



گروه صنعتی آلومینیوم غدیر

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کاتالوگ تخصصی ۲۰۱۶-۲۰۱۷

درباره گروه صنعتی آلومینیوم غدیر

پس از گذشت ربع قرن از سال ۶۸، غدیر در مساحت بیش از ۵۰۰۰۰ متر مربع تاسیس و احداث گردید و با استفاده از متد و تکنولوژی روز دنیا به سرعت یکی از برجسته ترین و پویا ترین مراکز صنعتی، در تولیدات صنایع آلومینیوم صنعتی با نصب و راه اندازی خطوط متعدد تمام اتوماتیک و رباتیک در



امر ساخت * قالب های اکستروژن آلومینیوم با دستگاه های پیشرفته * تولید انواع مقاطع آلومینیومی اختصاصی و ترمال بریک * رنگ آمیزی الکترو استاتیک و دکورال و آنادایز بر اساس استانداردهای روز دنیا پا به عرصه تولید و خدمات گذاشت.



About Ghadir Aluminium Ind. Group

GHADIR ALUMINIUM IND. GROUP

After about one quarter of century from 1989, Ghadir Co. was established in an area more than 50,000 m by the use of latest methods and technology. Quickly it was changed into one of the most highlighted and active industrial centers for manufacturing of industrial aluminum industries by installation and startup of



various robotic and full-automatic lines for manufacturing of followings:

- Aluminum extrusion molds by the use of advanced systems and manufacturing
- Manufacturing of various and special aluminum cross sections and thermal brake
- Electro-static painting and untitled and anodize

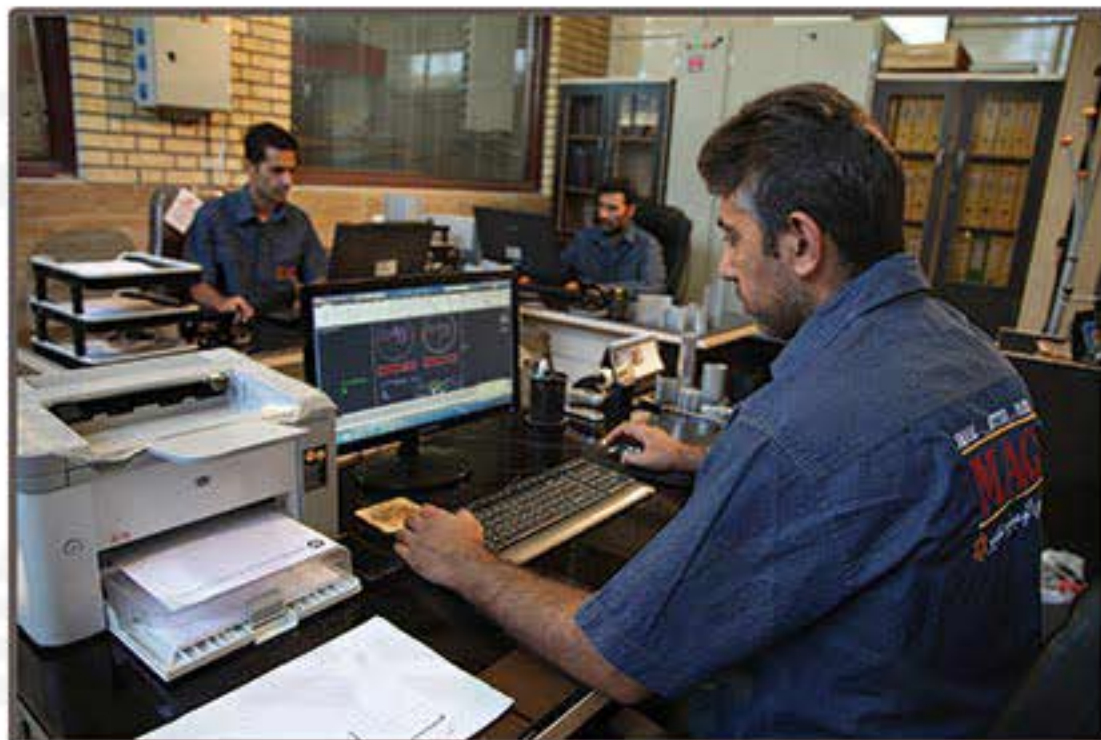
All based upon latest world standards.

واحد طراحی و مهندسی

در این واحد ابتدا به کمک نقشه یا مقطع پروفیل، آلومینیوم با ابزار آلات دقیق اندازه گیری و نقشه کشی شده و پس از نقشه کشی توسط طراح متخصص و به کمک نرم افزار های مرتبط جهت ساخت قالب به واحد ساخت نهائی ارجاع میگردد.

Planning & Engineering Unit:

Firstly aluminum is measured and mapped with precision tools in this unit by the help of a drawing and/or profile cross section. Then it may be referred to final manufacturing unit by a specialist and with the help of relevant software.



واحد قالب سازی

این واحد پیشرفته ترین قالب سازی در ایران می باشد که با اختیار داشتن دستگاه های روز دنیا (فرز CNC، وایرکات CNC و اسپارک CNC) قابلیت ساخت حساس ترین قالبهای اکستروژن آلومینیوم را داراست.



Molding Unit:

This unit is one of the most advanced molding unit in Iran. It is able to make sensitive molds of aluminum extrusion by having daily devices of the world (CNC, CNC Wire cut, CNC spark).

نیتراسیون

قالب ساخته شده بعد از سخت کاری اولیه و پولیش و مونتاژ برای مرحله نیتراسیون و پوشش دهی روانه این قسمت می شود که تا عمق (۲۰۰ میکرون) سختی را بر روی مقاطع ایجاد می کند.

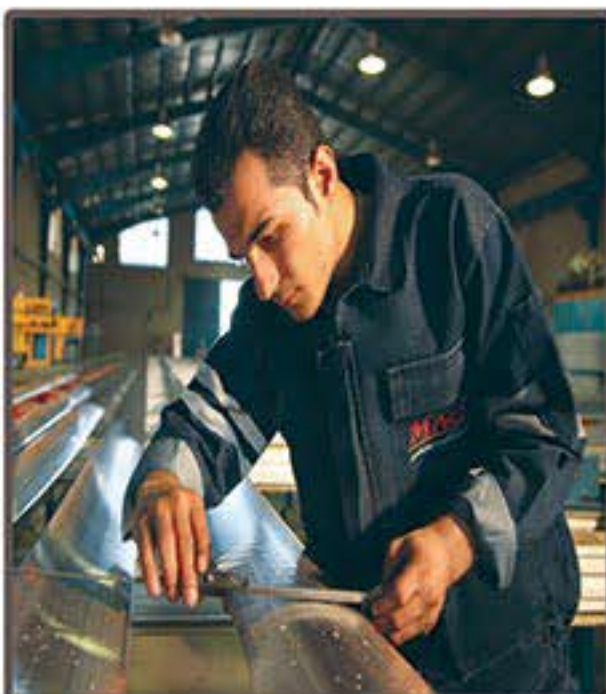
Nitration:

After primary hard working and polishing and assembly, the final mold is ready to enter into nitration and covering step up to a hardness depth of (200 micron) on various cross sections.



واحد کنترل کیفی Q.C

این واحد متشکل از پرسنل آموزش دیده میباشد که به موازات واحد های دیگر با (کنترل ورودی، کنترل حین فرآیند و کنترل محصول نهائی) در راستای کنترل و حفظ شاخص های کیفی و ارائه ی محصولات مطلوب به مشتریان در تلاش میباشد.



Quality Control Unit:

This unit includes some learned personnel who are working hardly in parallel with other units (Entrance control, In-process control and controlling of final product) in order to have better control and maintenance of quality indexes and presenting suitable products to customers.



اکستروژن

این واحد بخش اصلی تولید آلومینیوم میباشد که در حال حاضر با دارا بودن هشت دستگاه پرس اکستروژن، ظرفیت تولید تجمیع حدود روزانه ۳۰ تن آلومینیوم را دارا میباشد. این خط مجهز به دستگاه کشش دبل پولرو میزهای پیشرفته تمام اتوماتیک برای انتقال پروفیل به قسمت استرچ و برش بدون دخالت دست انتقال می یابد.



Extrusion:

This unit is specific for manufacturing of aluminum. At present there are eight extrusion pressure units with total daily production capacity of 30 tons of aluminum. It is equipped with double puller tension system and full automatic advanced desks for transfer of profile to stretch part and non-manual cutting.





پرس ها

دو دستگاه	۲۲۰۰ تن	پرس اکستروژن
دو دستگاه	۱۸۰۰ تن	پرس اکستروژن
یک دستگاه	۱۲۰۰ تن	پرس اکستروژن
سه دستگاه	۸۰۰ تن	پرس اکستروژن



Presses:

Extrusion press 2200 TON 2machine

Extrusion press 1800 TON 2machine

Extrusion press 1200 TON 1machine

Extrusion press 800 TON 3machine



کوره های اجینگ پروفیل

این مجموعه دارای کوره های اجینگ جهت مقاوم تر کردن و بالا بردن سختی پروفیل های تولید شده میباشد که پس از خروج از کوره، سختی پروفیل با دستگاه وبستر اندازه گیری و کنترل میشود.

Aging profile furnaces:

This collection has aging furnaces for enrichment and increasing the hardness of made profiles. The hardness of profile would be measured and controlled by Webster system.



خطوط رنگ استاتیک

این واحد دارای چهار خط رنگ پودری الکترواستاتیک که با بهره گیری از خط انتقال هوایی (کانوایر) کابین و سایکلون که دارای دستگاه پاشش رنگ به صورت اتوماتیک و رباتیک و کوره پخت رنگ می باشد که قادر است انواع مقاطع پروفیل های آلومینیومی را به طول حداکثر ۸.۵ متر طول را به صورت استاتیک رنگ آمیزی نماید.



Static painting lines:

This unit has four electrostatic powder painting lines with air transfer line (Conveyor) and cabin and cyclone. It has also paint automatic / robotic spraying system along with a paint baking furnaces for painting various cross sections of aluminum profiles with maximum length of 8.5 m on static basis.

واحد پولیش

این واحد دارای دو دستگاه پولیش تمام اتوماتیک میباشد که از آنها جهت پرداخت و براق کردن پروفیل های آلومینیومی جهت کوتینگ آنادایز مورد استفاده قرار میگیرد.

Polishing unit:

This unit has two full-automatic polishing systems for finishing and polishing of aluminum profiles and anodize coating as well.



واحد آنادایز

این مجتمع دارای دو واحد آنادایز مجزا میباشد که این واحدها با بهره گیری رکتی فایر ۱۰.۰۰۰ آمپر با دو ترانسفرماتور ۸۰۰ آمپر و سیستم تسویه آبی و اسمز معکوس و مجهز به یک دستگاه چیلر ۵۰ تنی و وانهای آنادایز شش متری می باشد که قادر به انجام آبکاری پروفیل ها و زیر سازی جهت رنگ آمیزی مقاطع آلومینیومی با میکرون بالا با ظرفیت ۲۰۰۰ تن ظرفیت سالانه را دارا میباشد.



Anodize unit:

This complex has equipped with two separate anodize units. There are a rectifier of 10,000 A and two transformers of 800A and also a hydro-osmosis treatment system and a 50-tons chiller and 6-meters anodizing baths. They are especially for profiles plating and infrastructure of aluminum cross sections with high micron and an annual capacity of 2000 tons as well.

واحد آزمایشگاه:

در این واحد جهت کنترل میزان مواد درون وانهای آبکاری آنادایزینگ و واحد ریخته گری و کوتینگ زیرکار کرومات رنگ استاتیک جهت کنترل کیفی مورد بازبینی و کنترل دقیق واقع میگردد.

Laboratory Unit:

The infrastructure of static chromate color would be reviewed and controlled as carefully as possible in order to have better controlling of materials in anodizing plating baths and cast ironing and coating.



واحد ترمال بریک :

پروفیل های تولید شده آلومینیومی بوسیله دستگاه تمام اتوماتیک آلمانی schmits باتیغه های پلی آمید در فرم و سایزهای مورد نیاز در اختیار مشتریان قرار میگیرد.



Thermal brake unit:

All produced aluminum profiles are provided to customers by full-automatic Schmits Germany devices and polyamide blades with required forms and sizes.

واحد دکورال :

این واحد با ایجاد کوتینگ زیر کار کرومات و رنگ پس زمینه آماده برای بافت طرح چوب بر روی پروفیل های تولید شده با انجام فرایندهای لازم آماده برای پوشش دادن انواع طرح چوب در رنگ دلخواه علاوه بر زیبایی رنگ هماهنگ با محیط دلخواه شما مقاومت سطحی بیشتری را در پروفیل های دکورال به وجود می آورد.

Decorative Unit:

By making infrastructure coating of chromate and background paint for wood plan texture on manufactured profiles, this unit makes more superficial resistance in decorative profiles by necessary process for coating various wood plans in desired colors rather than more beauty in compliance with your environment.



واحد ریخته گری:

فرآیند ریخته گری پیوسته (ریخته گری DC) که در سال ۱۹۳۳ گسترش پیدا کرد روشی است که برای تولید بیلتهای اکستروژن آلومینیوم با سیستم های کنترلی برنامه پذیر می توان پارامترهای متعدد ریخته گری عمودی واقعی برای تولید آلیاژهایی برای استحکام با حداقل جدایش فازی و توانایی تولید بیلتهای بزرگ و کم ترین مقدار ترک در آلیاژهای پر استحکام ایجاد نمود.



Cast Ironing Unit:

DC Cast Ironing unit has been developed in 1933. It means a method for producing of aluminum extrusion billets with programmable controlling systems. It is possible to make various parameters for real vertical cast ironing for making alloys and minimum phase separation and also making any billets with maximum and minimum cracks in high resistance alloys.

واحد لیبل زن و بسته بندی:

این واحد جهت جلوگیری از صدمه دیدن و یا خراشیدگی سطحی روی پروفیل ها در هنگام بسته بندی و حمل و نقل با لیبل های برن دار مخصوص مشتریان تولید و ایجاد میگردد.



Labeling & Packing unit:

This unit is purposed to prevent from any damages or surface scratches on profiles when packing and shipping with special brand labels of customers.



واحد برآشینیگ

فعالیت این واحد طرح خش دار کردن پروفیل ها جهت زیرکار آبکاری آنادایزینگ و مقاوم کردن سطوح پروفیل ها جهت رنگ آمیزی میباشد.



Brushing Unit:

This unit is responsible for scratching of profiles for anodizing plating and strengthening of profile surfaces for further painting.

واحد مونتاژ و خدمات آلومینیوم

در این واحد کلیه خدمات برش، قطعه بری، لقمه بر، ماشینکاری، پانچ و مونتاژکاری کلیه مقاطع اختصاصی با تکنولوژی روز اروپا و بهره گیری از ماشینهای CNC برش شرکت فوم ایتالیا آمادگی ارائه کلیه خدمات فوق الذکر را دارا میباشد.

Aluminum Assembly & services unit:

This unit includes all services such as : different types of cutting , machining, punch , assembly all specialized parts according to European Technology, using of Italian CNC cutting machines of **FOM** company and this unit including all mentioned services .





Code:100-5
سیستم درب لولایی
ترمال بریک نرمال
Thermal Break Normal
Hinge Door System
Page: 32



Code:100-1
سیستم درب و پنجره
کشویی ترمال مگنت
Normal Magnetic Door
& Window System
Page: 16



Code:100-6
سیستم پنجره لولایی
ترمال بریک نرمال
Thermal Break Normal
Hinge Window System
Page: 36



Code:100-2
سیستم درب و پنجره
کشویی ترمال بریک مگنت
Thermal Break Magnetic
Door & Window System
Page: 20



Code:100-7
سیستم درب و پنجره
کشویی ترمال
Normal Rail Door And
Window System
Page: 40



Code:100-3
سیستم درب لولایی
ترمال بریک مگنت
Thermal Break Magnetic
Hinge Door System
Page: 24



Code:100-8
سیستم پنجره
لولایی ترمال
Normal Hinge
Window System
Page: 44



Code:100-4
سیستم پنجره لولایی
ترمال بریک مگنت
Thermal Break Magnetic
Hinge Window System
Page: 28

Code:100-11



Code:100-9

سیستم درب

لوازی نرمال

Normal Hinge

Door System

Page: 48



Code:100-12



Code:100-10

سیستم درب و پنجره

فیکس و

لیفت اند اسلاید

Fix - Lift & Slide

Door & window system

Page: 52



سیستم درب و پنجره کشویی زرمال مگنت ۹۷ میلیمتر

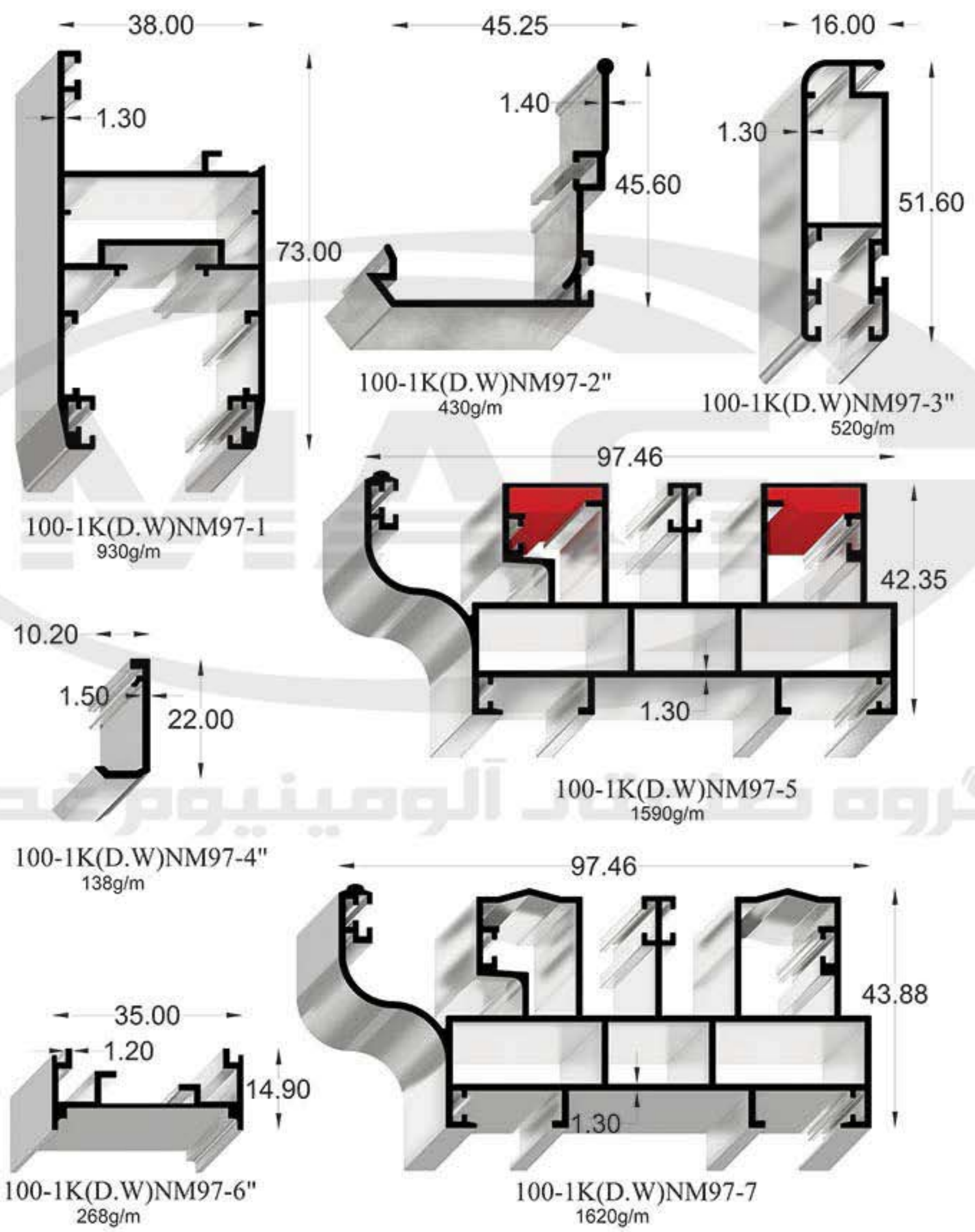


Normal Magnetic Door & Window System 97mm

گروه صنعتی آلومینیوم غدیر



Code:100-1K(D.W)NM97





Code:100-1K(D.W)NM97



Code 100-1K(D.W)NM97

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سیستم درب و پنجره کشویی ترمال بریک مگنت ۹۷ میلیمتر

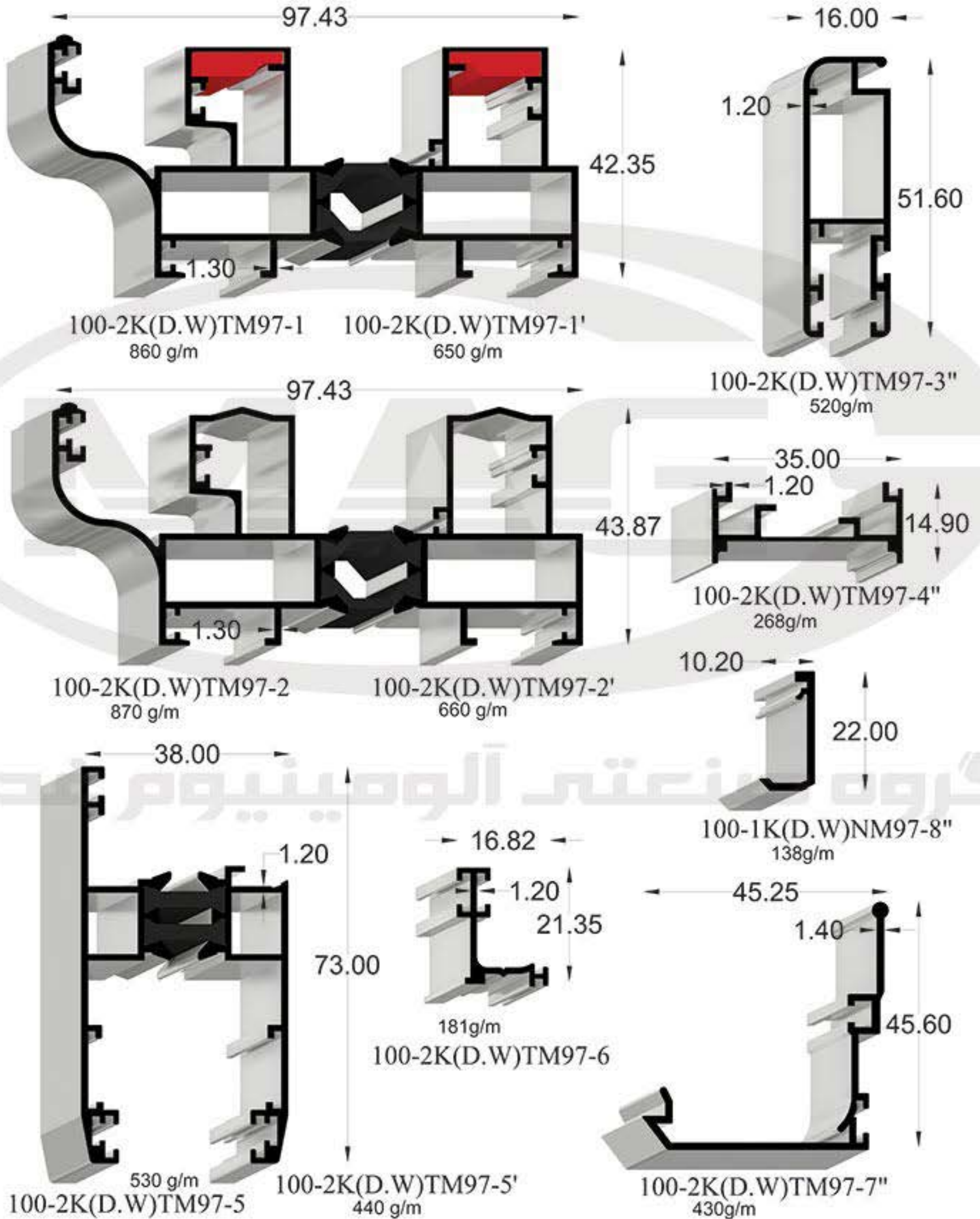


Thermal Break Magnetic Door & Window System 97mm

گروه صنعتی آلومینیوم غدیر



Code:100-2K(D.W)TM97





Code:100-2K(D.W)TM97



Code 100-2K(D.W)TM97

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سیستم درب آلومینیوم ترمال بریک مگنت ۶۸ میلیمتر



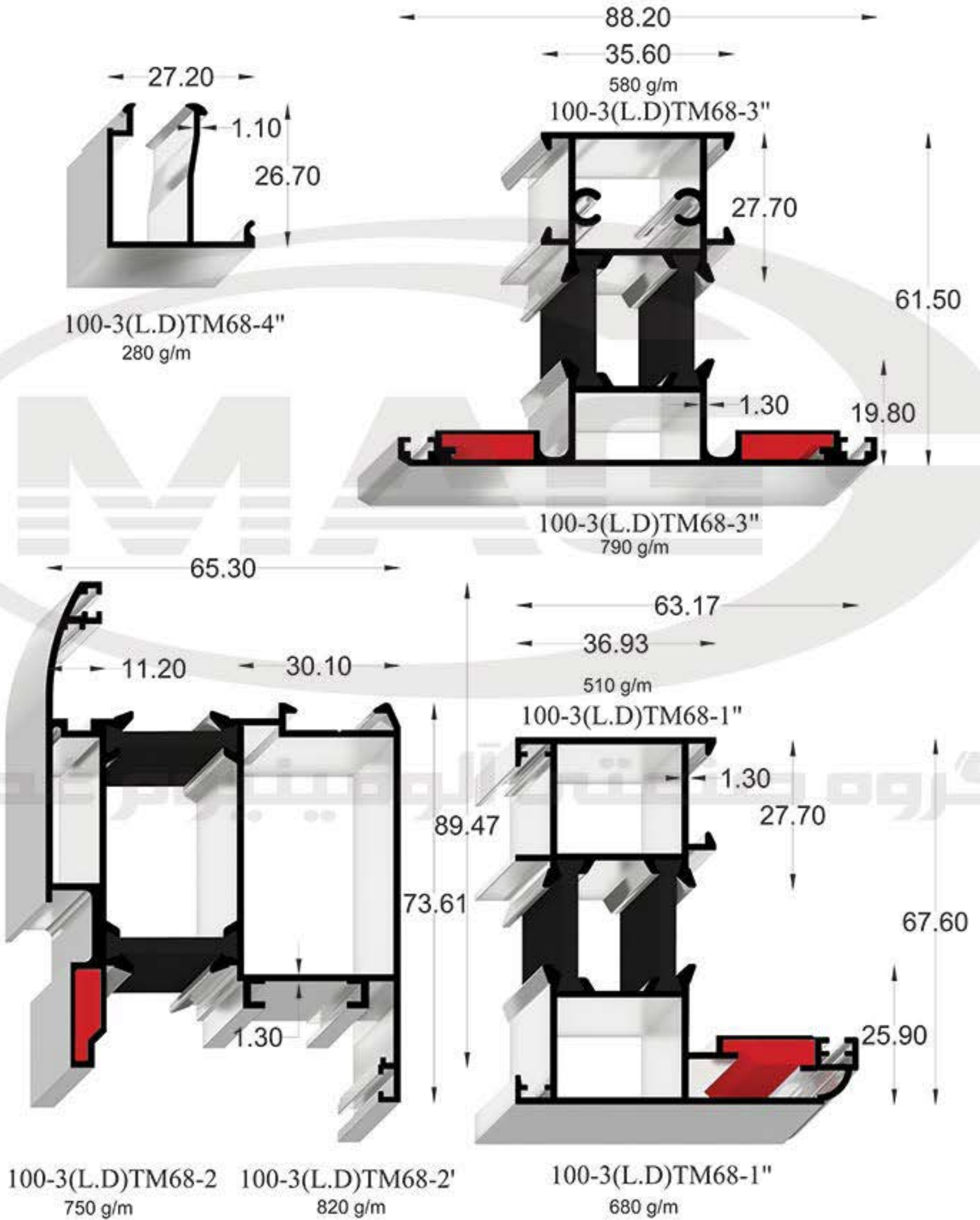
Thermal Break Magnetic Hinge Door System 68mm

گروه صنعتی آلومینیوم غدیر



Code:100-3(L.D)TM68

Detail Code 100-3(L.D)TM68





Code:100-3(L.D)TM68



Code 100-3(L.D)TM68

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سیستم پنجره آلومینیوم ترمال بریک مگنت ۶۸ میلی متر



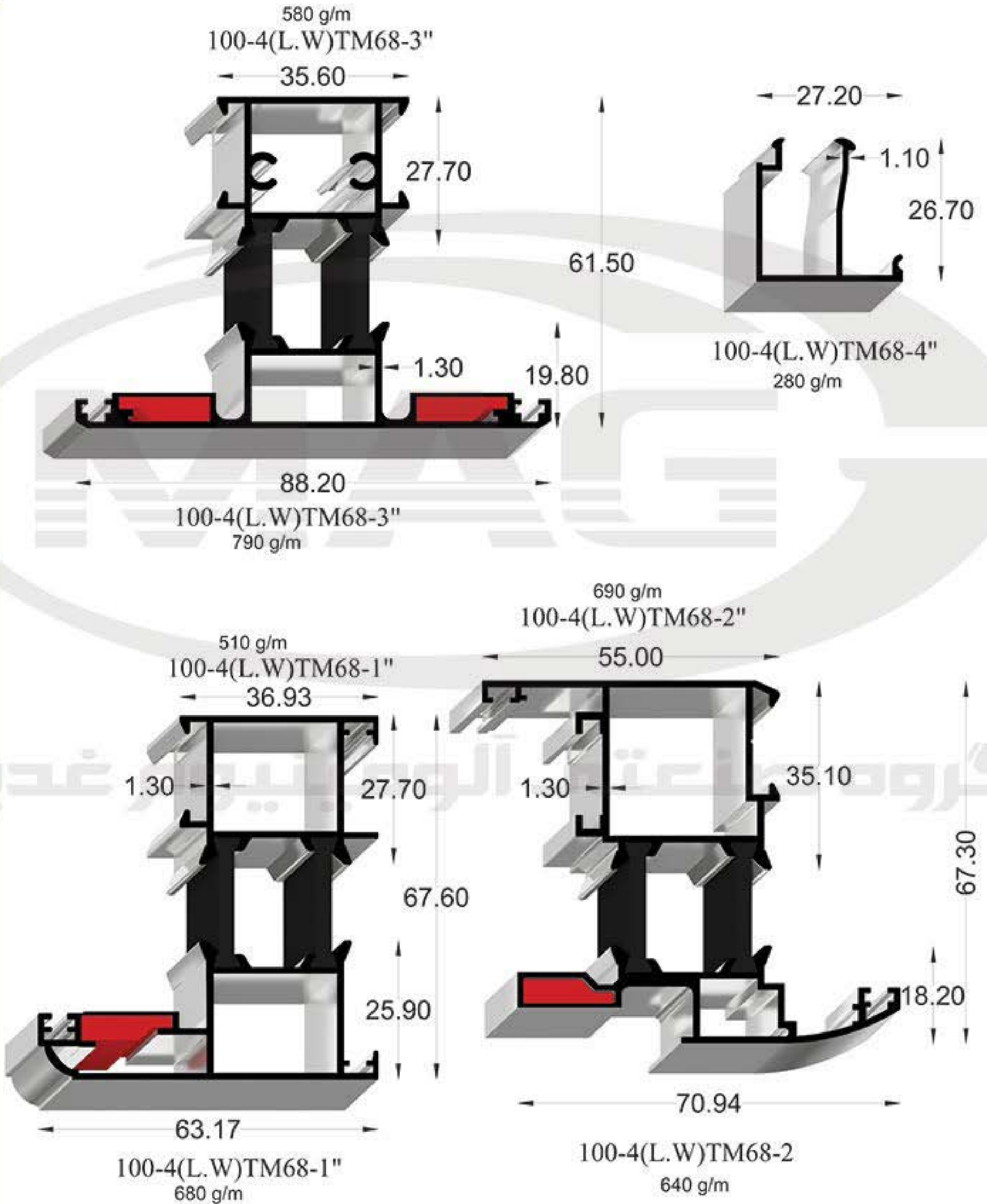
Thermal Break Magnetic Hinge Window System 68mm

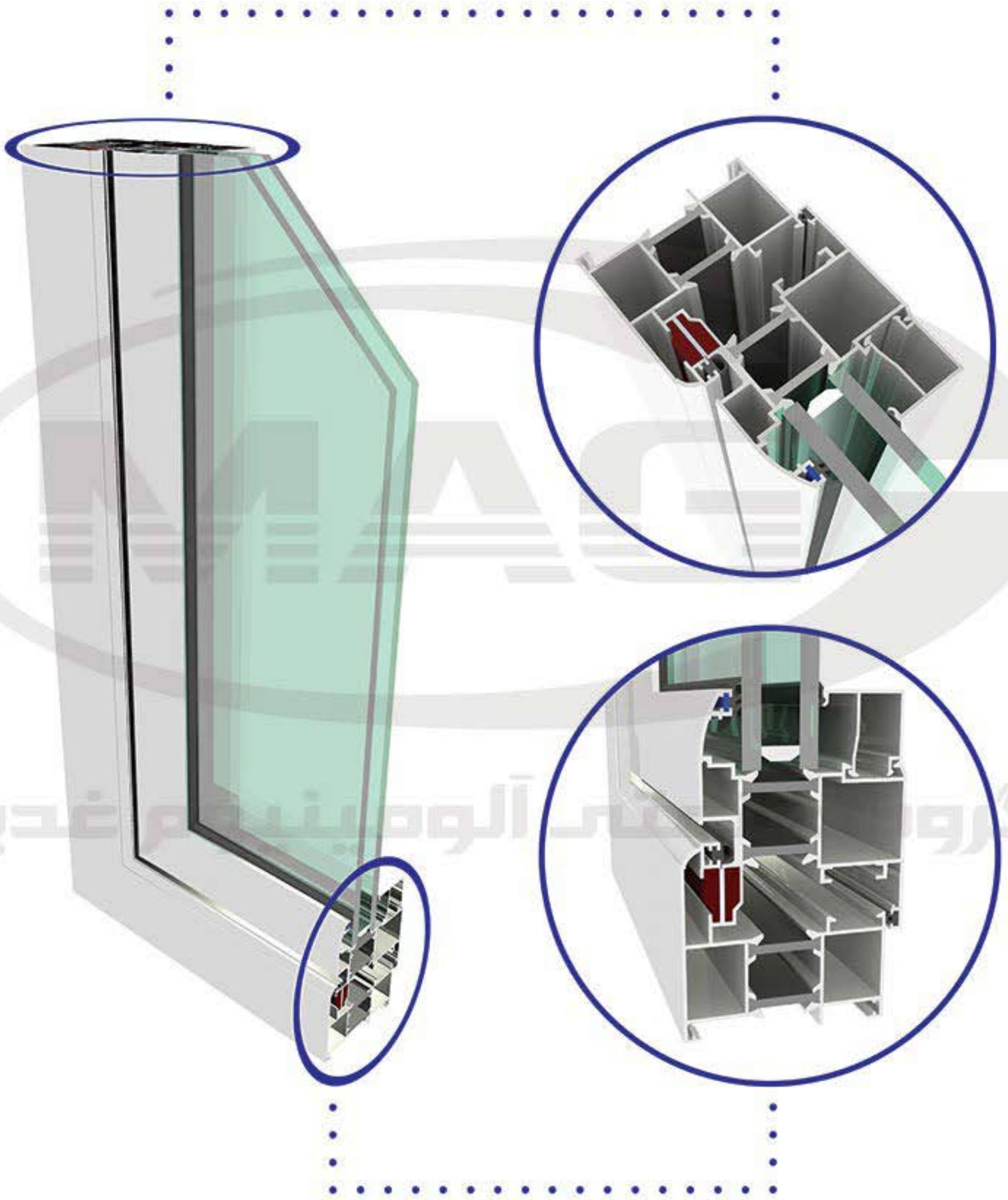
گروه صنعتی آلومینیوم غدیر



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Detail Code 100-4(L.W)TM68





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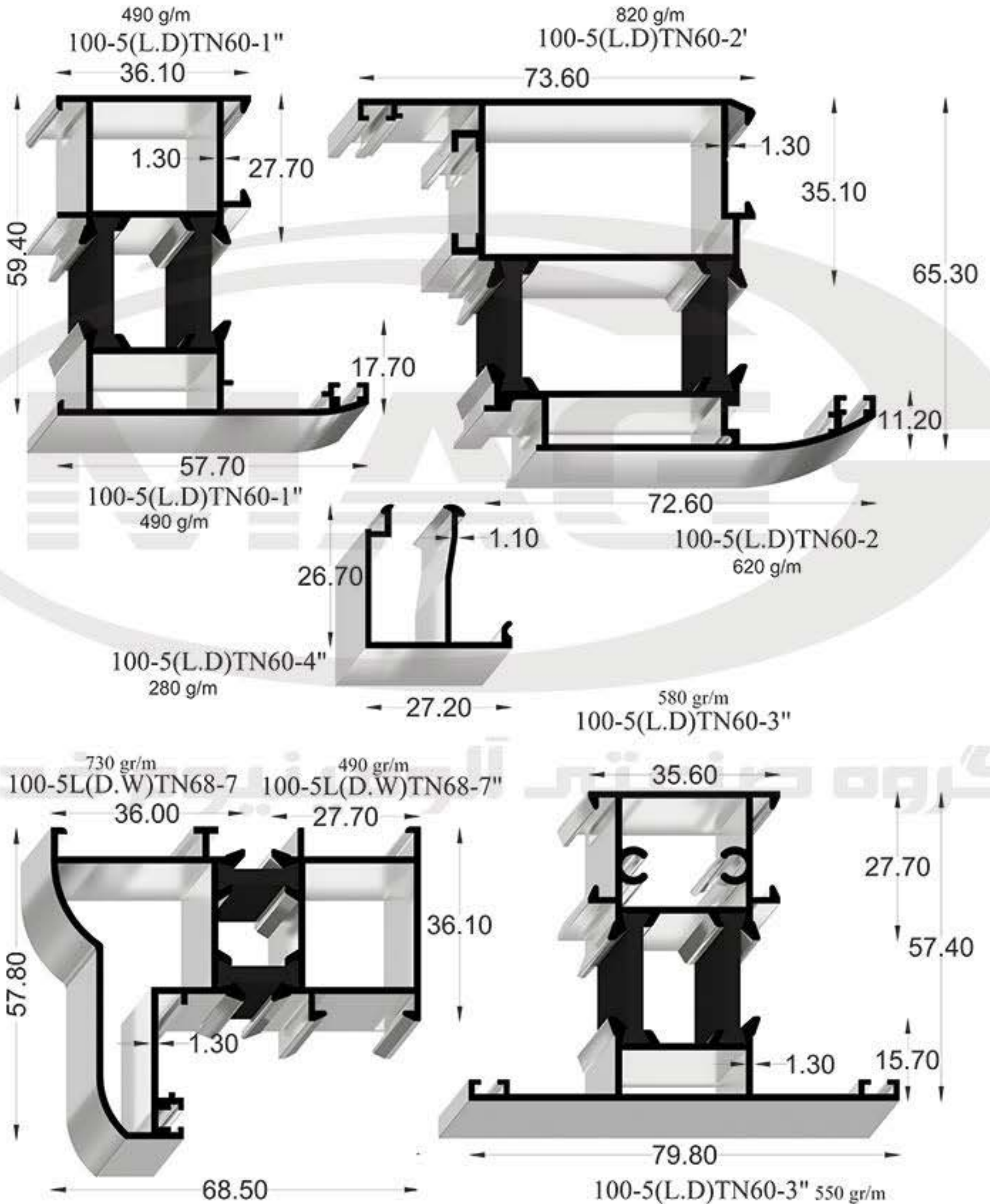
GHADIR ALUMINIUM IND. GROUP

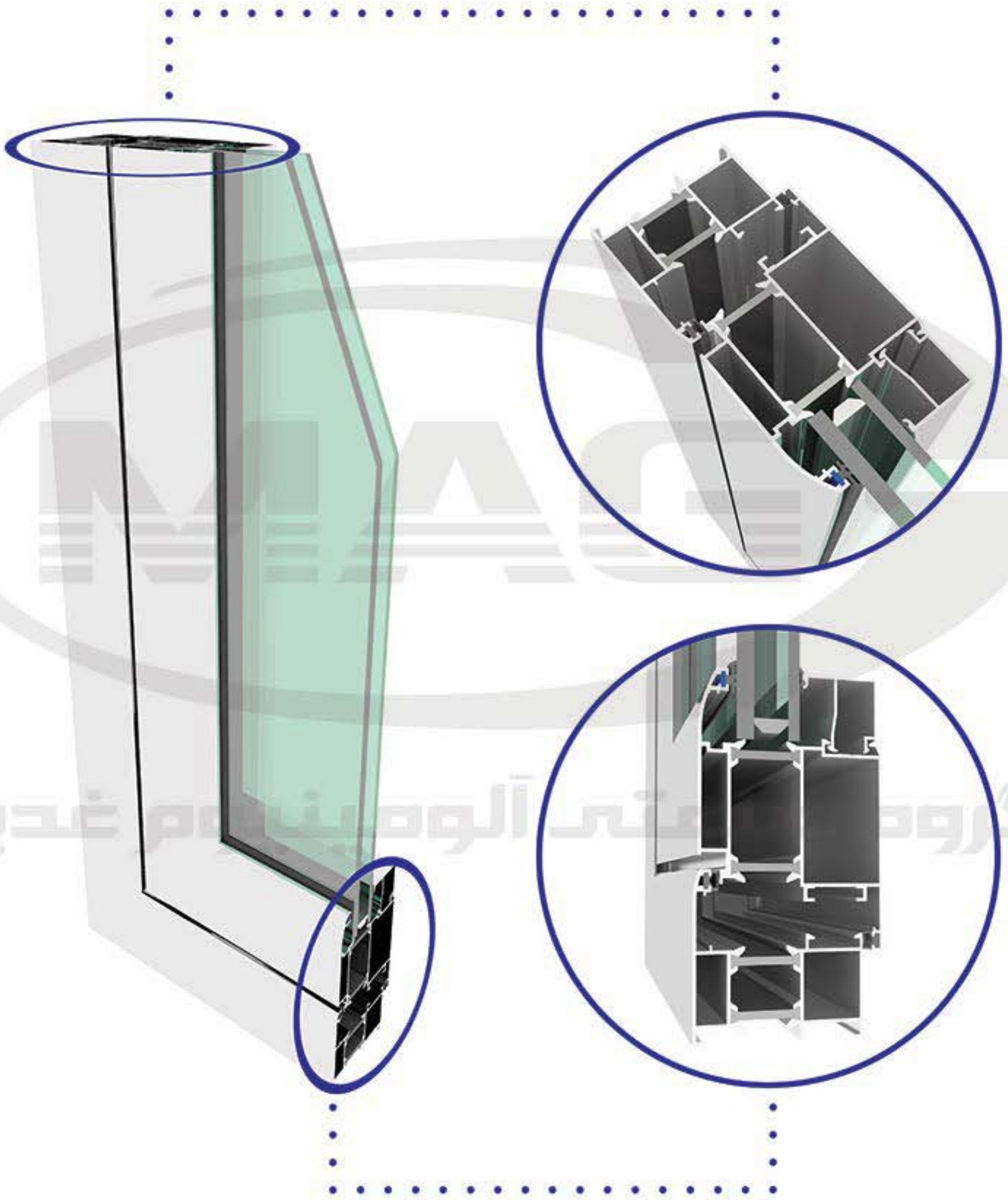
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Code:100-5(L.D)TN60





Code:100-5(L.D)TN60



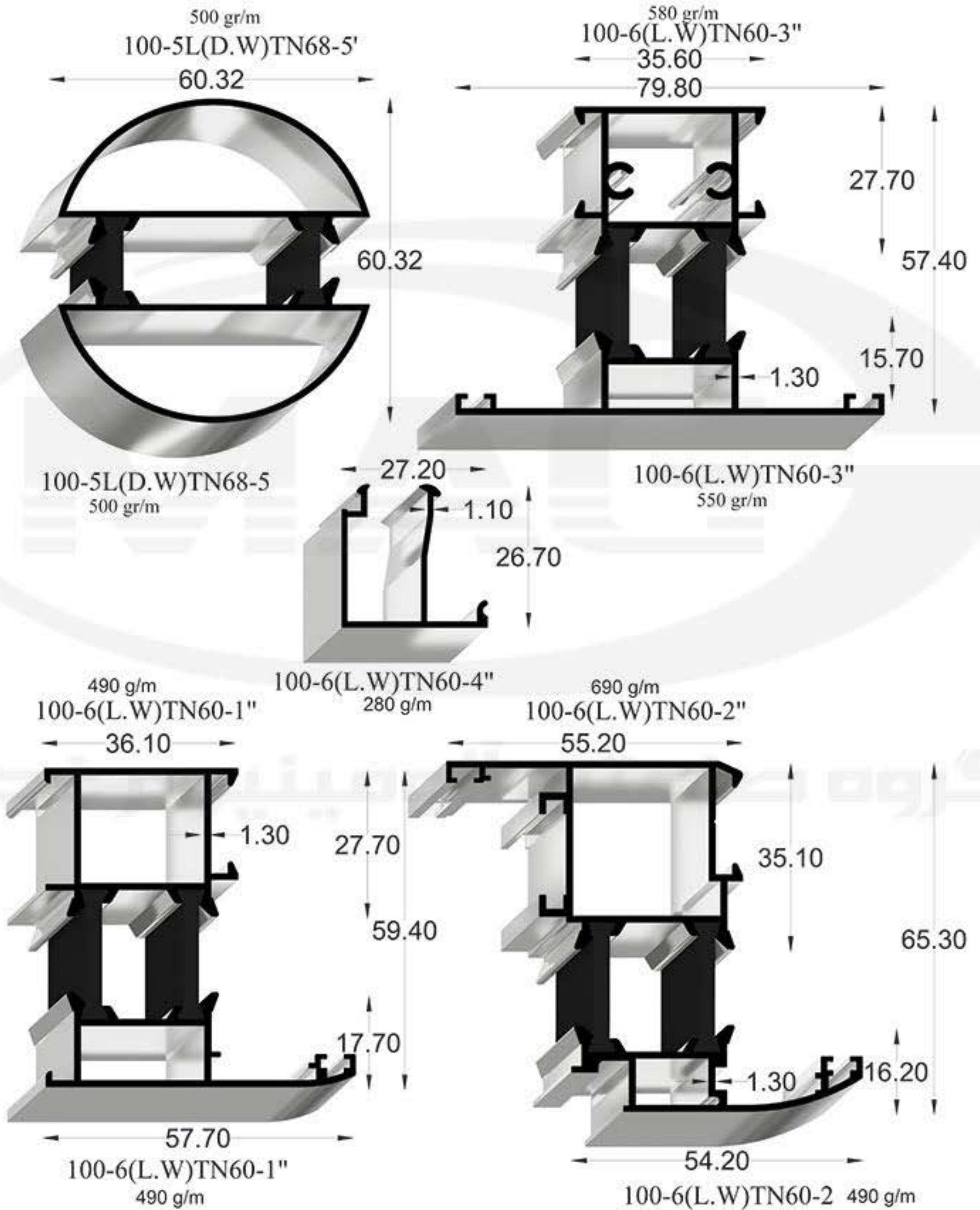
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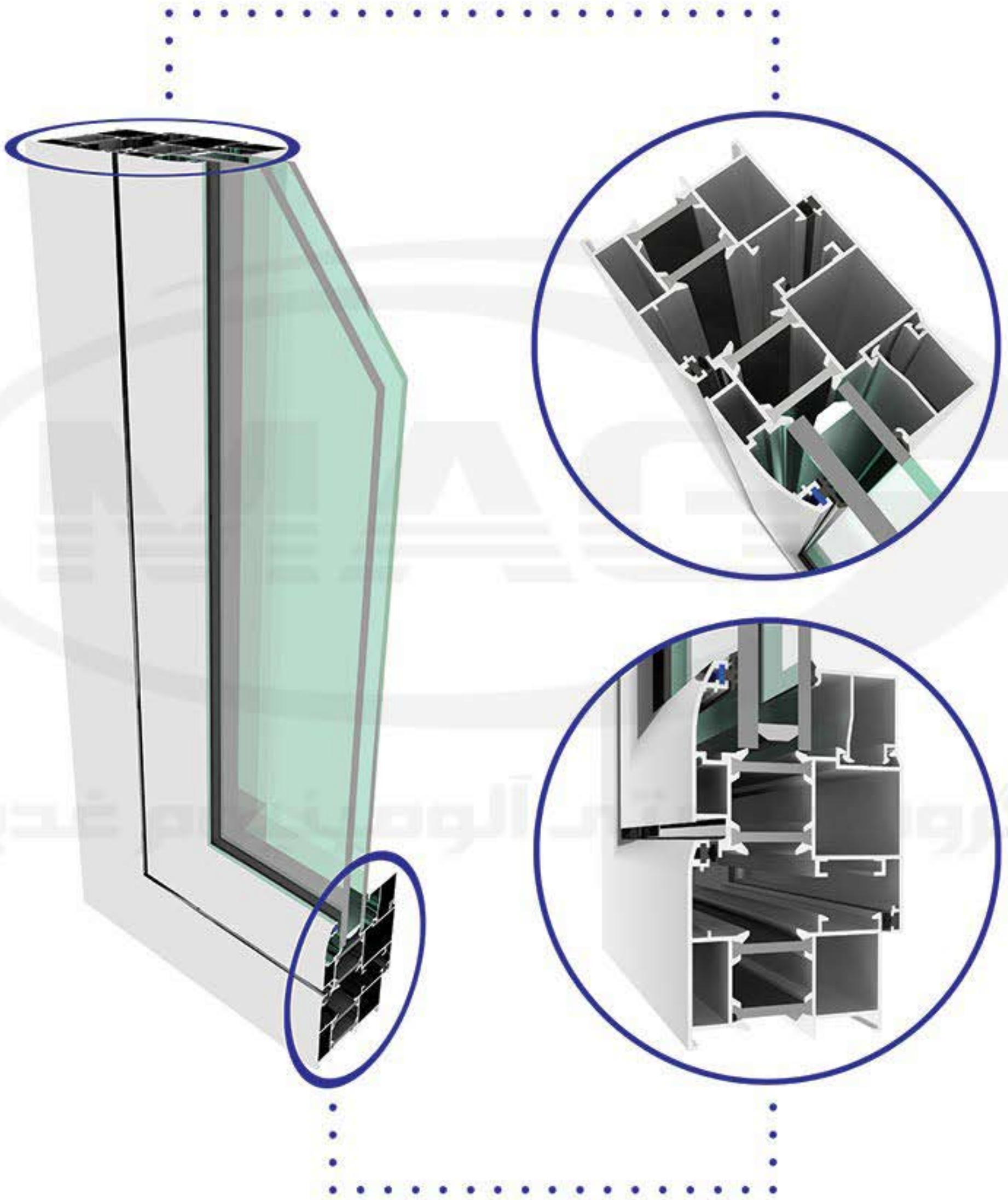
GHADIR ALUMINIUM IND. GROUP





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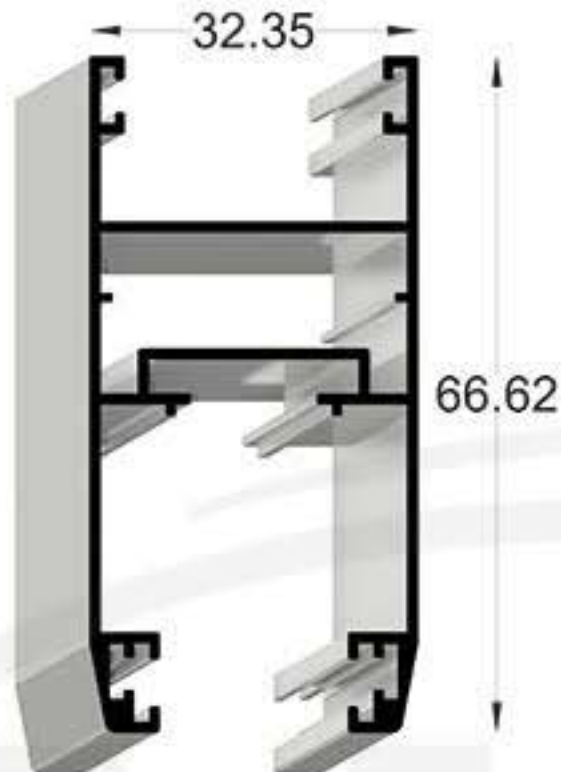
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GHADIR ALUMINIUM IND. GROUP

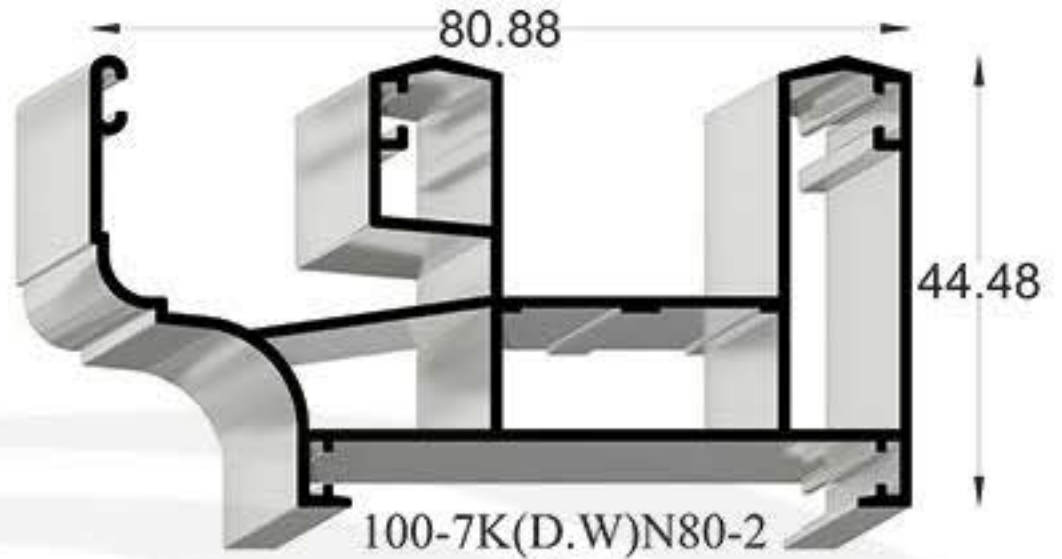




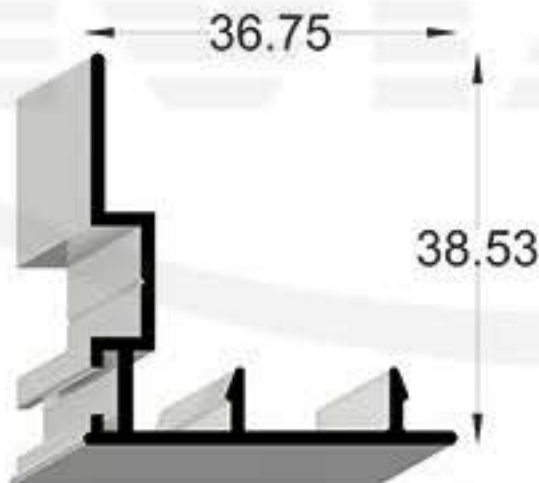
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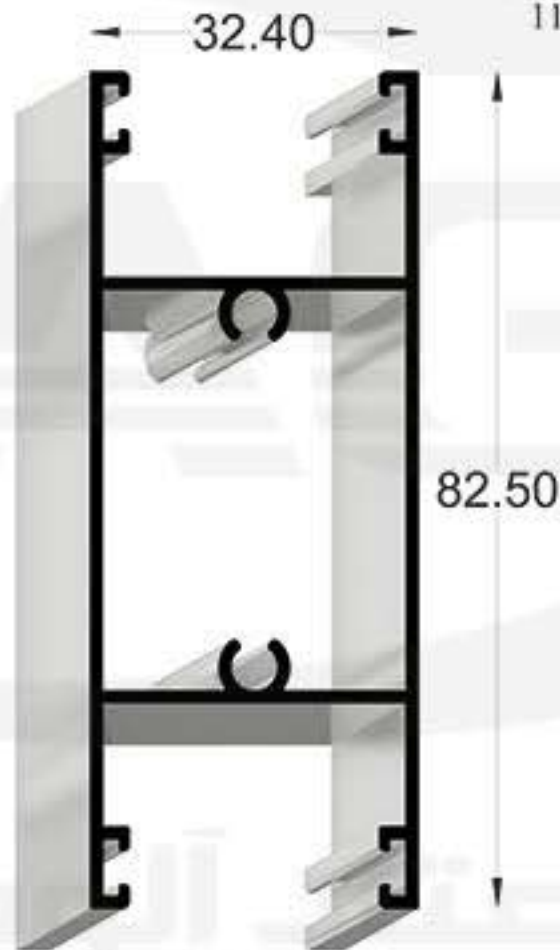
100-7K(D.W)N80-1
800 gr/m



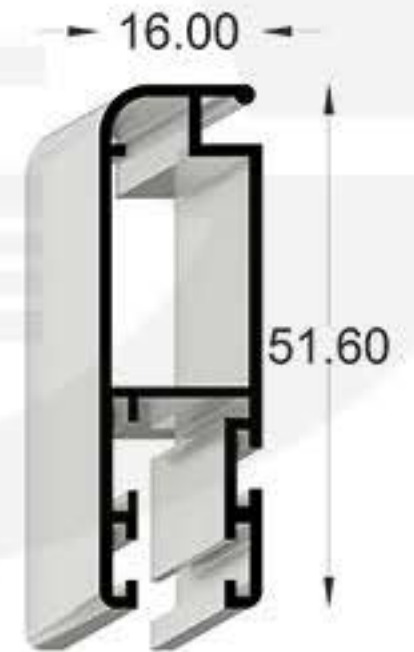
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1140 gr/m



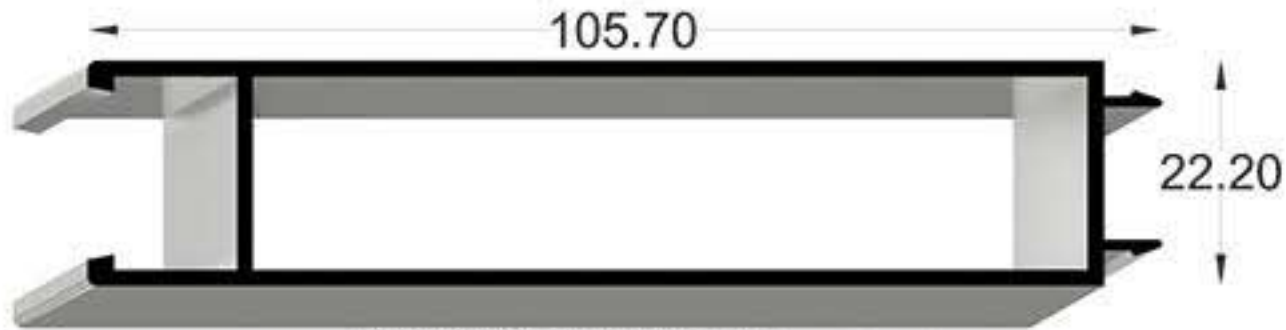
100-7K(D.W)N80-3
360 gr/m



100-7K(D.W)N80-4" 970 gr/m



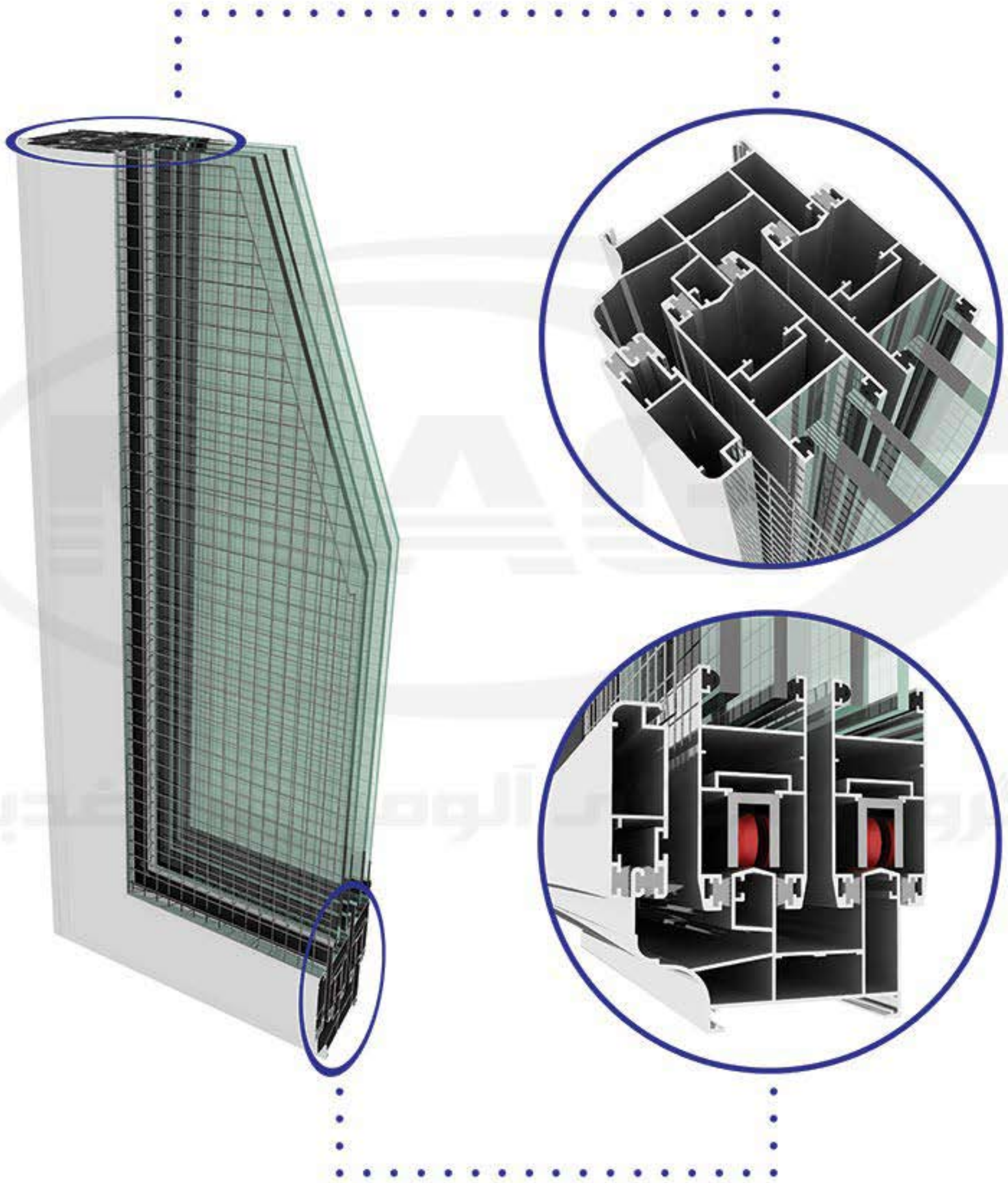
100-7K(D.W)N80-5"
520 gr/m



100-7K(D.W)N80-6" 1070 gr/m



100-7K(D.W)N80-7" 940 gr/m



Code:100-7K(D.W)N80



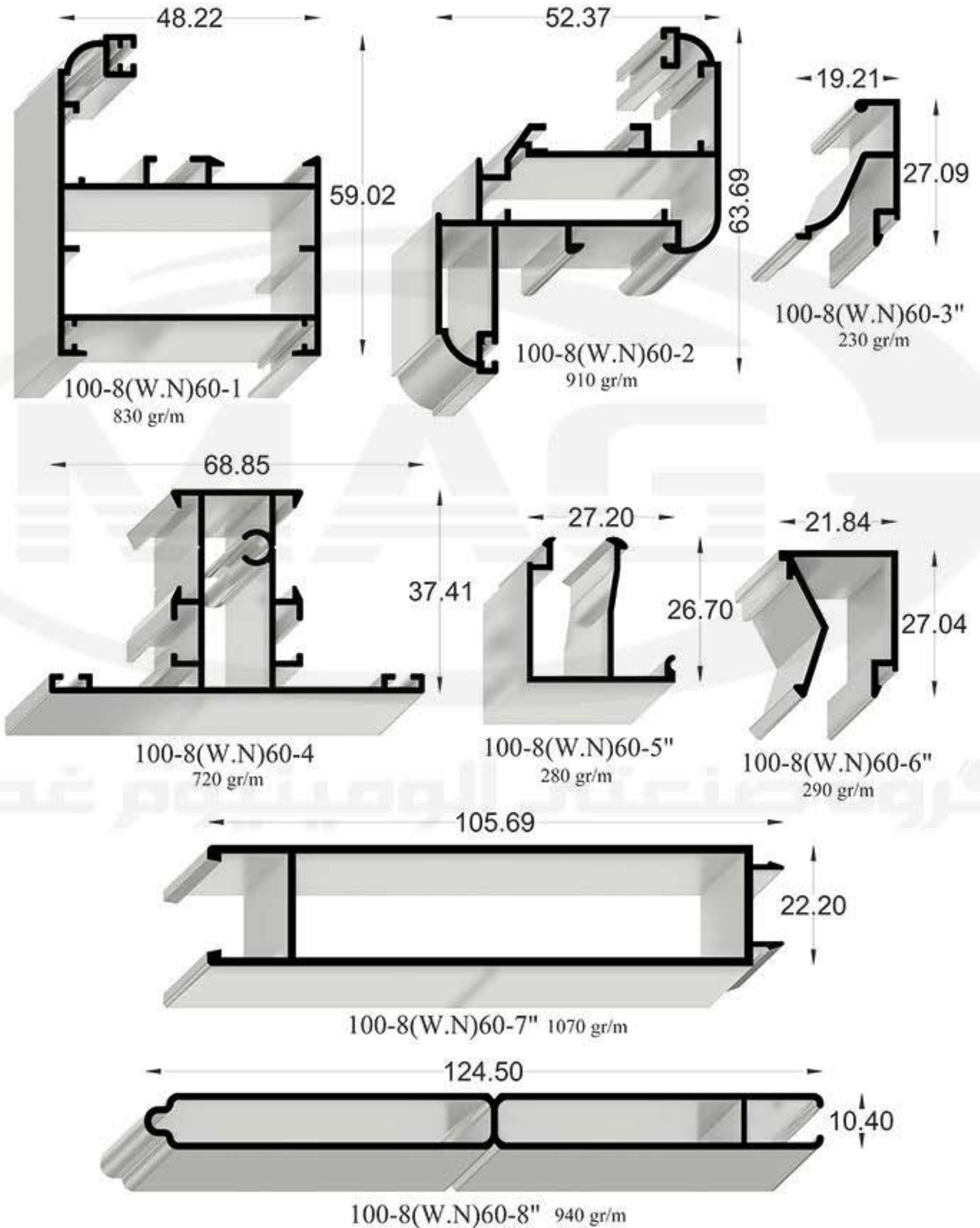
Code 100-7K(D.W)N80

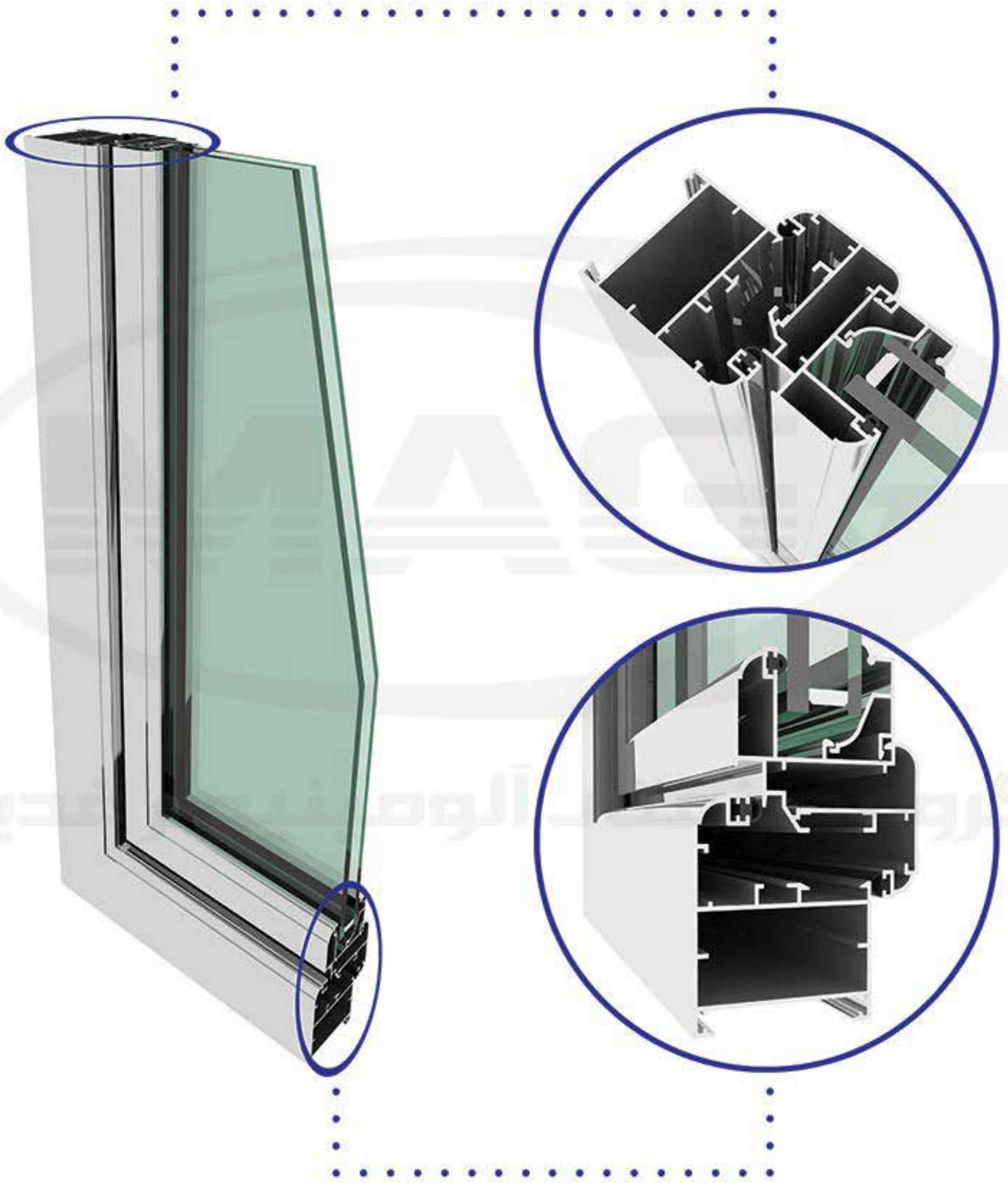
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Code:100-8(W.N)60





Code:100-8(W.N)60



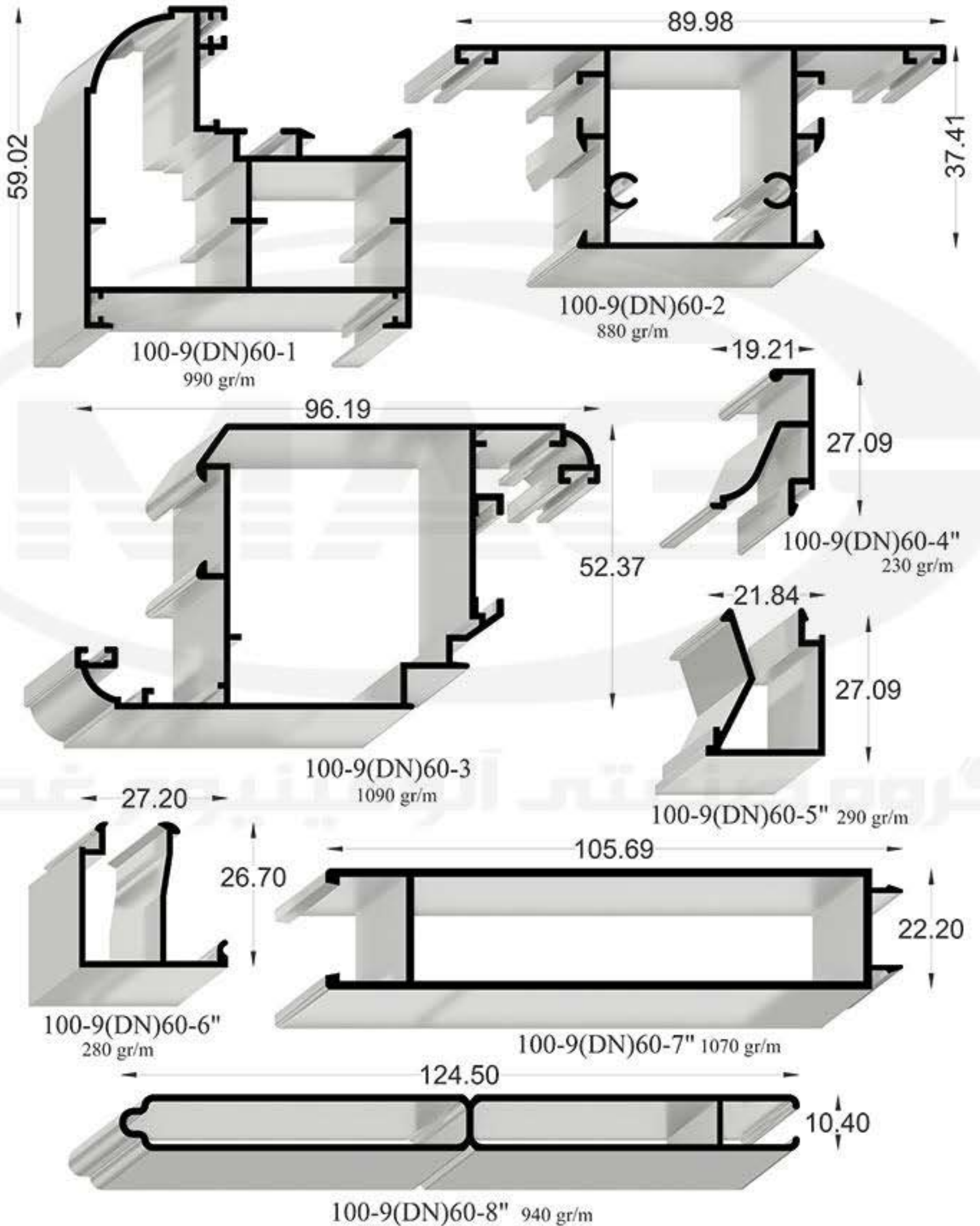
Code 100-8(W.N)60

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Code:100-9(D.N)60





Code:100-9(D.N)60



Code 100-9(D.N)60

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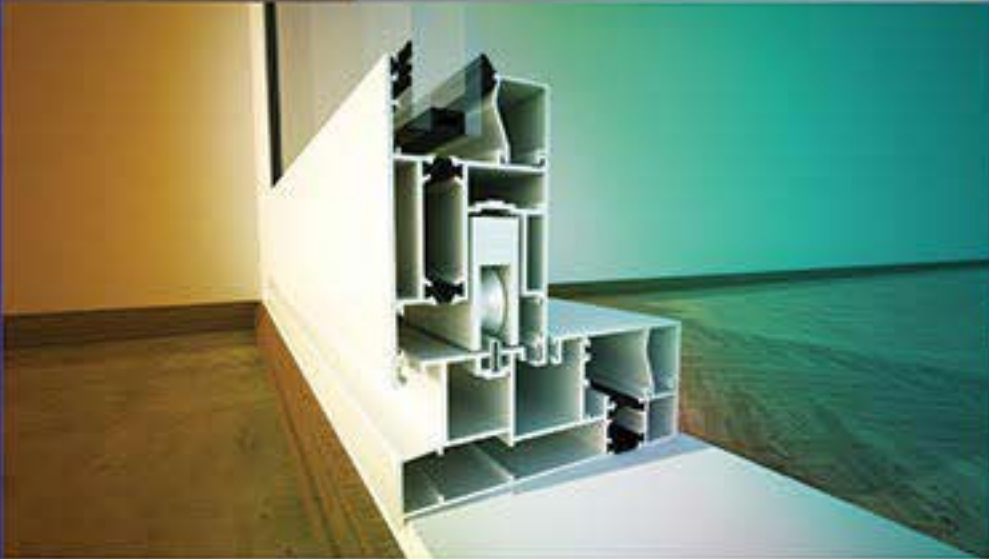
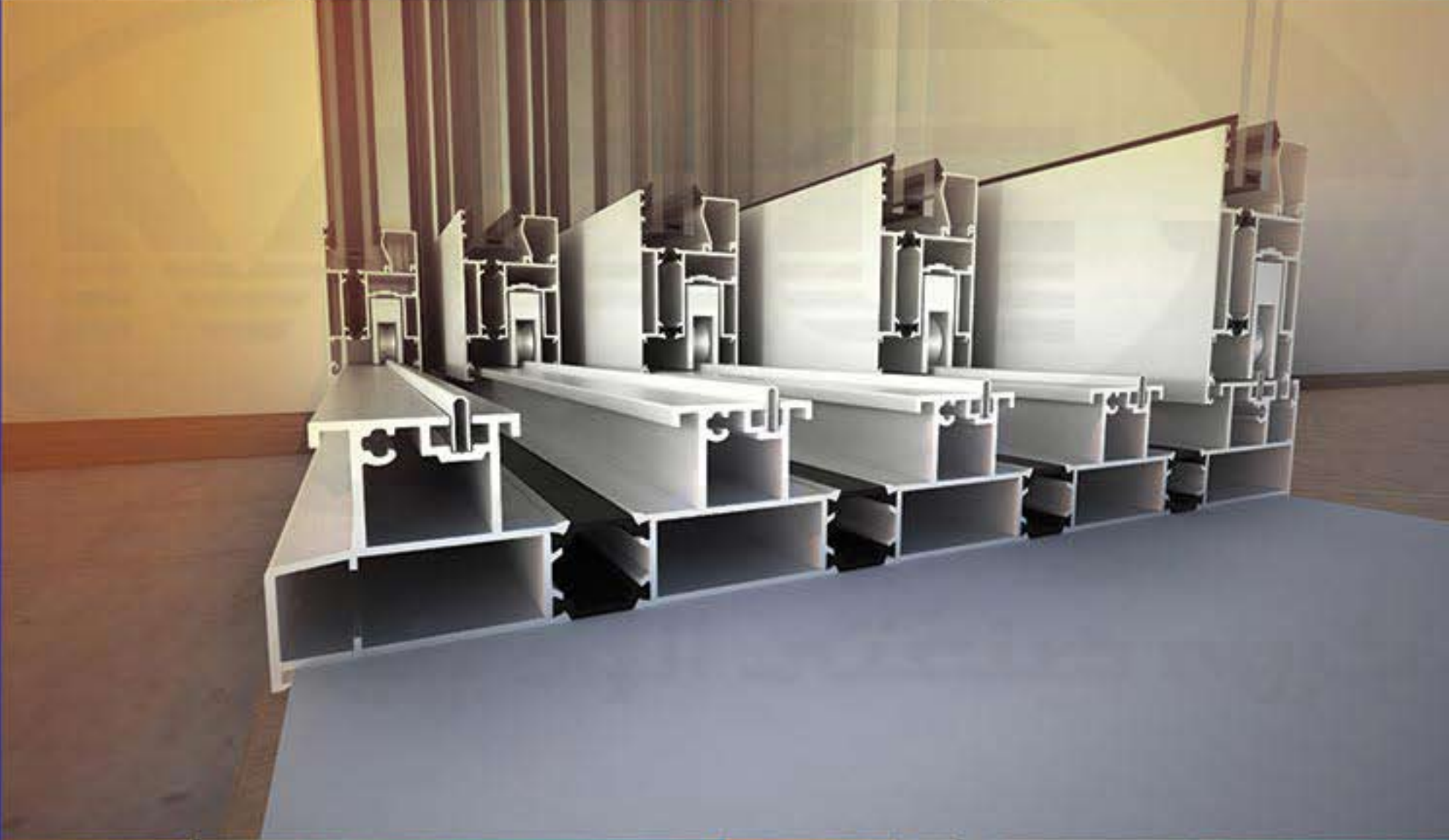
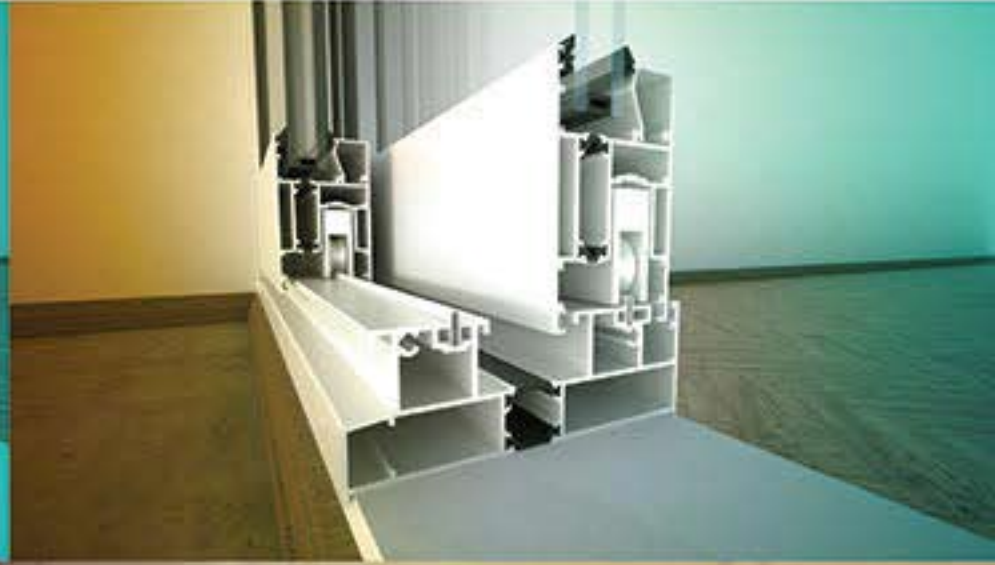
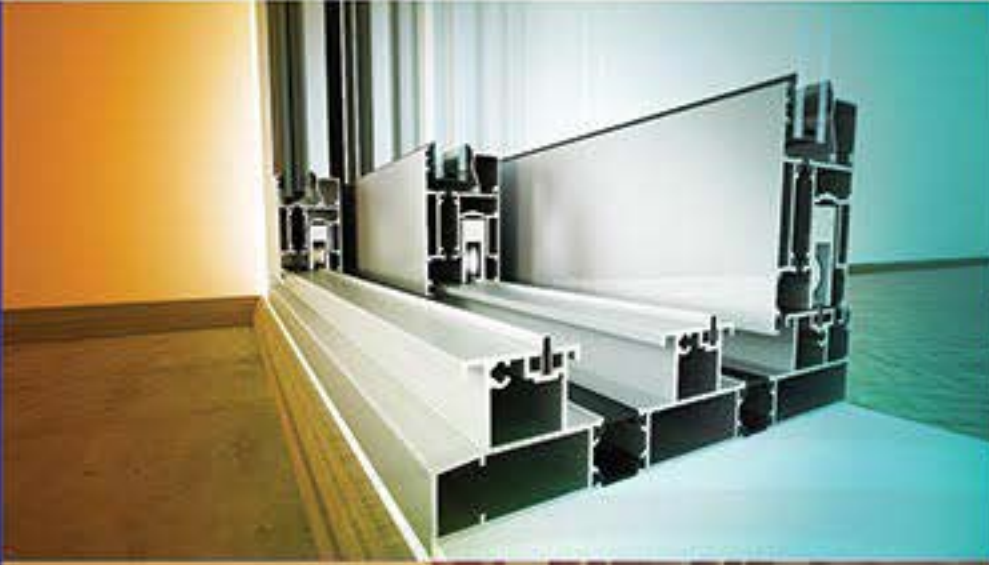


