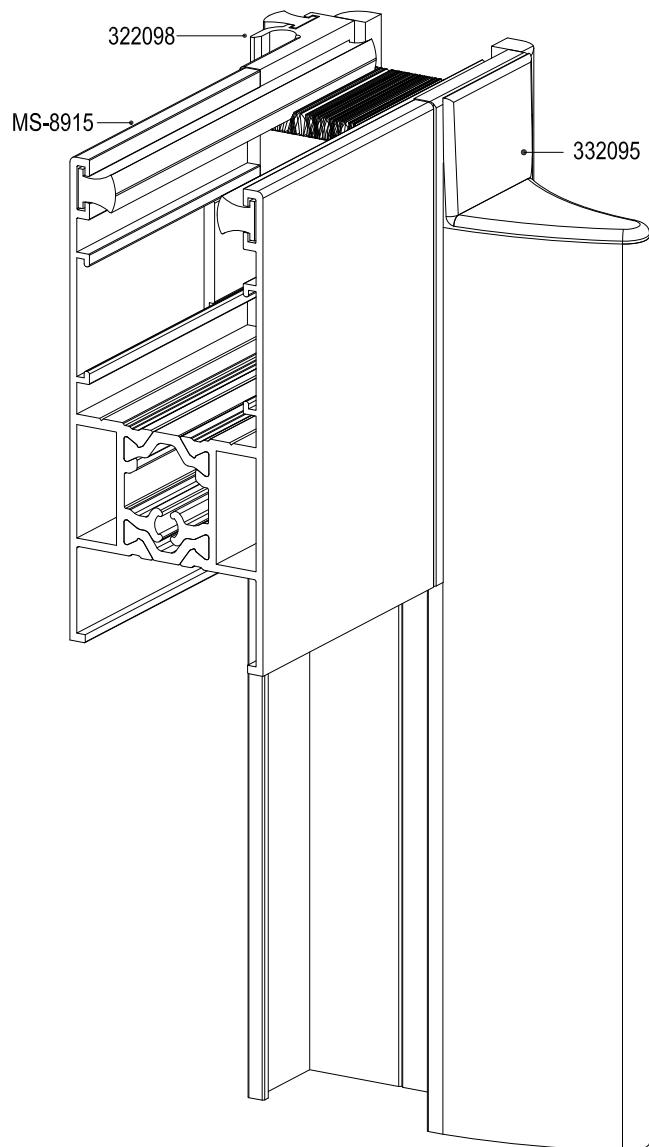
**90**

# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

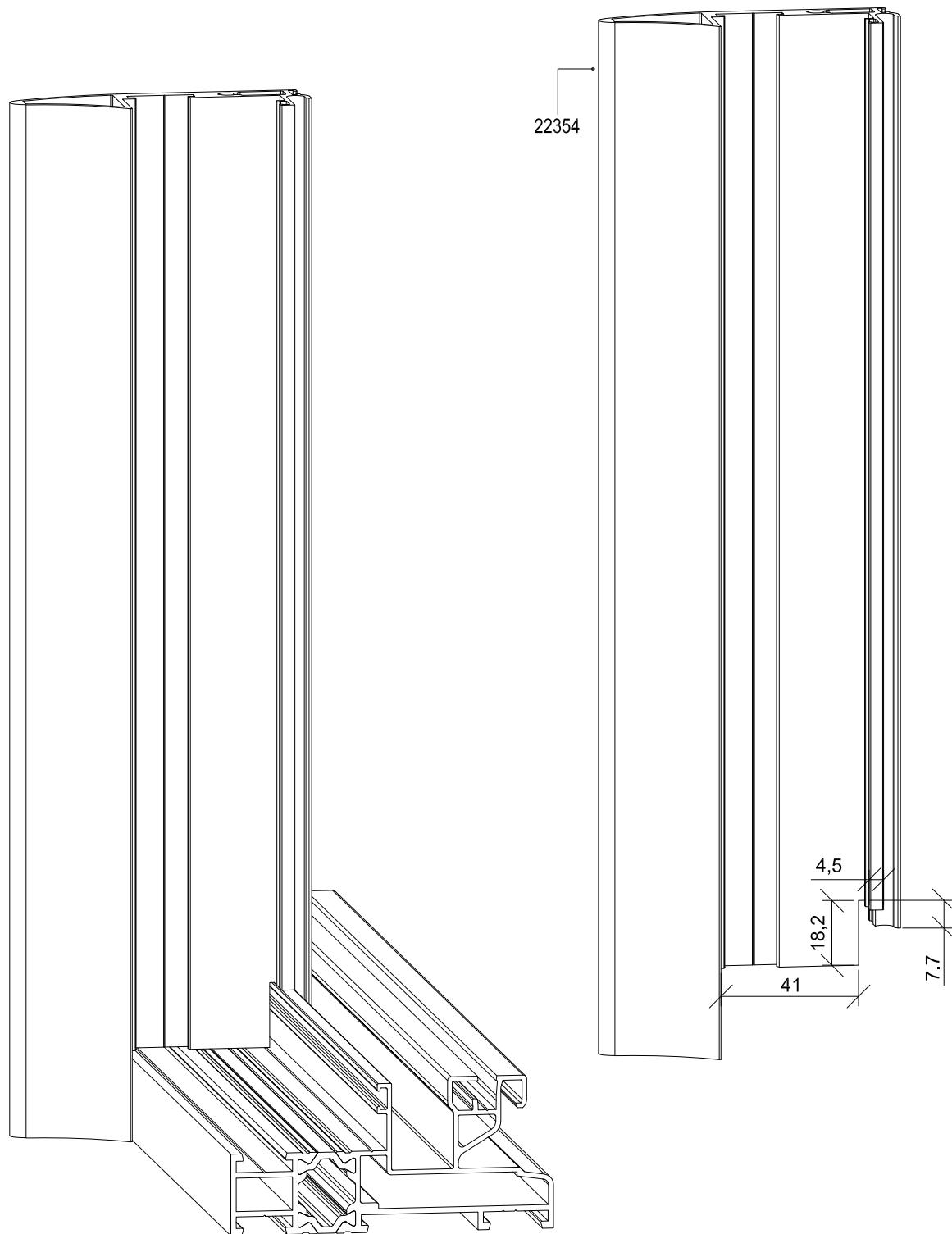


İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



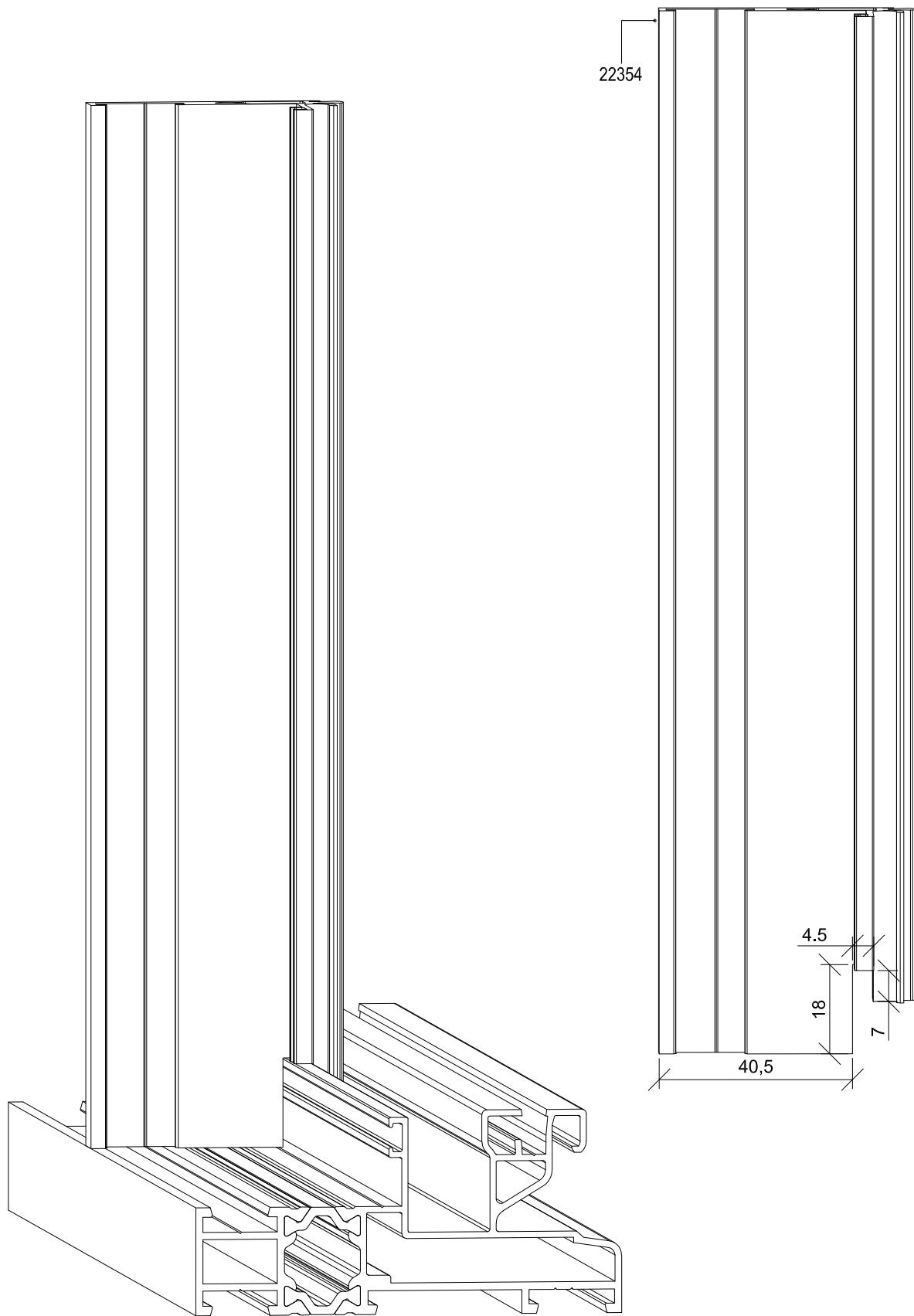
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**92**

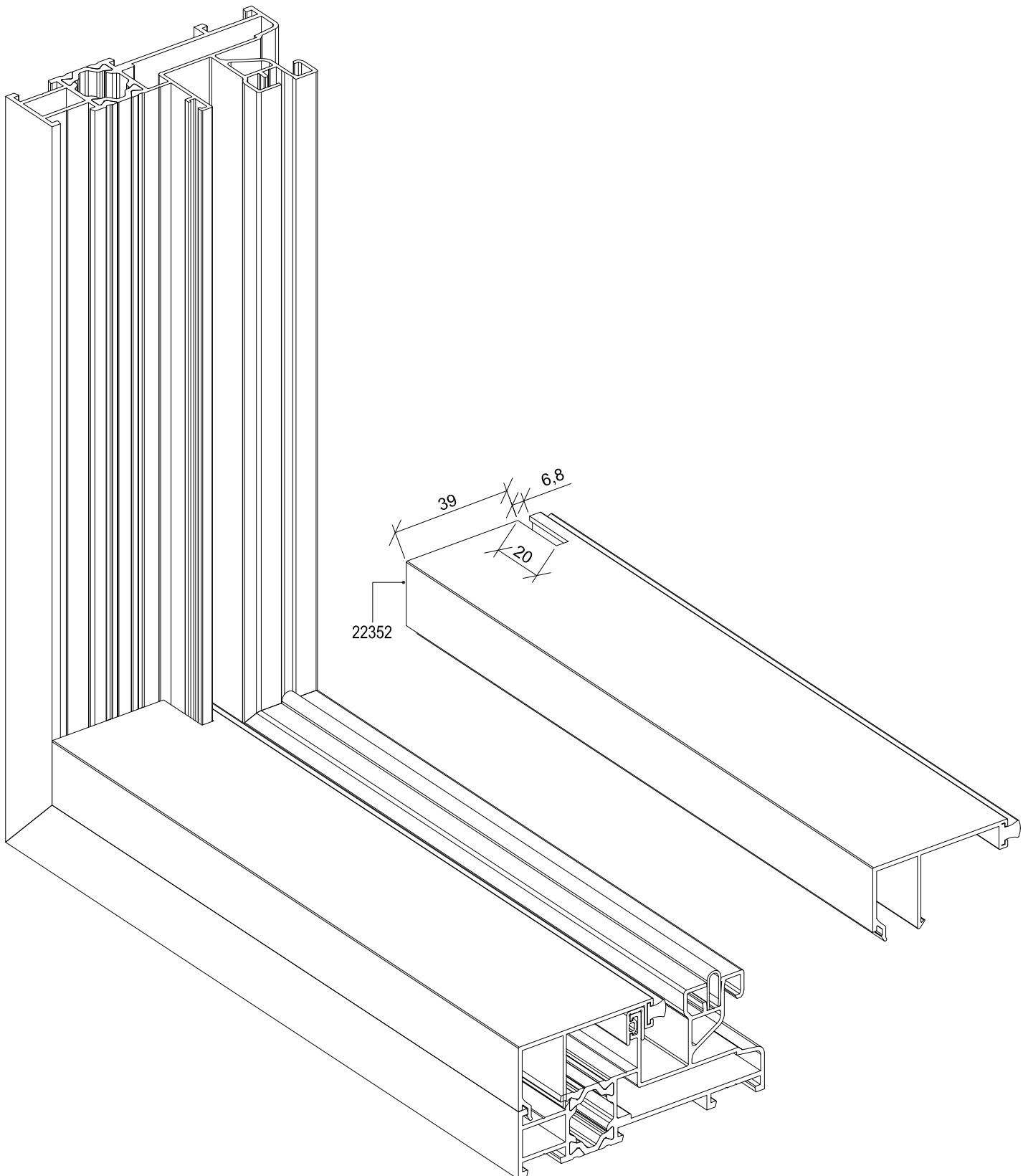
# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS



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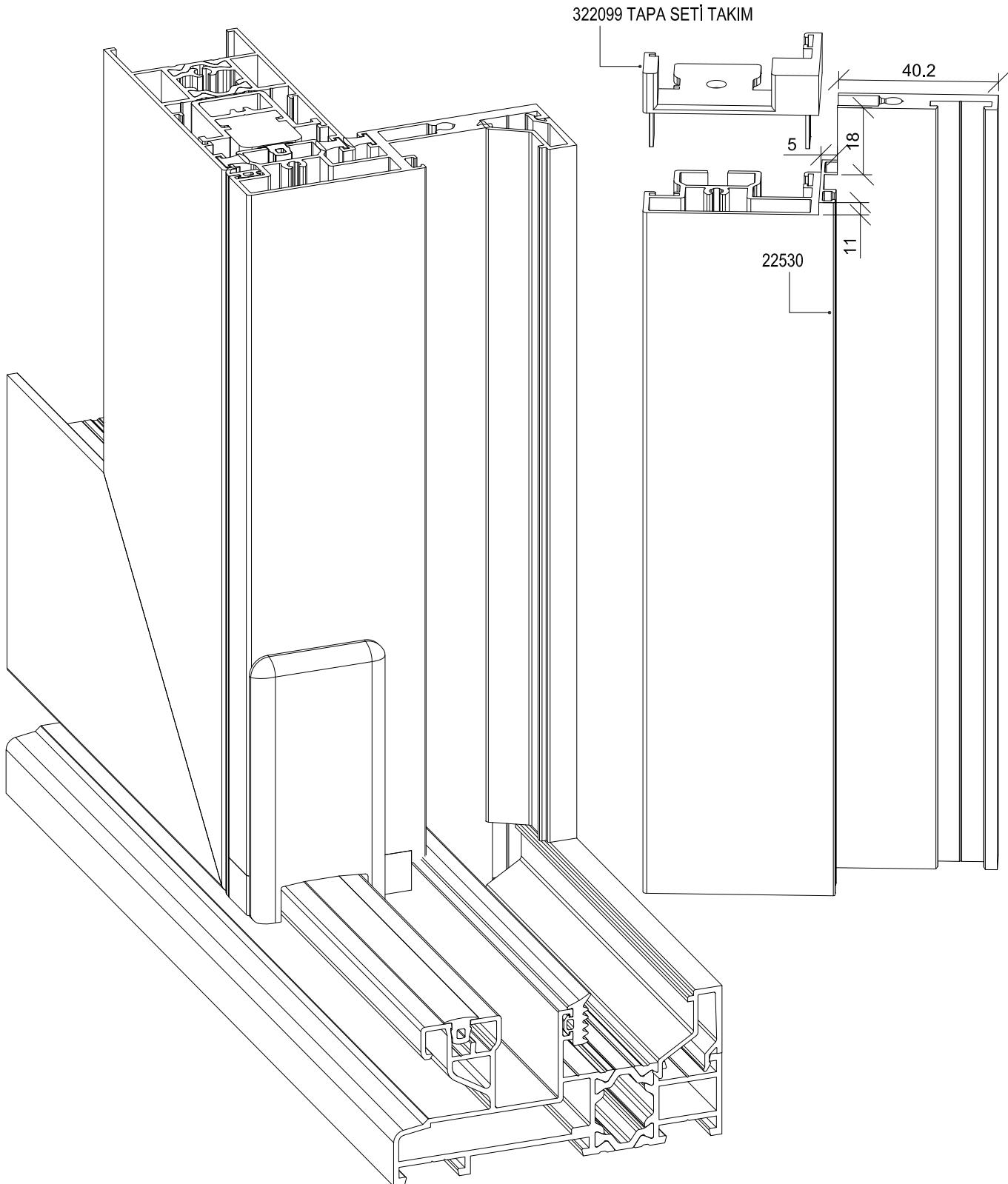
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# MAESTRO 89 Insulated Sliding