Code:100-10



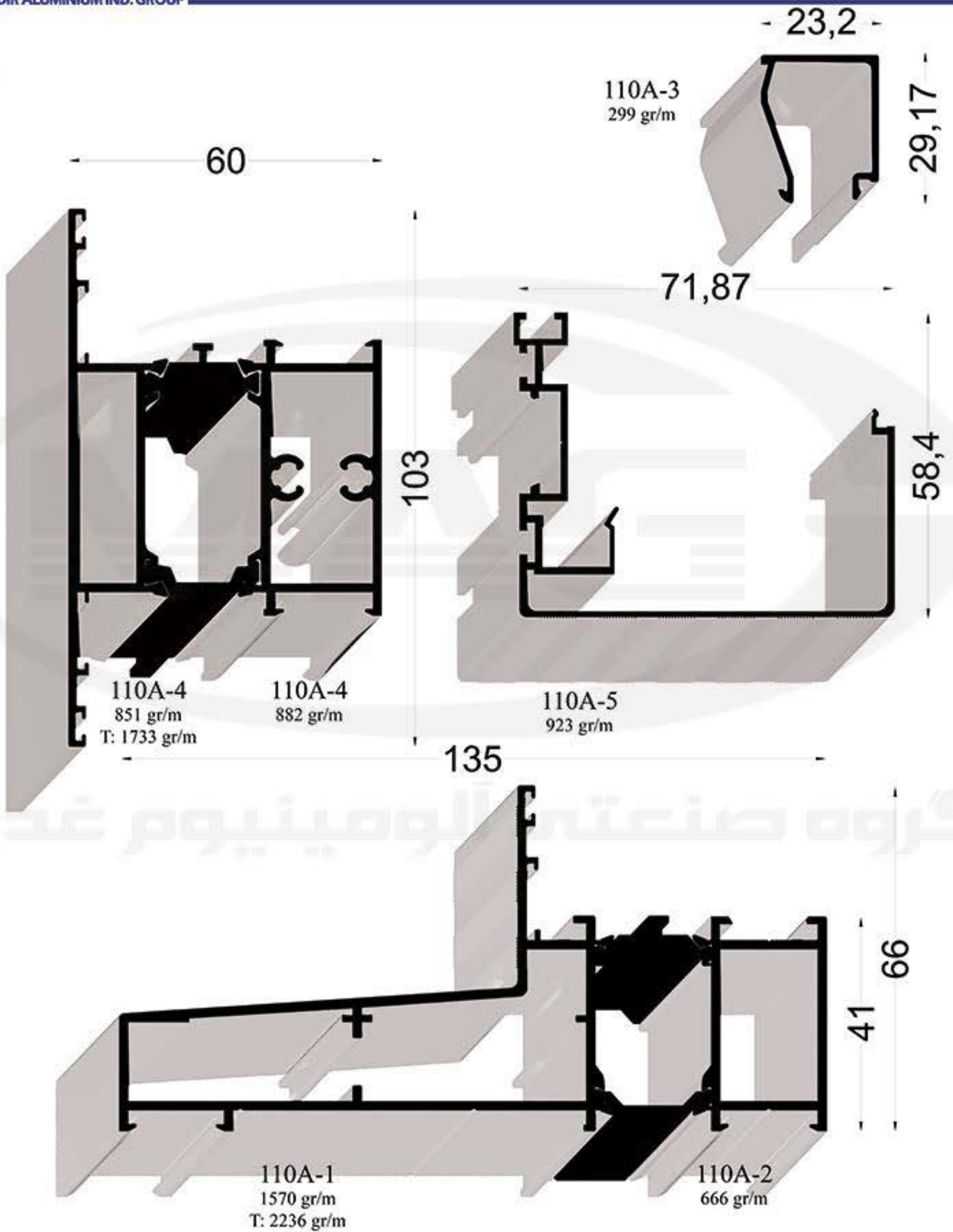
Detail Code 100-10

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Code:100-10/F(W)T135



سیستم درب و پنجره لیفت اند اسلاید مونو ریل ترمال بریک ۱۳۵ میلیمتر

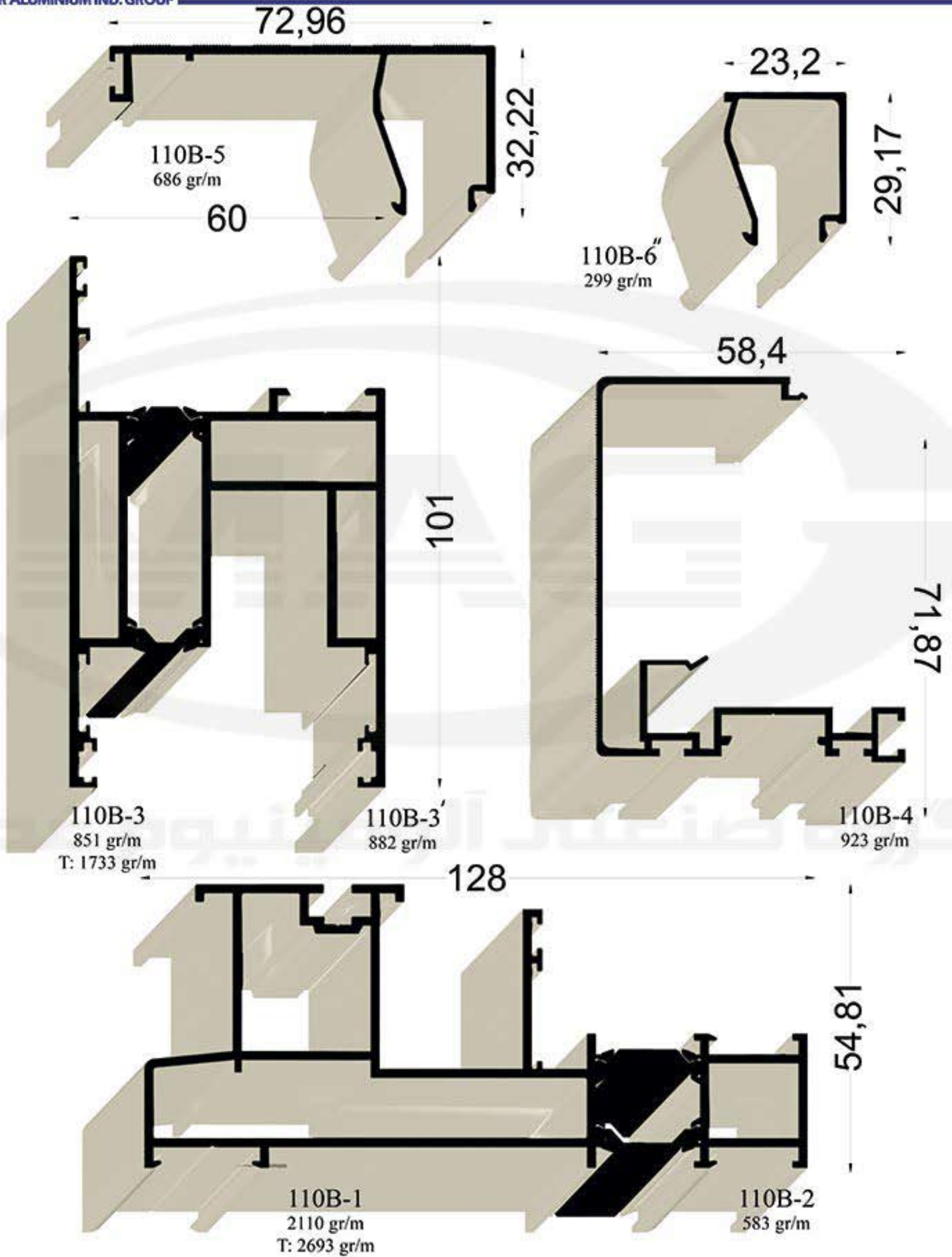


Thermal Break Mono rail Lift & Slide Door & Window System 135mm

گروه صنعتی آلومینیوم غدیر



Code:100-10/IRL(D.W)T135

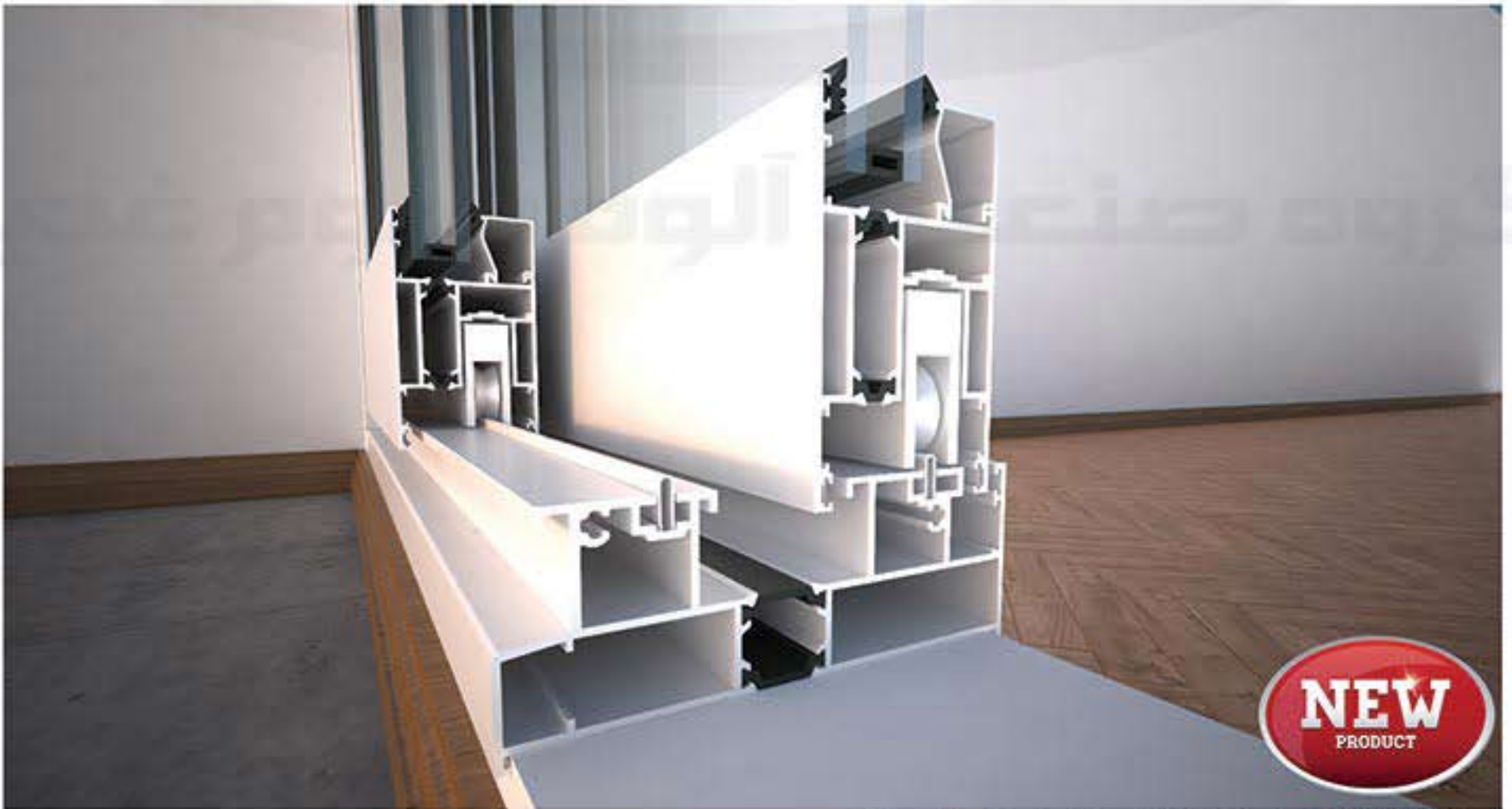


سیستم درب و پنجره لیفت اند اسلاید دو ریل ترمال بریک ۱۴۳ میلیمتر

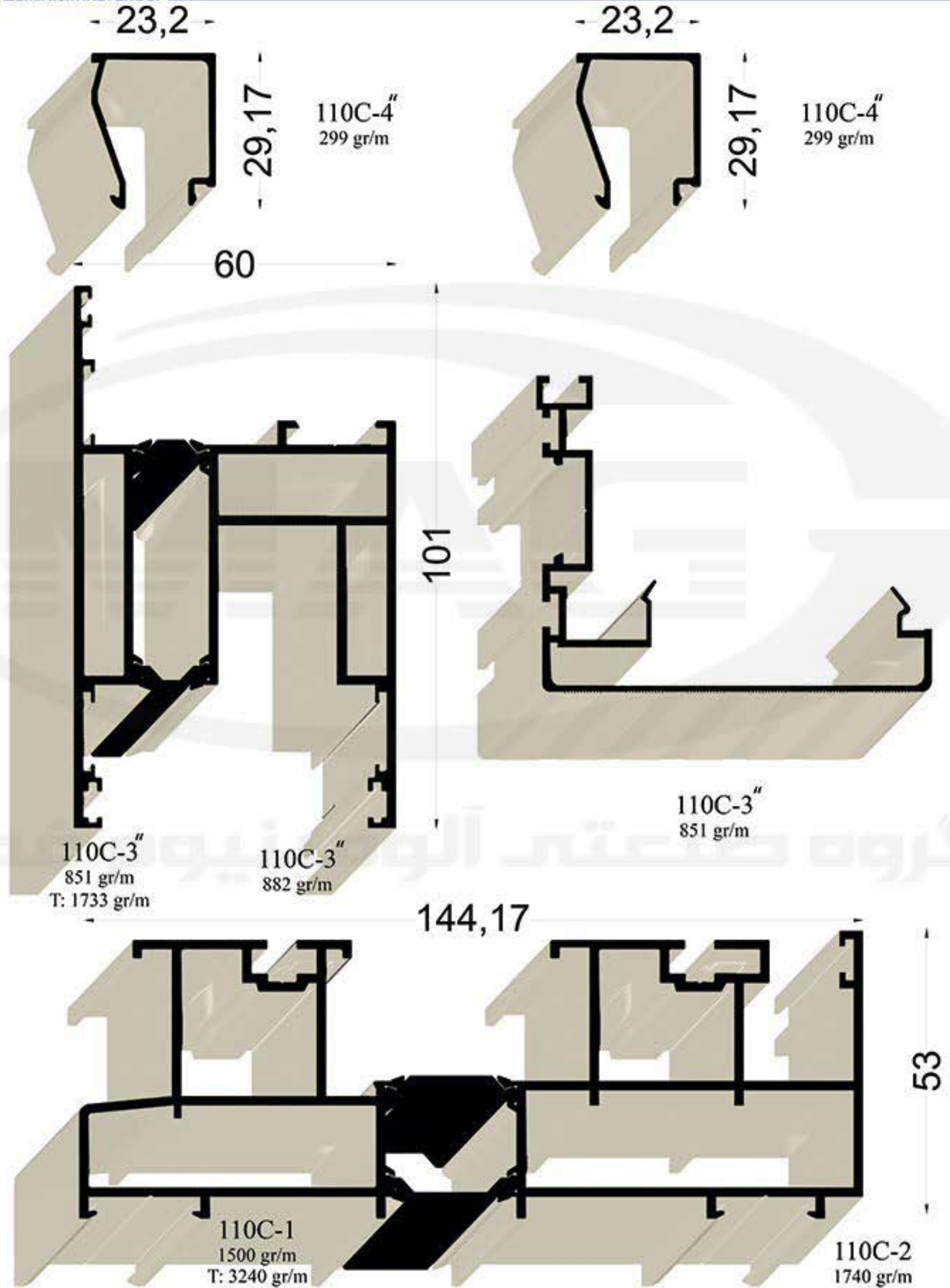


Thermal Break Duo rail Lift & Slide Door & Window System 143mm

گروه صنعتی آلومینیوم غدیر



Code:100-10/2RL(D.W)T143



سیستم درب و پنجره لیفت اند اسلاید سه ریل ترمال بریک ۲۲۰ میلی متر

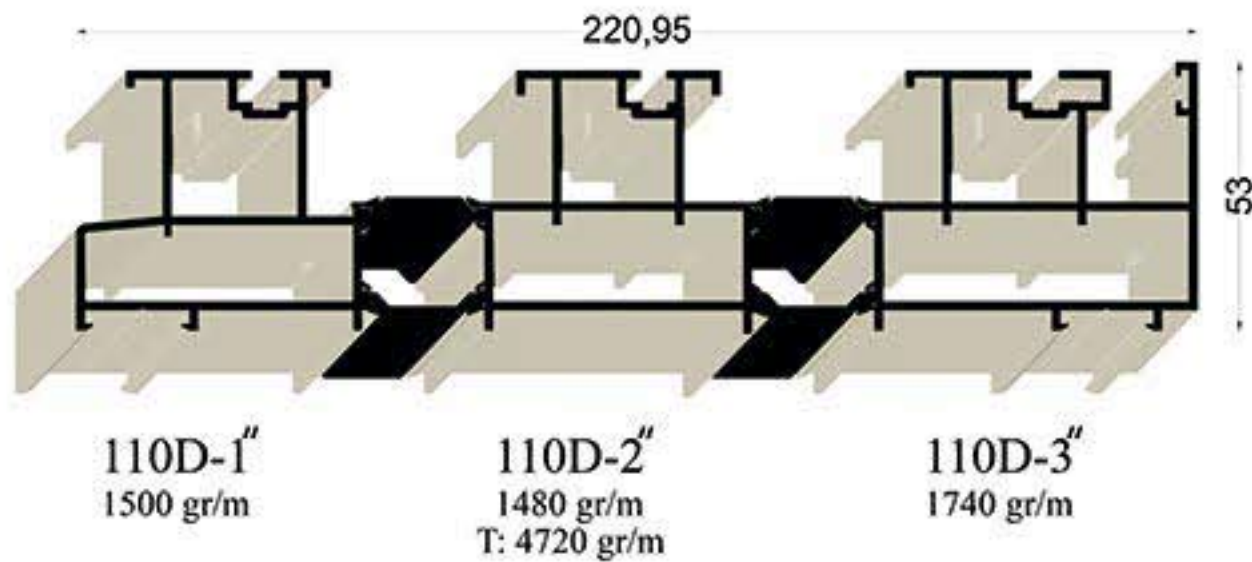
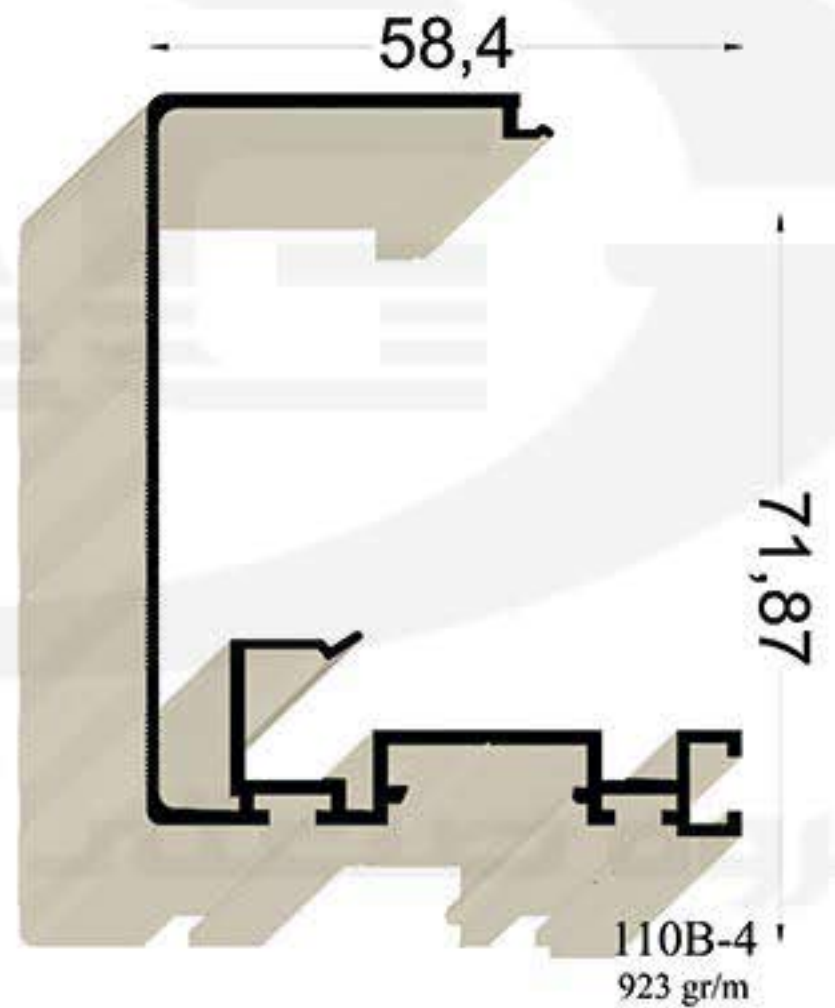
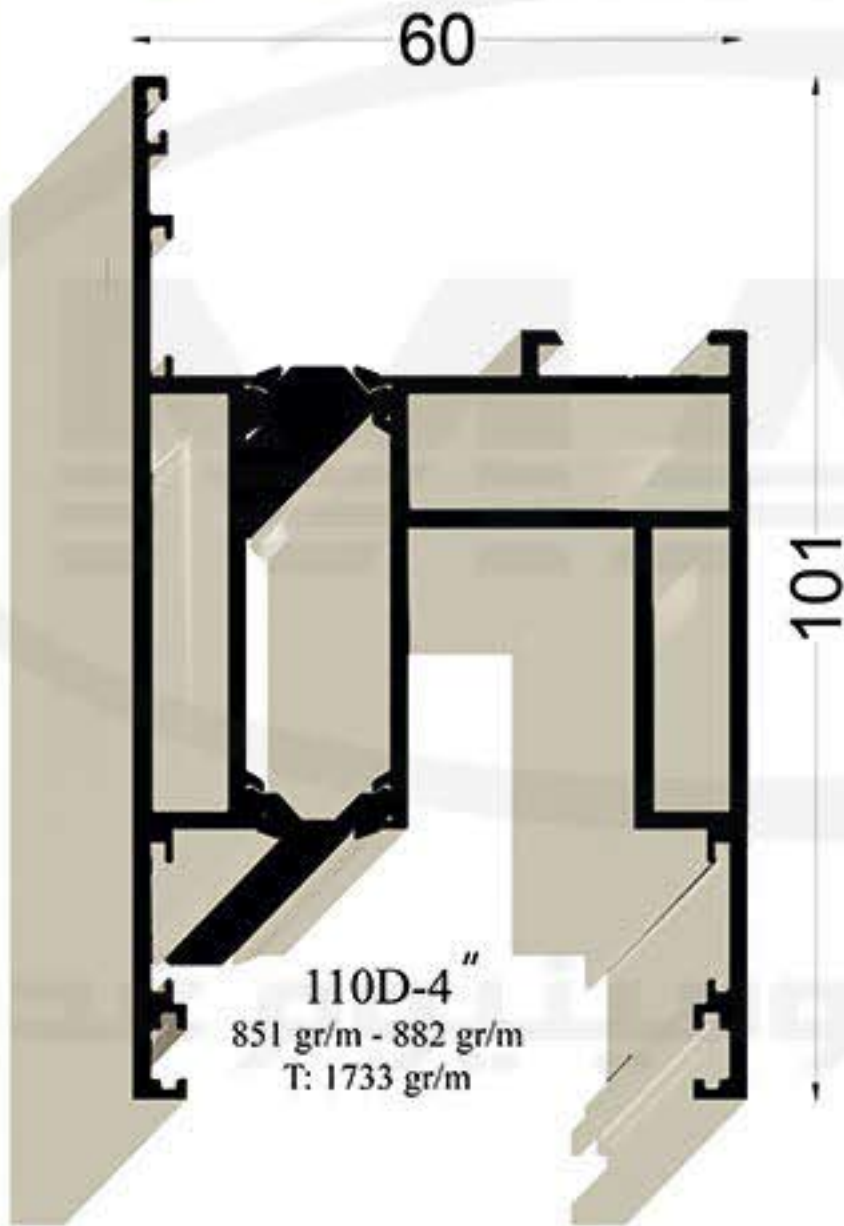
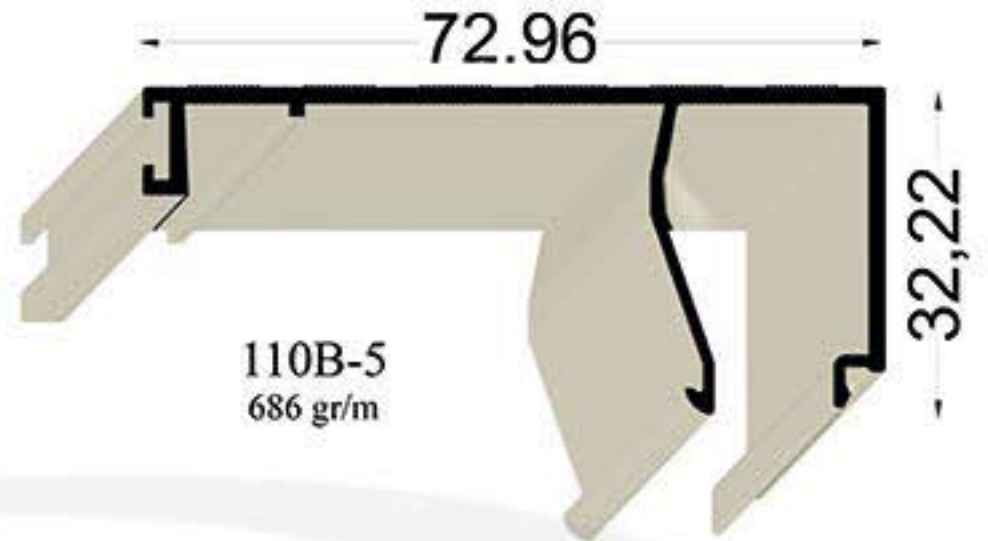
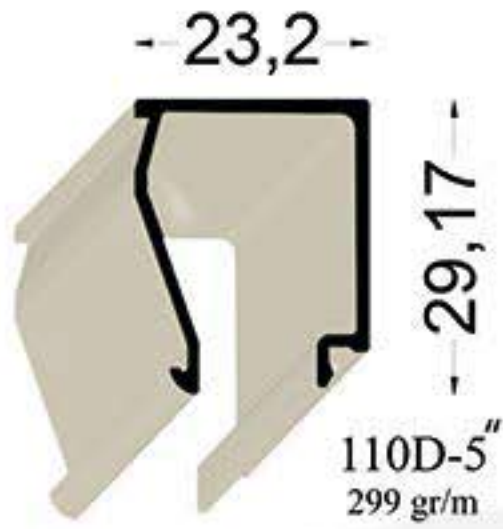


Thermal Break Tri rail Lift & Slide Door & Window System 220mm

گروه صنعتی آلومینیوم غدیر



Code:100-10/3RL(D.W)T220

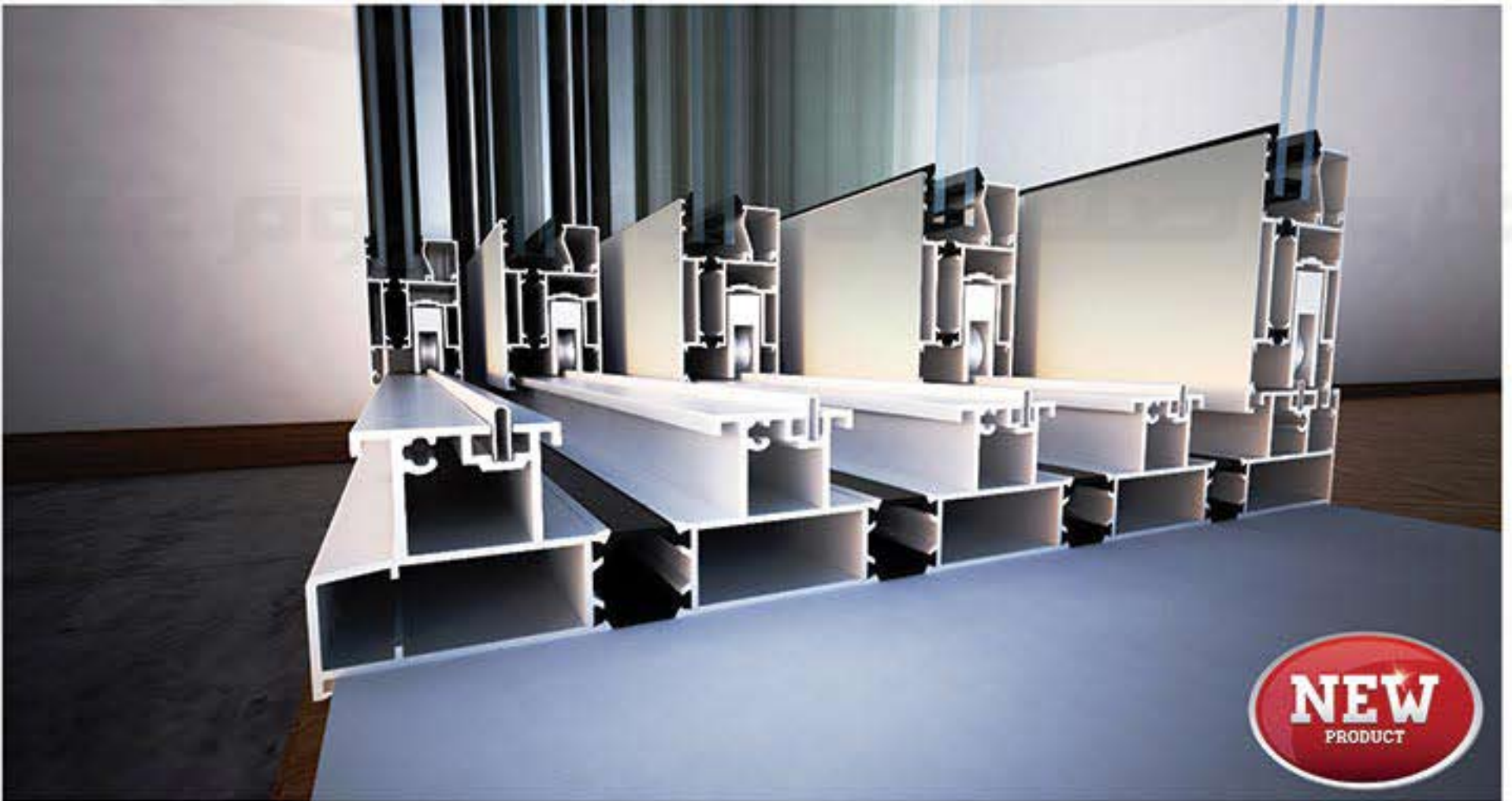


سیستم درب و پنجره لیفت اند اسلاید چند ریل (مولتی ریل) ترمال بریک

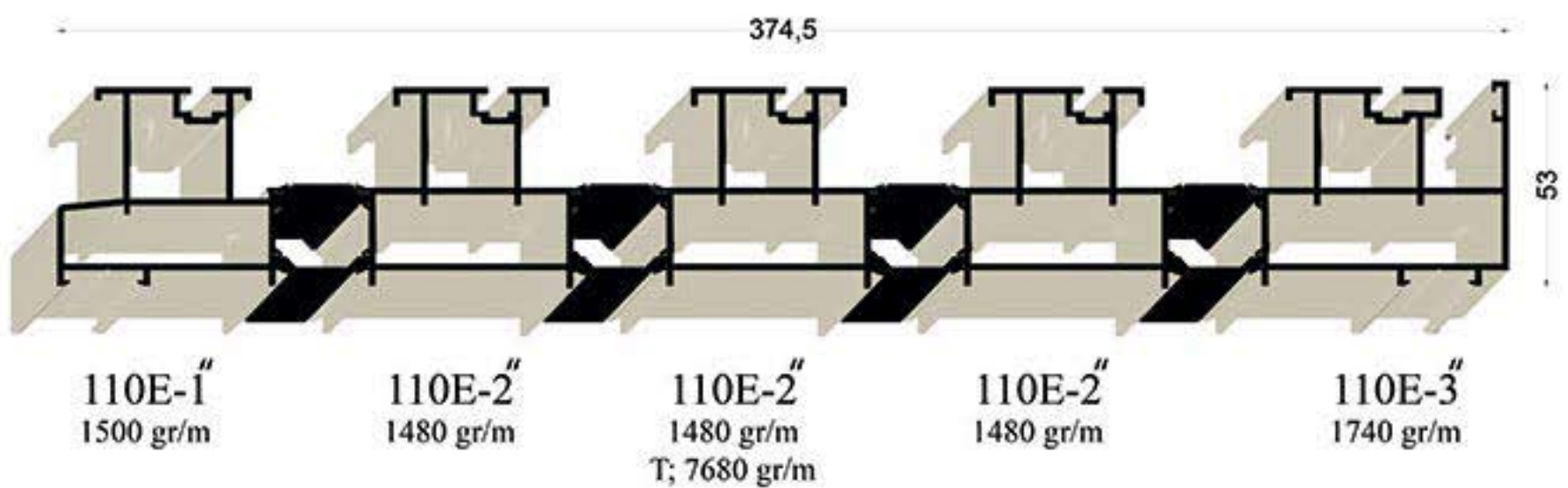
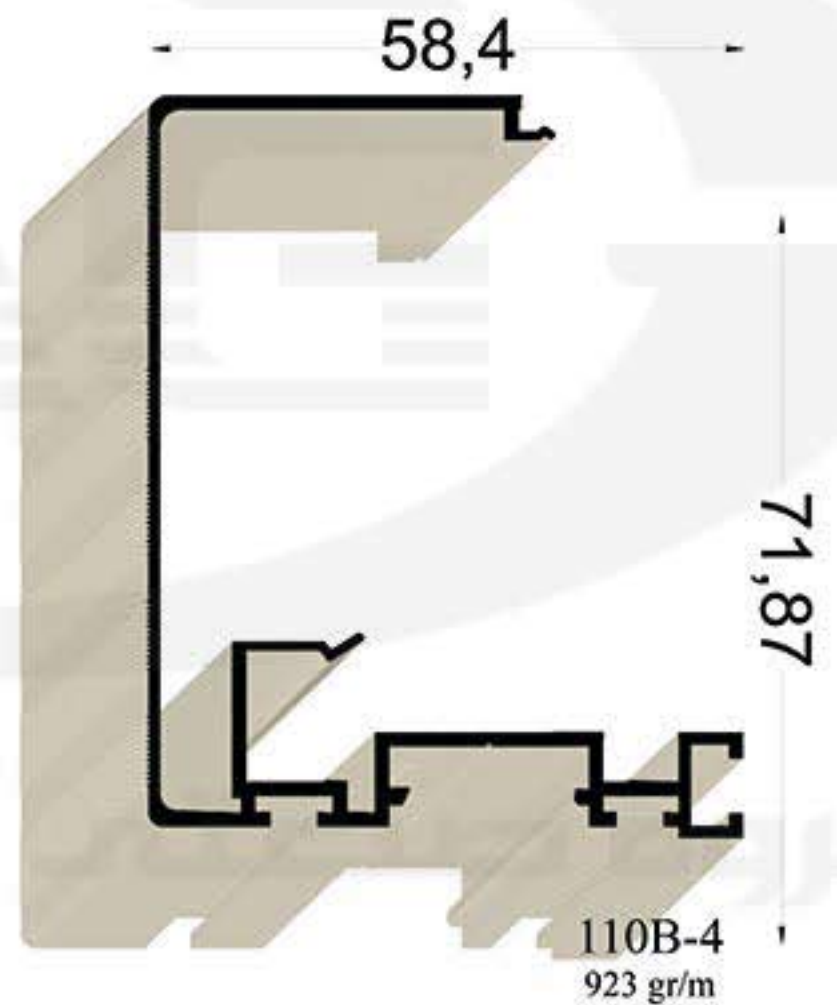
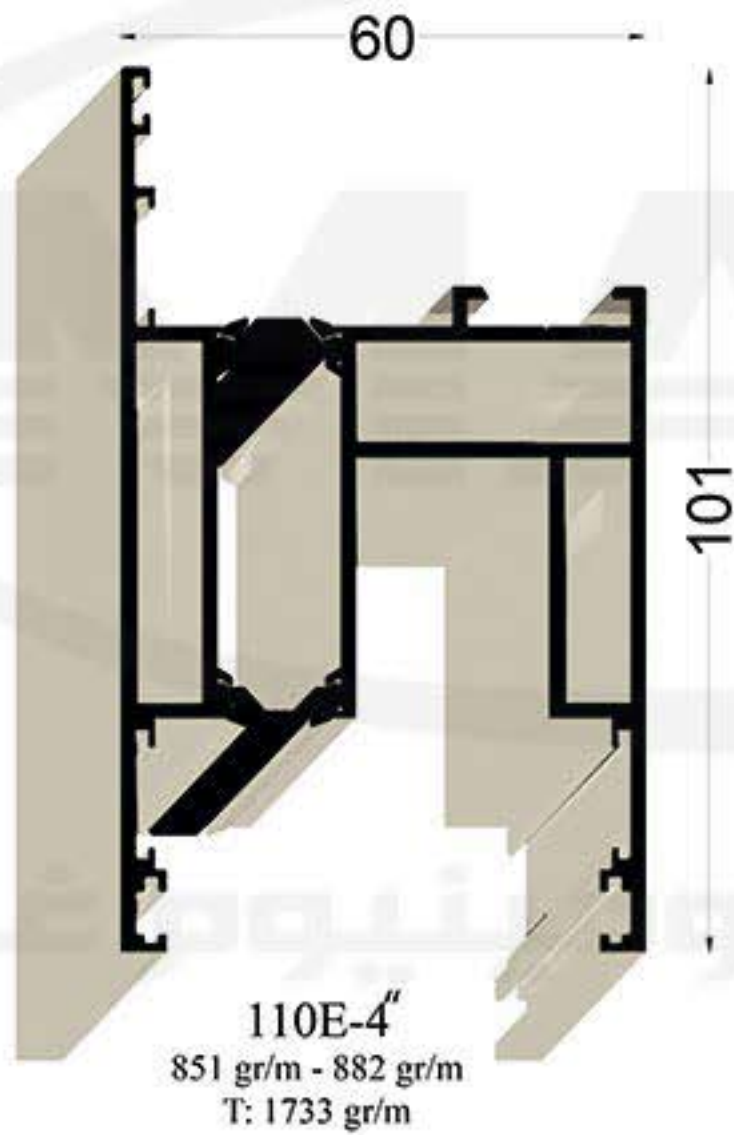
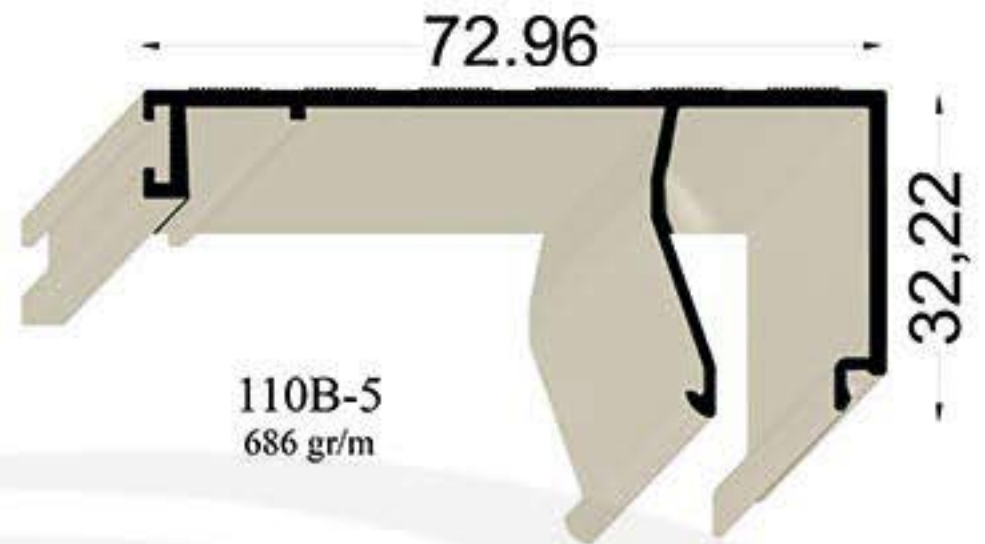
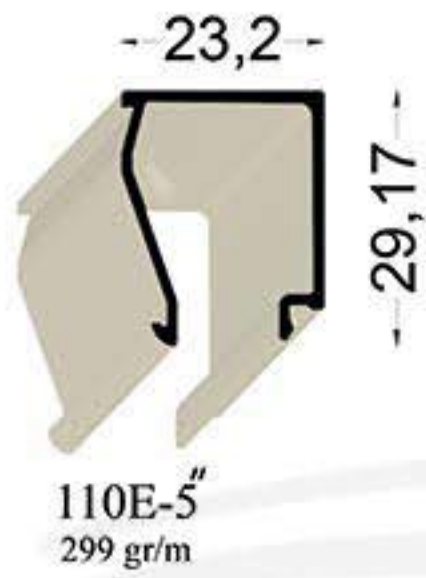


Thermal Break Multirail Lift & Slide Door & Window System

گروه صنعتی آلومینیوم غدیر



Code:100-10/MRL(D.W)T





Code:101E
سیستم لوله ای
Fence Tube System
Page: 92



Code:101A
سیستم لامل نما
Lamel Facade System
Page: 66



Code:101F
سیستم لوله شیشه ای
Glass Tube System
Page: 98



Code:101B
سیستم لوزر نما
Lower Facade system
Page: 72



Code:101G
پروخیل های
درب شیشه ای
Glasses Door Profils
Page: 100



Code:101C
سیستم فریم لس
Frame Less System
Page: 80



Code:101H
سیستم نما
Facade System
Page: 102



Code:101D
سیستم جام بالکنی
Balcony Cup System
Page: 88



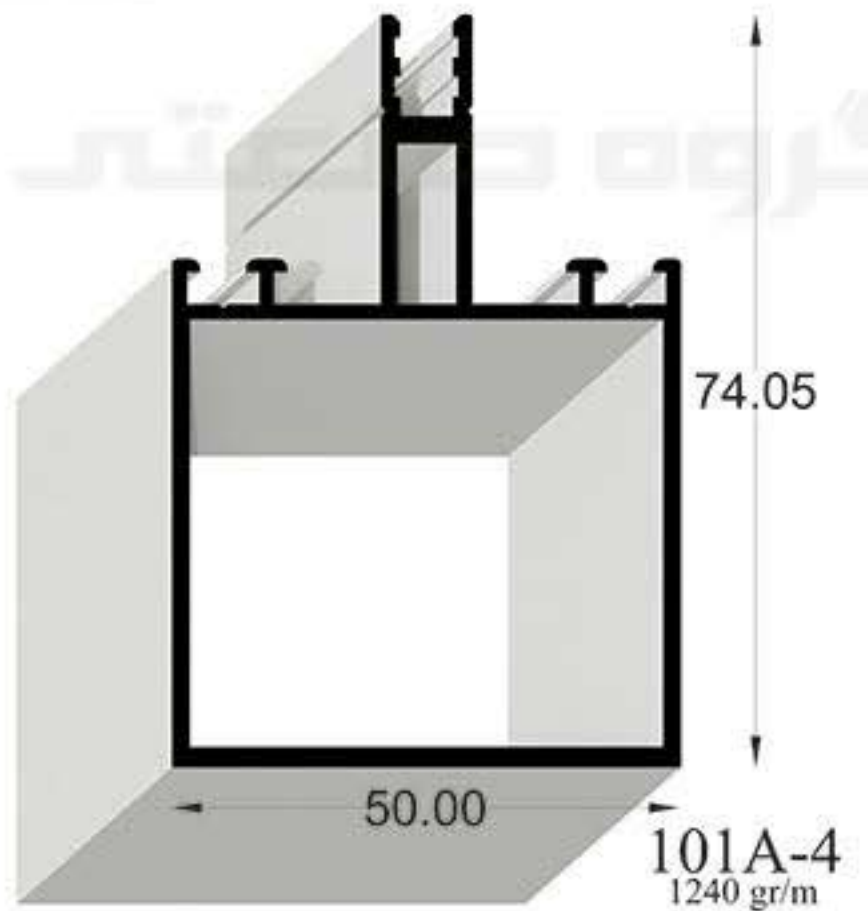
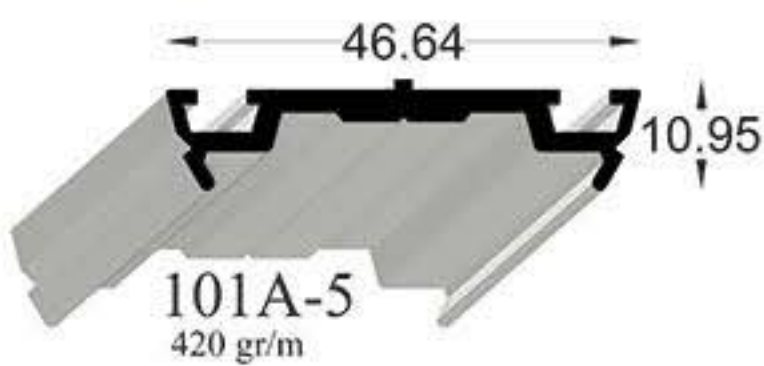
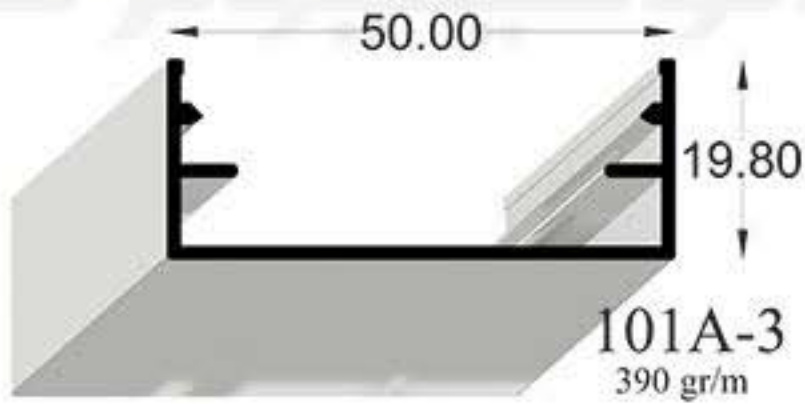
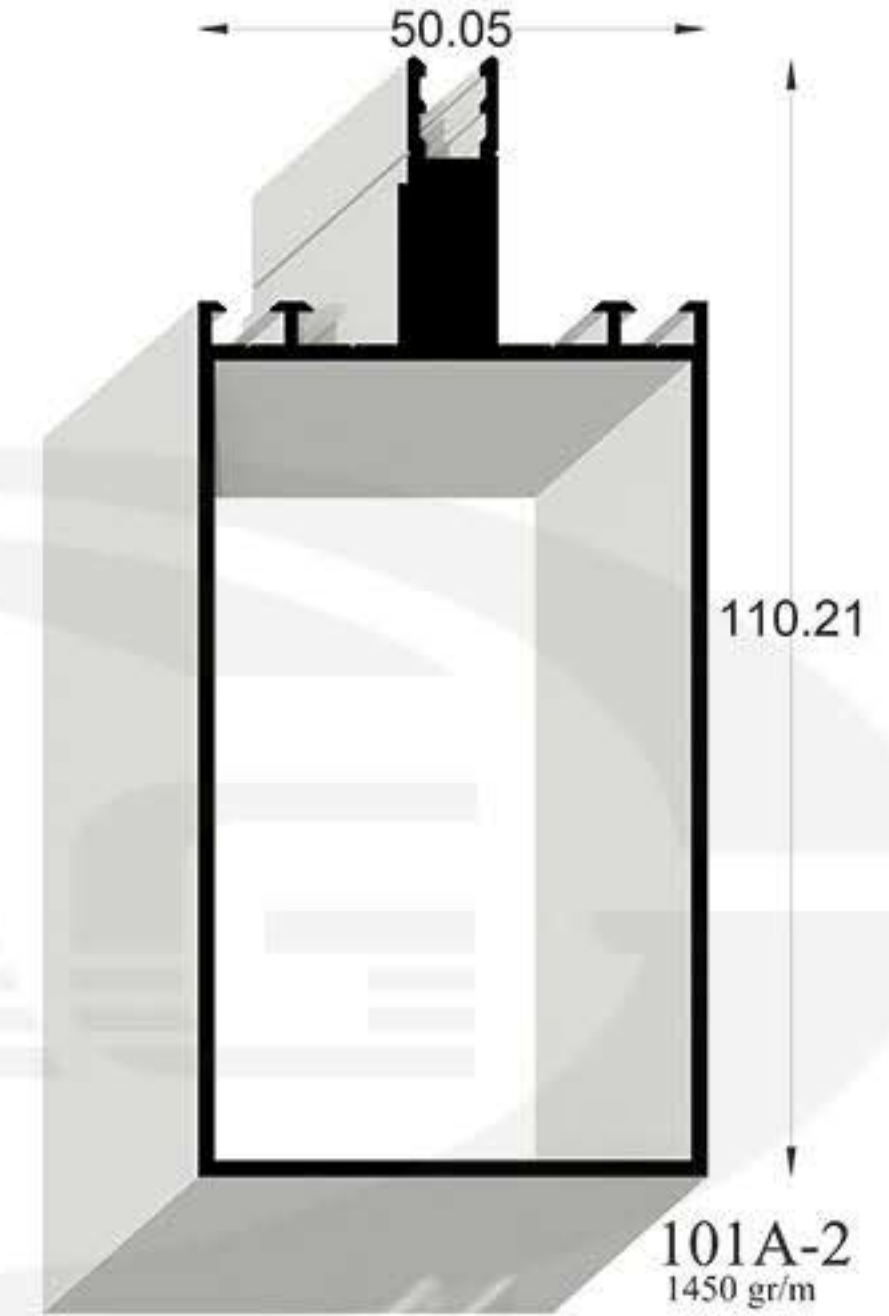
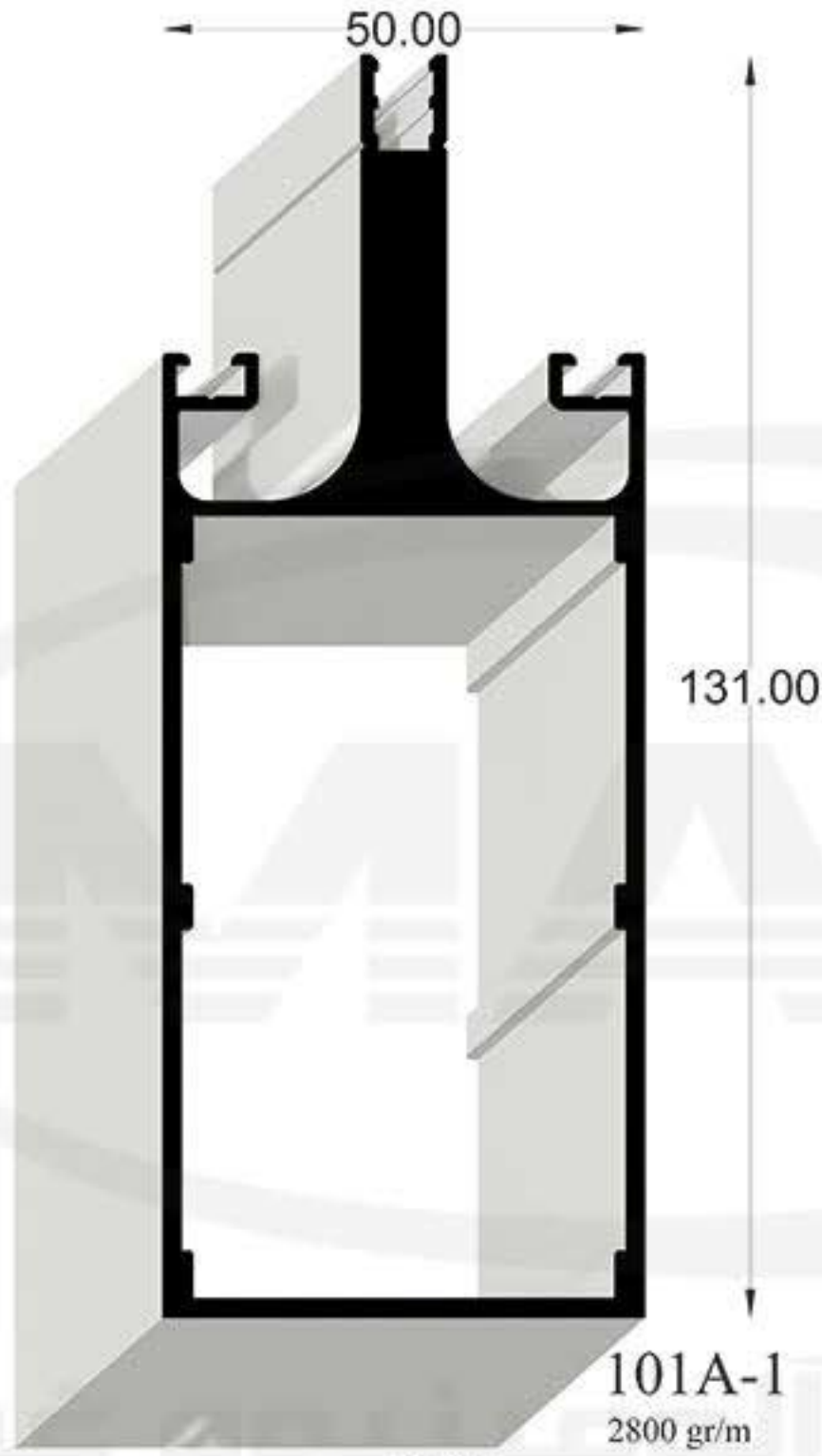
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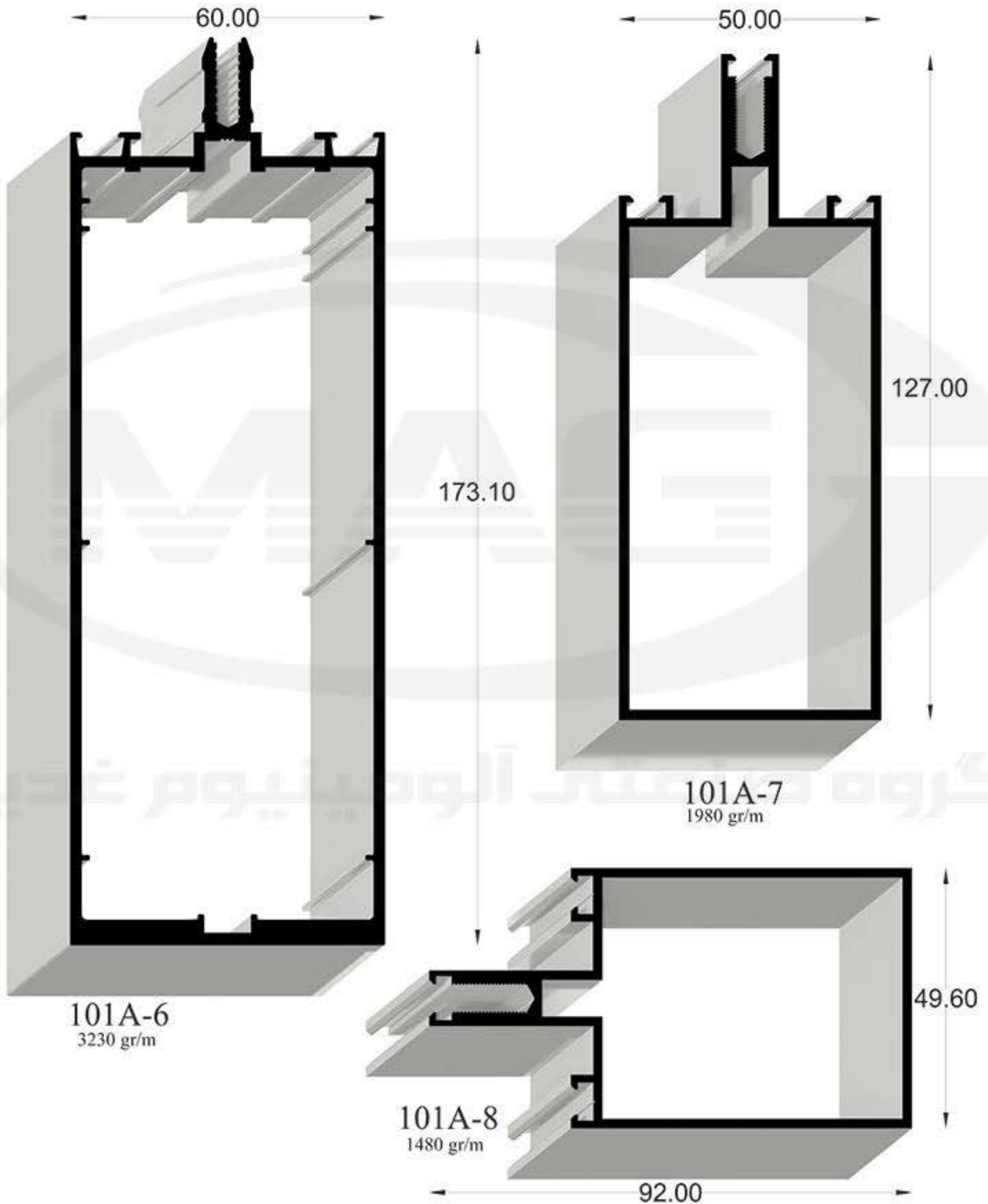
Building Facade

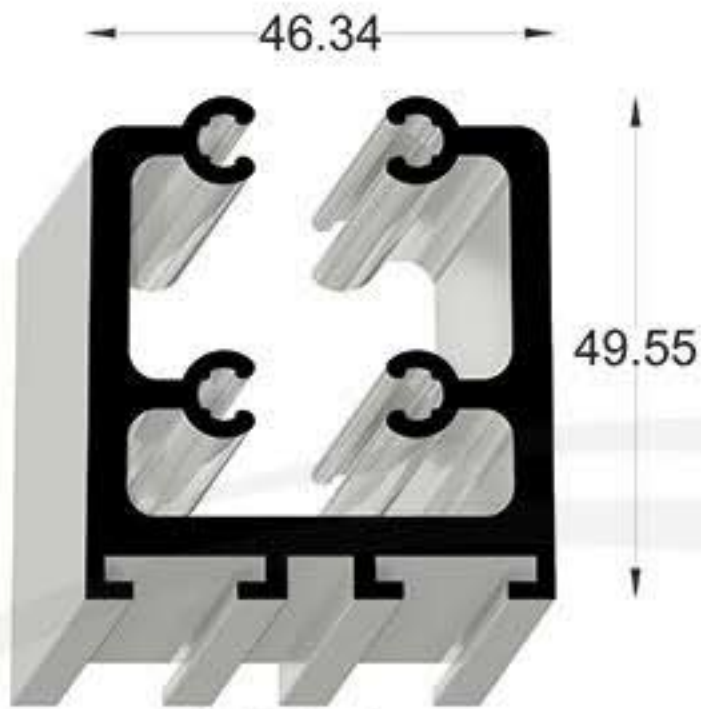




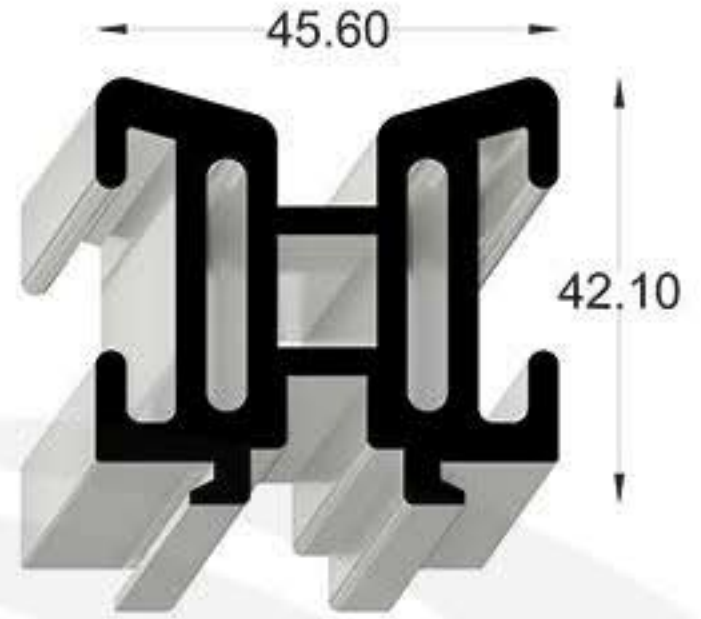
Code:101A



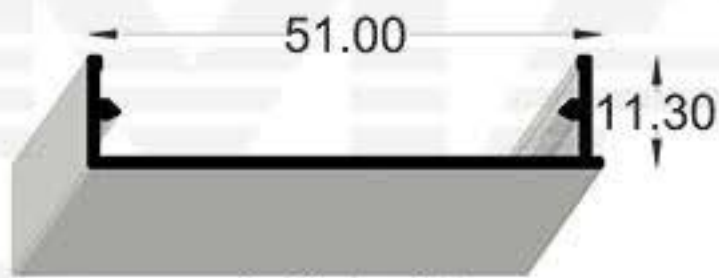




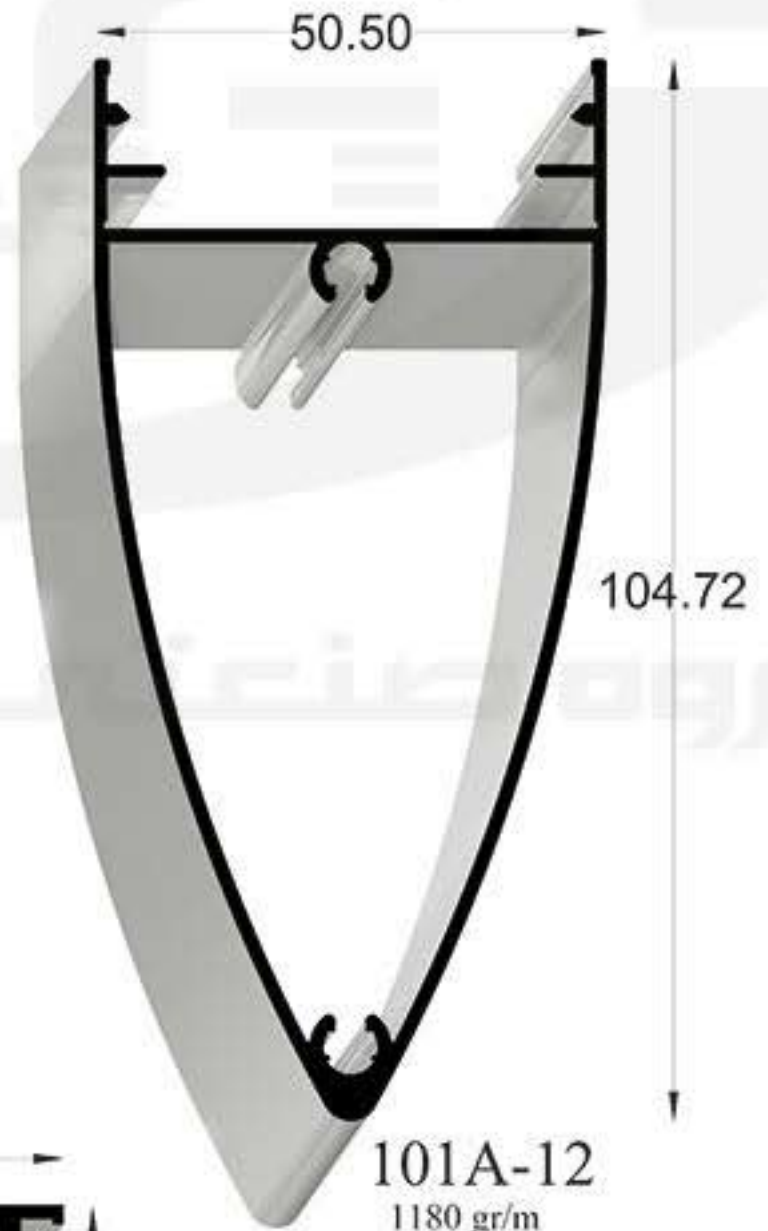
101A-9
1960 gr/m



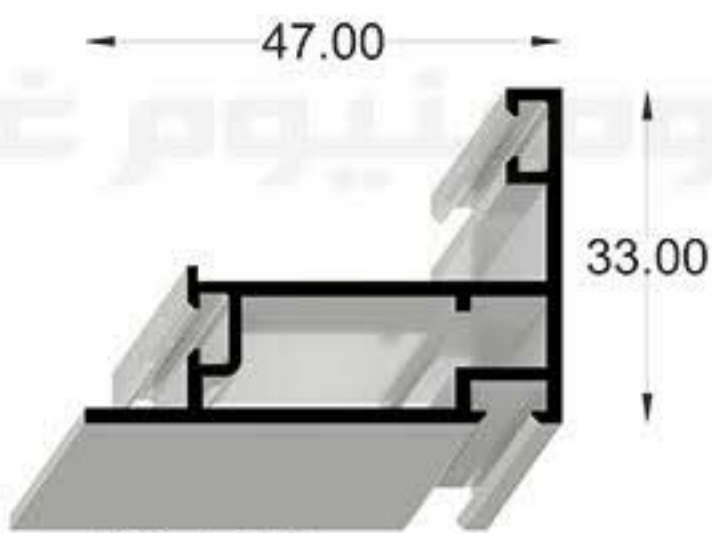
101A-10
2210 gr/m



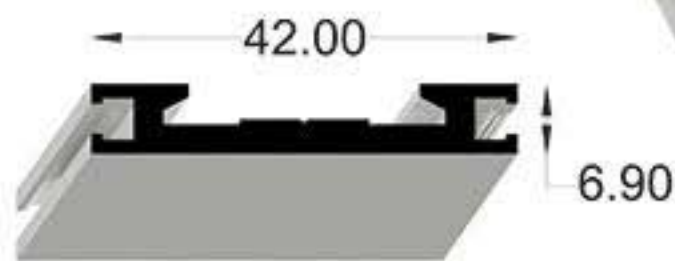
101A-11
270 gr/m



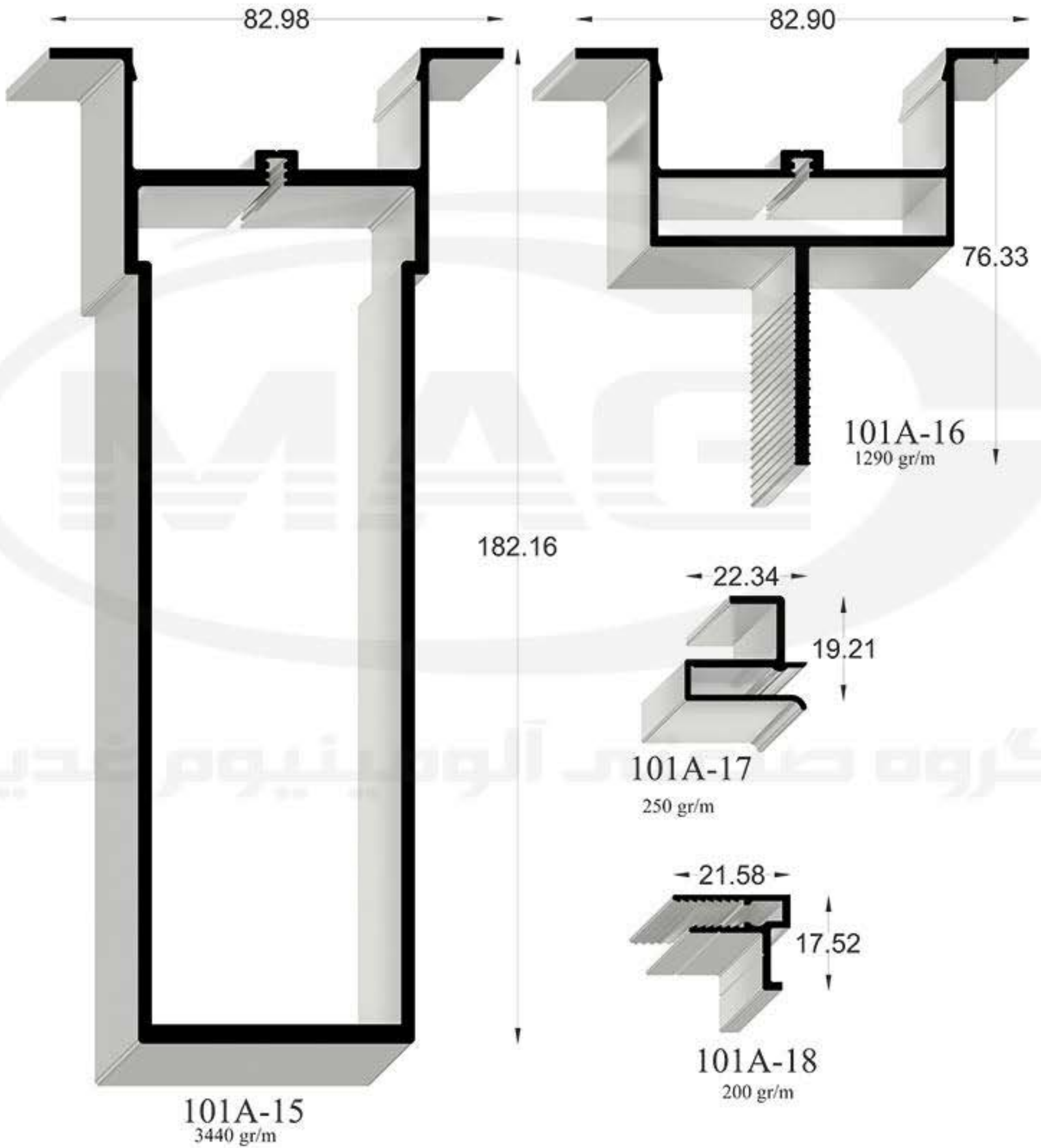
101A-12
1180 gr/m



101A-13
580 gr/m



101A-14
438 gr/m





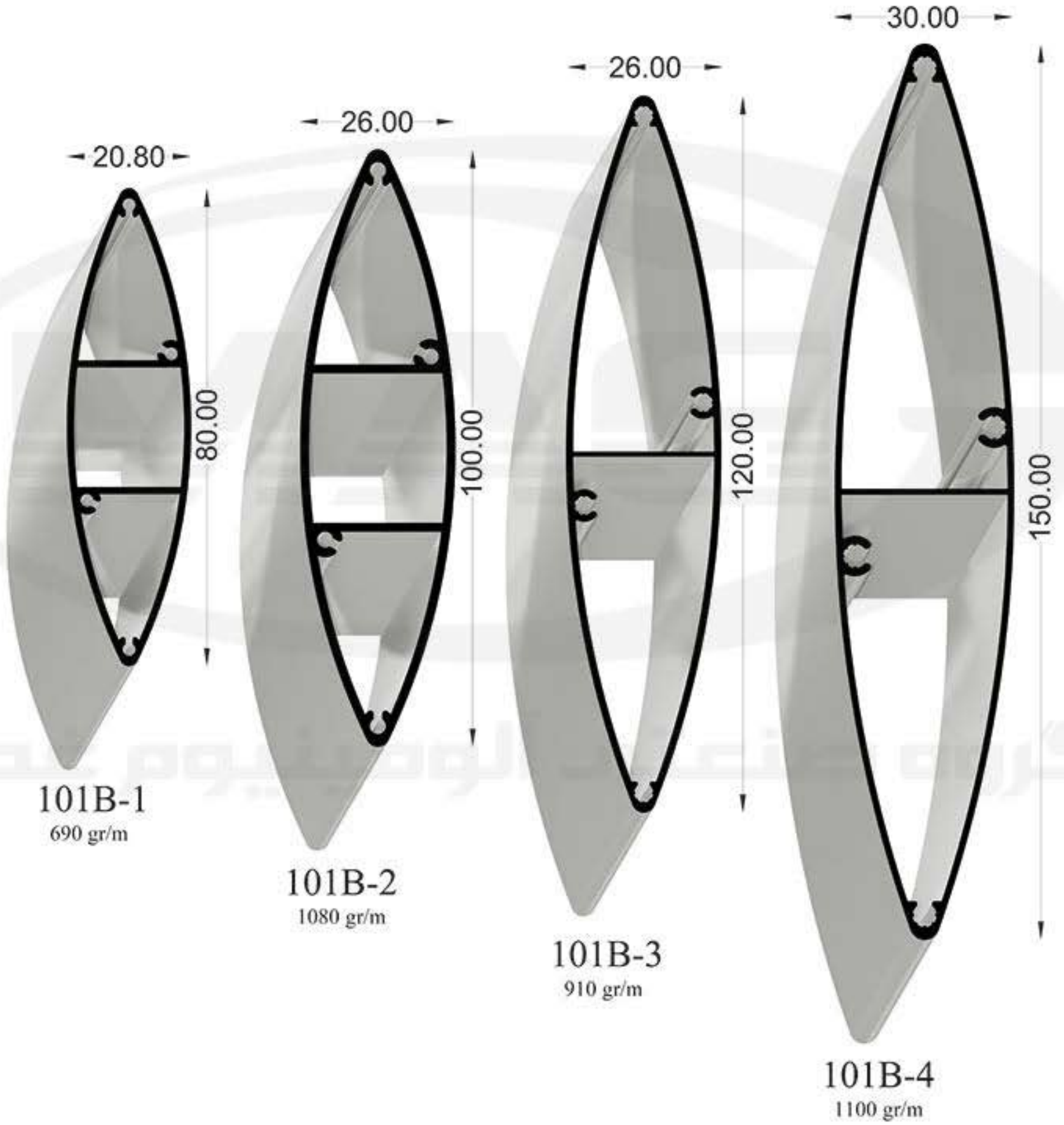
Code 101A

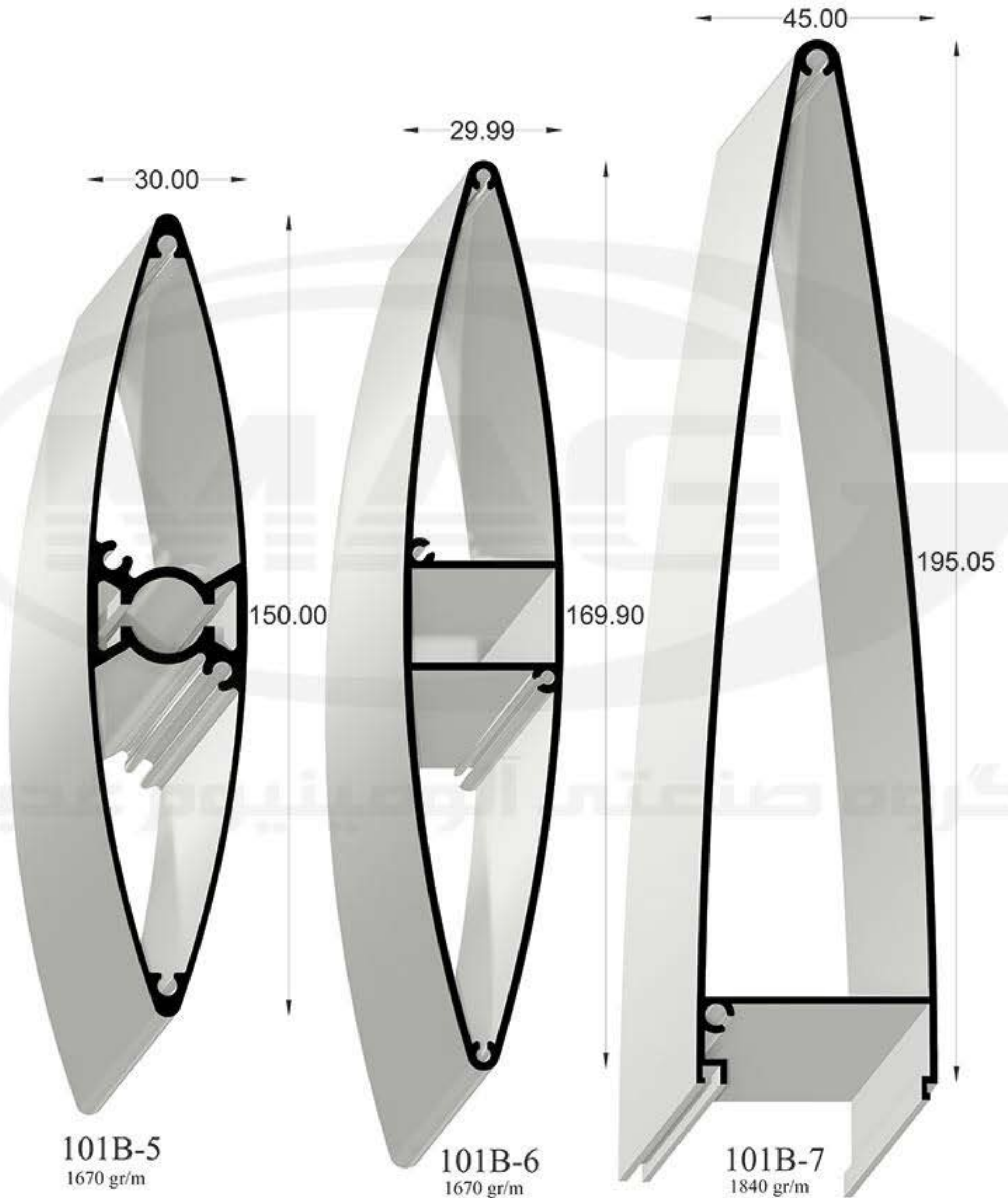
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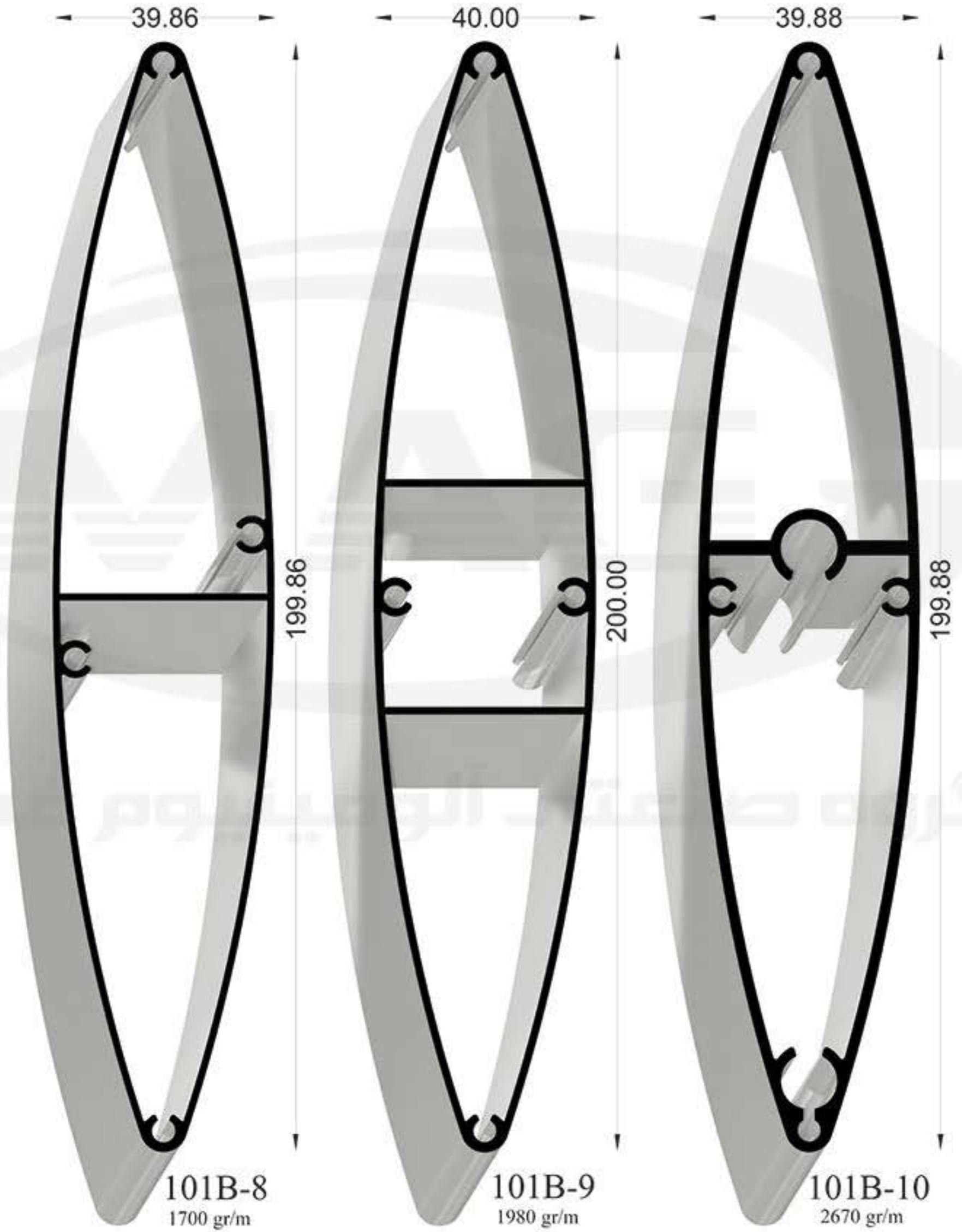


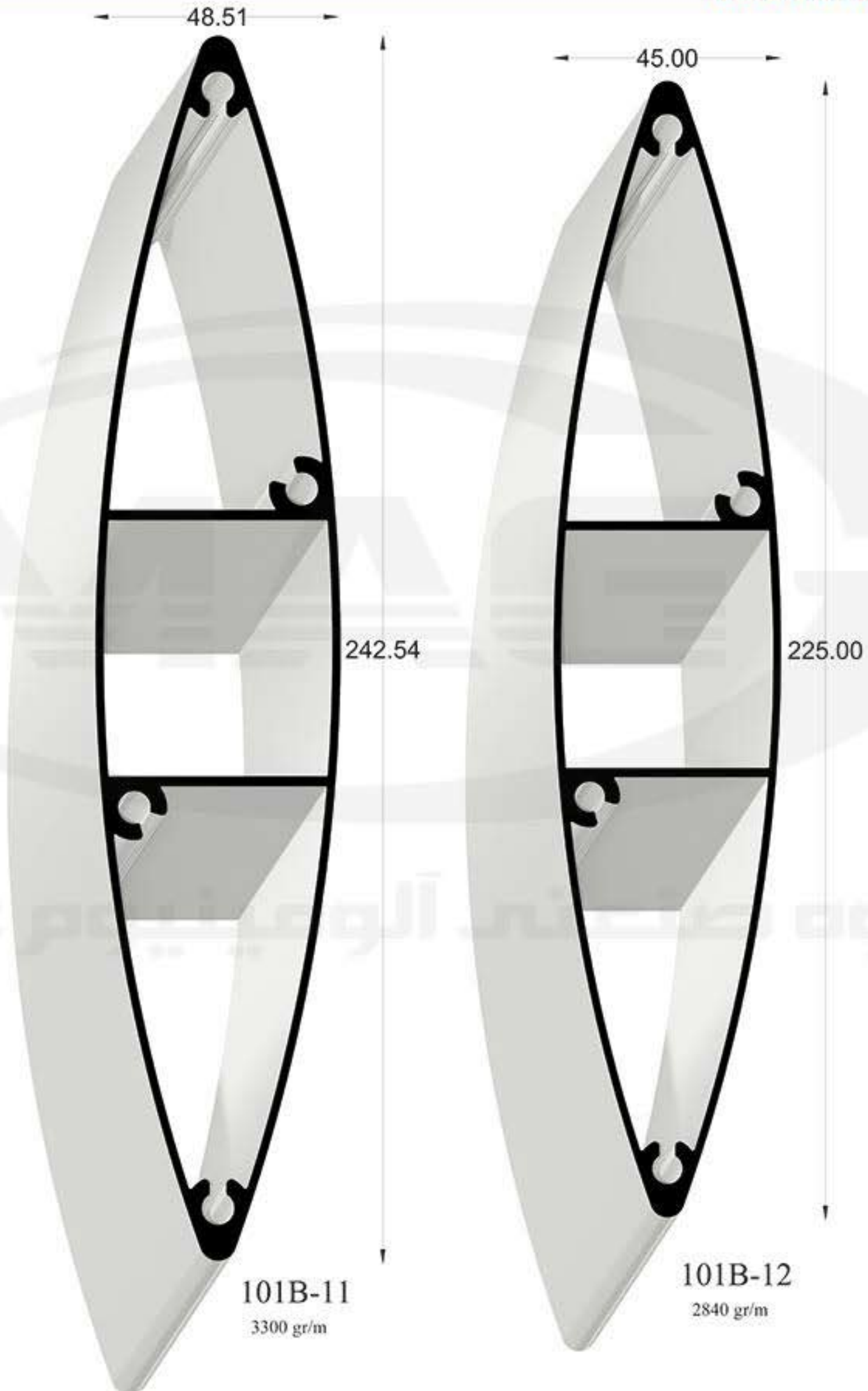


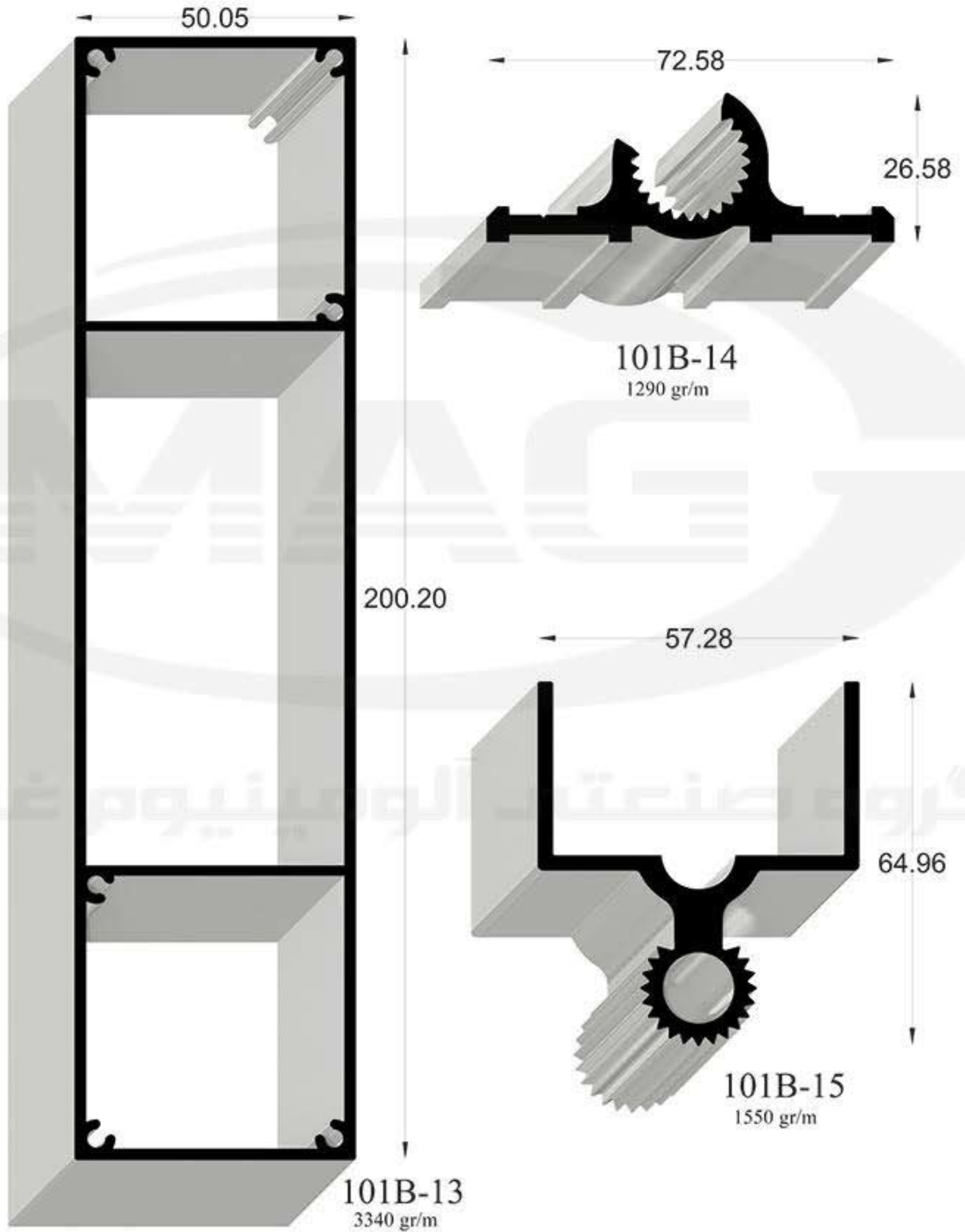
Code:101B

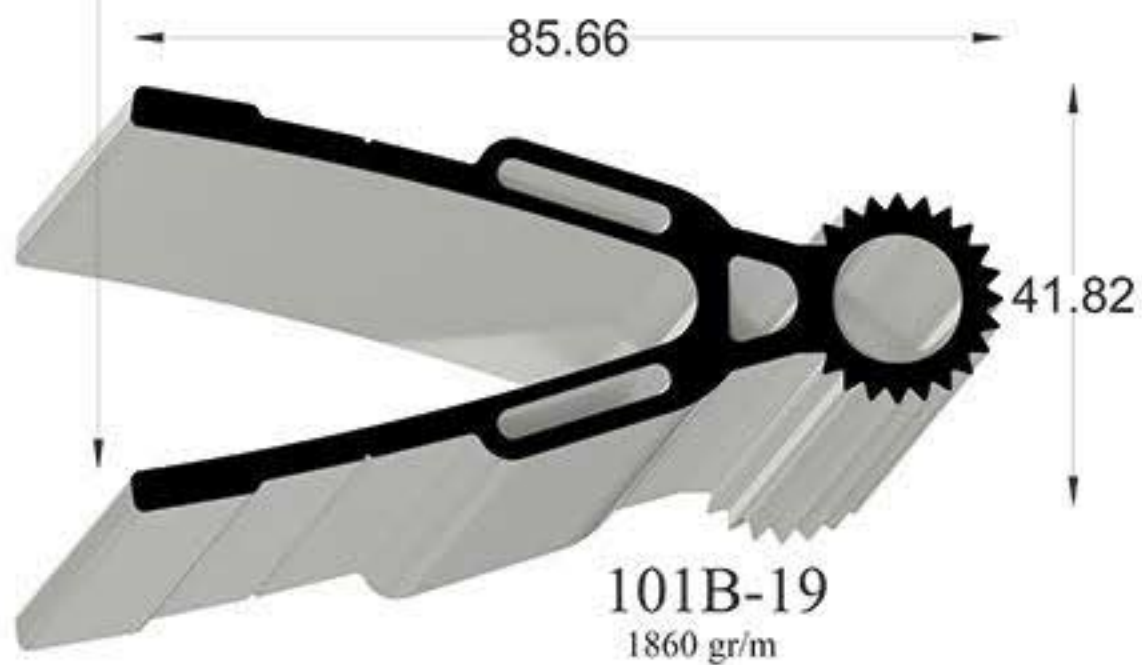
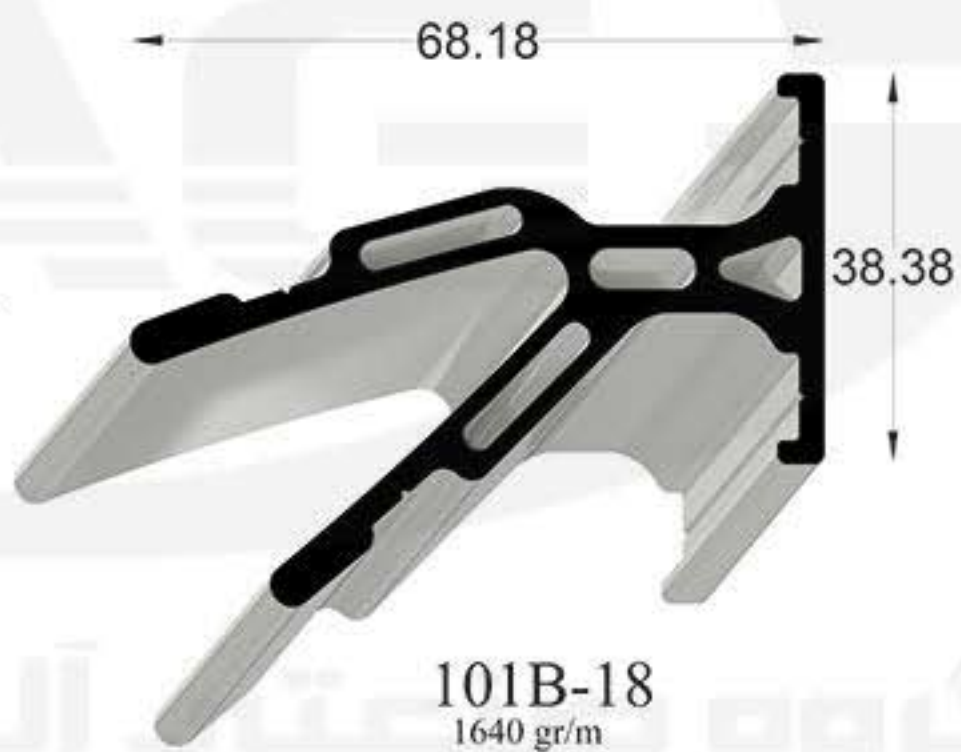
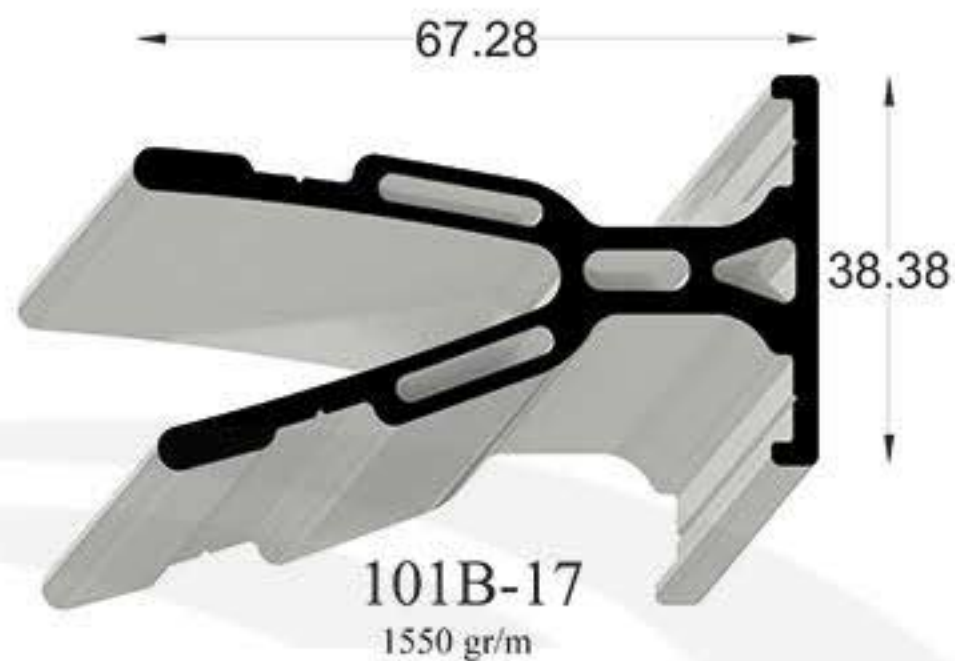
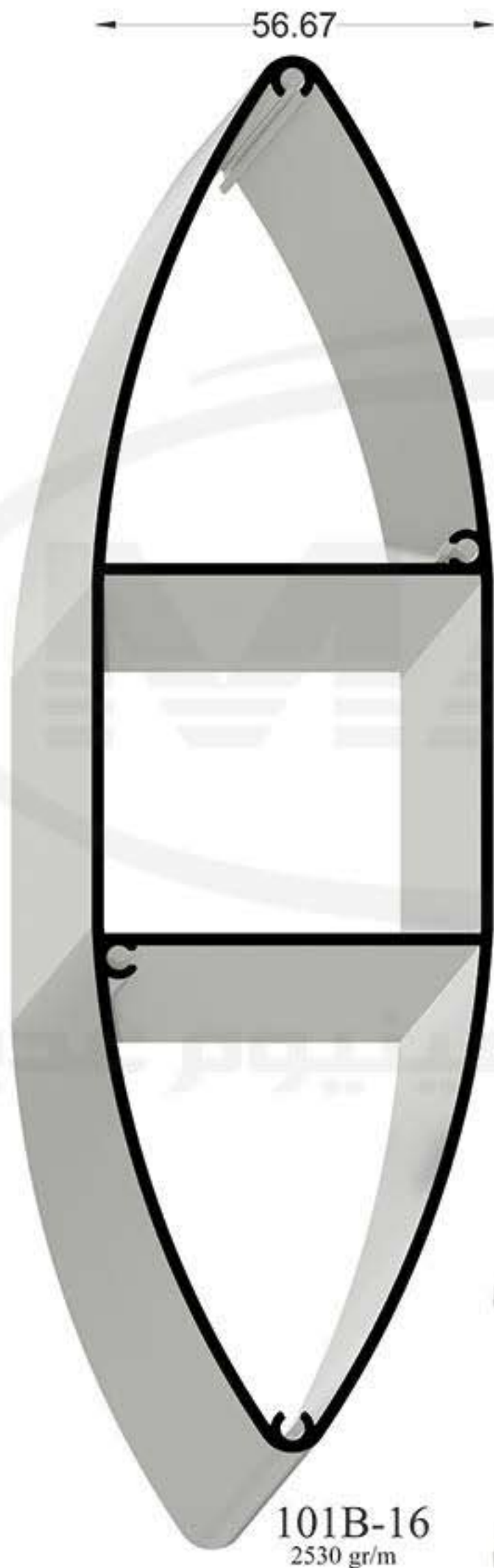














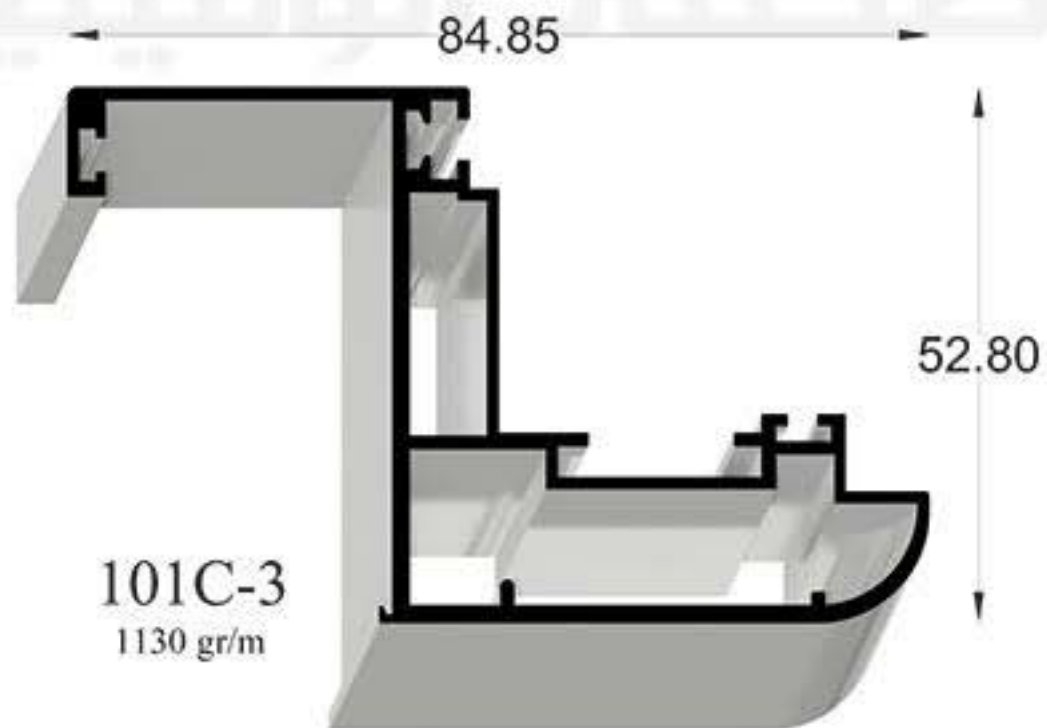
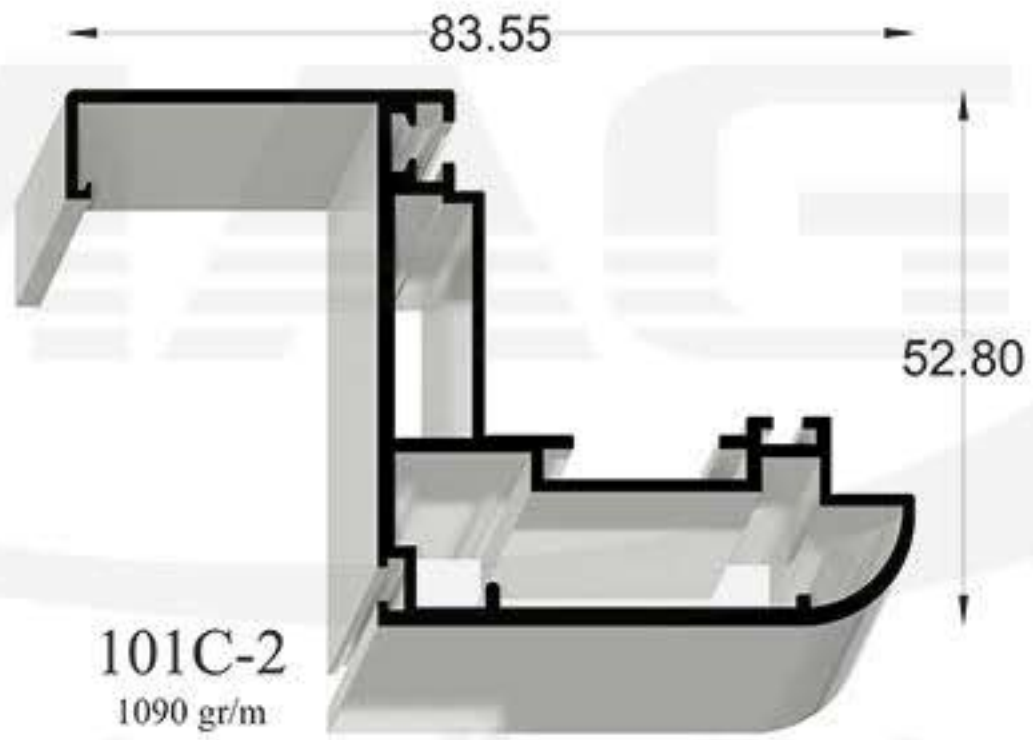
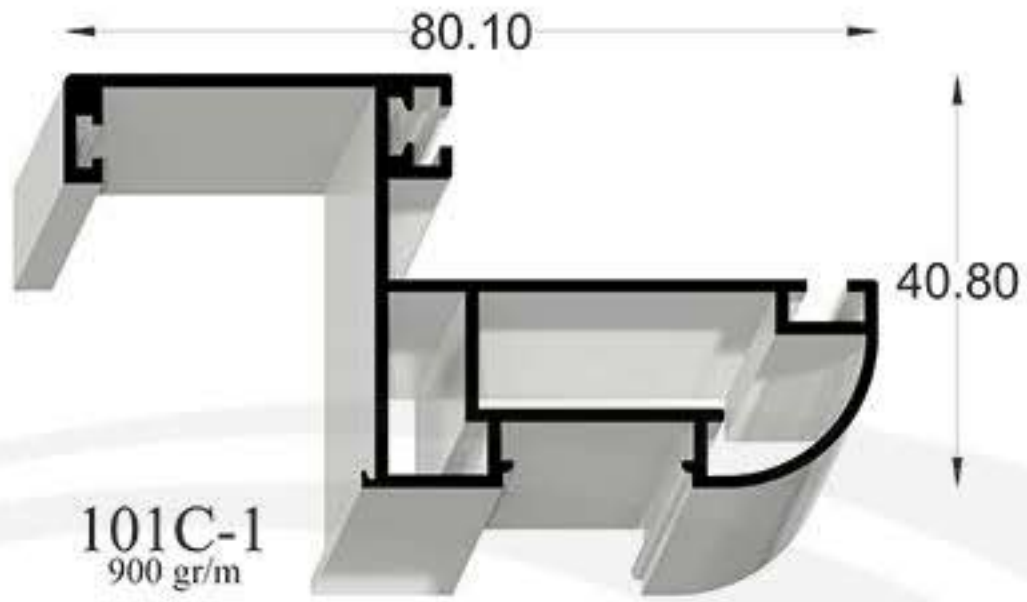
Code 1001B