İMALAT UYGULAMA DETAYLARI  
MANUFACTURING APPLICATION DETAILS

SAYFA 78 DETAY /PAGE 78 DETAIL



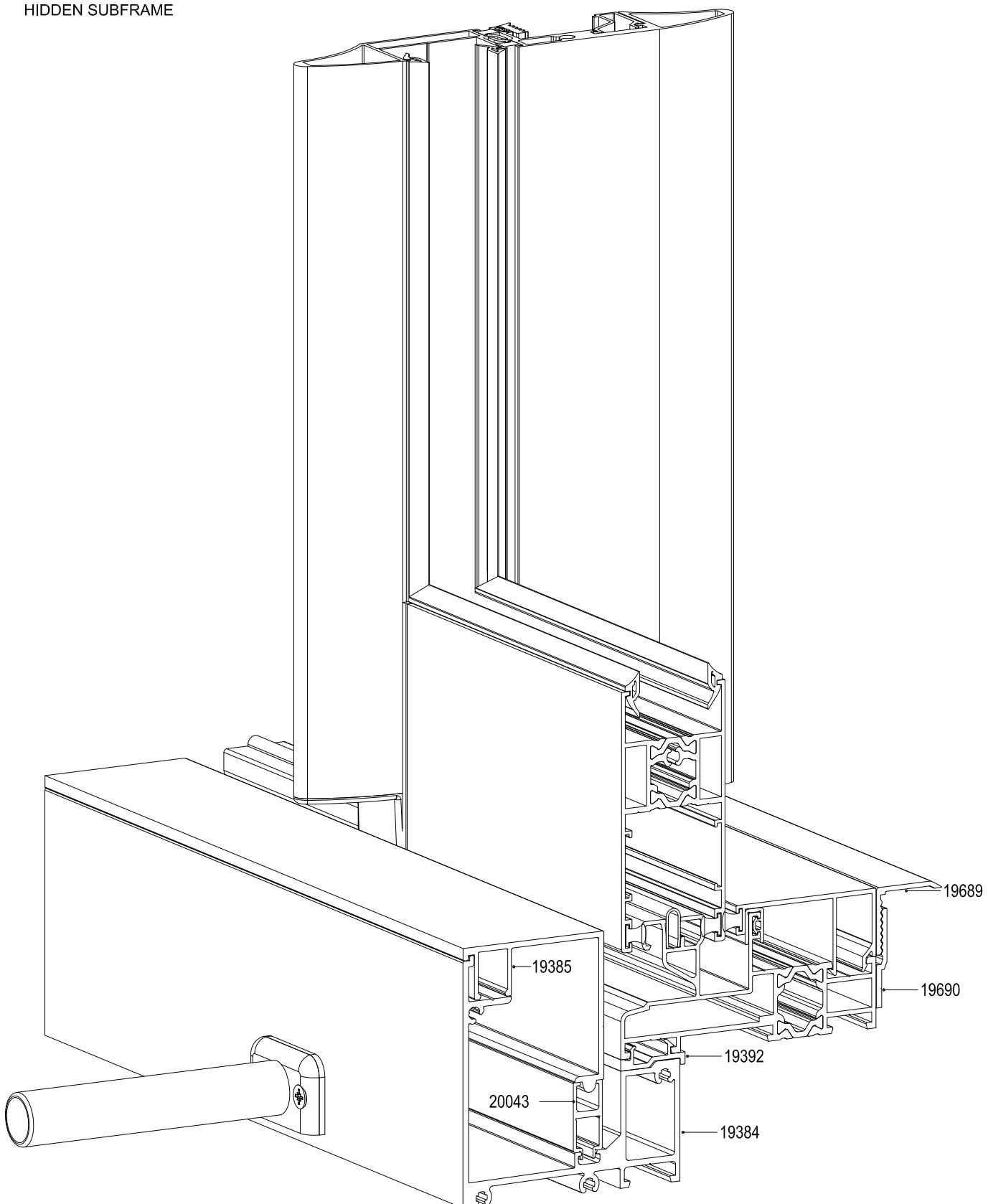
95

**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

GÖMİLÜ ALT KASA  
HIDDEN SUBFRAME



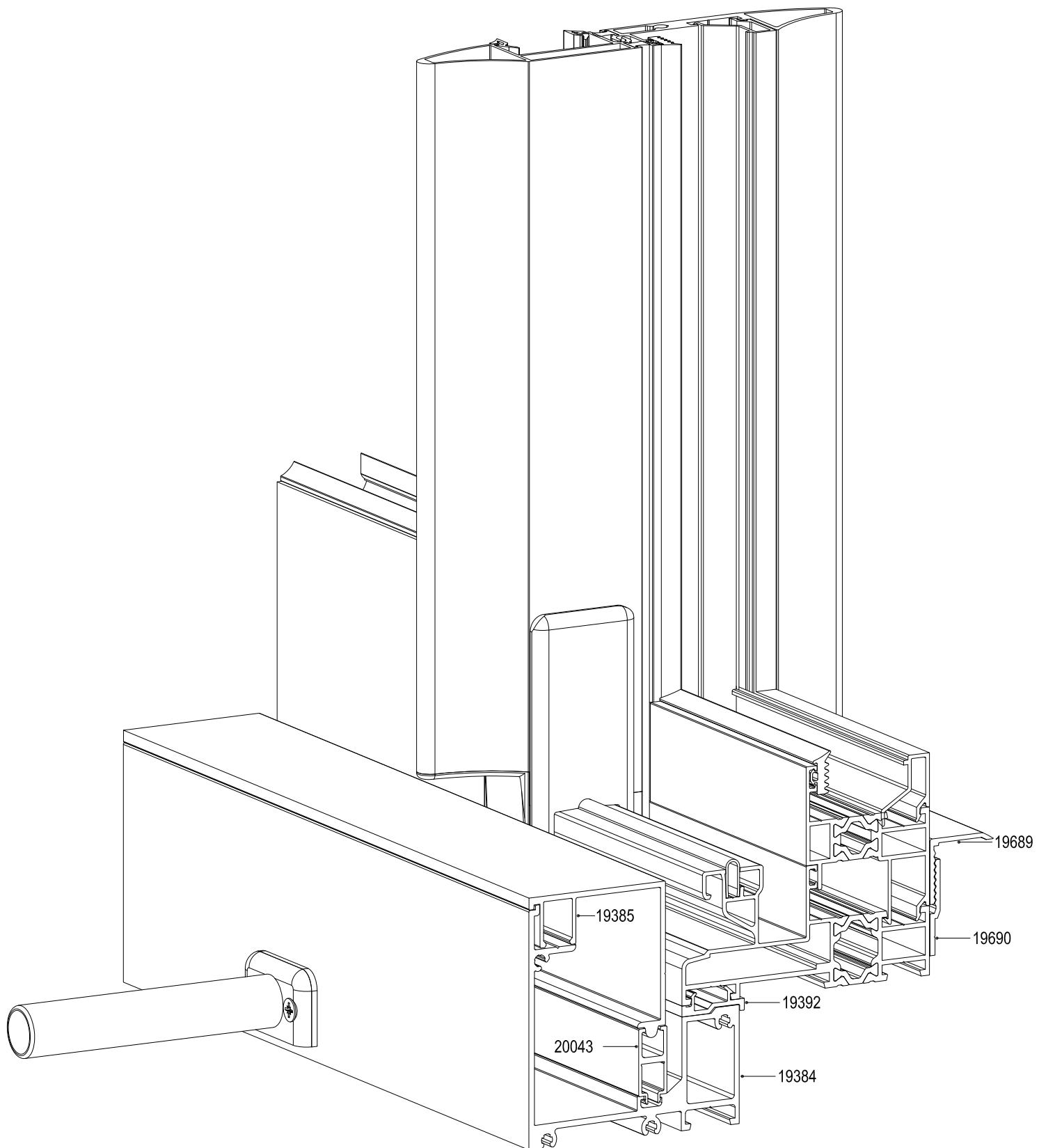
**FERMOSA**  
SYSTEM

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**96**

# MAESTRO 89 Insulated Sliding

GÖMİLÜ ALT KASA  
HIDDEN SUBFRAME

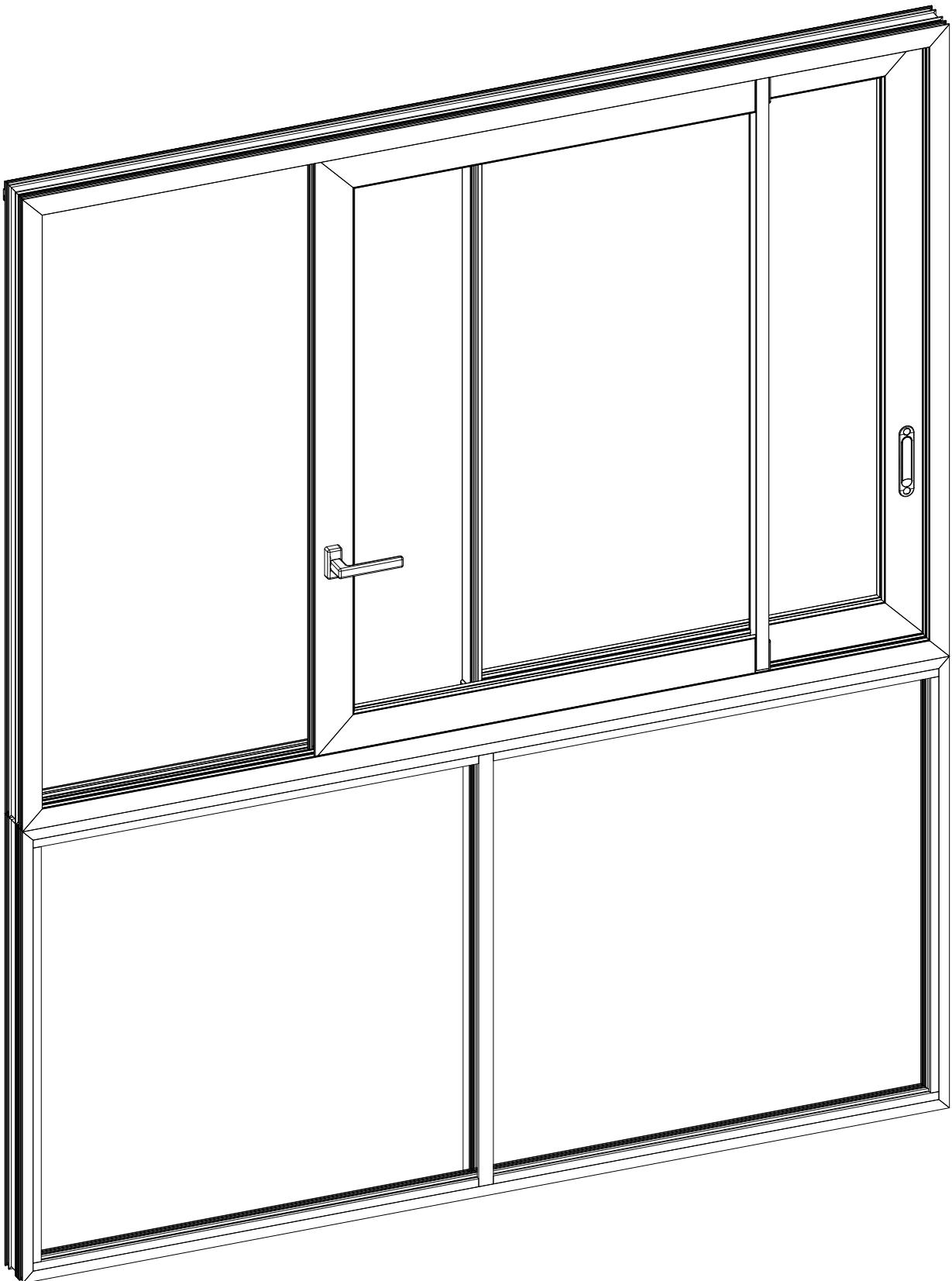


# **MAESTRO 89 Insulated Sliding**

## **SİSTEM KESİT DETAYLARI**

---

## **SYSTEM CROSS SECTION DETAILS**

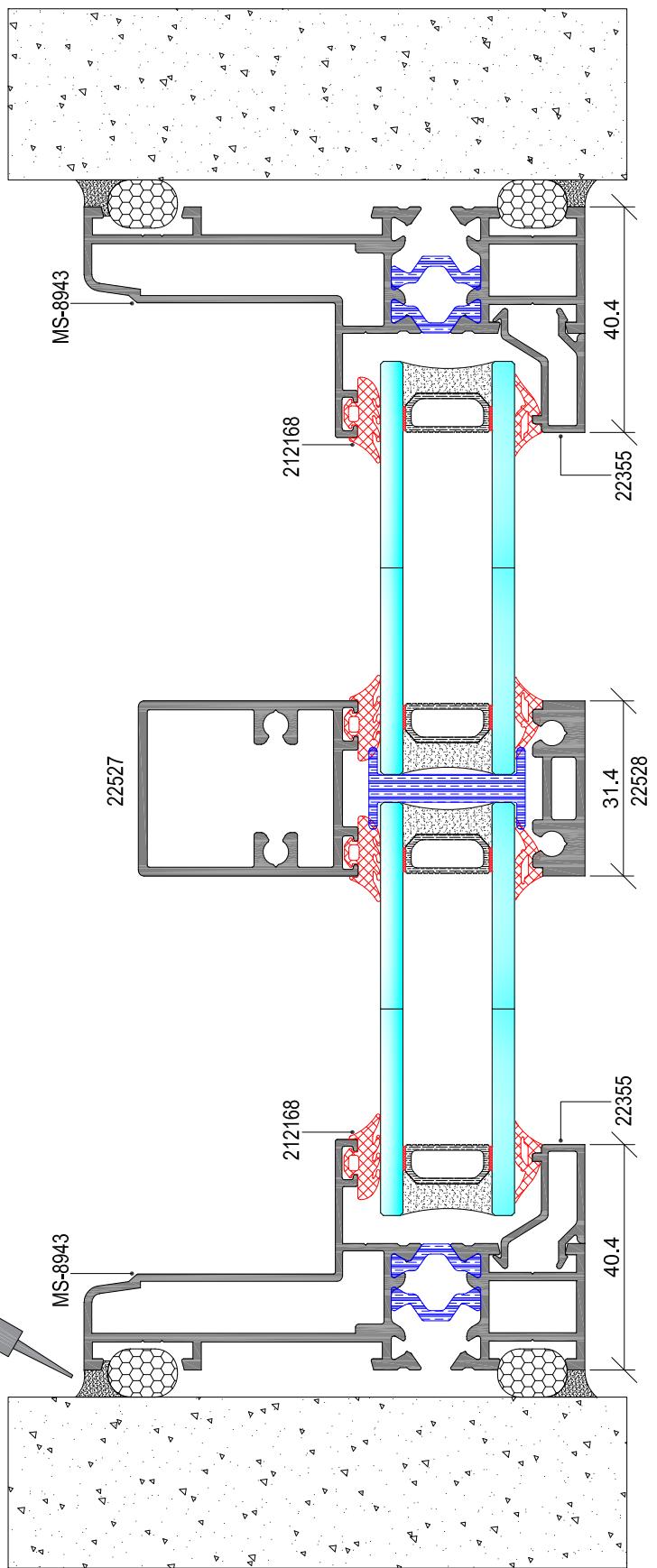
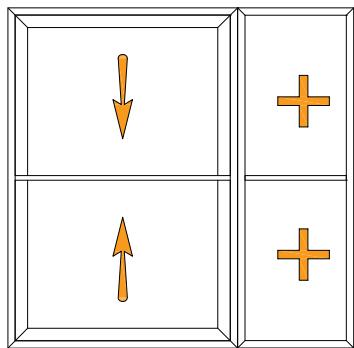