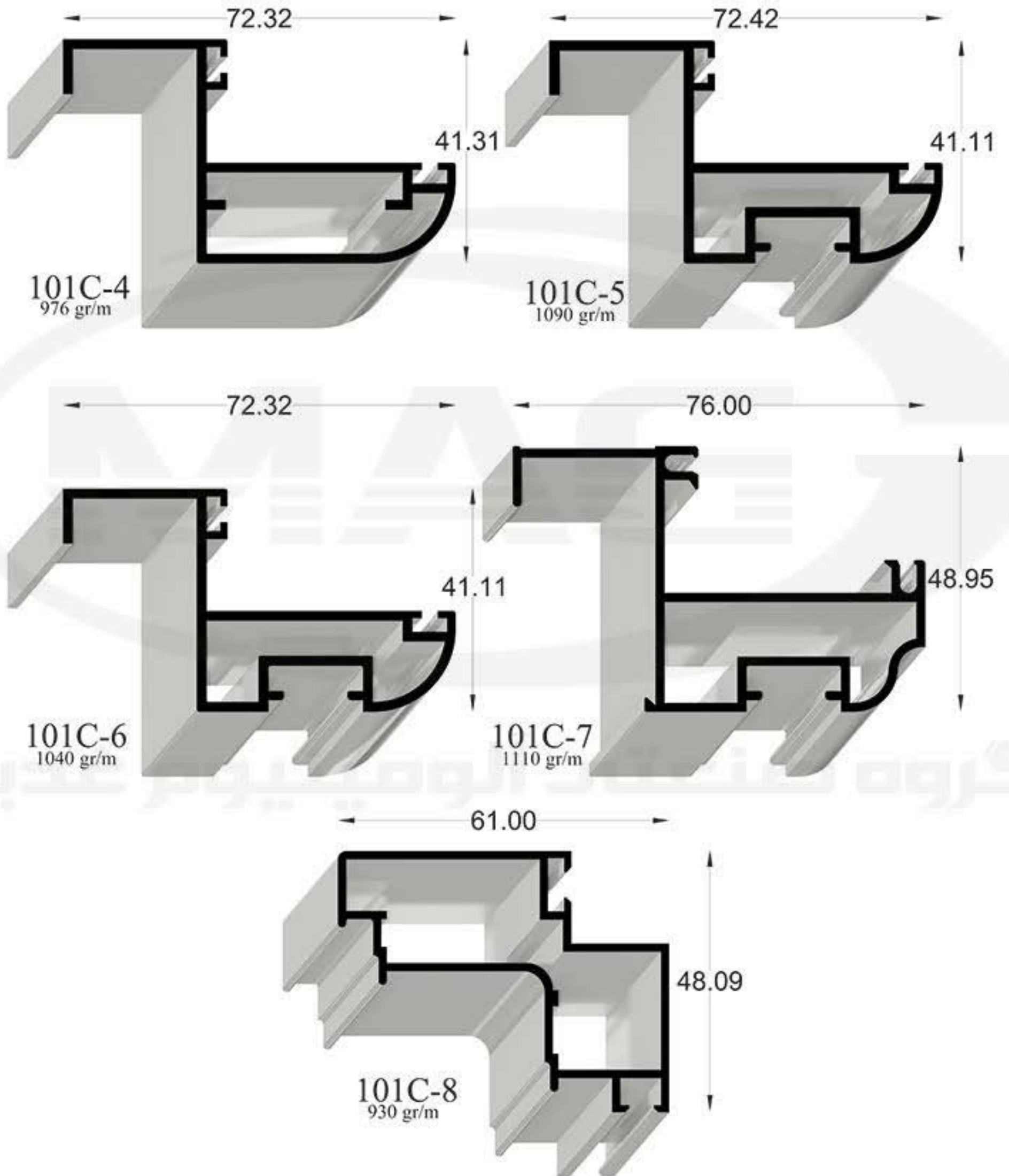
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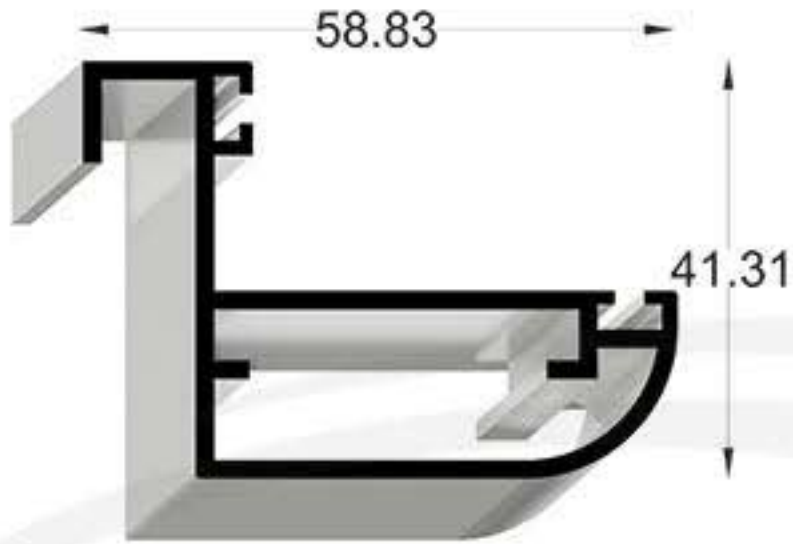




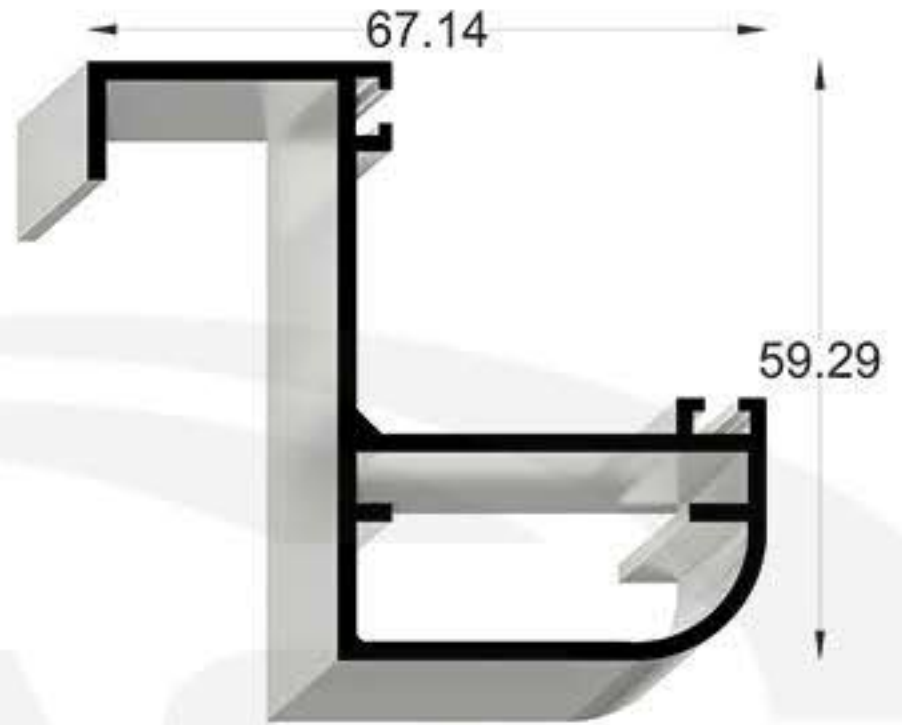
Code:101C



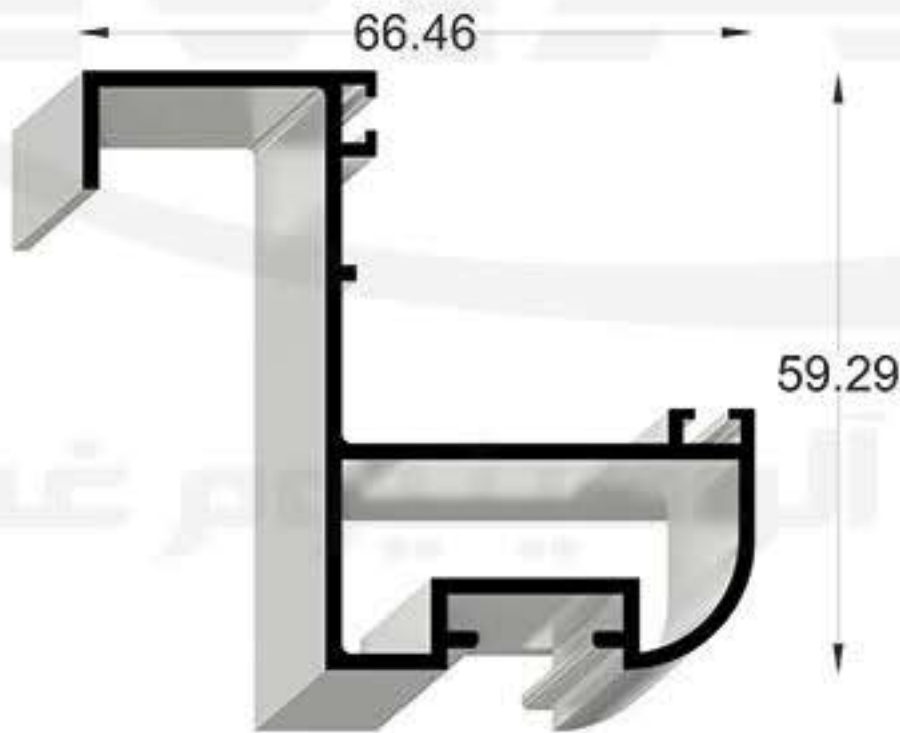




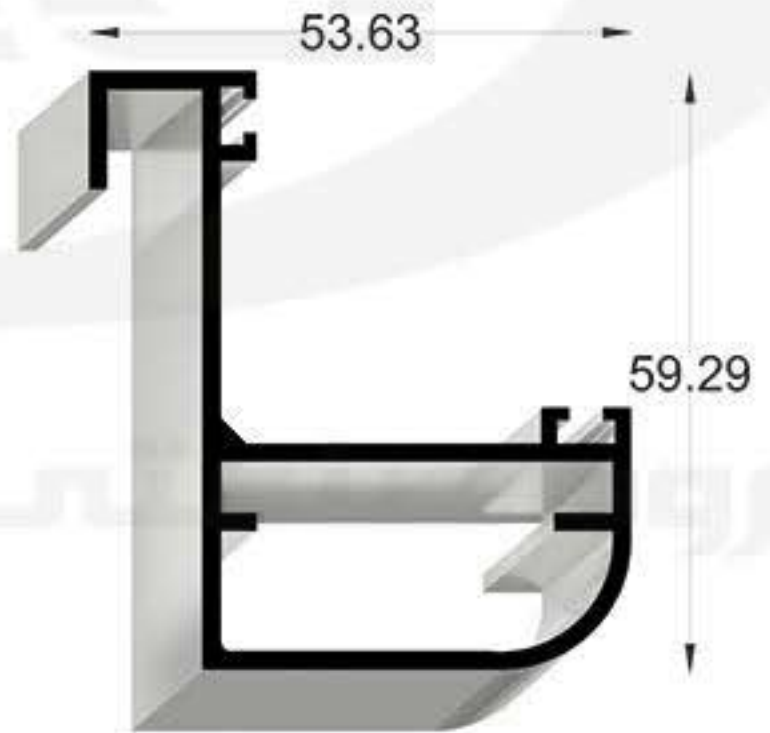
101C-9
910 gr/m



101C-10
1070 gr/m



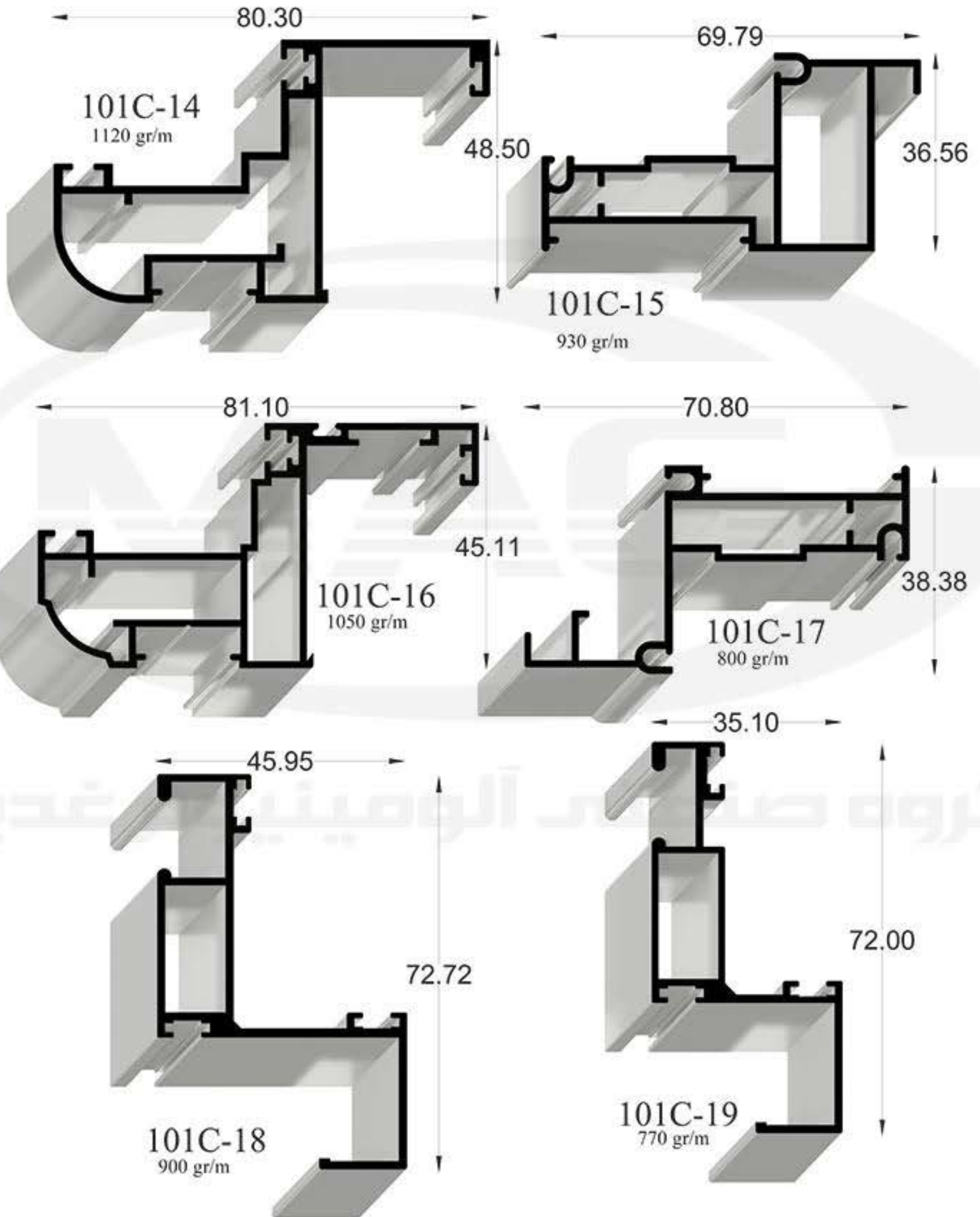
101C-11
980 gr/m

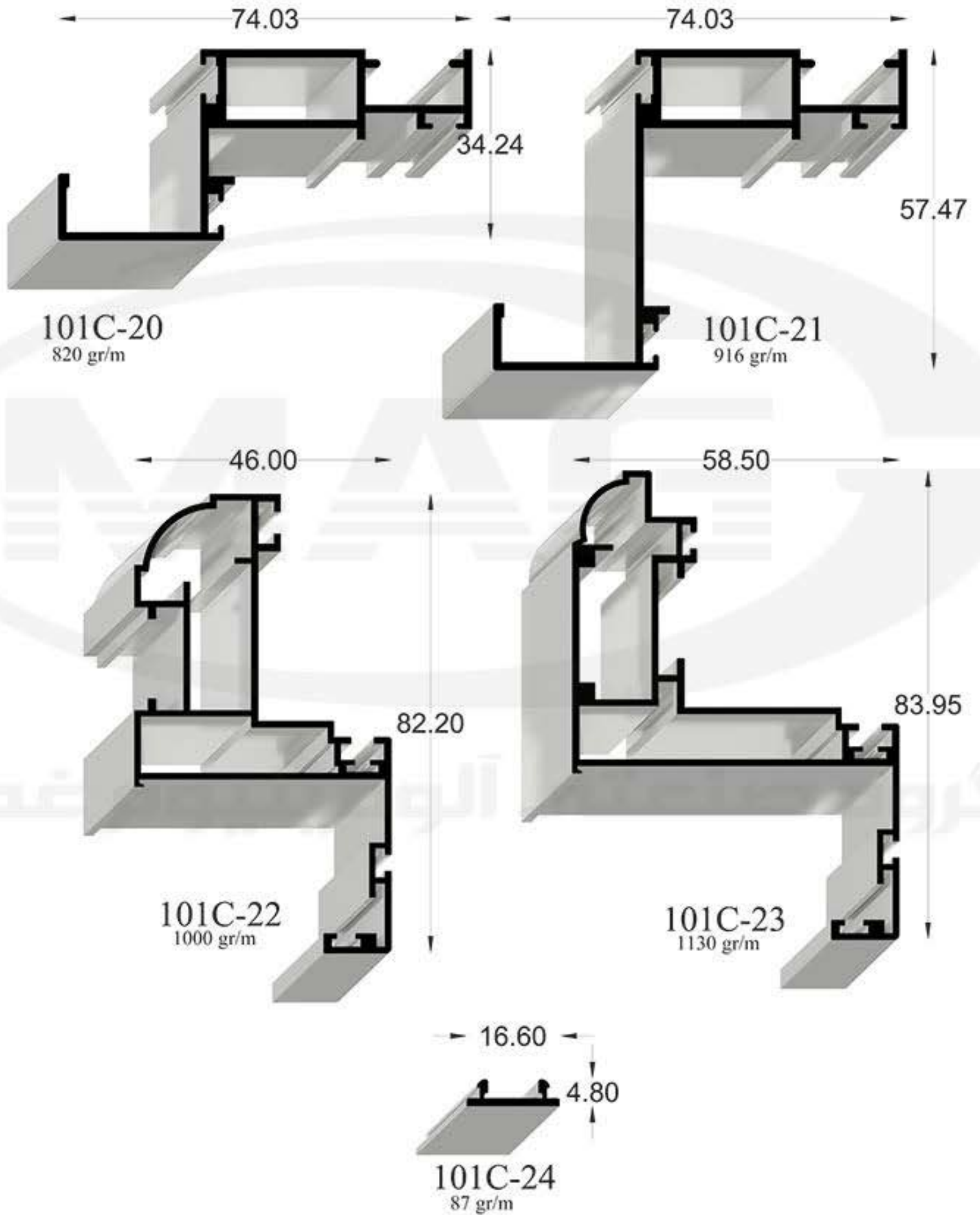


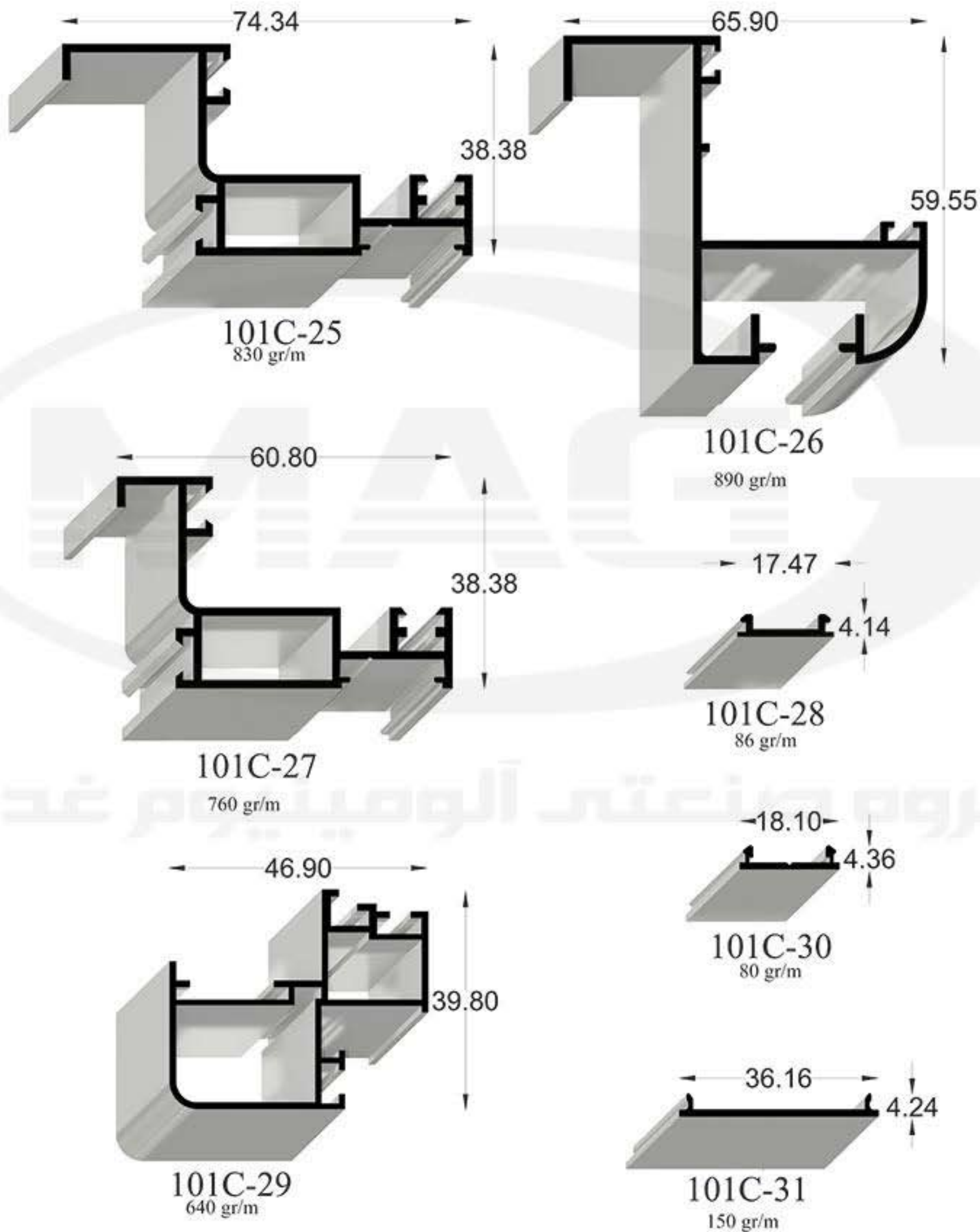
101C-12
1000 gr/m

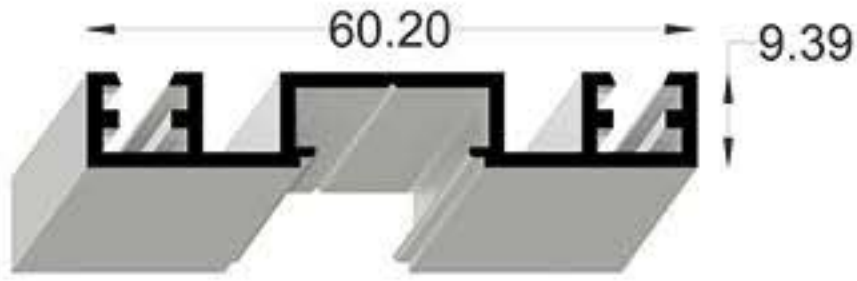


101C-13
110 gr/m

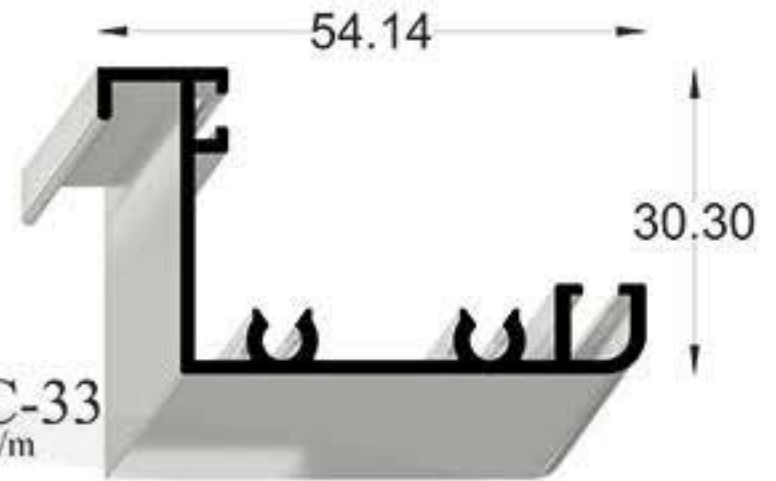




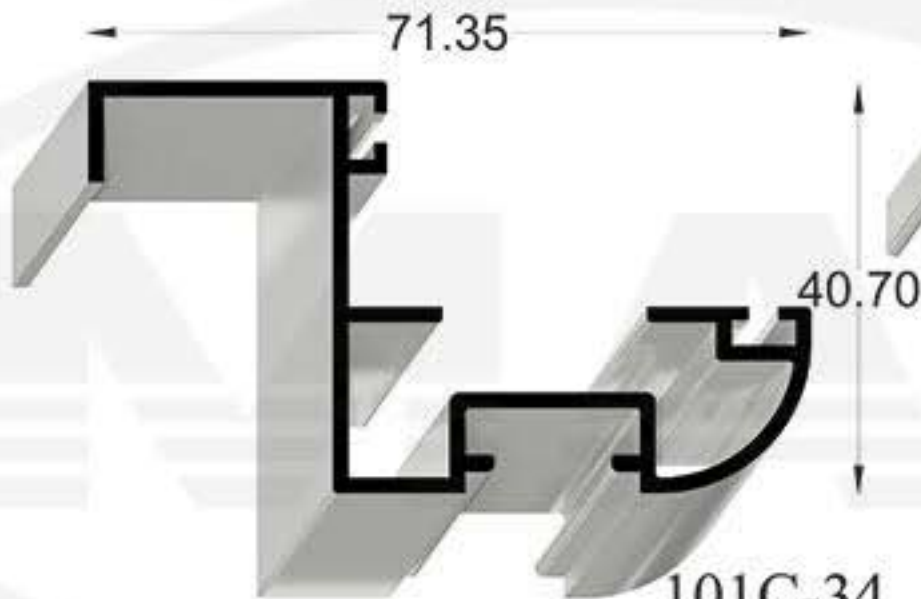




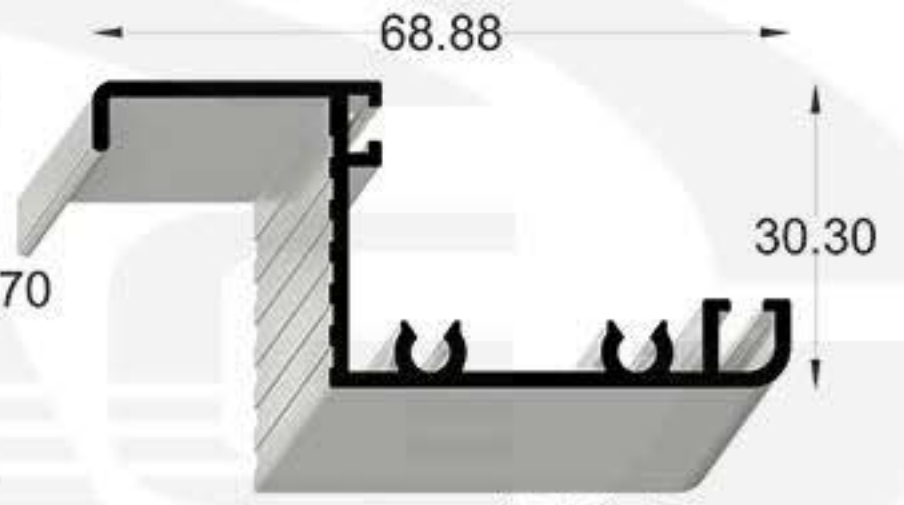
101C-32
500 gr/m



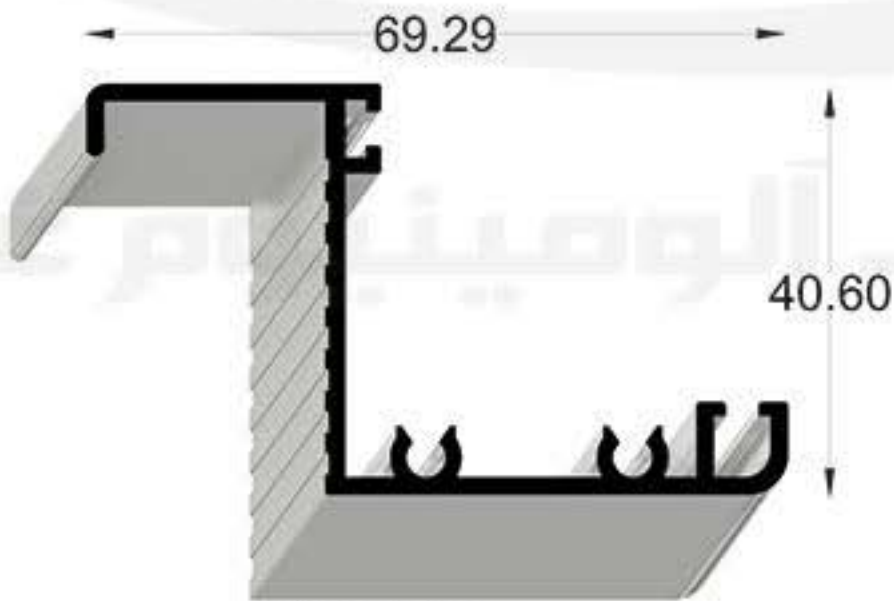
101C-33
510 gr/m



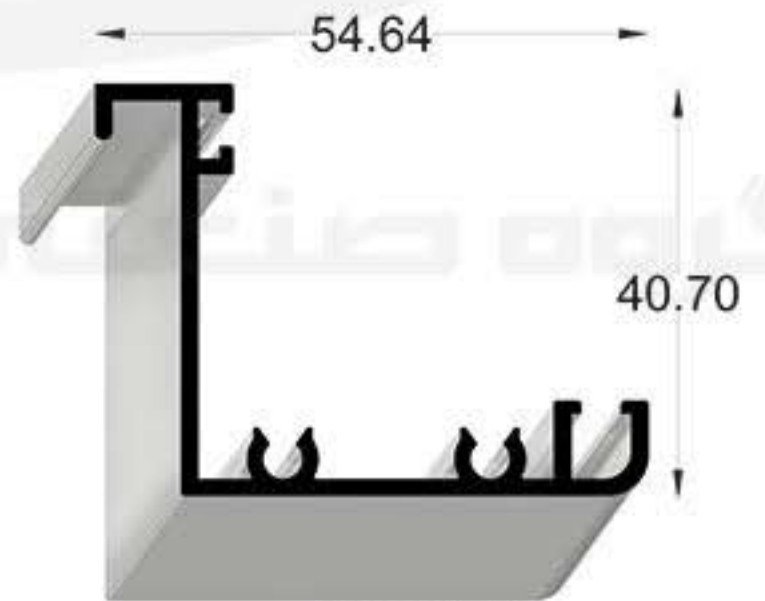
101C-34
800 gr/m



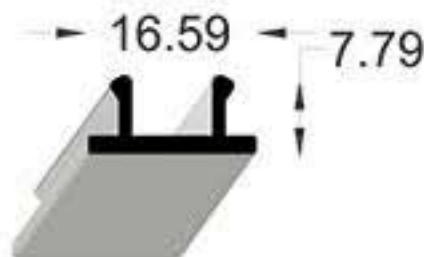
101C-35
630 gr/m



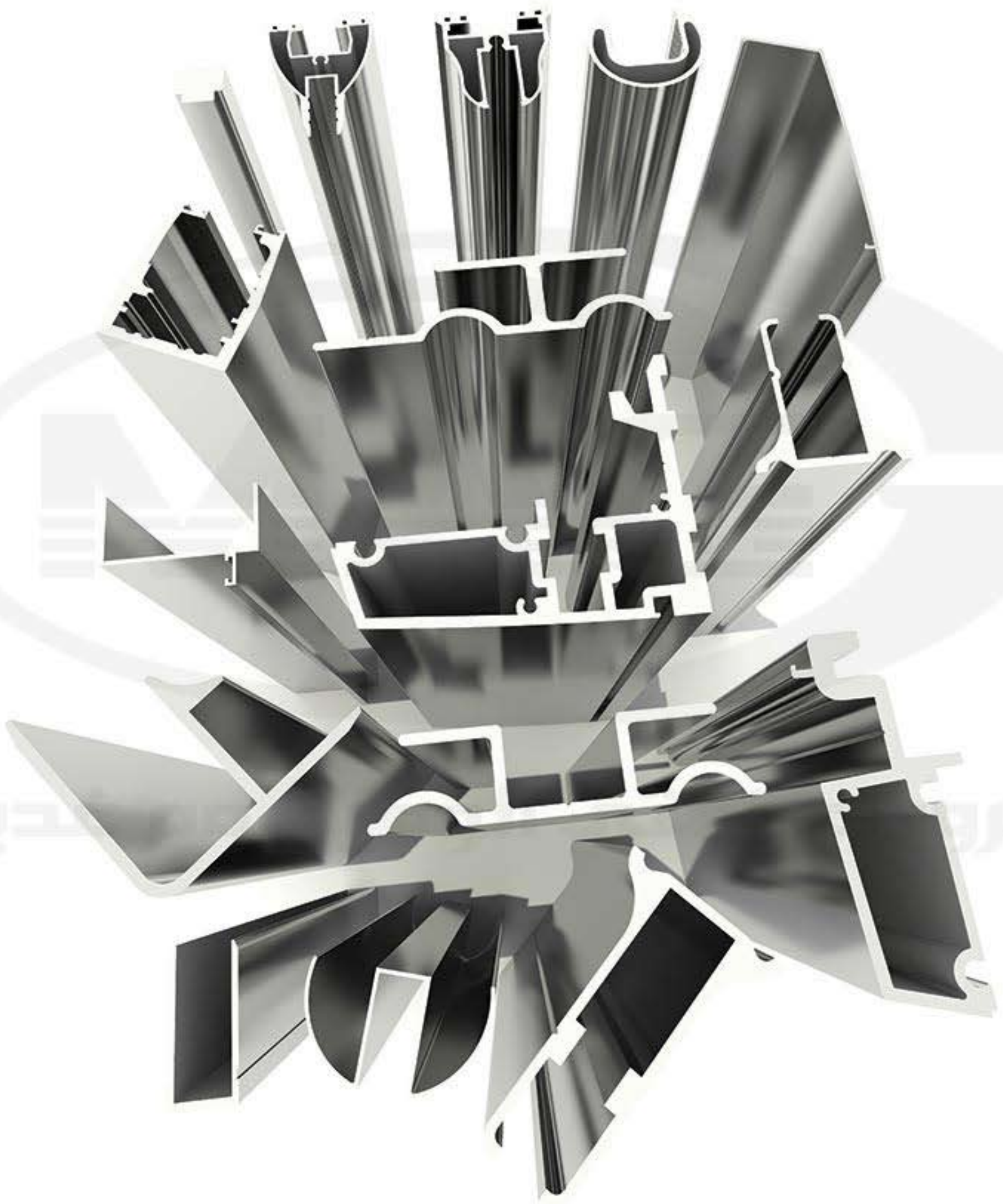
101C-36
750 gr/m



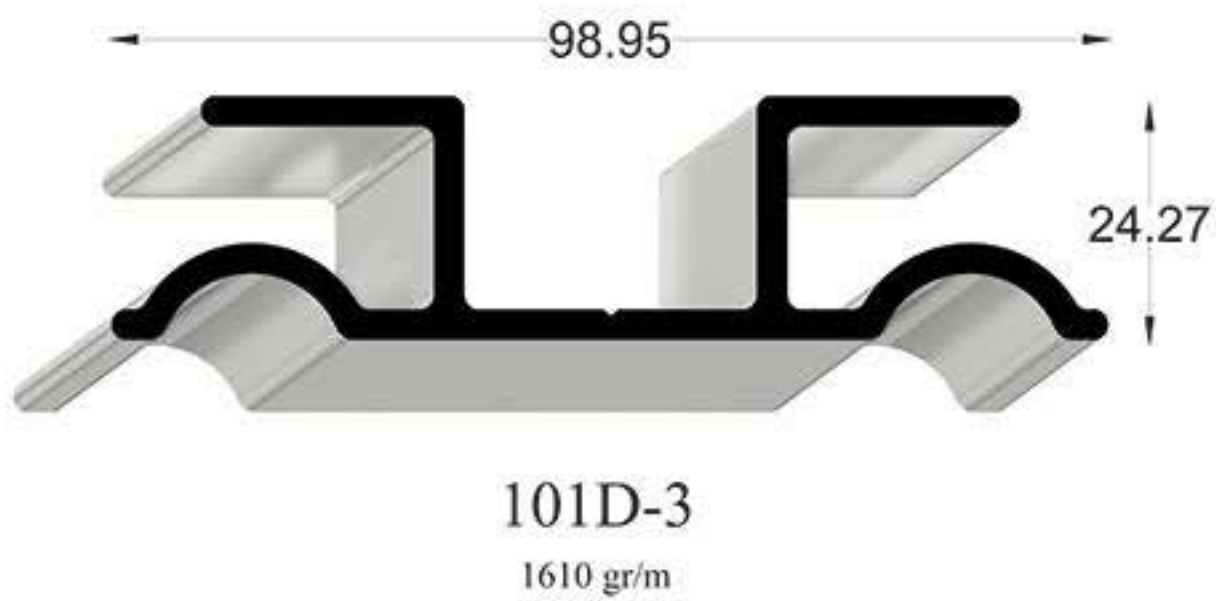
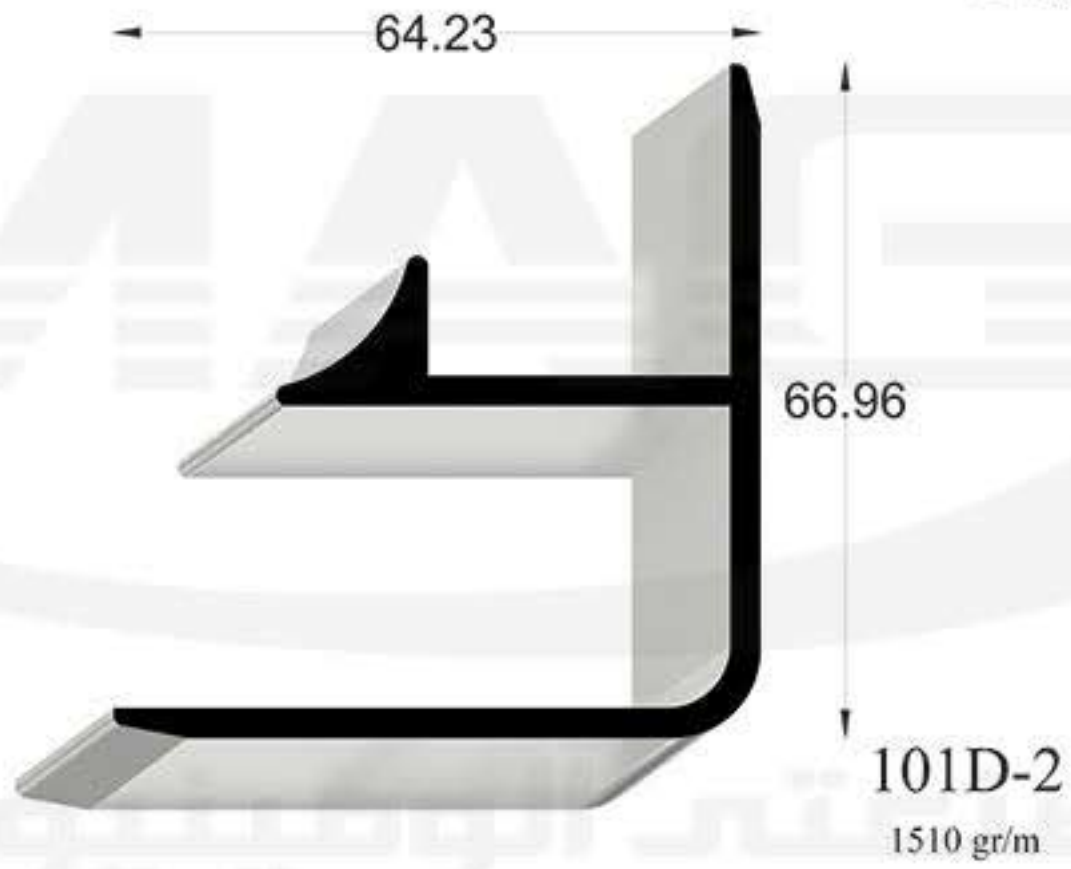
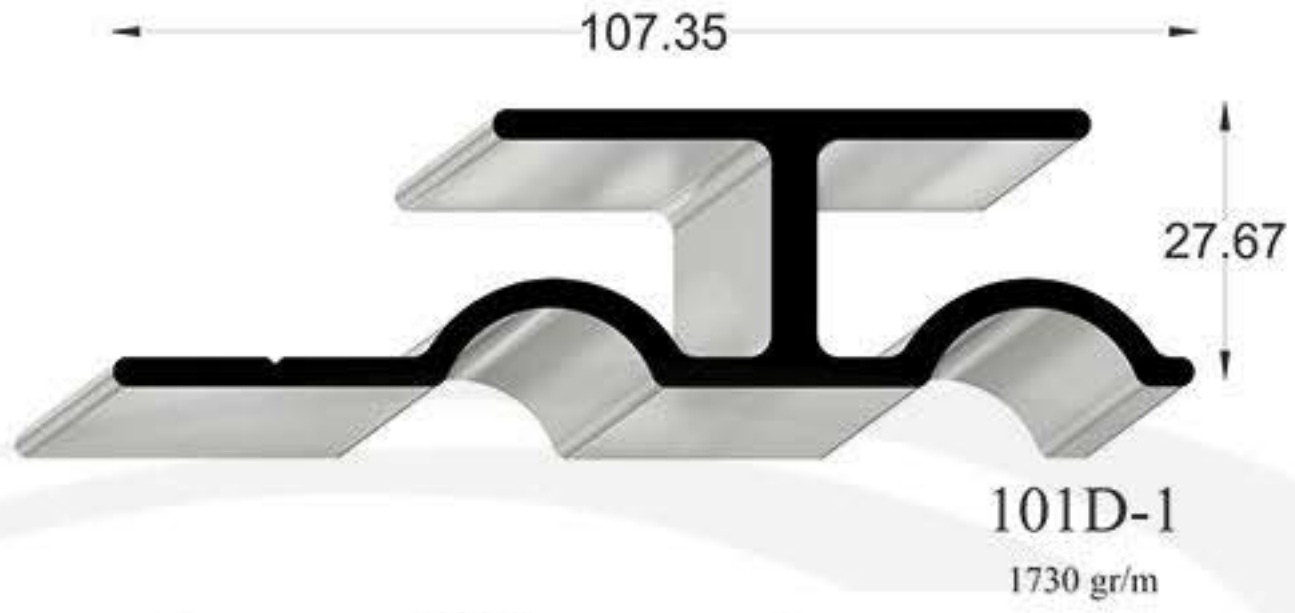
101C-37
650 gr/m

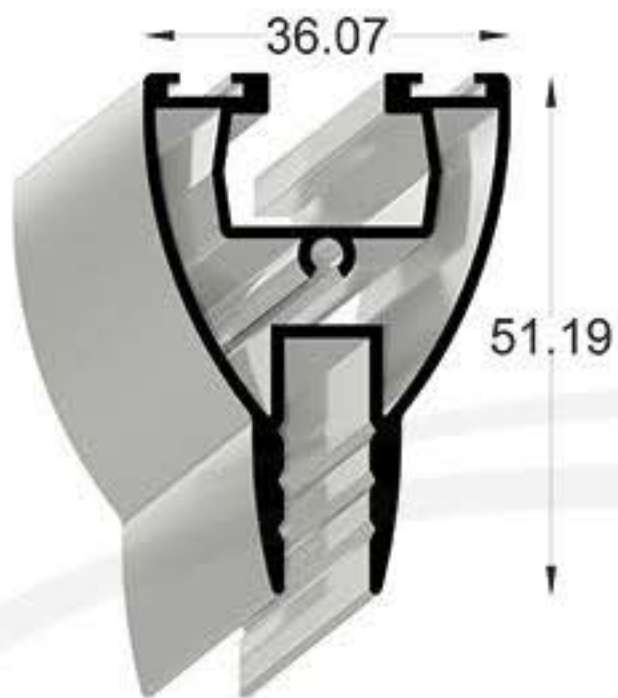


101C-38
130 gr/m

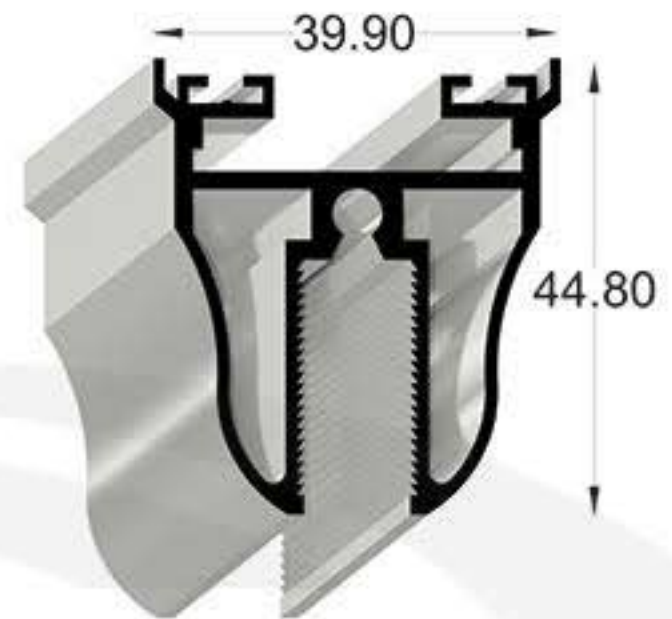


Code:1010

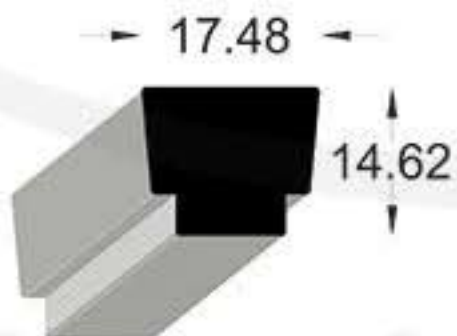




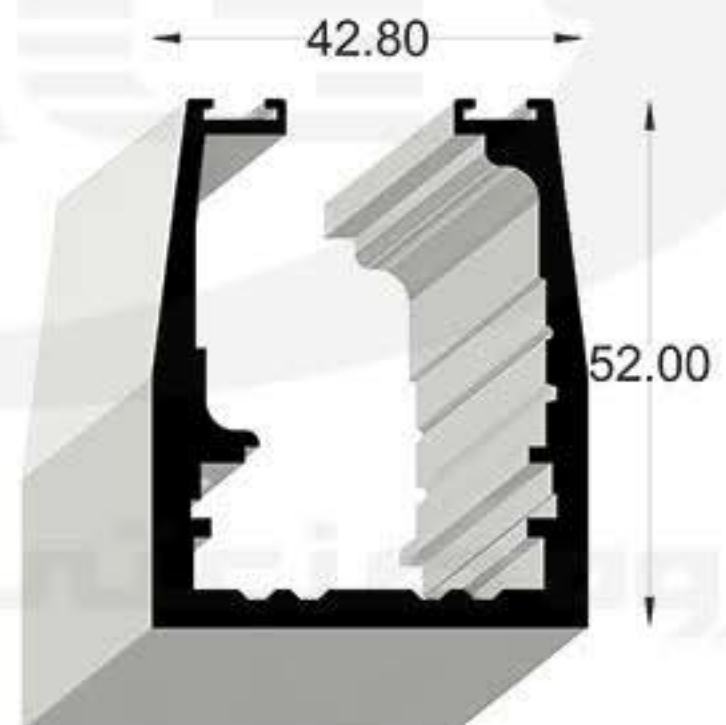
101D-4
860 gr/m



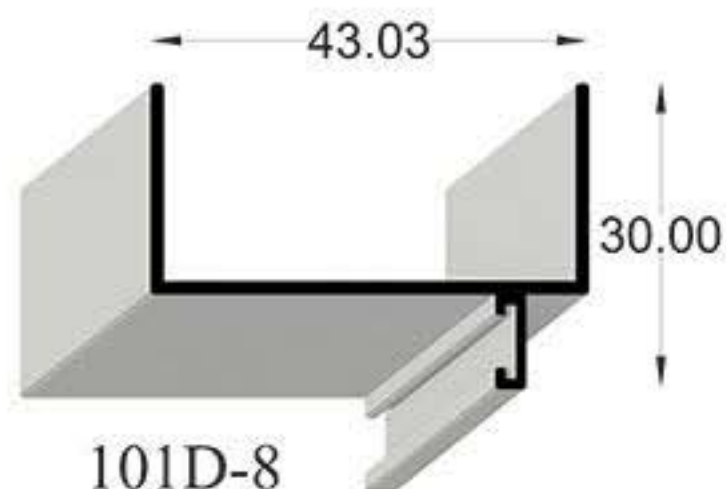
101D-5
980 gr/m



101D-6
590 gr/m



1520 gr/m
101D-7



101D-8
330 gr/m



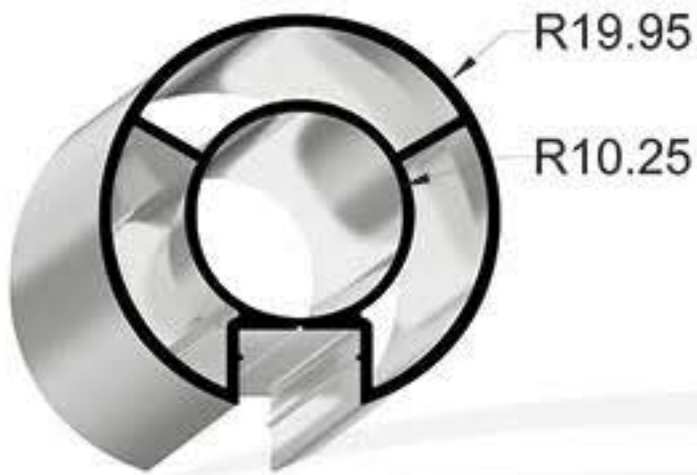
Code 1010

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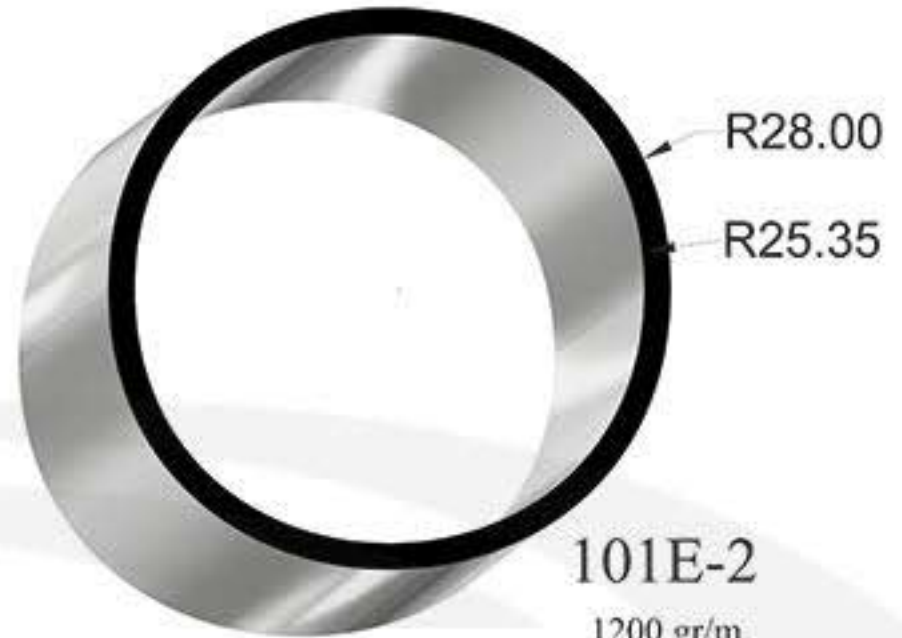




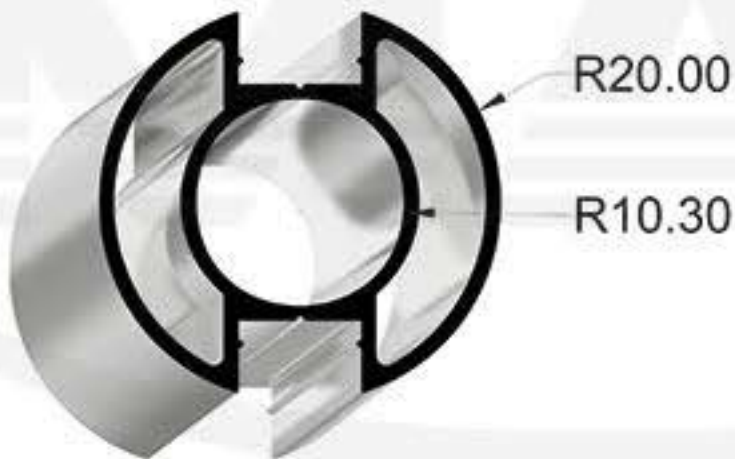
Code:101E



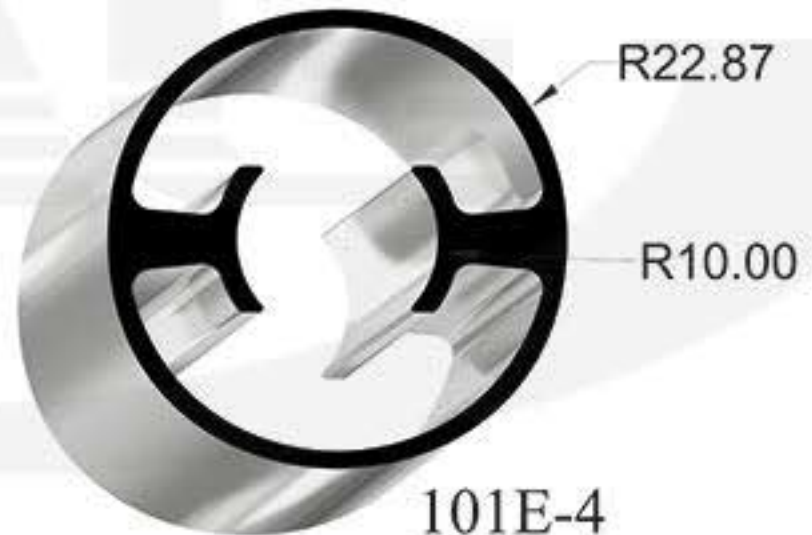
101E-1
680 gr/m



101E-2
1200 gr/m



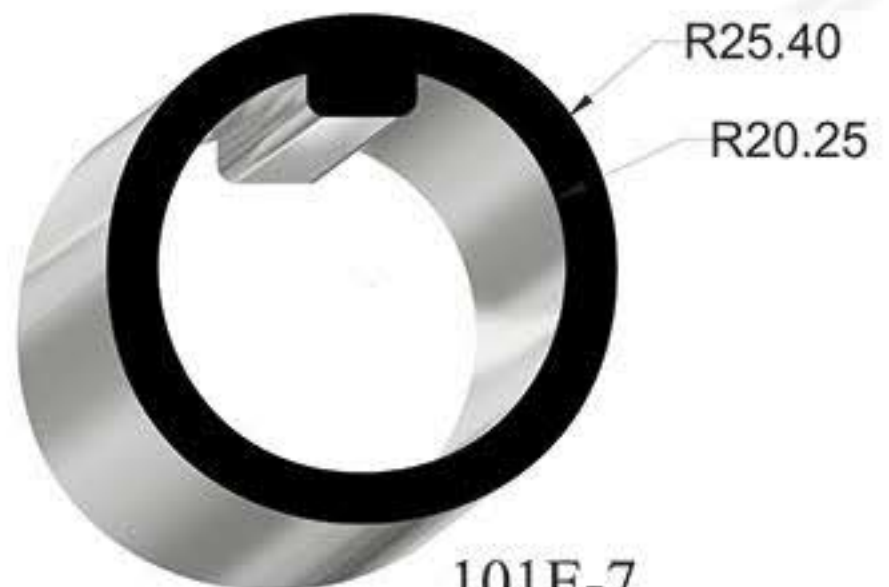
101E-3
850 gr/m



101E-4
1130 gr/m



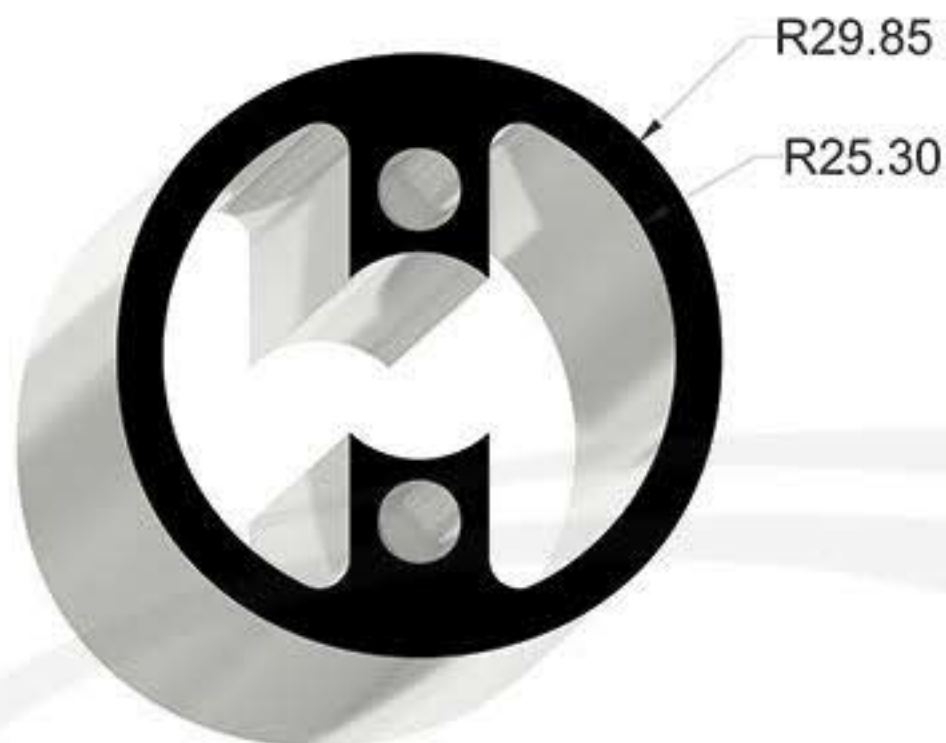
101E-5
240 gr/m



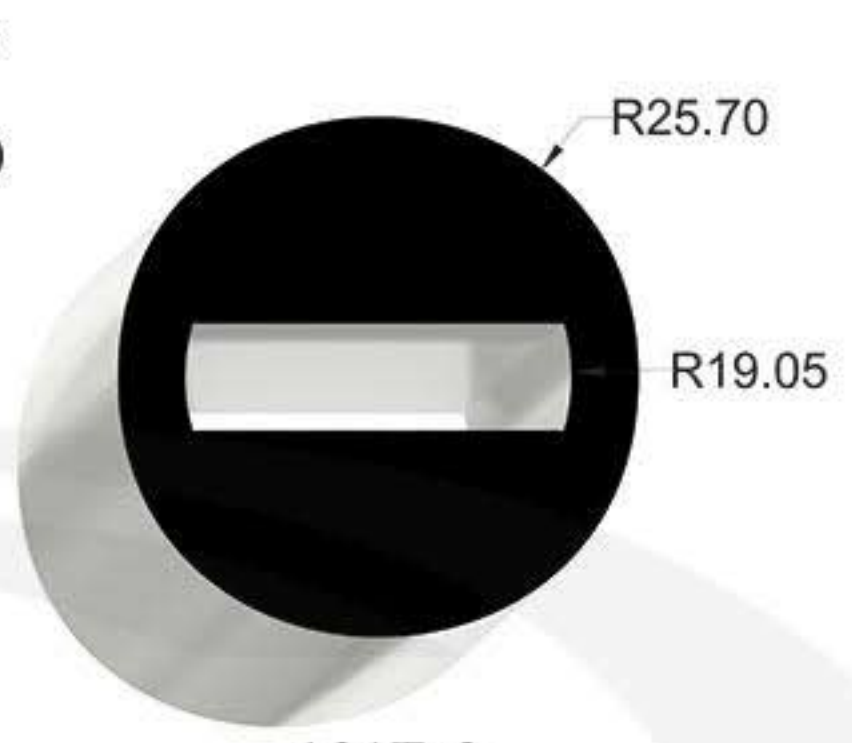
101E-7
2130 gr/m



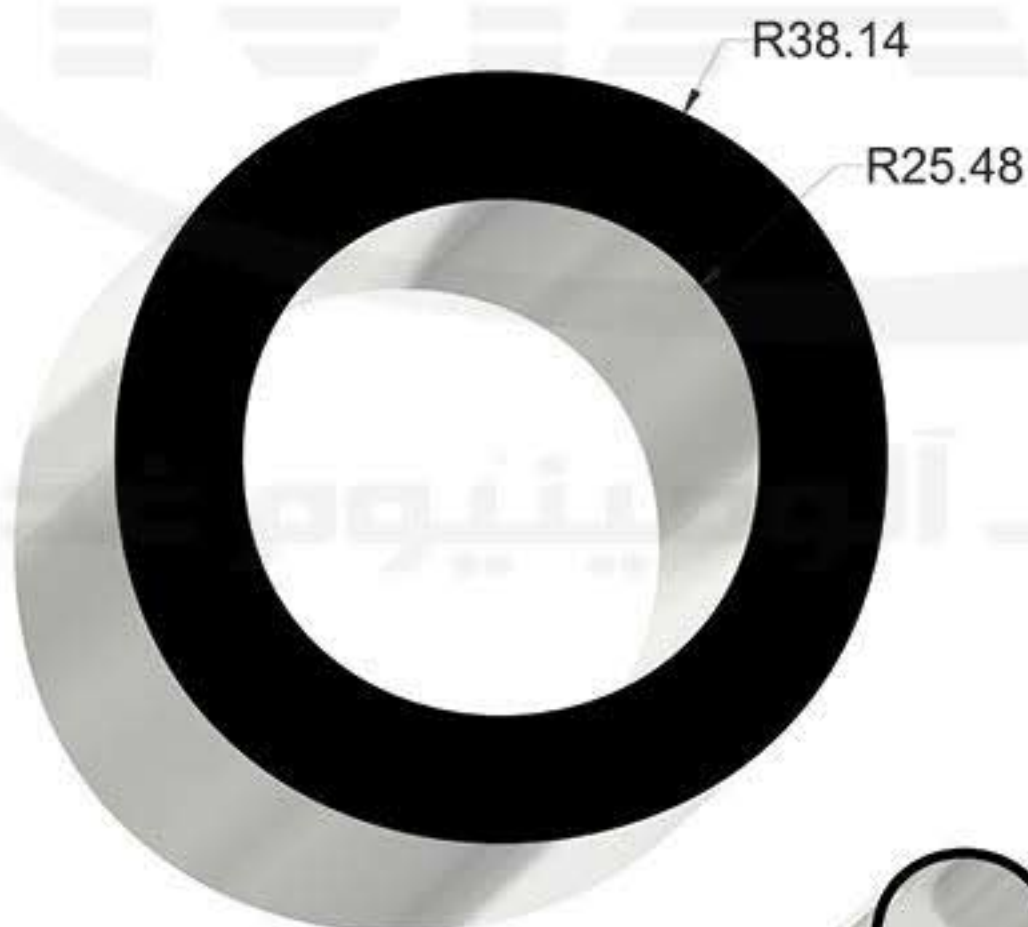
101E-6
60 gr/m



101E-8
3050 gr/m



101E-9
4530 gr/m



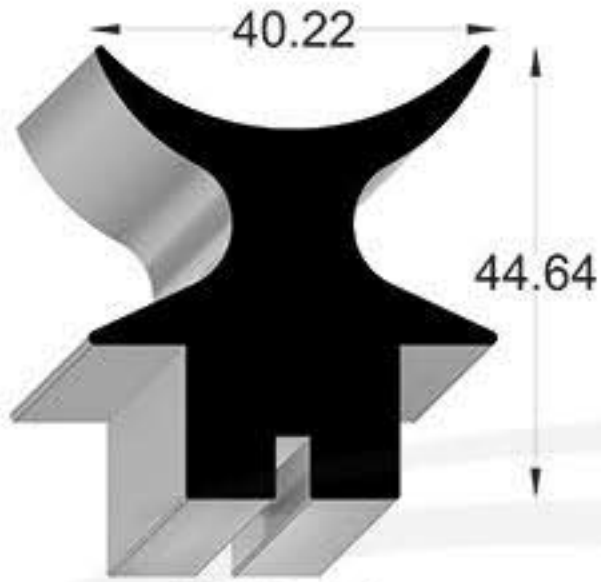
101E-10
6830 gr/m



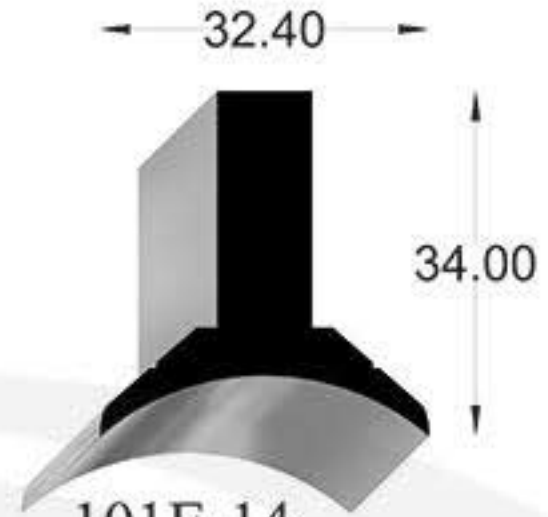
101E-11
600 gr/m



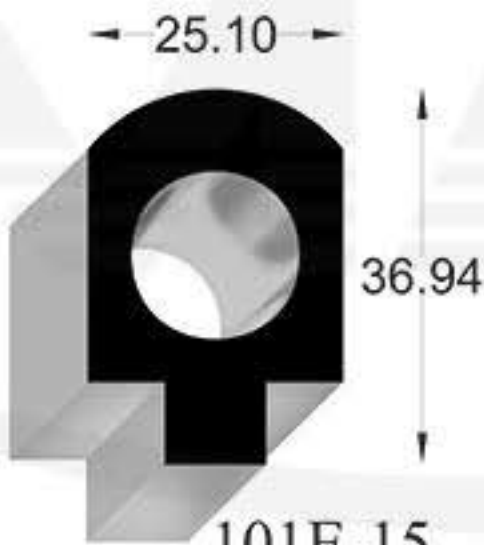
101E-12
150 gr/m



101E-13
2200 gr/m



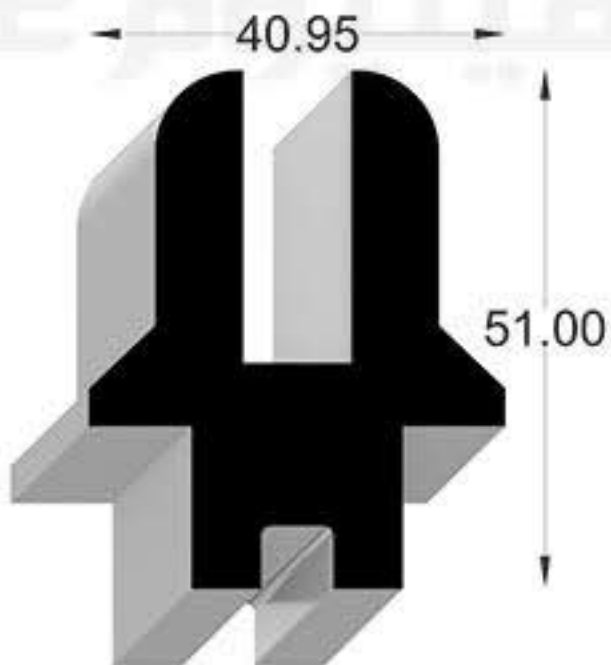
101E-14
960 gr/m



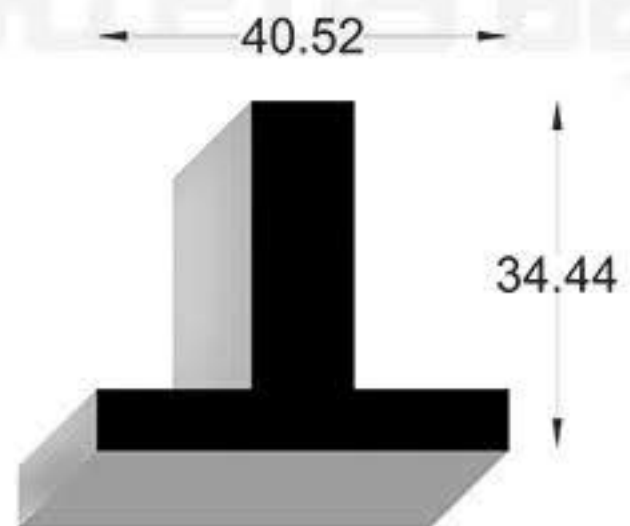
101E-15
1470 gr/m



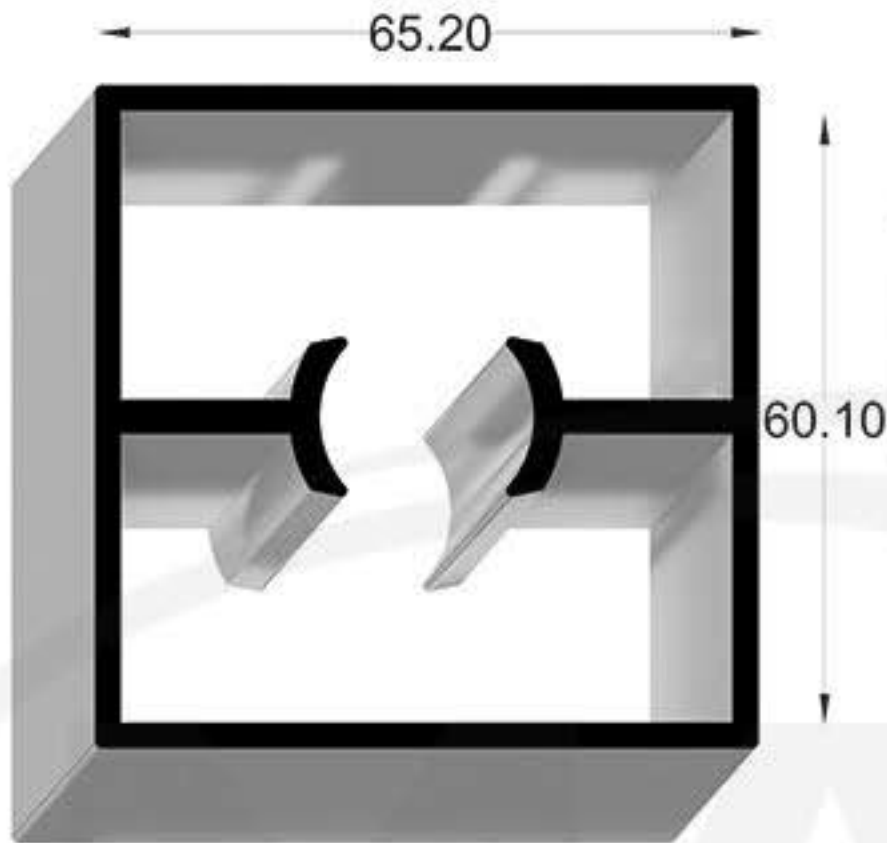
101E-16
2110 gr/m



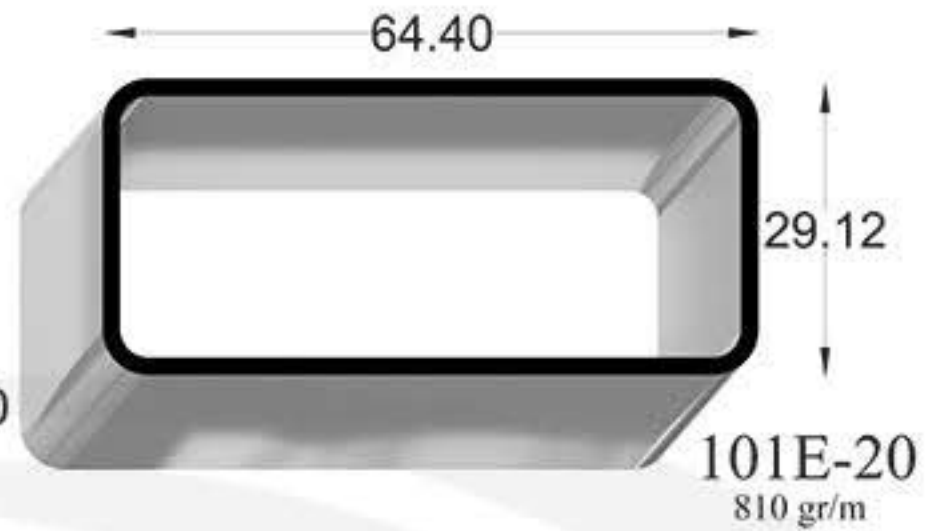
101E-17
2750 gr/m



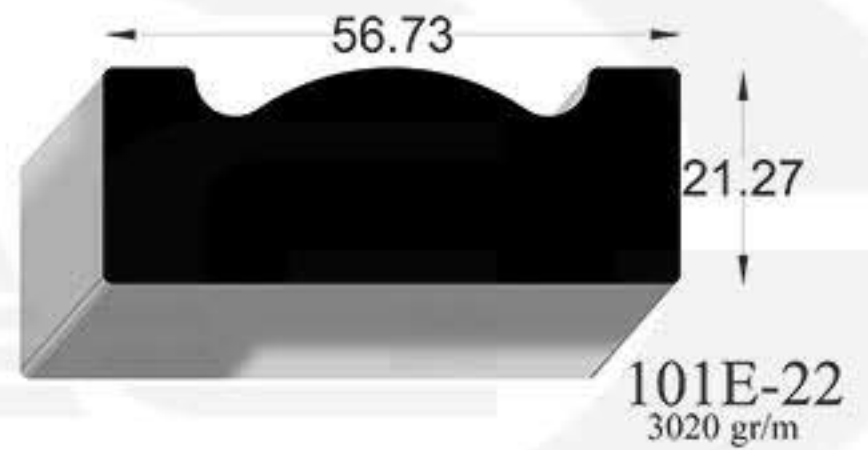
101E-18
1440 gr/m



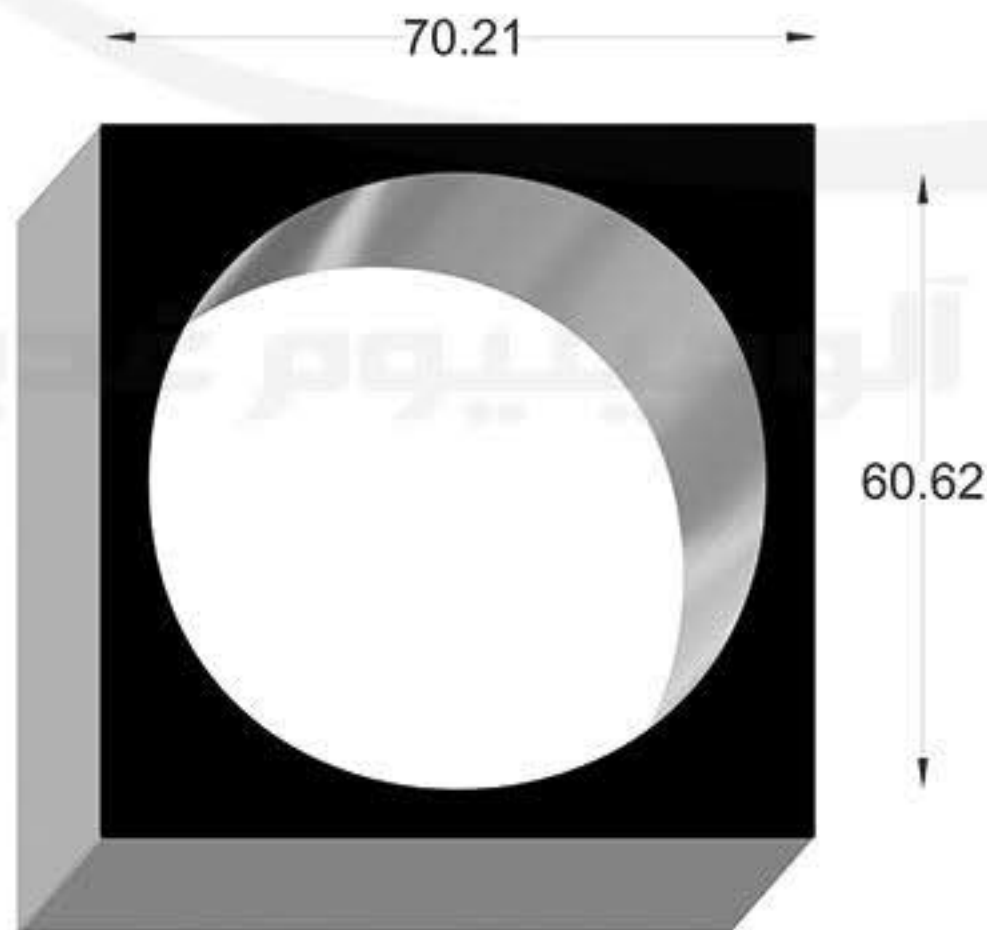
101E-19
2290 gr/m



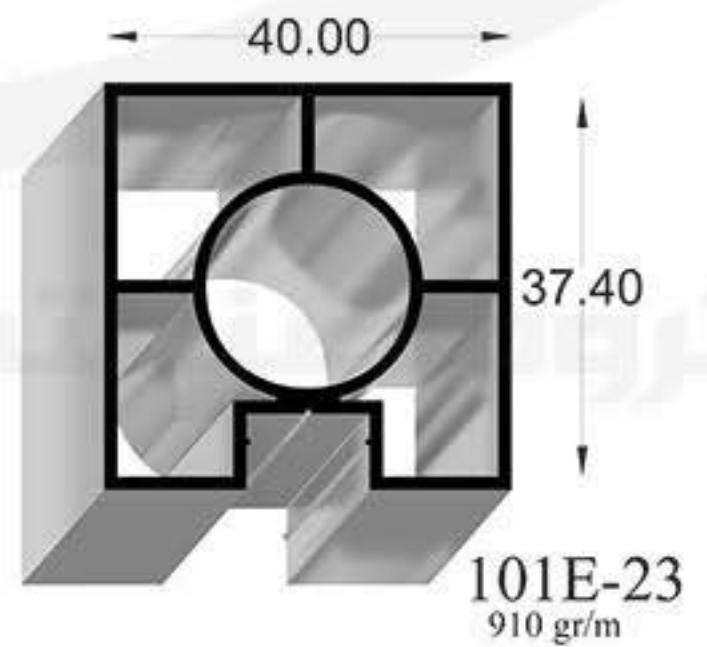
101E-20
810 gr/m



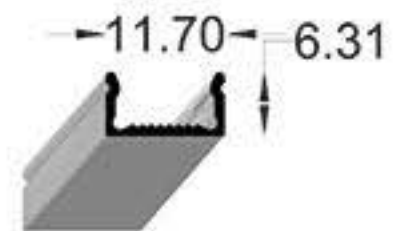
101E-22
3020 gr/m



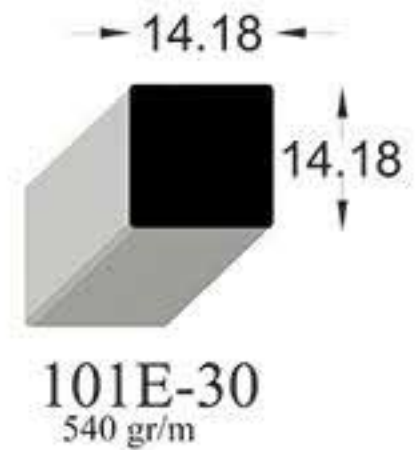
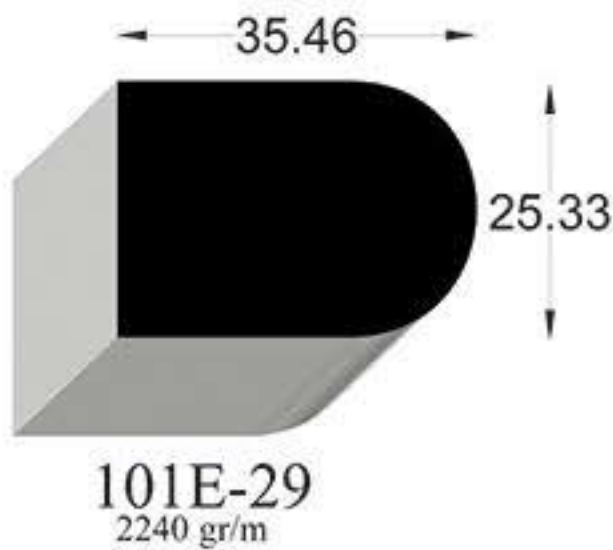
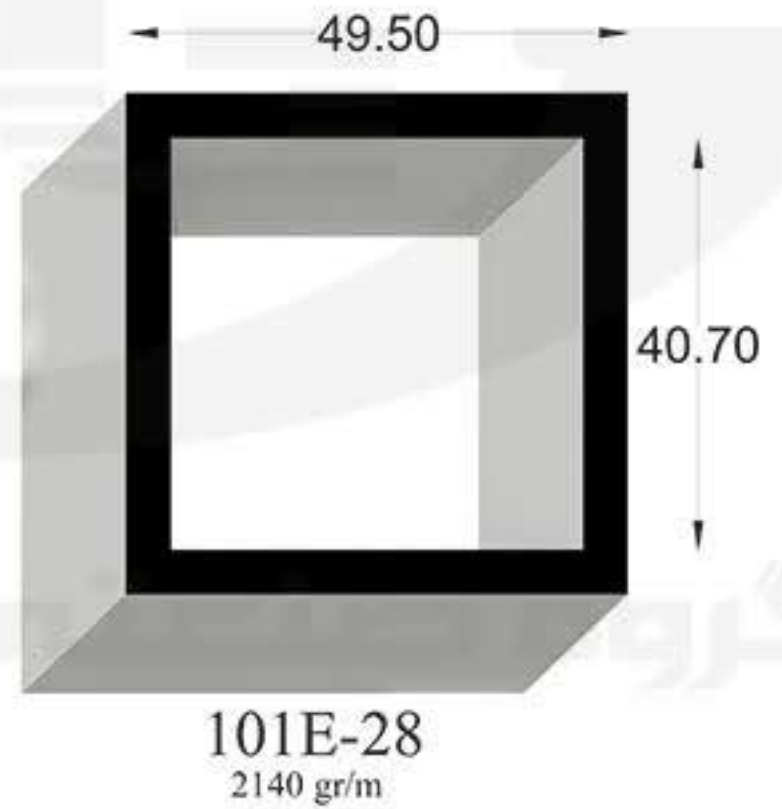
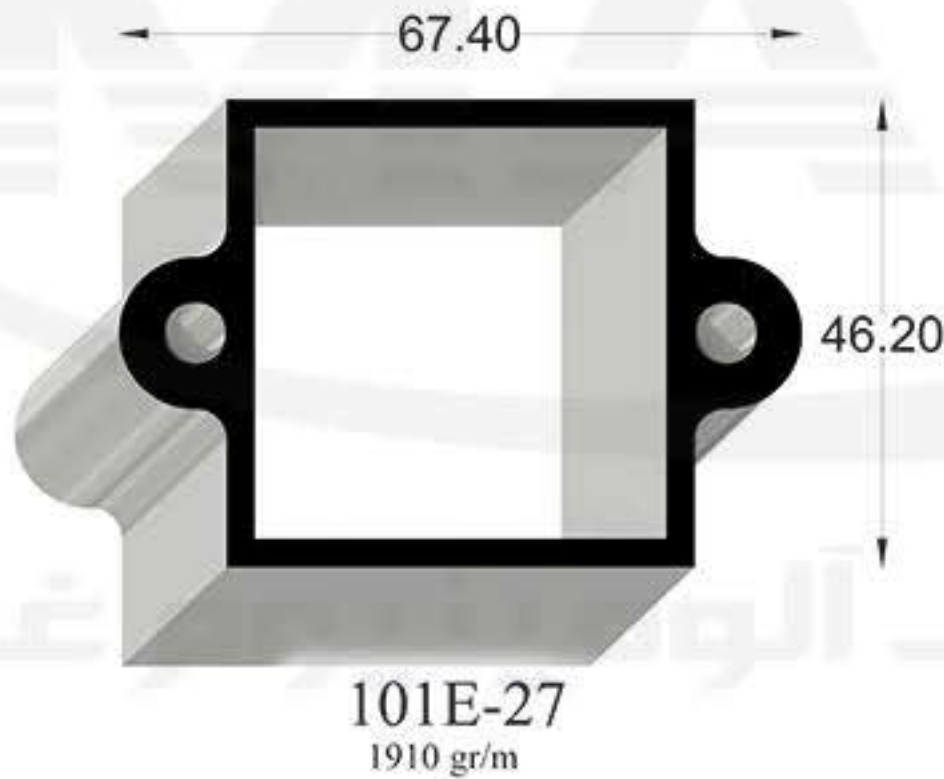
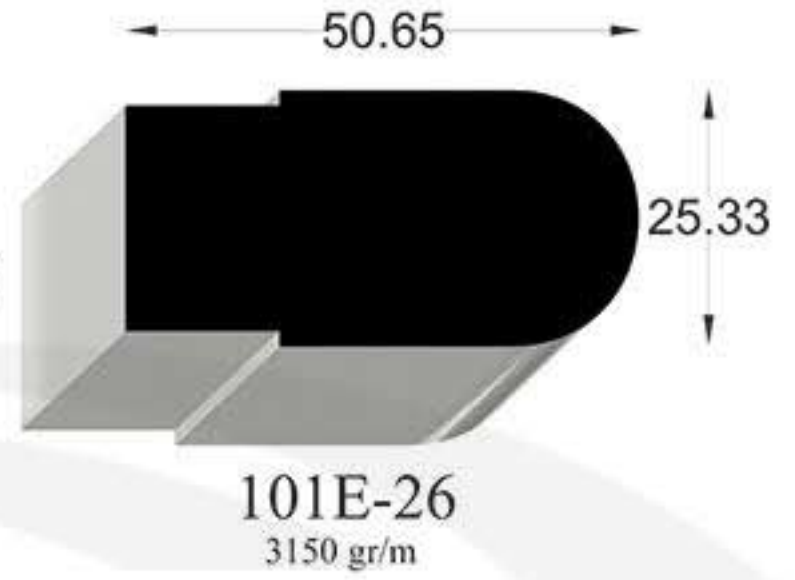
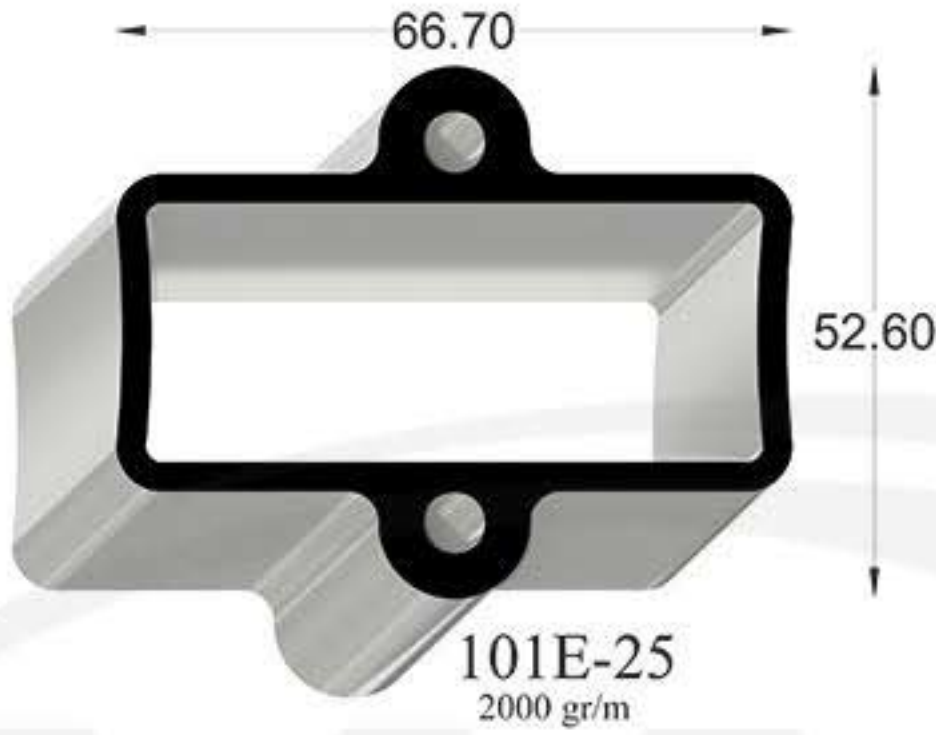
101E-21
5520 gr/m