**FERMOSA**  
SYSTEM

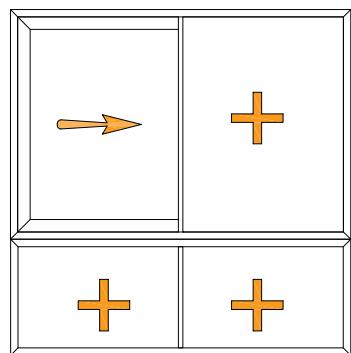
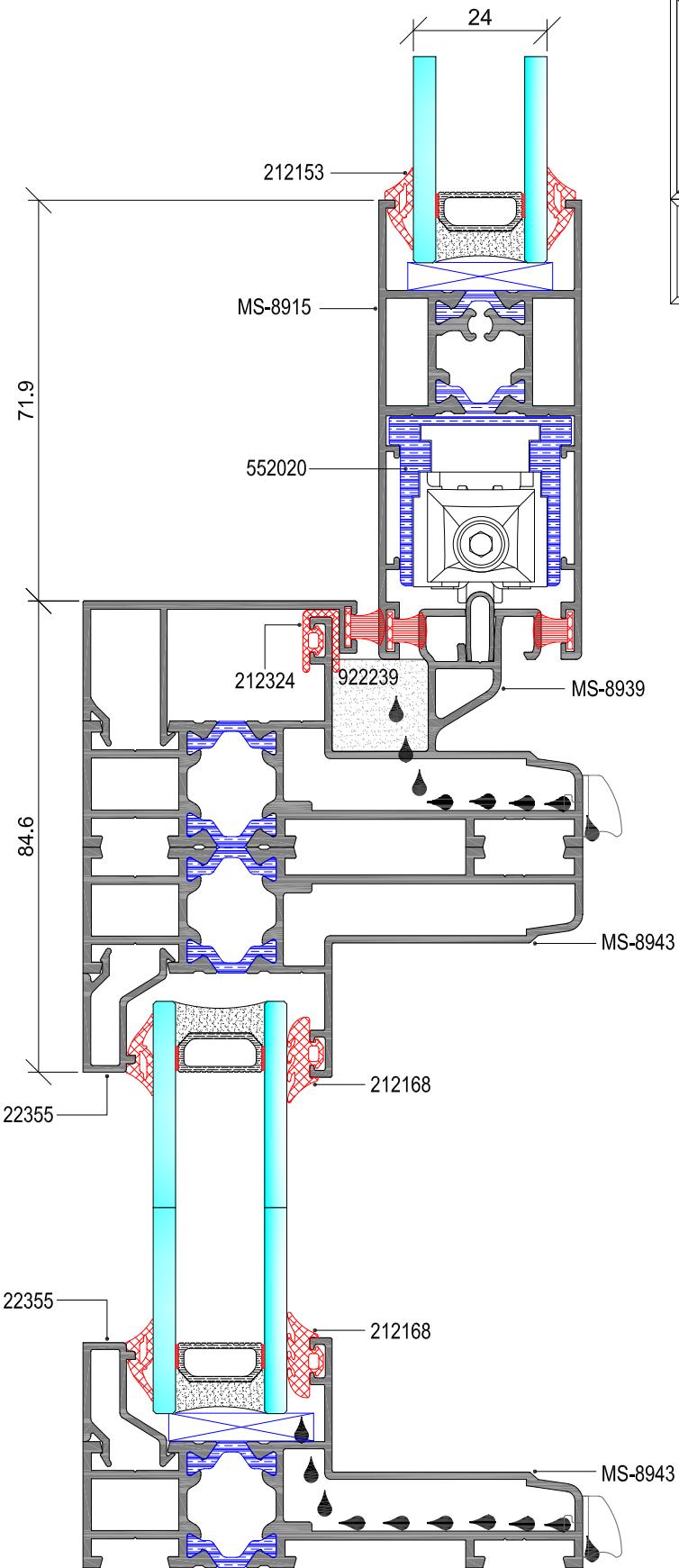
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# MAESTRO 89 Insulated Sliding

ALT SABİT SÜRME DETAYI  
BOTTOM FIXED SLIDING DETAIL



# MAESTRO 89 Insulated Sliding



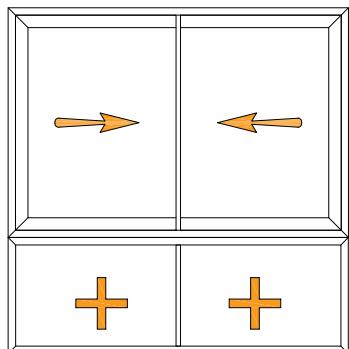
**ALT SABİT SÜRME DETAYI**  
BOTTOM FIXED SLIDING DETAIL

**FERMOSA**  
SYSTEM

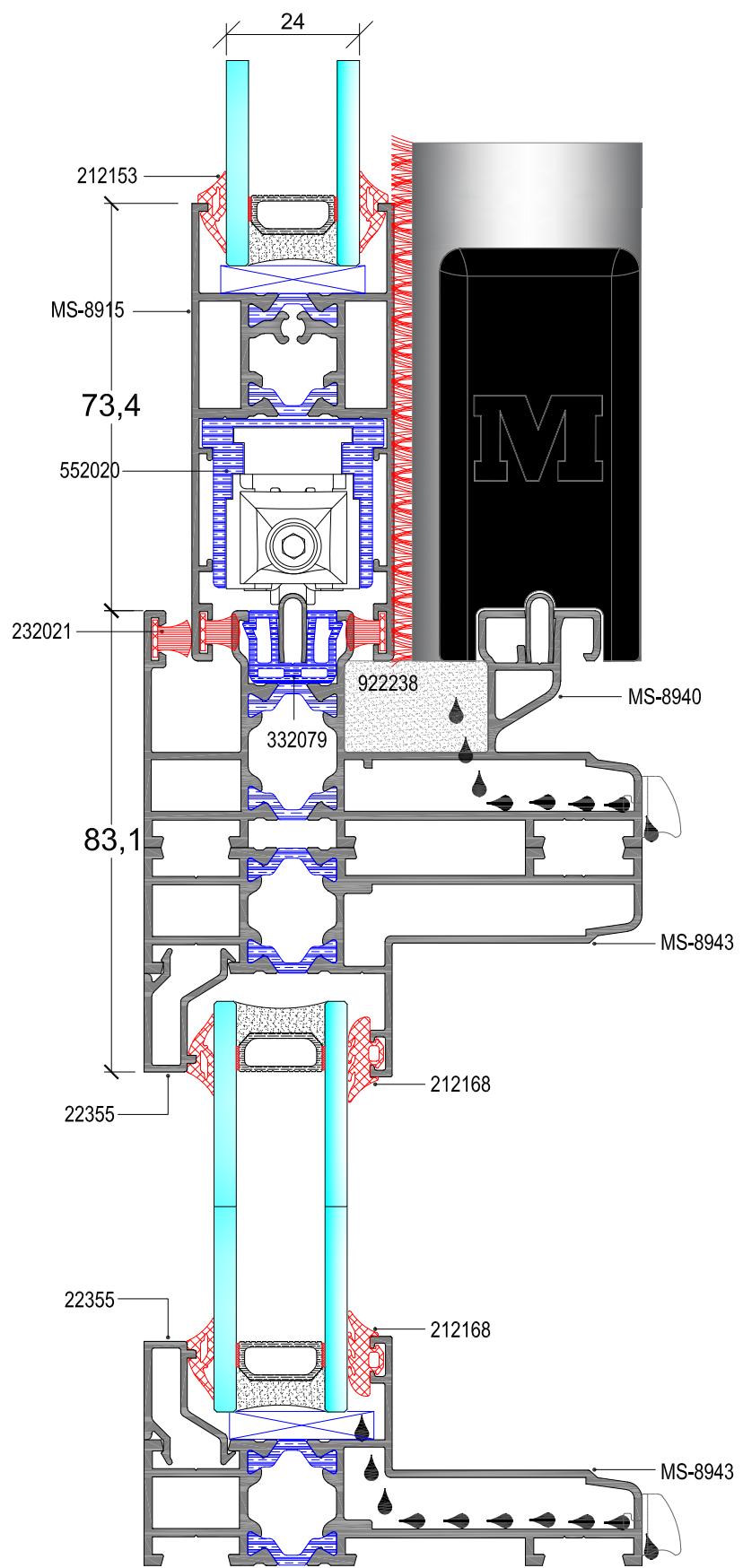
Her hakkı saklıdır; 2016. Burak Alüminyum'un izni olmadan kopya edilemez, çoğaltılamaz ve yayımlanamaz.  
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**100**

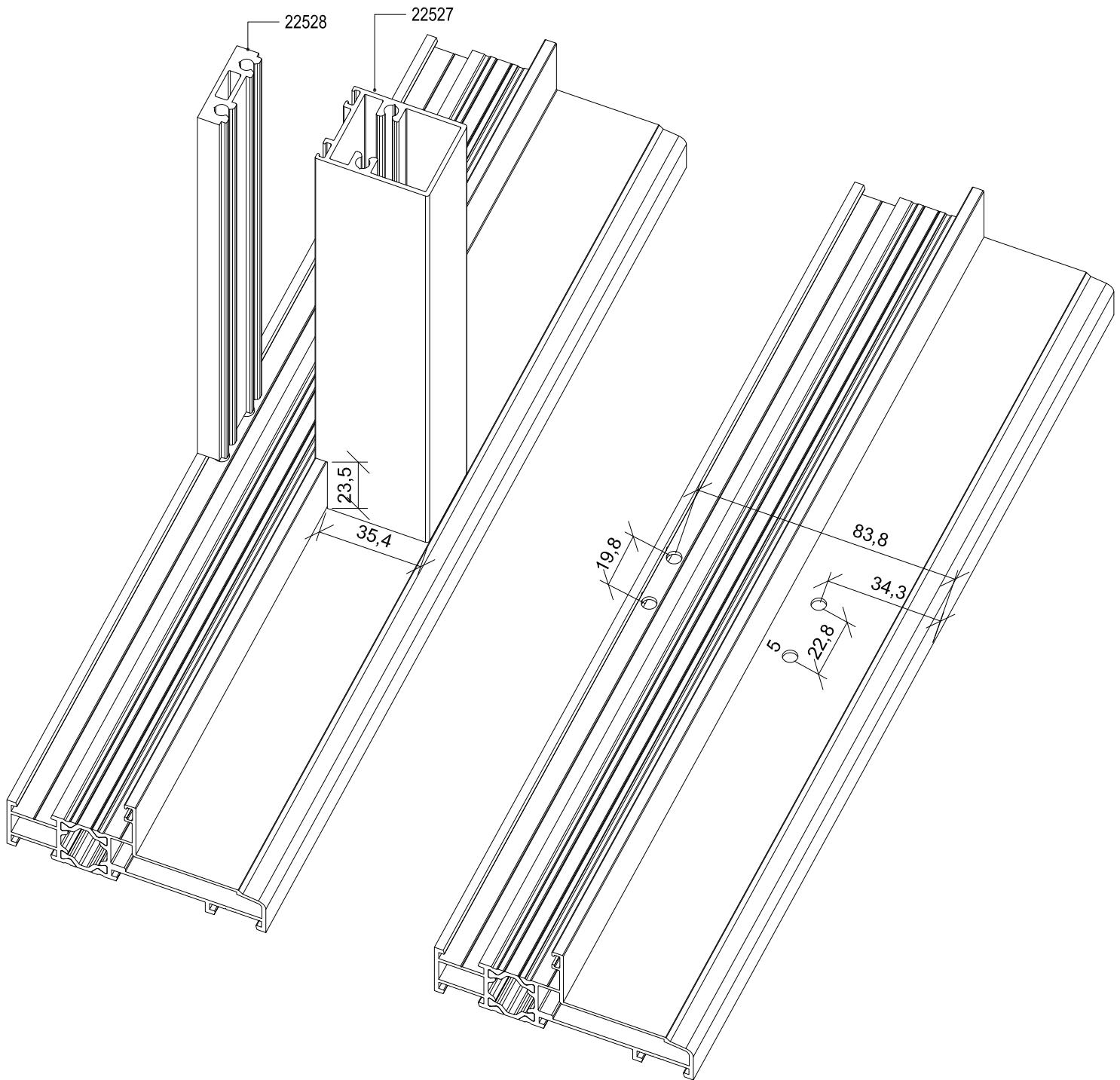
# MAESTRO 89 Insulated Sliding



**ALT SABİT SÜRME DETAYI**  
BOTTOM FIXED SLIDING DETAIL



# MAESTRO 89 Insulated Sliding

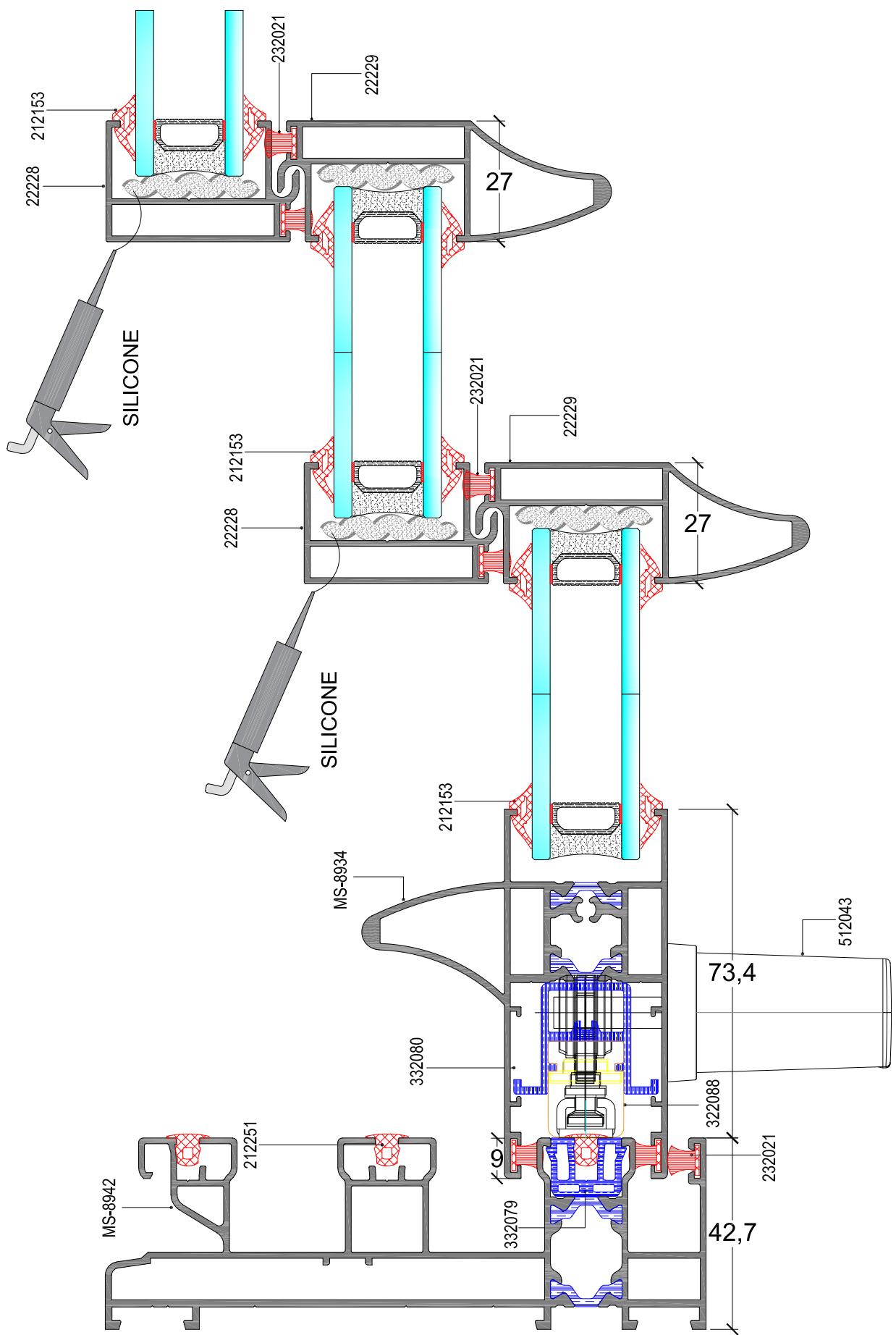


**FERMOSA**  
SYSTEM

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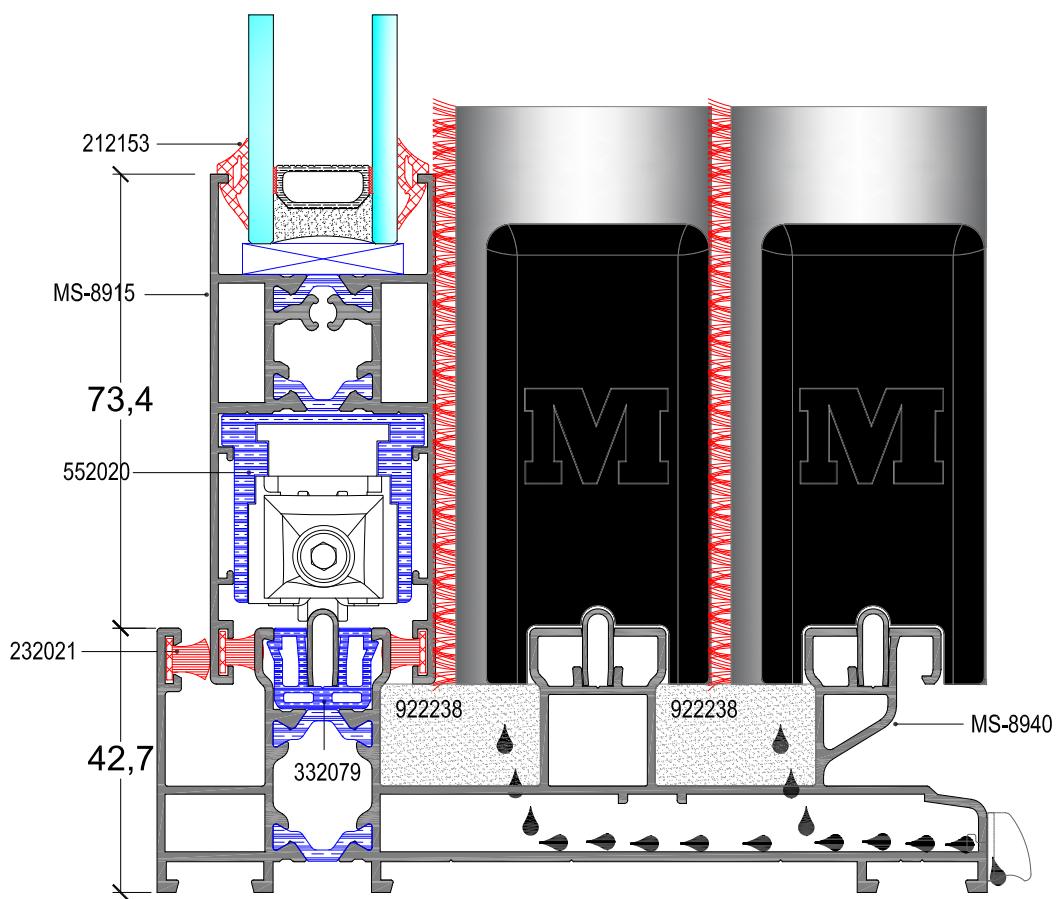
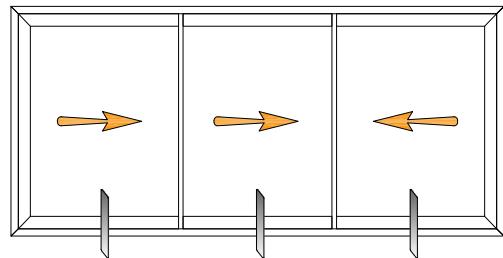
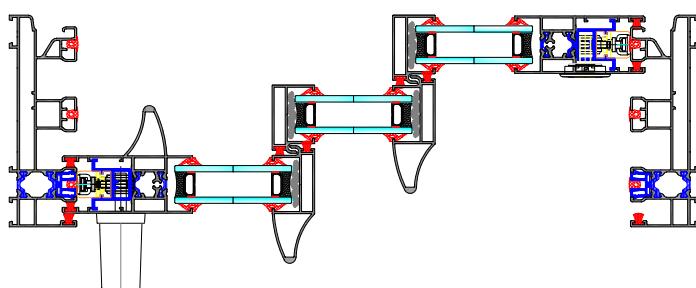
**102**

# MAESTRO 89 Insulated Sliding



# MAESTRO 89 Insulated Sliding

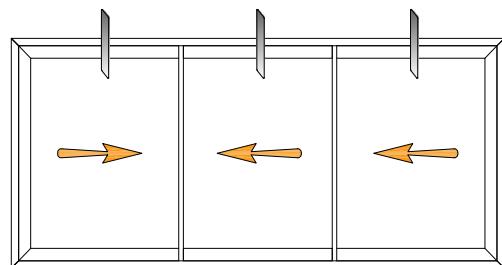
ÜÇ KANATLI YALITIMLI SÜRME DETAYI  
INSULATED SLIDING DOOR DETAIL WITH TRIPLE SASH



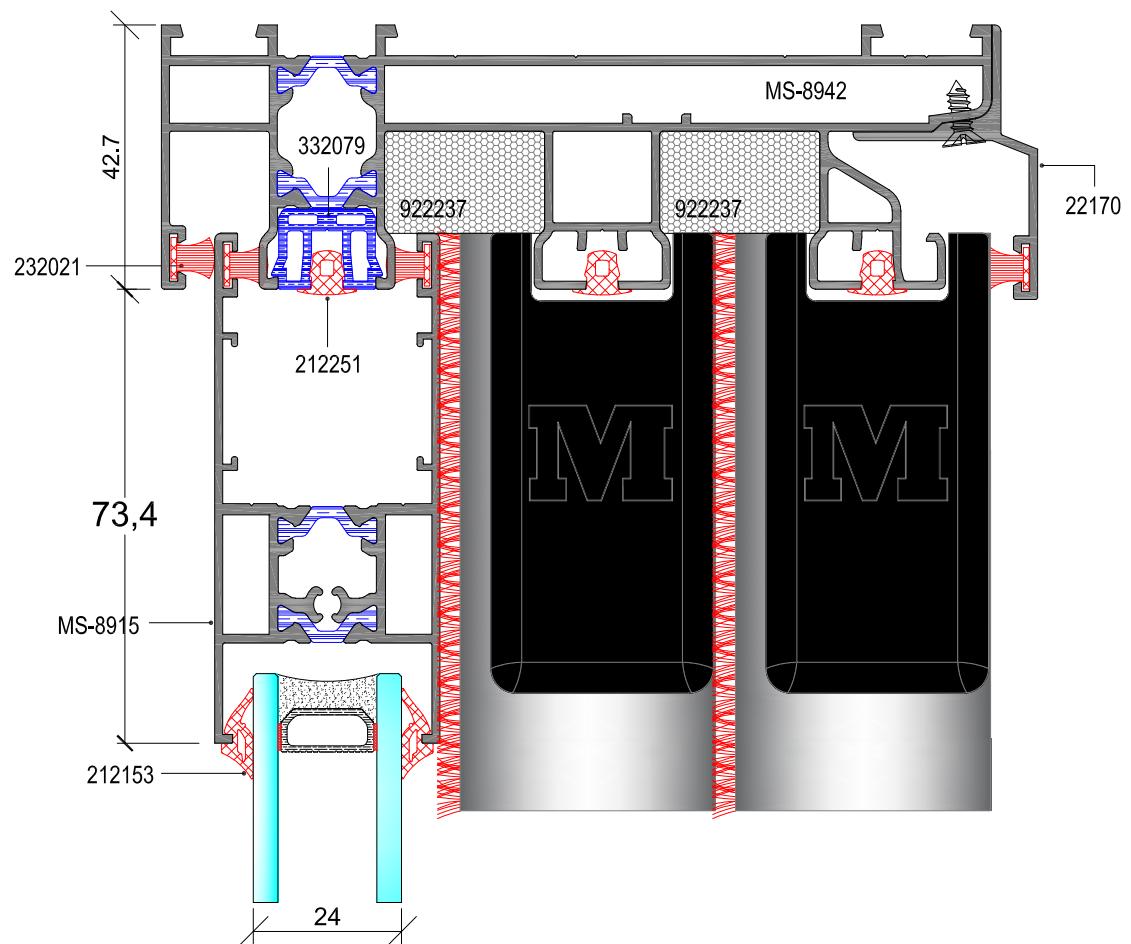
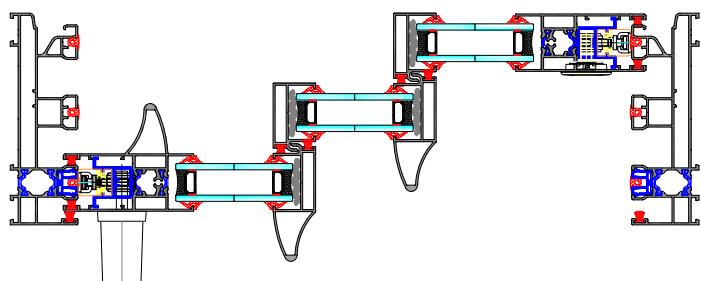
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

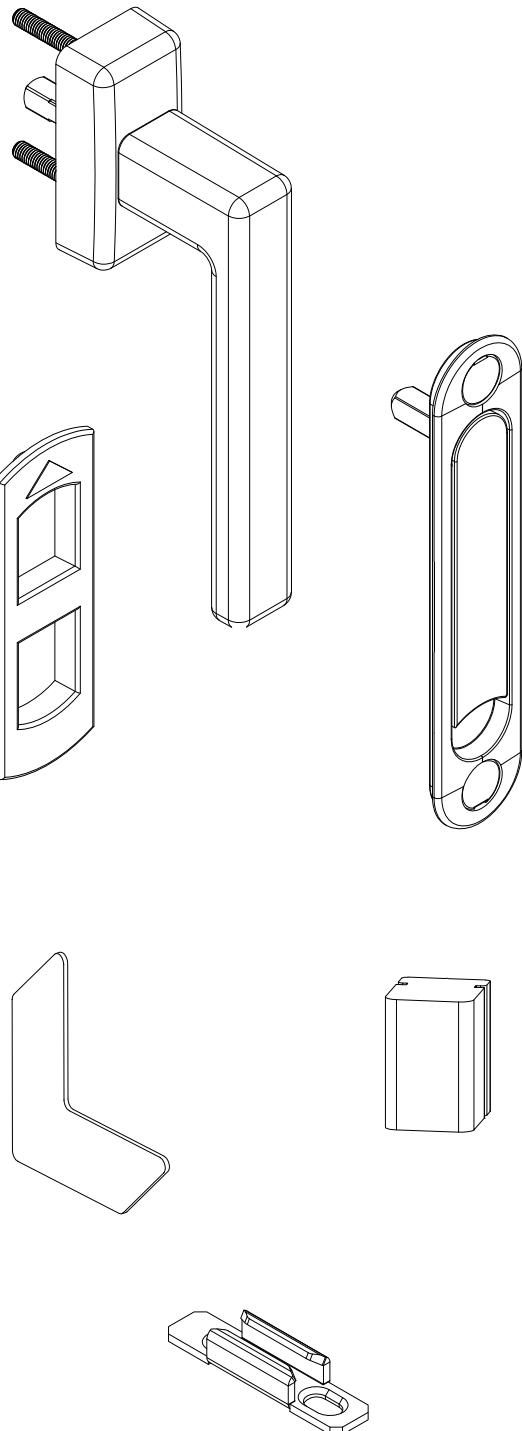


ÜÇ KANATLI YALITIMLI SÜRME DETAYI  
INSULATED SLIDING DOOR DETAIL WITH TRIPLE SASH



## **AKSESUARLAR**

## **ACCESSORIES**

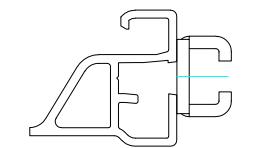
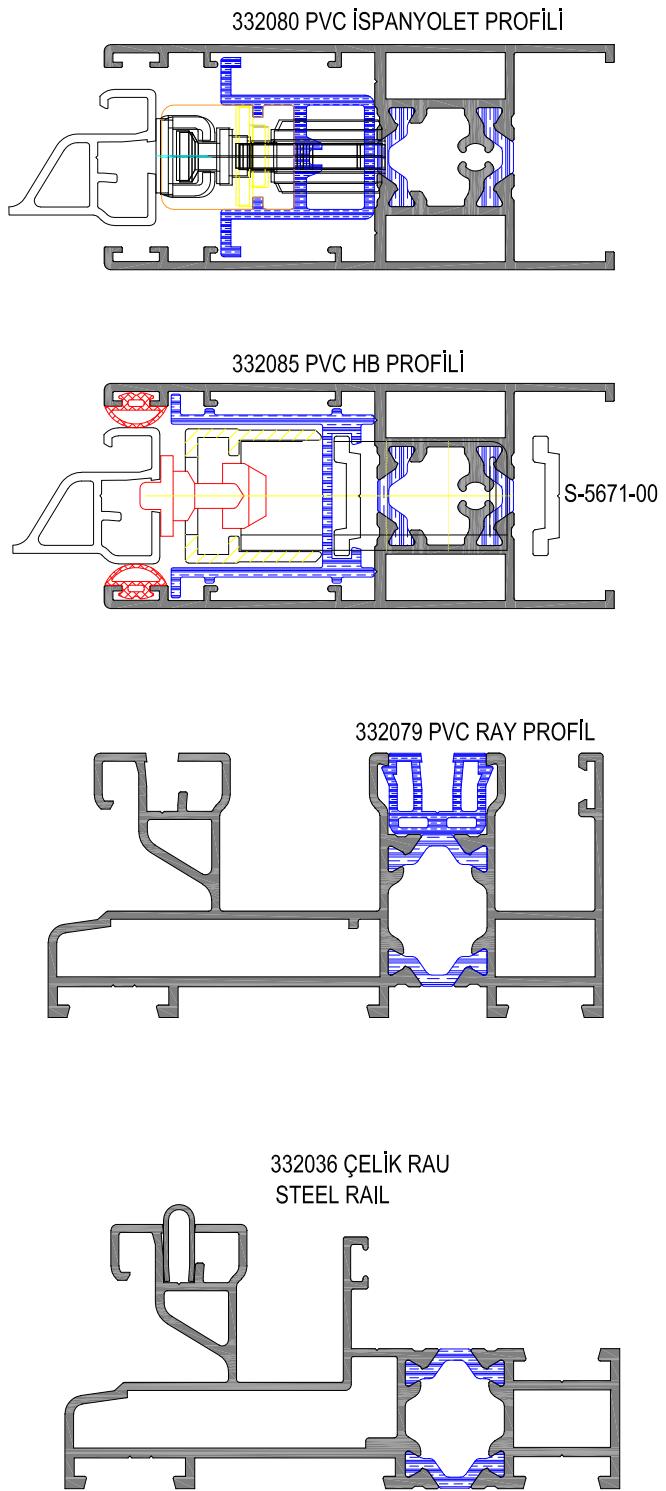