101E-23
910 gr/m

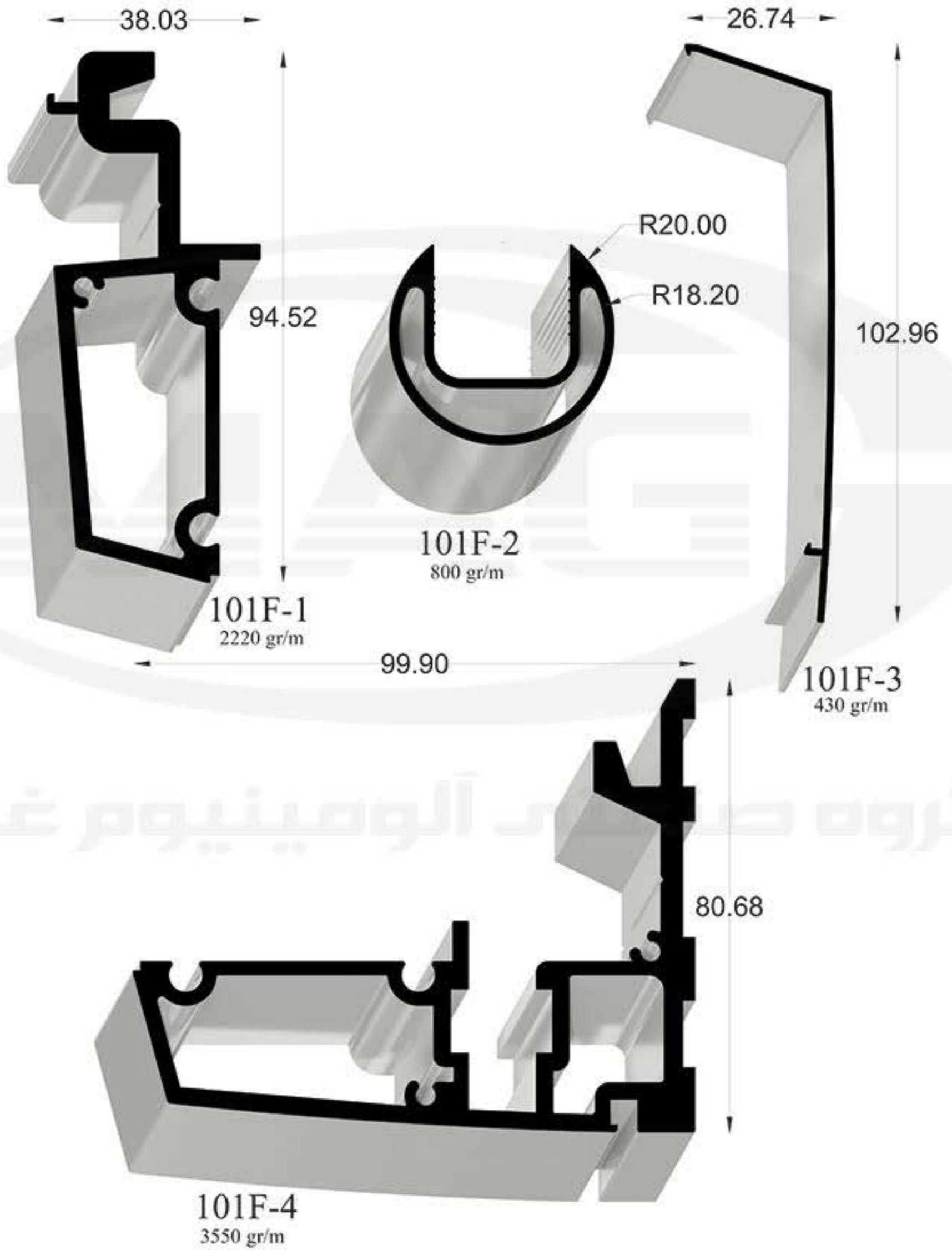


101E-24
60 gr/m



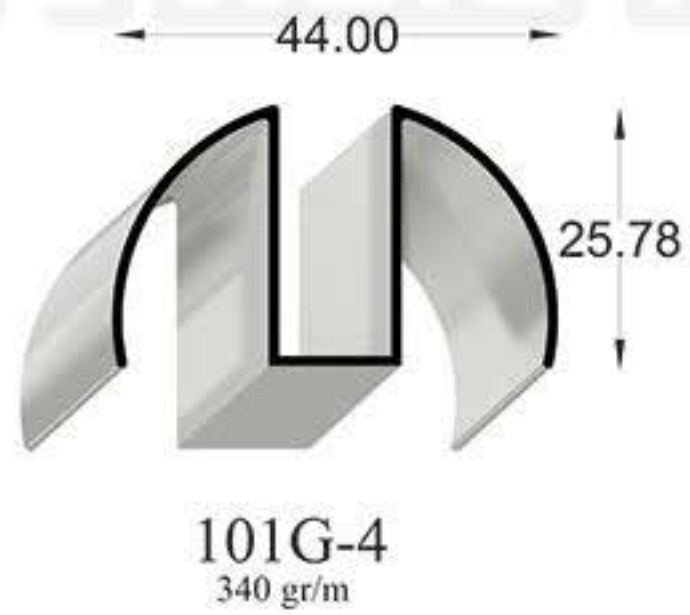
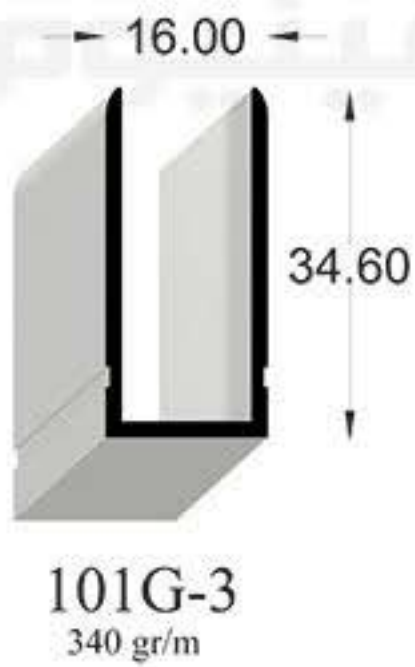
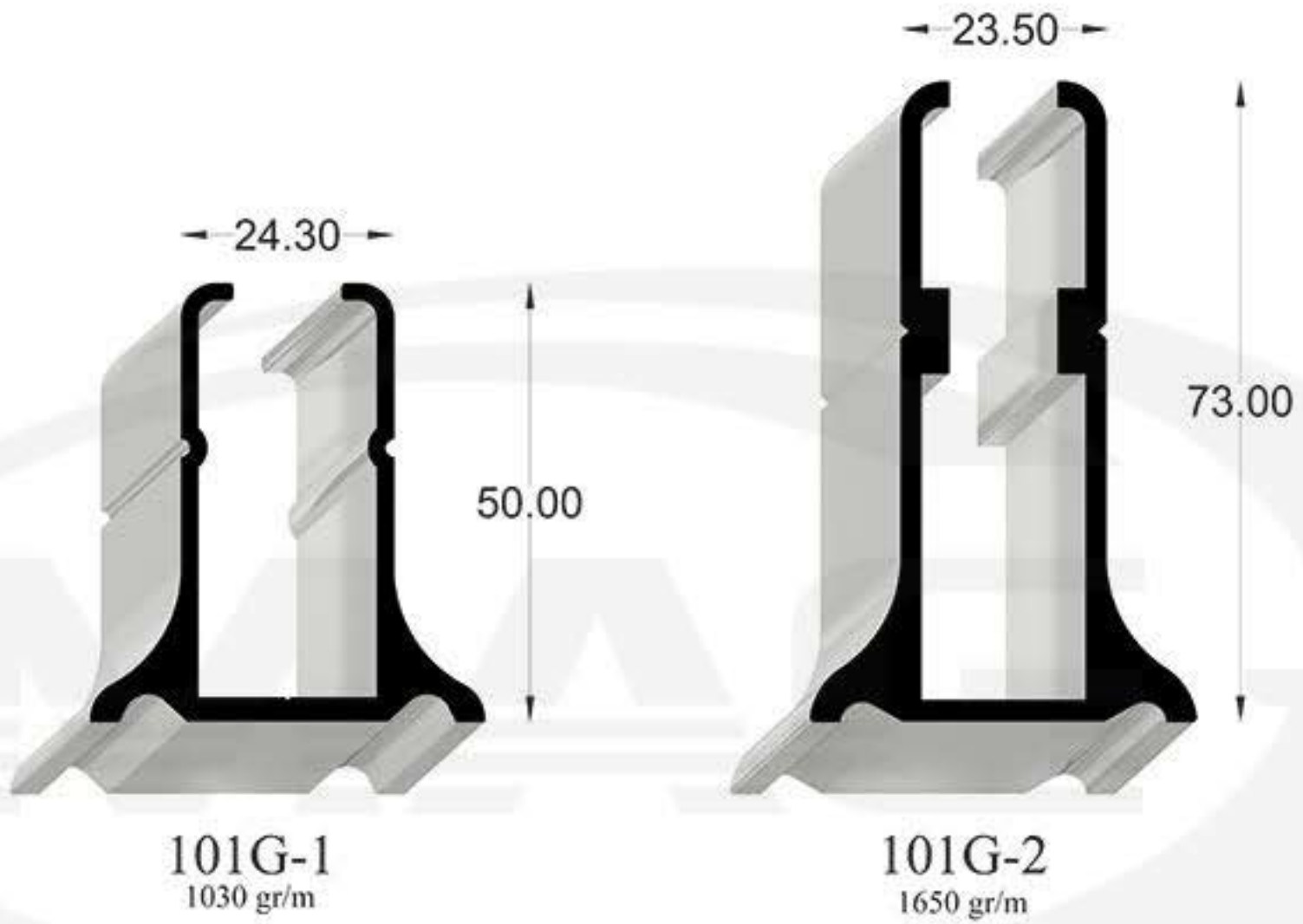


Code:101F



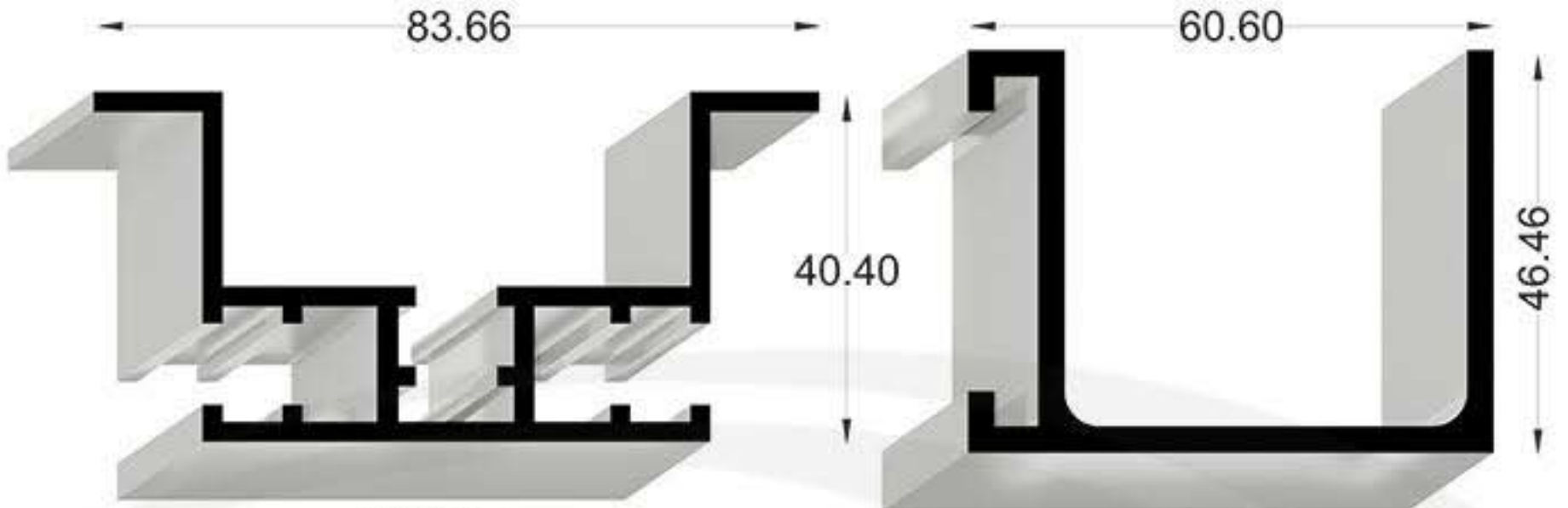


Code:101G



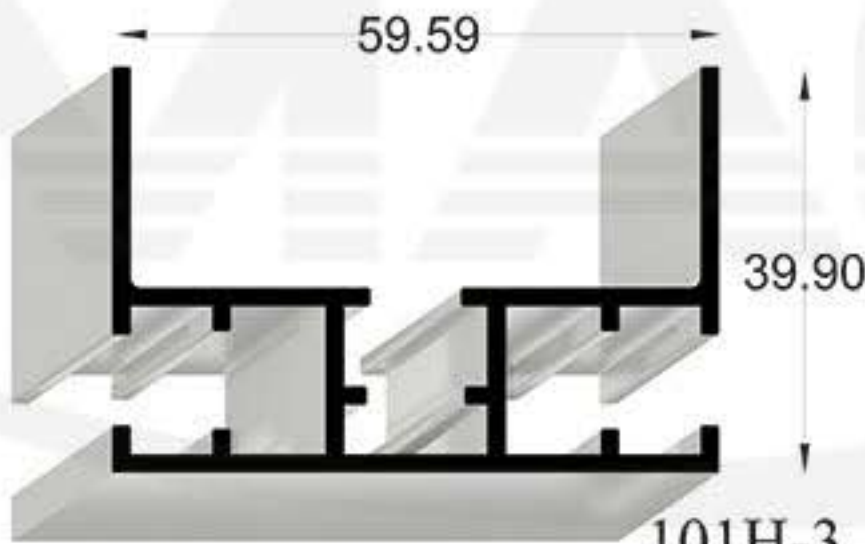


Code:101H

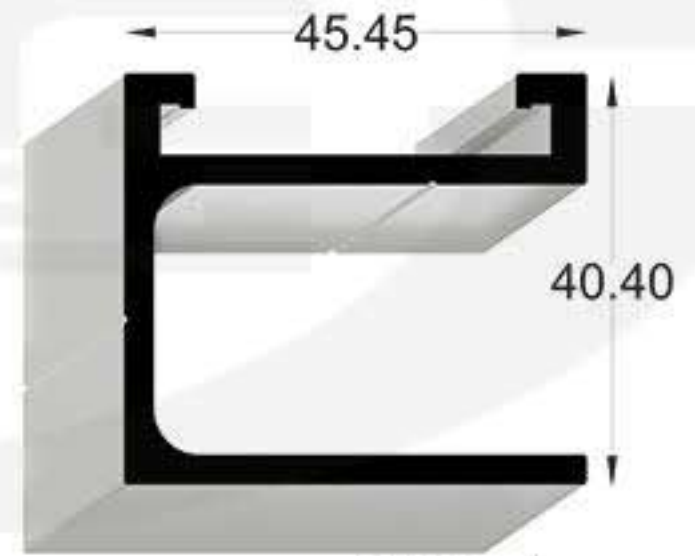


101H-1
1380 gr/m

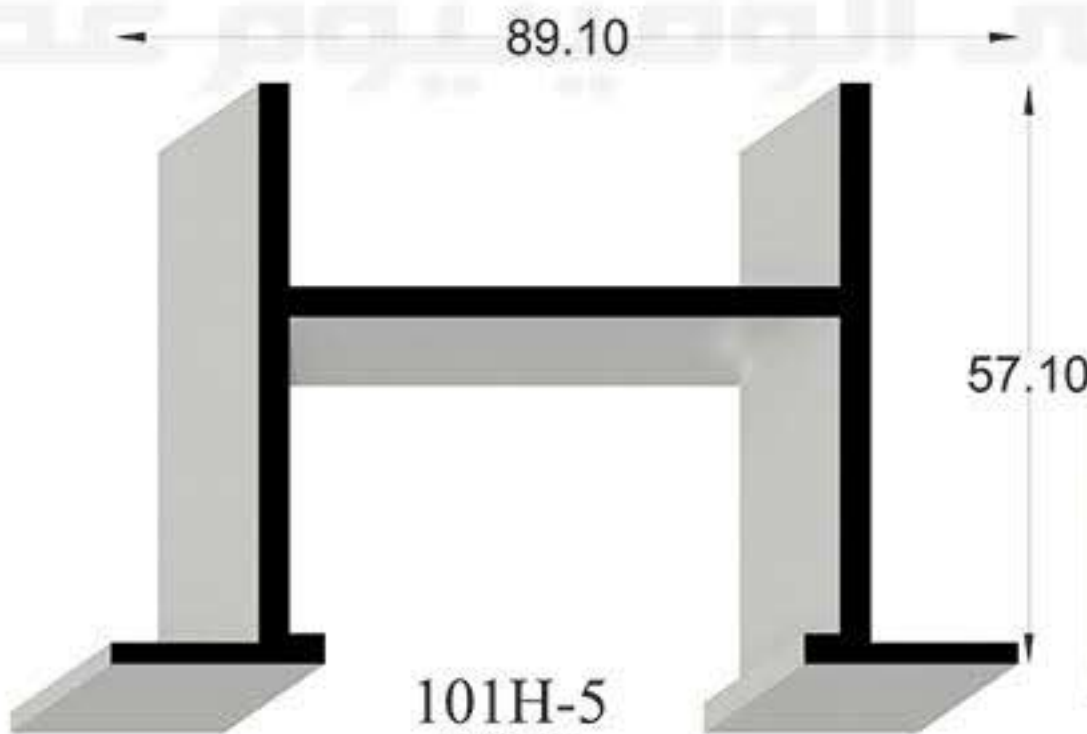
101H-2
1360 gr/m



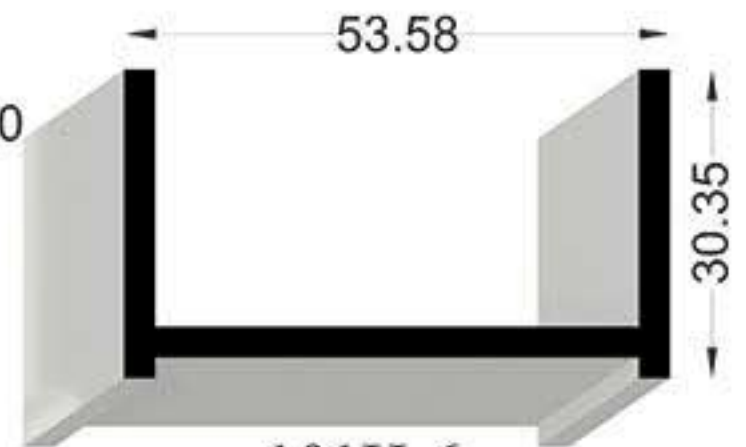
101H-3
1020 gr/m



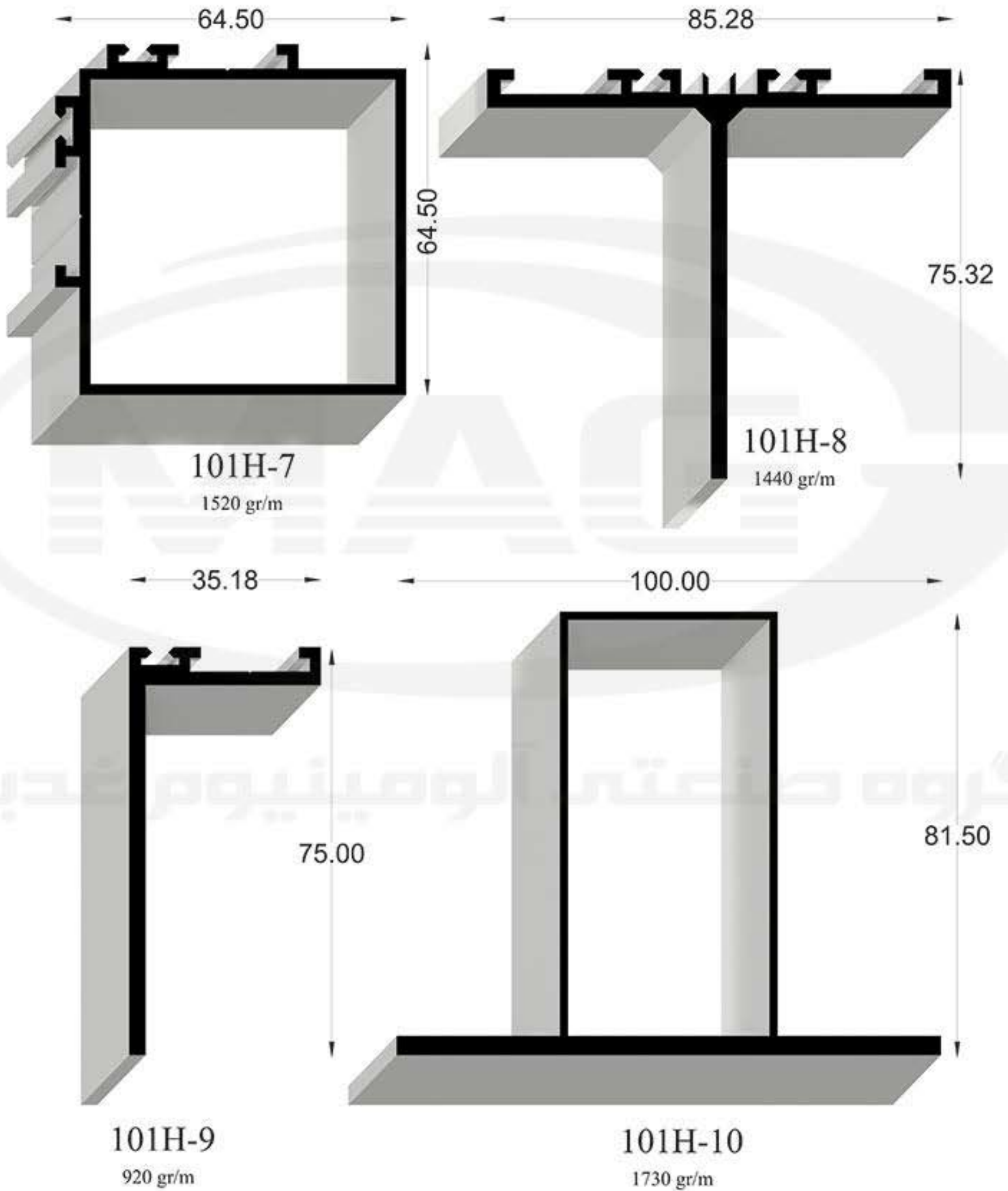
101H-4
1160 gr/m

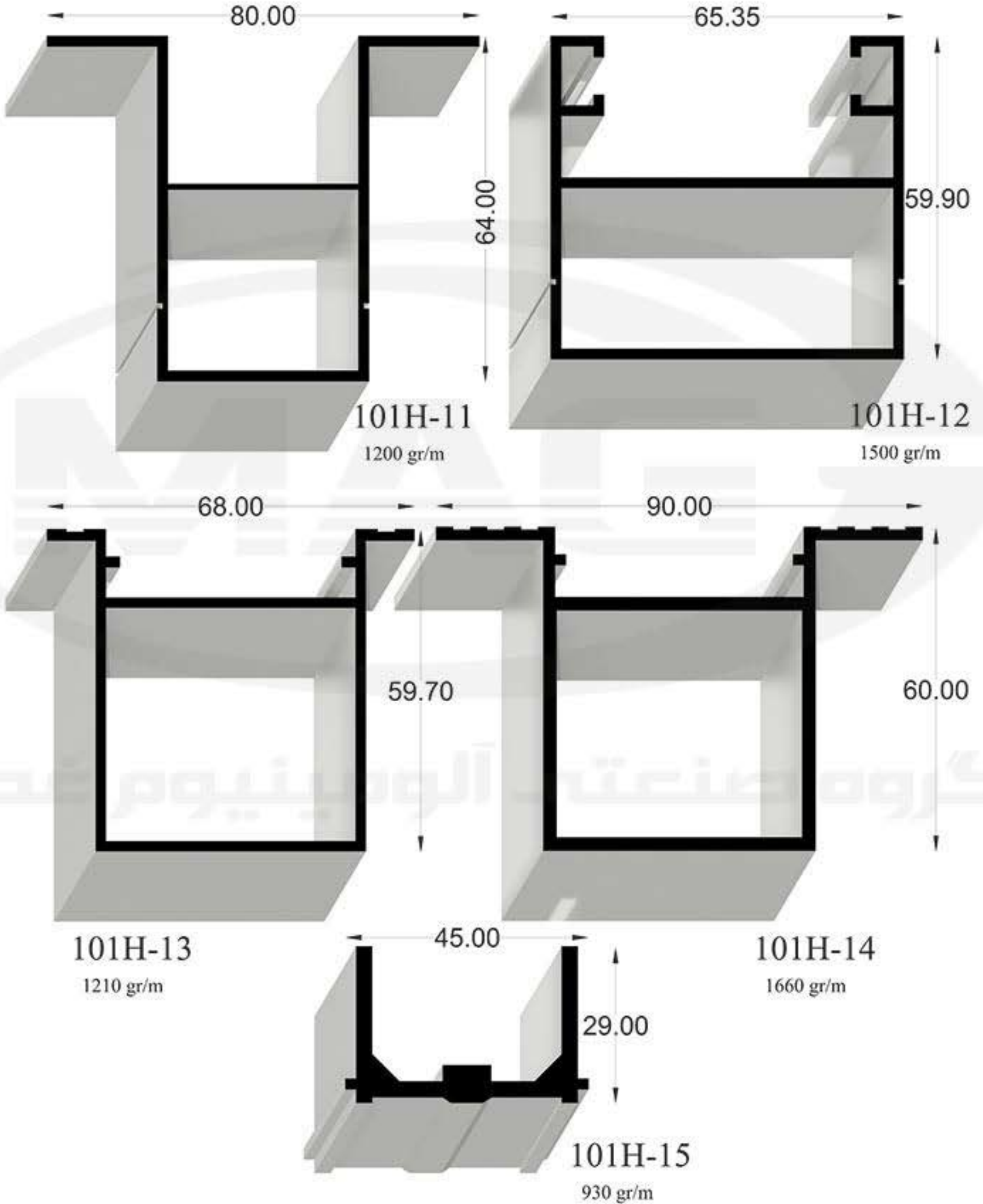


101H-5
1580 gr/m



101H-6
880 gr/m







Code:102C

سیستم توری رولیکا

Mesh Screens System

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Code:102A

سیستم توری پلایس

Lace Pleated System

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Code:102D

سیستم پرده هوا

Air Curtains System

Page: 122



Code:102B

سیستم پرده زبرا

Zebra Blind System

Page: 114

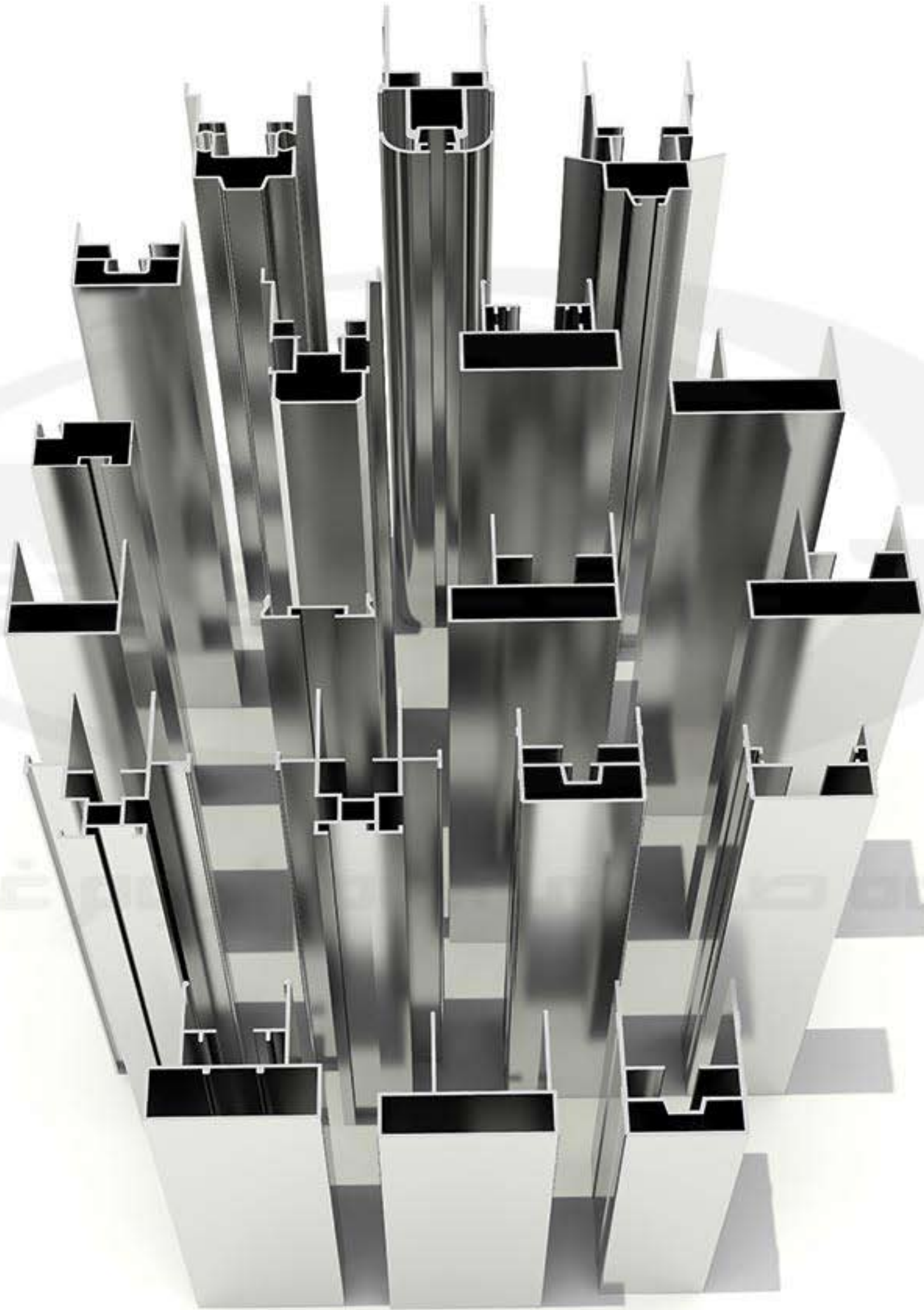




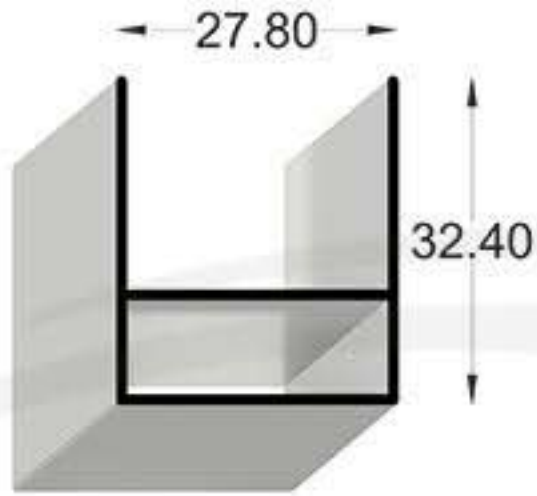
Gride System

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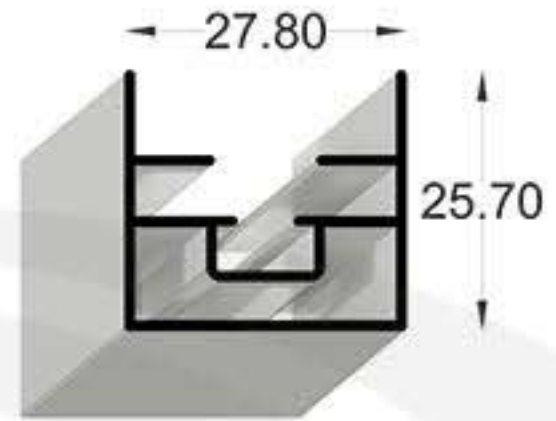




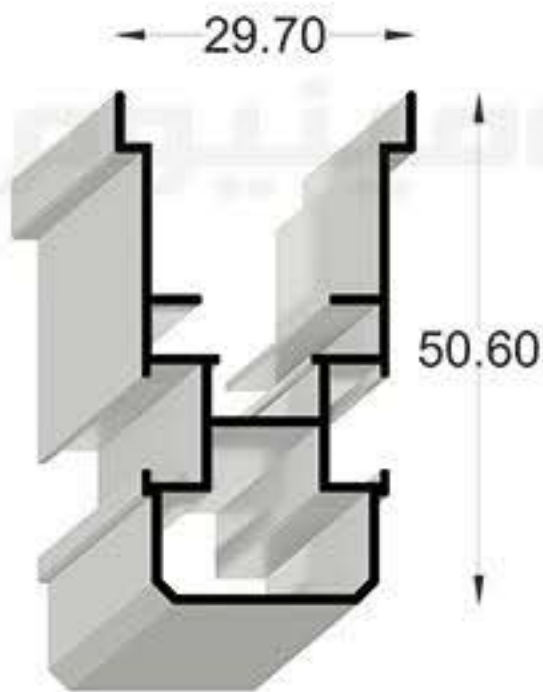
Code:102A



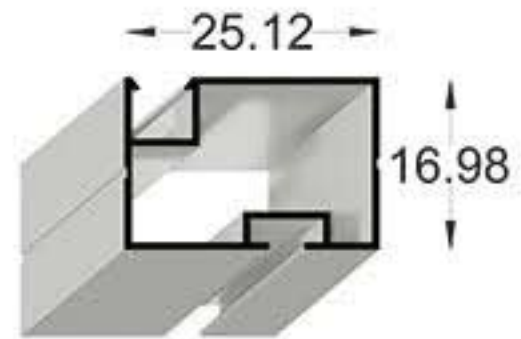
102A-1
330 gr/m



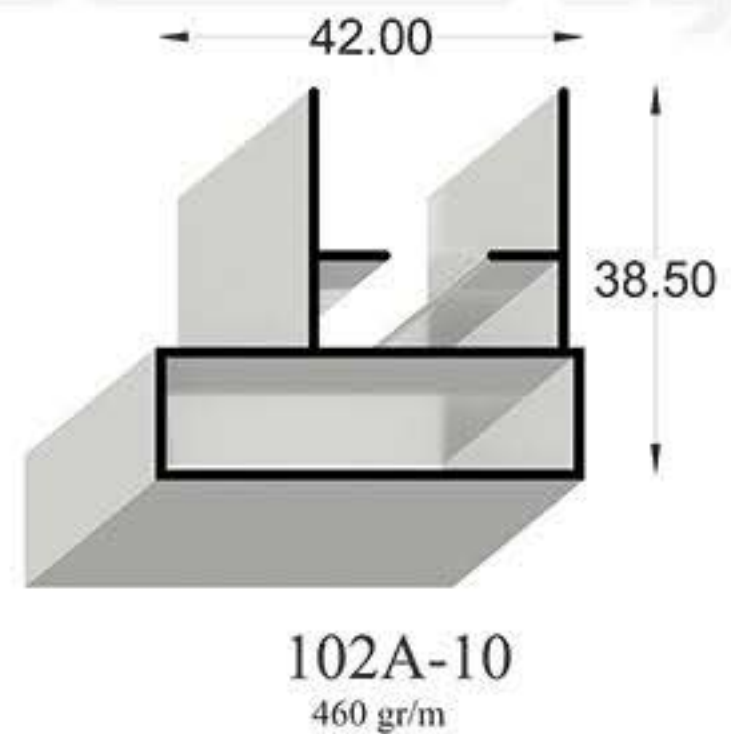
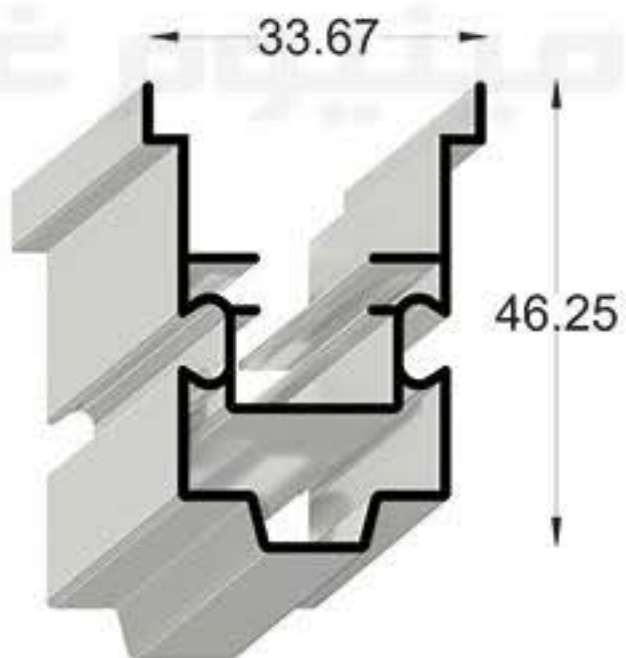
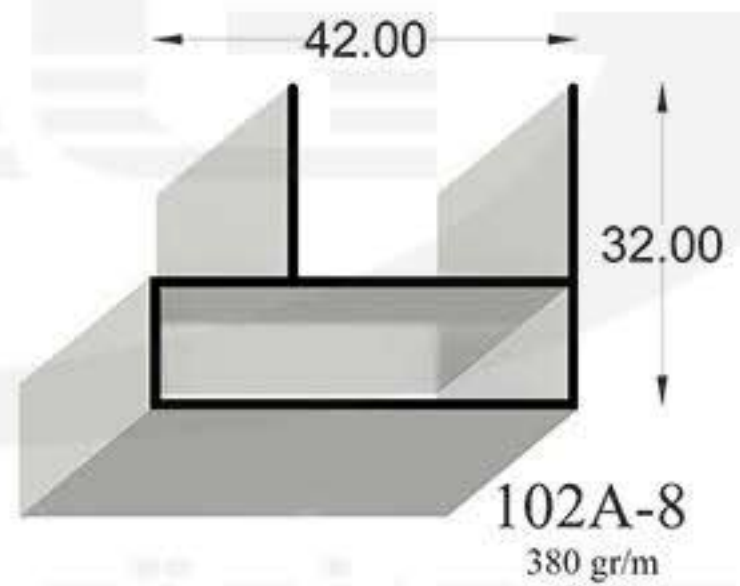
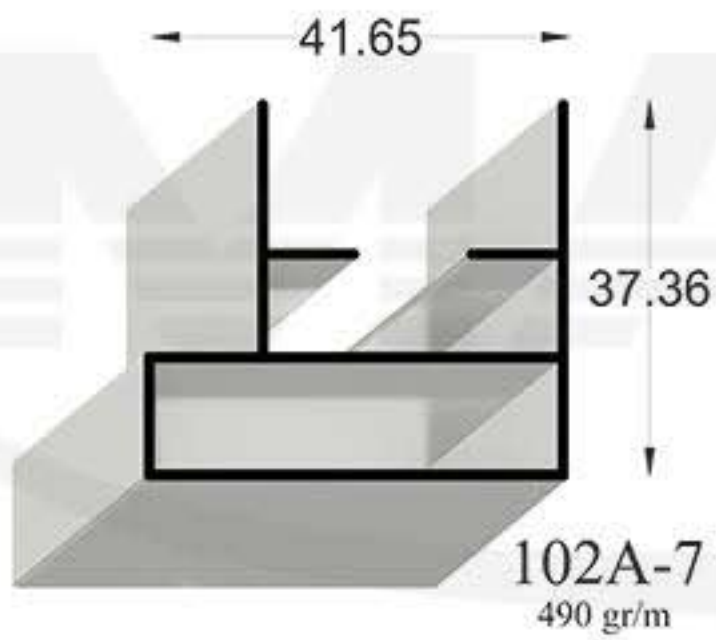
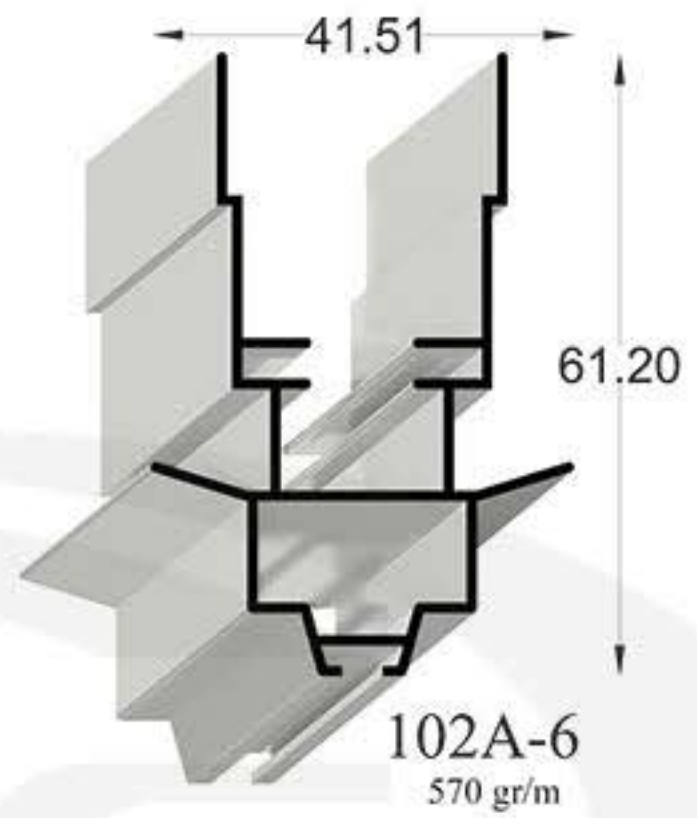
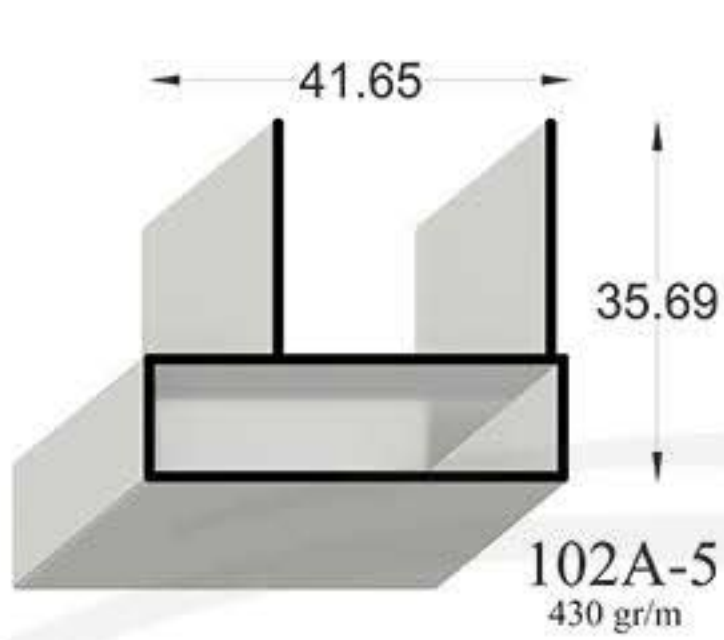
102A-2
370 gr/m

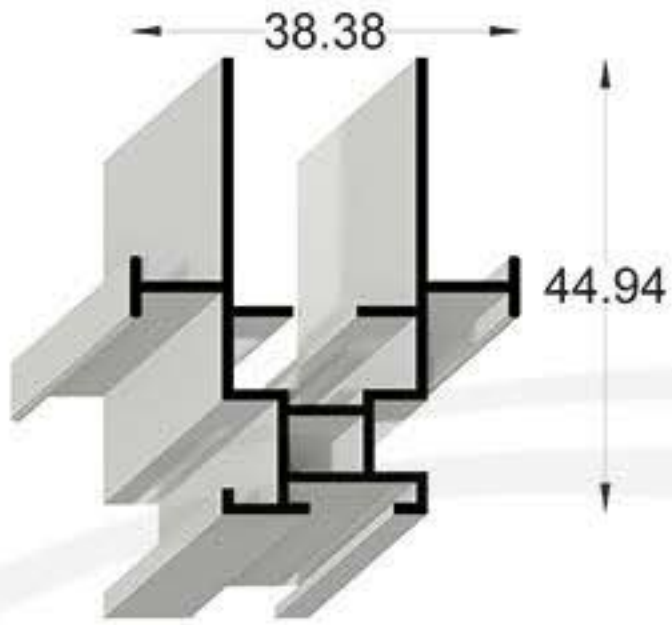


102A-3
470 gr/m

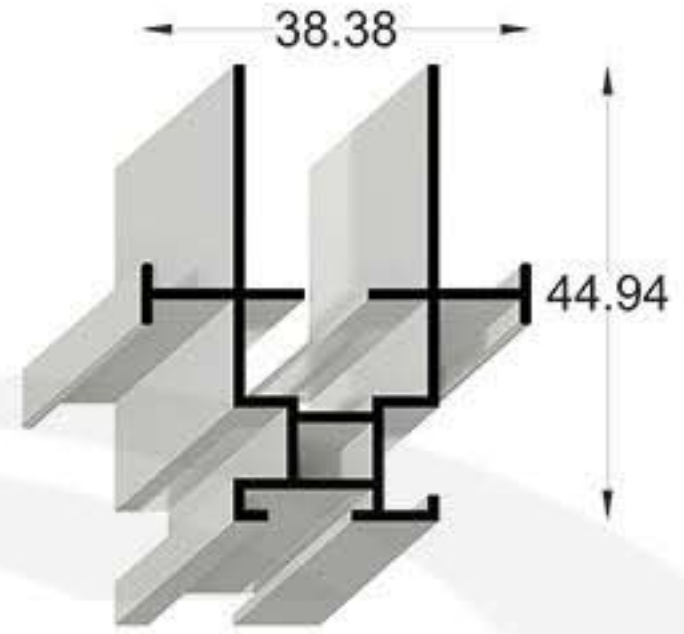


102A-4
180 gr/m

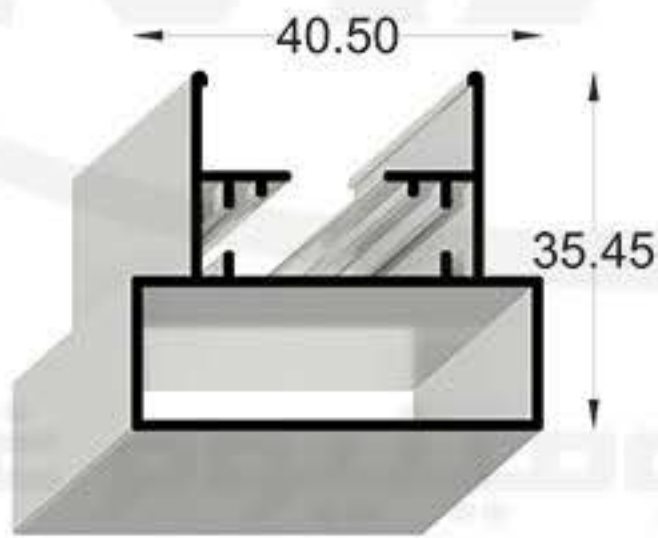




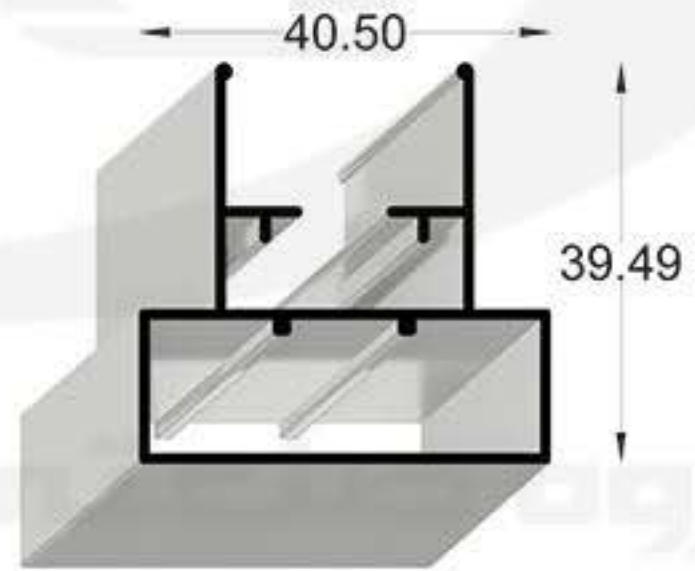
102A-11
500 gr/m



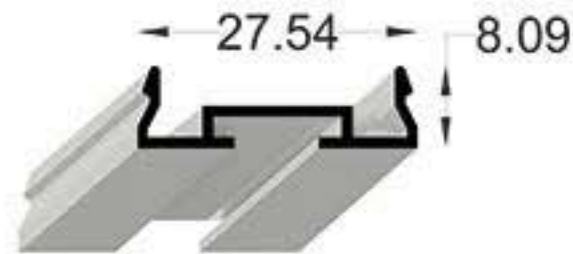
102A-12
500 gr/m



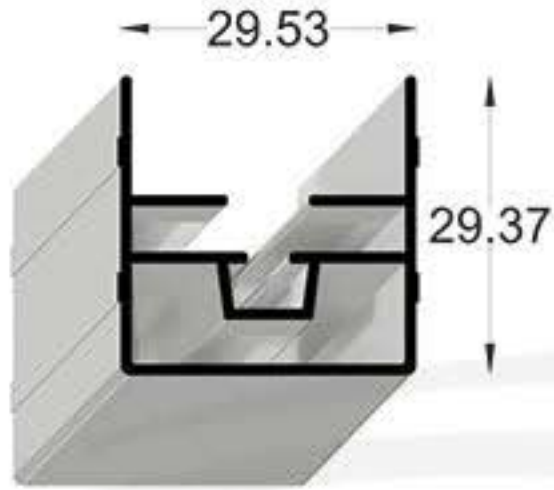
102A-13
520 gr/m



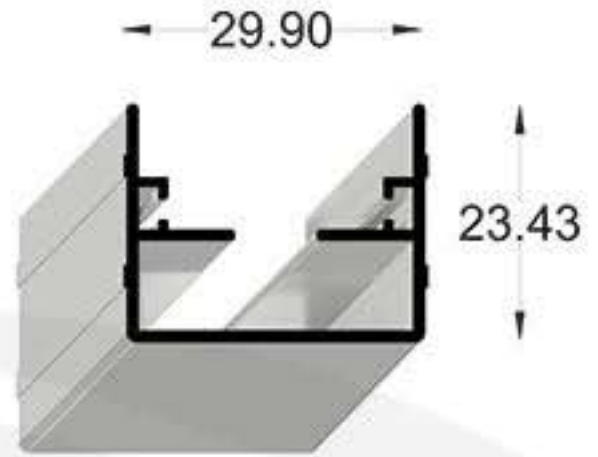
102A-14
520 gr/m



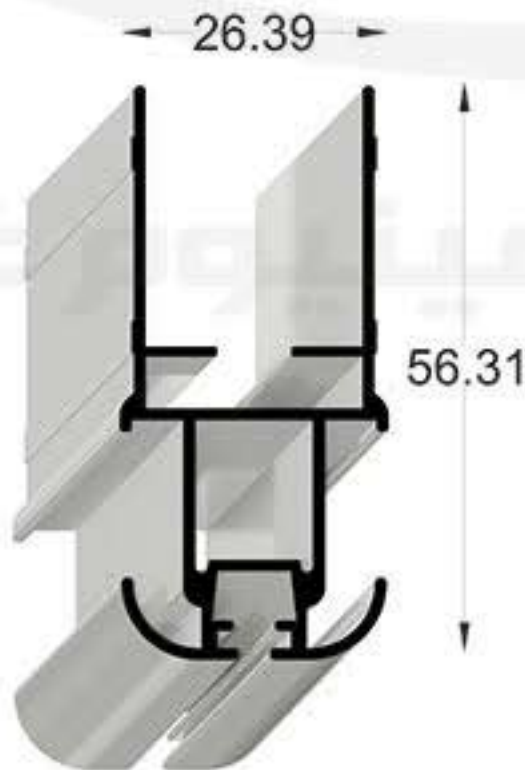
102A-15
160 gr/m



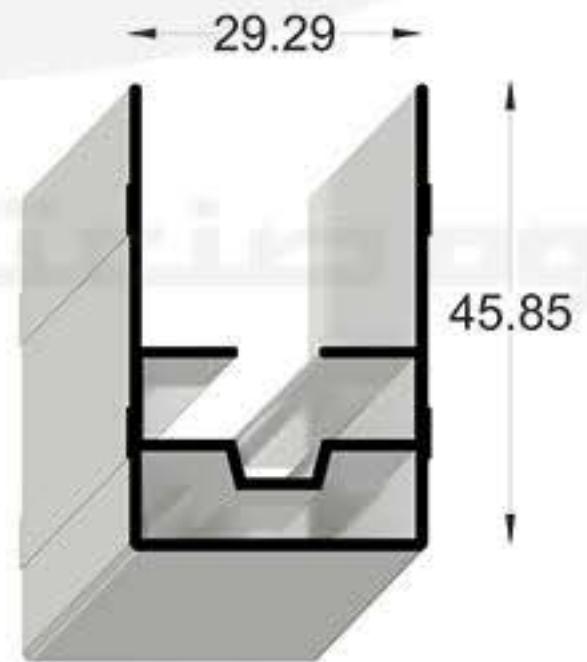
102A-16
430 gr/m



102A-17
330 gr/m



102A-18
650 gr/m



102A-19
570 gr/m



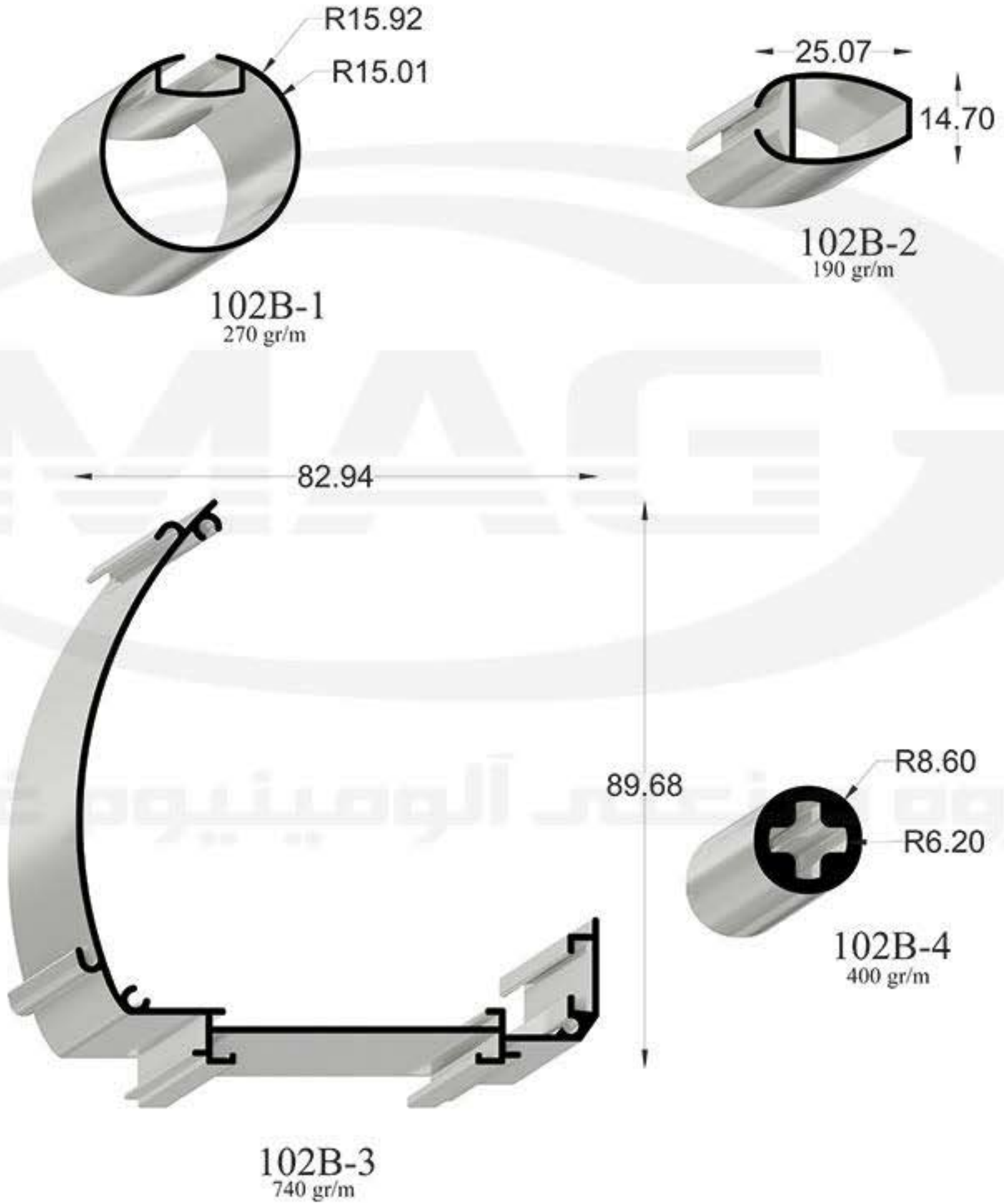
Code 102A

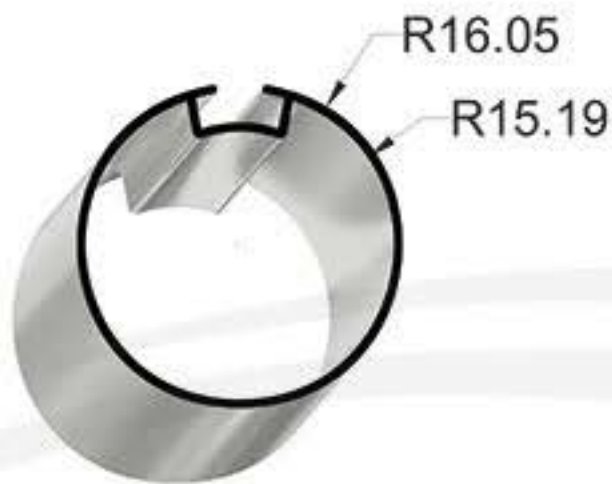
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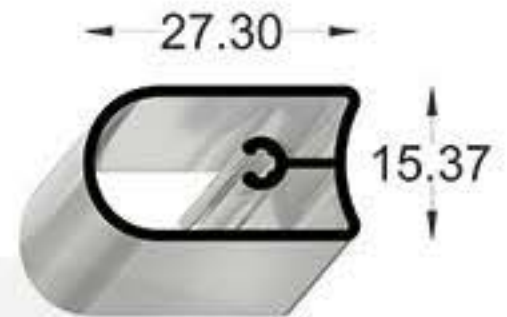


Code:102B

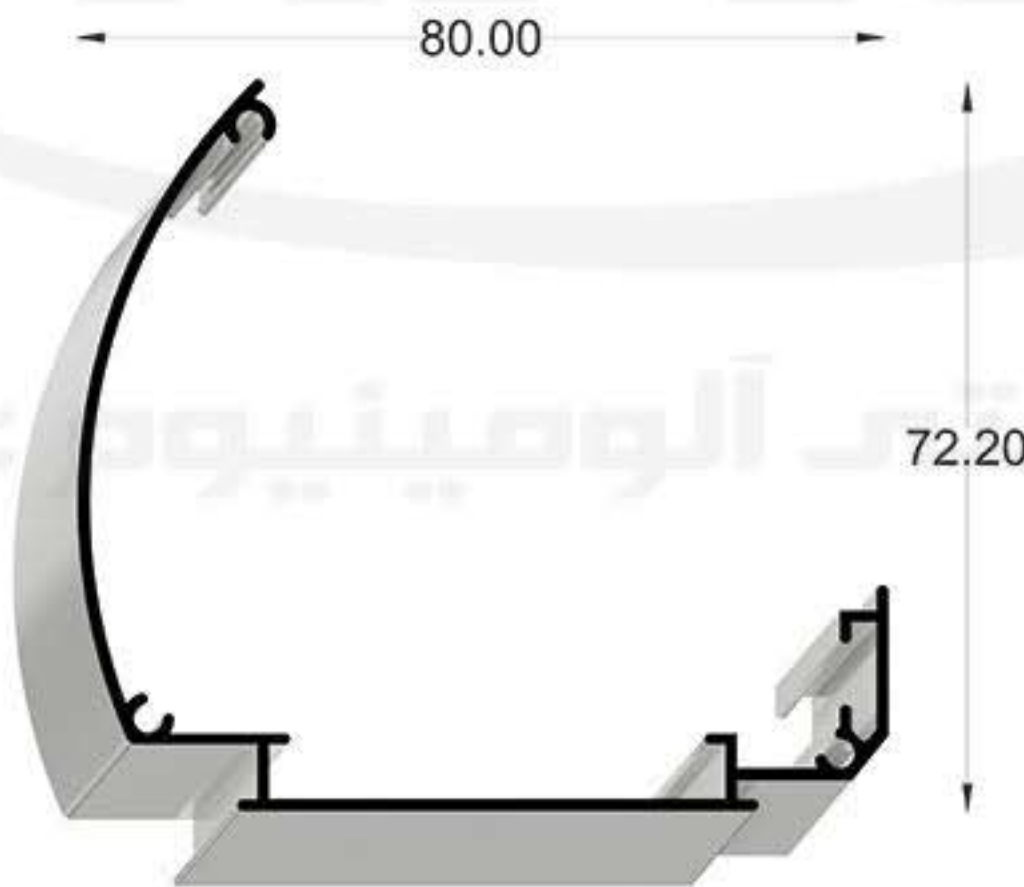




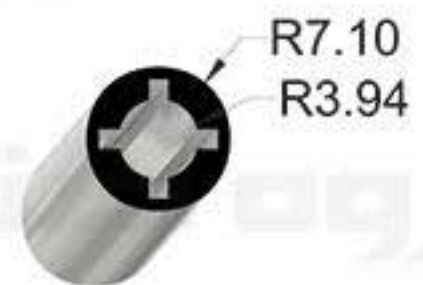
102B-5
250 gr/m



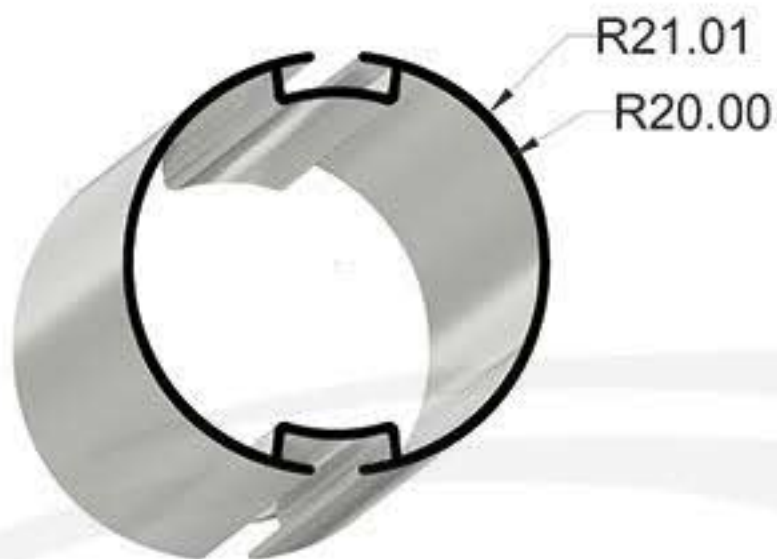
102B-6
270 gr/m



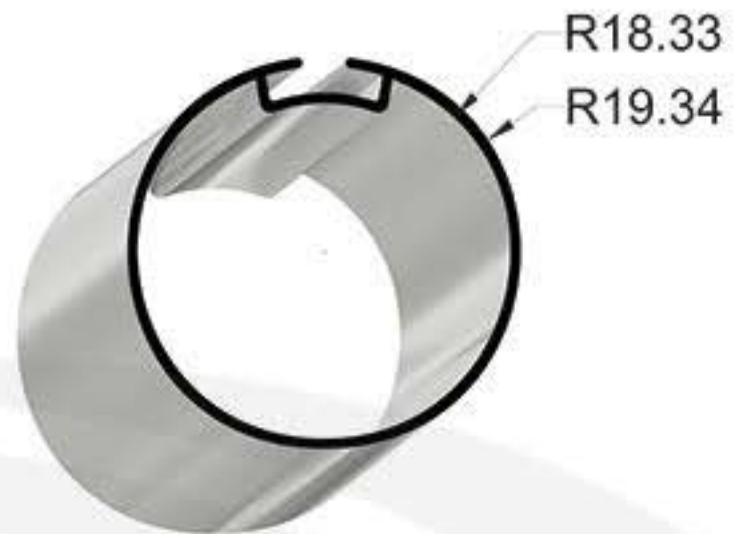
102B-7
640 gr/m



102B-8
250 gr/m



102B-9
420 gr/m



102B-10
350 gr/m

88.18

35.75

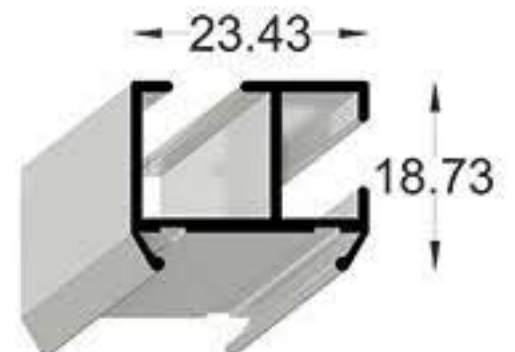


102B-11
660 gr/m

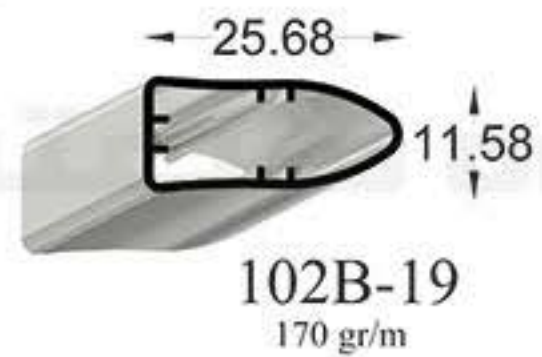
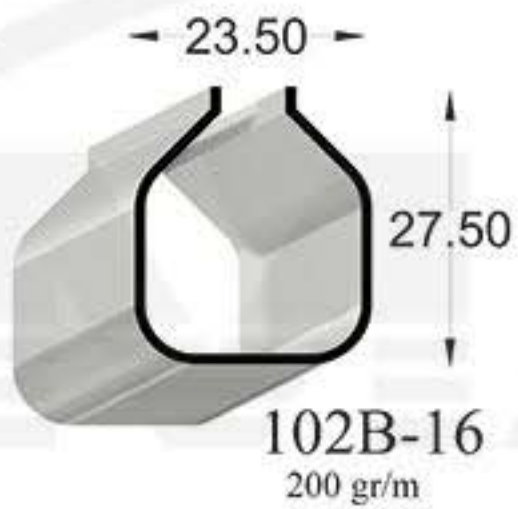
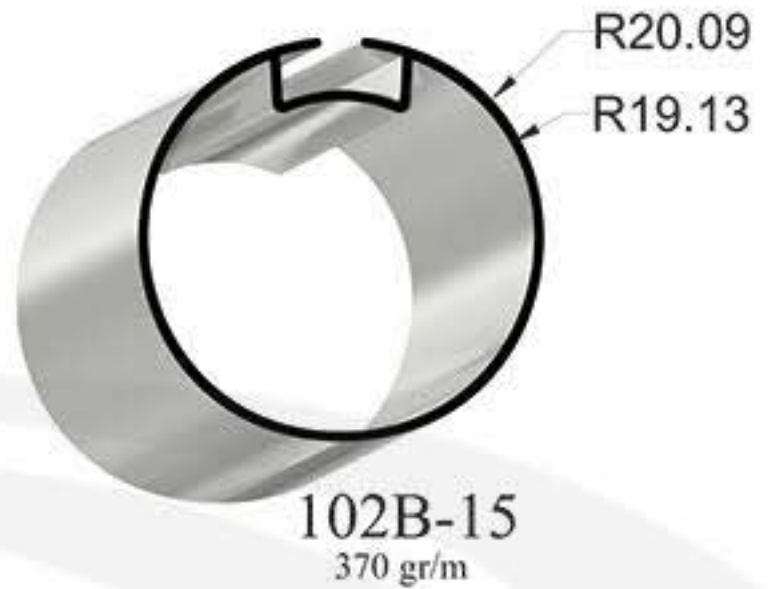


102B-12
320 gr/m

90.12



102B-13
240 gr/m





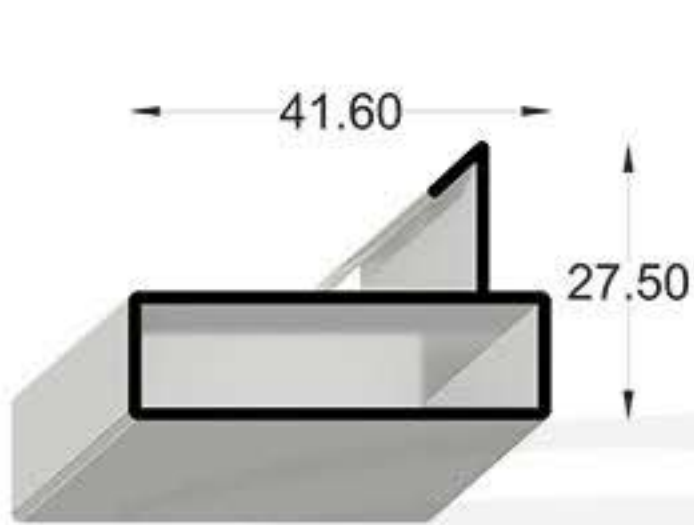
Code 102B

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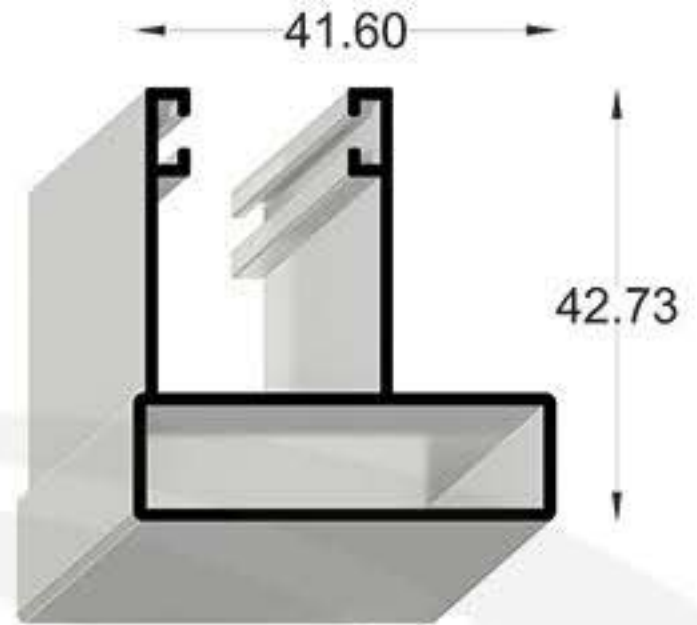




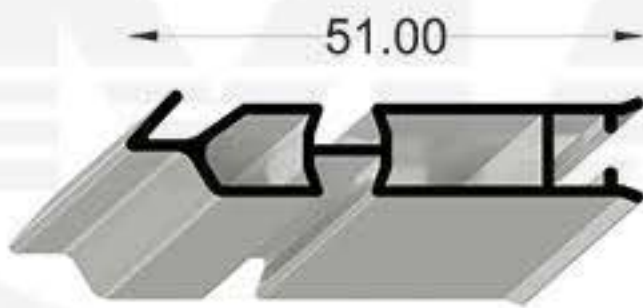
Code:102C



102C-1
415 gr/m



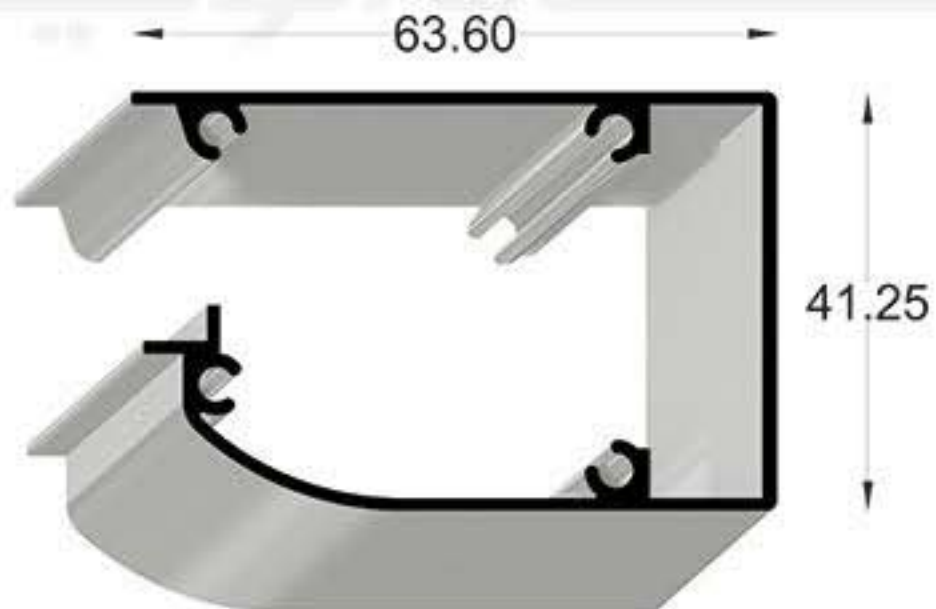
102C-2
610 gr/m



102C-3
390 gr/m



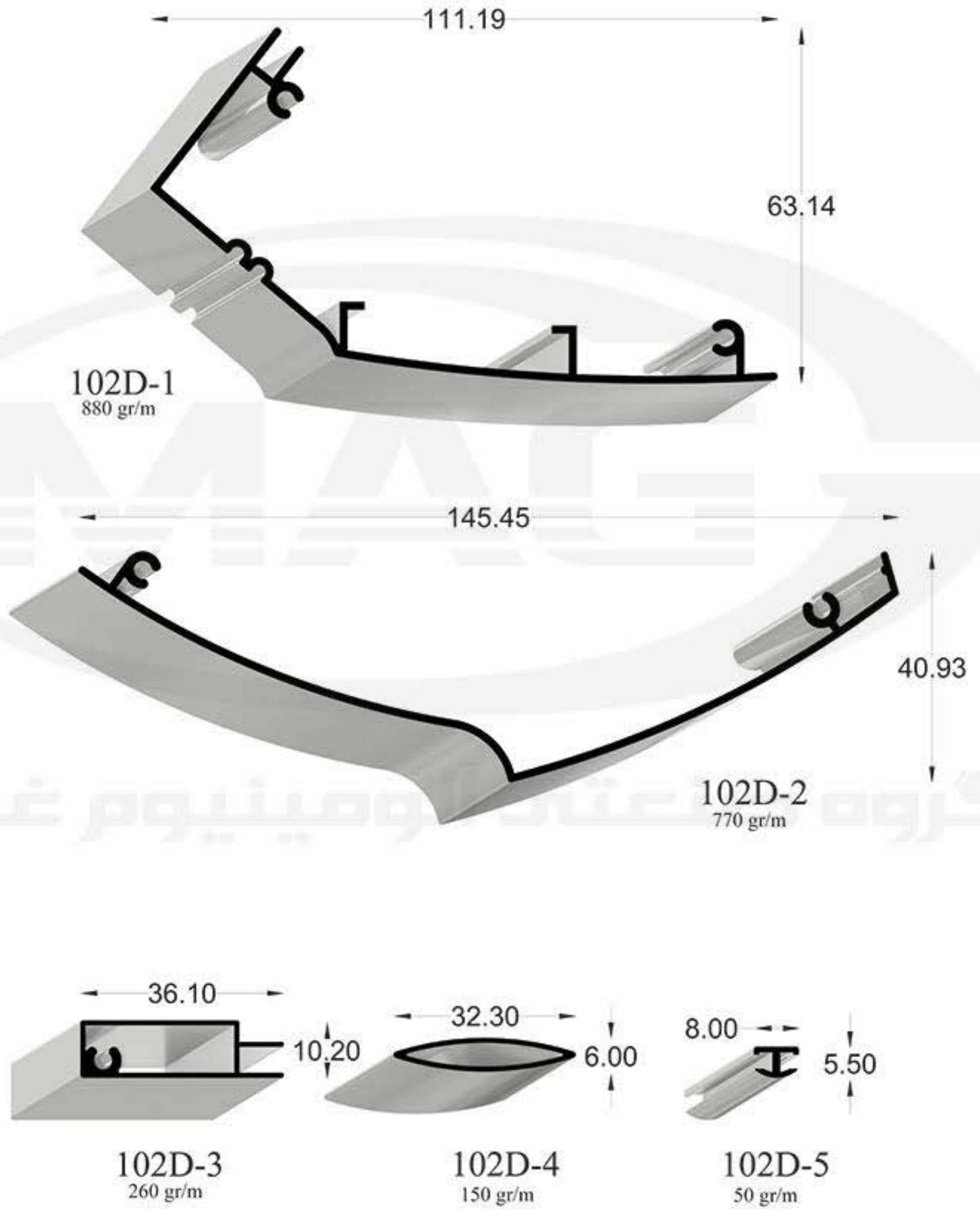
102C-4
290 gr/m



102C-5
800 gr/m



Code:1020





Code:103C
سیستم درب
کریه ای ماشین
Automobil Shutters
Door System
Page: 140



Code:103A
سیستم دربهای اتومات
Automatic door System
Page: 126



Code:103B
سیستم دربهای
کریه برقی
Electric Shutters
Door System
Page: 132

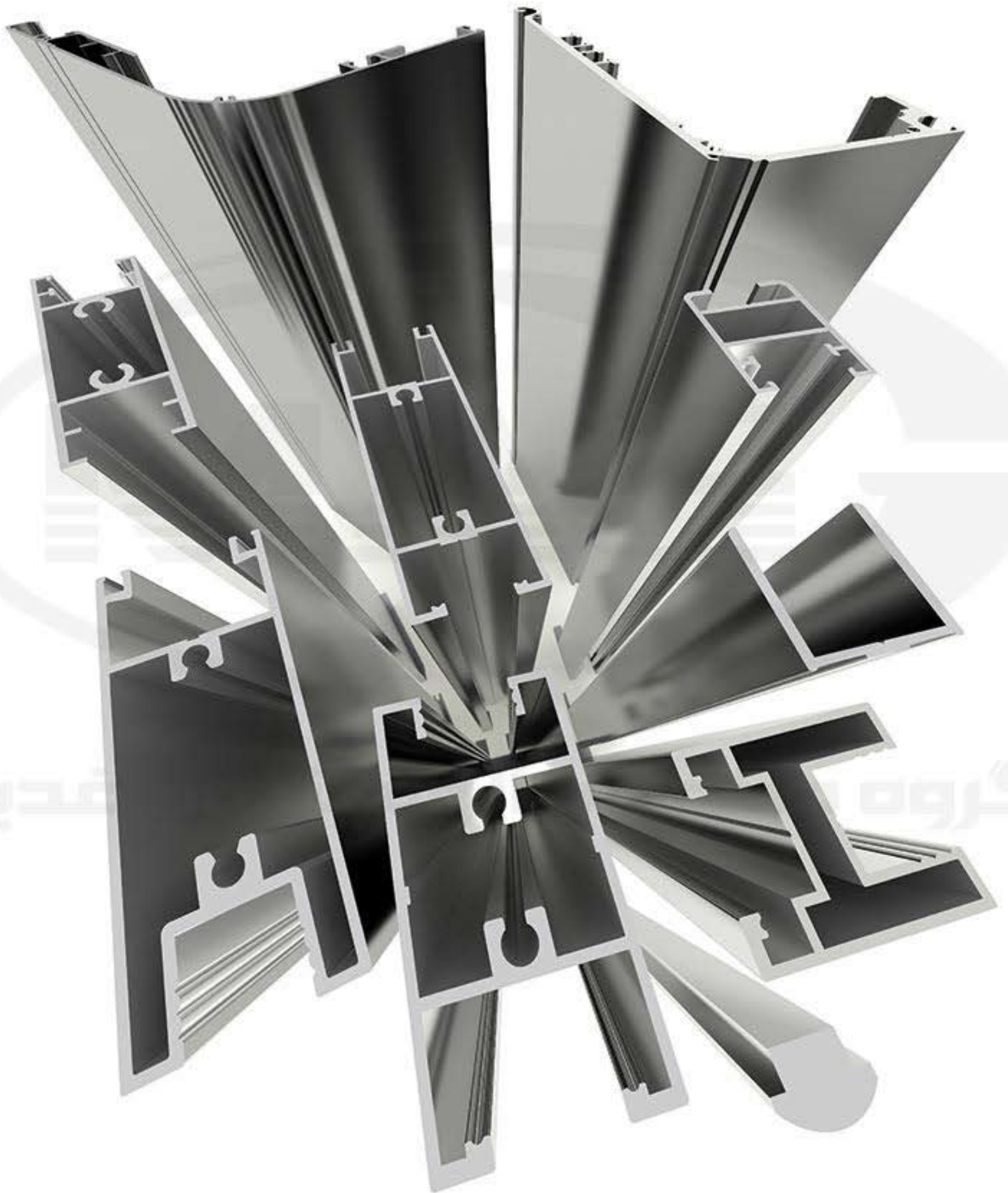




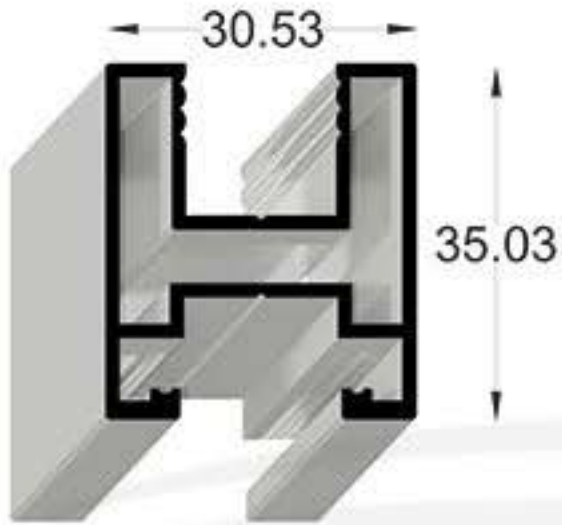
Automatic Doors System

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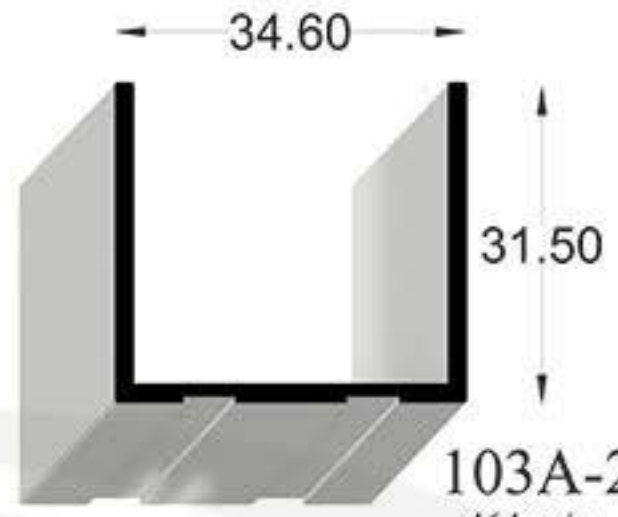




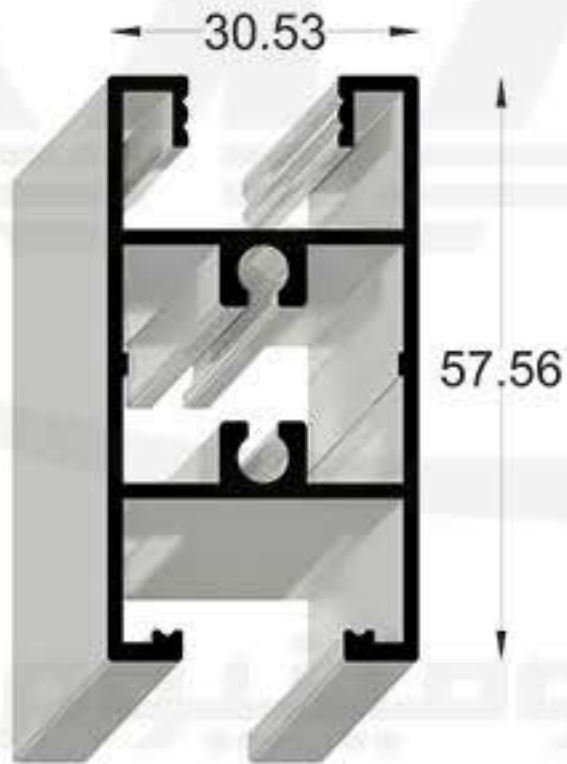
Code:103A



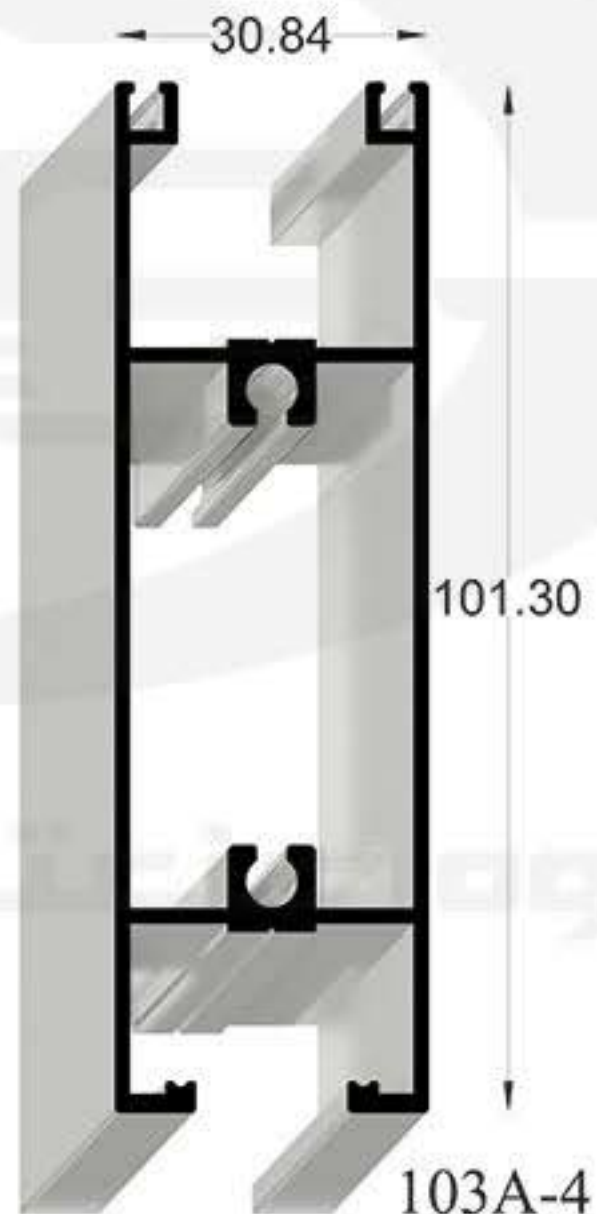
103A-1
685 gr/m



103A-2
464 gr/m



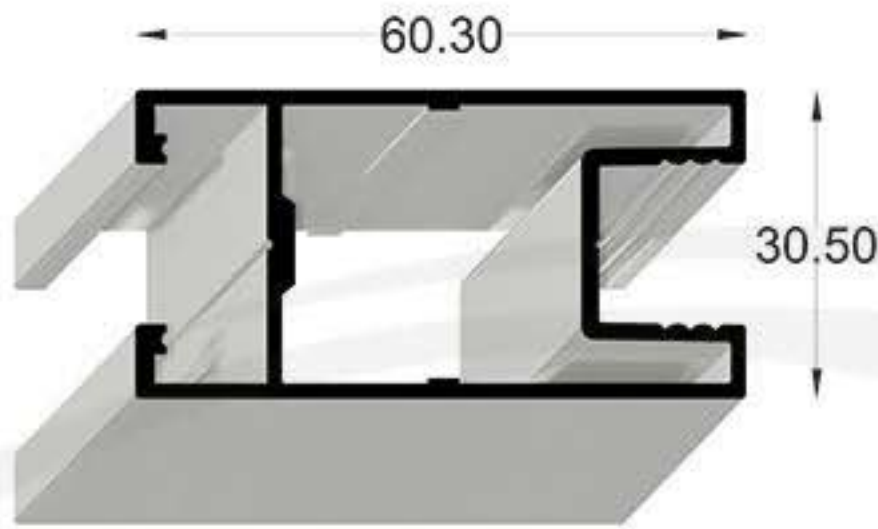
103A-3
1020 gr/m



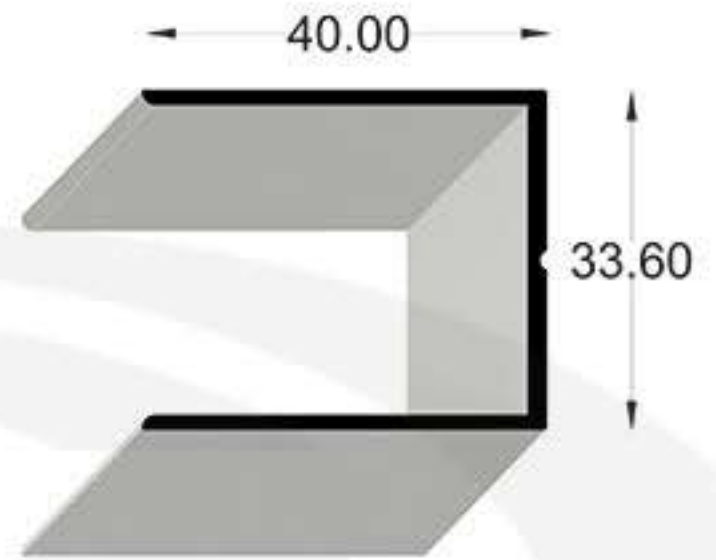
103A-4
1410 gr/m



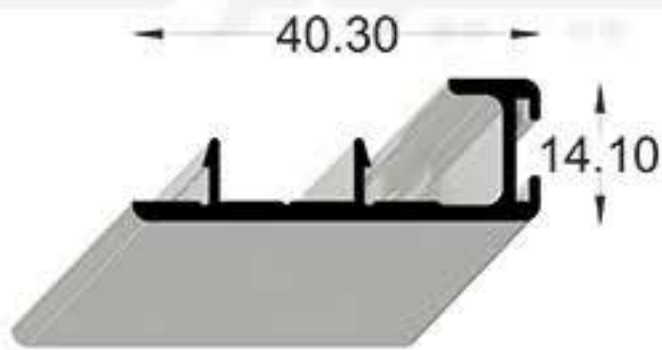
103A-5
920 gr/m



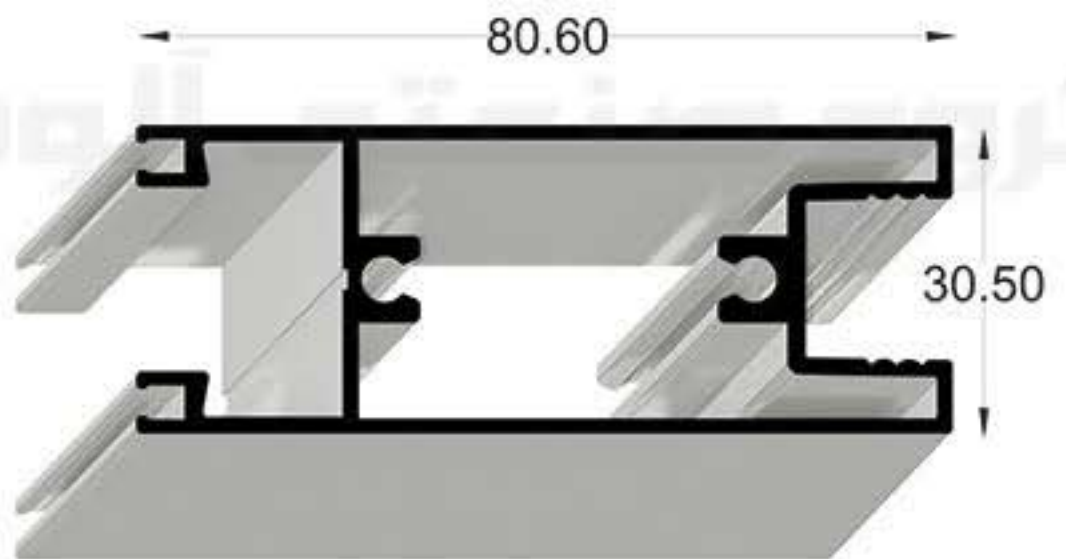
103A-6
960 gr/m



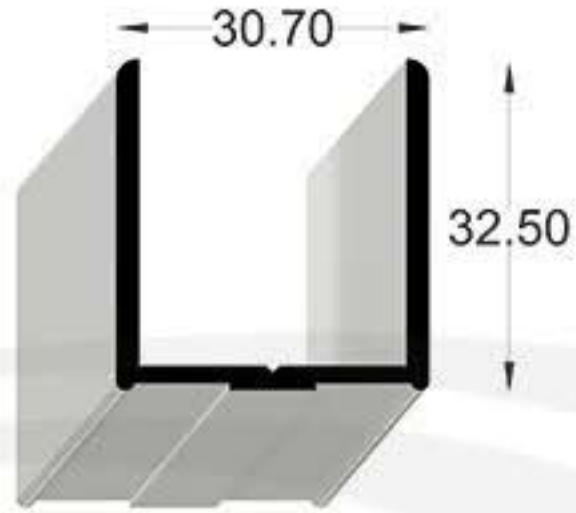
103A-7
470 gr/m



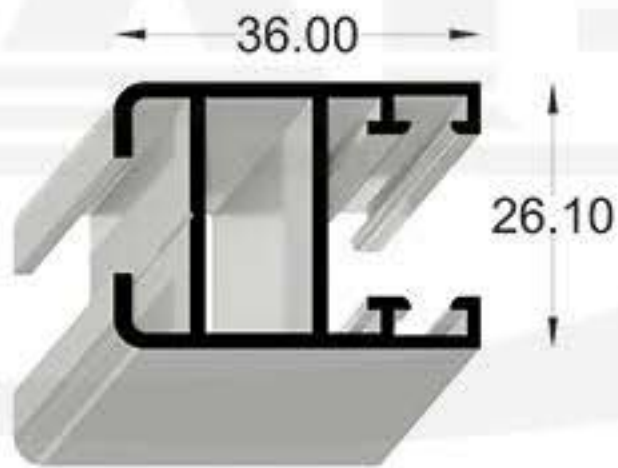
103A-8
330 gr/m



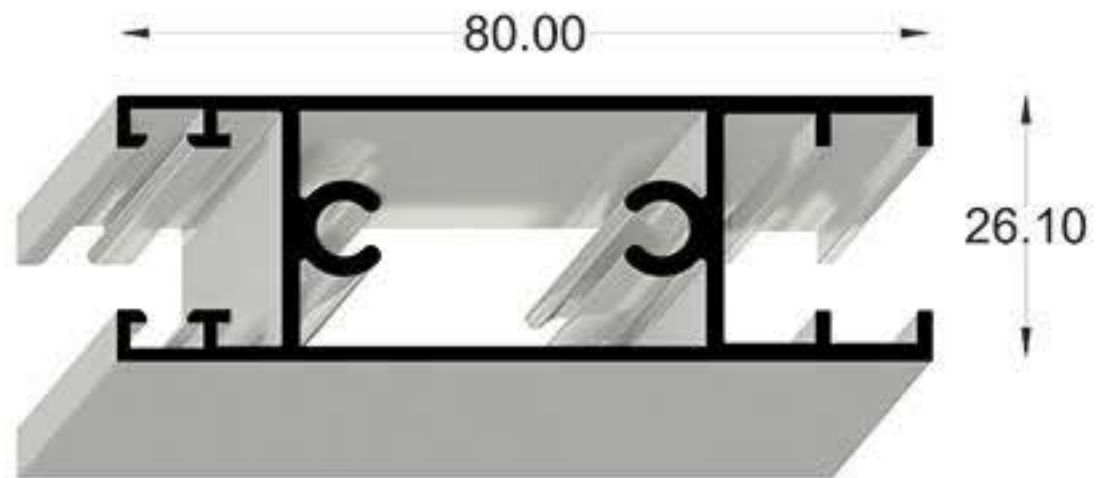
103A-9
1300 gr/m



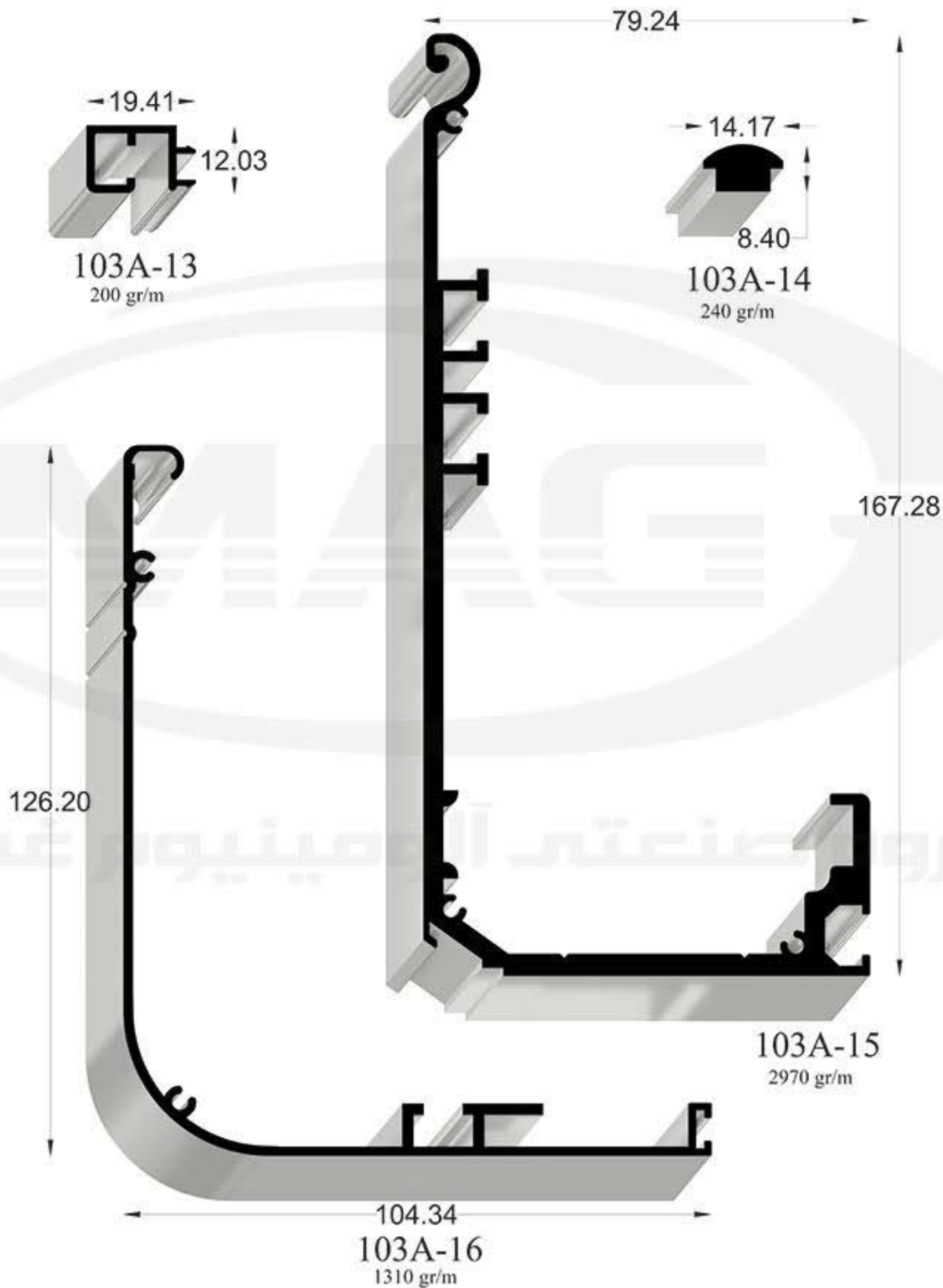
103A-10
520 gr/m

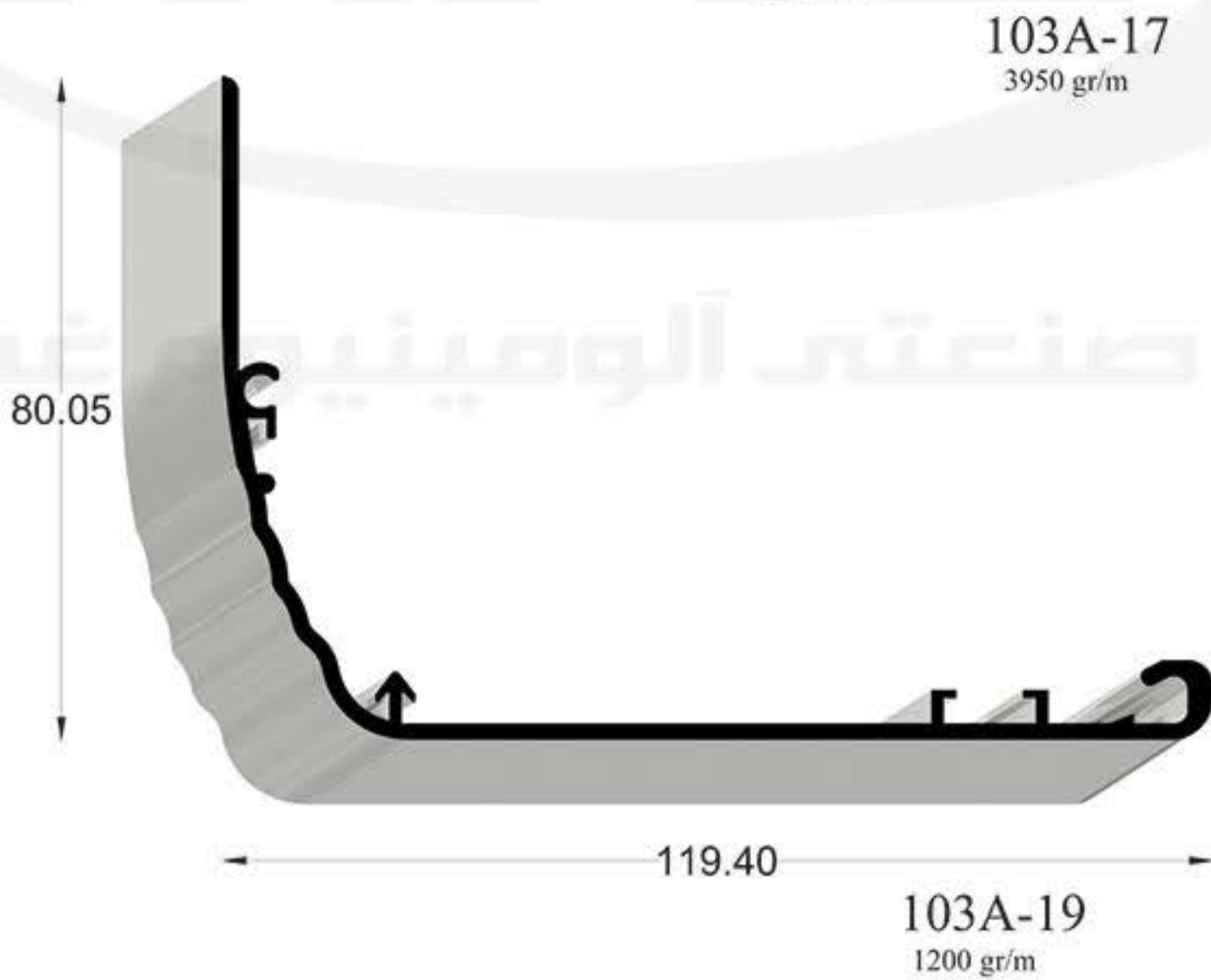
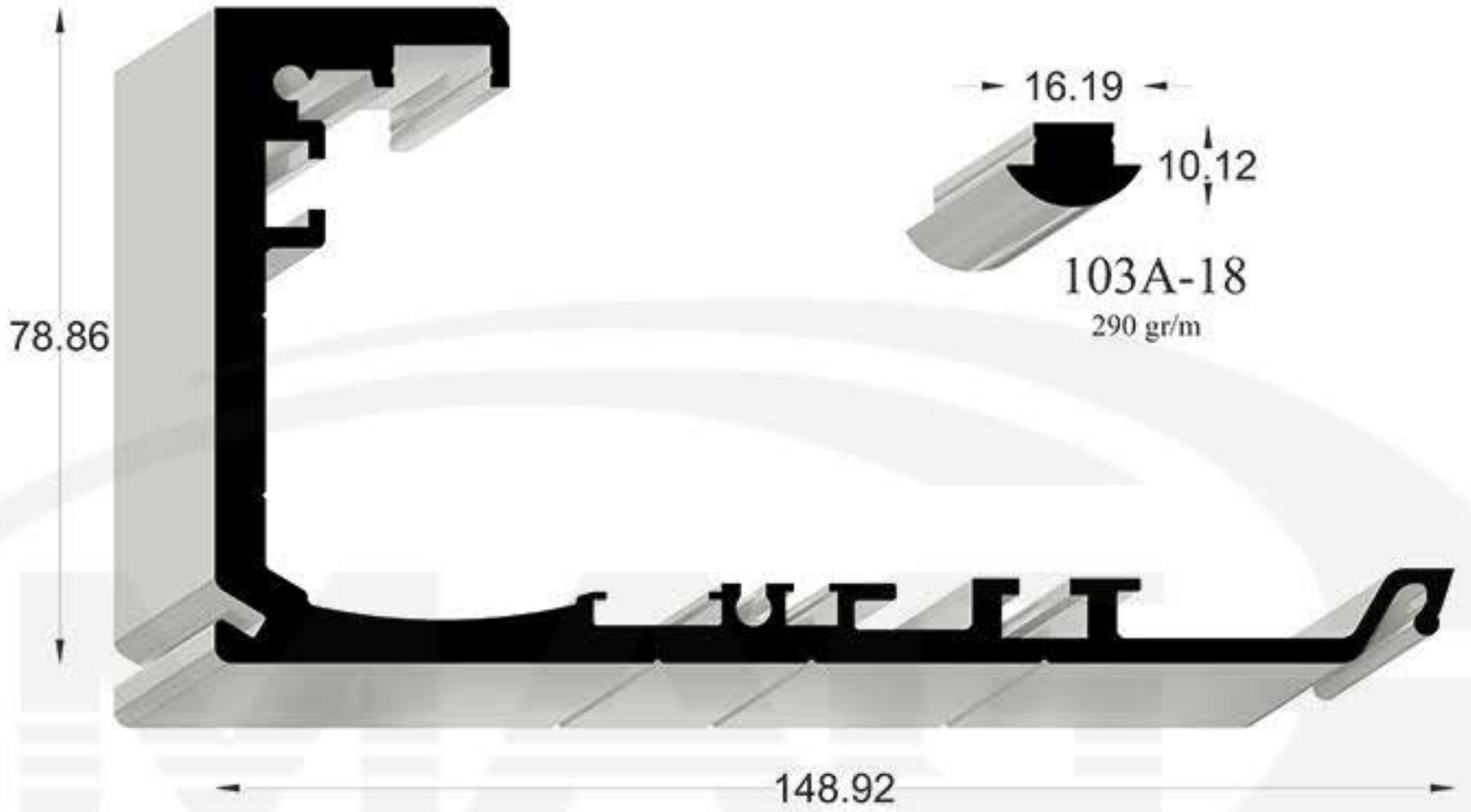