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SYSTEM

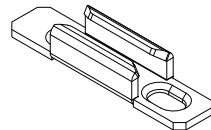
Her hakkı saklıdır; 2016. Burak Alüminyum'un izni olmadan kopya edilemez, çoğaltılamaz ve yayımlanamaz.  
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# MAESTRO 89 Insulated Sliding

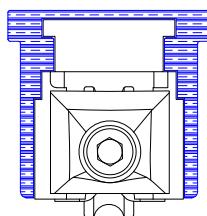
## AKSESUARLAR / ACCESSORIES



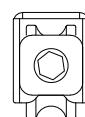
512060 METAL KARŞILIK  
METAL STRIKER



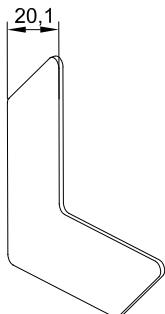
552020 AYARLI RULMAN  
DOUBLE BEARING



552022 SİNİKLİK RULMANI  
SMALL BEARING



162001 KÖŞE ÇAVUŞU  
CORNER ALIGNMENT

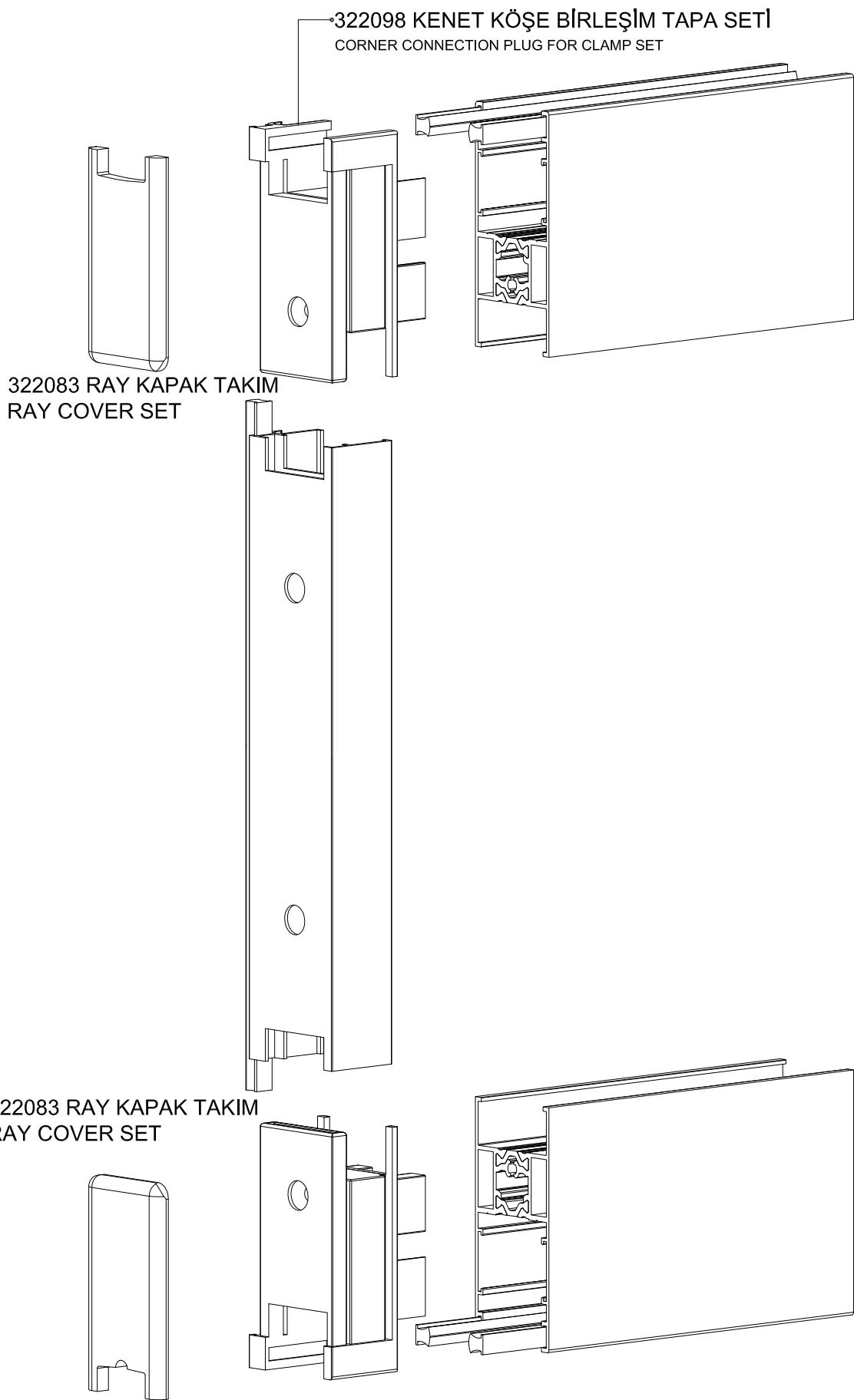


**FERMOSA**  
SYSTEM

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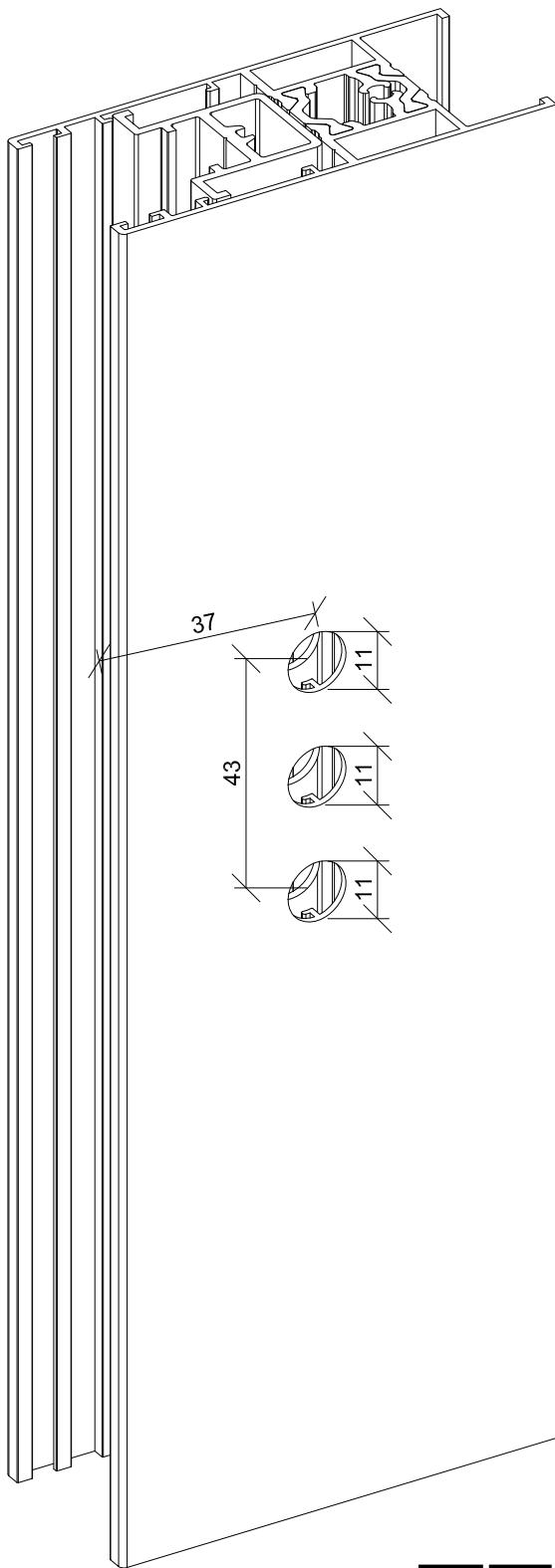
# MAESTRO 89 Insulated Sliding

AKSESUARLAR / ACCESSORIES

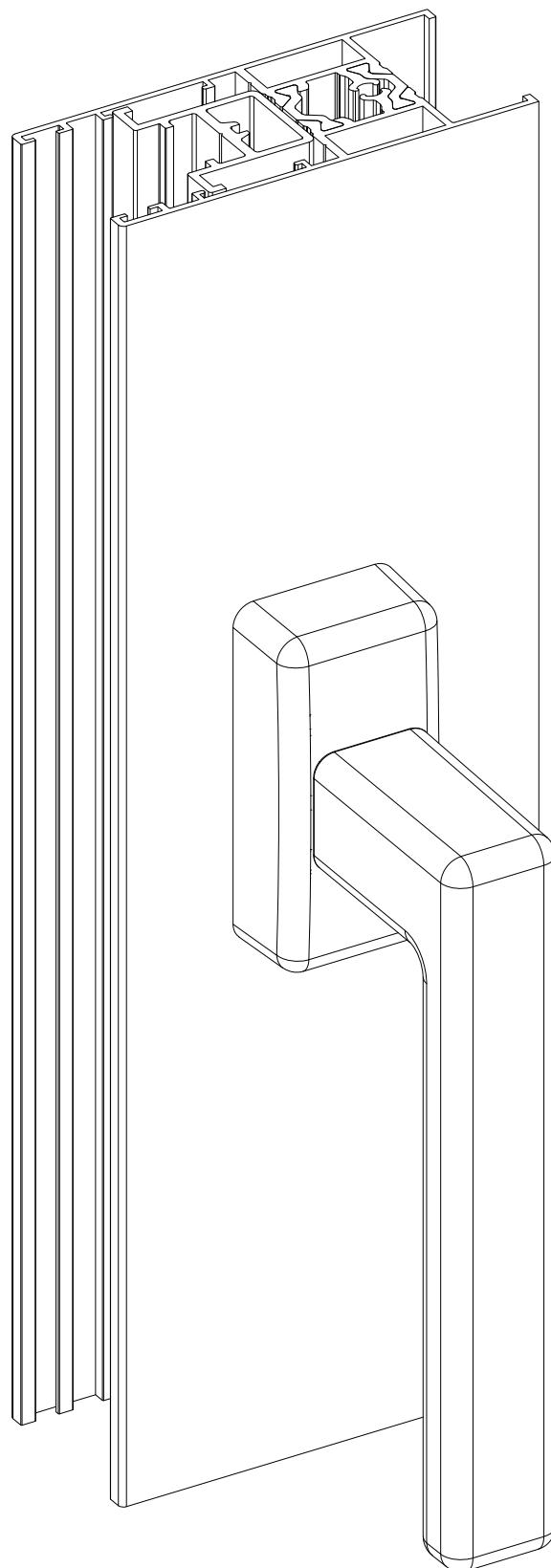


# MAESTRO 89 Insulated Sliding

AKSESUARLAR / ACCESSORIES



512043 PENCERE KOLU  
WINDOW HANDLE



**FERMOSA**  
SYSTEM

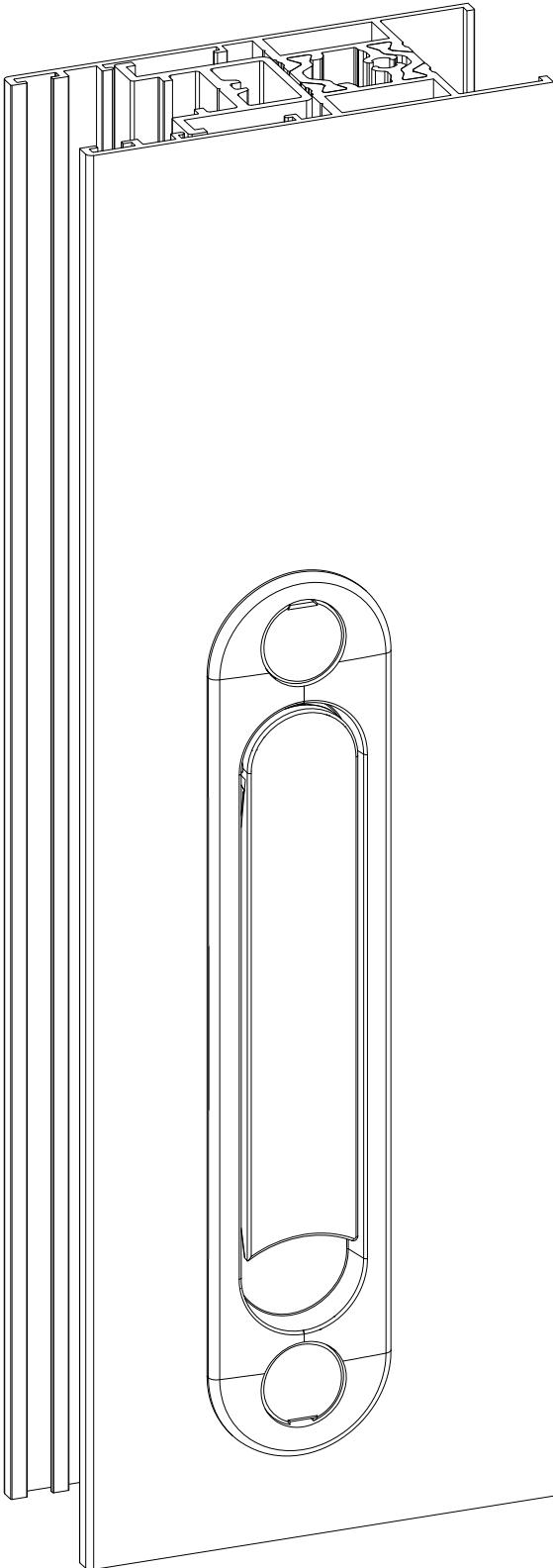
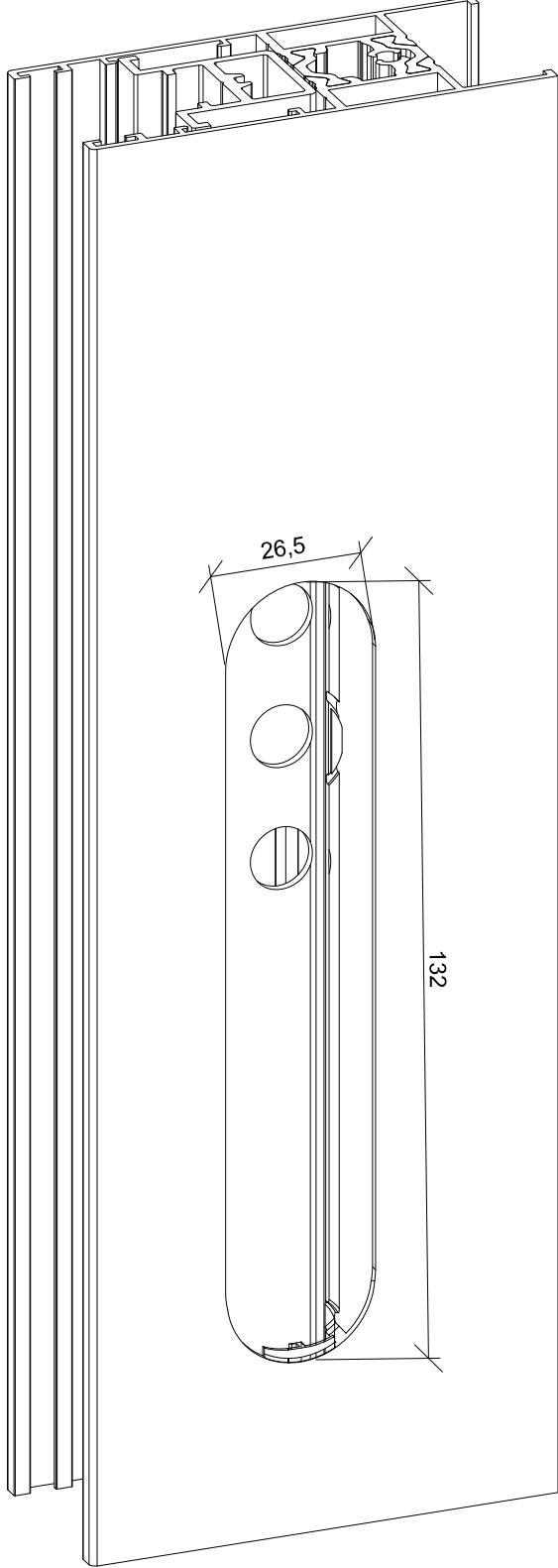
Her hakkı saklıdır; 2016. Burak Alüminyum'un izni olmadan kopya edilemez, çoğaltılmaz ve yayımlanamaz.  
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# MAESTRO 89 Insulated Sliding