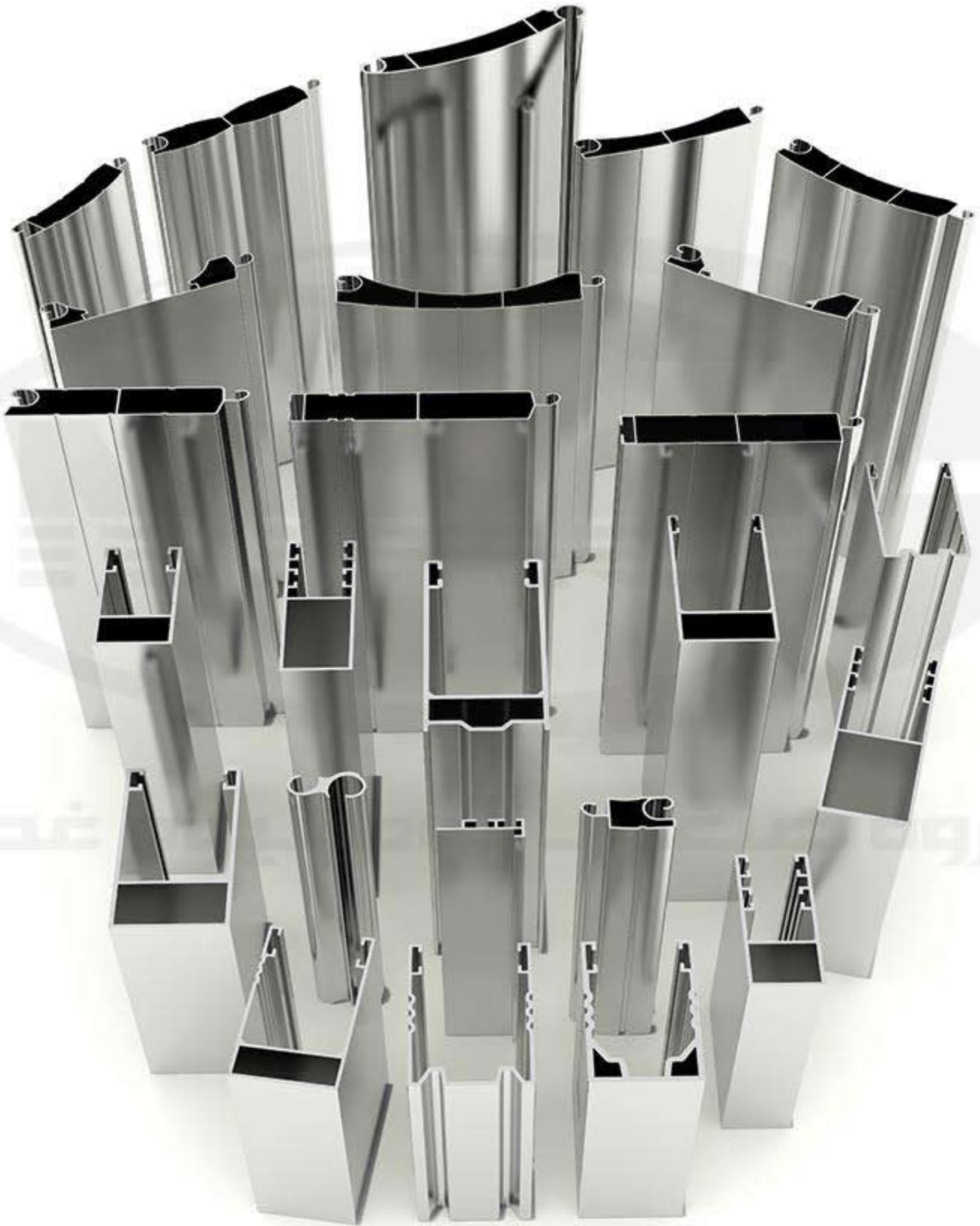
103A-11
600 gr/m



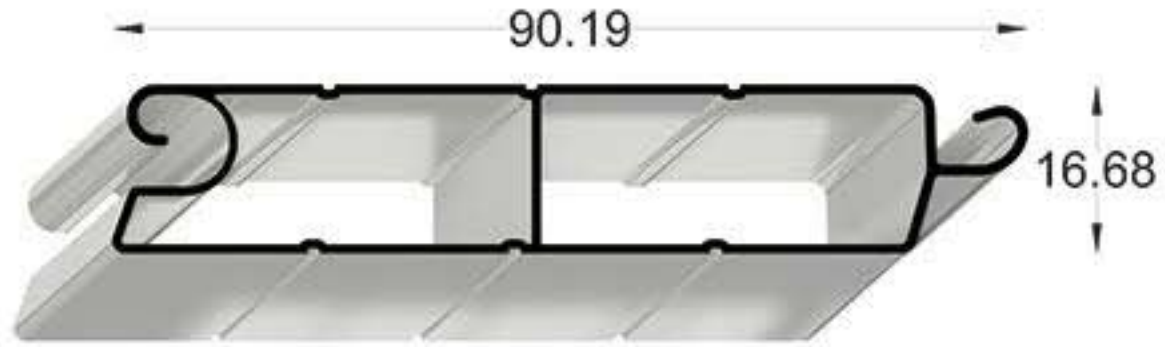
103A-12
1210 gr/m







Code:103B



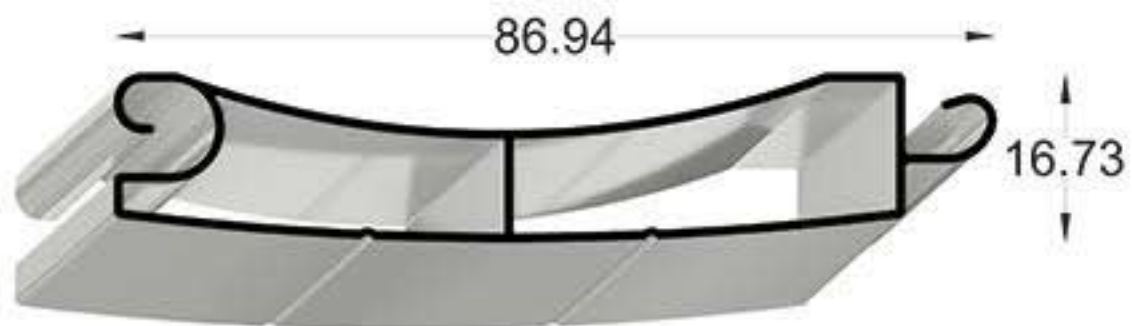
103B-1
600 gr/m



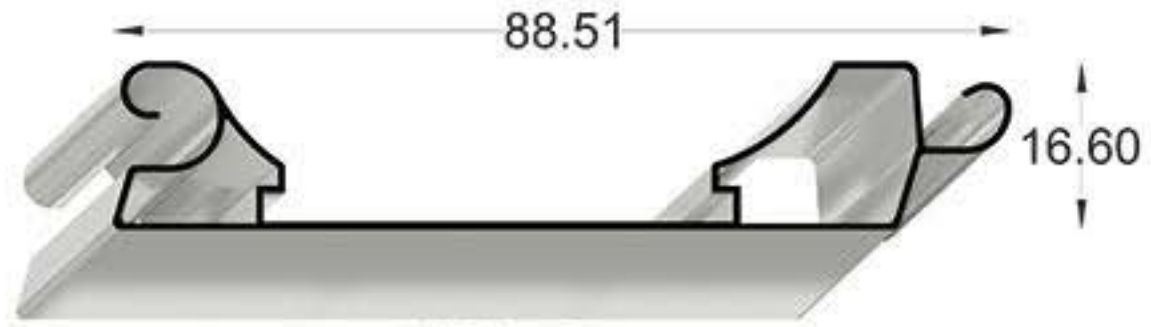
103B-2
290 gr/m



103B-3
580 gr/m

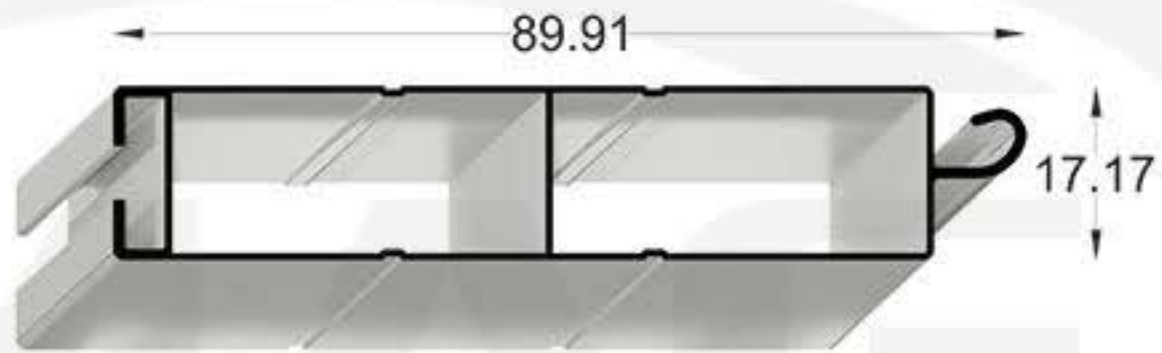


103B-4
540 gr/m



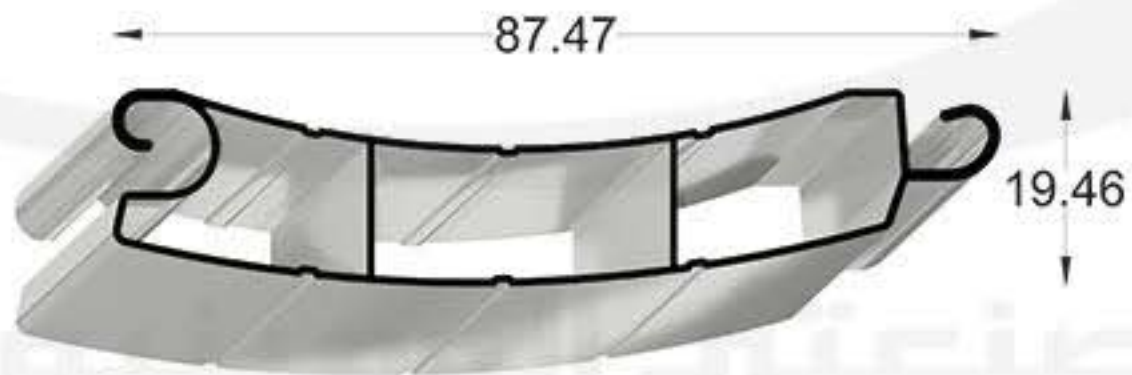
103B-5

136 gr/m



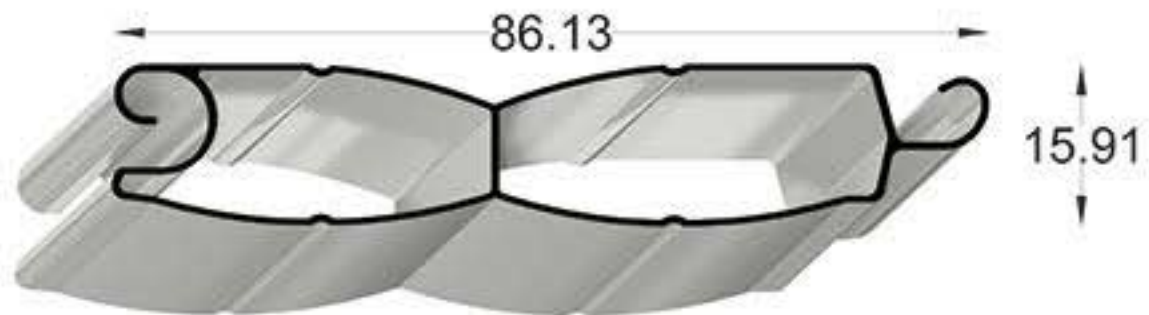
103B-6

480 gr/m



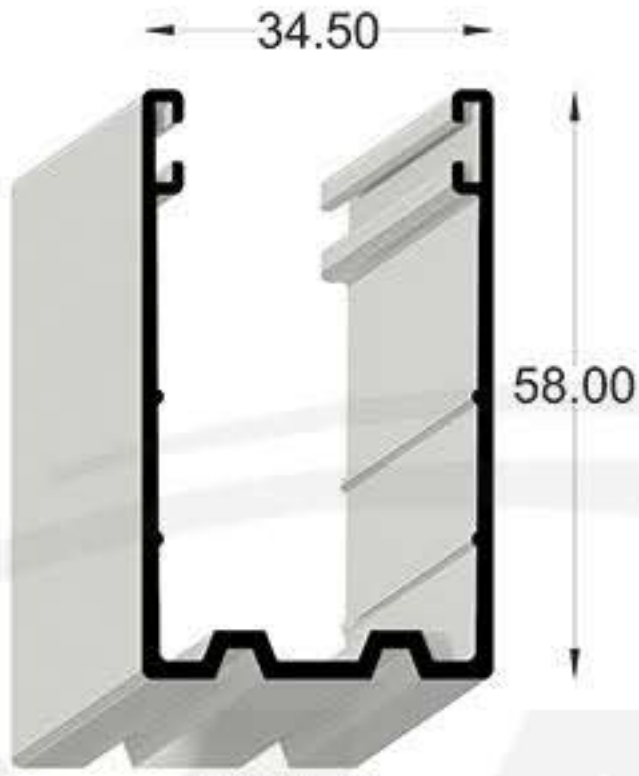
103B-7

520 gr/m

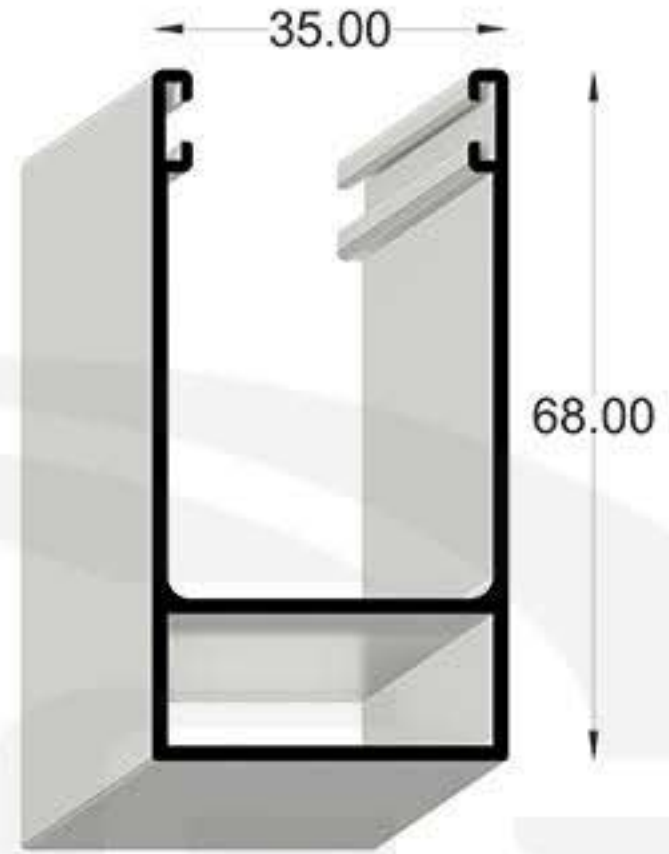


103B-8

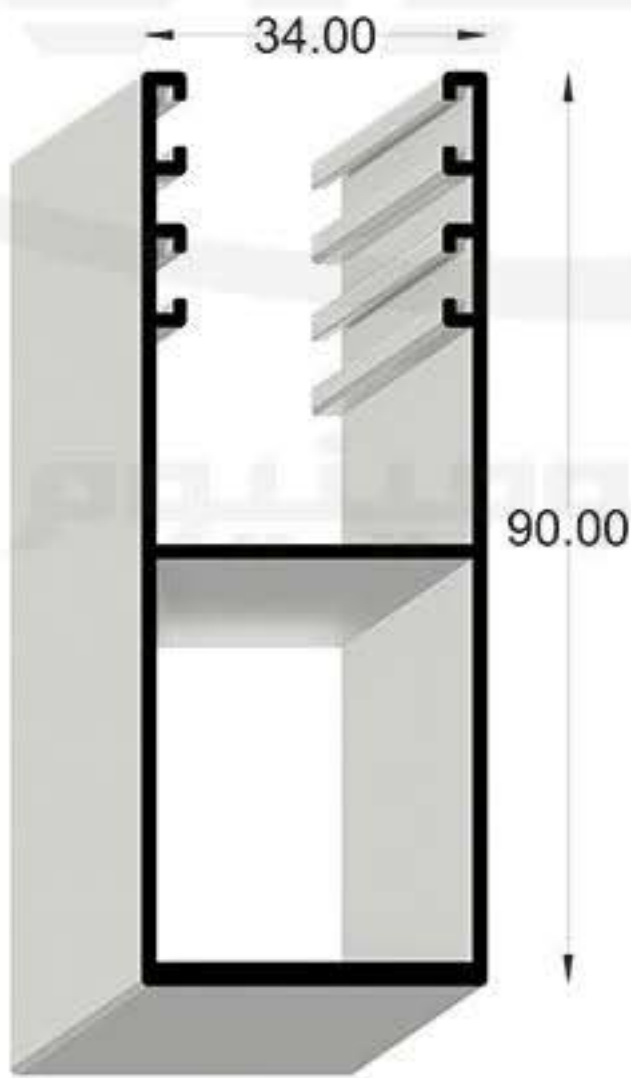
411 gr/m



103B-9
720 gr/m



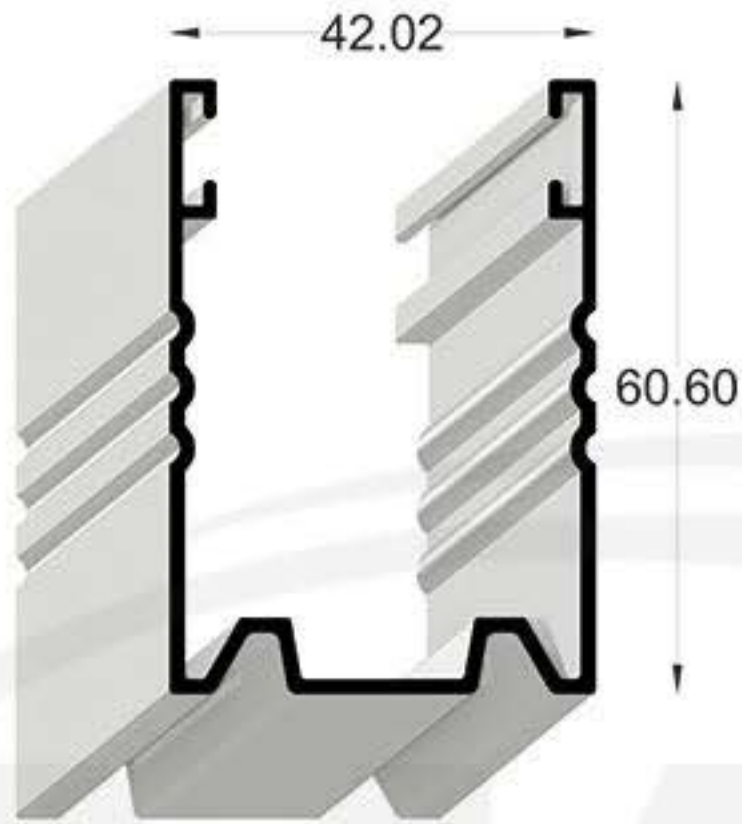
103B-10
850 gr/m



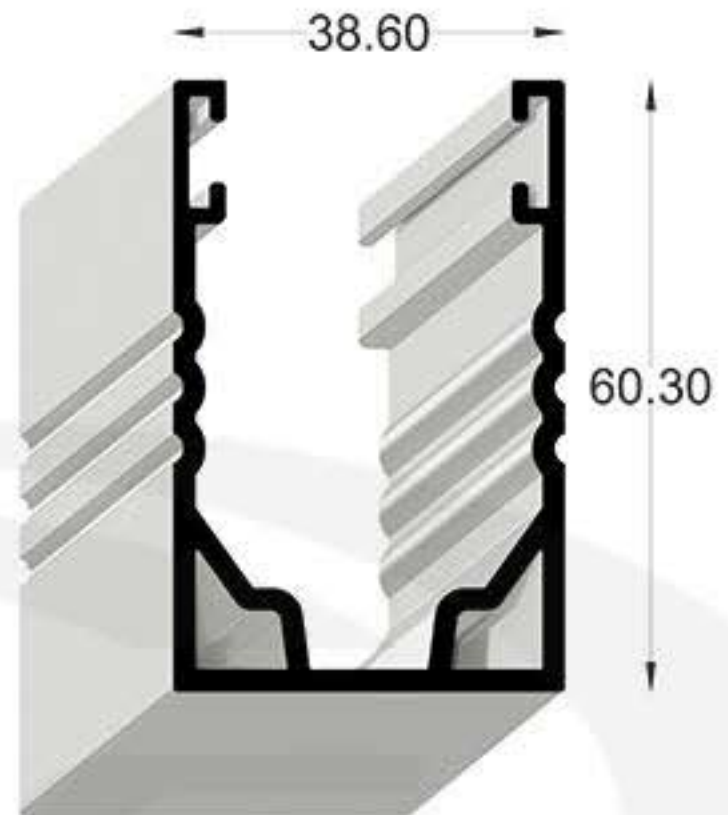
103B-11
1150 gr/m



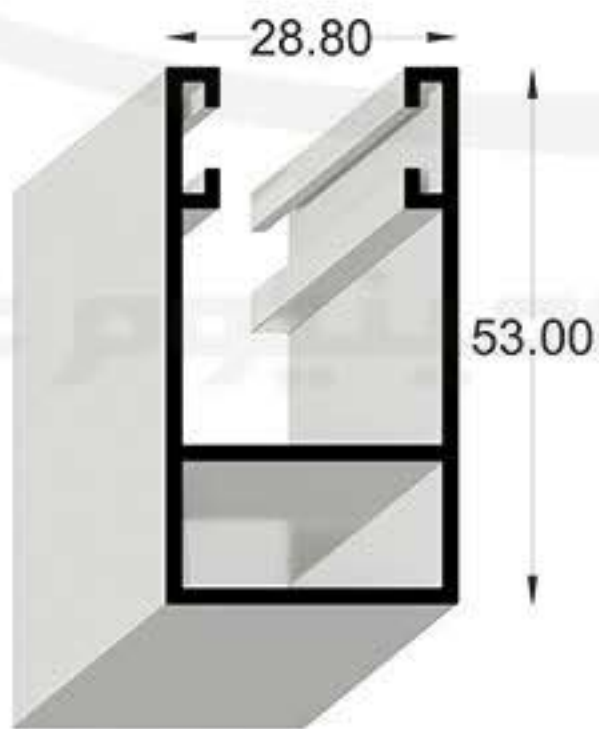
103B-12
260 gr/m



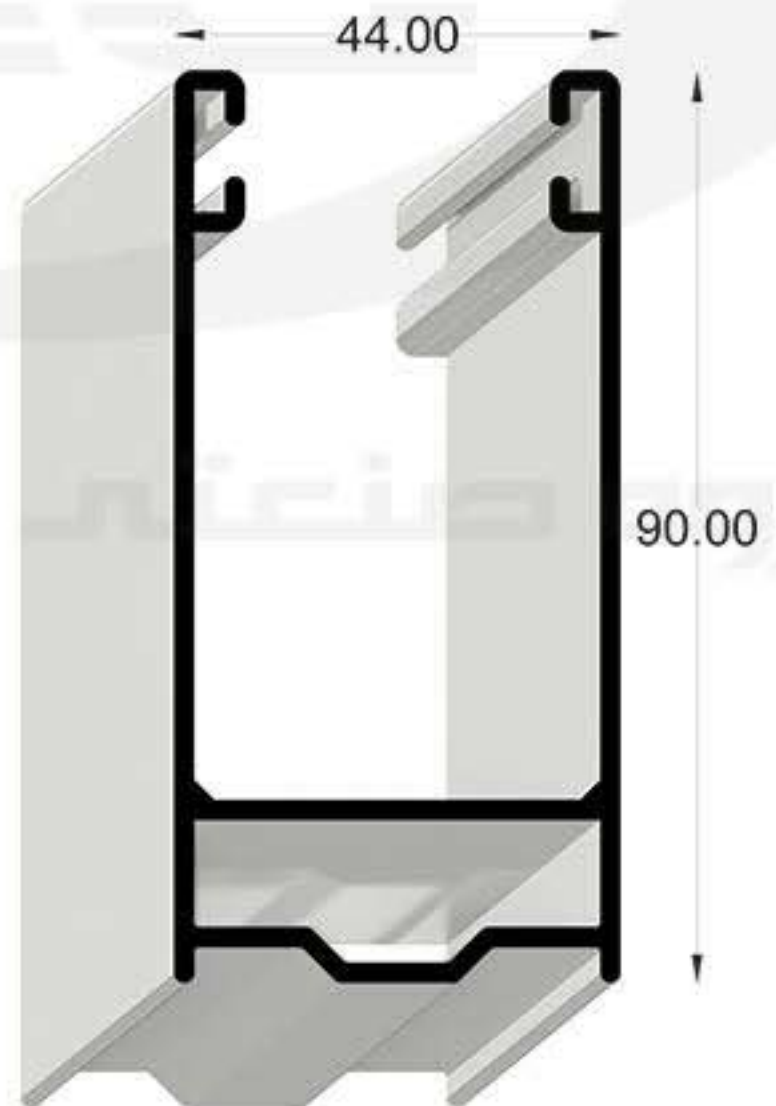
103B-13
790 gr/m



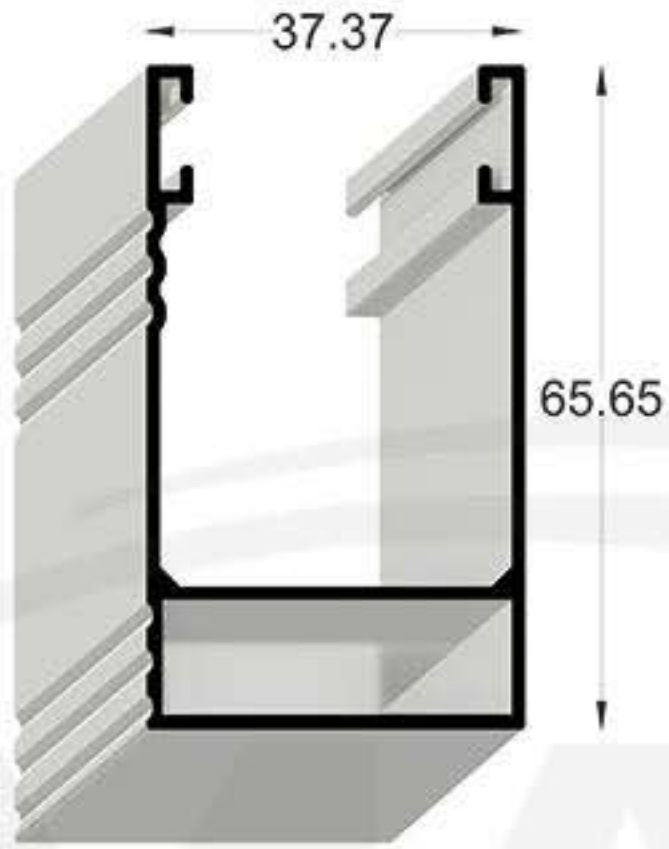
103B-14
1230 gr/m



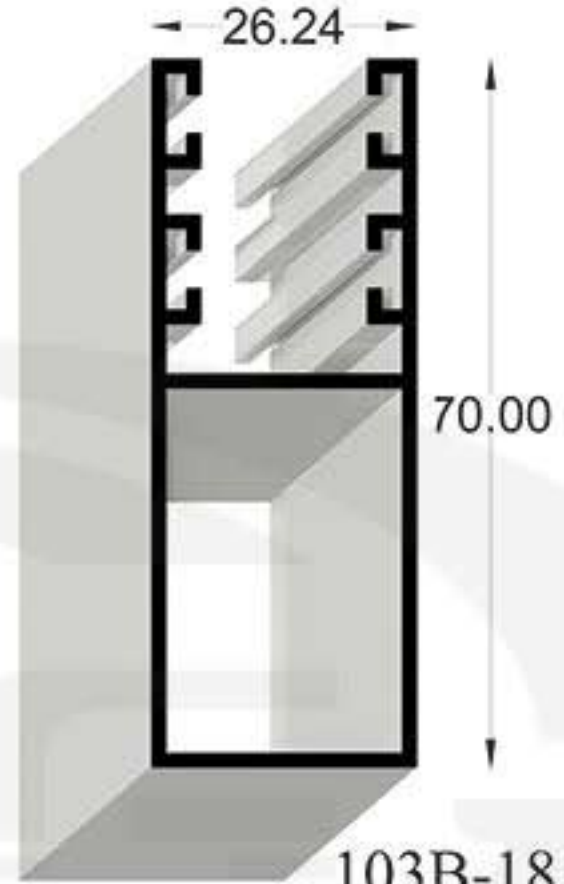
103B-15
780 gr/m



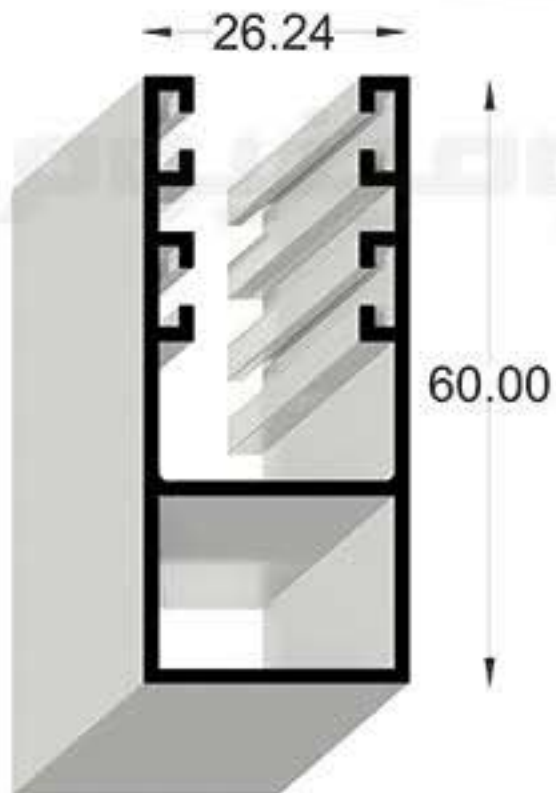
103B-16
1590 gr/m



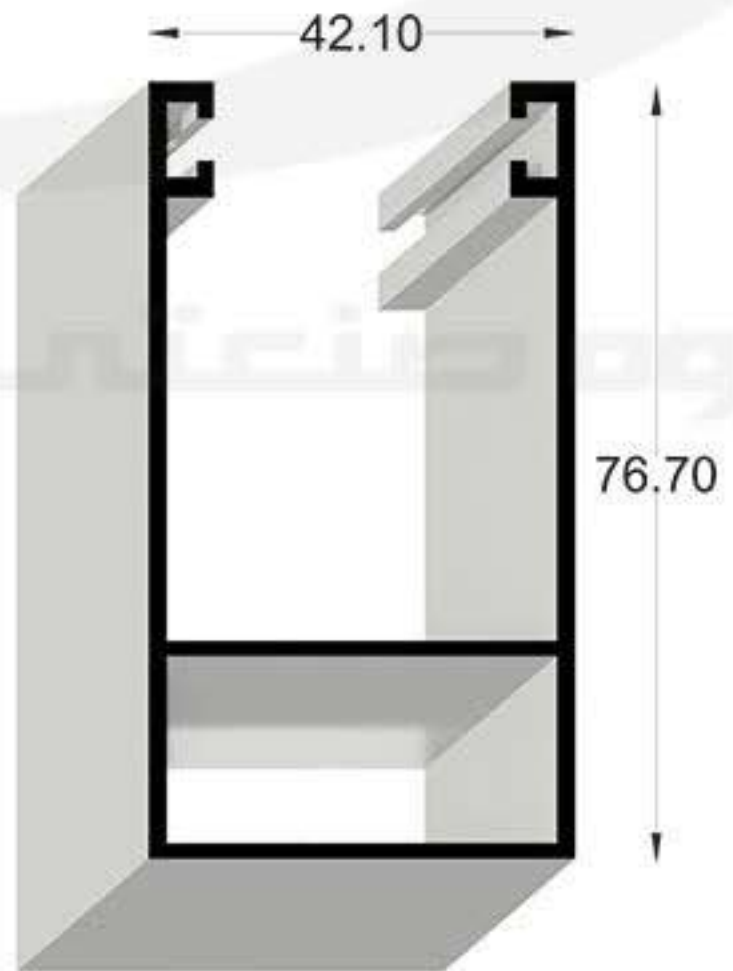
103B-17
820 gr/m



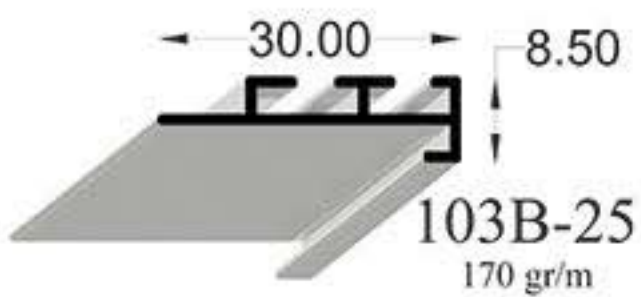
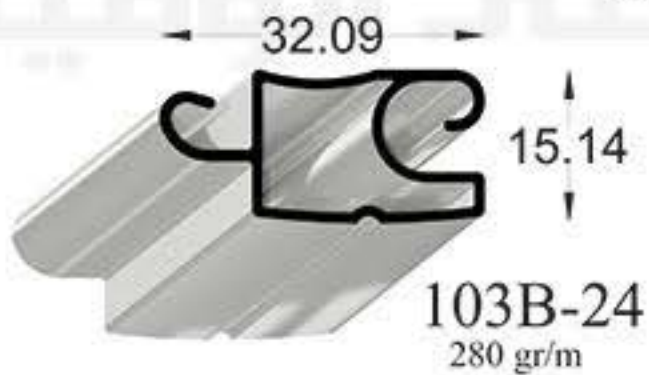
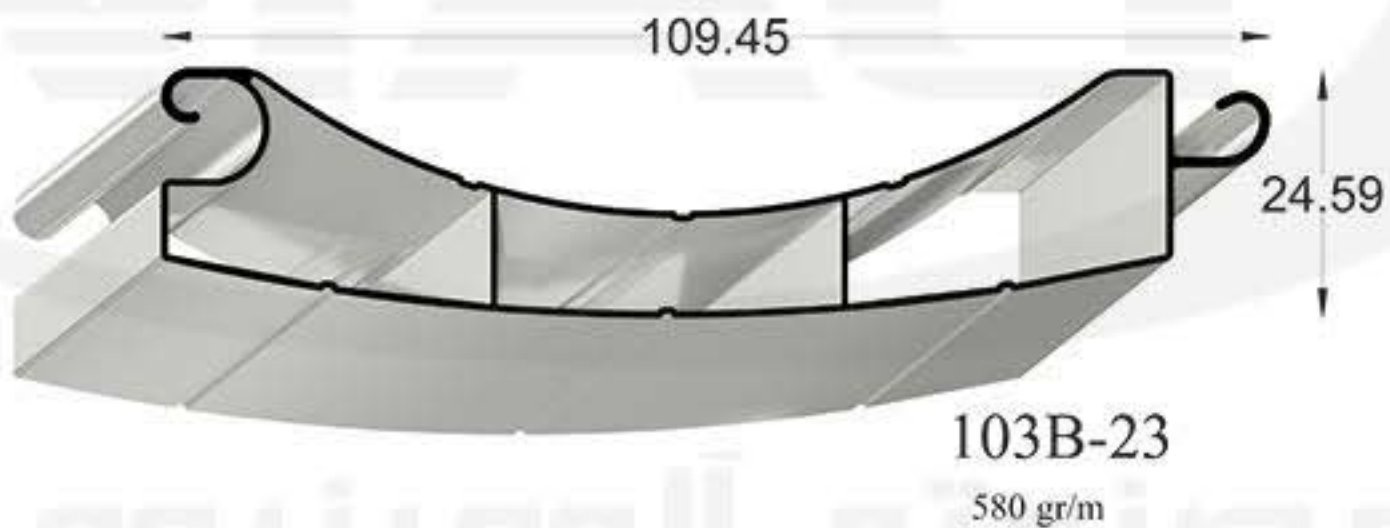
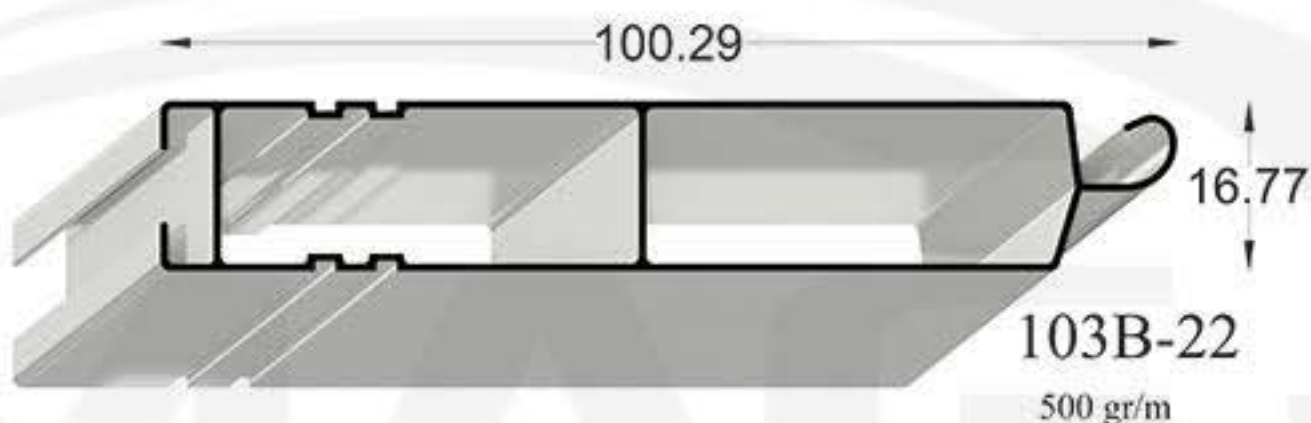
103B-18
920 gr/m



103B-19
840 gr/m



103B-20
1180 gr/m





Code 103B

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Code:103C



103C-1

240 gr/m



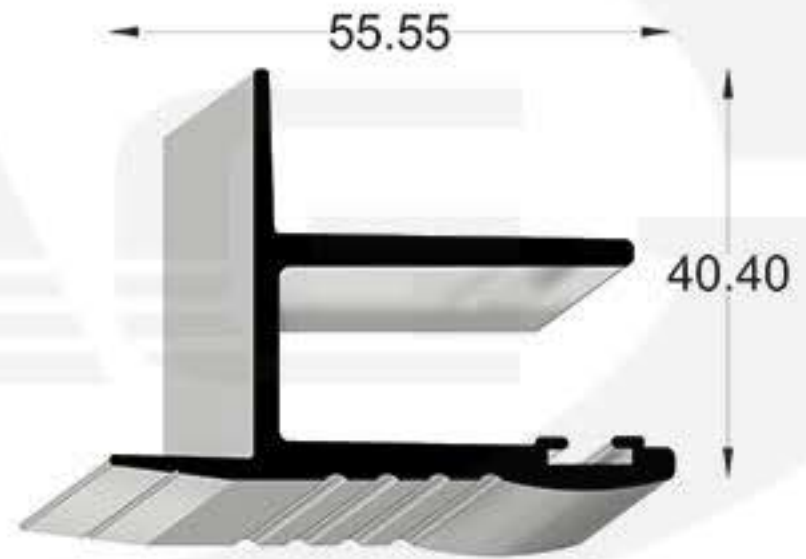
103C-2

220 gr/m



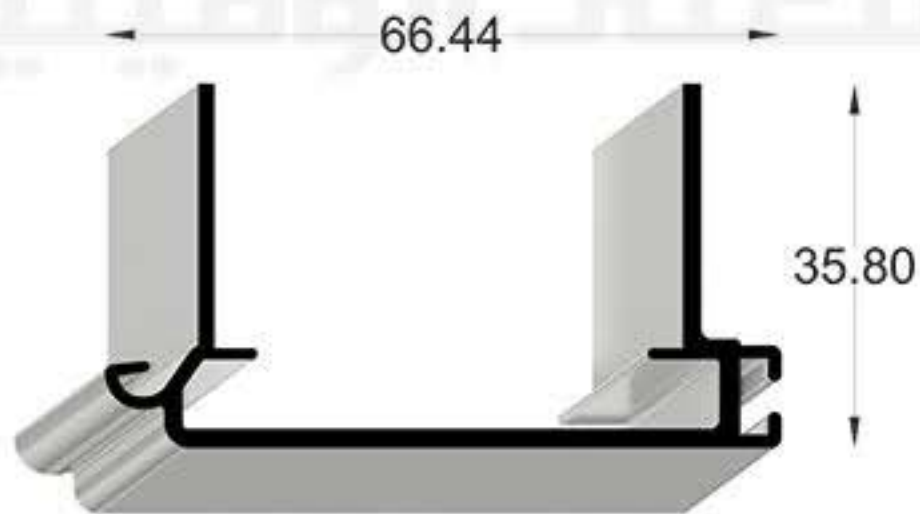
103C-3

210 gr/m



103C-4

950 gr/m



103C-5

720 gr/m



Code:104B

سیستم یفحال ماشینی

Mechanical
Refrigeration System

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Code:104A

سیستم یفحال ویترینی

Refrigeration System

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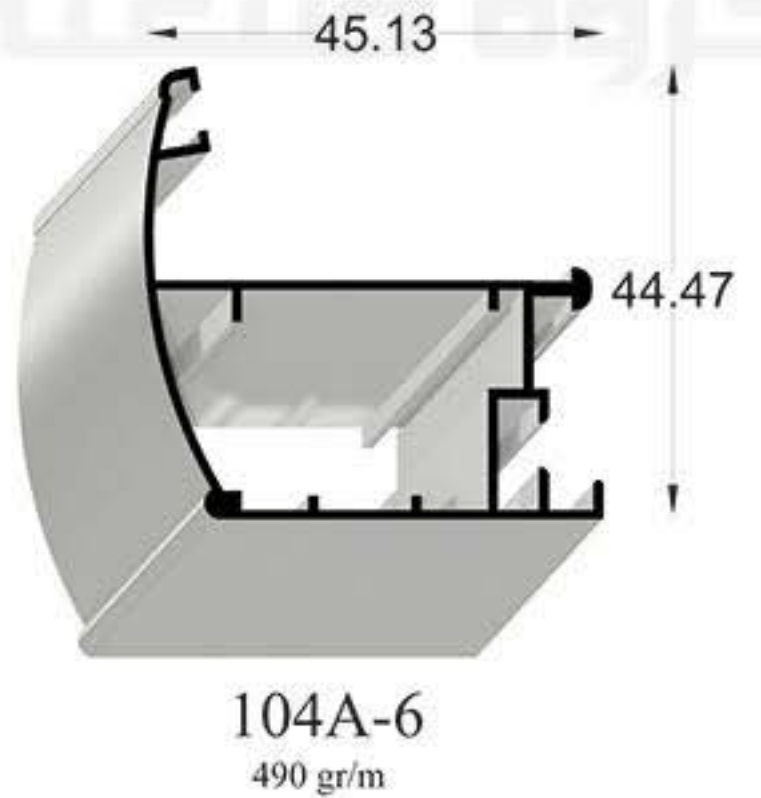
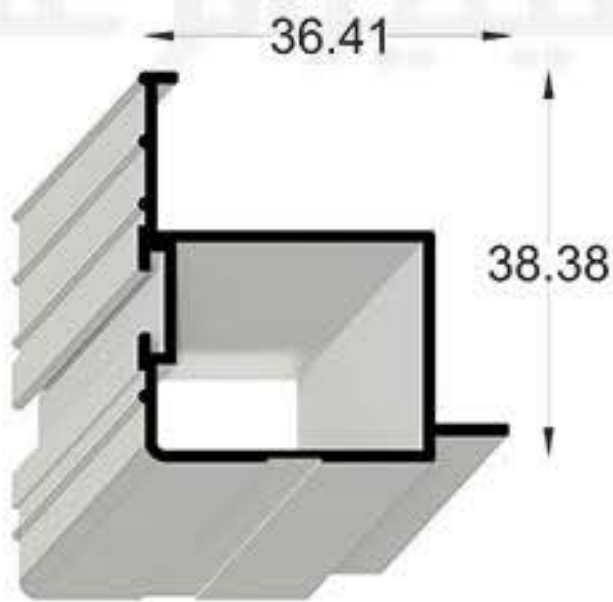
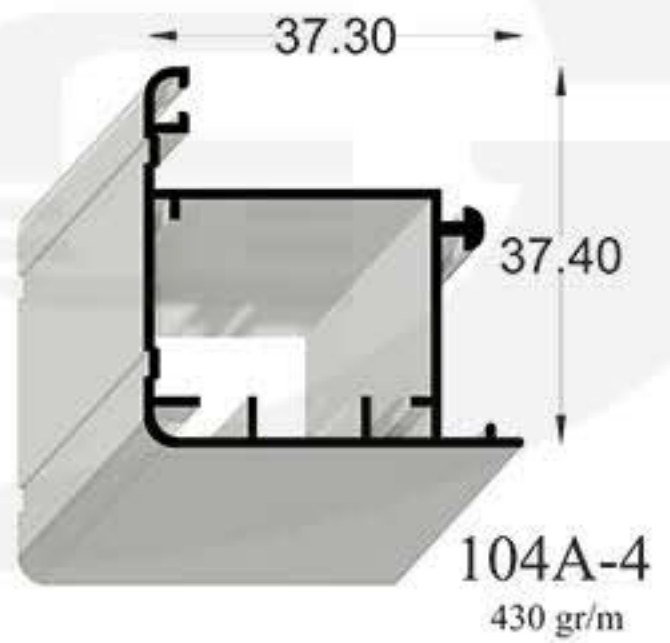
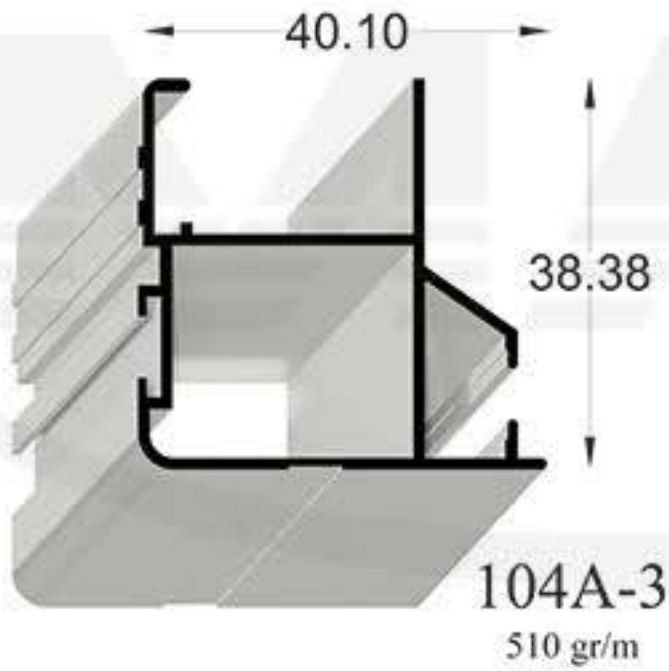
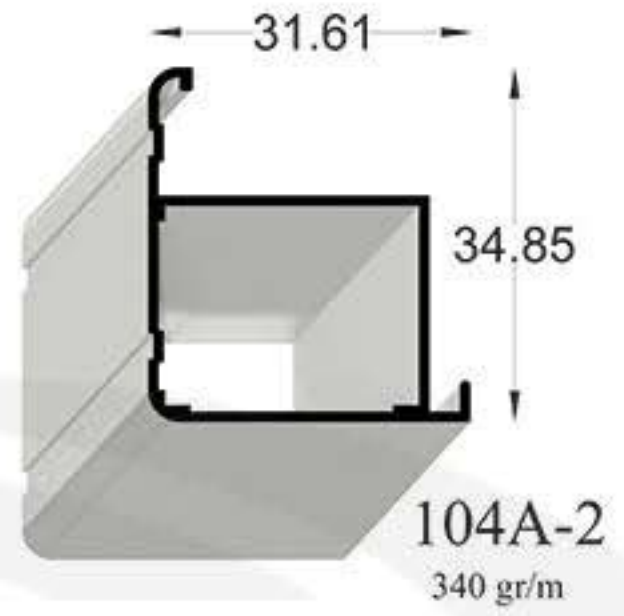
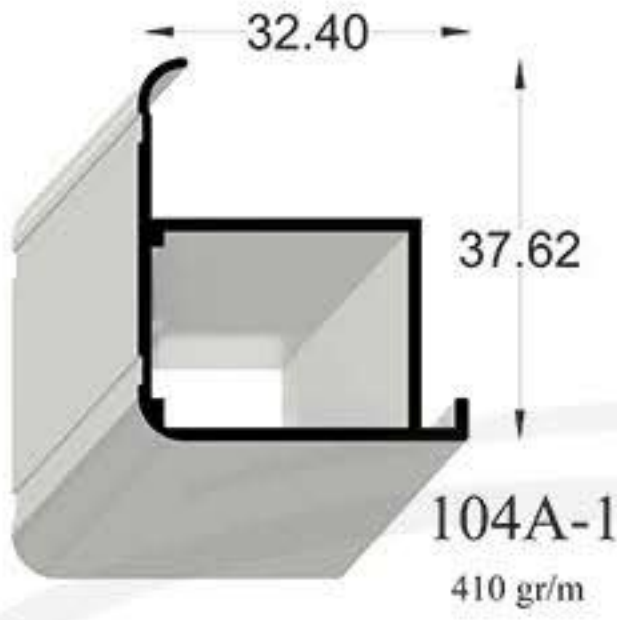
Refrigeration Systems

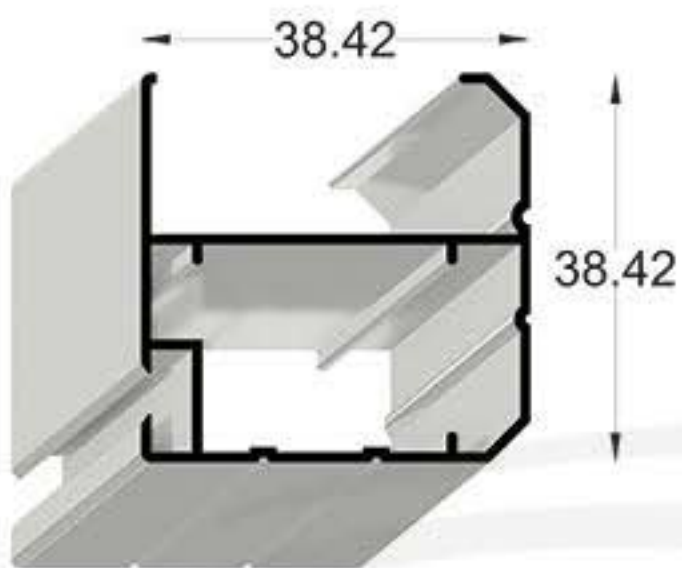
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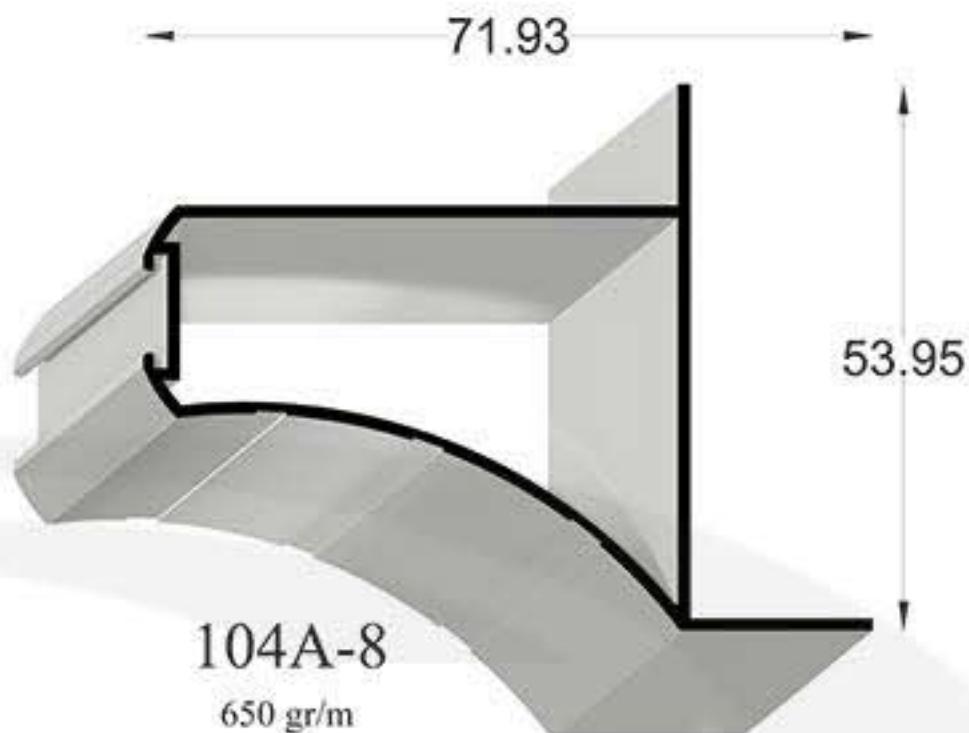


Code:104A

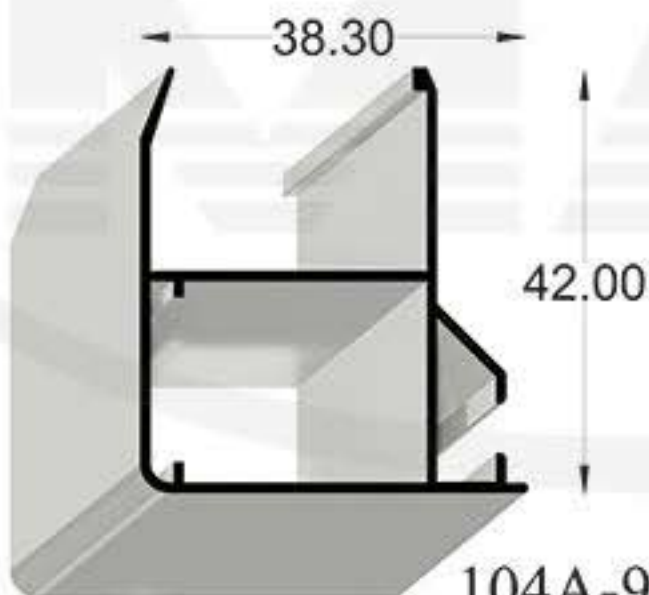




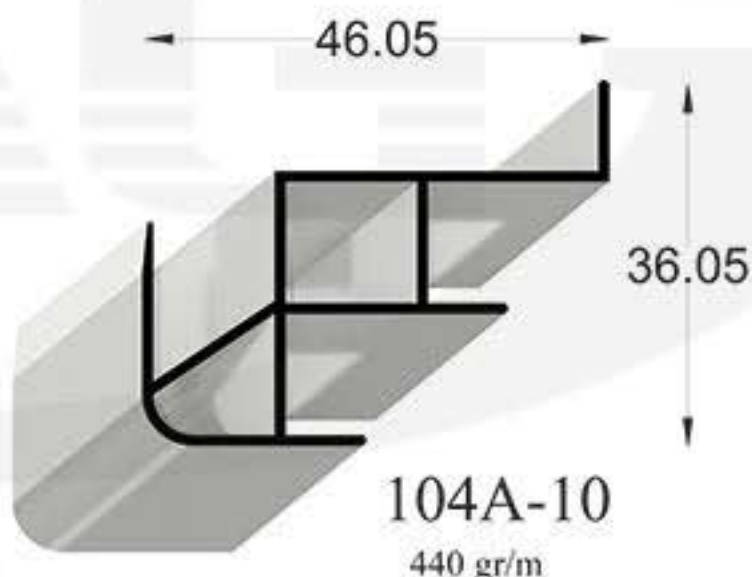
104A-7
470 gr/m



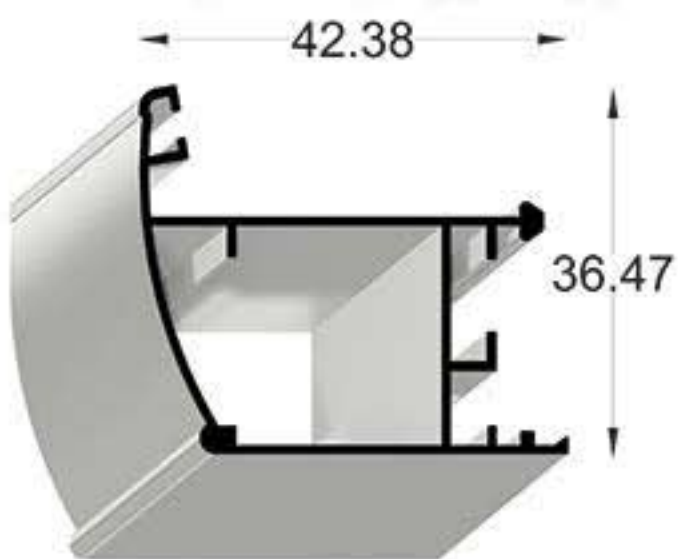
104A-8
650 gr/m



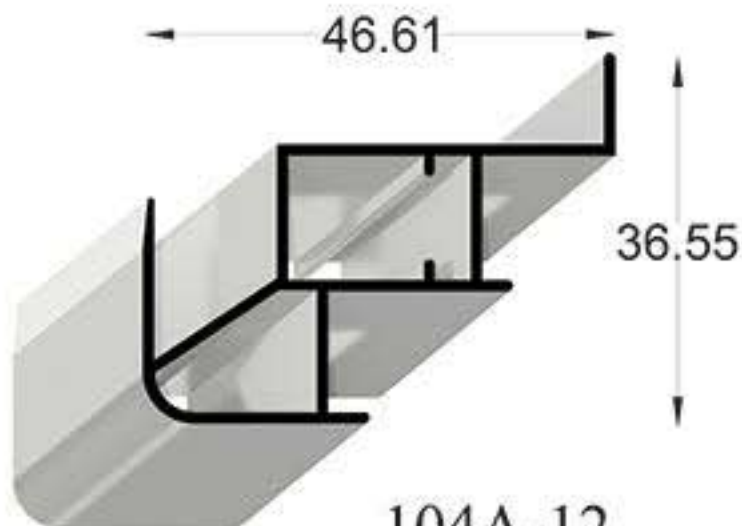
104A-9
460 gr/m



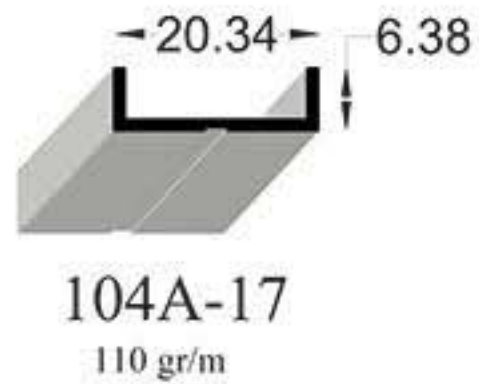
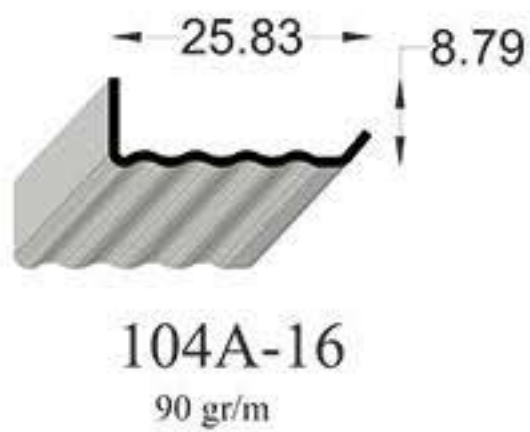
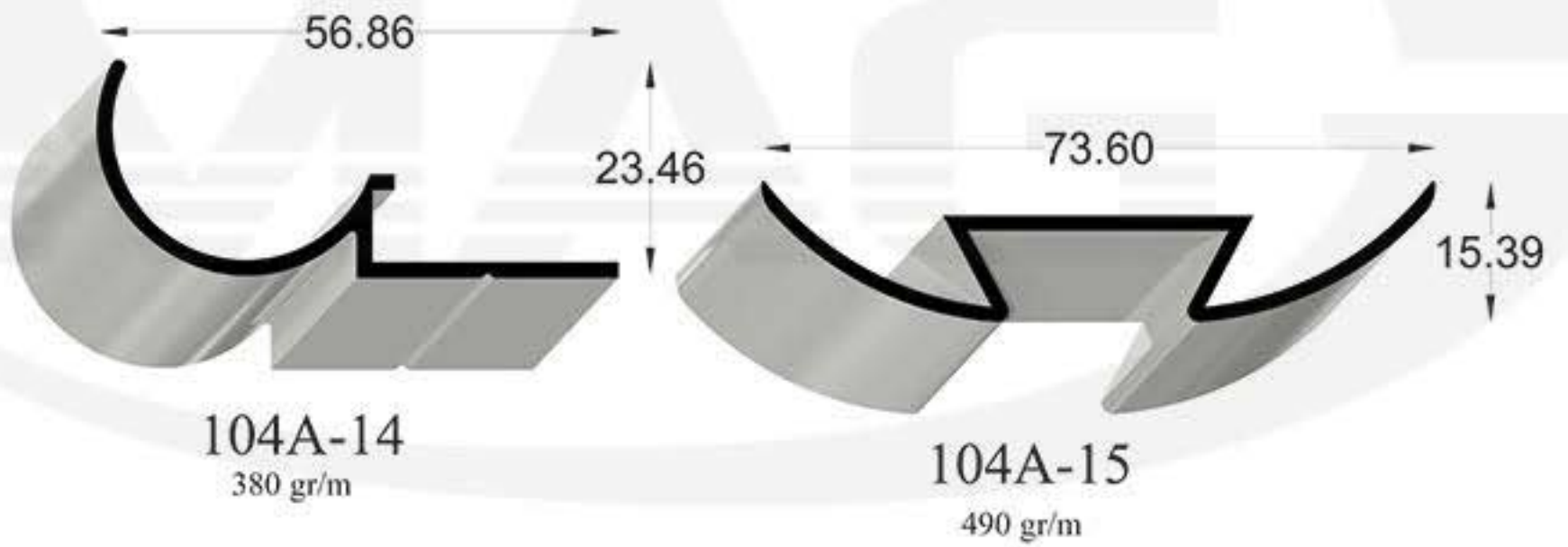
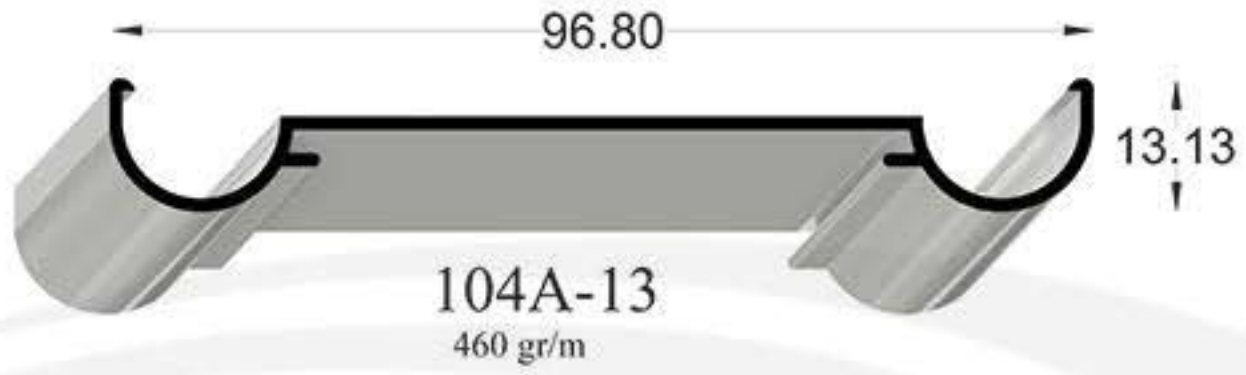
104A-10
440 gr/m