512061 GÖMME PENCERE KOLU  
HIDDEN WINDOW HANDLE

AKSESUARLAR / ACCESSORIES



111

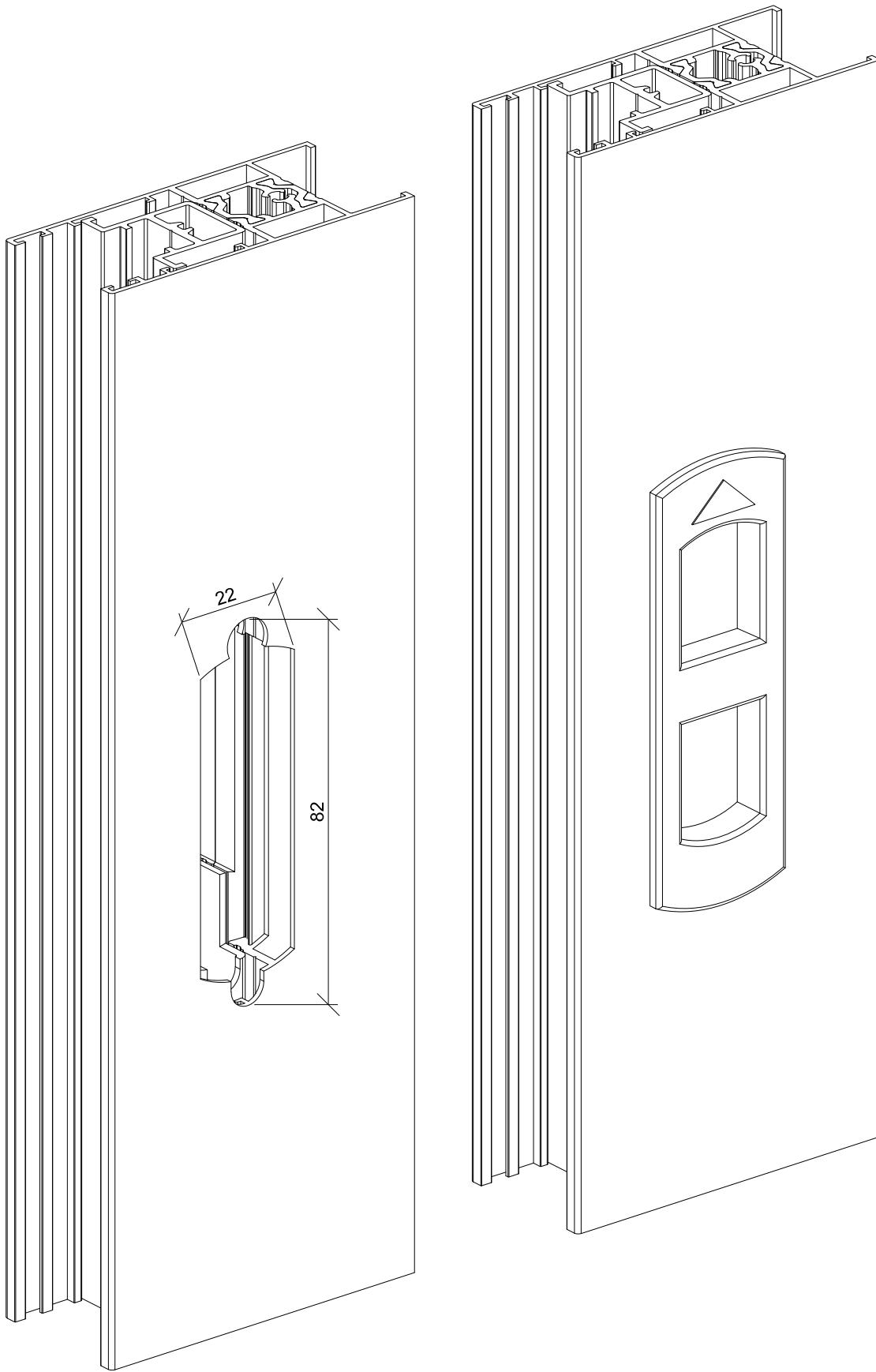
**FERMOSA**  
SYSTEM

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# MAESTRO 89 Insulated Sliding

AKSESUARLAR / ACCESSORIES

512059 DIŞ ÇEKME KOL  
TEETH RECESSED HANDLE



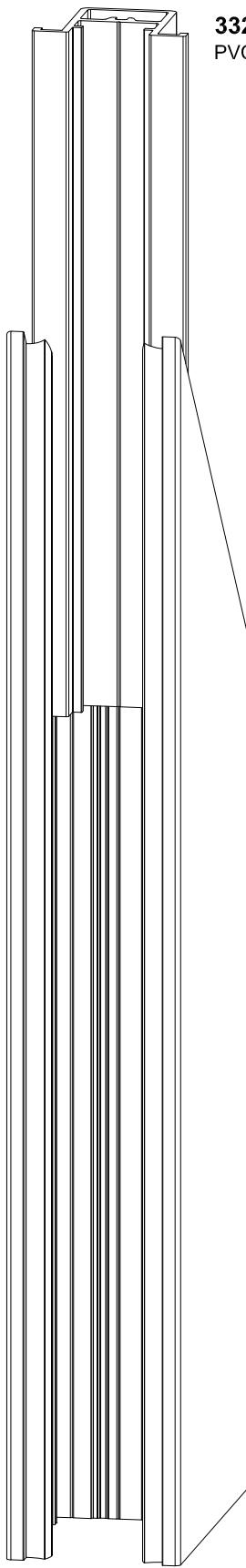
**FERMOSA**  
SYSTEM

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**112**

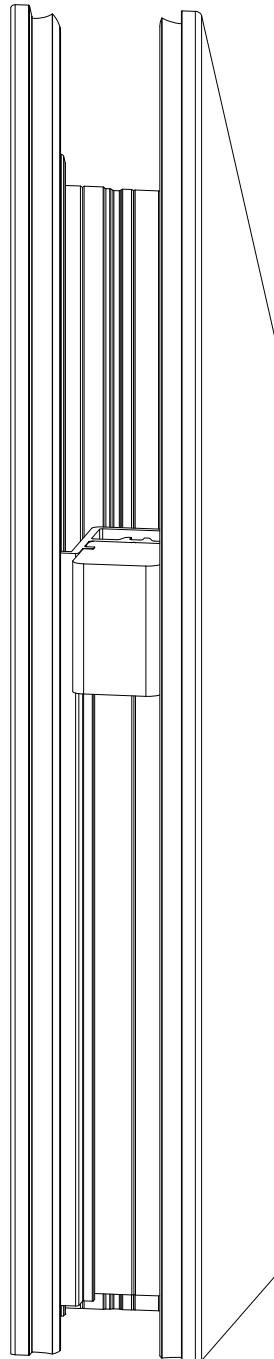
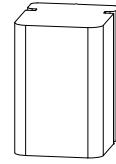
# MAESTRO 89 Insulated Sliding

AKSESUARLAR / ACCESSORIES



332080 PVC İSPANYOLET PR.  
PVC ISPANYOLET PR.

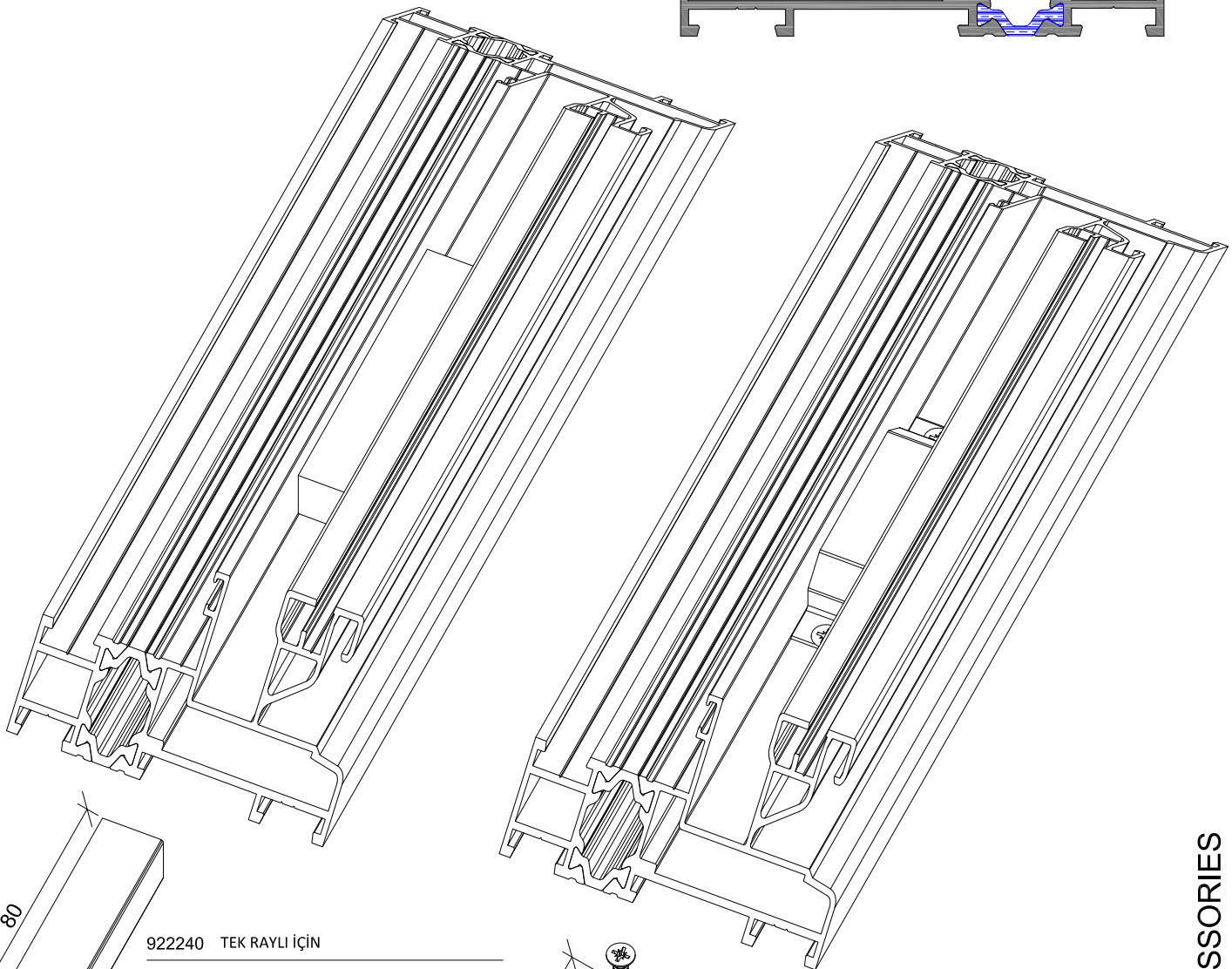
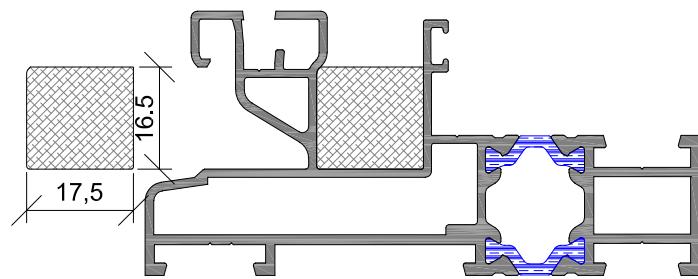
322088 STOPER



**FERMOSA**  
SYSTEM

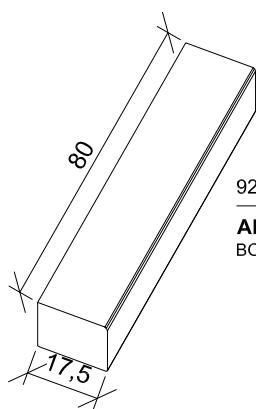
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# MAESTRO 89 Insulated Sliding



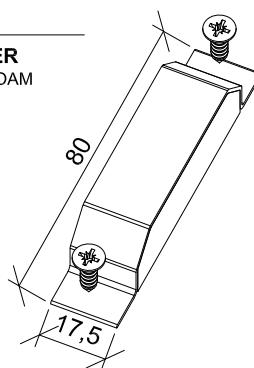
922240 TEK RAYLI İÇİN

**ALT SU VE HAVA KESİCİ SÜNGER**  
BOTTOM WATER AND AIR BLOCKER FOAM



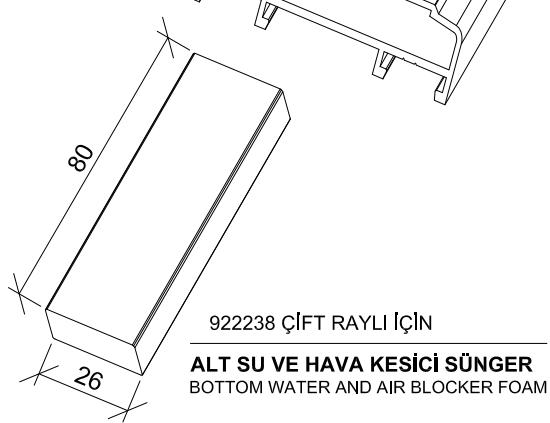
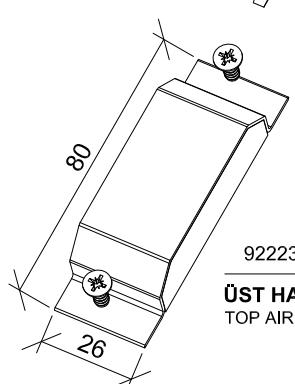
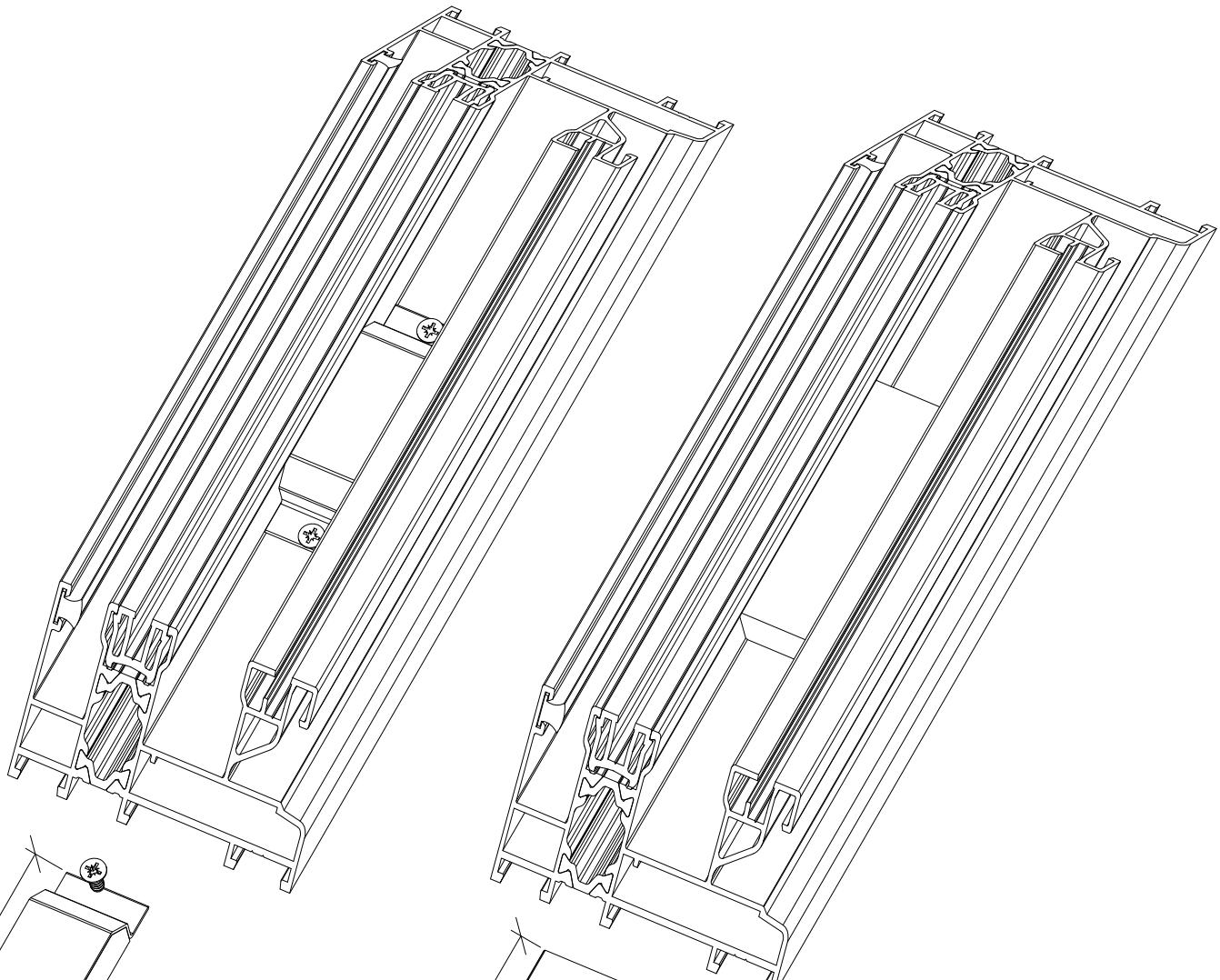
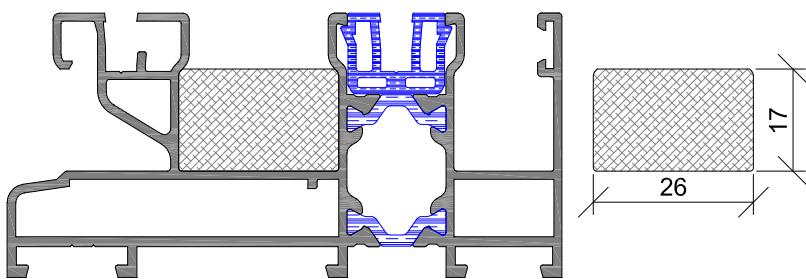
922239 TEK RAYLI İÇİN