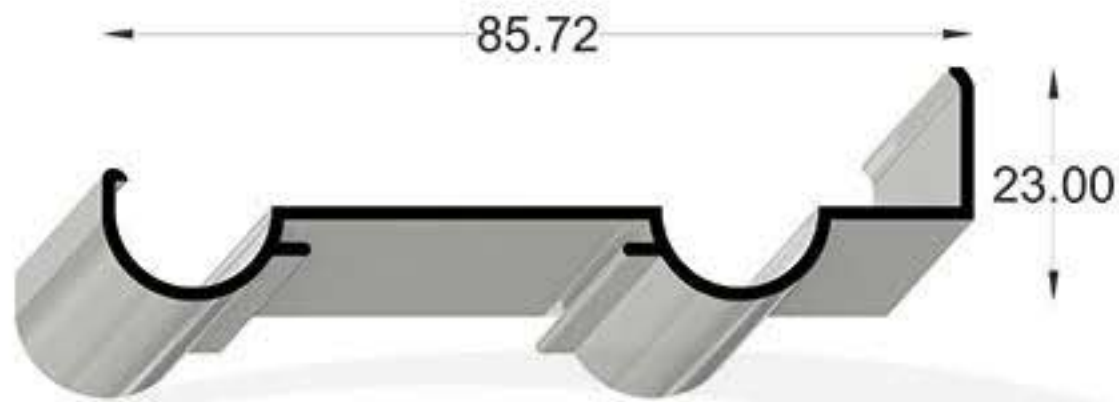


104A-11
430 gr/m

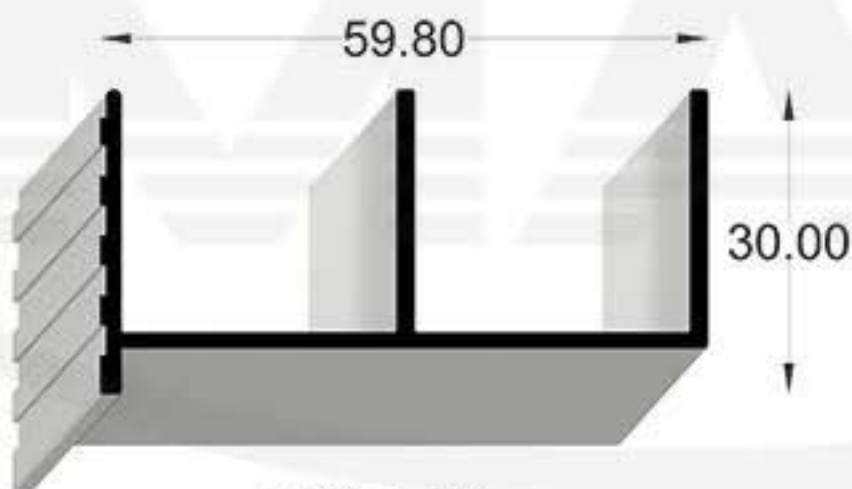


104A-12
480 gr/m

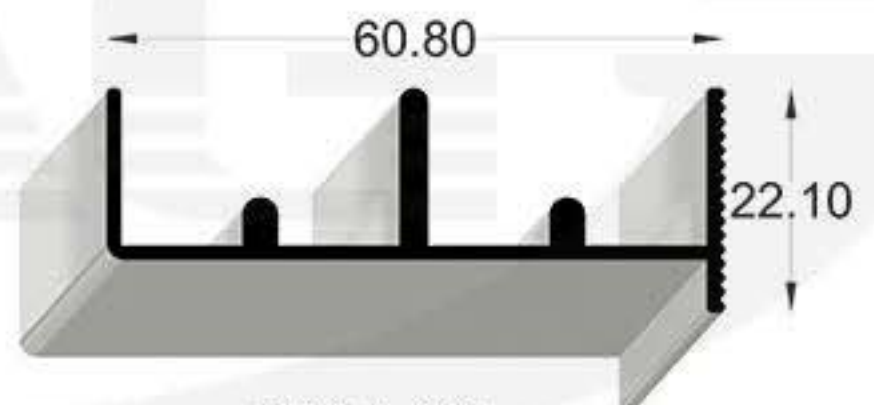




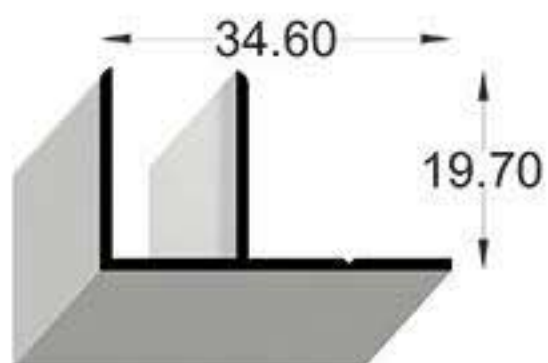
104A-18
450 gr/m



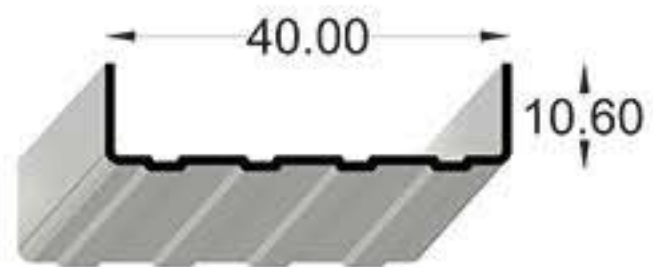
104A-19
630 gr/m



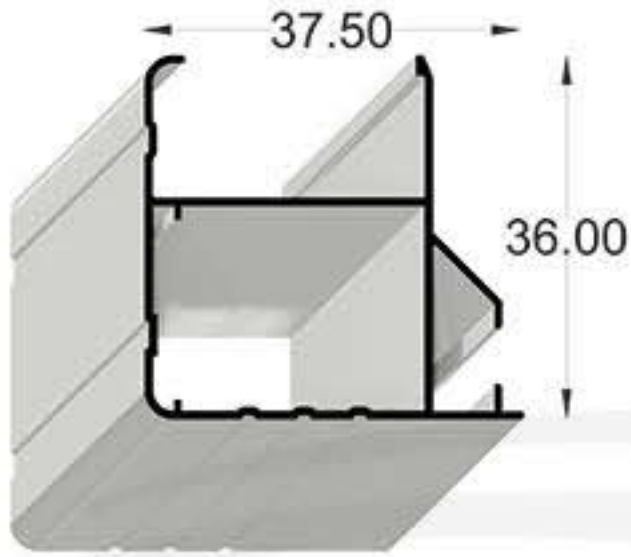
104A-20
570 gr/m



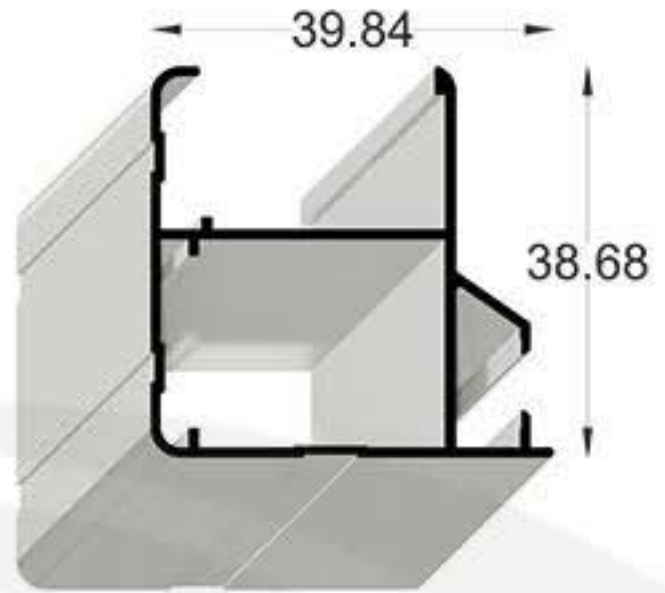
104A-21
230 gr/m



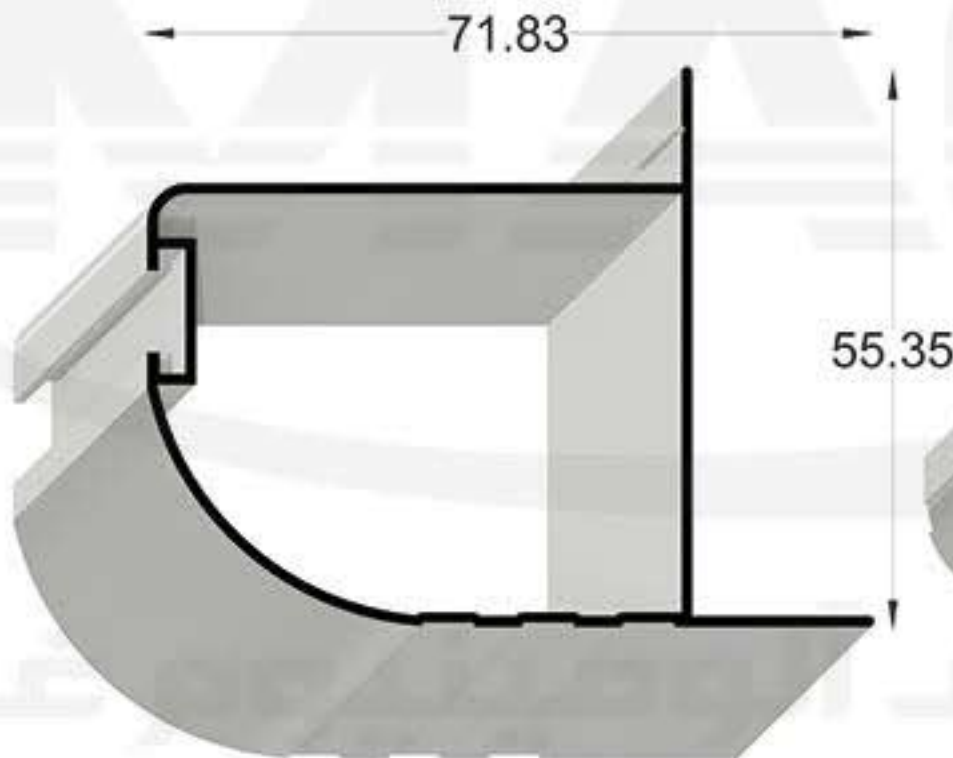
104A-22
150 gr/m



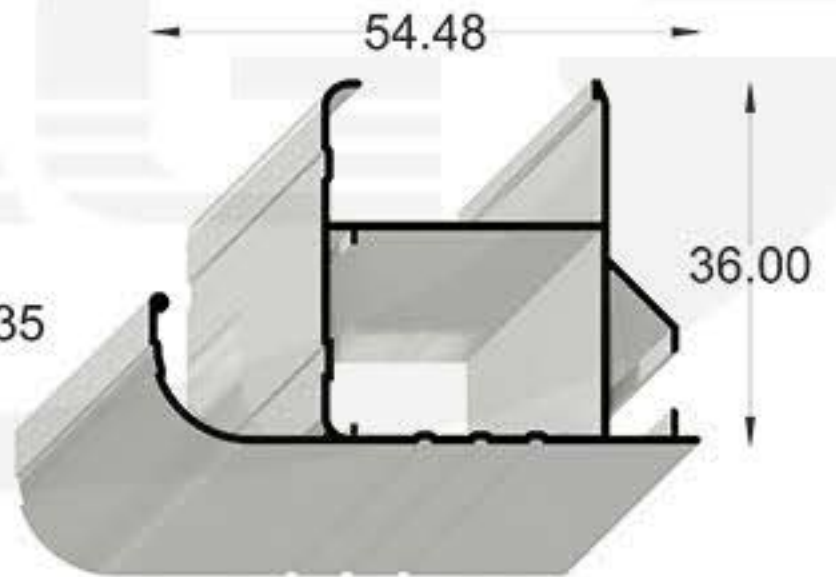
104A-23
340 gr/m



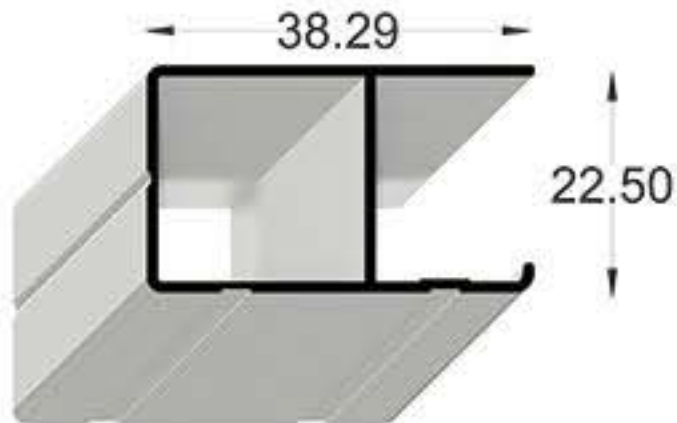
104A-24
460 gr/m



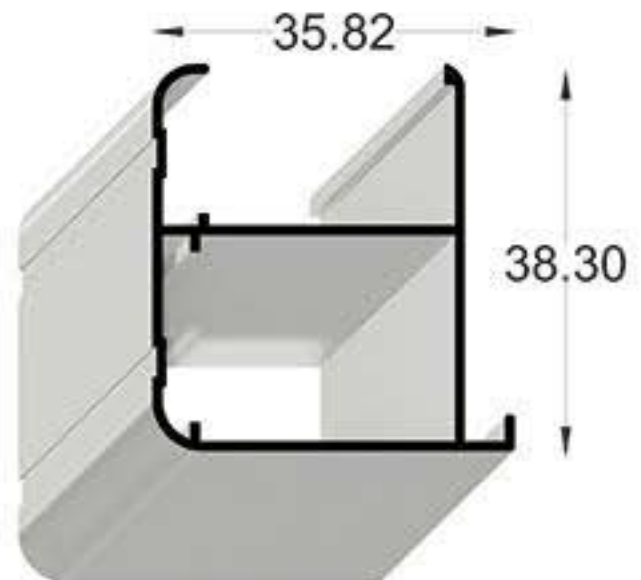
104A-25
620 gr/m



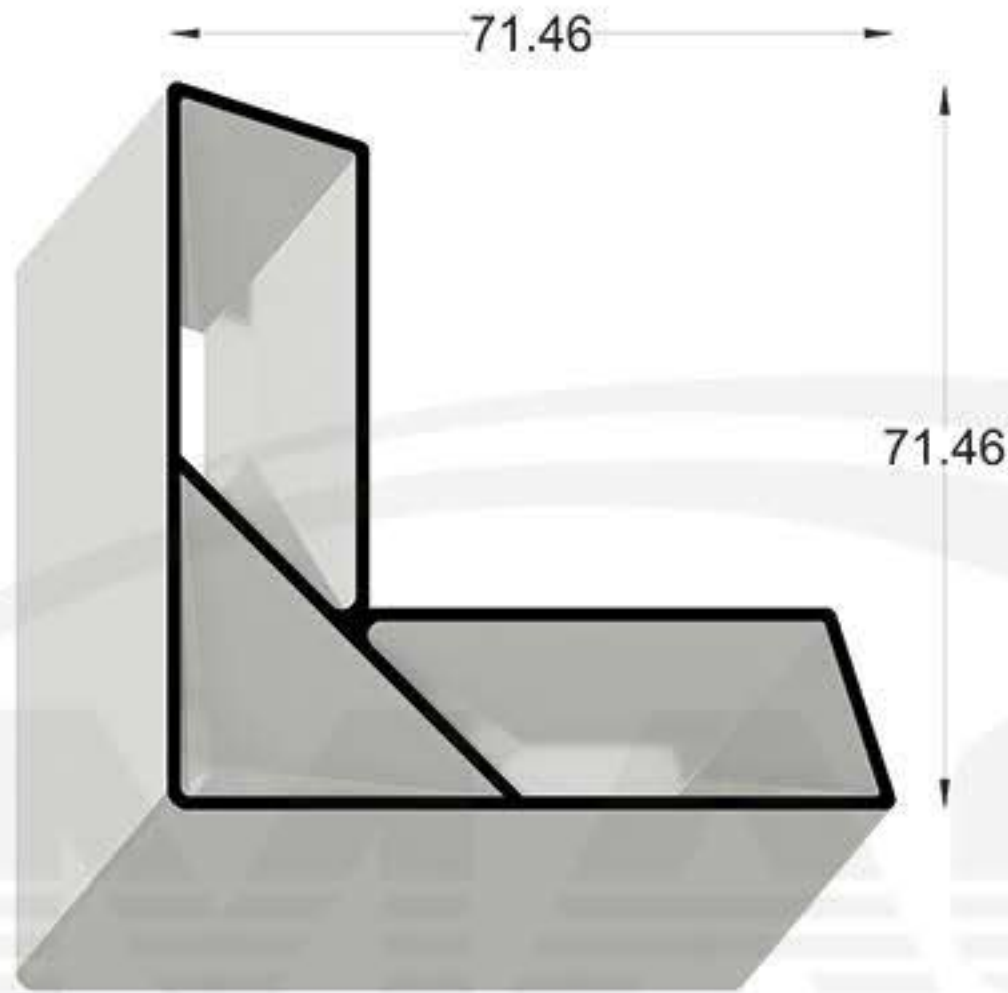
104A-26
410 gr/m



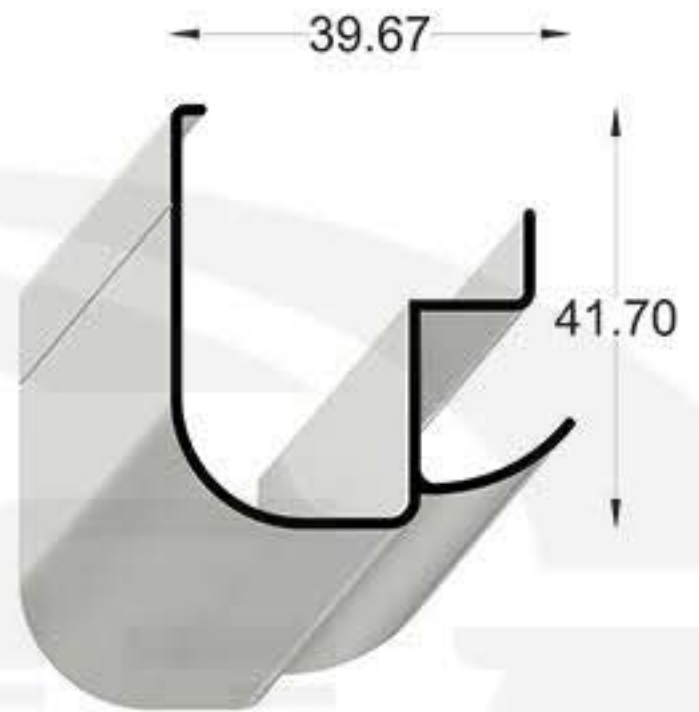
104A-27
340 gr/m



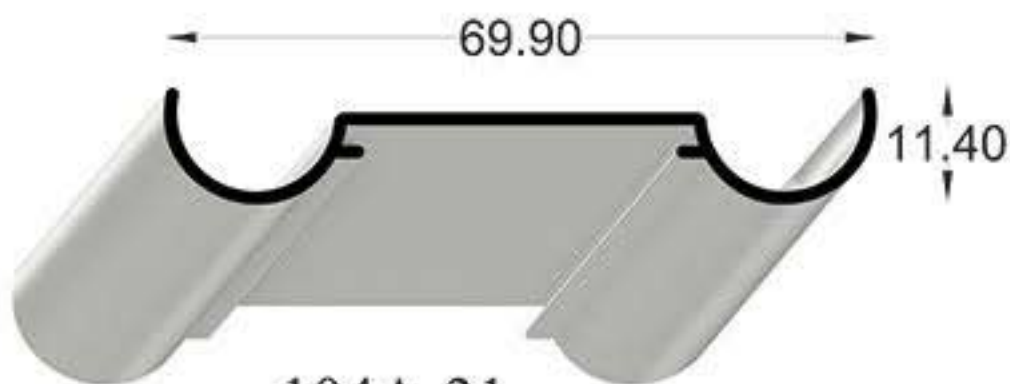
104A-28
400 gr/m



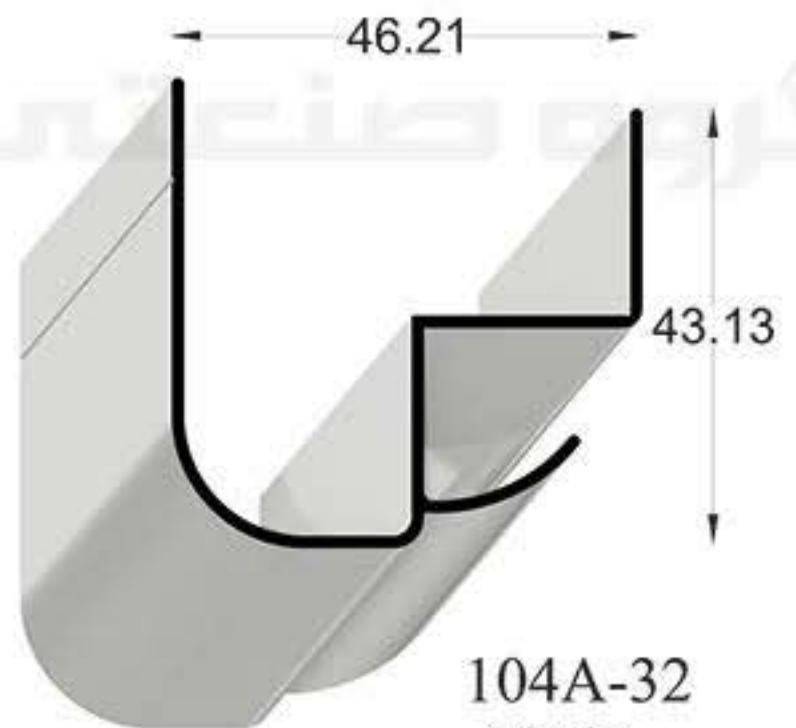
104A-29
1120 gr/m



104A-30
350 gr/m



104A-31
320 gr/m



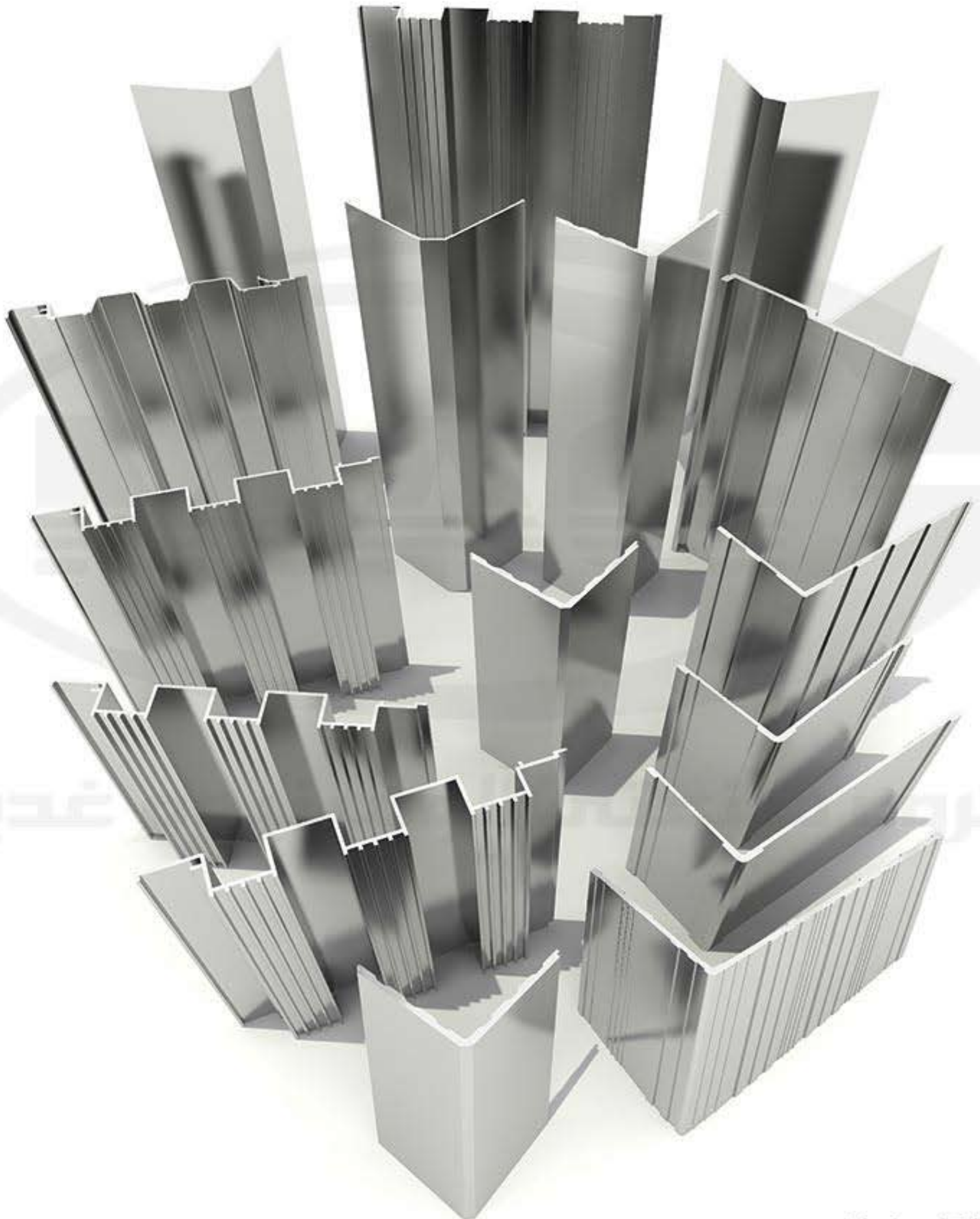
104A-32
470 gr/m



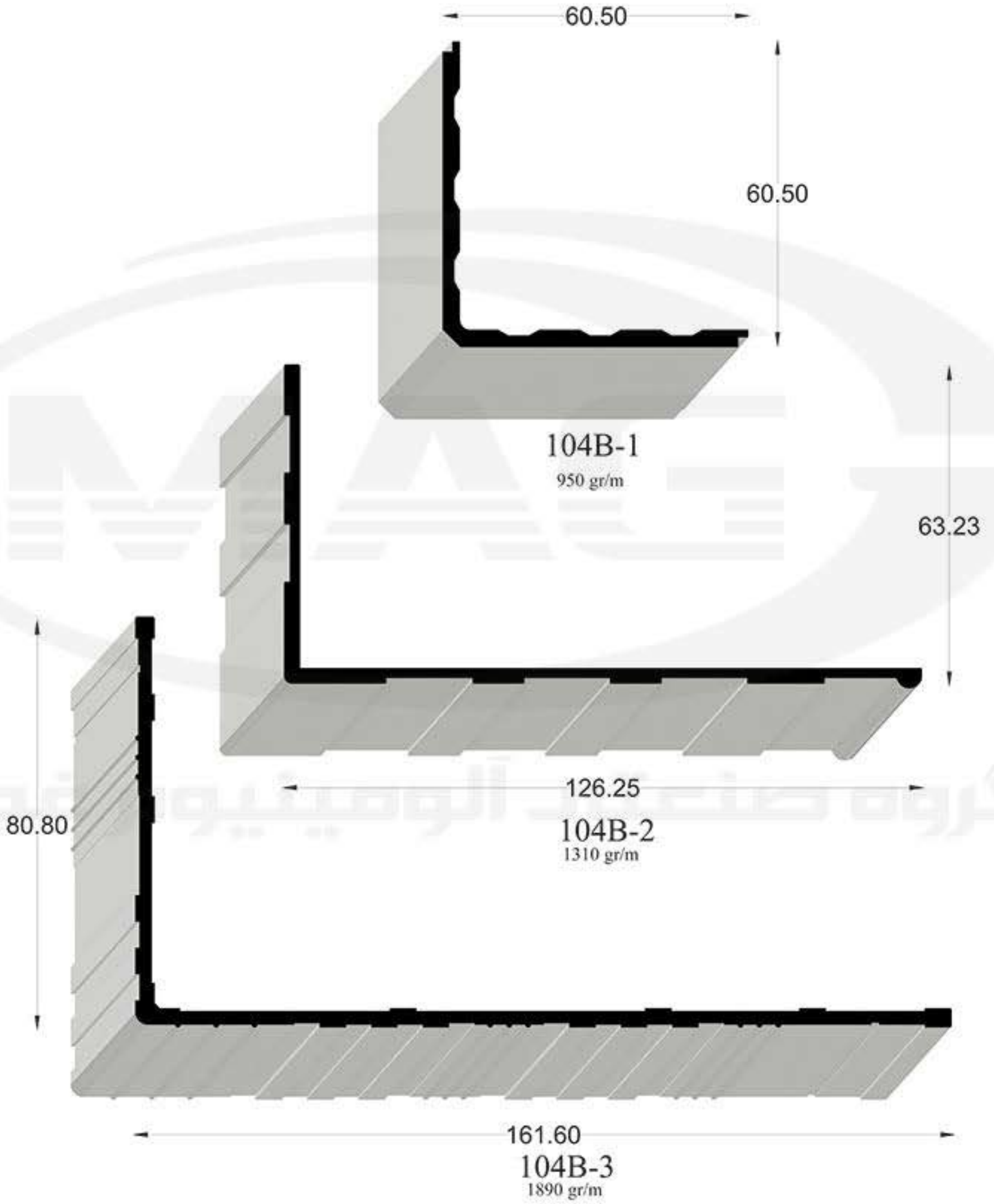
Code 104A

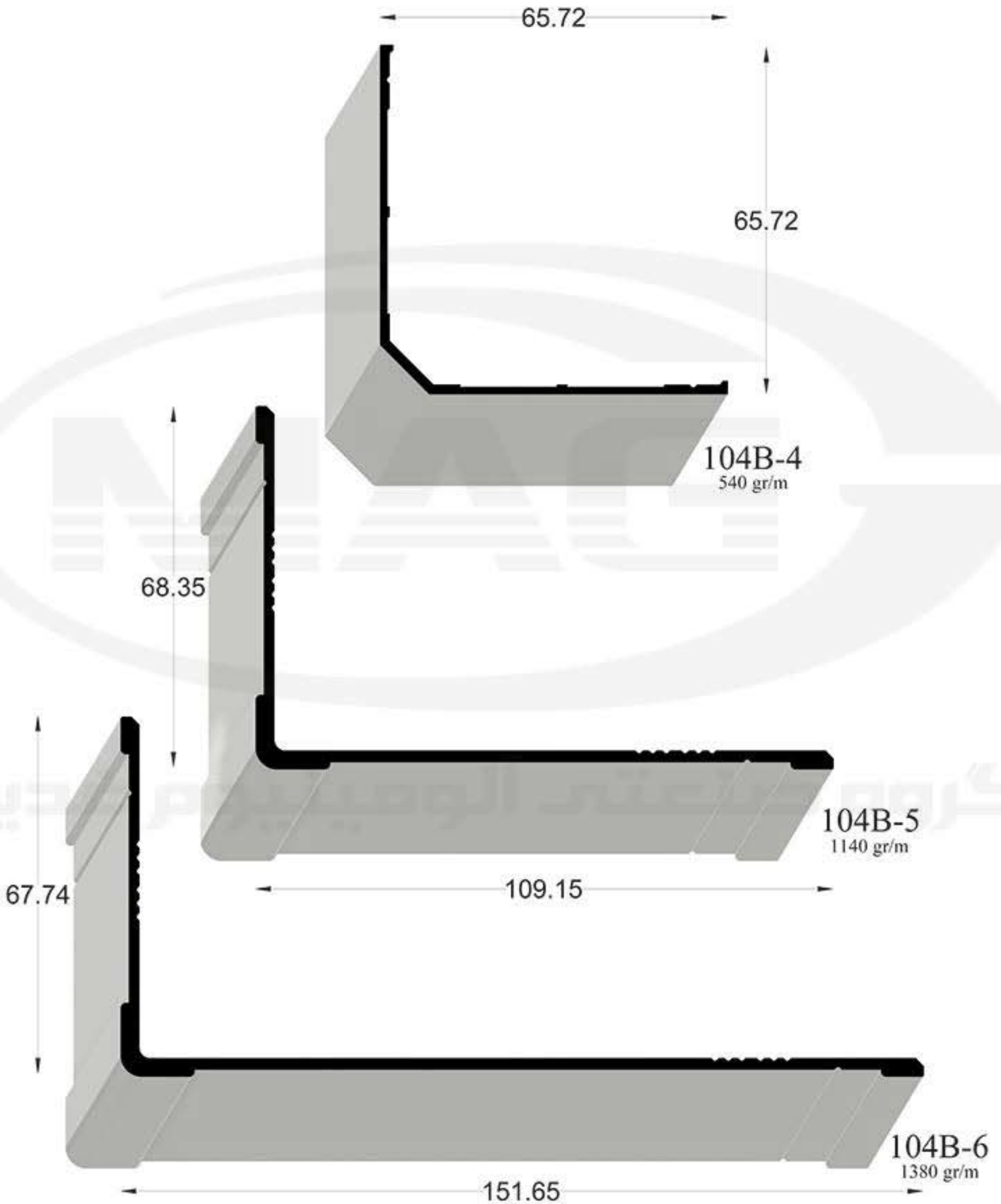
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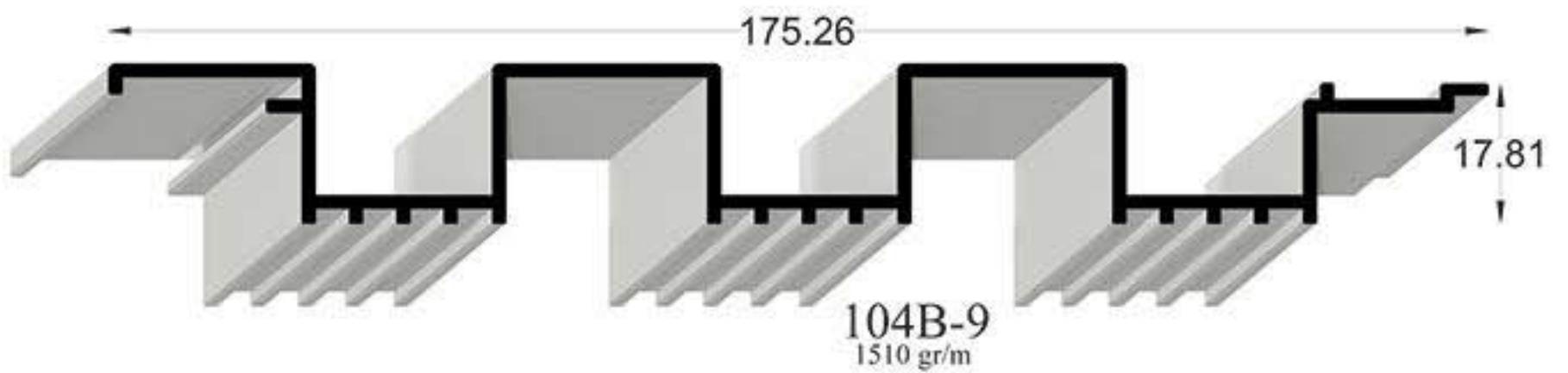
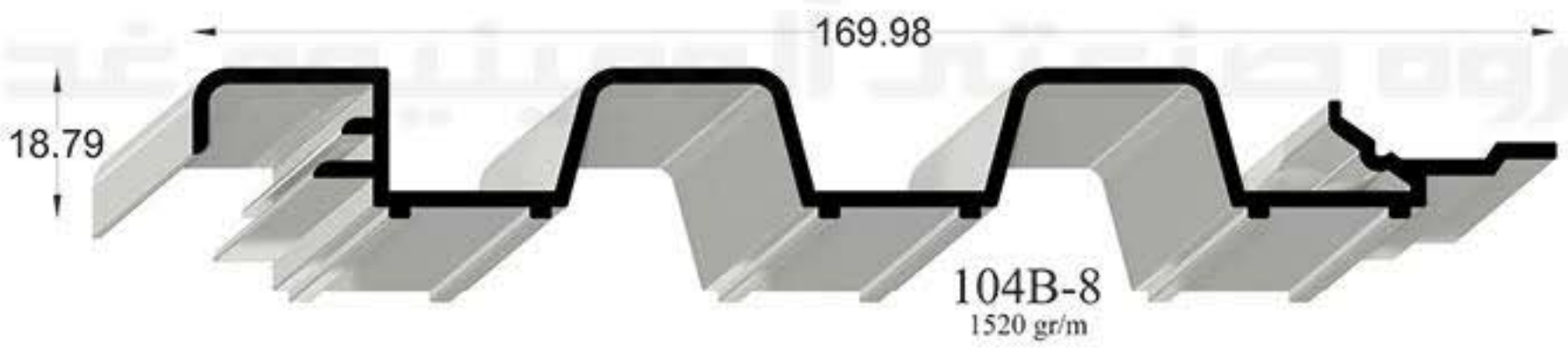
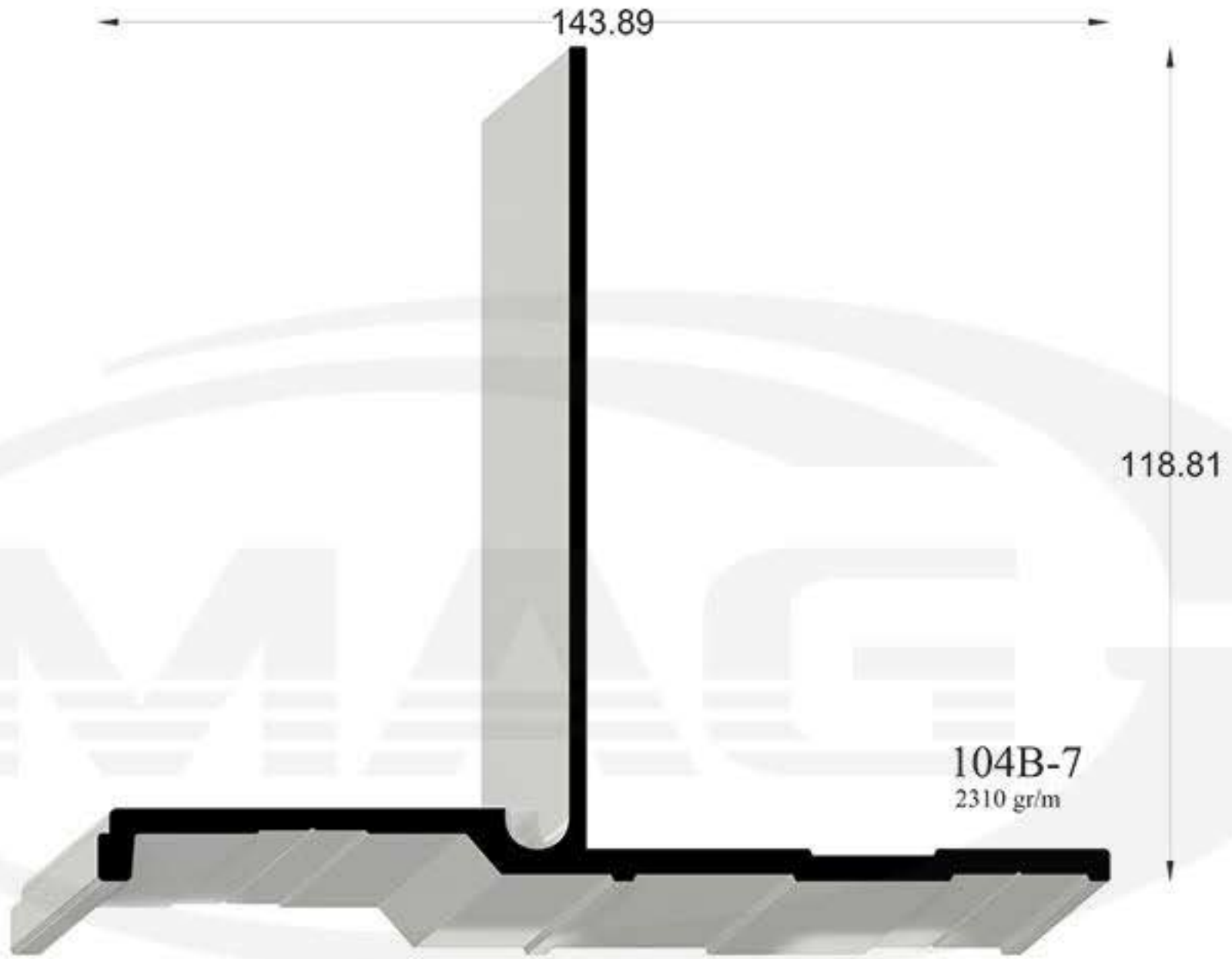




Code:104B

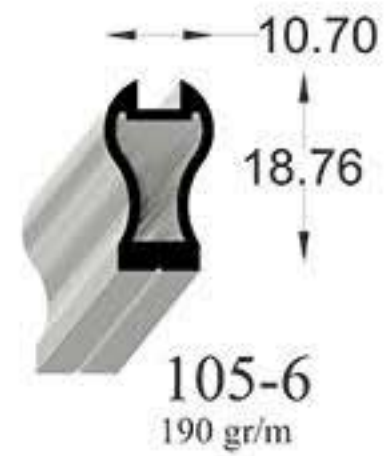
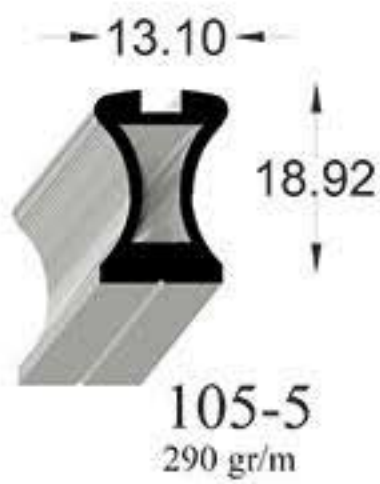
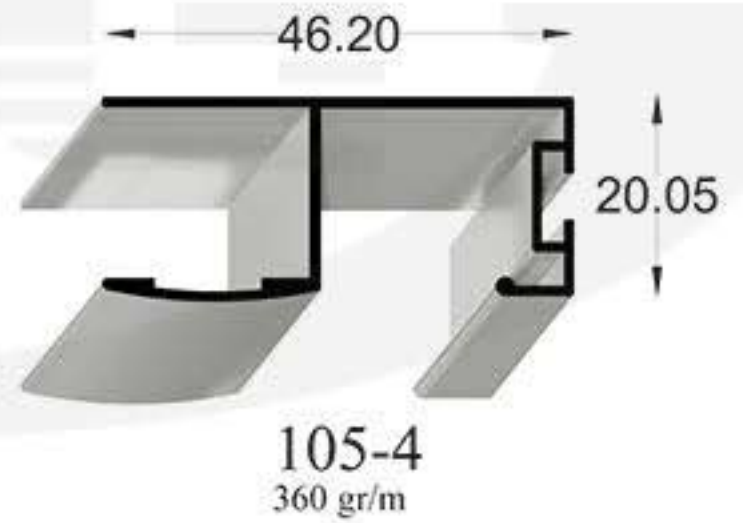
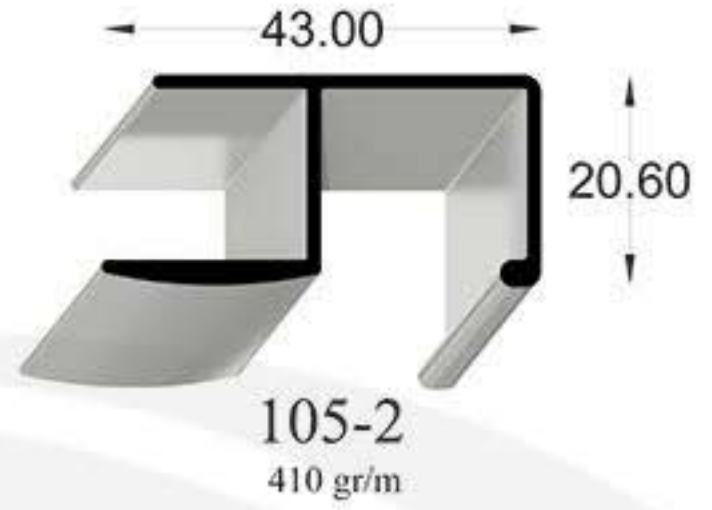
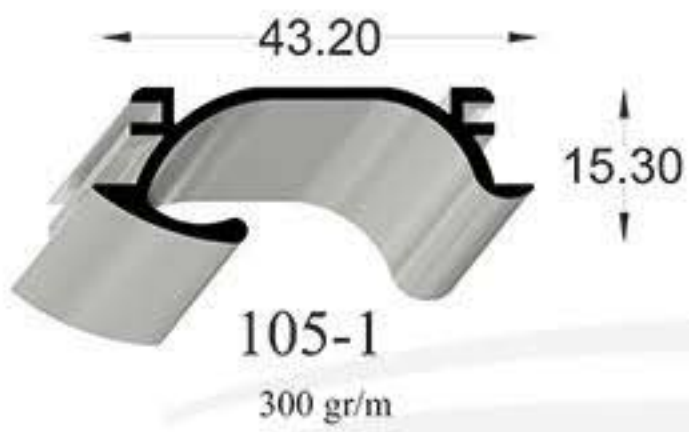


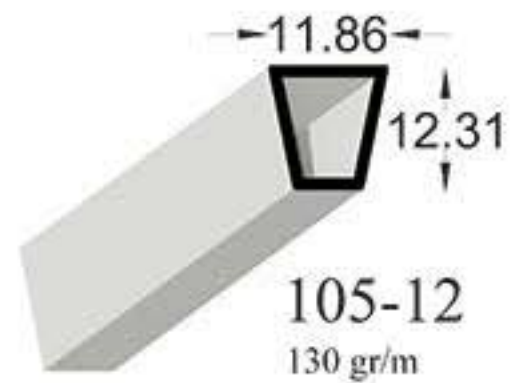
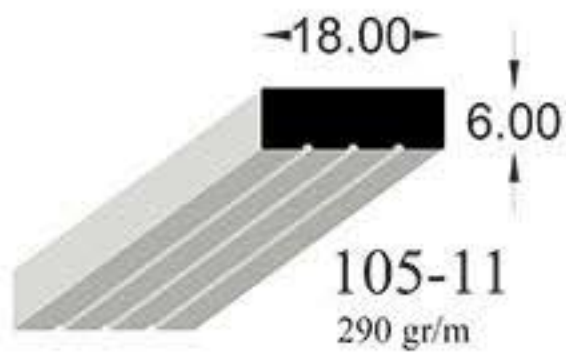
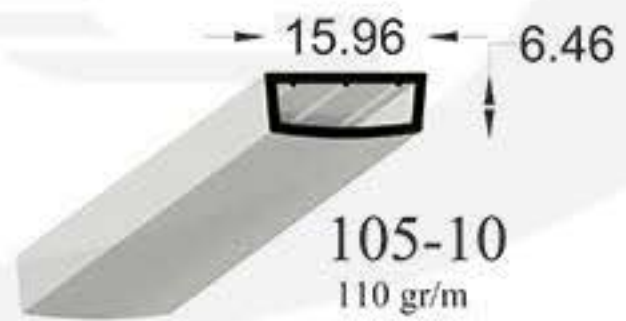
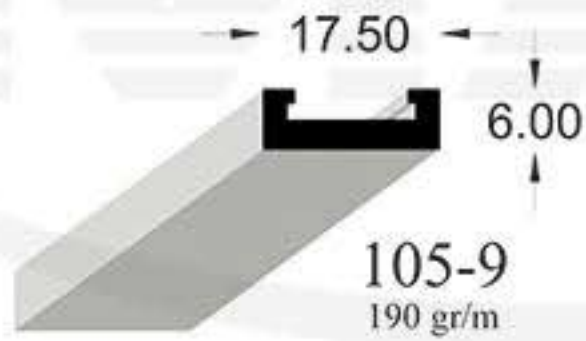
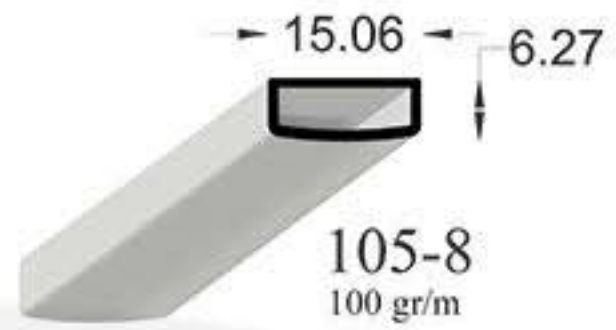
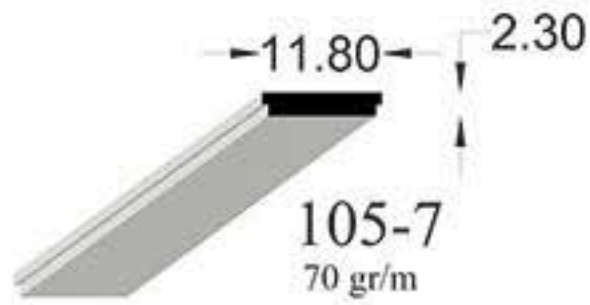


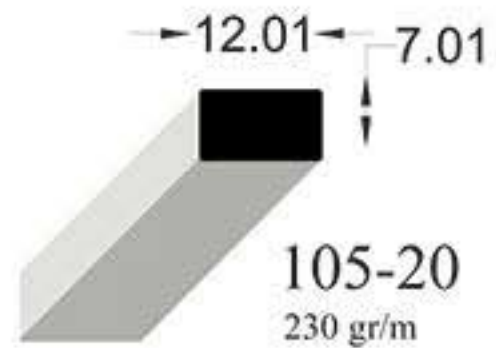
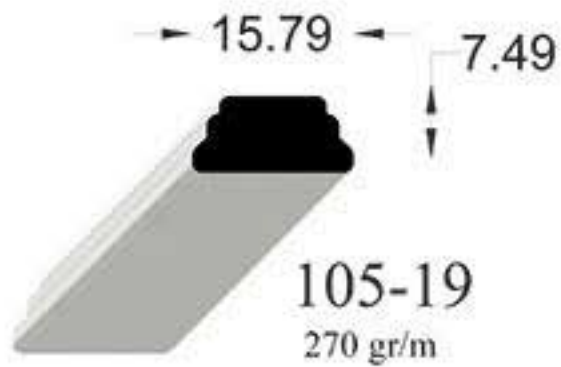
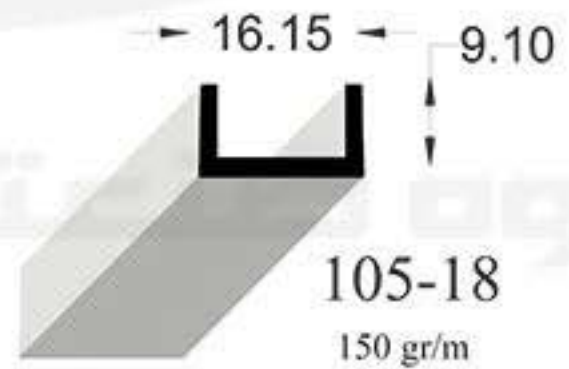
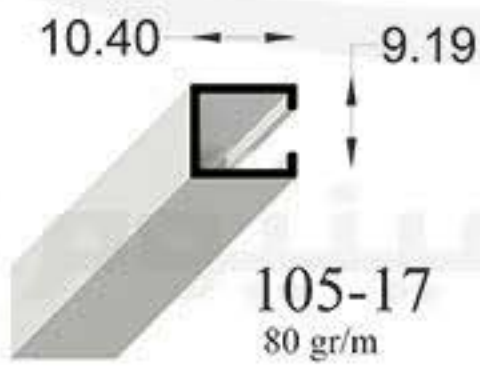
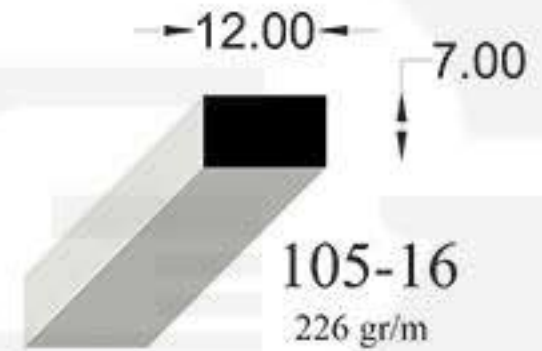
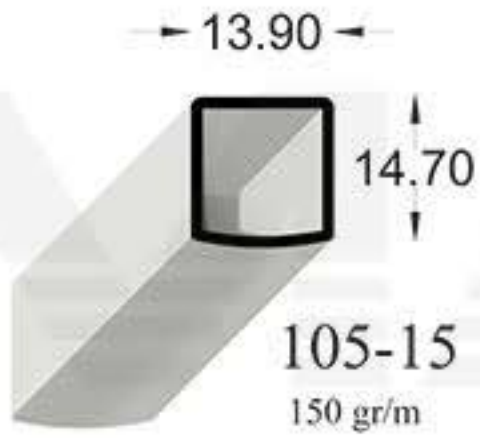
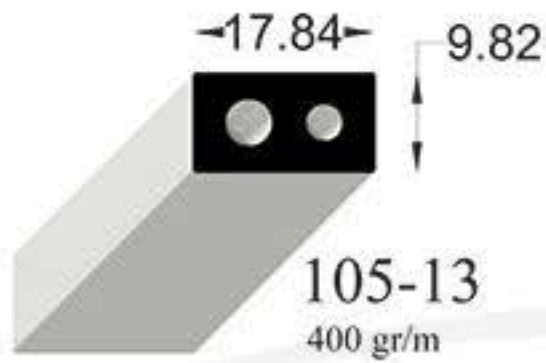


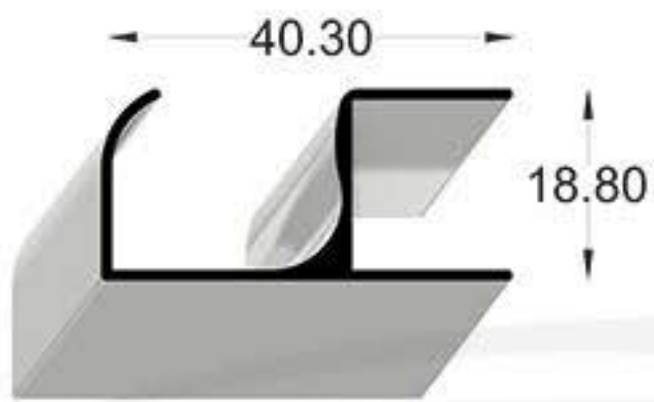


Code:105

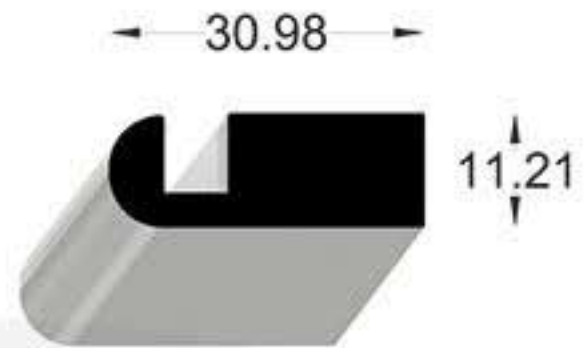




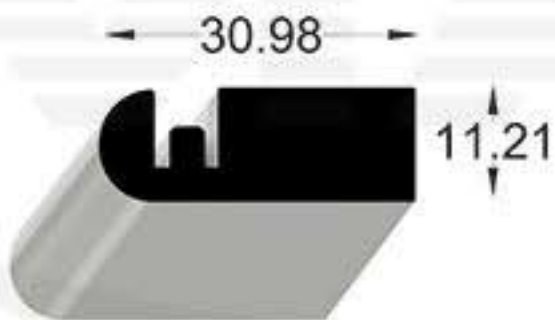




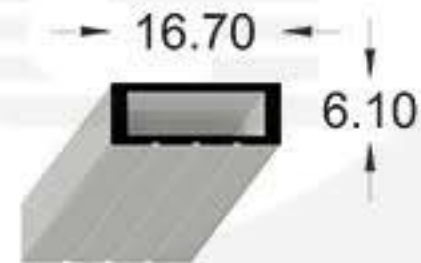
105-21
300 gr/m



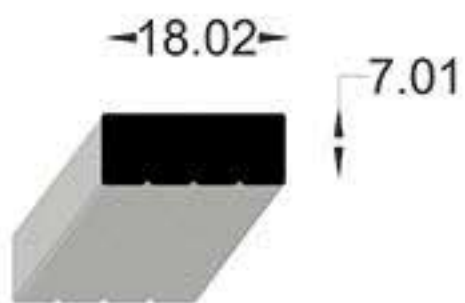
105-22
770 gr/m



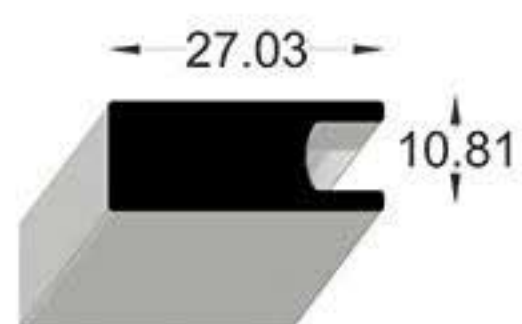
105-23
800 gr/m



105-24
120 gr/m



105-25
340 gr/m



105-26
650 gr/m



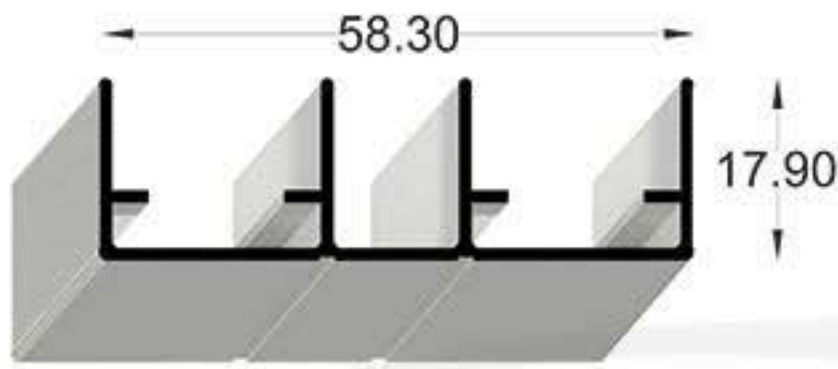
Code 105

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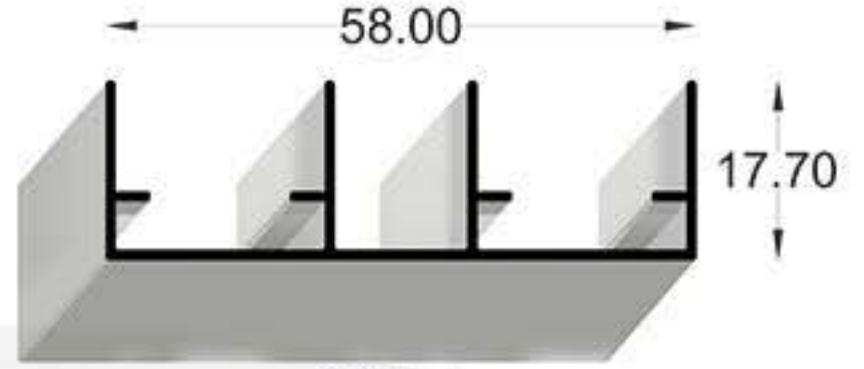




Code:106



106-1
460 gr/m



106-2
390 gr/m



106-3
260 gr/m



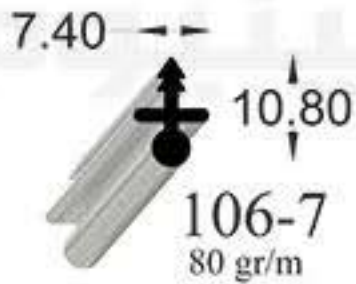
106-4
250 gr/m



106-5
280 gr/m



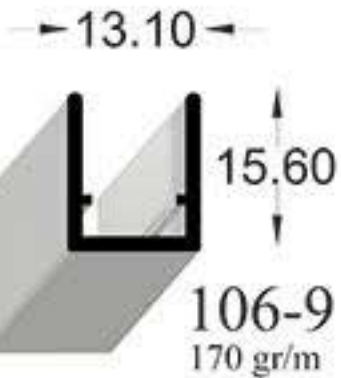
106-6
200 gr/m



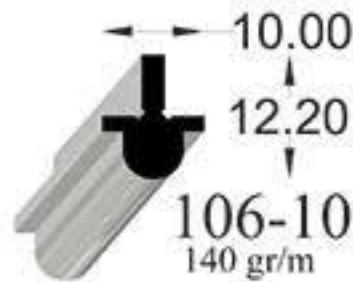
106-7
80 gr/m



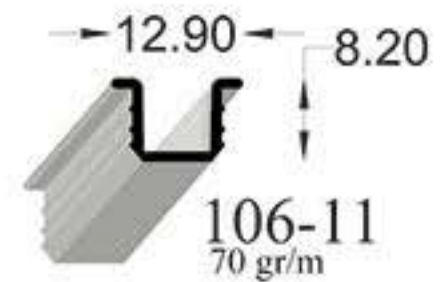
106-8
220 gr/m



106-9
170 gr/m



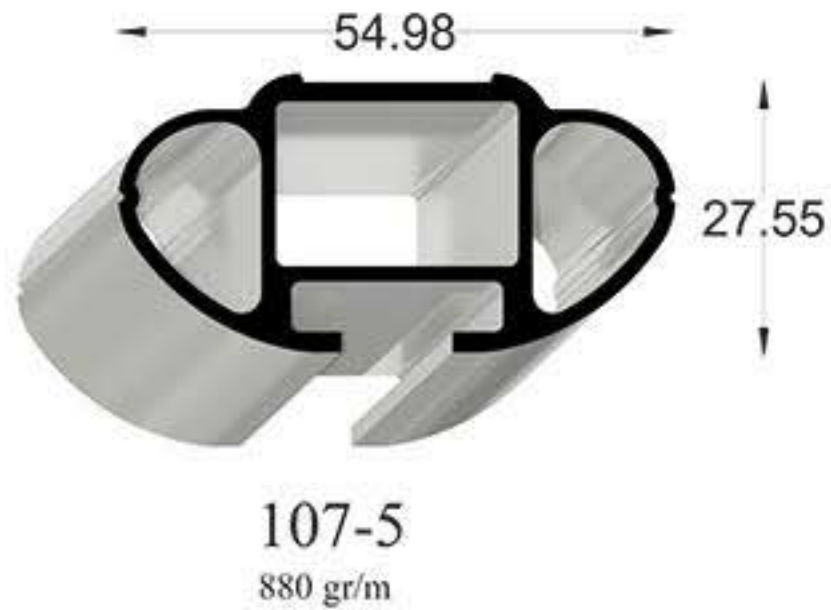
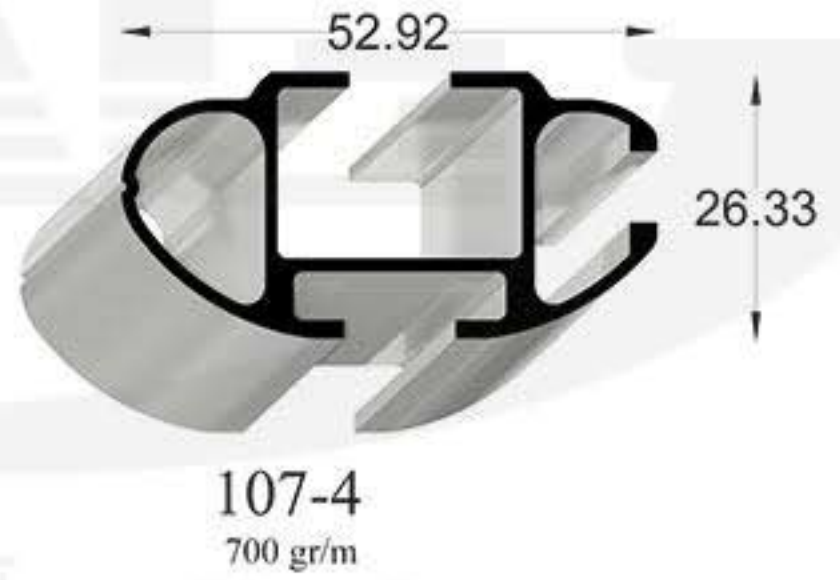
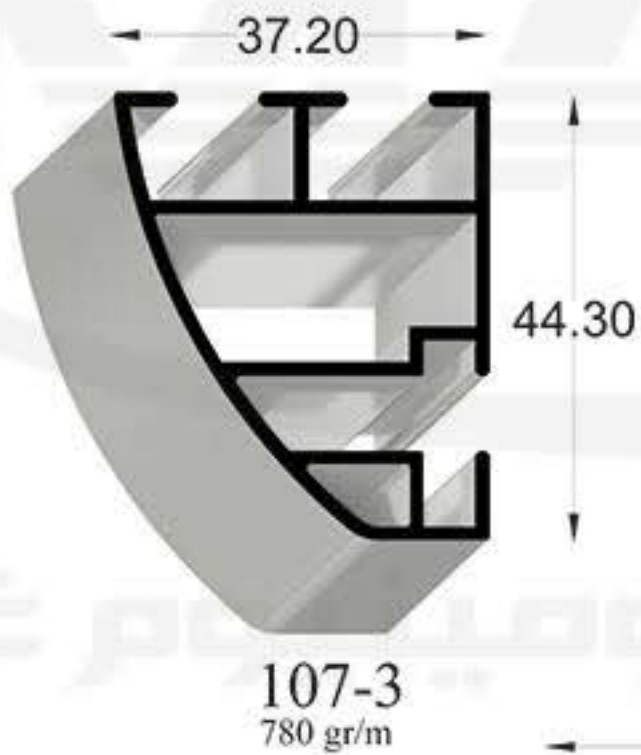
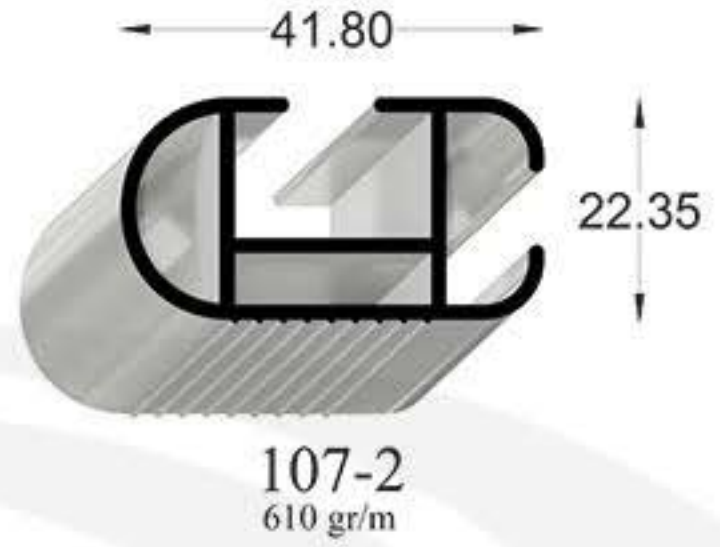
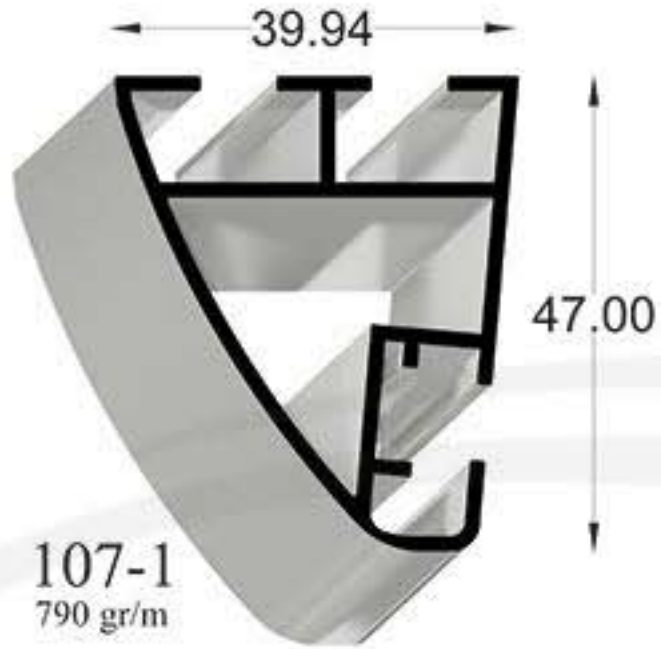
106-10
140 gr/m

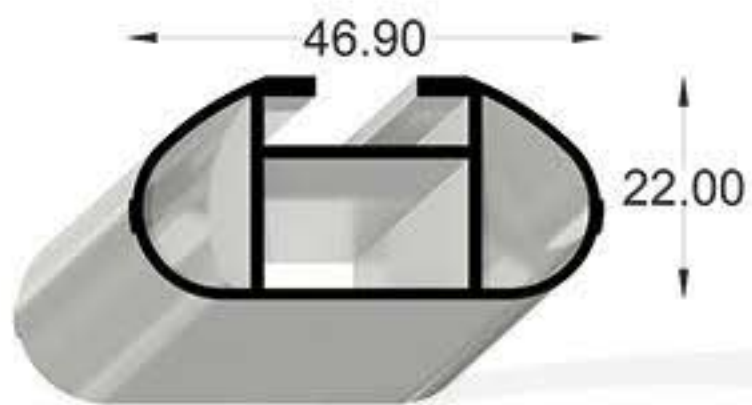


106-11
70 gr/m

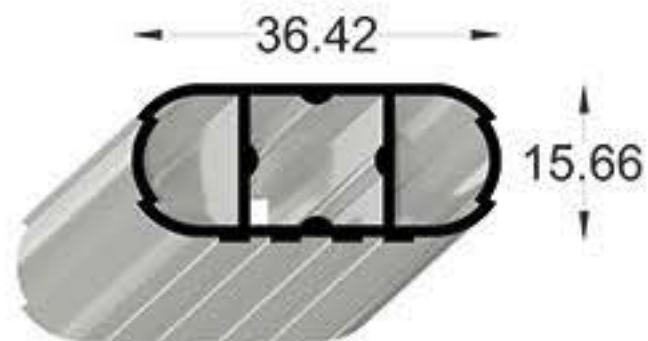


Code:107

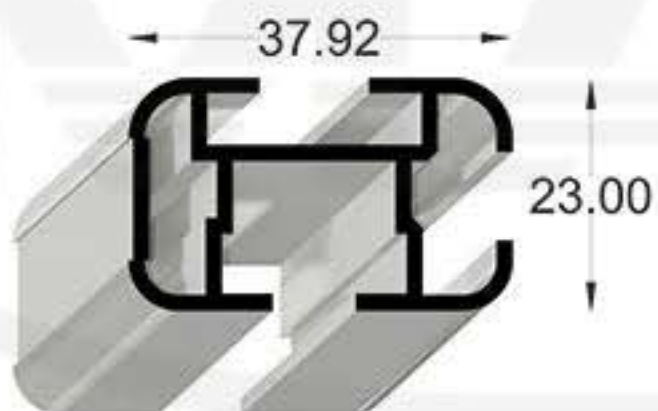




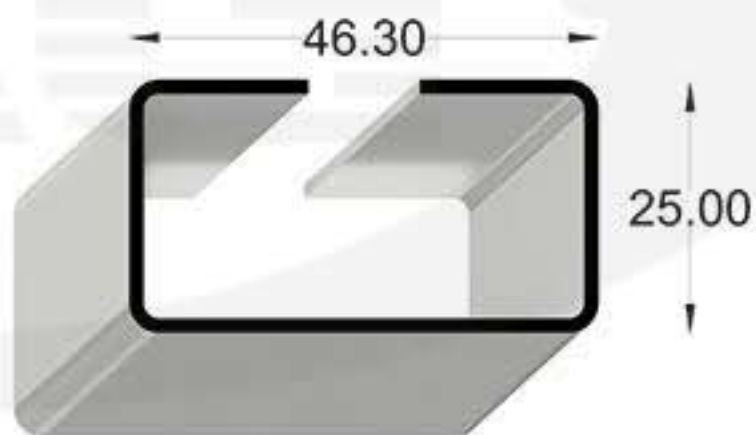
107-6
540 gr/m



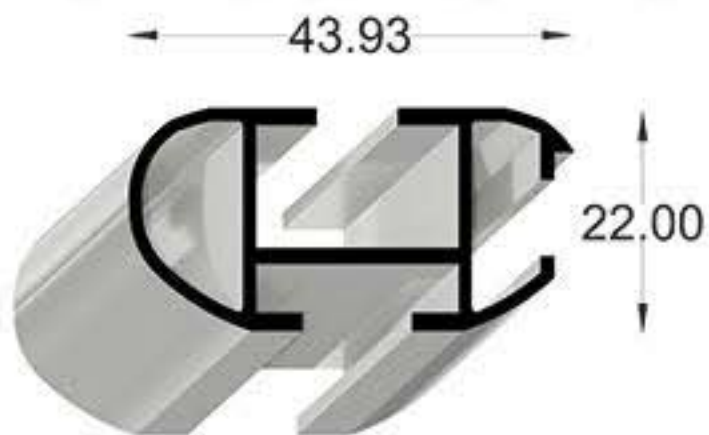
107-7
400 gr/m



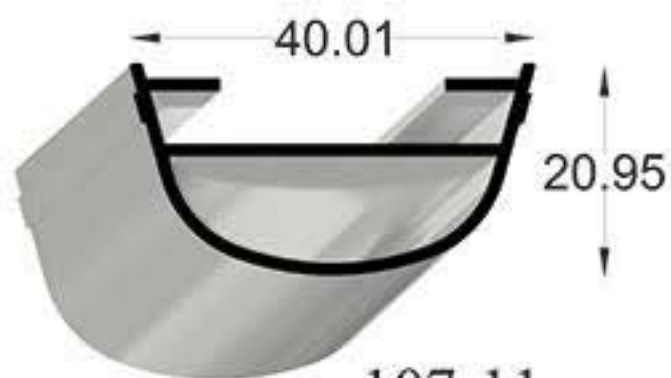
107-8
610 gr/m



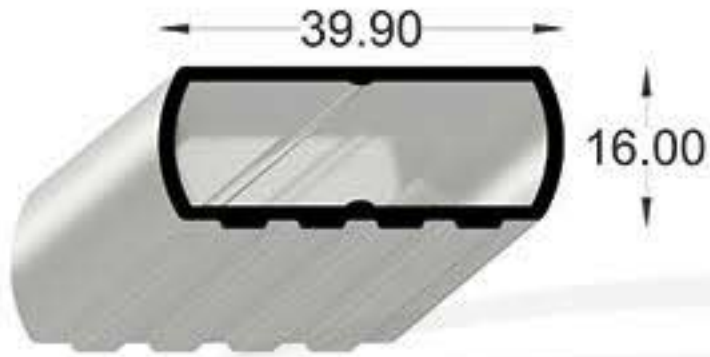
107-9
460 gr/m



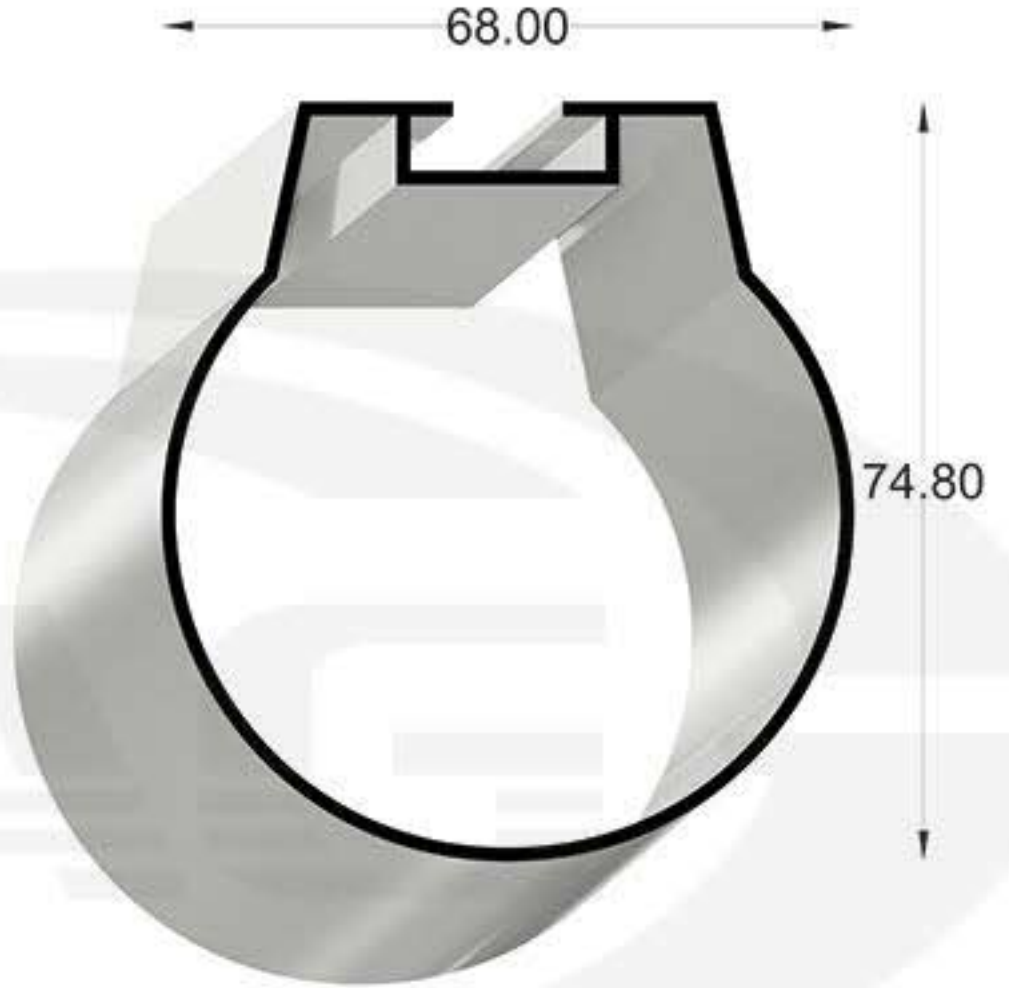
107-10
540 gr/m



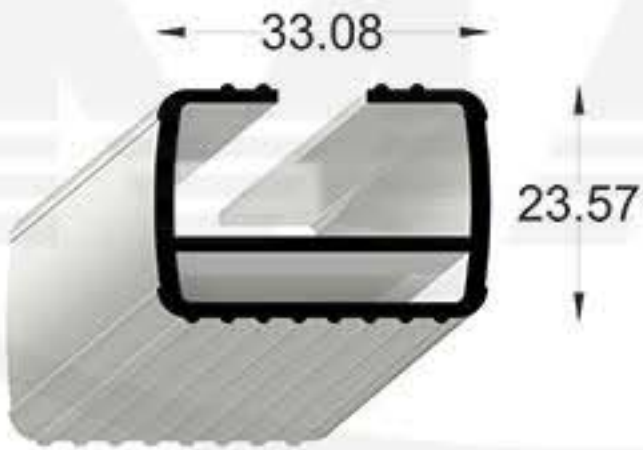
107-11
380 gr/m



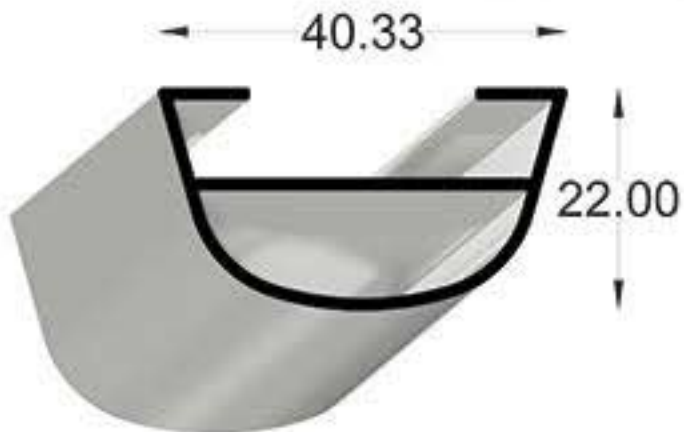
107-12
440 gr/m



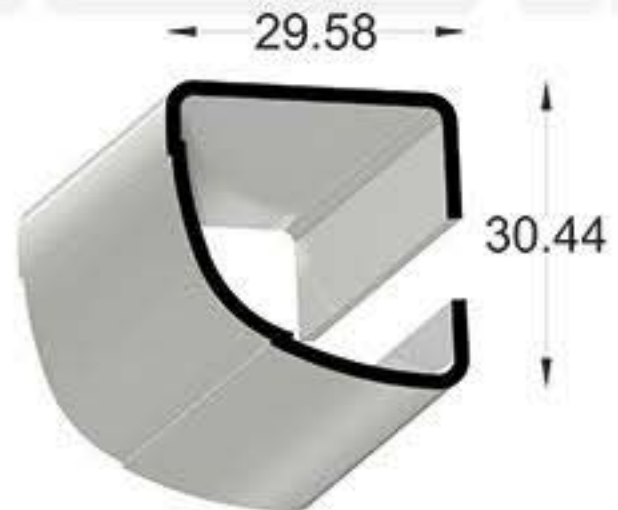
107-14
920 gr/m



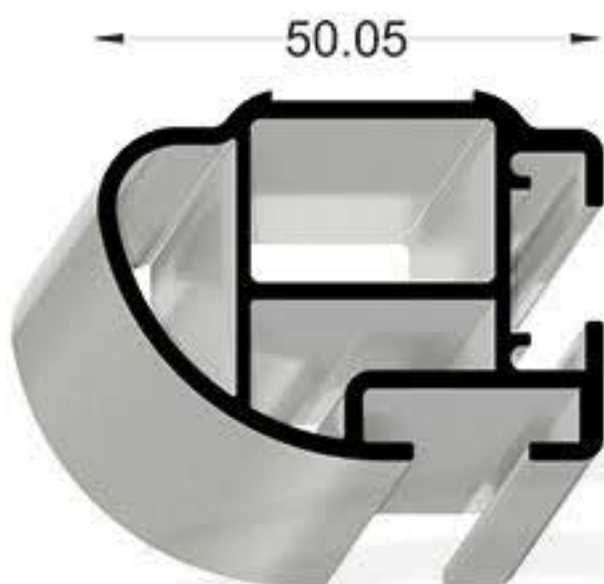
107-13
540 gr/m



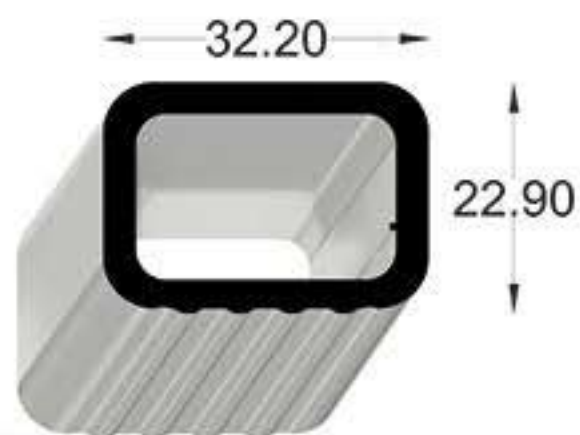
107-15
380 gr/m



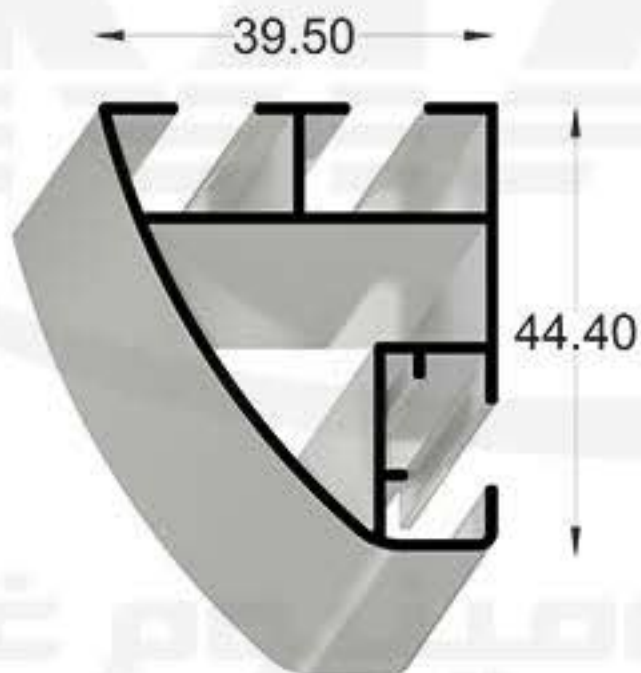
107-16
360 gr/m



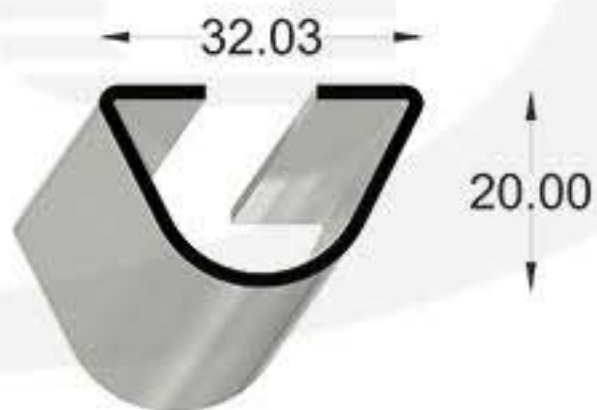
107-17
1100 gr/m



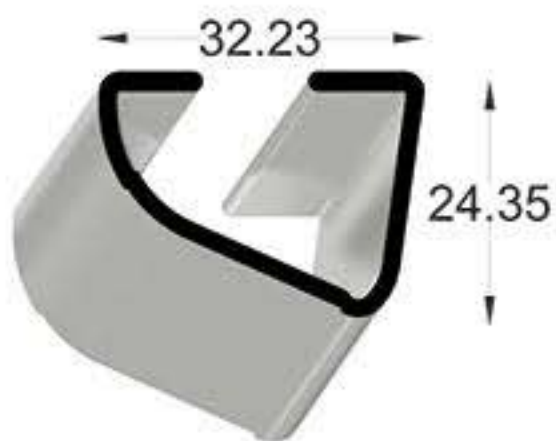
107-18
780 gr/m



107-19
620 gr/m



107-20
270 gr/m



107-21
400 gr/m



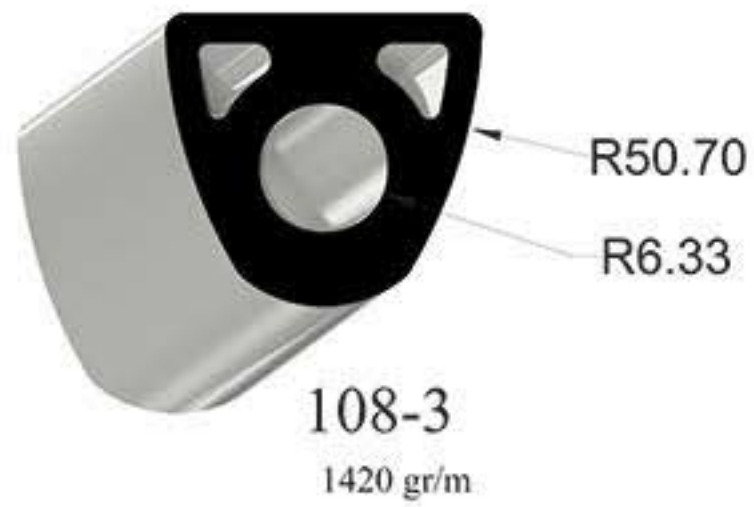
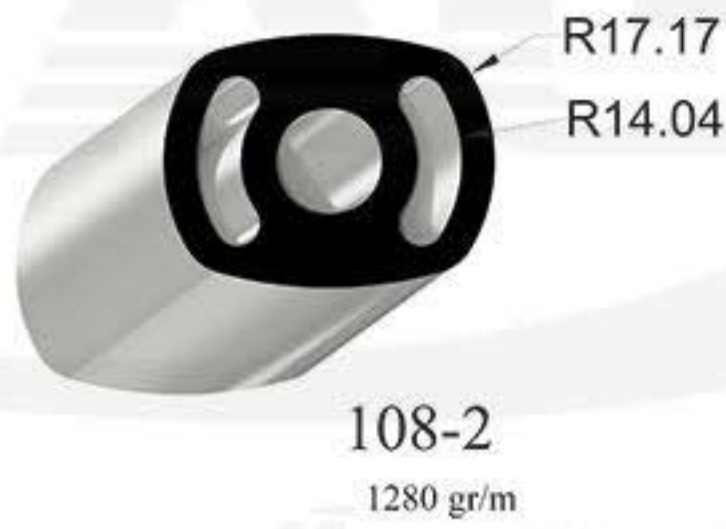
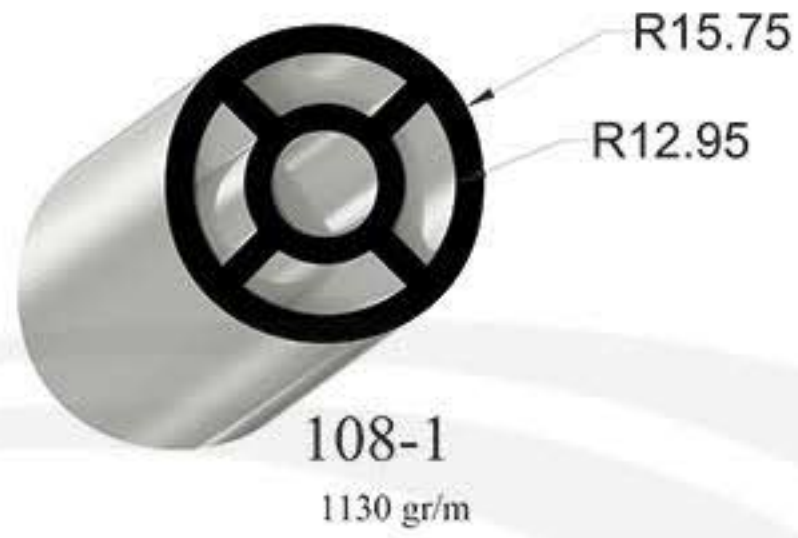
Code 107

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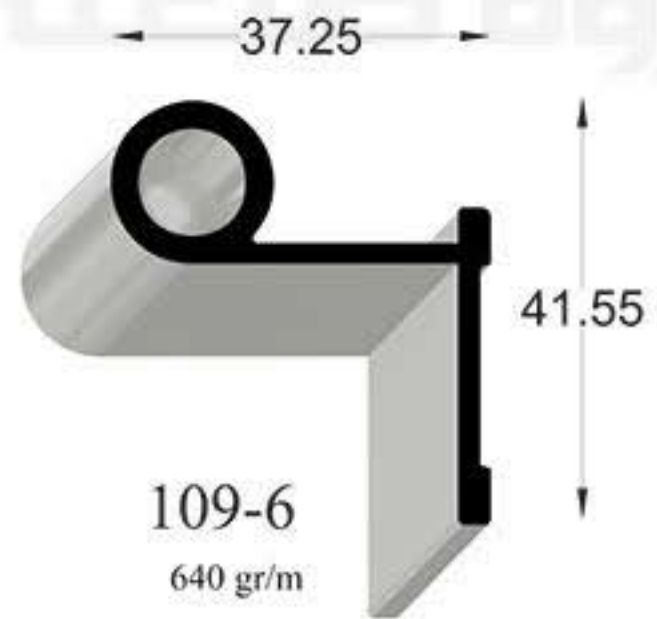
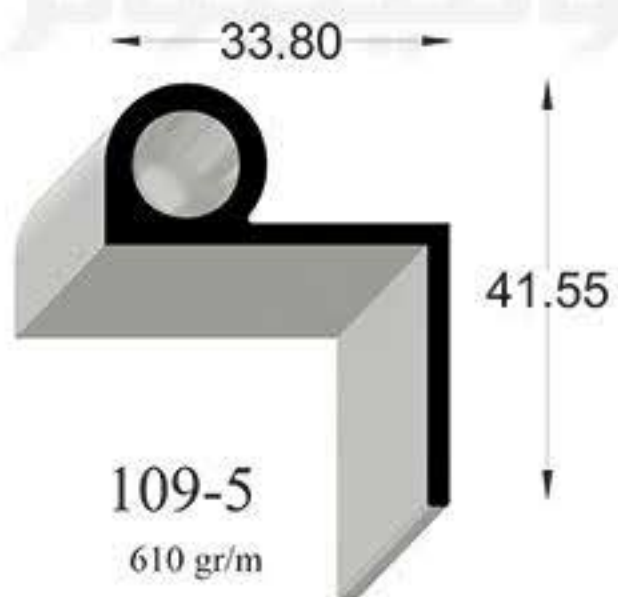
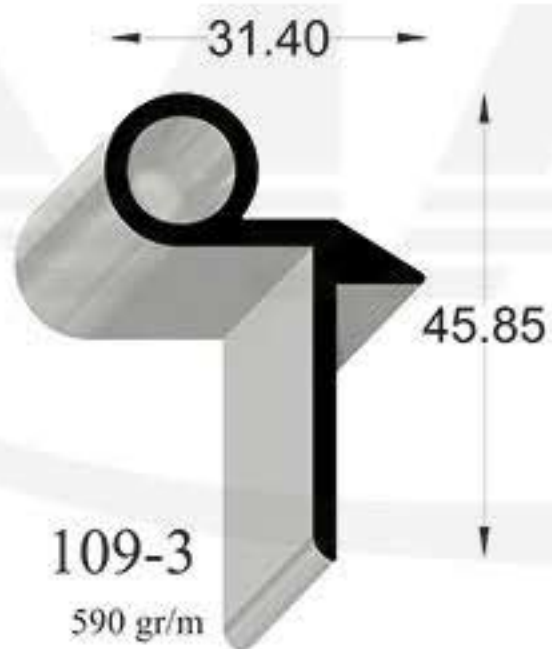
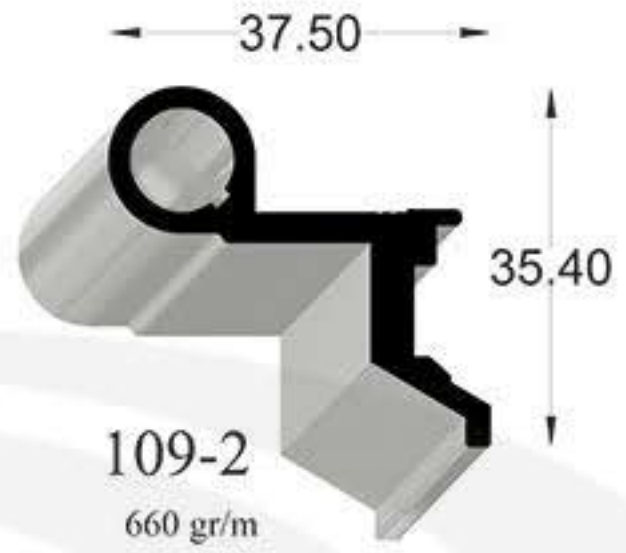
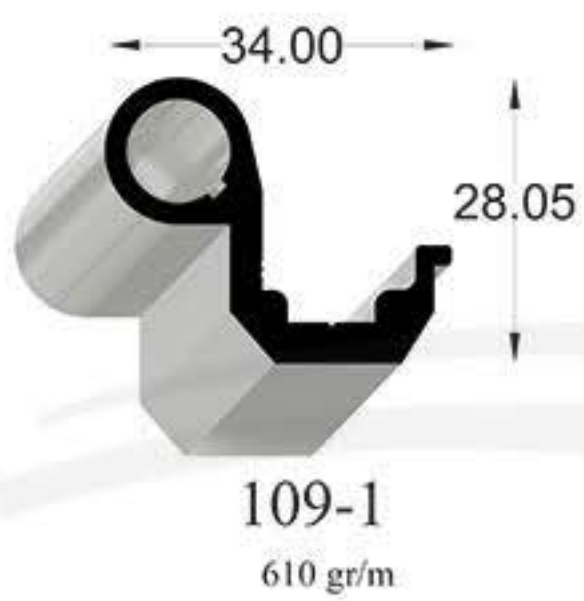
Code:108



Hinge Doors and Windows

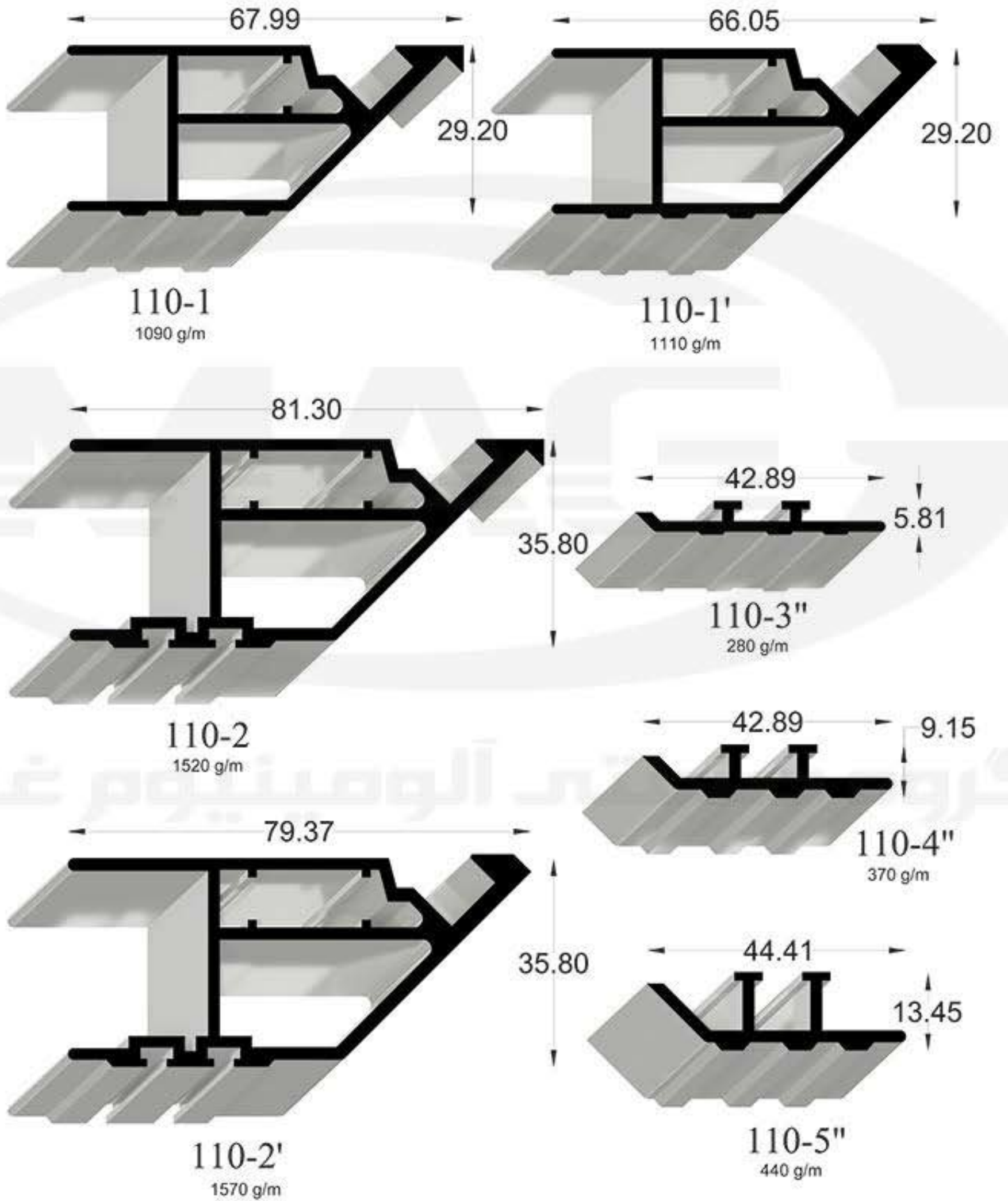


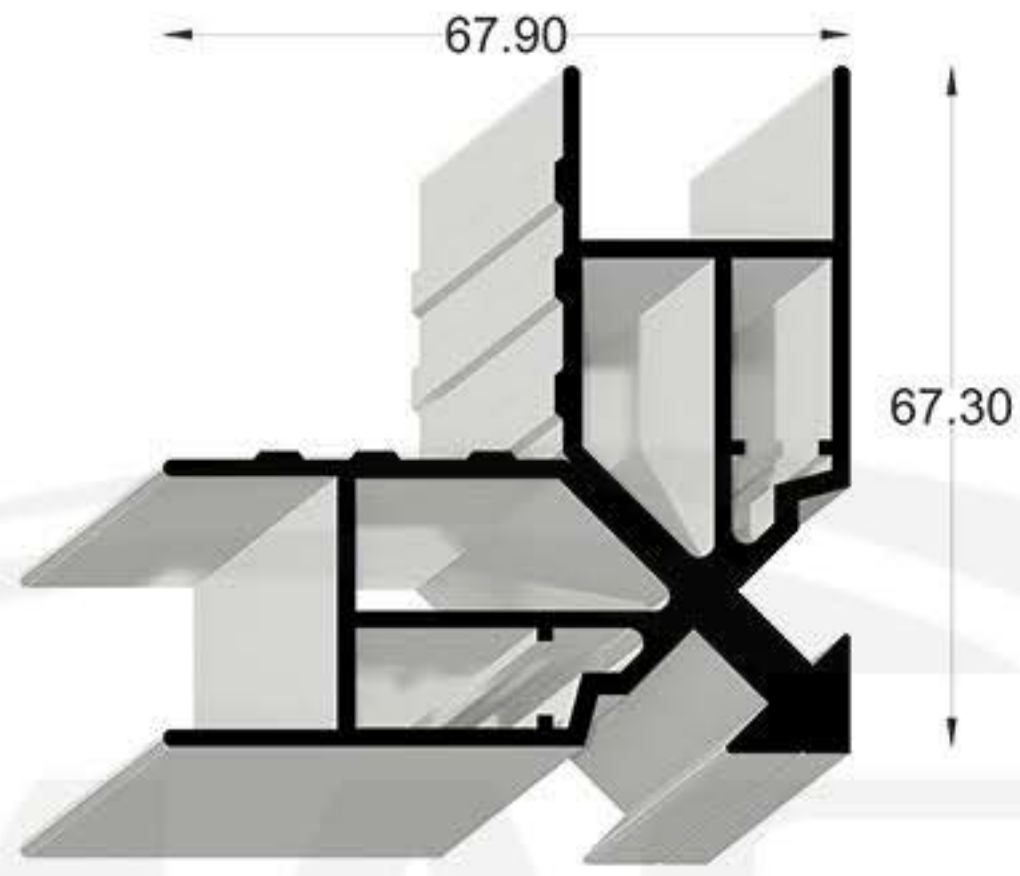
Code:109



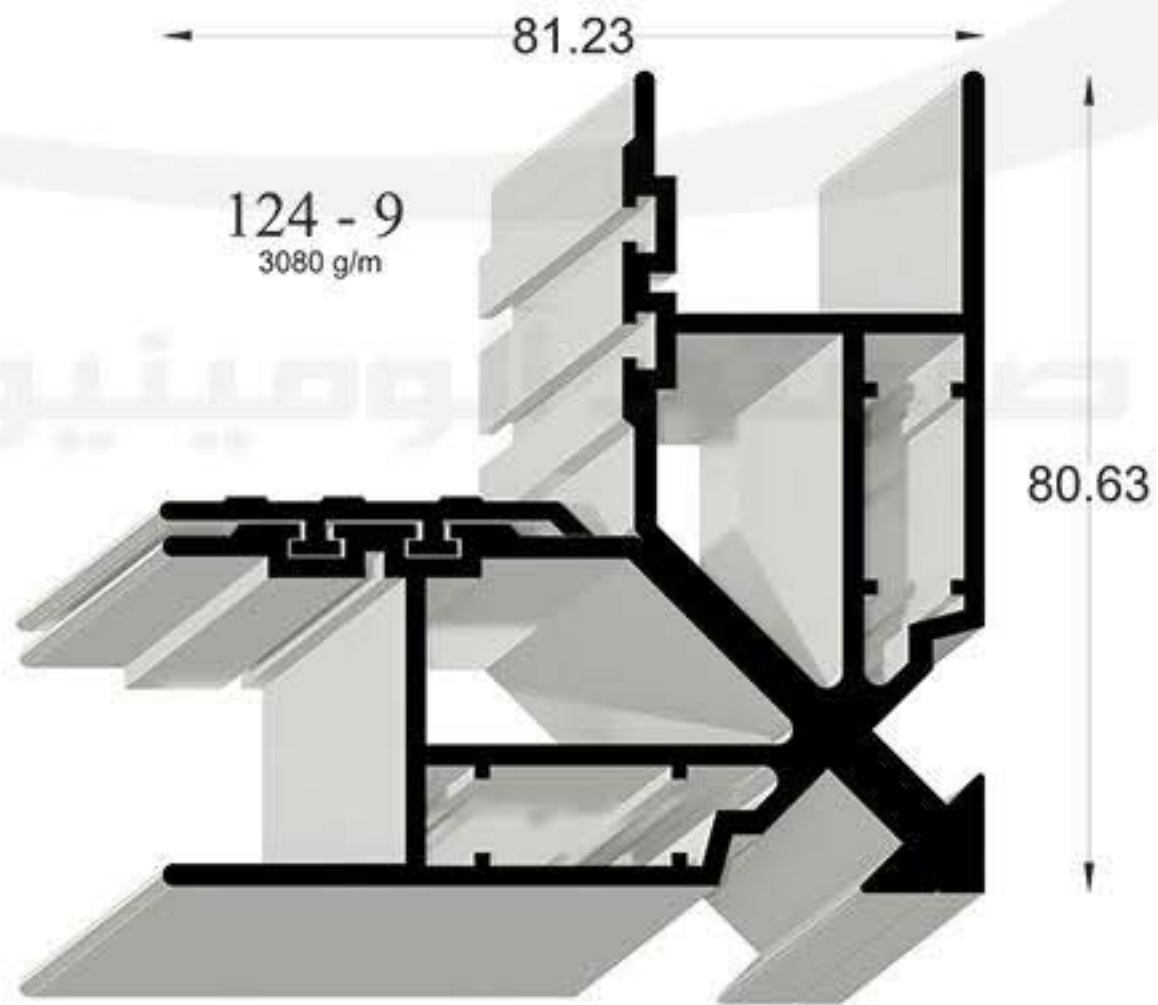


Code:110



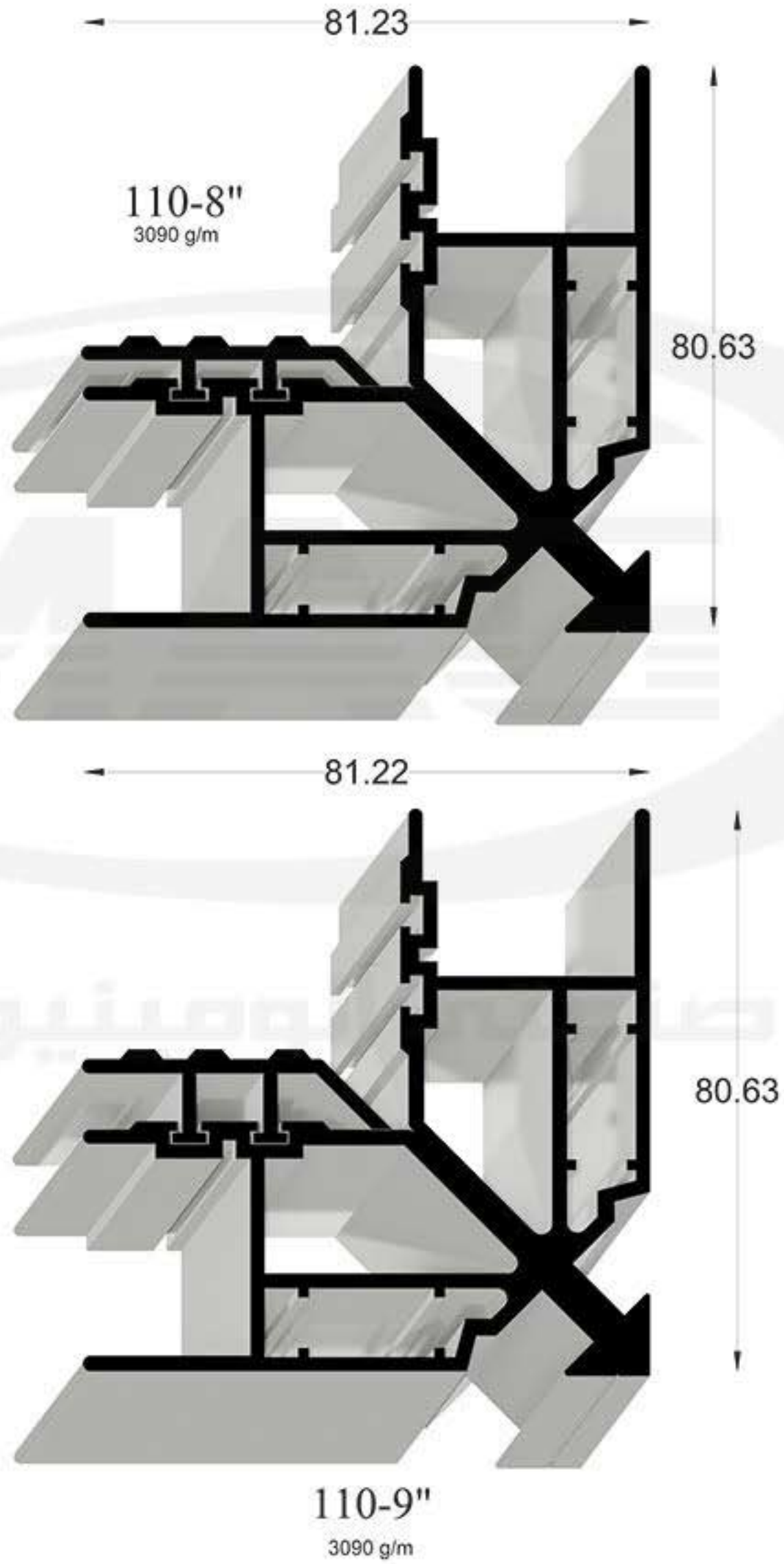


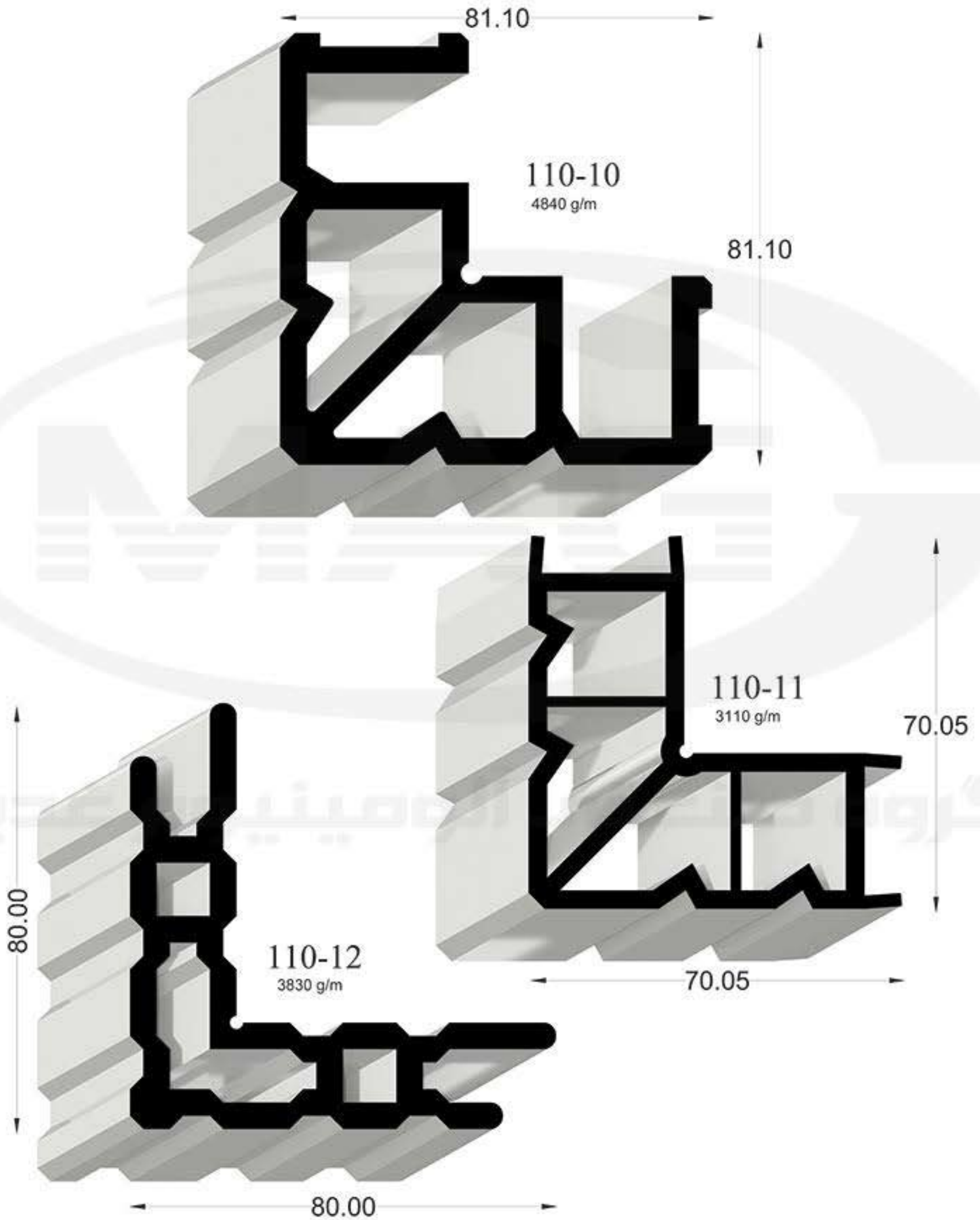
110-6"
2200 g/m

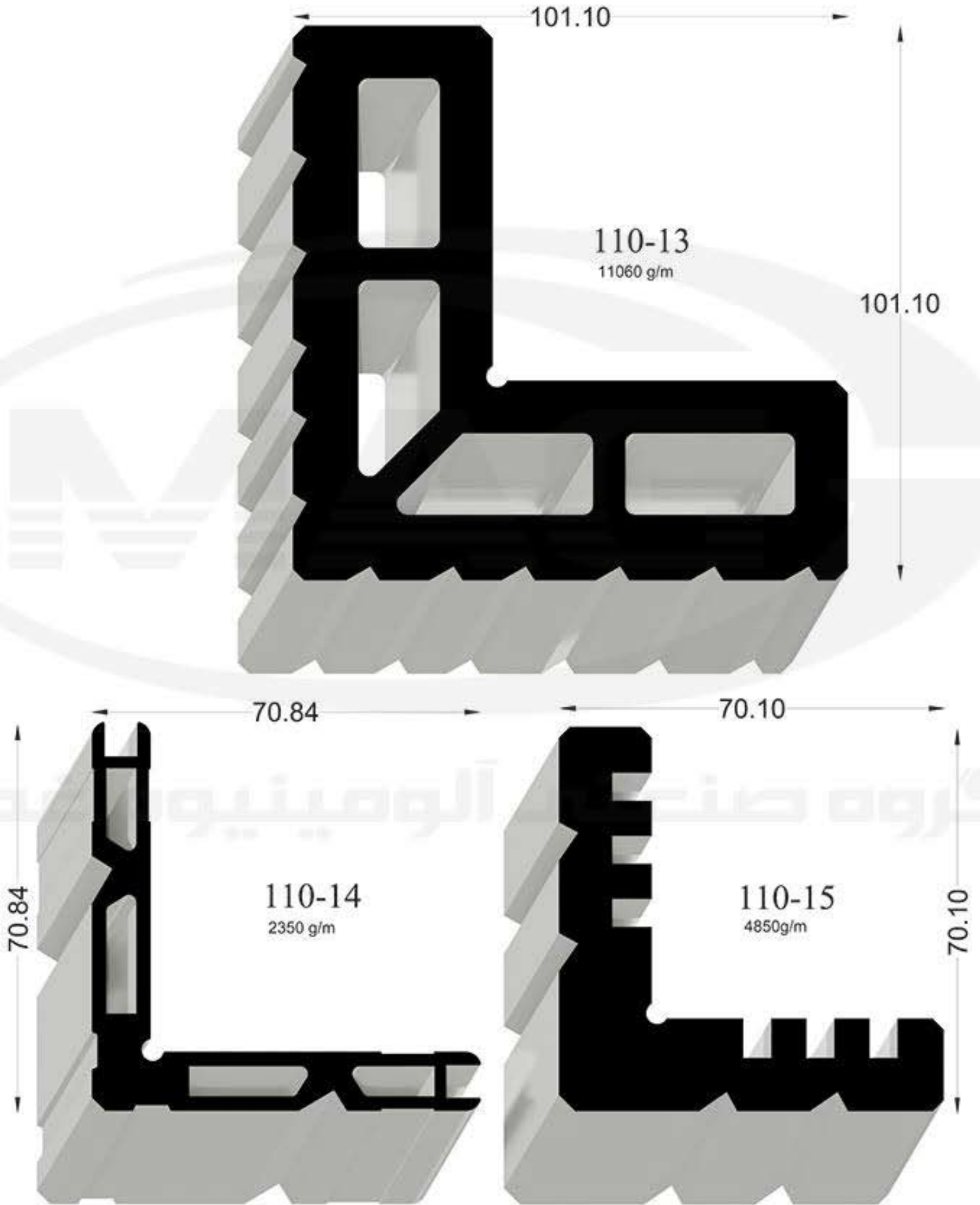


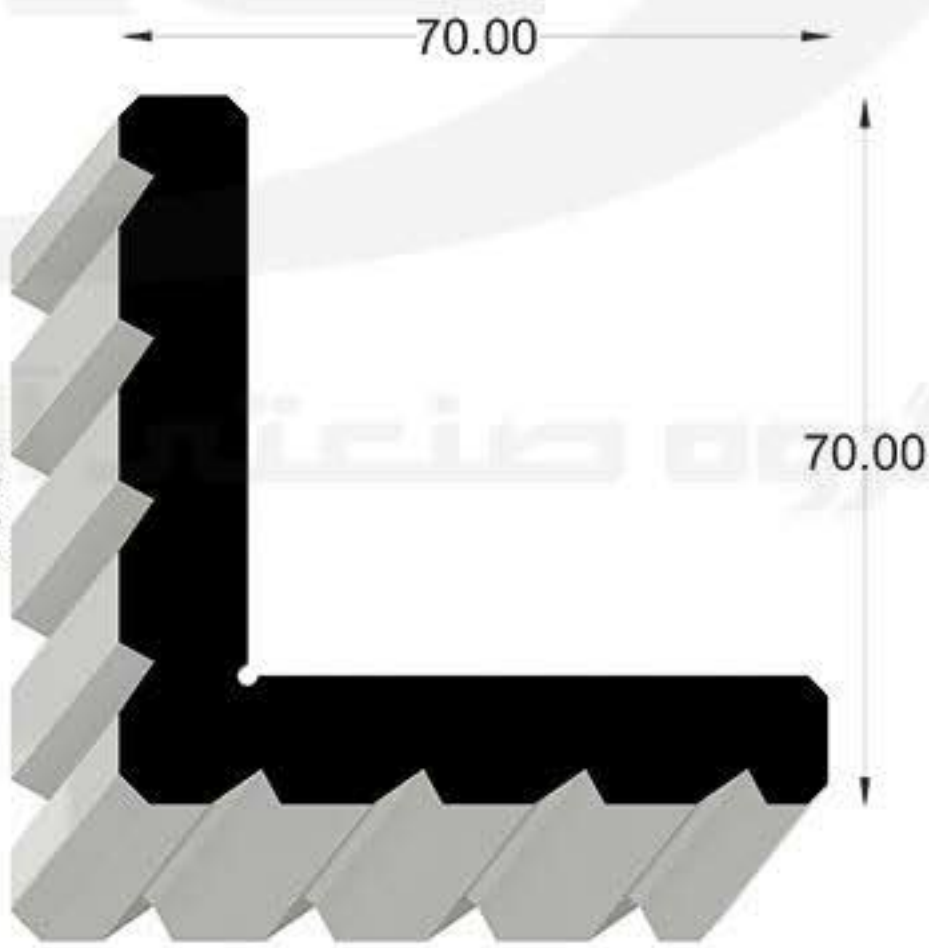
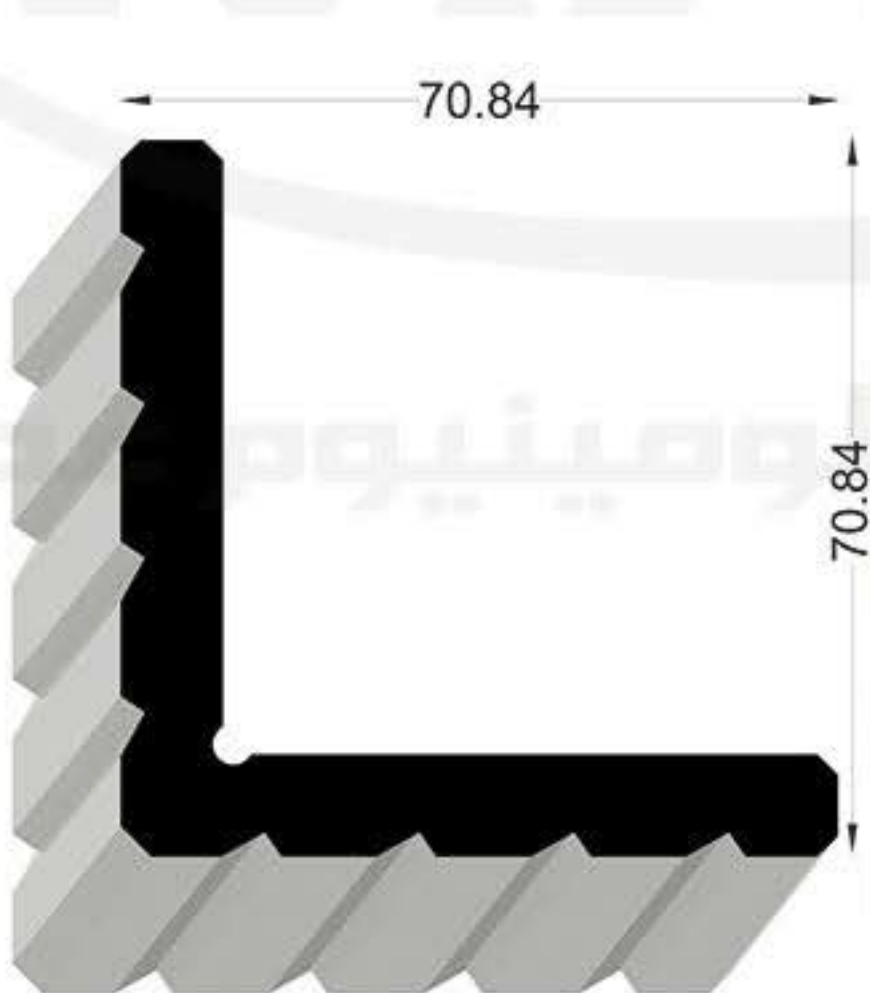
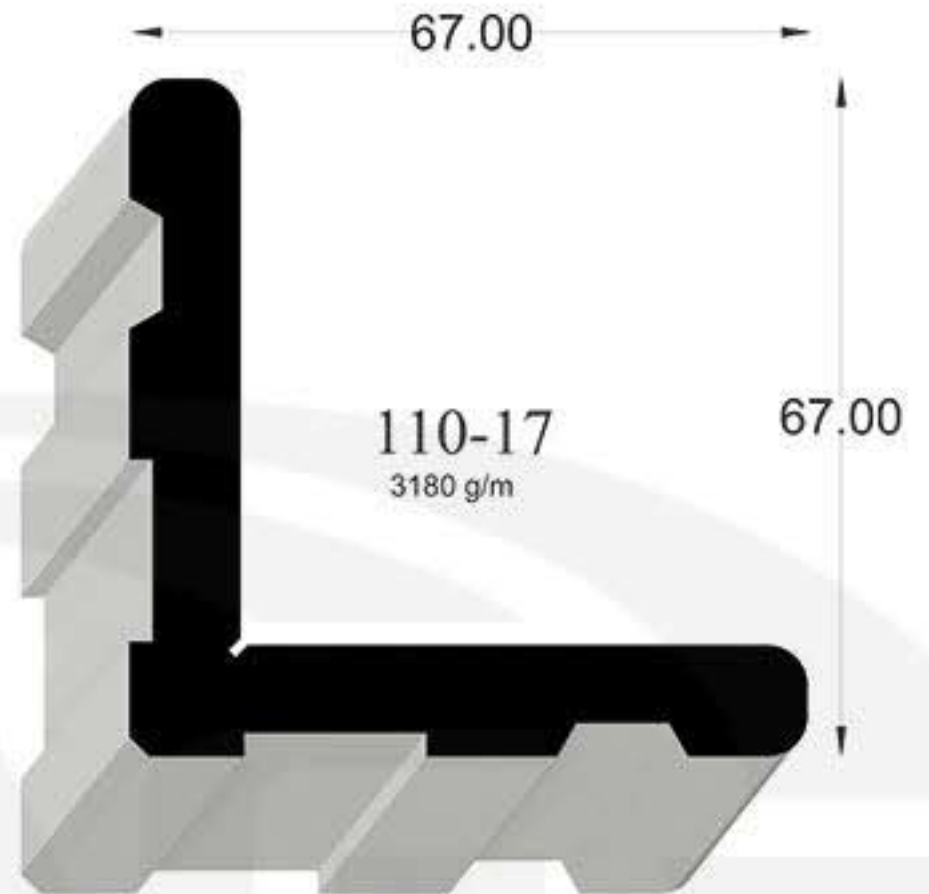
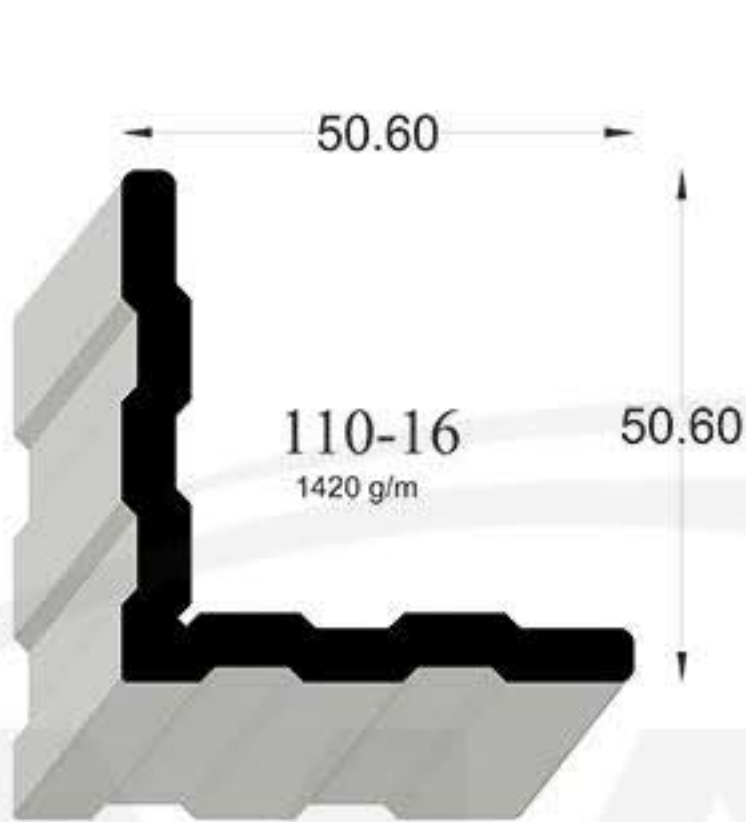
124 - 9
3080 g/m

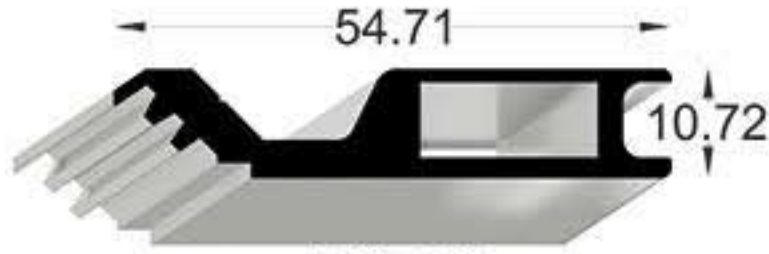
110-7"
3090 g/m



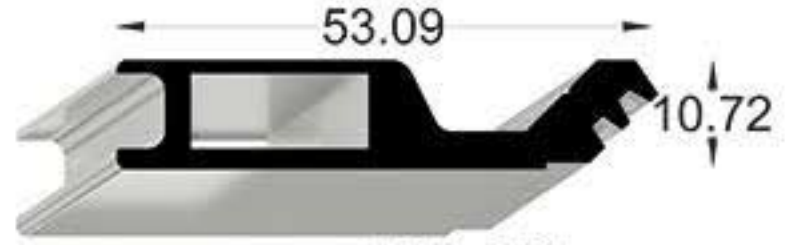




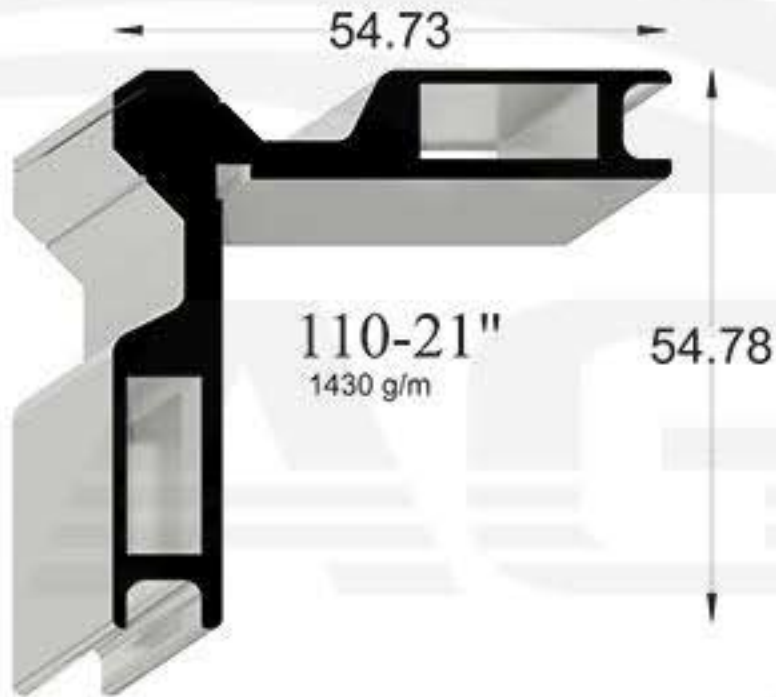




110-20
710 g/m



110-20'
720 g/m



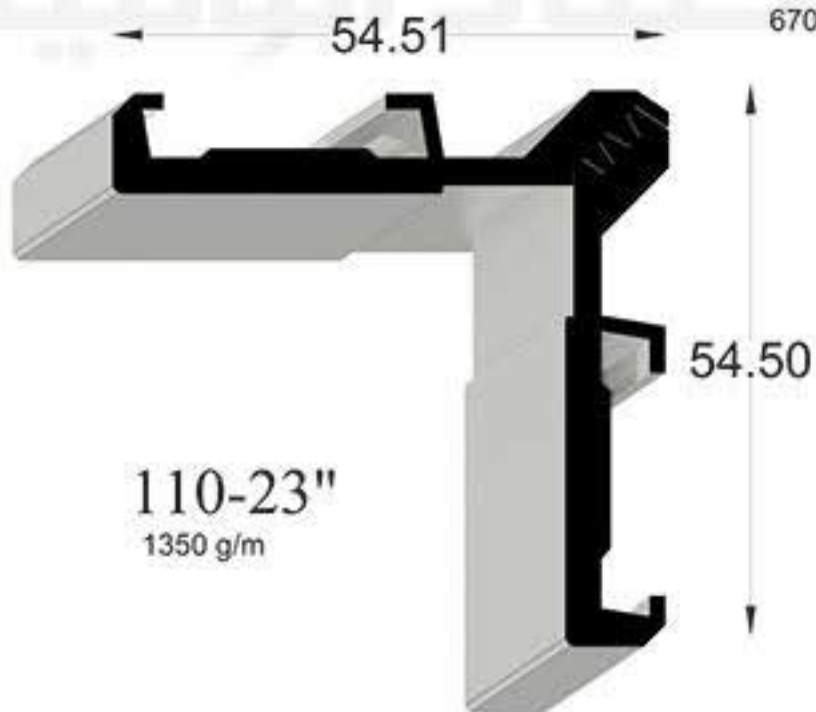
110-21''
1430 g/m



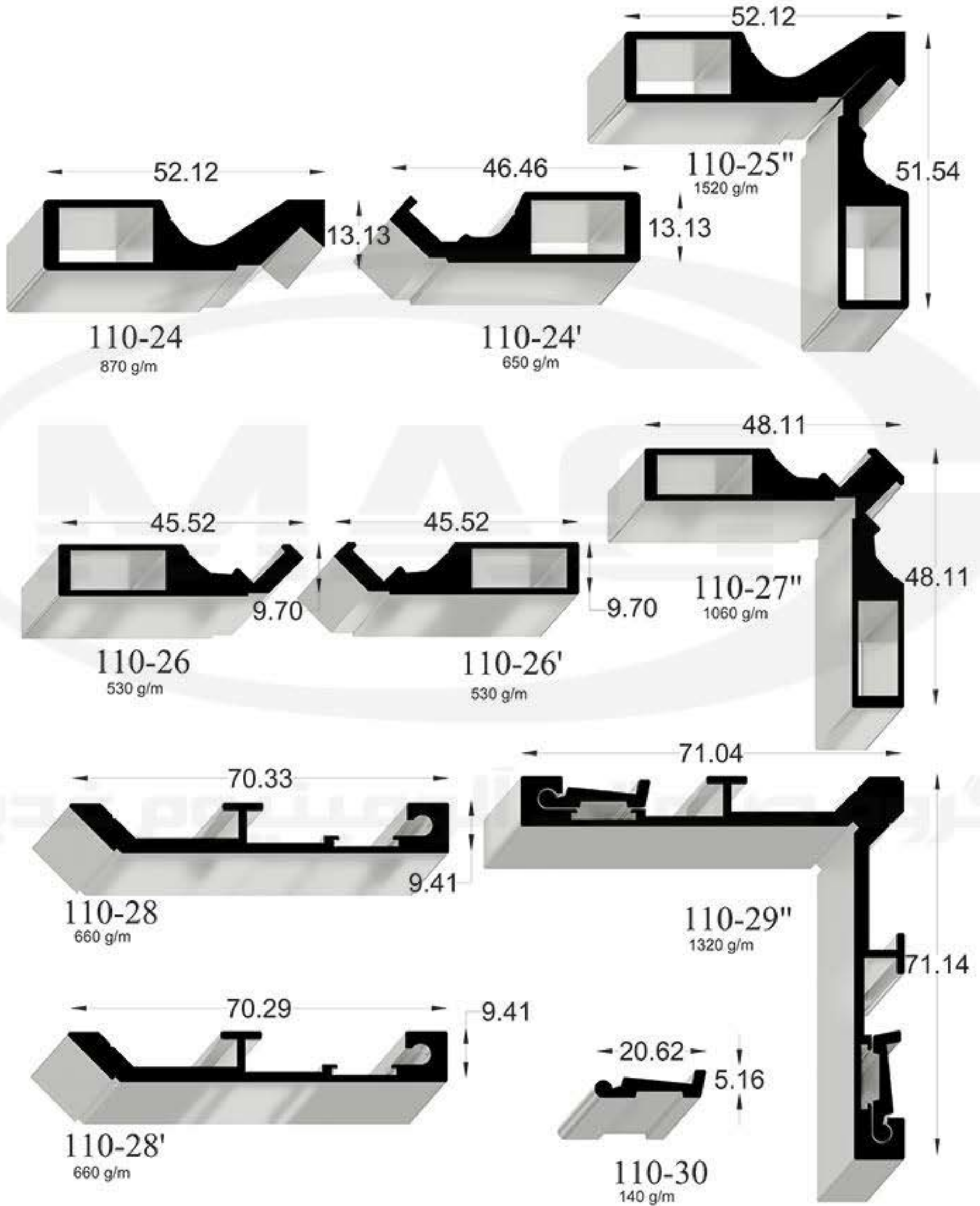
110-22
680 g/m



110-22'
670 g/m



110-23''
1350 g/m

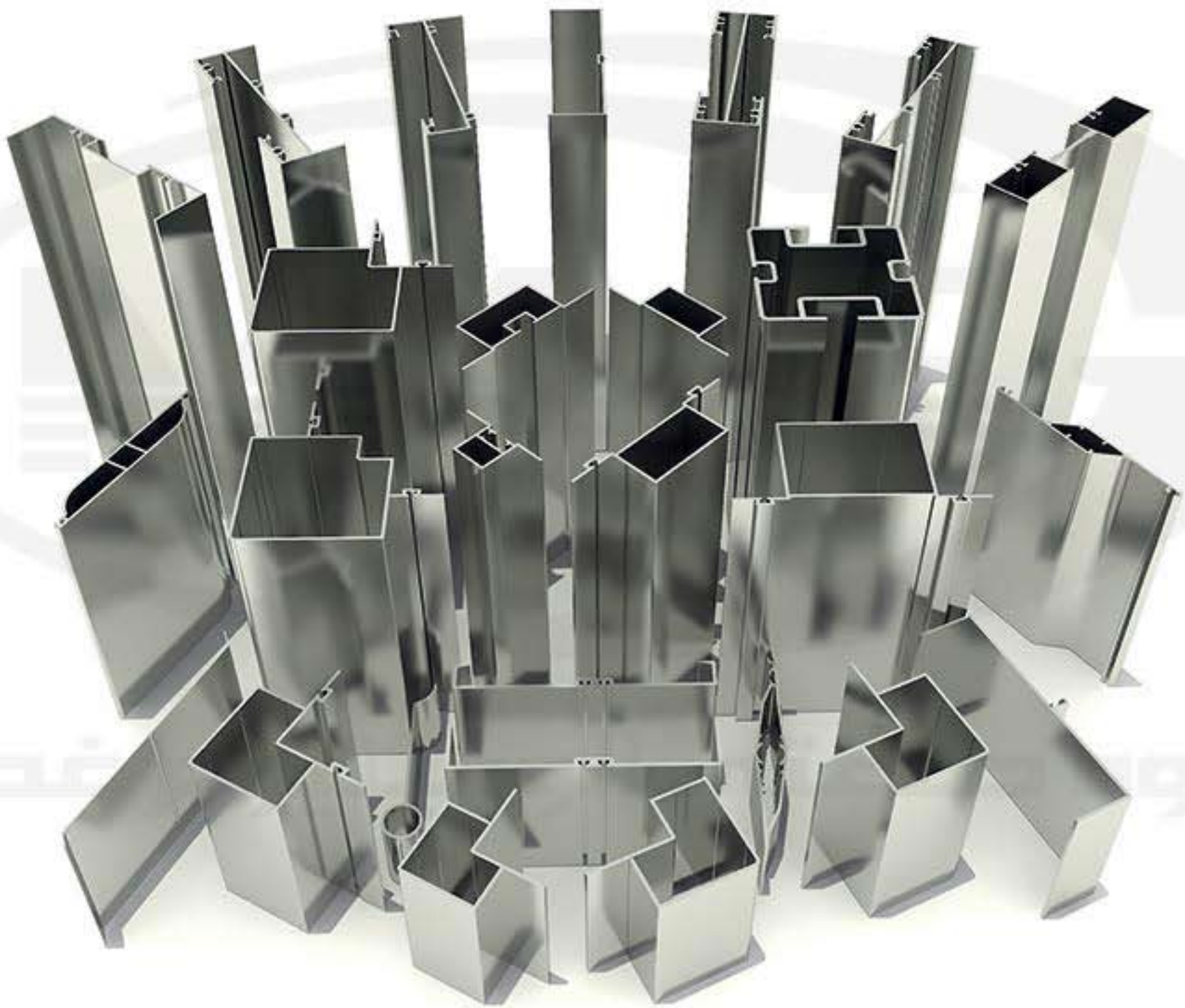




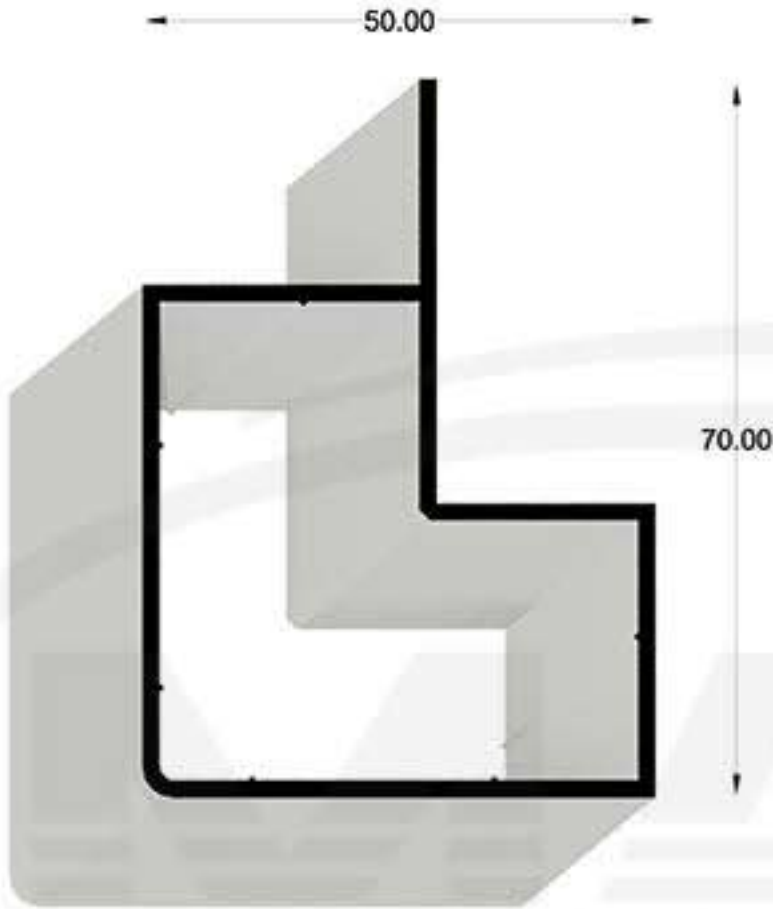
Code 110

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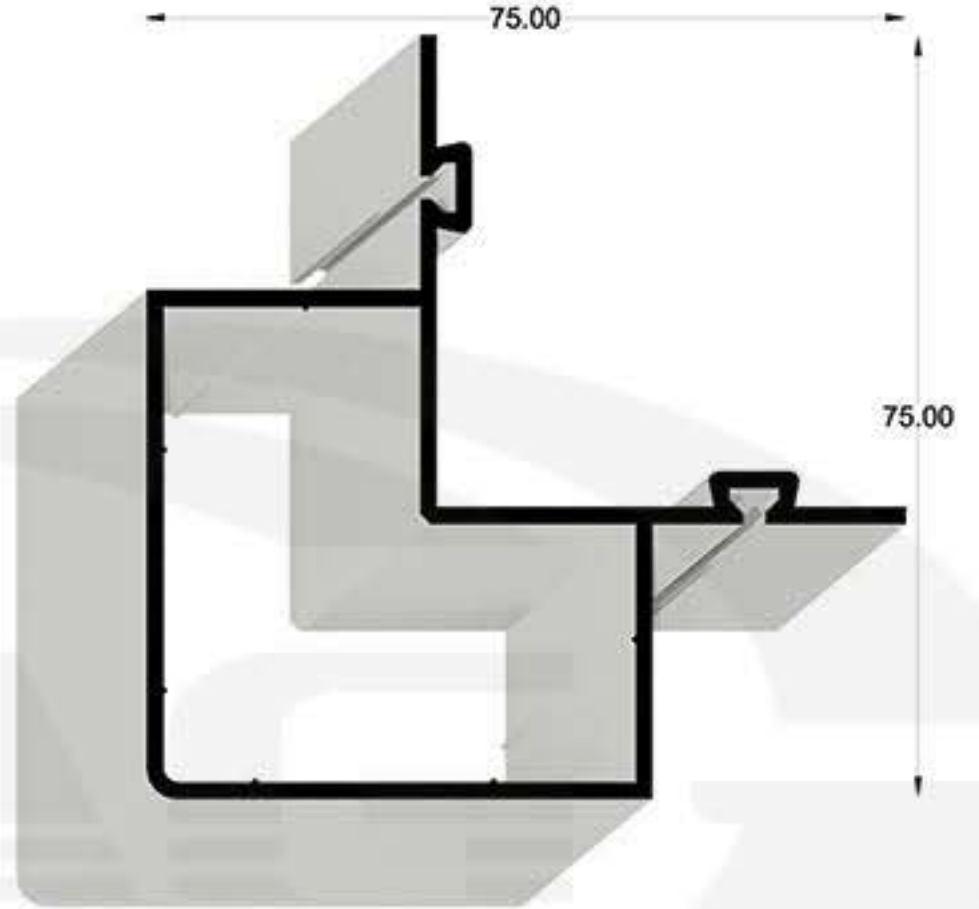




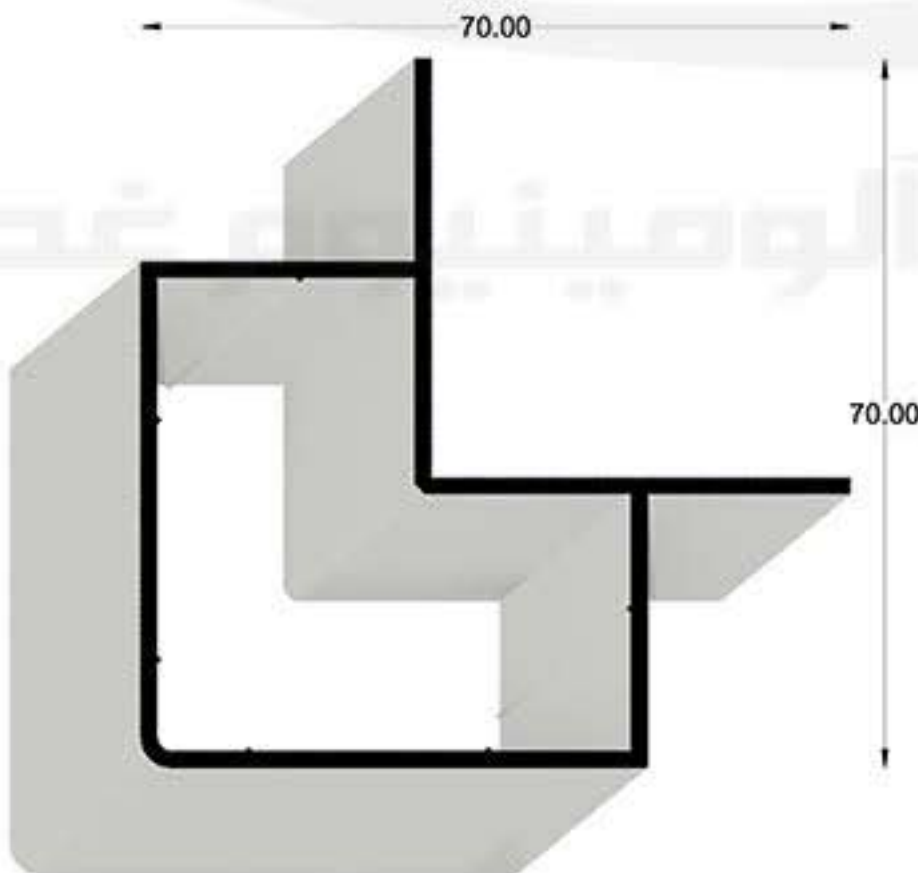
Ventilation Detail Code 111 (A 1-14)



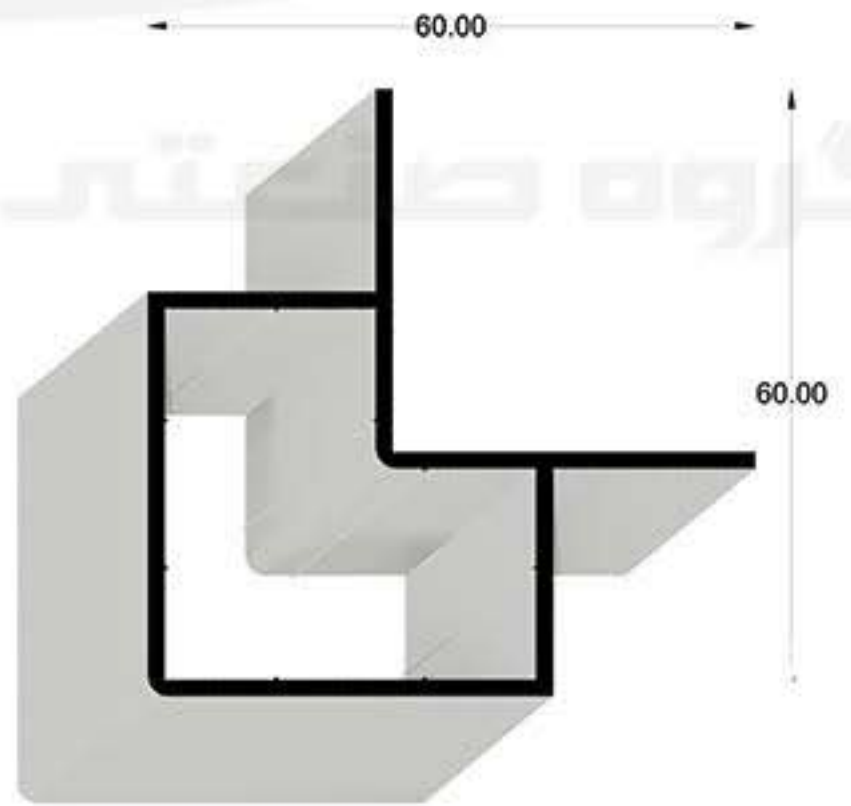
111A-1
1500 gr/m



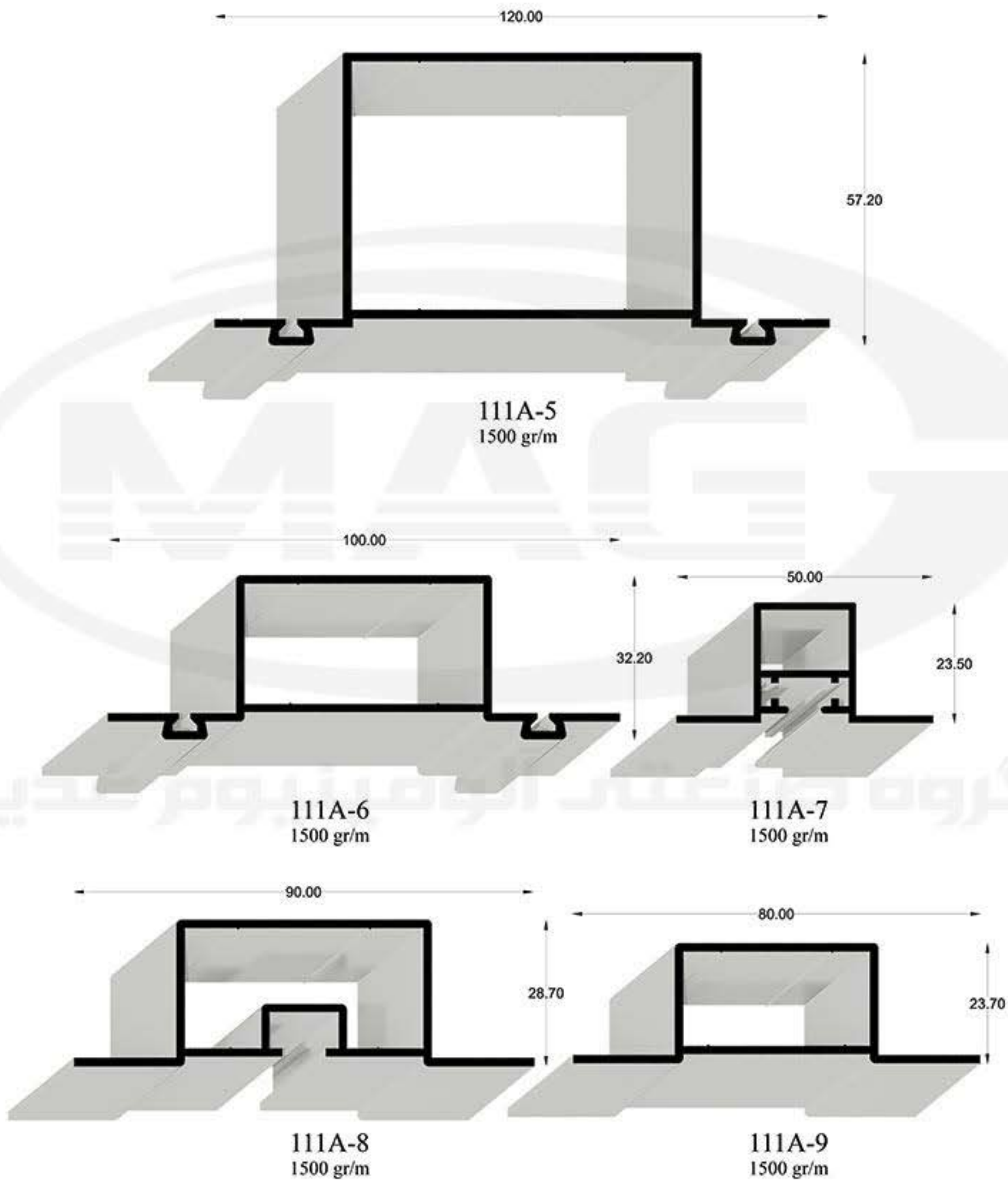
111A-2
1500 gr/m



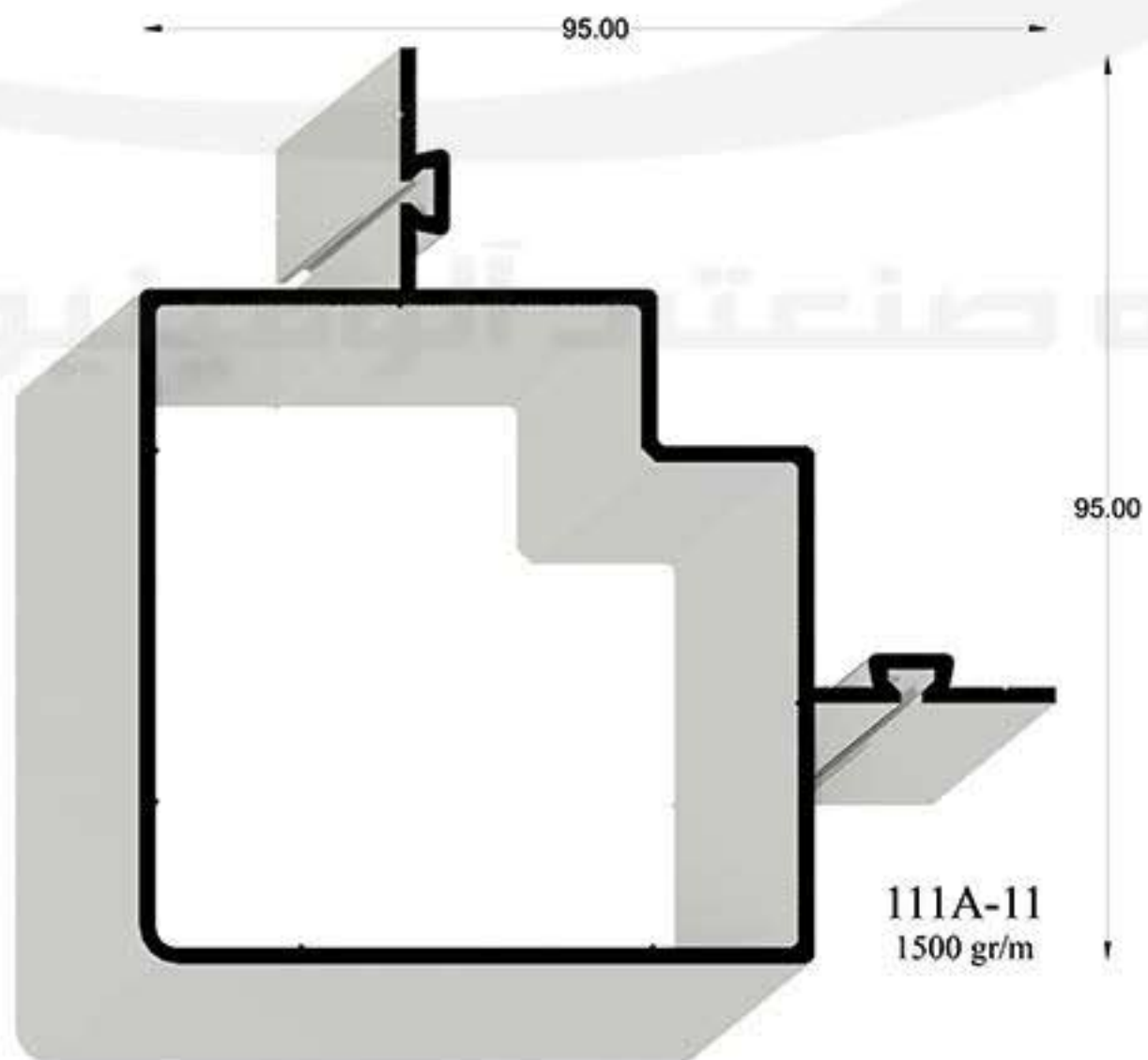
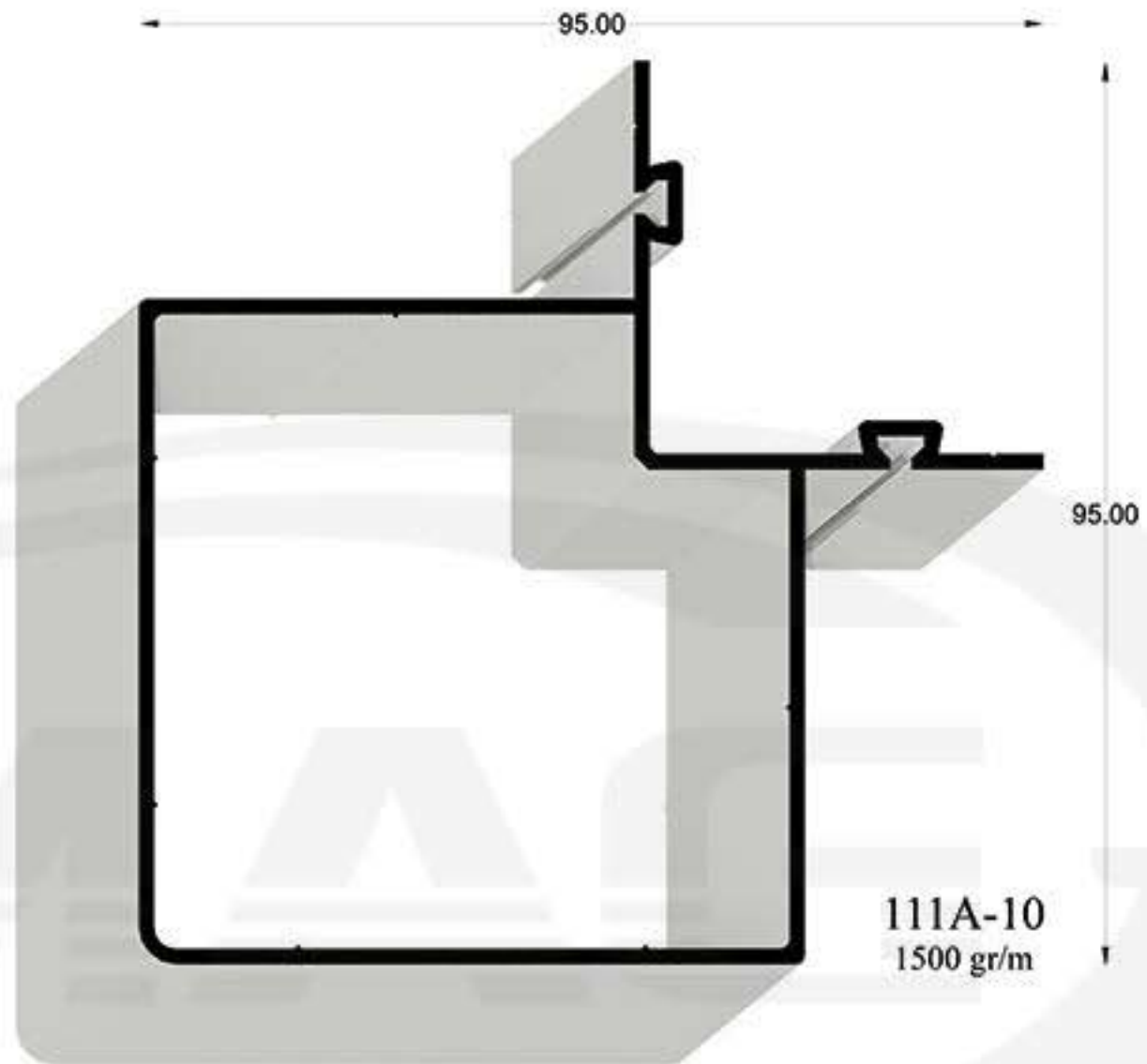
111A-3
1500 gr/m

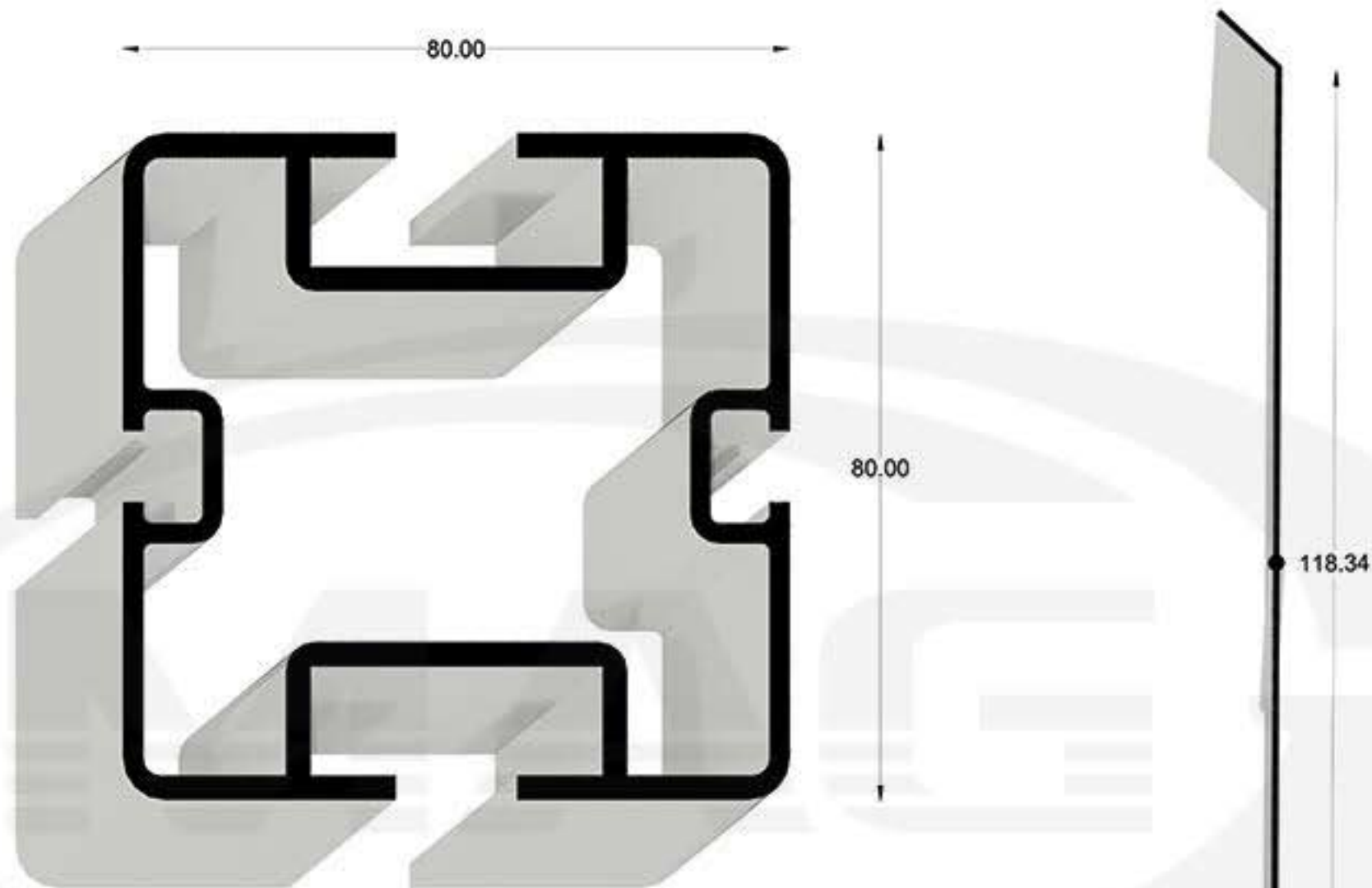


111A-4
1500 gr/m



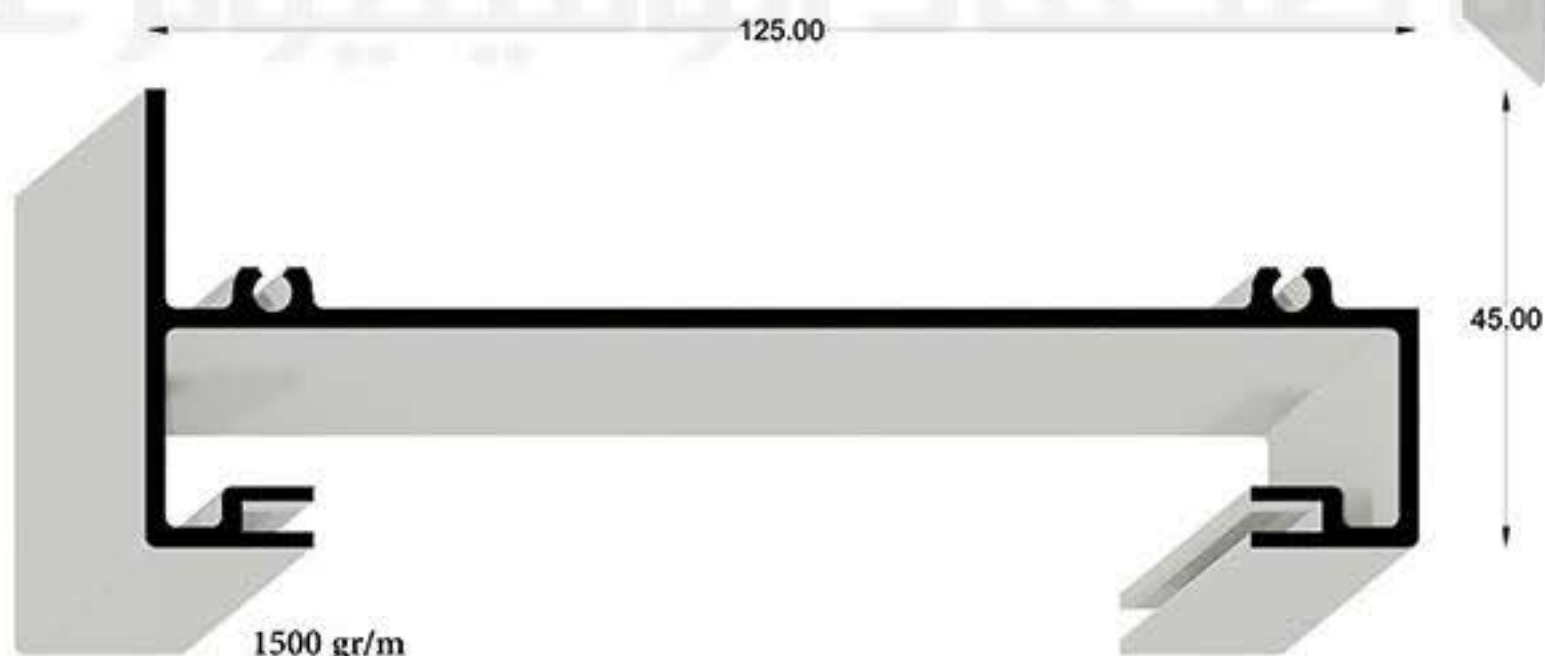
Ventilation Detail Code 111 (A 1-14)





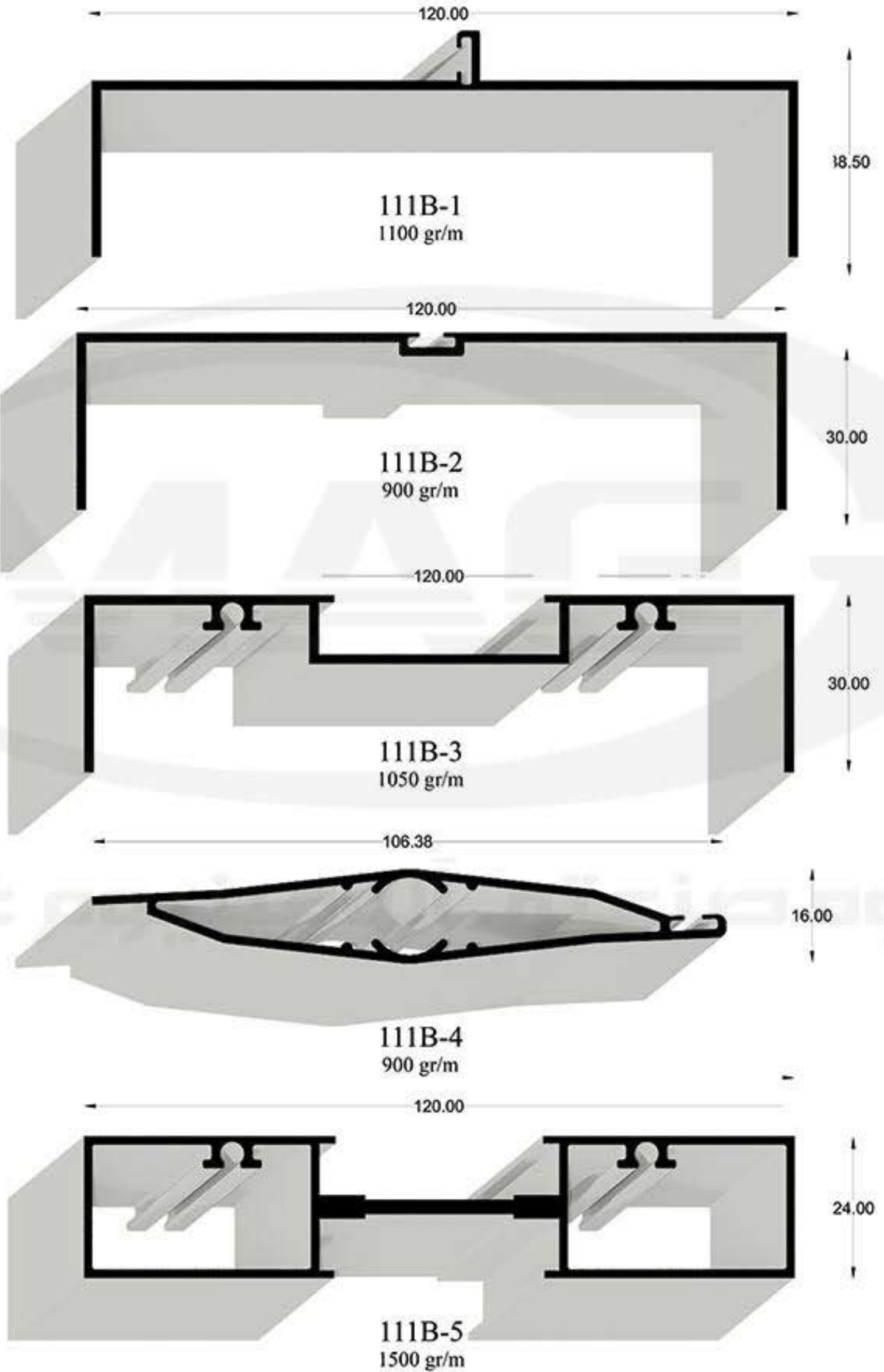
111A-12
1500 gr/m

111A-13
1500 gr/m



111A-14
1500 gr/m

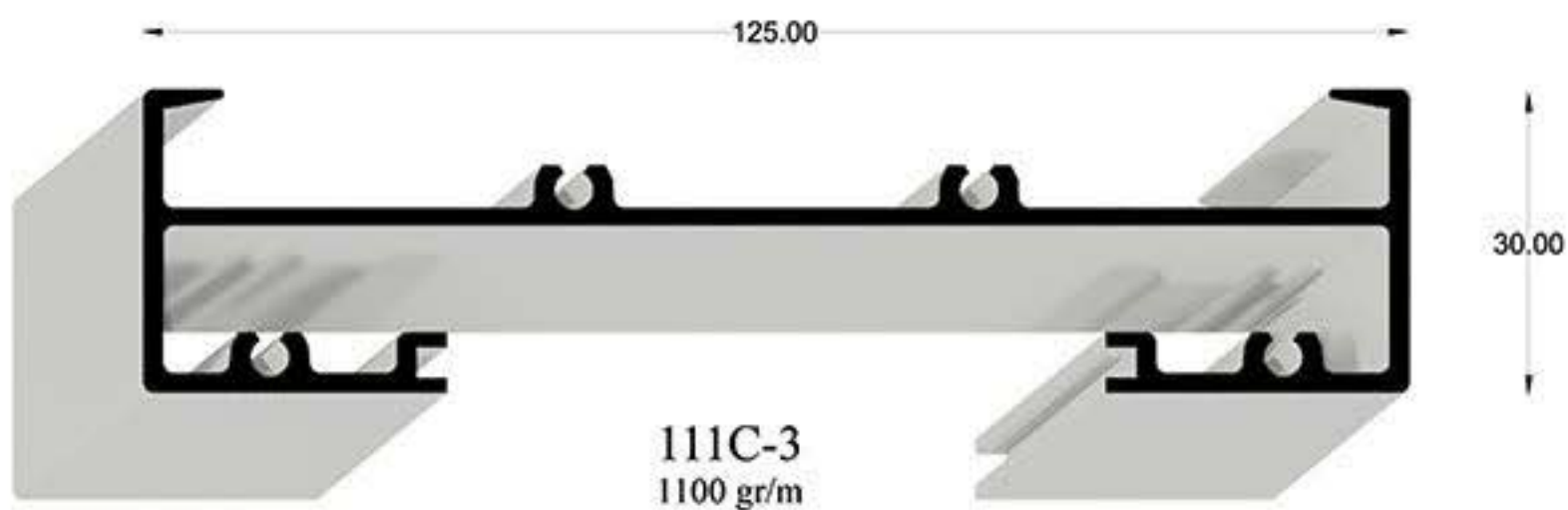
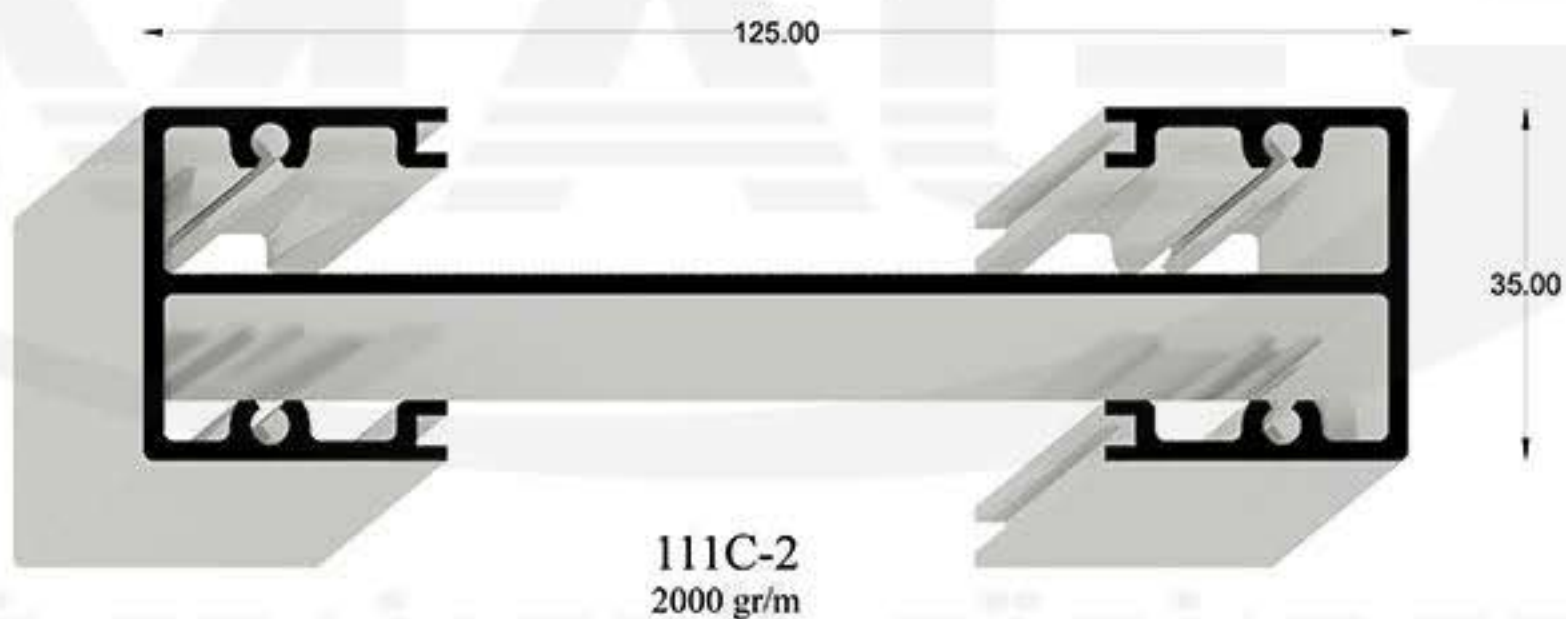
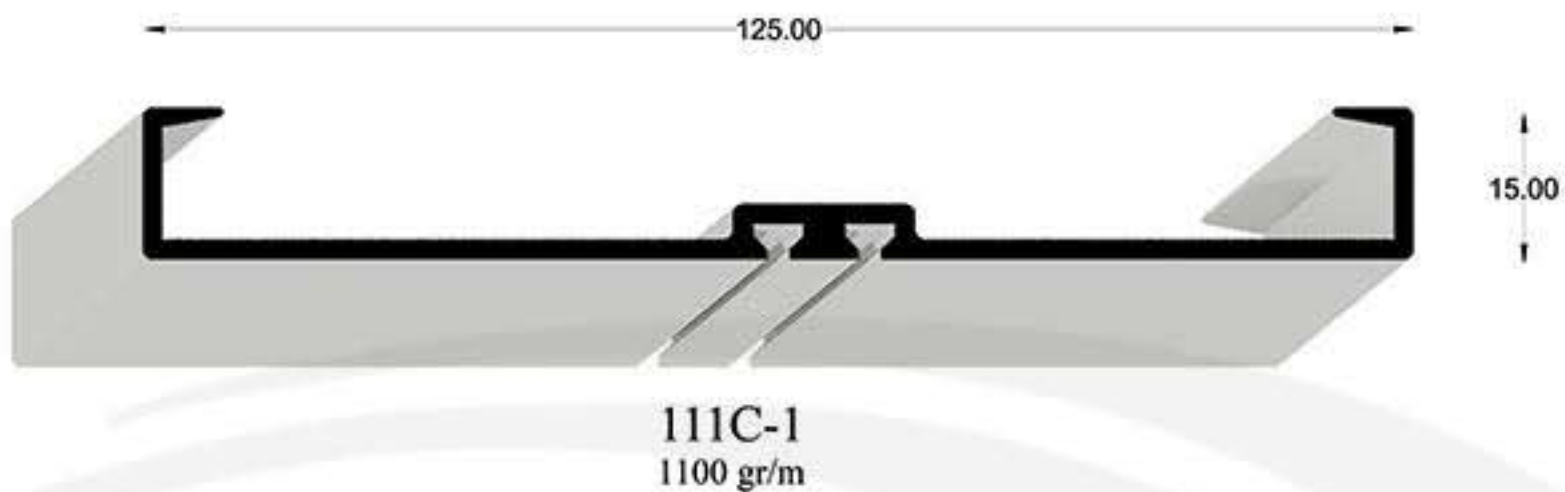
Ventilation Detail Code 111 (B 1-5)



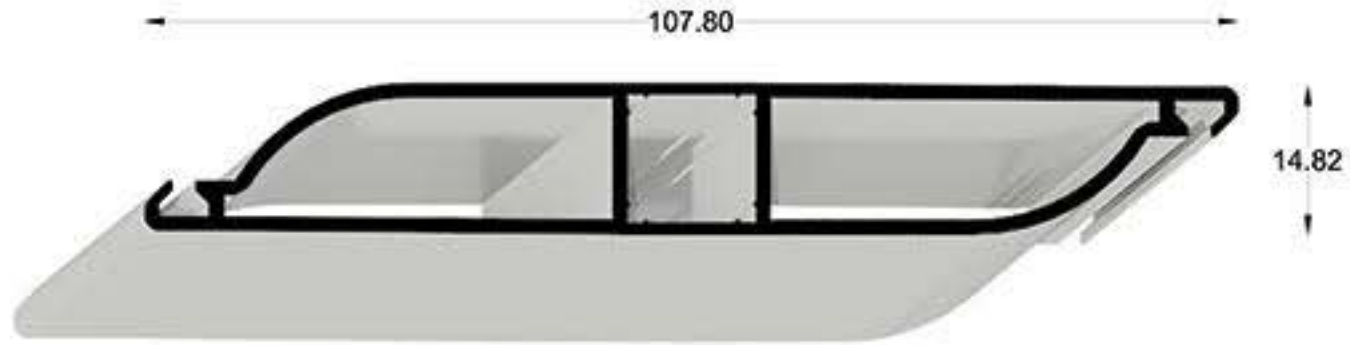
Ventilation Detail Code 111 (C 1-8)



گروه صنعتی آلومینیوم غدیر



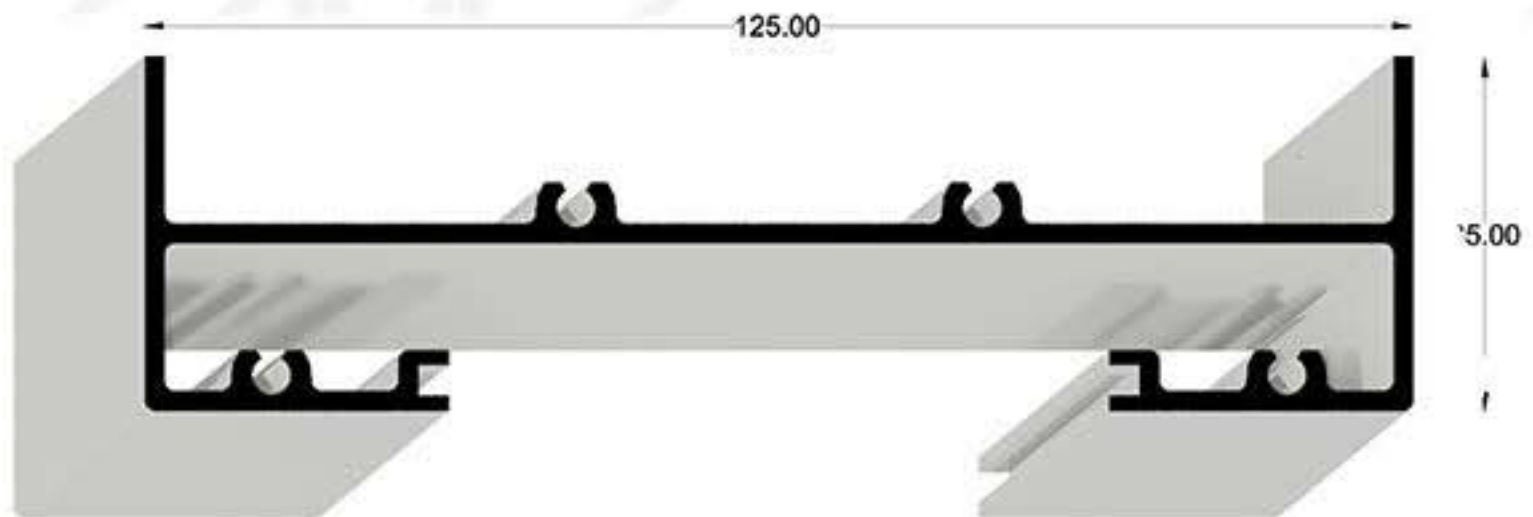
Ventilation Detail Code 111 (C 1-8)



111C-4
1100 gr/m



111C-5
760 gr/m

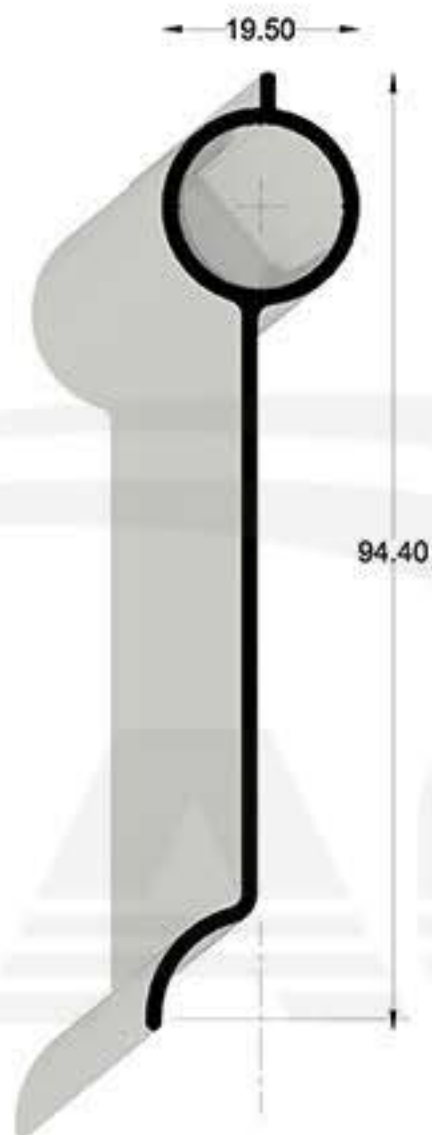


111C-6
1500 gr/m

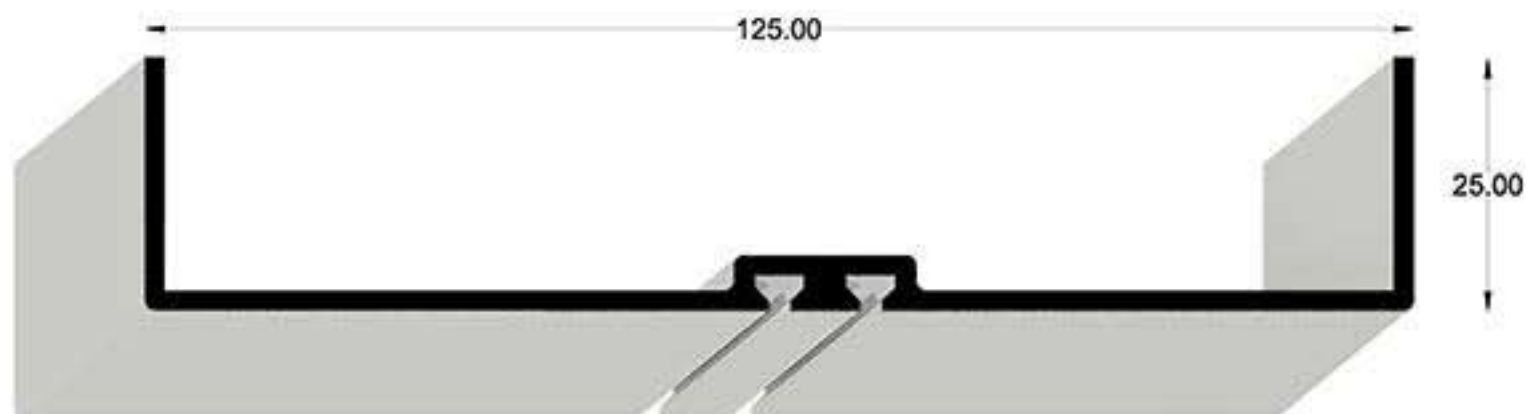
Ventilation Detail Code 111 (C 1-8)



گروه صنعتی آلومینیوم غدیر



111C-7
760 gr/m

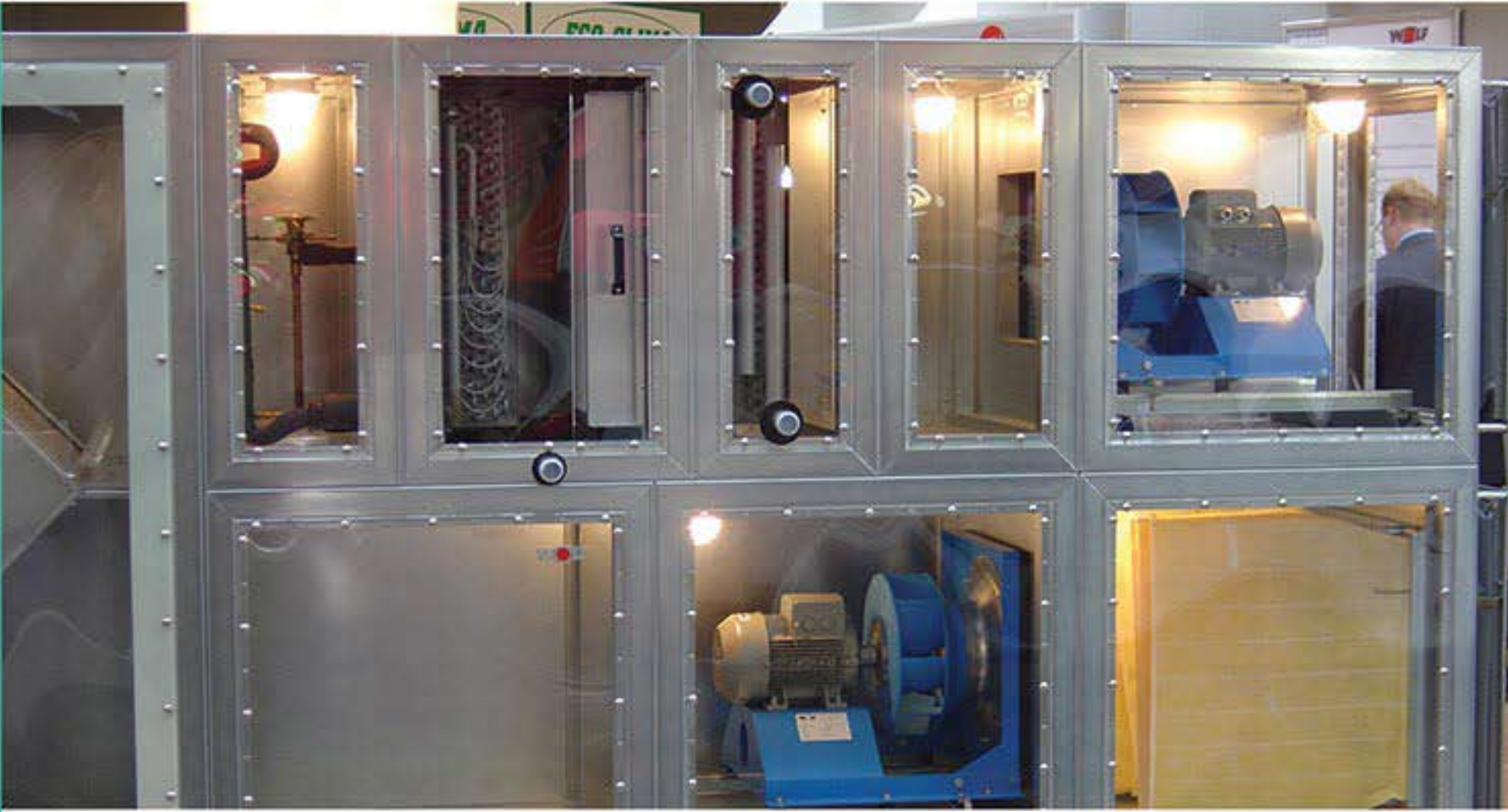


111C-8
1000 gr/m



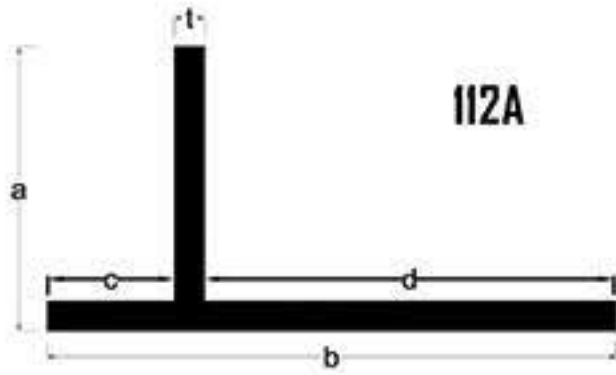
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Ventilation Detail Code 111 A,B,C

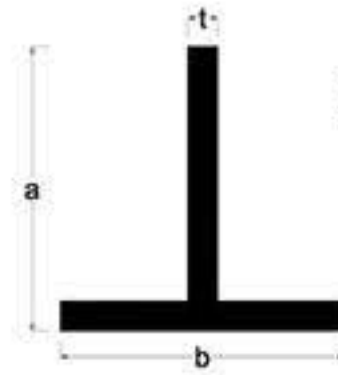




Code:112



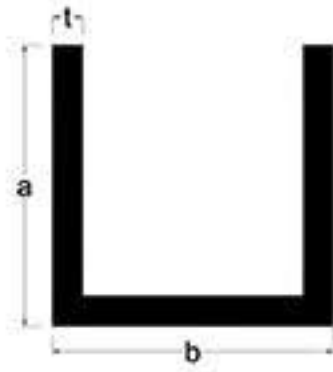
112A



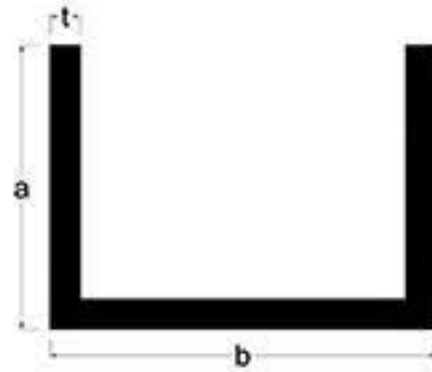
112B

a (mm)	b (mm)	c (mm)	d (mm)	t (mm)	weight (kg/m)
10	20	5	15	1.2	0.094
10	20	5	15	1.5	0.116
10	20	5	15	2	0.152
15	30	10	20	1.2	0.143
15	30	10	20	1.5	0.177
15	30	10	20	2	0.233
20	40	15	25	1.2	0.191
25	50	20	30	1.2	0.240
25	50	20	30	1.5	0.299
25	50	20	30	2	0.396
30	60	20	40	1.2	0.289
30	60	20	40	1.5	0.360
35	70	25	45	1.5	0.421
40	60	20	40	1.2	0.322
40	60	20	40	1.5	0.401
40	60	20	40	2	0.532
45	65	20	45	1.2	0.354
45	65	20	45	1.5	0.441
45	65	20	45	2	0.586
50	70	25	45	1.2	0.387
50	70	25	45	1.5	0.482
50	70	25	45	2	0.640
55	100	10	30	2	5.711
55	100	20	35	1.5	4.286
55	100	30	70	1.2	3.429
60	80	10	30	1.2	0.452
60	80	10	30	1.5	0.563
60	80	10	30	2	0.749

a (mm)	b (mm)	t (mm)	weight (kg/m)
10	10	1.2	0.061
10	10	1.5	0.075
10	10	2	0.098
15	15	1.2	0.094
15	15	1.5	0.116
15	15	2	0.152
20	20	1.2	0.126
25	25	1.2	0.159
25	25	1.5	0.197
25	25	2	0.260
30	30	1.2	0.191
30	30	1.5	0.238
35	35	1.5	0.279
40	40	1.2	0.256
40	40	1.5	0.319
40	40	2	0.423
45	45	1.2	0.289
45	45	1.5	0.360
45	45	2	0.477
50	50	1.2	0.322
50	50	1.5	0.401
50	50	2	0.532
55	55	1.2	0.354
55	55	1.5	0.441
55	55	2	0.586
60	60	1.2	0.387
60	60	1.5	0.482
60	60	2	0.640



112C

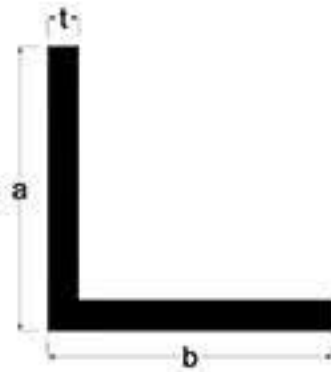


112D

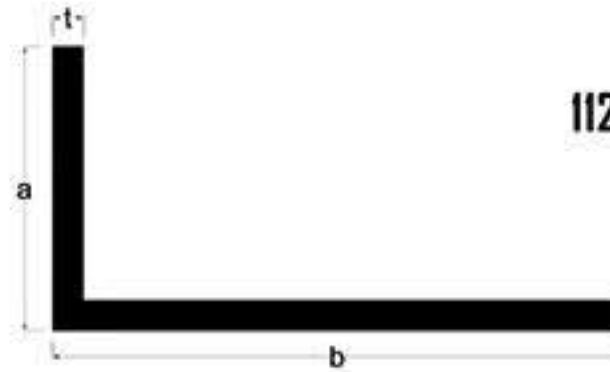
a (mm)	b (mm)	t (mm)	weight (kg/m)
10	10	1.2	0.090
10	10	1.5	0.110
10	10	2	0.141
12	12	1.2	0.109
12	12	1.5	0.134
12	12	2	0.174
15	15	1.2	0.139
15	15	1.5	0.171
15	15	2	0.222
17	17	1	0.133
17	17	1.2	0.158
17	17	1.5	0.195
17	17	2	0.255
20	20	1.2	0.187
20	20	1.5	0.232
20	20	2	0.304
25	25	1.2	0.236
25	25	1.5	0.293
25	25	2	0.385
30	30	1.2	0.285
30	30	1.5	0.354
30	30	2	0.466
35	35	1.2	0.334
35	35	1.5	0.415
35	35	2	0.548
40	40	1.2	0.383
40	40	1.5	0.476
40	40	2	0.629

a (mm)	b (mm)	t (mm)	weight (kg/m)
10	12	1.2	0.096
10	12	1.5	0.118
10	12	2	0.152
10	15	1.2	0.106
10	15	1.5	0.130
10	15	2	0.168
10	18	1.2	0.116
10	18	1.5	0.142
10	18	2	0.184
10	20	1.2	0.122
10	20	1.5	0.151
10	20	2	0.195
10	22	1.2	0.129
10	22	1.5	0.159
10	22	2	0.206
10	25	1.2	0.139
10	25	1.5	0.171
10	25	2	0.222
10	30	1.2	0.155
10	30	1.5	0.191
10	30	2	0.250
10	35	1.2	0.171
10	35	1.5	0.212
10	35	2	0.277
10	40	1.2	0.187
10	40	1.5	0.232
10	40	2	0.304
10	45	1.2	0.204
10	45	1.5	0.252
10	45	2	0.331
10	60	1.6	0.333
12	12	1.2	0.109
12	12	1.5	0.134
12	12	2	0.174
12	15	1.2	0.119
12	15	1.5	0.146
12	15	2	0.190
12	18	1.2	0.129
12	18	1.5	0.159
12	18	2	0.206
12	20	1.2	0.135
12	20	1.5	0.167
12	20	2	0.217
12	22	1.2	0.142
12	22	1.5	0.175
12	22	2	0.228
12	25	1.2	0.152
12	25	1.5	0.187
12	25	2	0.244

a (mm)	b (mm)	t (mm)	weight (kg/m)
12	30	1.2	0.168
12	30	1.5	0.207
12	30	2	0.271
12	35	1.2	0.184
12	35	1.5	0.228
12	35	2	0.298
12	40	1.2	0.200
12	40	1.5	0.248
12	40	2	0.325
12	45	1.2	0.217
12	45	1.5	0.268
12	45	2	0.353
15	12	1.2	0.129
15	12	1.5	0.159
15	12	2	0.206
15	15	1.2	0.139
15	15	1.5	0.171
15	15	2	0.222
15	17	0.9	0.110
15	18	1.2	0.148
15	18	1.5	0.183
15	18	2	0.239
15	20	1.2	0.155
15	20	1.5	0.191
15	20	2	0.250
15	22	1.2	0.161
15	22	1.5	0.199
15	22	2	0.260
15	25	1.2	0.171
15	25	1.5	0.212
15	25	2	0.277
15	30	1.2	0.187
15	30	1.5	0.232
15	30	2	0.304
15	35	1.2	0.204
15	35	1.5	0.252
15	35	2	0.331
15	40	1.2	0.220
15	40	1.5	0.273
15	40	2	0.358
15	45	1.2	0.236
15	45	1.5	0.293
15	45	2	0.385
17	15	1.2	0.152
20	15	2	0.277
20	18	0.9	0.137
20	18	1.2	0.181
20	19	1.5	0.228
40	30	1.5	0.435



112E



112F

a (mm)	b (mm)	t (mm)	weight (kg/m)
10	10	1.2	0.061
10	10	1.5	0.075
10	10	2	0.098
12	12	1.2	0.074
12	12	1.5	0.092
12	12	2	0.119
14	14	1.2	0.087
14	14	1.5	0.108
14	14	2	0.141
16	16	1.2	0.100
16	16	1.5	0.124
16	16	2	0.163
20	20	1.2	0.126
20	20	1.5	0.157
20	20	2	0.206
20	20	1.2	0.126
20	20	1.5	0.157
20	20	2	0.206
22	22	1.2	0.139
22	22	1.5	0.173
22	22	2	0.228
25	25	1.2	0.159
25	25	1.5	1.424
25	25	2	0.260
30	30	1.2	0.191
30	30	1.5	0.238
30	30	2	0.315
40	40	1.2	0.256
40	40	1.5	0.319

a (mm)	b (mm)	t (mm)	weight (kg/m)
7	35	2.8	0.298
10	15	1.2	0.077
10	20	1.5	0.116
10	20	20	0.542
10	22	1.2	0.100
10	22	1.5	0.124
10	22	20	0.651
10	25	1.2	0.110
10	25	1.5	0.136
10	25	20	0.814
10	30	1.2	0.126
10	30	1.5	0.157
10	30	20	1.085
10	40	1.2	0.159
10	40	1.5	0.197
10	40	20	1.627
10	45	1.2	0.175
10	45	1.5	0.218
10	45	20	1.898
10	50	1.2	0.191
10	50	1.5	0.238
10	50	3	0.464
12	20	1.2	0.100
12	20	1.5	0.124
12	20	2	0.163
12	22	1.2	0.107
12	22	1.5	0.132
12	22	2	0.174
12	25	1.2	0.117
12	25	1.5	0.144
12	25	2	0.190
12	30	1.2	0.133
12	30	1.5	0.165
12	30	2	0.217
12	40	1.2	0.165
12	40	1.5	0.205
12	40	2	0.271
12	45	1.2	0.182
12	45	1.5	0.226
12	45	2	0.298
12	50	1.2	0.198
12	50	1.5	0.246
12	50	2	0.325
15	20	1.2	0.110
15	20	1.5	0.136
15	20	2	0.179
15	22	1.2	0.117
15	22	1.5	0.144
15	22	2	0.190
15	25	1.2	0.126
15	25	1.5	0.157
15	25	2	0.206
15	30	1.2	0.143

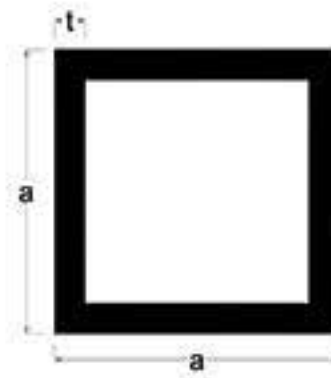
a (mm)	b (mm)	t (mm)	weight (kg/m)
15	30	1.5	0.177
15	30	2	0.233
15	40	1.2	0.175
15	40	1.5	0.218
15	40	2	0.287
15	45	1.2	0.191
15	45	1.5	0.238
15	45	2	0.315
15	50	1.2	0.208
15	50	1.5	0.258
15	50	2	0.342
18	20	1.2	0.120
18	20	1.5	0.148
18	20	2	0.195
18	22	1.2	0.126
18	22	1.5	0.157
18	22	2	0.206
18	25	1.2	0.136
18	25	1.5	0.169
18	25	2	0.222
18	30	1.2	0.152
18	30	1.5	0.189
18	30	2	0.250
18	40	1.2	0.185
18	40	1.5	0.230
18	40	2	0.304
18	45	1.2	0.201
18	45	1.5	0.250
18	45	2	0.331
18	50	1.2	0.217
18	50	1.5	0.271
18	50	2	0.358
20	20	1.2	0.126
20	20	1.5	0.157
20	20	2	0.206
20	22	1.2	0.133
20	22	1.5	0.165
20	22	2	0.217
20	25	1.2	0.143
20	25	1.5	0.177
20	25	2	0.233
20	30	1.2	0.159
20	30	1.5	0.197
20	30	2	0.260
20	40	1.2	0.191
20	40	1.5	0.238
20	40	2	0.315
20	45	1.2	0.208
20	45	1.5	0.258
20	45	2	0.342
20	50	1.2	0.224
20	50	1.5	0.279
20	50	2	0.369



112G

a (mm)	b (mm)	weight (kg/m)
10	18,5	0.502
14	3	0.114
20	3	0.163
22	3.5	2.088
23	2.5	0.156
25	3	0.203
25	4	0.271
28	5	0.380
40	2	0.217
40	3	0.325
50	2	0.271
50	3	0.407
50	4	0.542
50	5	0.678
50	6	0.814
50	8	1.085
50	10	1.356
59	50	8.000
60	30	4.882
65	30	5.288
69.9	5.9	1.112

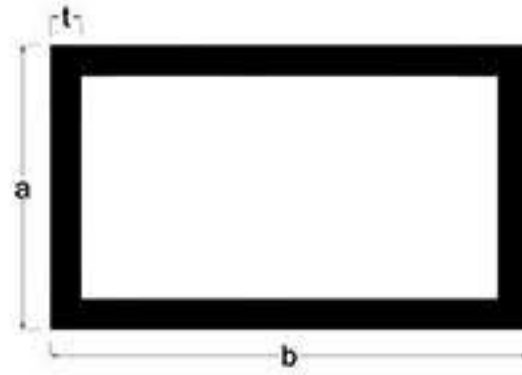
a (mm)	b (mm)	weight (kg/m)
74.9	3.5	0.711
80	2	0.434
80	4	0.868
80	10	2.170
80	20	4.339
87	5	1.180
100	5.9	1.598
100	6.9	1.869
100	10	2.712
100	18	4.882
110	5.9	1.758
110	5	1.492
125	5.9	1.998
130	3.9	1.374
140	6.9	2.620
160	6	2.602
160	5.9	2.559
170	4	1.844
185	3.5	1.766
200	5.9	3.199
200	2	10.848



112H

a (mm)	a (mm)	t (mm)	weight (kg/m)
10	10	1.2	0.115
10	10	1.5	0.138
10	10	2	0.174
12	12	1.2	0.141
12	12	1.5	0.171
12	12	2	0.217
15	15	1.2	0.180
15	15	1.5	0.220
15	15	2	0.282
20	20	1.2	0.245
20	20	1.3	0.264
20	20	1.5	0.301
20	20	2	0.391
25	25	1.2	0.310
25	25	1.3	0.334
25	25	1.5	0.382
25	25	2	0.499
30	30	1.3	0.405
30	30	2	0.607
30	30	3	0.000
35	35	1.2	0.440
35	35	1.5	0.545
35	35	2	0.716
40	40	1	0.423
40	40	1.2	0.505
40	40	1.5	0.626
40	40	1.8	0.746

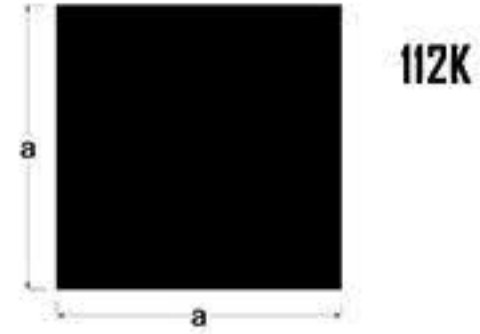
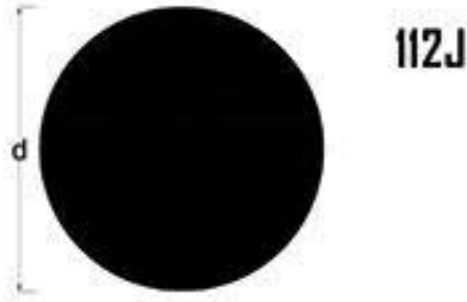
a (mm)	a (mm)	t (mm)	weight (kg/m)
40	40	2	0.824
45	45	1.8	0.844
49	49	2	1.020
50	50	1	0.532
50	50	1.2	0.635
50	50	1.5	0.789
50	50	1.6	0.840
50	50	2	1.041
50	50	3	1.530
60	60	1.2	0.765
60	60	1.3	0.828
60	60	3	1.855
60	60	4	2.430
63	63	1.5	1.001
70	70	1.3	0.969
70	70	1.5	1.115
75	75	1.5	1.196
80	80	1.4	1.194
80	80	1.5	1.277
80	80	2	1.692
80	80	3.2	2.666
95	95	1.6	1.621
95	95	2	2.018
100	100	1.2	1.286
100	100	1.4	1.497
100	100	1.5	1.603
120	120	5	6.238



1121

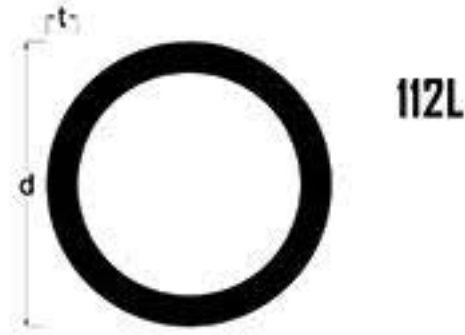
a (mm)	b (mm)	t (mm)	weight (kg/m)
10	12	1.2	0.128
10	12	1.5	0.155
10	12	2	0.195
10	15	1.2	0.147
10	15	1.5	0.179
10	15	2	0.228
10	20	1.2	0.180
10	20	1.5	0.220
10	20	2	0.282
10	25	1.2	0.212
10	25	1.5	0.260
10	25	2	0.336
10	35	1.2	0.277
10	35	1.5	0.342
10	35	2	0.445
10	40	1.2	0.310
10	40	1.5	0.382
10	40	2	0.499
10	50	1.2	0.375
10	50	1.5	0.464
10	50	2	0.607
15	30	1.3	0.299
17	25	1	0.217
17	25	1.2	0.258
20	20	1.2	0.245
20	40	1	0.315
20	40	1.2	0.375
20	40	1.5	0.464
20	60	1.2	0.505

a (mm)	b (mm)	t (mm)	weight (kg/m)
20	80	1.4	0.738
20	80	2	1.041
20	100	1.4	0.890
20	120	1.5	1.115
25	60	1.2	0.538
25	95	2	1.258
30	30	1.2	0.375
30	40	1.2	0.440
30	40	1.8	0.648
30	100	1.5	1.033
32	70	1.3	0.701
32	75	1.5	0.846
35	35	1.2	0.440
38	64	1.2	0.648
39.1	49	2	0.912
40	40	1.2	0.505
40	50	1	0.477
40	50	1.2	0.570
40	60	1.25	0.661
40	60	4	1.996
40	80	1.5	0.952
40	80	2	1.258
40	80	3.2	1.972
44.6	60	3	1.604
50	95	1.6	1.231
50	95	2	1.530
50	120	5	4.339
63	63	1.5	1.001
95	95	2	2.018
100	100	1.2	1.286



Ø d(mm)	weight (kg/m)
Ø 5	0.053
Ø 10	0.213
Ø 12	0.307
Ø 15	0.479
Ø 16	0.545
Ø 18	0.690
Ø 20	0.852
Ø 22	1.030
Ø 25	1.331
Ø 30	1.916
Ø 32	2.180
Ø 35	2.608
Ø 40	3.406
Ø 45	4.311
Ø 50	5.322
Ø 55	6.440
Ø 60	7.664
Ø 65	8.995
Ø 70	10.432
Ø 75	11.975
Ø 80	13.625
Ø 85	15.381
Ø 90	17.244
Ø 95	19.214
Ø 100	21.289

a (mm)	a (mm)	weight (kg/m)
10	10	0.271
12	12	0.391
15	15	0.610
20	20	1.085
25	25	1.695
30	30	2.441
35	35	3.322
40	40	4.339
45	45	5.492
50	50	6.780
55	55	8.204
60	60	9.763
65	65	11.458
70	70	13.289
75	75	15.255
80	80	17.357
85	85	19.594
90	90	21.967
95	95	24.476
100	100	27.120



d (mm)	t (mm)	weight (kg/m)
15	2.75	0.287
16	1.5	0.185
16	2	0.238
16	4	0.408
16	5	0.467
19	1.2	0.182
19.2	1.5	0.226
20	1	0.162
20	1.8	0.279
20	3	0.434
20	4	0.545
20.4	1.2	0.196
21	4.5	0.632
22	1.2	0.212
22	1.5	0.262
22	2.5	0.415
22	5	0.724
24	3.75	0.646
24	5	0.809
25	1.5	0.3
25	3.25	0.602
25	8.25	1.176
26	2	0.409
28	2.8	0.601
28	4.7	0.932
29.5	2	0.468
30	2.2	0.521
30	3	0.689
30	3.75	0.838
30	4	0.885

d (mm)	t (mm)	weight (kg/m)
30	10	1.703
31	6.2	1.309
32	2	0.51
32	3	0.741
35	2.5	0.691
35	3	0.817
35	3.25	0.878
35	13.5	2.471
35.5	14.5	2.592
40	1	0.332
40	2.5	0.798
40	5	1.49
40.2	15.1	3.227
40.5	16.35	3.362
43	1.5	0.53
50	1.5	0.619
50	1.8	0.738
50	2	0.817
50	2.5	1.011
50	3	1.200
50	10.5	3.531
50.15	20.57	5.18
54	1.8	0.8
55	2.3	1.032
60	2.5	1.225
60	3	1.456
60	5	2.341
65	7	3.456
70	1.5	0.875
75	5	2.978
82	4	2.656



GHADIR ALUMINIUM IND. GROUP

Dedicated Products

قطعات افنصاص



Code:113

اتصالات . قفل و يراقا آرات

مصنوعات شرکت GIESSE ایتالیا



گروه صنعتی آلومینیوم غدیر



GIESSE





GIESSE PRODUCTS

Hardware for aluminium windows and doors

GHADIR ALUMINIUM IND. GROUP



GIESSE



GSQ International S.p.A.