**ÜST HAVA KESİCİ SÜNGER**  
TOP AIR BLOCKER FOAM



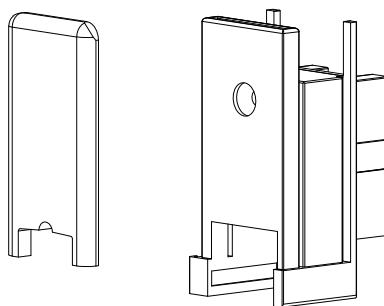
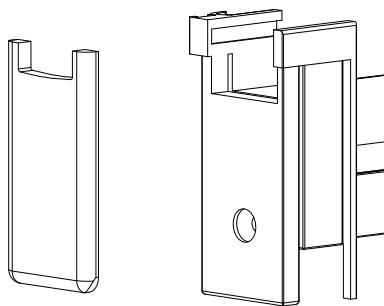
**FERMOSA**  
SYSTEM

# MAESTRO 89 Insulated Sliding



AKSESUARLAR / ACCESSORIES

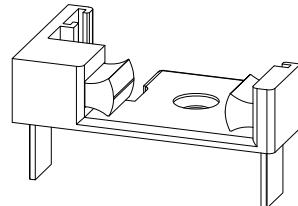
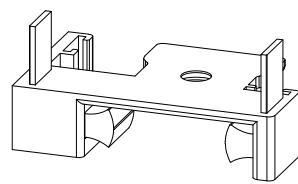
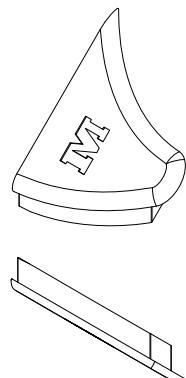
# **MAESTRO 89 Insulated Sliding**



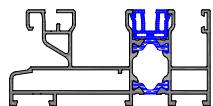
## **-TAPA SETLERİ-**

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## **-(PLUG KITS)-**



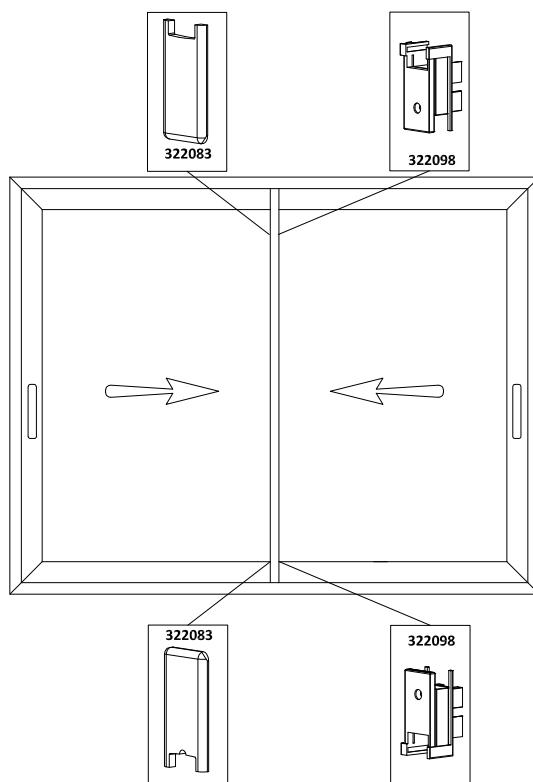
# MAESTRO 89 Insulated Sliding



## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETİ

SLIDING ACCESSORY PVC SET

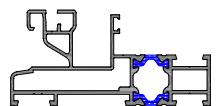


AKSESUARLAR / ACCESSORIES

## SET KODU: 372002

SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
2	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
2	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG

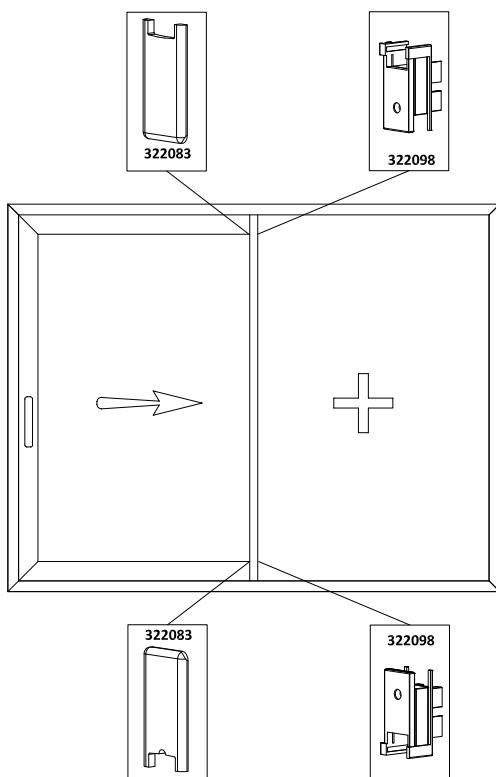
# MAESTRO 89 Insulated Sliding



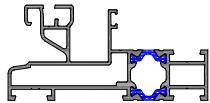
## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETI

SLIDING ACCESSORY PVC SET



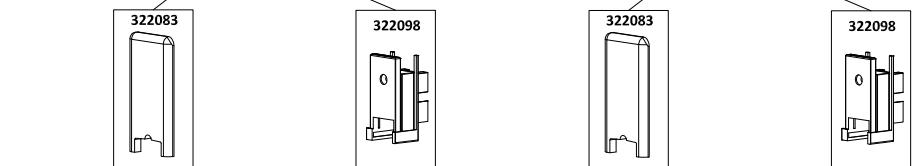
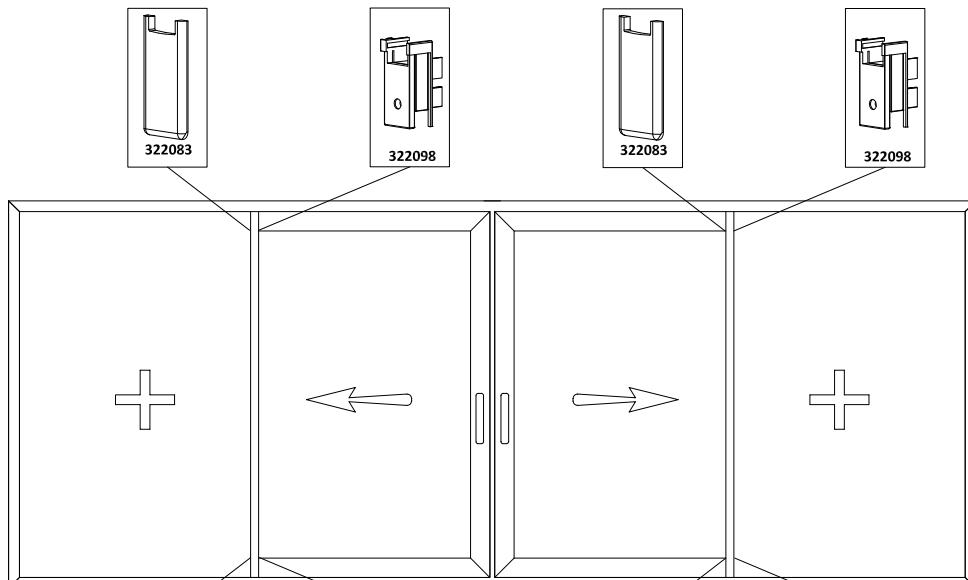
SET KODU: 372003		
SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
1	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
1	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG



## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETI

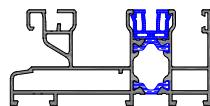
SLIDING ACCESSORY PVC SET



## SET KODU: 372002

SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
2	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
2	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG

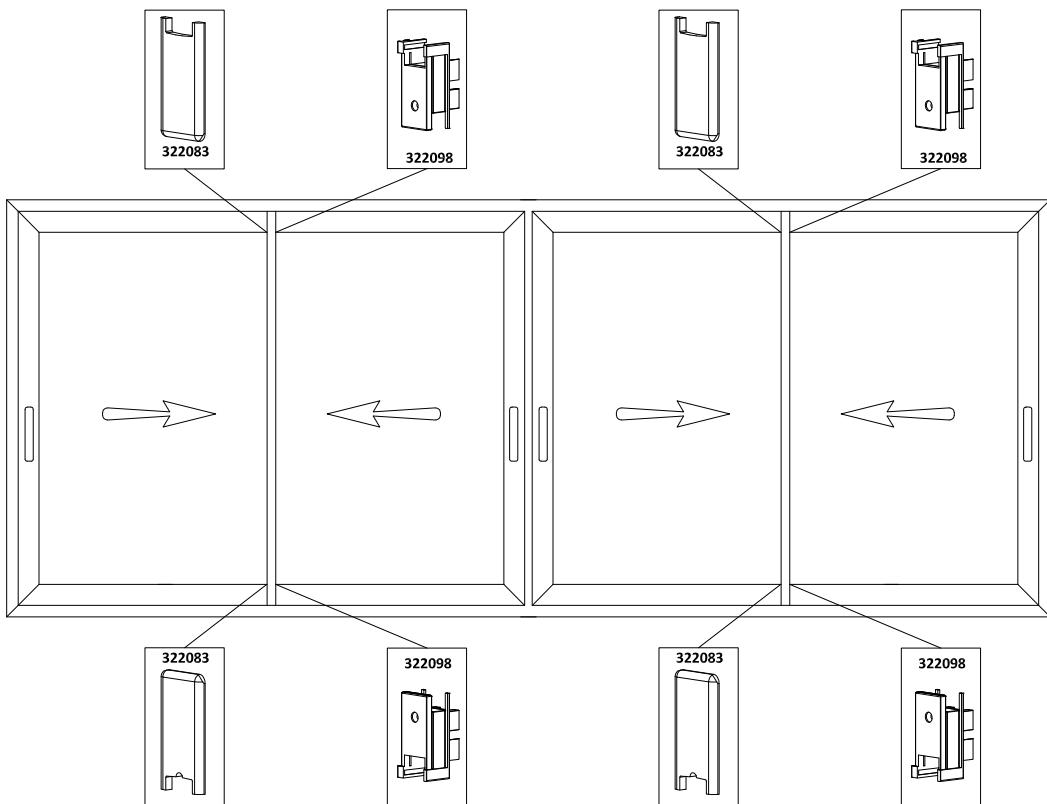
# MAESTRO 89 Insulated Sliding



## - TAPA SETLERİ (PLUG KITS) -

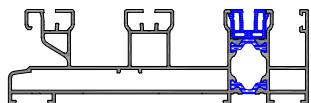
SÜRME AKSESUAR PVC SETI

SLIDING ACCESSORY PVC SET



## SET KODU: 372004

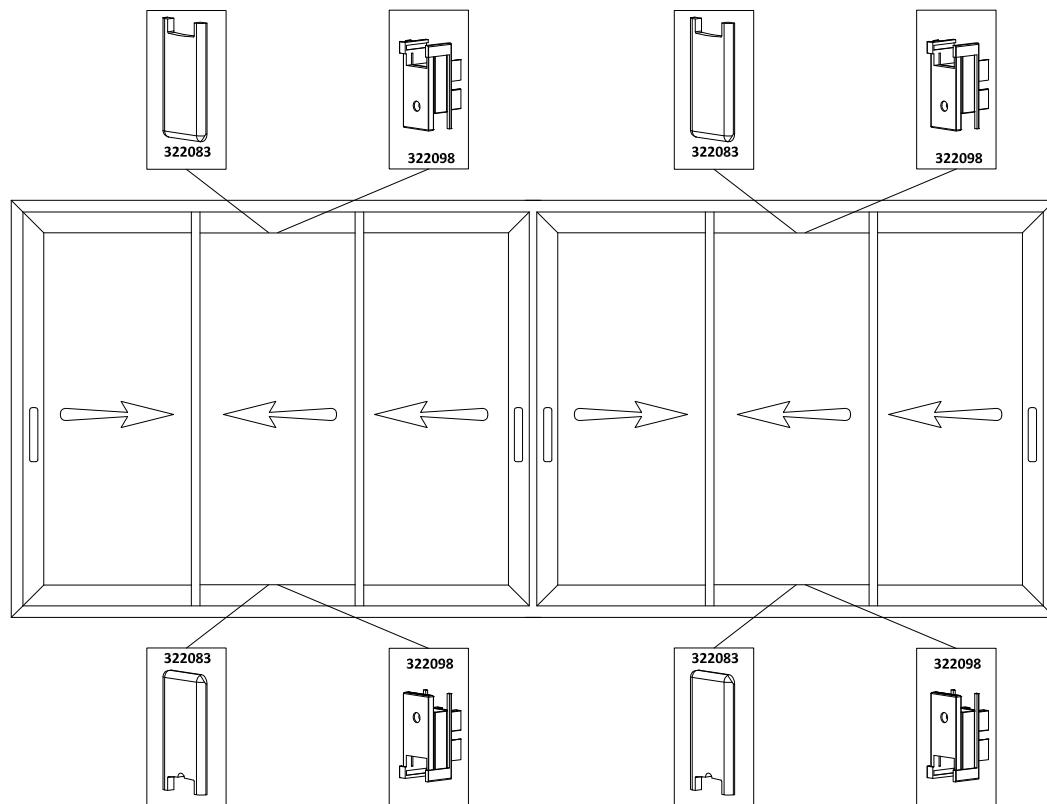
SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
4	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
4	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG



## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETI

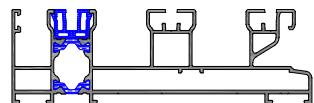
SLIDING ACCESSORY PVC SET



## SET KODU: 372005

SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
8	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
8	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG

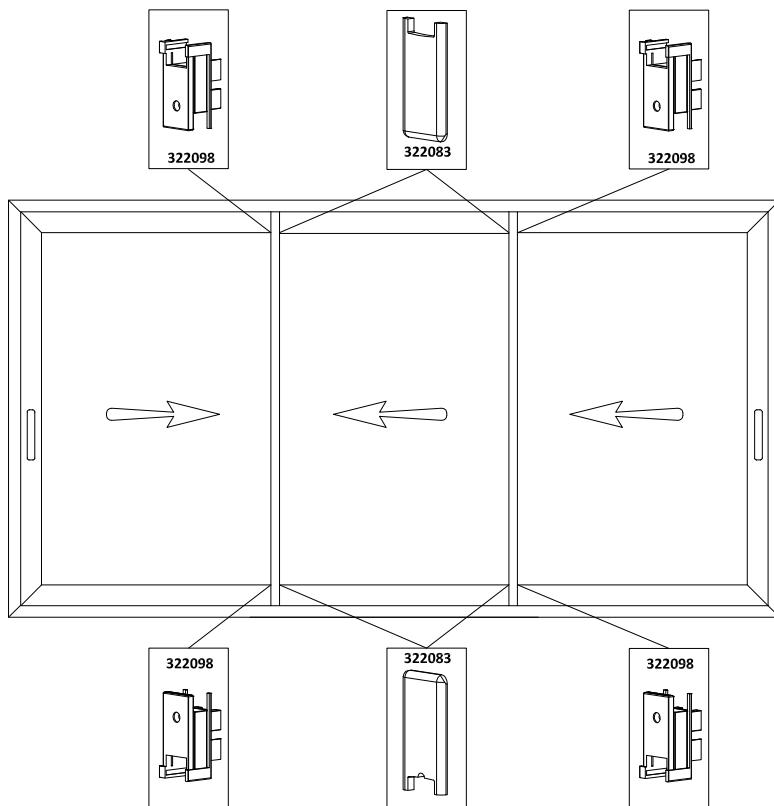
# MAESTRO 89 Insulated Sliding



## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETI

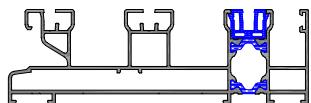
SLIDING ACCESSORY PVC SET



## SET KODU: 372004

SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
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4	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG

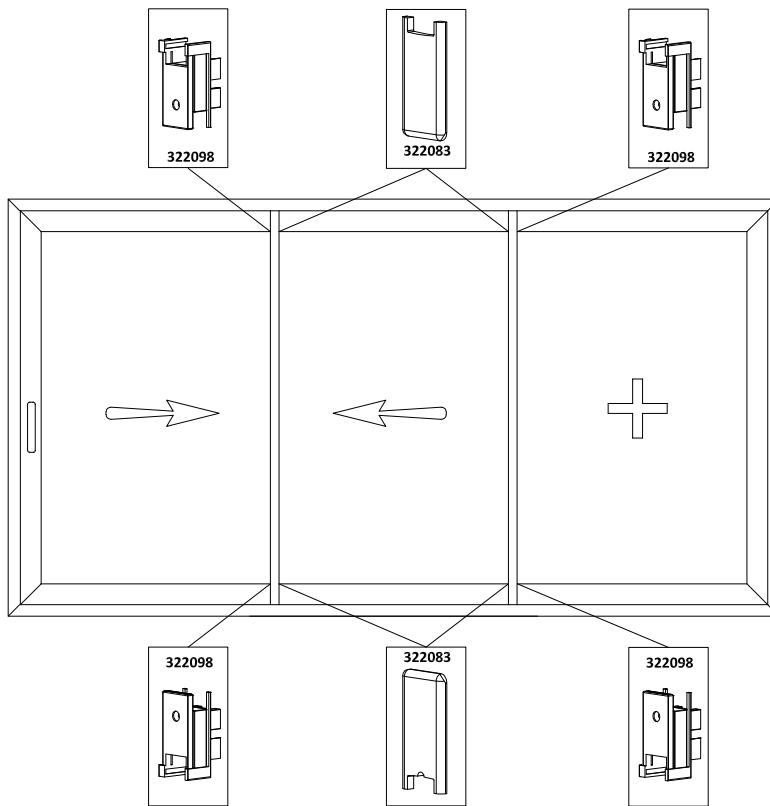
# MAESTRO 89 Insulated Sliding



## - TAPA SETLERİ (PLUG KITS) -

SÜRME AKSESUAR PVC SETİ

SLIDING ACCESSORY PVC SET

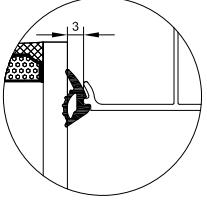
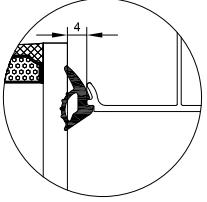
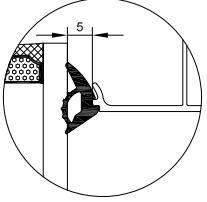
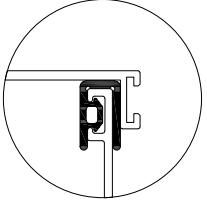
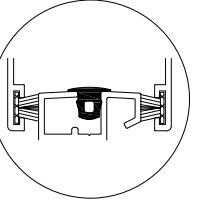
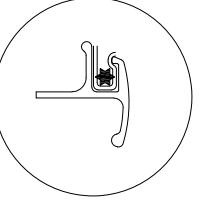
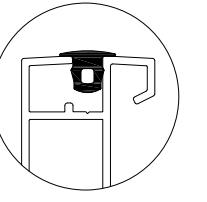


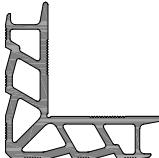
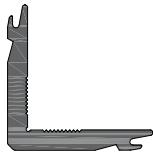
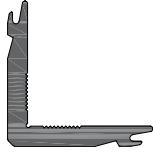
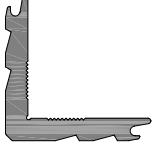
## SET KODU: 372004

SET TAKIM	AKSESUAR KODU ACCESSORY CODE	AKSESUAR TANIMI ACCESSORY DESCRIPTION
4	322083	ALT-ÜST KENET TAPASI / BOTTOM-TOP CLAMP PLUGS
4	322098	ALT-ÜST KENET BİRLEŞİM TAPASI / BOTTOM-TOP CLAMP CONNECTION PLUG

# MAESTRO 89 Insulated Sliding

## EPDM FİTİLLER / EPDM GASKETS

ÇİZİM / DRAWING	AKSESUAR KODU VE ÜRÜN BİLGİLERİ / ACCESSORY CODE AND PRODUCT DESCRIPTION	TAKILMA BÖLGESİ / APPLICATION AREA
	<p><b>212153</b>  <b>KAMA FİTİLLİ 3 mm (24MM CAM İÇİN) / SUPPORT GASKET 3 mm</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 42 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 350 m</b></p>	
	<p><b>212154</b>  <b>KAMA FİTİLLİ 4 mm (22MM CAM İÇİN) / SUPPORT GASKET 4 mm</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 55 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 270 m</b></p>	
	<p><b>212155</b>  <b>KAMA FİTİLLİ 5 mm (20MM CAM İÇİN) / SUPPORT GASKET 5 mm</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 65 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 230 m</b></p>	
	<p><b>212324</b>  <b>KAMA KASA BİNİ FİTİLLİ / STEP GASKET FOR FRAME</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 0,47 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 300 m</b></p>	
	<p><b>232021</b>  <b>PERDELİ FIRÇA FİTİLLİ 69X700 / WEATHER STRIP BRUSH</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 450 m</b></p>	
	<p><b>212158</b>  <b>SİNEKLİK FİTİLLİ / GASKET FOR INSECT SCREEN</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 31 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 485 m</b></p>	
	<p><b>212251</b>  <b>RAY KAPATMA FİTİLLİ / RAIL COVER GASKET FOR FRAME</b>  <b>BİRİM AĞIRLIK / UNIT WEIGHT: 45 g/m</b>  <b>KOLİ MİKTARI / PACKAGE QUANTITY: 375 m</b></p>	

KÖŞE TAKOZLARI / CORNER CLEATS		
ÇİZİM / DRAWING	AKSESUAR KODU VE ÜRÜN BİLGİLERİ / ACCESSORY CODE AND PRODUCT DESCRIPTION	KESİM ÖLÇÜSÜ / CUTTING DIMENSION
	<b>111303</b> PROFİL NUMATASI / PROFILE NUMBER: 5880-19 BİRİM AĞIRLIK / PROFILE WEIGHT: 2,710 kg/m	6,8 mm
	<b>111350</b> PROFİL NUMATASI / PROFILE NUMBER: 20234 BİRİM AĞIRLIK / PROFILE WEIGHT: 2,553 kg/m	38mm
	<b>1113345</b> PROFİL NUMATASI / PROFILE NUMBER: 20234 BİRİM AĞIRLIK / PROFILE WEIGHT: 2,553 kg/m	15,6mm
	<b>111318</b> PROFİL NUMATASI / PROFILE NUMBER: MS8920 BİRİM AĞIRLIK / PROFILE WEIGHT: 2,748 kg/m	19,5mm

# MAESTRO 89 Insulated Sliding

## TEKNİK ÖZELLİKLER / TECHNICAL PROPERTIES

Alüminyum profil üretim tesisimiz **ISO 9001 , ISO 14001 , ISO 18001** kalite güvence belgelerine sahiptir.

**1-Profil Hammaddesi** (*Raw Material*) : AA 6063 (AlMgSi 0.5 F22) , **EN 573-3**

**2-Mekanik Özellikler** (*Mechanical Properties*) : **EN 755-2**

Elastisite Modülü (*Elasticity Modul*) : 7000 kN/cm<sup>2</sup>

Kopma Mukavemeti (*Yield Strength*) : 215 N/mm<sup>2</sup>

Akma Mukavemeti (*Flow Strength*) : 160 N/mm<sup>2</sup>

Uzama (*Elongation*) : minimum 6 %

Sertlik (*Hardness*) : 70 HRB

**3-Bariyer Hammaddesi**

**a-PA 66 GF 25 (25 % cam elyaf takviyeli polyamid)** (*25 % the manufactured from glass stiffened polyamid*): Eloksal ve toz boyası işleminden **önce** yerleştirilir. (*Placed into the aluminium profiles **before** anodic oxidation and powder coating.*)

**b- PVC :**

Eloksal ve toz boyası işleminden **sonra** yerleştirilir. (*Placed into the aluminium profiles **after** anodic oxidation and powder coating.*)

PVC bariyerler, Polyamid bariyerlere göre 10 % daha ağırdır. (*PVC insulation bars are 10 % heavier than Polyamid insulation bars .*)

**4-Eloksal** (*Anodic Oxidation*)

Eloksallı Ürünlere İlişkin Teknik Resim Standardı : **DIN 17611 , EN 12371-1 (QUALANOD)**  
(*The Standards of Technical Delivery Terms Regarding Elokal Products*)

Eloksal Tabakasının Kalınlığı (*Thickness of Elokal Coating*): 10-15 mikron, **EN ISO 2360**

Daldırma ve Renklendirme Standardı (*The Standards of Immersion Coloring*) : **DIN 50018**

Tesbit İşlemi Standardı (*Sealing Standards*) : **EN 12373-5 , ISO 3210 (TS 2676)**

**5-Toz Boya Standartları** (*The Standards of Powder Coating*)

Kalınlık (*Thickness*) : min. 60 mikron

Adhezyon (*Adhesion*) : **EN ISO 2409**

Esneklik (*Elasticity*) : **EN ISO 1519**

Deformasyon (*Deformation*) : **EN ISO 6272-1**

Sertlik (*Hardness*) : **EN ISO 2815**

**6-Yüzey Görünümü** (*Surface Appearance*) : Gözle yapılacak kontrolde,yüzey üzerinde kaplanmış alan,çizik,püttürlük,kabarıklık,leke,soyulma vb. hatalar görülmemelidir. (*By visual observation,there has been no defects seen on the surface,such as scratches cramped shapes,stainings,swellings,stain etc. on the exposed areas.*)

**7-Tüm Fitiller** (*All gaskets*)

Hammadde (*Raw material*) : EPDM

Derz fitilleri hammaddesi (*Raw material of Gaskets for suture*) : Silikon (*Silicone*)

Ölçü Toleransları Standardı (*Measurement Tolerances Standards*) : **DIN ISO 3302-1/E2**

Kalite Kontrol Standardı (*Quality Control Standard*) : **RAL-GZ 716**

**8-Profil Tasarım ve Üretimindeki Ölçü Toleransları Standartları** : **EN 12020-2 , EN 755-9**

(*Measurement Tolerances Standards for Profile Design and Manufacturing*)

**FERMOSA**  
SYSTEM

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## KULLANIM ŞARTLAR

Profiller, folyolu muhafaza edilmeli, folyoları inşaat bitiminde çıkartılmalıdır. Kireç ve çimento gibi inşaat malzemeleri alüminyum yüzeylerle temas etmemelidir.

Profiller binaya uygulandıktan sonra düzenli aralıklarla temizlenmelidir. Profillerin temizliği, hafifçe sabunlu ılık su ve/veya bu suyla ıslatılmış yumuşak bir bez ile yapılmalı, deterjan, çamaşır suyu, zımpara, tel fırça ve aşındırıcı, alkali, asidik temizleyici kullanılmamalıdır.

Sistem için önerilen aksesuar ve serif malzemeleri katalogda belirtilen biçimde uygulanmalı ve tüm aksesuarları eksiksiz olarak kullanılmalıdır.

Sistemin katalogda belirtilen fitilreme, silikonlama, su tahliyesi ve havalandırma metodlarına uyulmalıdır. İlave her türlü uygulama için Burak Alüminyum'dan destek ve onay alınmalıdır.

### GARANTİ KOŞULLARI!

Profiller, yukarıda belirtilen şartlara uygun biçimde kullanılmış ve hiçbir şekilde mekanik hasara veya deformasyona uğramamış ise, herhangi bir kusur durumunda, garantimiz yalnız kusurlu parçaların de-montajı, tekrar üretimi, tekrar eloksali ve tekrar yerine takılması ile sınırlı olacaktır. Yukarıda bahsedilmeyen konular iş hukukuna tabidir.

Mimari sistem kataloğu belirtilmeyen veya Burak Alüminyum'un onay vermediği aksesuar ve serif malzemesi kullanımından doğabilecek her türlü sorumluluk uygulamacı firmaya aittir.

Mimari sistem kataloğu belirtilen detay ve sistem çözümleri haricindeki uygulamalar için Burak Alüminyum'un onayı alınmalıdır.

Aksi takdirde bu uygulamalardan meydana gelebilecek problem ve aksaklılıklardan Burak Alüminyum sorumlu değildir.

## TERMS OF SERVICE

Profiles must be protected with folio tapes and they must be taken out when the structure was finished. Building materials as similar lime and cement must not be touched with the aluminium surfaces.

The profiles must be cleaned periodically after the structure was finished. Cleaning of profiles must be done by the fabric that was damped with warm water and soap. Don't use detergent, chlorine water, emery, wire brush, abrasive, base, acidic cleaner.

Accessories and consumables should be applied as shown at the catalogue and used completely.

Glazing, siliconing, water drainage and ventilation methods specified on the catalogue should be applied completely.

Any type of the additional methods should be approved by Burak Aluminium.

### TERMS OF WARRANTY

If the profiles was used according to terms of service and they have no mechanical damage or deformation,in any defect situation,our warranty is limited by disassembly, re-product, re-eloxal, re-assembly of faulty pieces. These are subjected to la bor law.

Builder is responsible for all conditions by using of accessories and consumables that did not confirmed by Burak Aluminium are not mentioned in catalogue of Architectural System.

Confirmation must be taken from Burak Aluminium for applications without details and system solutions that are mentioned in catalogue of architectural sytem. If not Burak Aluminium is not responsible because of any wrong applications.

# **FERMOSA**

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**SYSTEM**

TS-EN-755-1/8/9  
TS-EN-12020-1/2  
TS-EN-4922



ISO 9001:2008  
ISO 14001:2004  
OHSAS 18001:2007



EURASIA  
W  
AA  
Qualanod



Gost - R



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