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No. L0230 400003330 000000000



U0346101/05-2012

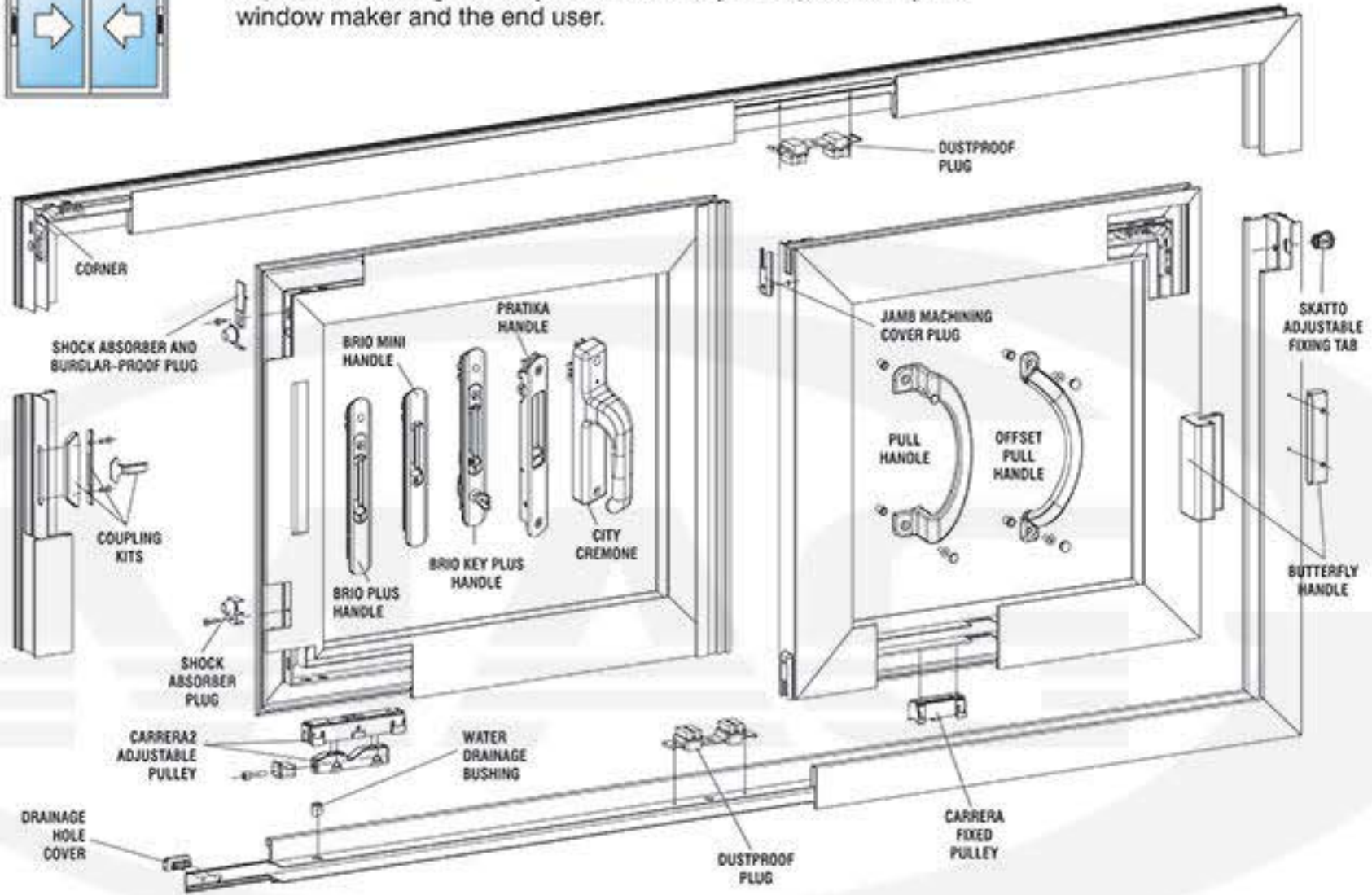
www.giesse.it



Sliding windows and doors

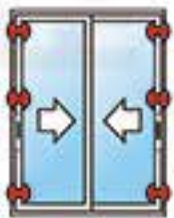
A COMPLETE RANGE

Giesse provides a complete range of fittings for sliding windows, capable of dealing with any needs that may be expressed by the window maker and the end user.



TOP SECURITY BRIO: GIESSE MULTI-LOCKING FOR THE SAFETY OF THE SLIDING SYSTEM

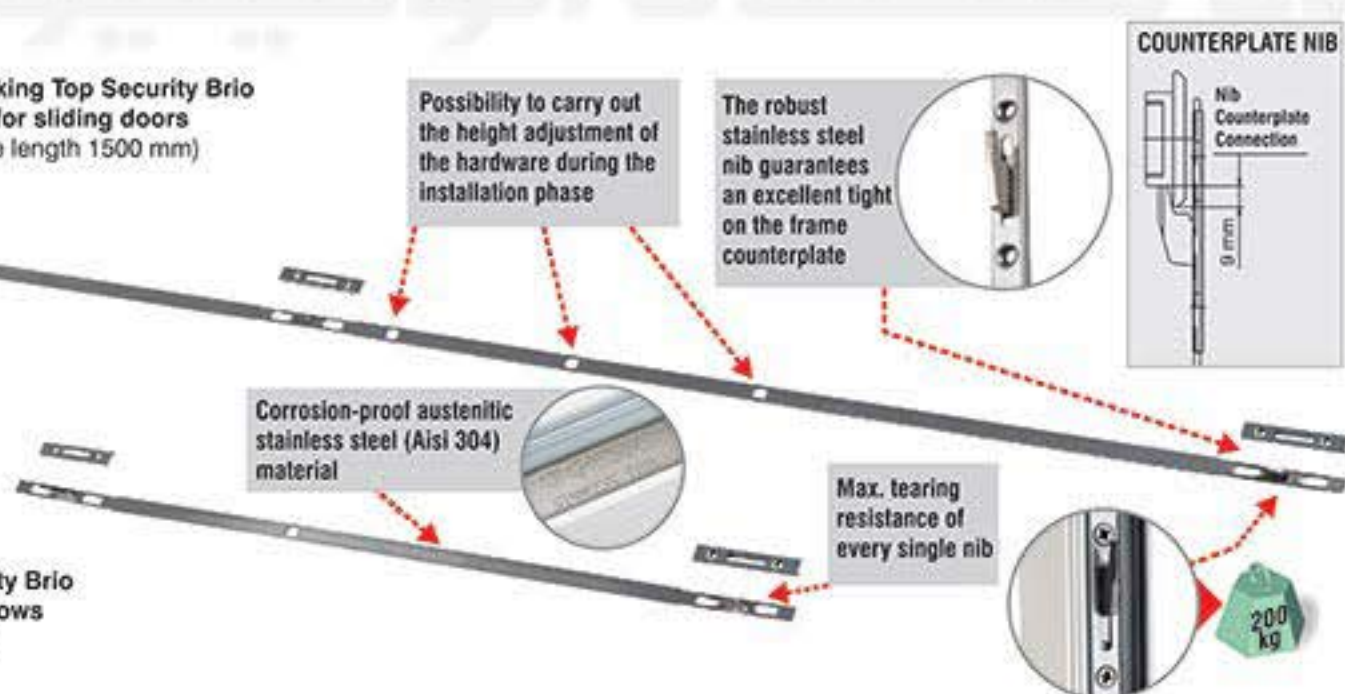
The Multi-locking Top Security Brio is applied on the wing profiles with 90° cut, where the recessed handle is applied inside the tubularity. For this series Giesse has studied 2 types of hardware, one for doors (3 locking points) and one for windows (2 locking points).



Multi-locking Top Security Brio
3 points for sliding doors
(hardware length 1500 mm)



Multi-locking Top Security Brio
2 points for sliding windows
(hardware length 720mm)



HANDLES FOR SLIDING WINDOWS AND DOORS



ITEM	DESCRIPTION
02983	BRIO PLUS HANDLE
02883	BRIO PLUS HANDLE WITH INT. KEY
02873	BRIO PLUS MD HANDLE WITH INT. KEY
02988	BRIO MINI HANDLE
02967V	BRIO KEY OUTSIDE EMBEDDING HANDLE
02996	BRIO KEY OUT. EMB. HAND. (EURO BARREL)
02966N	BRIO OUTSIDE EMBEDDING HANDLE
03360V	CITY CREMONE

ITEM	DESCRIPTION
02980	BRIO OUTSIDE EMBEDDING HANDLE
03016	BRIO PULLING ALUMINIUM HANDLE
02614	BRIO DECENTRAL. PULLING ALUMINIUM HANDLE
00831	BRIO RAPID HANDLE
03351	PRATIKA HANDLE
03353	PRATIKA DUO HANDLE
03352	PRATIKA DUO HANDLE WITH KEY

SLIDING ACCESSORIES

Giesse provides a complete range of fittings for sliding windows, capable of dealing with any needs that may be expressed by the window maker and the end user.

Coupling kits

Depending on the geometry of the sash and frame profile a vast range of different nibs can be ordered with different geometrical forms and materials: corrosion proof stainless steel and galvanised Zamak.

Given the very extensive range of frame profiles, Giesse offers a wide range of counterplates made of galvanised Zamak and stainless steel.



Pulleys

Giesse offers a variety of carriage models: with one or two wheels, fixed or adjustable, in different materials with various capacities to meet all requirements.

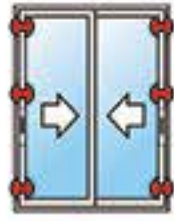
With the Carrera range it is possible to achieve load capacities of up to 45 Kg per wheel, which means sash weights even in excess of 150 Kg.

The use of corrosion-proof materials gives Giesse pulleys a robustness and durability ahead of the rest, maintaining optimal performance levels.



Sliding windows and doors

GIESSE MULTIPOINT TEMPO



The new GIESSE Tempo multipoint locking system for sliding windows and doors is designed to satisfy the requirement for greater security of sliding systems, and combines a high performance closure with a wide range of accessories for all needs. The Tempo system provides sliding systems with two and three point locking, operated by a wide range of single and double handles, with or without keys.

The TEMPO multipoint system does not require mounting bolts: it simply snaps into the profile. The TEMPO system is constructed in nylon and polyamide for outstanding corrosion resistance. GIESSE Tempo is compatible with a wide range of handles, all available in single and double versions:

- Window handle
- Handle with small and large grip (combines with 7 mm square bolt mechanism)
- Cremone
- Flush-mounted handle (combines with sliding mechanism)



Lenght 1650 mm

Lenght 680 mm



Handle and cremone



Handle with small grip



Handle with large grip

The rods are either 680 mm long for two locking points, or 1650 mm for three locking points.

The control mechanism is available in two versions: with a 7 mm handle-actuated square bolt, or with a sliding mechanism operated by cremone or flush-mounted handle.

The locking nibs are adjustable, with an interval of 5 mm.

The rod is constructed in polyamide and nylon. The nibs are constructed in stainless steel.



Mechanism with square 7 mm



Drivegear mechanism for cremone handle



Locking point



Locking

Check TEMPO
MULTILOCKING
SYSTEM
catalogue for all
details.

GS1000-ML / GS1000-HL / GS1000-HD

The GS1000 tilt-and-slide system is the ideal solution for the construction of large windows.

- Insulation and convenience
- Comprehensive range
- Designed for aluminium
- High performance: up to 180 kg
- Reliable and tested
- Easy assembly
- Minimal space requirements
- Modular system

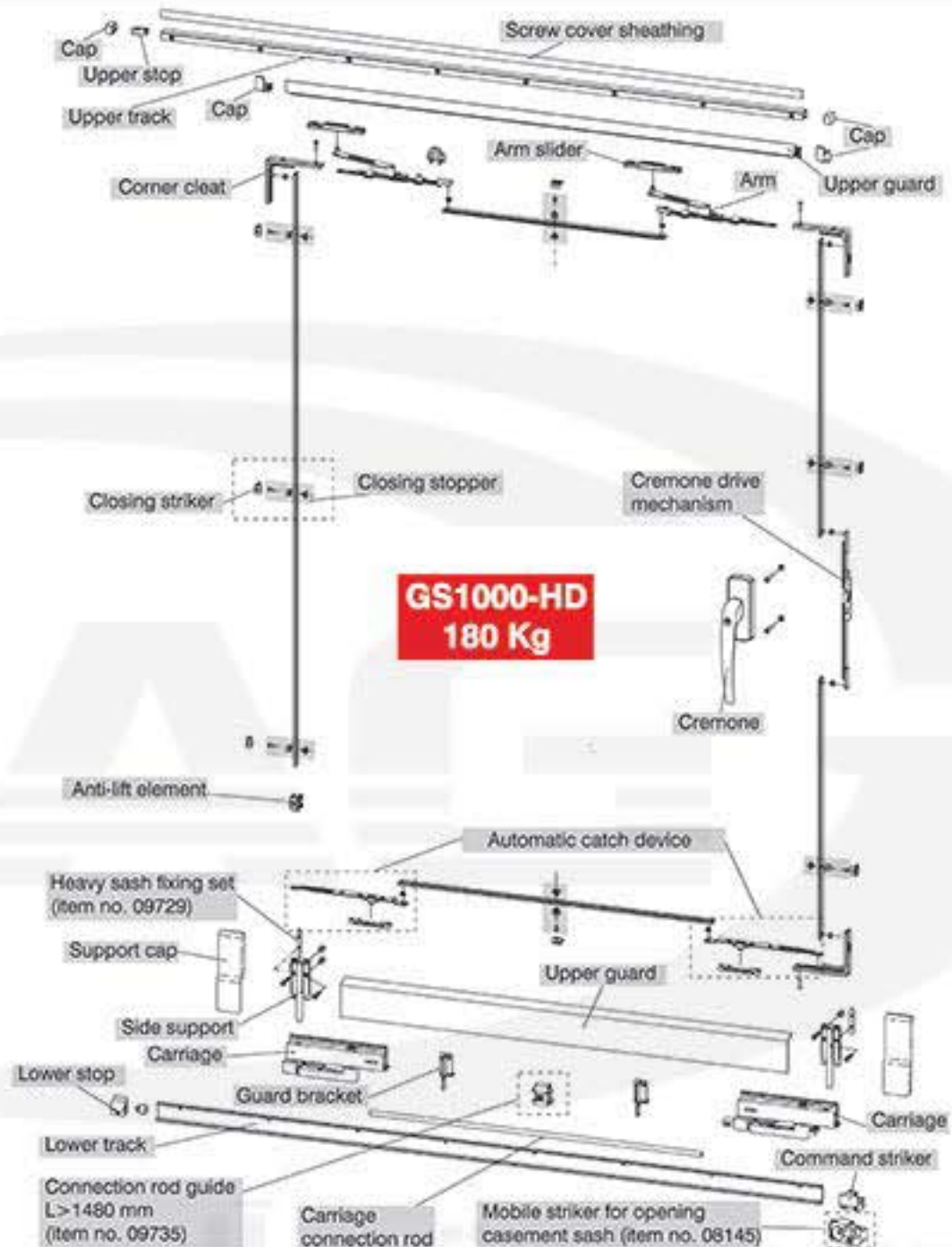
Three different tilt-and-slide models that take into account the type of application together with the size and weight of the window to be constructed:

- **GS1000-ML** the ideal system for the construction of windows with small sashes weighing up to **90kg**
- **GS1000-HL** the ideal system for the construction of windows with large sashes weighing up to **150kg**
- **GS1000-HD** the system that delivers top performance and greatly facilitates the construction of large windows with sashes weighing up to **180kg**.

All versions feature the automatic catch device: one simple action is all it takes to place the sash in the tilt position, which is useful for room ventilation.

The GS1000-HD version also features the forced control system for super-easy, smooth operation of heavy sashes up to 180 kg.

The GS1000-HD model's special self-closing system means the sash can be closed using only one hand, simply by operating the cremone.



Check GS 1000 Tilt and Slide catalogue for all details.



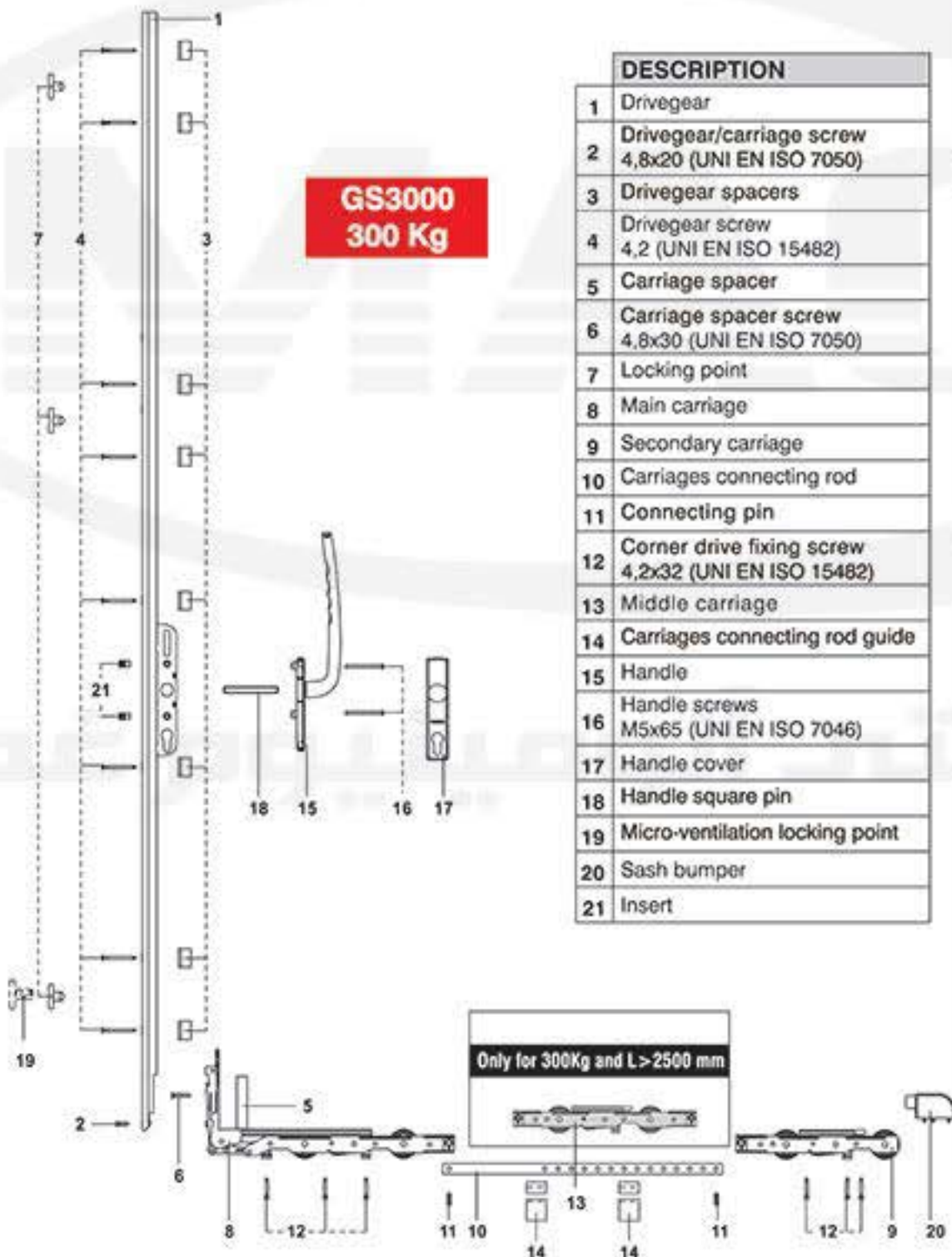
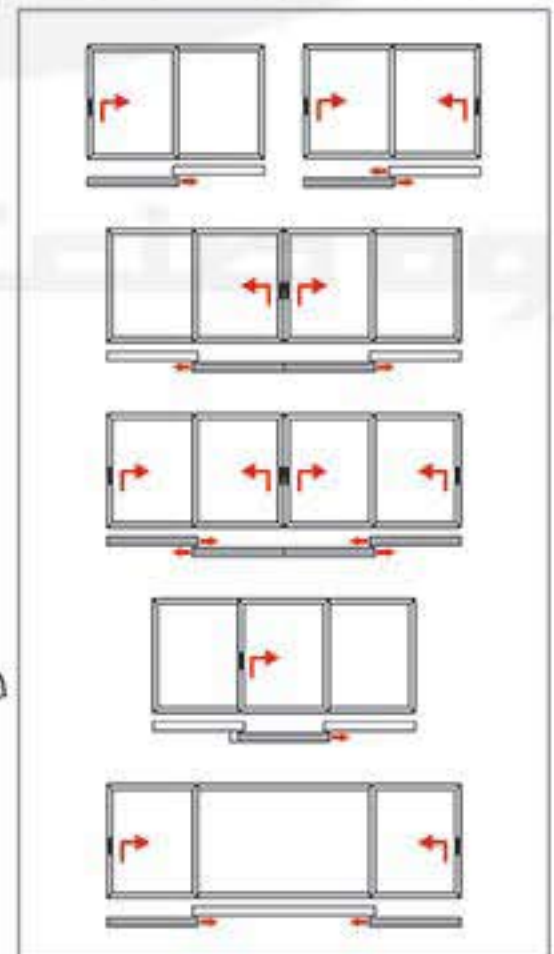
GS3000: the best sliding system for high loads

GS3000

Lift and slide windows offer the best way of creating large areas of glass that can weigh up to 300 Kg. The smooth lines of these windows blend in perfectly with the surroundings, whatever the setting. The possibility to mount a walkable small threshold (according to a architectural barrier rules) means full access to the exterior.

Assembling the system is both easy and instinctive. All the components in the system connect to one another easily and quickly and fit to the profile with the provided screws.

The GS3000 lift and slide system offers a wide range of components related to opening different typologies e.g. for one or more sashes, for windows and balcony doors with differing types of specific profiles.



Check GS 3000 Lift & Slide catalogue for all details.

GS HD TYPE "C" ARMS

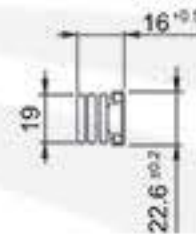
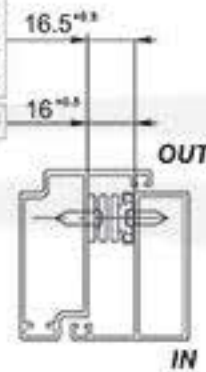
GS HD type C arms are extremely versatile articles, suitable for Side Hung windows with medium and high load capacities, and they are particularly suitable for medium sized windows.

The range comprises 5 models, which can be fitted on Side hung windows. The Arms are sold in pairs, each of which is made up of one Right hand and one Left hand arm. Each box holds six pairs.



SIDE HUNG

ART.08148000N
ART.08149000N
ART.08151000N
ART.08152000N
ART.08147000N



DESCRIPTION ARM	Code Article	GS HD TYPE "C"					DIMENSIONS FOR SIDE HUNG		
		Opening System	F.Stay Width Dimen. (mm)	Stack Height (mm)	F.Stay Size (mm)	Opening Angle Max. (mm)	Height Vent From.To. (mm)	Width Vent Max. (mm)	Max.Vent Weight Kg (mm)
GS HD - 10° Type C	08147000N	Side	23	15.5+0.5	263	82°	1200	550	36
GS HD - 12° Type C	08148000N	Side	23	16+0.5	313	85°	1200	600	38
GS HD - 14° Type C	08149000N	Side	23	16+0.5	365	87°	1200	650	40
GS HD - 16° Type C	08151000N	Side	23	16+0.5	414	87°	1200	700	42
GS HD - 18° Type C	08152000N	Side	23	16+0.5	463	87°	1200	750	45

MULTI-POINT LOCKING SYSTEM FOR SIDE HUNG WITH FORK

Two-handed two-way cremone is ideal for internal application on top hung or side hung outward opening windows with a channel in the sash for a connection rod to slide in.

The Unica cremone is sold in two modes:

Ready-assembled: art. 01155N Fully assembled Unica cremone for side-hung opening.

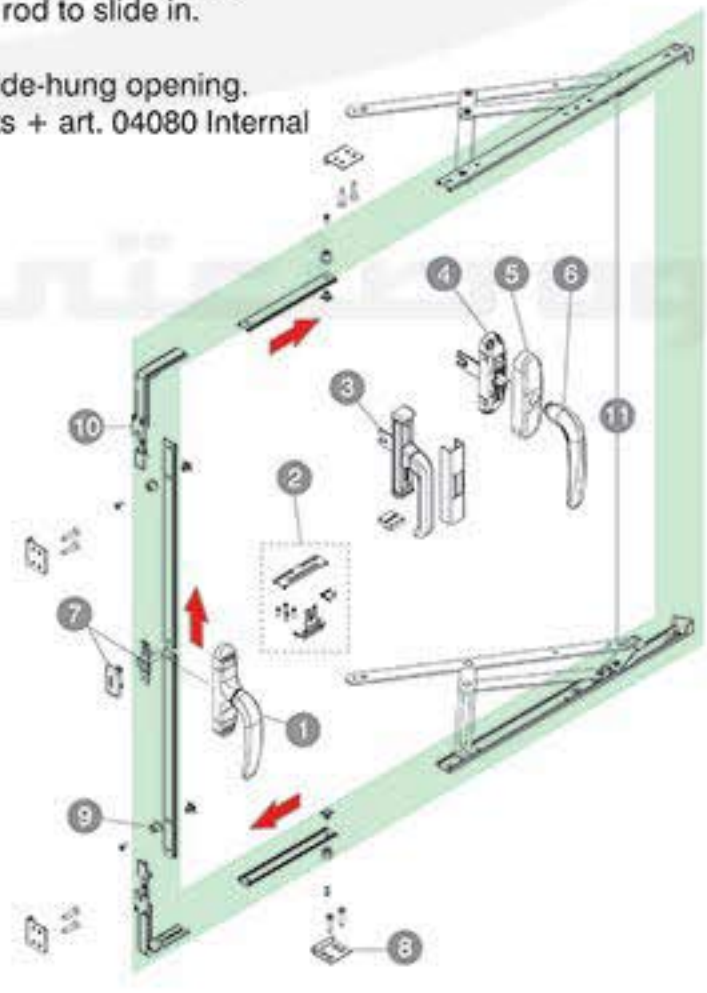
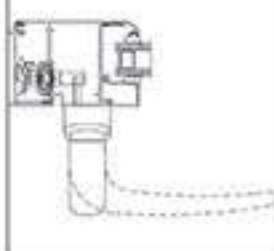
Not ready-assembled: art. 01150 Unica cremone without internal parts + art. 04080 Internal components kit (sliders, racks, base, fixing plate and screws).



SIDE HUNG

- Unica cremone (01150N)
Unica Key cremone (01151N)
- Unica Fork 20mm (02407), 35mm (02408), 45mm (02409), 55mm (02410)
- Nova cremone Fork (01114)
Nova cremone Fork with block (01116)
- Cover cremone mechanism (04101N slider L=20 mm; 04112N slider L=35 mm; 04113N slider L=45 mm; 04111N slider L=55 mm)
- Cover for Mechanism (04135)
- Pull handle (04160 Prima; 04171 Martina; 04179 Barbara; 04184 Elisa)
- Rod drive device (04098 pin 9,5 mm; 04099 pin 18,5 mm)
- Curtain wall striker (01266K-01267K)
- Adjustable fastening pawl (04030)
- Corner drive (04019K-04020K)
- Giesse side hung arms

Example of profile cross section



Multi-point locking system

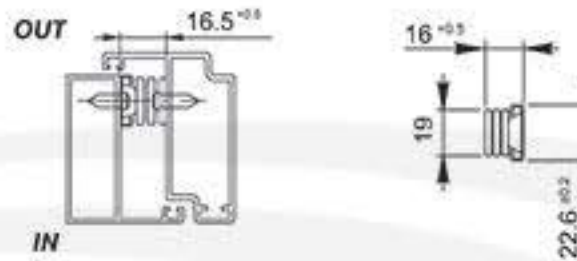
GS HD TYPE "P" ARMS

GS HD type P arms are strong, solid articles, suitable for Top Hung type windows of medium-large size with medium-heavy load capacities. GS HD Type P arms are particularly suitable for Top Hung windows in structural or semi-structural Curtain Walls.

The Type P range comprises 9 models, of different sizes, to cover the majority of market requests. The Arms are sold in pairs, each of which is made up of one Right hand and one Left hand arm. Each box holds six pairs.



TOP HUNG



DESCRIPTION ARM	Code Article	GS HD TYPE "P"					DIMENSIONS FOR TOP HUNG		
		Opening System	F.Stay Width Dimen. (mm)	Stack Height (mm)	F.Stay Size (mm)	Opening Angle Max.	Height Vent From.To. (mm)	Width Vent Max. (mm)	Max.Vent Weight Kg (mm)
GS HD - 10° Type P	08534000N	Top	23	16+0.5	261.5	35°	700	1200	50
GS HD - 12° Type P	08535000N	Top	23	16+0.5	317.5	30°/35°	800	1200	60
GS HD - 14° Type P	08536000N	Top	23	16+0.5	353.5	30°/35°	1000	1300	69.5
GS HD - 16° Type P	08537000N	Top	23	16+0.5	414.5	30°/35°	1200	1400	88.5
GS HD - 18° Type P	08538000N	Top	23	16+0.5	458.5	25°/30°	1400	1400	102
GS HD - 20° Type P	08539000N	Top	23	16+0.5	511.5	25°/30°	1600	1500	135
GS HD - 22° Type P	08540000N	Top	23	16+0.5	556.5	20°/25°	1700	1500	137
GS HD - 24° Type P	08541000N	Top	23	16+0.5	602.5	20°/25°	1800	1500	139
GS HD - 28° Type P	08542000N	Top	23	16+0.5	707.5	10°/15°/20°	2000	1500	155

MULTI-POINT LOCKING SYSTEM FOR TOP HUNG CURTAIN WALL

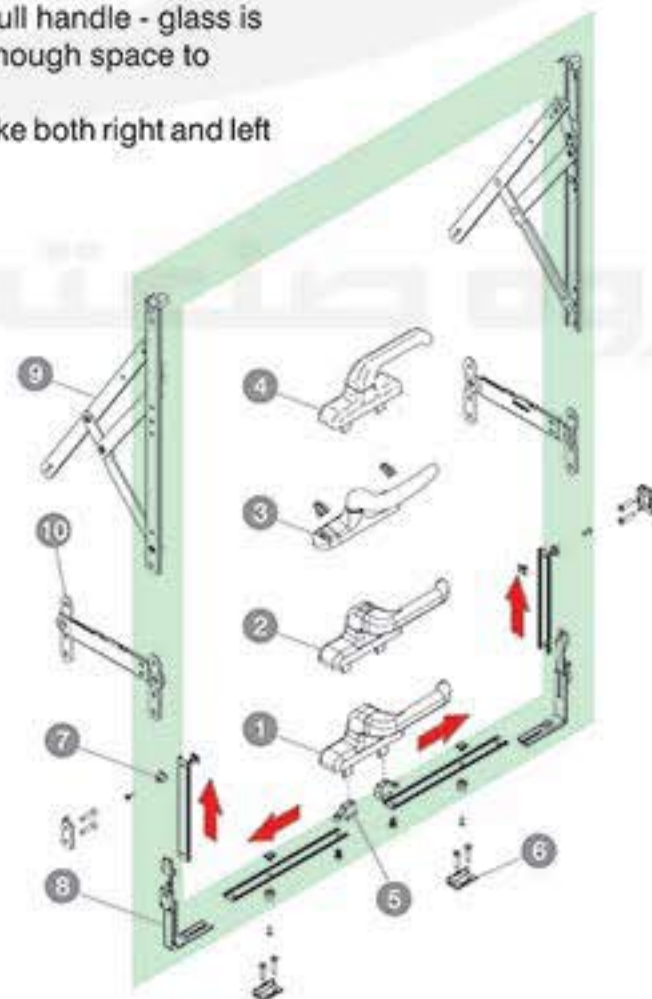
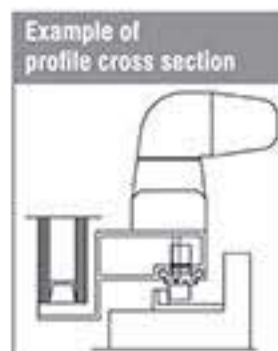
The Euro CW Cremones with offset pull-handles enable the easy moving of the opening wings present in a Curtain Wall. In this range of Cremones, the distance pull handle - glass is higher compared to the standard cremones, thus ensuring the operator enough space to move the handle during window opening or closing.

Two-handed EURO CW Cremones, with the same article it is possible to make both right and left fastening.



TOP HUNG

- 1 Euro cremone misaligned CW2 handle (05007)
- 2 Euro Key cremone misaligned CW2 handle (05008)
- 3 Unica CW2 cremone off set handle (01170N)
- 4 Euro cremone (01000U)
- 5 Connection block (02236)
- 6 Curtain wall striker (01266K-01267K)
- 7 Adjustable fastening pawl (04030)
- 8 Corner drive (04019K-04020K)
- 9 Giesse top hung arms
- 10 Giesse limiter arms:
Laser arm 2 stop (01951);
Telescopic laser unit (01954)





TOP/SIDE HUNG ARMS

TOP HUNG (OUTWARDS OPENING)

Code Glesse	Description	Arm dimensions		TOP/SIDE HUNG	Maximum sash dimensions		Capacity and max. opening		Material
		Inches	mm		Width mm	Height mm	Angle °	Load capacity KG	
08351	GACS 22" ARM - TYPE P - TOP HUNG - PAIR	22"	567	Top	1700	1500	20	100	AISI 304
						< = 1000	45°	80	
						> 1000 < = 1500	30° with extra limiter arm		
08352	GACS 28" ARM - TYPE P - TOP HUNG - PAIR	28"	711	Top	1700	2000	15	100	AISI 304



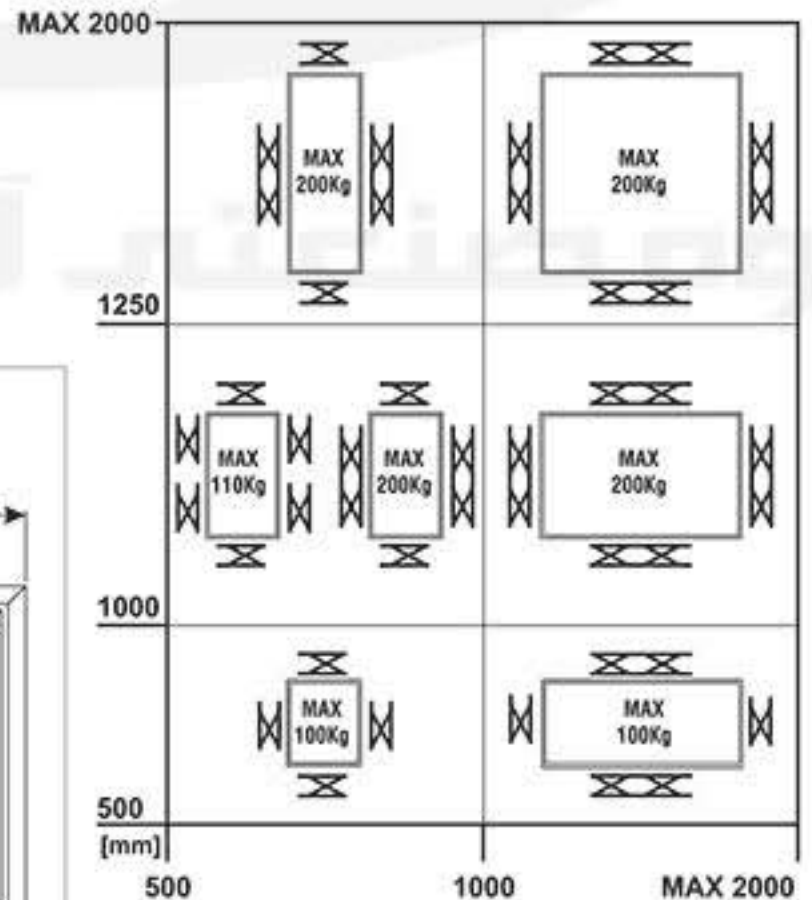
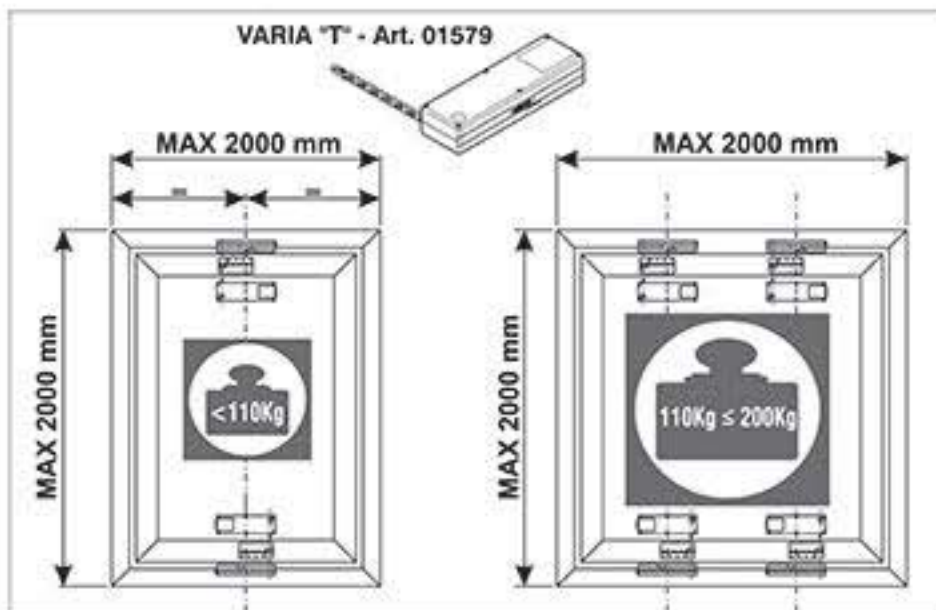
SIDE HUNG (OUTWARDS OPENING)

Code Glesse	Description	Arm dimensions		TOP/SIDE HUNG	Maximum sash dimensions		Capacity and max. opening		Material
		Inches	mm		Width mm	Height mm	Angle °	Load capacity KG	
08349	GACS 10" ARM - TYPE TS - TOP/ SIDE HUNG - PAIR	10"	259	Top	1500	650	50	50	AISI 304
				Side	600	1500	50 - 84	35	
08350	GACS 16" ARM - TYPE TS - TOP/ SIDE HUNG - PAIR	16"	412	Top	1500	800	30	100	AISI 304
							50	55	
							90	not permitted	
				Side	700	1600	30 - 50 - 90	42	
				700		30	60		
						50 - 90	42		



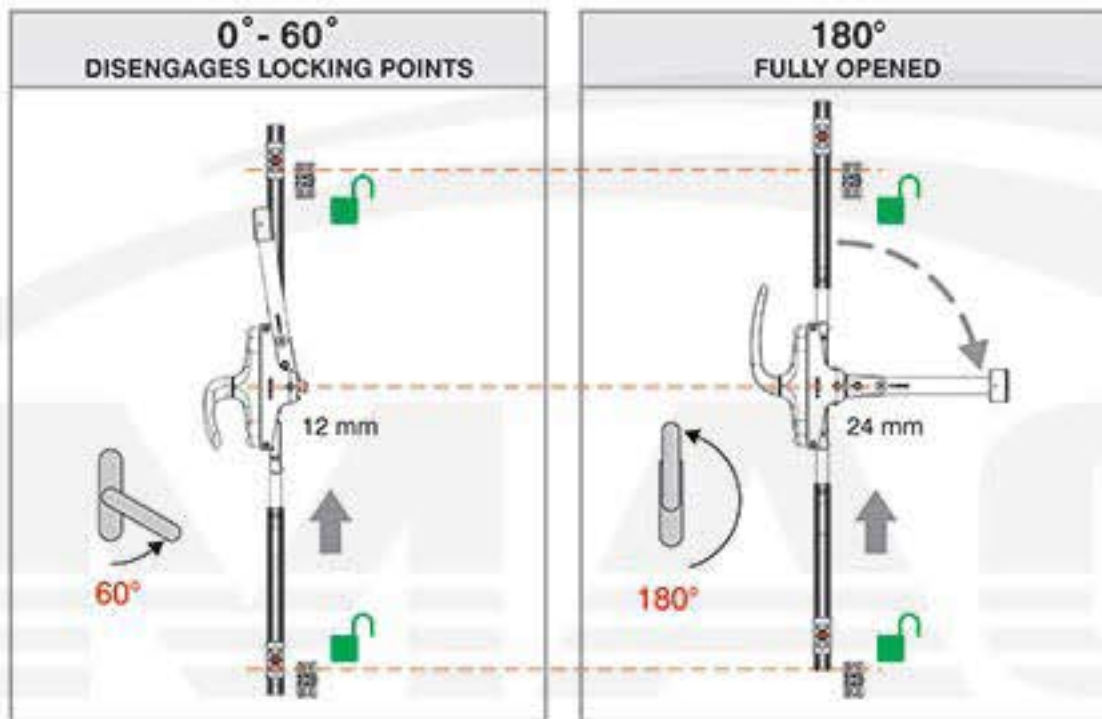
PARALLEL ARMS

Art. 01990000	Art. 01991000
Art. 01992000	Art. 01993000



IMPROVING THE APPEARANCE AND PERFORMANCE OF OUTSWING CASEMENT WINDOWS

- New window Crank System: cremone and locking mechanism installed on the window frame
- Top and Side hung application with same mechanism
- Fixed internal flyscreen
- Security: limiting arms and key cremone
- Anticorrosion materials, tested 15,000 cycles.



0°
CLOSSES AND LOCKS



0°-60°
DISENGAGES



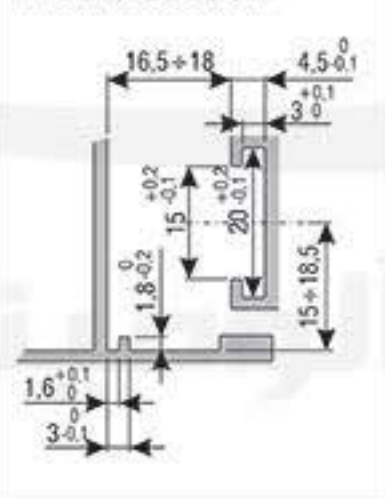
60°-180°
OPENS

System Design for the OS Operator

The OS Operator has been designed to work with a vent-to-frame clearances that allow for standard four bar hinges. The ideal design utilizes an integral groove on the vent with a flat surface on the frame.

For a detailed review of potential applications, please contact Giesse Engineering for assistance.

Profile section



The limit stop has a custodial screw, allowing the vent to be easily opened fully for cleaning purposes.



Vent attached to limit stop



Vent disengaged from limit stop

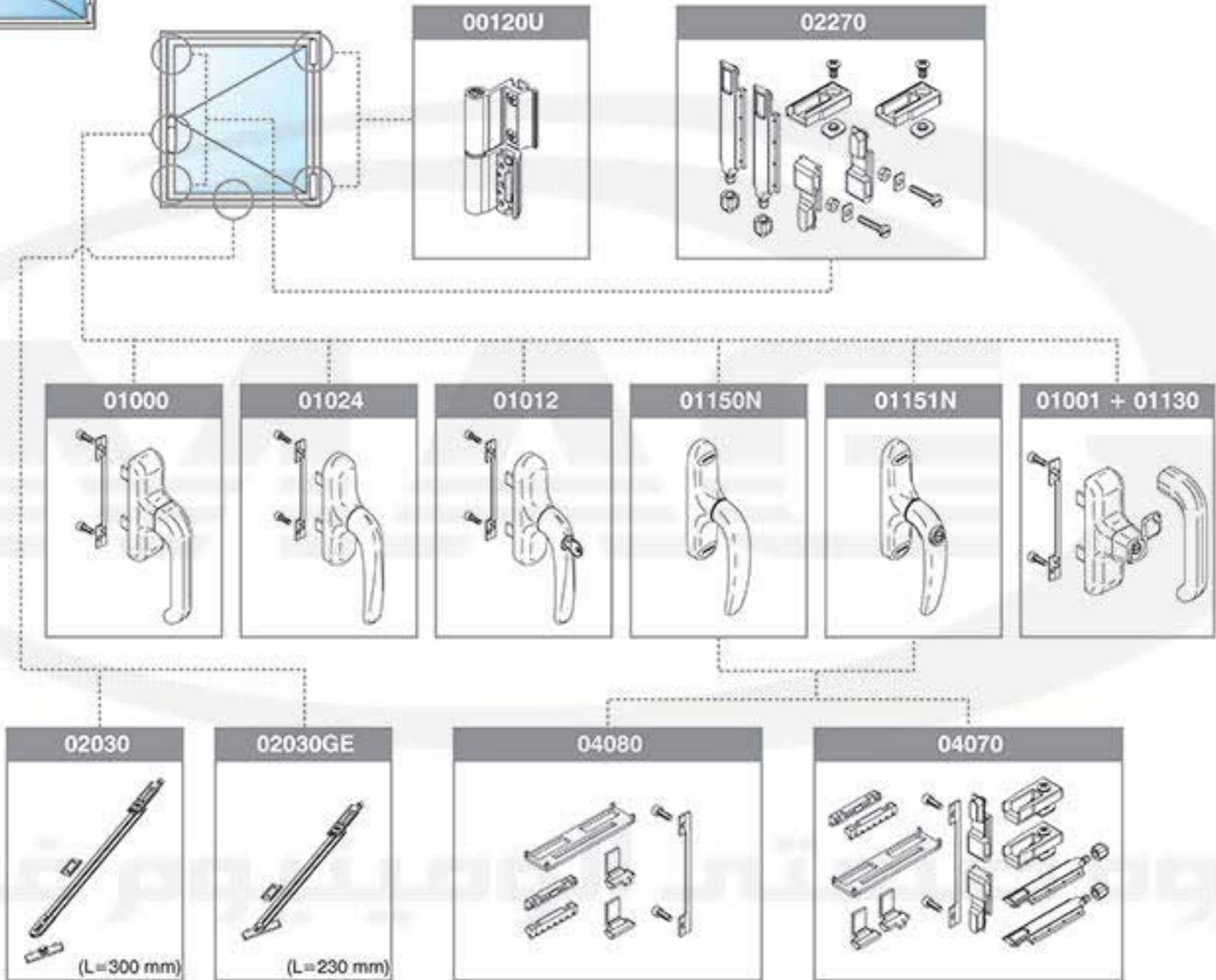
Vent fully opened

MAX AND MIN VENT SIZE	Top Hung				Side Hung			
	L Max.	L Min.	H Max.	H Min.	L Max.	L Min.	H Max.	H Min.
OS Operator mechanism 725 mm Code 02000 000	1500 mm	800 mm	2000 mm	450 mm *	900 mm	450 mm*	1600 mm	800 mm
OS Operator mechanism 466,5 mm Code 02002 000 1 Code 02002 000 2	1500 mm	500 mm	2000 mm	450 mm *	900 mm	450 mm*	1600 mm	500 mm

* IF THIS DIMENSION IS ≤ 550 mm LOOSE RIVET ARMS MUST BE USED

Check OS OPERATOR catalogue for all details.

HINGED WINDOW - SIDE HUNG INWARD OPENING

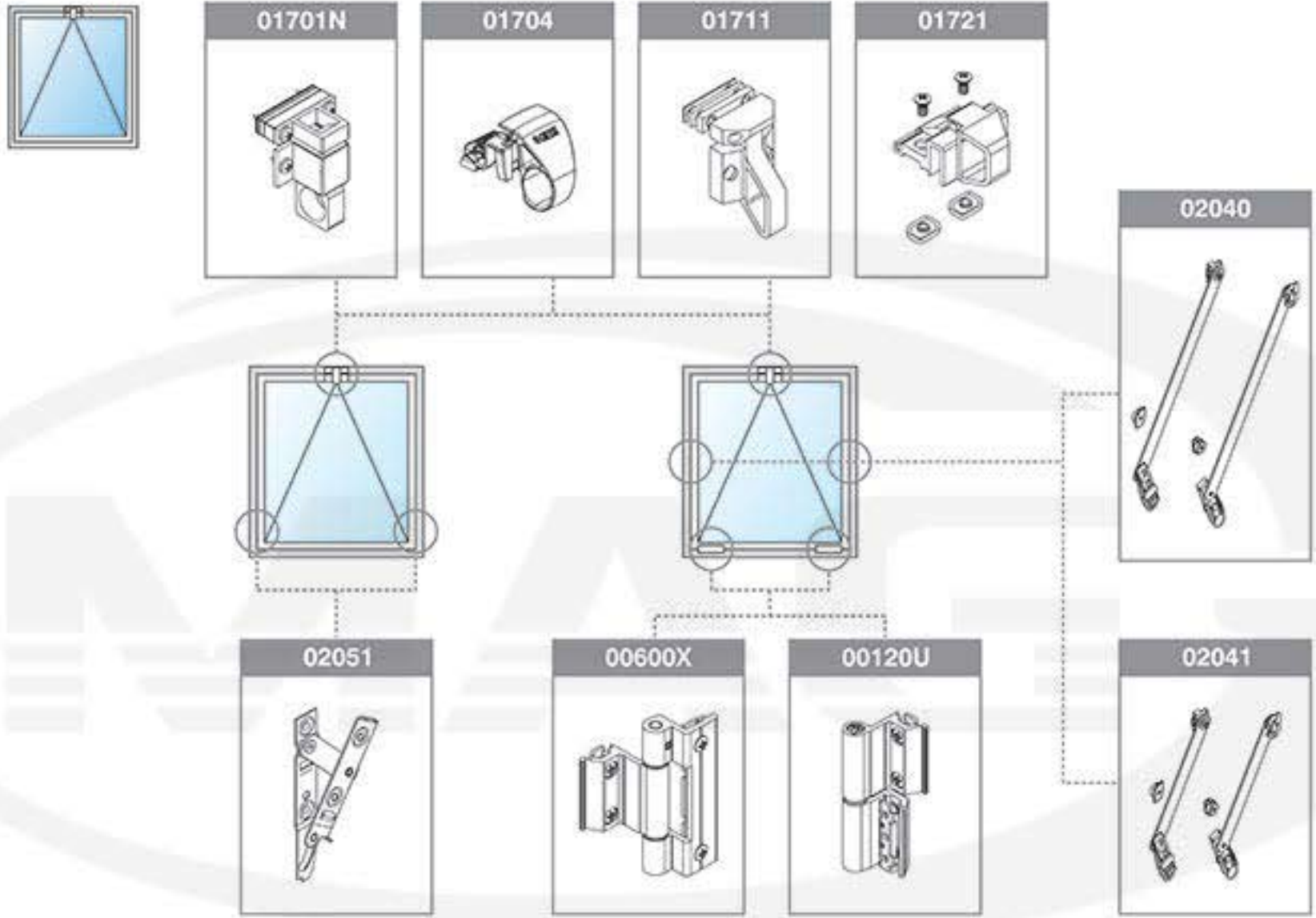


ITEM	DESCRIPTION
00120U	FLASH BASE HINGE
01000U	EURO CREMONE
01001	EURO AWAY CREMONE
01012	PRIMA KEY CREMONE
01024U	PRIMA CREMONE
01130	EURO REMOVABLE HANDLE
01150N	UNICA CREMONE
01151N	UNICA KEY CREMONE
02030	FRIZ WINDOW STAY (300mm)
02030GE	FRIZ WINDOW STAY (230mm)
02270	CLOSING KIT WING
04070	INTERNAL OPENING KIT UNICA SYSTEM
04080	INTERNAL OPENING KIT UNICA SYSTEM


Polyamide Connection Rod
 15/20 mm
 Art. 03524590

Manual Punching Machine
 for polyamide rod
 Art. 5810170002

BOTTOM HUNG WINDOW

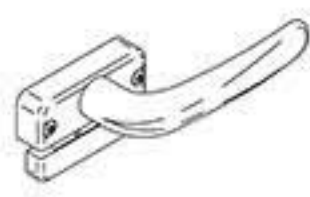


ITEM	DESCRIPTION
00120U	FLASH BASE HINGE
00600X	BRIDGE 2 HINGE
01701N	GRISBI FINGER CATCH
01704	TWIN CATCH
01711	RIVO CATCH
01721	CICO FINGER CATCH
02040	LONG ARM RALLENTY mm 250
02041	SHORT ARM RALLENTY mm 150
02051	HINGE FOR BOTTOM-HUNG WINDOW
02317	TWIN BAR CLOSING PLUGS

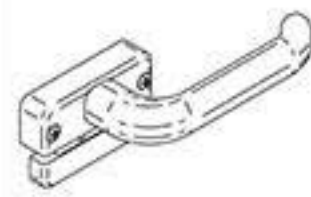


OUTWARD OPENING: reversible lever handle for external installation to close top-hung and pivot-hung windows.

01640N

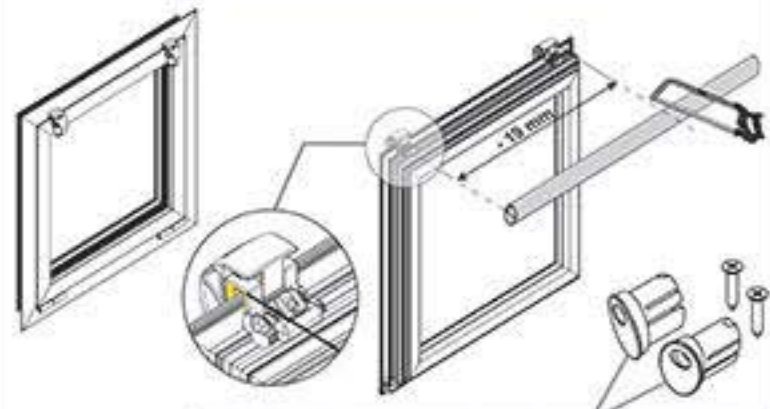


01650N



ITEM	DESCRIPTION
01640N	EXTERNAL HANDLE BRAVO PRIMA
01650N	EXTERNAL HANDLE BRAVO EURO

APPLICATION ON TWIN CATCH



02317 - Plugs In polycarbonate and ABS

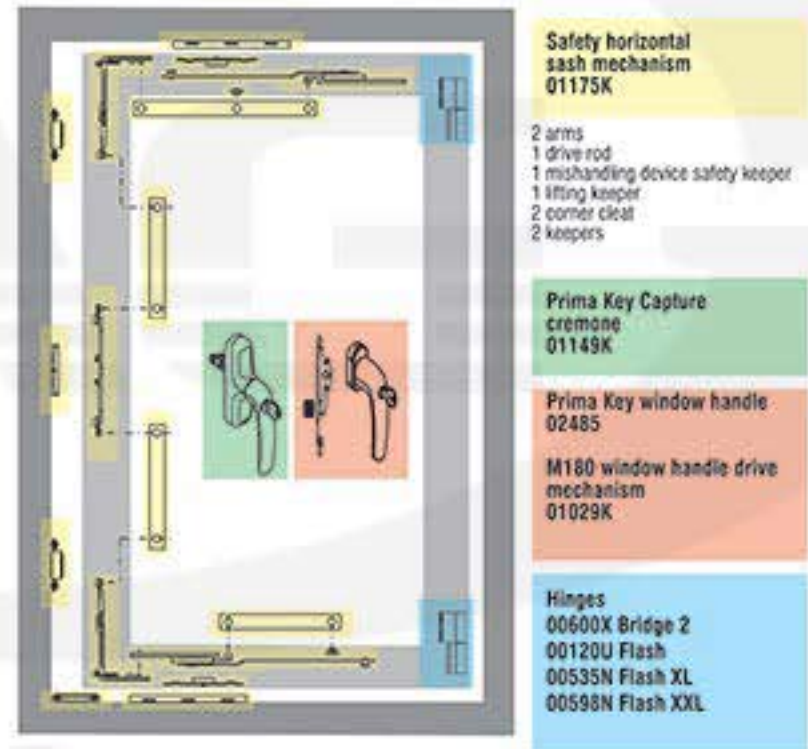
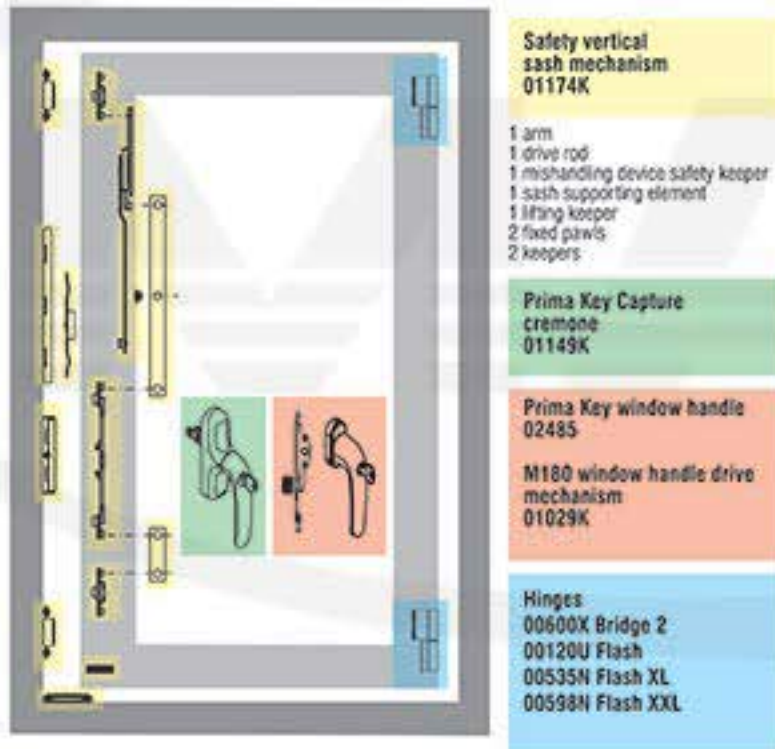
GIESSE SECURITY WINDOW HARDWARE

Multipoint locking hardware with a built-in limit device.

Giesse presents the new security window for European groove profiles, with controlled opening (limited or total with key) of the sash.

The ideal solution for schools, hospitals and public buildings in general.

The security sash kit allows limited sash opening (from 130 mm to 260 mm) depending on arm adjustment) with cremone at 90°, and full opening with cremone turned 180°. Using Prima Key cremones it is possible to inhibit full opening of the sash, maintaining only secure opening, so that only authorised persons in possession of the key can fully open the window.



Prima Key Capture cremone



Prima Key window handle



TILT & TURN CLASSIC 3D 80 GIESSE

The most performance solution for medium size tilt & turn windows

GIESSE solution for the small and medium tilt & turn windows with a dedicated product. The tilt & turn CLASSIC 3D 80 has all the component pre-assembled and, most of them self-positioning on the frame. Is also available the template (code 03528) that allows the quick gasket's cut and the correct installation of the few non self-positioning components. All the zamak components of the CLASSIC 3D 80 has the GS Silver Plus treatment that allow to reach high corrosion resistance results. With the GS Silver Plus treatment, CLASSIC 3D 80 has grade 4 according to EN 1670, therefore have a corrosion resistance superior than 240 hours in salty spray.

CLASSIC 3D 80

Advantages

- ❑ Economic
- ❑ 80 Kg load capacity
- ❑ 3D adjustments
- ❑ One arm up to 1300 mm
- ❑ Multipoint: additional fasteners and burglar resistance device
- ❑ Simple easy and quick
- ❑ Maximum corrosion resistance

3D adjustments

CLASSIC 3D 80 tilt and turn has the 3D adjustments:

- +/- 1 mm side (hinge)
- +1,5 -0,5 mm high
- +/- 2,4 mm compression
- +1,5 -3,5 mm side (arm)



Only one arm up to 1300 mm

With CLASSIC 3D tilt & turn is possible to make windows up to 1300 mm width with one configuration using only T1 arm. For width > 1000 mm is mandatory the additional arm 04301K to combine with the T1 arm.



Packaging

The CLASSIC tilt & turn follow the same packaging of the FUTURA tilt & turn.

Code	Description	Pack
04739	CLASSIC 3D 80 TT HINGES	10
04322	CLASSIC 3D 80 T1 ARM	10
04704	CREMONE TT MECHANISM	10
04705N	WINDOW HANDLE TT MECHANISM	10
01033K	PRIMA CREMONE	10
02484	PRIMA WINDOW HANDLE	10
03528	CLASSIC 3D 80 TEMPLATE	20



FUTURA 3D 130 AND 150 TILT AND TURN

The highest level of performance available with a basic system.

Capacity: 130 Kg and 150 Kg.



Excellent performance

FUTURA 3D 130 and 150 HP tilt and turn are the tilt and turn system that successfully combines all the advantages of FUTURA 3D while also adding the possibility to create sashes with greater dimensions and weights thanks to the use of next-generation materials.

This new tilt and turn hardware has a lot in common with FUTURA 3D - its connection rod cutting layouts have not changed, and neither have its style nor its quick and easy assembly, which make installation times, minimal whilst keeping its appearance.

Adjustable in 3 dimensions

The FUTURA 3D 130 and 150 HP tilt and turn mechanism can be adjusted in the following ways: height + 1,5 mm / - 0,5 mm; width +/- 1 mm; window drop + 1 mm / - 3,5 mm and compression +2,4 mm / - 2,4 mm.

FUTURA 3D 130 maximum load-bearing capacity table

2500	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
2400	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
2300	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
2200	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
2100	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
2000	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	139	
1900	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	132	
1800	140	140	140	140	140	140	140	140	140	140	140	140	140	140	133	125	
1700	140	140	140	140	140	140	140	140	140	140	140	140	140	134	126	118	
1600	140	140	140	140	140	140	140	140	140	135	126	118	111				
1500	140	140	140	140	140	140	140	140	137	127	118	111	104				
1400	140	140	140	140	140	140	140	138	127	118	110	104	97				
1300	140	140	140	140	140	140	140	128	118	110	103	96					
1200	140	140	140	140	140	140	129	118	109	101	95						
1100	140	140	140	140	140	130	118	108	100	93							
1000	140	140	140	140	131	118	108	99	91								
900	140	140	140	133	118	108	97	89									
800	140	140	135	118	105	95	86										
700	140	138	118	104	92	83											
600																	
390	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700				

FUTURA 3D 150 HP maximum load-bearing capacity table

2500	159	158	158	157	157	157	150	150	150	150	150	150	150	150	150	150	150
2400	159	158	158	157	157	156	150	150	150	150	150	150	150	150	150	150	150
2300	159	158	157	157	157	156	150	150	150	150	150	150	150	150	150	150	150
2200	159	158	157	157	157	156	150	150	150	150	150	150	150	150	150	150	150
2100	158	158	157	157	156	156	150	150	150	150	150	150	150	150	150	150	150
2000	158	157	157	157	156	156	150	150	150	150	150	150	150	150	150	150	150
1900	158	157	157	156	156	156	150	150	150	150	150	150	150	150	150	150	150
1800	158	157	157	156	156	156	150	150	150	150	150	150	150	150	150	150	150
1700	157	157	156	156	156	156	150	150	150	150	150	150	150	150	148	140	140
1600	157	157	156	156	156	156	150	150	150	150	150	149	140	131			
1500	157	157	156	156	156	150	150	150	150	150	149	140	131	123			
1400	157	156	156	156	156	150	150	150	150	150	140	130	122	115			
1300	157	156	156	156	150	150	150	150	150	140	130	121	113				
1200	156	156	156	150	150	150	150	150	140	129	120	112					
1100	156	156	156	150	150	150	140	128	118	110							
1000	156	156	150	150	150	140	127	116	107								
900	156	150	150	150	140	126	114	105									
800	156	150	150	140	124	112	101										
700	150	150	140	122	109	98											
600																	
390	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700				

New dynamic packaging

Giesse has created new packaging for FUTURA 3D tilt and turn systems in response to the requests made by those who create sashes with window handles or in logica versions. Mechanism kits were created for these. In addition, by packaging hinges separately from mechanisms, delivery times are improved for low-revolving products.

	<p>Closure mechanism 10 pcs.</p>	<p>Hinges 10 pcs.</p>	<p>Arms 10 pcs.</p>	<p>Driver 10 pcs.</p>
FUTURA 3D 130 and 150 HP	04704000 Mech.Traditional (Cremona)	04711... Hinges (3D 130) 04712... Hinges (3D 150HP)	04200000 Type 1 (130) 04201000 Type 2 (130) 04204000 Type 1 (150HP) 04205000 Type 2 (150HP)	01033K Prima Cremona 01090K Euro Cremona
	04705000 Mech.Traditional (window handle)	04711... Hinges (3D 130) 04712... Hinges (3D 150HP)	04200000 Type 1 (130) 04201000 Type 2 (130) 04204000 Type 1 (150HP) 04205000 Type 2 (150HP)	02484 Prima Window Handle 02460 Master Window Handle

FUTURA 3D 170 HP INVISIBLE TILT AND TURN

Invisible, when the design requires it.
Capacity: 170 Kg.



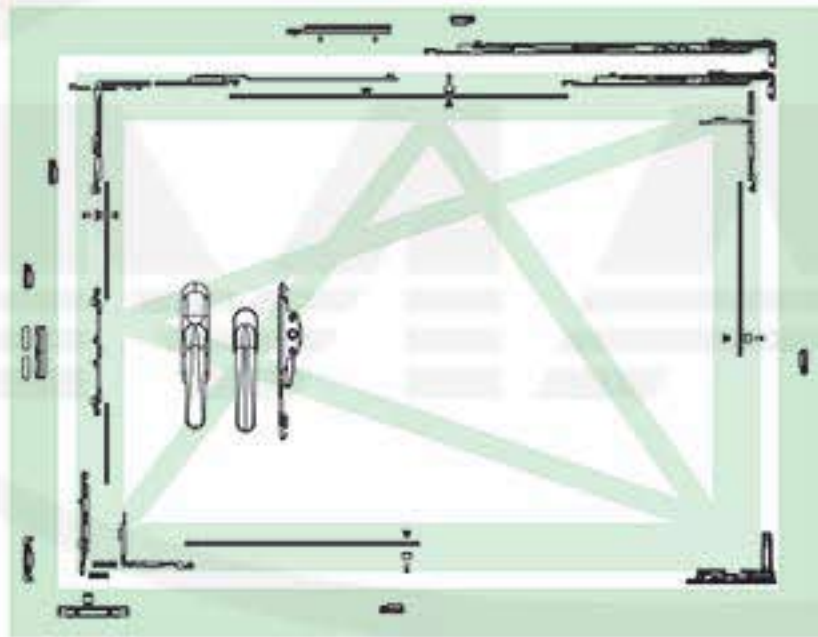
Performance connected to design

Giesse presents a completely new product in its range of tilt and turn windows -- a system of invisible accessories appropriate for creating prestigious design works. FUTURA 3D tilt and turn system.

This "hidden" system is completely invisible when the window is closed. In fact, the only visible element on the window is the Cremona bolt or window handle. It's the finishing touch for those who are searching for a serious and simple design. FUTURA 3D 170 HP tilt and turn windows are created with high quality materials to provide resistance in any type of weather. In addition, the system provides for a basic window opening of up to 90°, and if the end stop piece located on the hinge and arm is removed, it's possible to adjust the opening corner to 105°.

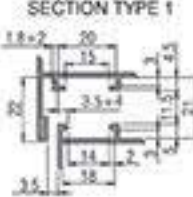
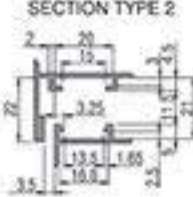
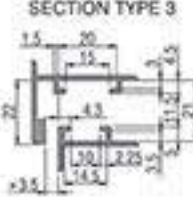
Adjustable in 3 dimensions

The FUTURA 3D 170 HP Invisible tilt and turn mechanism can be adjusted in the following ways: height + 1,5 mm / - 1,5 mm; width +/- 1,5 mm; window drop + 1 mm / - 4 mm and compression +2,4 mm / - 2,4 mm.



FUTURA 3D
170 HP Invisible

04704000	Mech. Traditional (Cremona)
04705000	Mech. Traditional (window handle)

042060001 T1 R Sec. type 1 - 042060002 T1 L Sec. type 1 042070001 T2 R Sec. type 1 - 042070002 T2 L Sec. type 1 044350001 T1 R Sec. type 2 - 044350002 T1 L Sec. type 2 044360001 T2 R Sec. type 2 - 044360002 T2 L Sec. type 2 042120001 T1 R Sec. type 3 - 042120002 T1 L Sec. type 3 042130001 T2 R Sec. type 3 - 042130002 T2 L Sec. type 3		
SECTION TYPE 1	SECTION TYPE 2	SECTION TYPE 3
		

01033K	Prima Cremona
01090K	Euro Cremona
02484	Prima Window Handle
02460	Master Window Handle

GS AP001

GS AP001 is the panic device for PUSH BAR applications which combines easy assembly, a long working lifetime, compatibility with most profiles, attention to design and highly certified performance, all in one. The vast range enables panic exits to be created for every situation.

Reliability of the devices is guaranteed by the **high quality and resistance of the materials** selected. The mechanism is made of galvanised steel, the bar of extruded aluminium and the supplementary locking points (latches) of stainless steel. Bolt guards are made of galvanised steel. The GS AP001 panic device is also available (with different codes) in a **fire door version** (GS AP001 F).

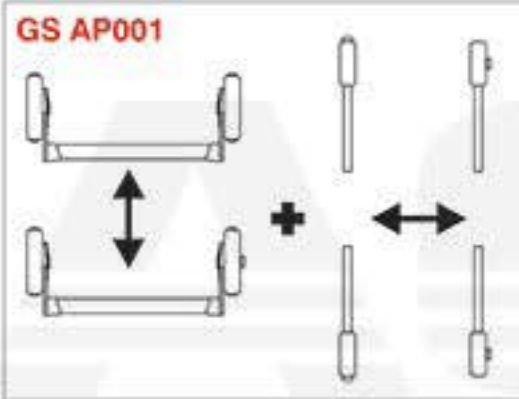


GS AP001

EN 1125:2008
3 7 7 0 1 4 2 2 A A

GS AP001 F

EN 1125:2008
3 7 7 B 1 4 2 2 A A



GS AP002

GS AP002 is the panic device for TOUCH BAR applications which combines easy assembly, a long working lifetime, compatibility with most profiles, attention to design and highly certified performance, all in one. The vast range enables panic exits to be created for every situation. The GS AP002 is both right-hand and left-hand, so mounting on doors opening to the right or the left involves no operations on the device.

Reliability of the devices is guaranteed by the **high quality and resistance of the selected materials**. The mechanism is made of galvanised steel, the bar of extruded aluminium and the supplementary locking points (latches) of stainless steel. Bar cover guards and bolt guards are made of galvanised steel. The GS AP002 panic device is also available (with different codes) in a **fire door version** (GS AP002 F).

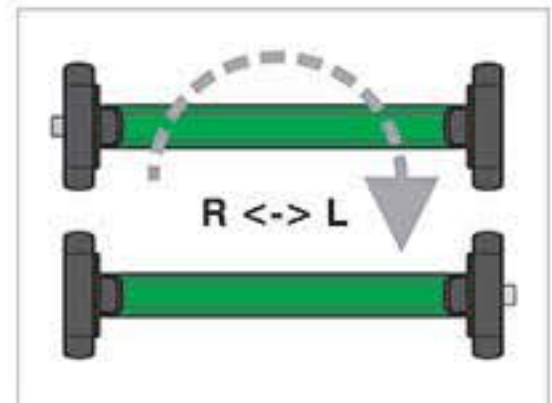
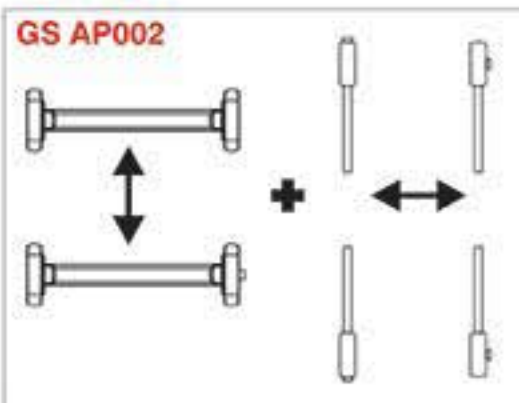


GS AP002

EN 1125:2008
3 7 7 0 1 4 2 2 B A

GS AP002 F

EN 1125:2008
3 7 7 B 1 4 2 2 B A



Check GIESSE Panic Device catalogue for all configurations.

Clamp fixed hinges with window type profiles

FLASH BASE

Pre-assembled, self-positioning and two-handed with pin in stainless steel.
 The FLASH BASE hinge features the GIESSE-RAPID (patented) fixing system that allows it to be fitted quickly and securely to window profiles.
 The special shape of the hinge and the fixing plate allows fast and practical installation - even on windows that are already assembled - plus perfect positioning on the profile.
 Available in the full range of RAL and TREND colours.
 FLASH BASE hinge can be used for load capacities of up to 75 kg.

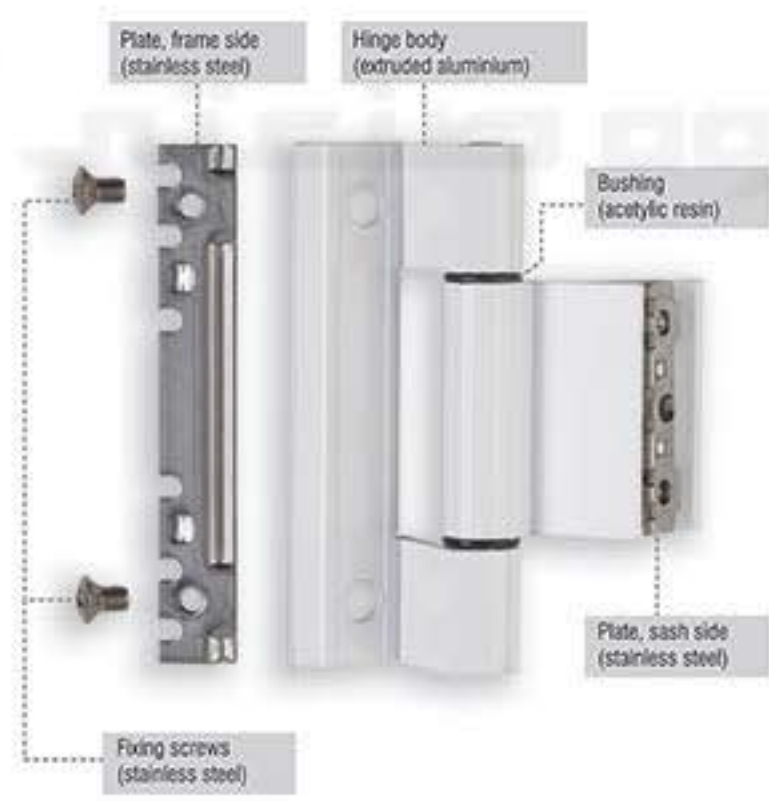
75Kg



BRIDGE 2 THE THREE PART HINGE

Resistant and quick to assemble, it has a wide range of articles for all the main profiles.
 BRIDGE 2 is the comb hinge for light-weight doors and windows made using window profiles.
 It is recommended for use in applications that involve particular cross stress on the pin axis, for example in the case of a very wide sash or an inward or outward opening window.
 BRIDGE 2 can be used for load capacities of up to 90 kg.

90Kg





GIESSE DOORS HINGES

Clamps fixed hinges with window type profiles

GHADIR ALUMINIUM IND. GROUP

FLASH XL

Fixing take place using insertion plates, just like a normal window hinge, without having to drill the holes typical of front application door hinges.

FLASH XL enables ± 1 mm side adjustment of the clearance between sash and frame, possible even with the door installed.

FLASH XL can be used for load capacities of up to **100 kg**.

100Kg



LINEA 3D

Linea 3D offers unique performance in its class. Included in class 13 in compliance with EN1935, load capacity is **120 kg** with 2 hinges, and **150 kg** with 3 hinges.

Linea 3D has been tested to **1,000,000** cycles in compliance with EN1191, which certifies a standard door.

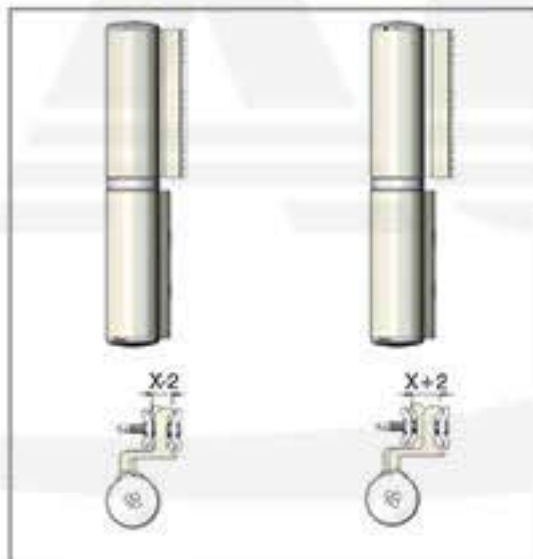
Linea 3D can be easily and rapidly adjusted in three directions when the wing is already installed:

Side adjustment (± 2 mm);

Pressure adjustment (± 0.5 mm);

Height adjustment (+4/-2 mm).

120Kg



Linea 3D side adjustment



Side adjustment typical of conventional clamp-fixed hinges

FLASH XXL

No type of machining is necessary for the assembly of FLASH XXL, which requires only traditional fit in fixing plates. The use of a bearing placed between the hinge on the sash side and the hinge on the frame side, guaranteeing optimal sliding, also on the doors at the limit of load capacity. FLASH XXL is easy to adjust laterally (± 1 mm) and in height (-2/+4 mm).

All adjustments can be made even when the door is already installed.

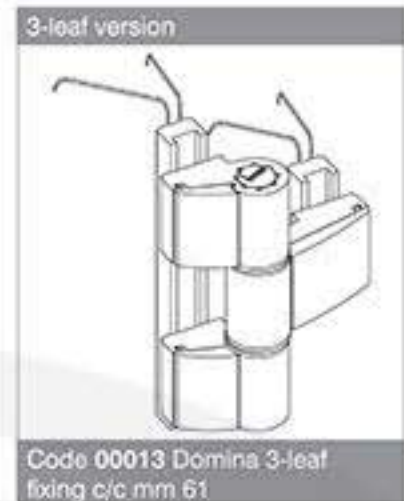
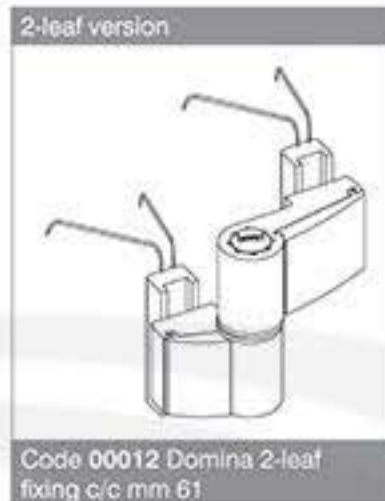
FLASH XXL can be used for load capacities of up to **160 kg**.

160Kg



DOMINA

Two-handed hinge for front application for heavy aluminium doors with door profile.
Available for application with various C/C distances and different rises.
With DOMINA it is possible to carry out a wide range of side adjustments (-2.5 to +1 mm) and pressure adjustments (± 1 mm) on the door, thanks to the Giesse patented eccentric bushing system.
Both these adjustments can be made without lifting the sash, thereby making the installer's job easier.
The hinge is also height adjustable (up to 2 mm) by means of shim washers.
Also available in the 3-leaf version which gives the insulating profile maximum resistance in the case of critical applications. Load capacities: 2-leaf hinges up to **120 kg**, 3-leaf hinges **140 Kg**.
Including fixing plates.



120Kg

DOMINA HP

Domina HP is a hinge with frontal application with excellent performance and reliability, for use with aluminium doors with door profiles.
The vast array of products makes it possible to accessorize the main door profiles available on the market.
All Domina HP and Domina HP Cover hinges, versions 2 and 3 leaves, have already obtained the CE mark in conformance with the EN1935:2002 norms.
Maximum hinge weight-bearing capacity:
up to **160 kg** with two hinges, 2-leaf version
up to **180 kg** with three hinges, 2-leaf version
up to **180 kg** with two hinges, 3-leaf version
up to **200 kg** with three hinges, 3-leaf version



160Kg

Now with fixing plates or spreading dowels, check page 17.

DOMINA HP COVER

Domina HP Cover differs from Domina HP solely due to the absence of aluminium screw-cover plates. In this version of the hinge, they are replaced by Zamak covers, which can be purchased separately, based on the desired finish.
Maximum hinge weight-bearing capacity:
up to **160 kg** with two hinges, 2-leaf version
up to **180 kg** with three hinges, 2-leaf version
up to **180 kg** with two hinges, 3-leaf version
up to **200 kg** with three hinges, 3-leaf version



160Kg

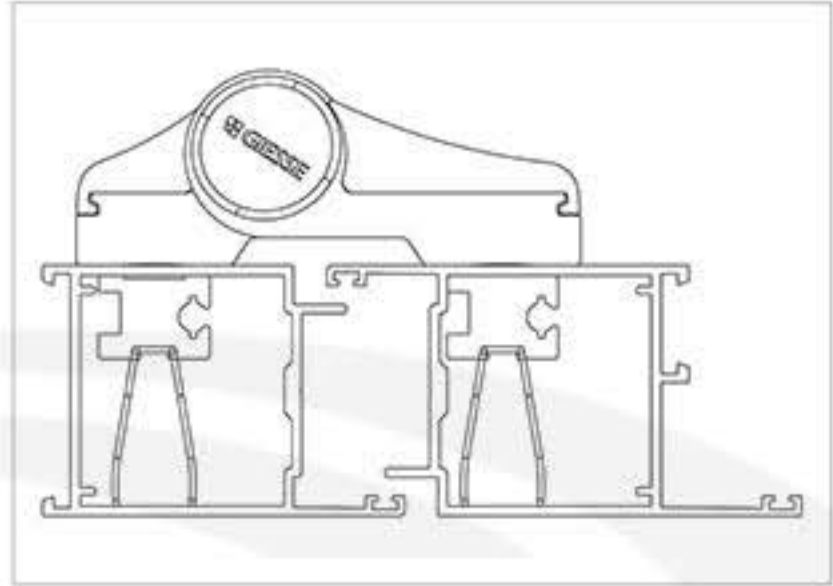
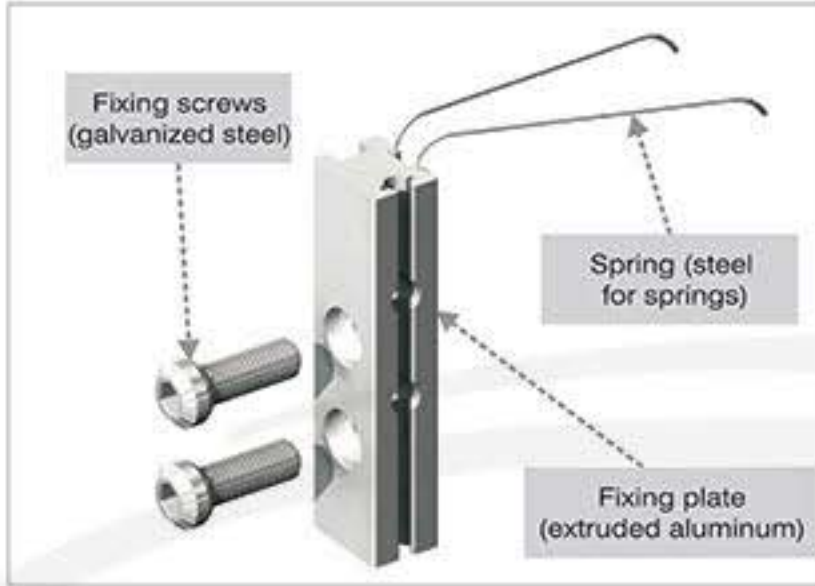


GIESSE DOORS HINGES

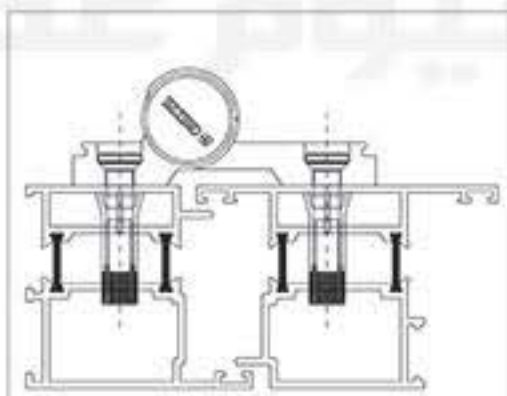
Fixing systems for DOMINA HP/COVER HP

GHADIR ALUMINIUM IND. GROUP

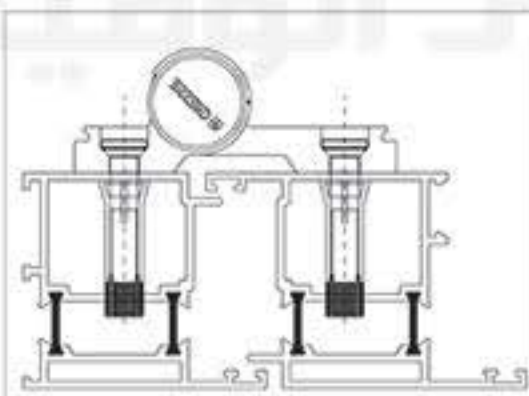
COUNTERPLATE KIT



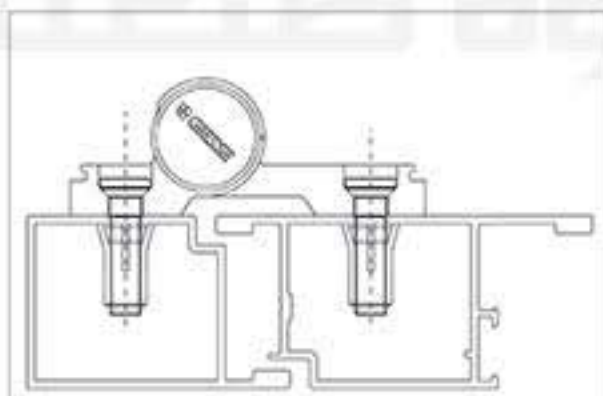
RAPID SPREADING DOWELS



Thermal-break profile
External opening



Thermal-break profile
Internal opening



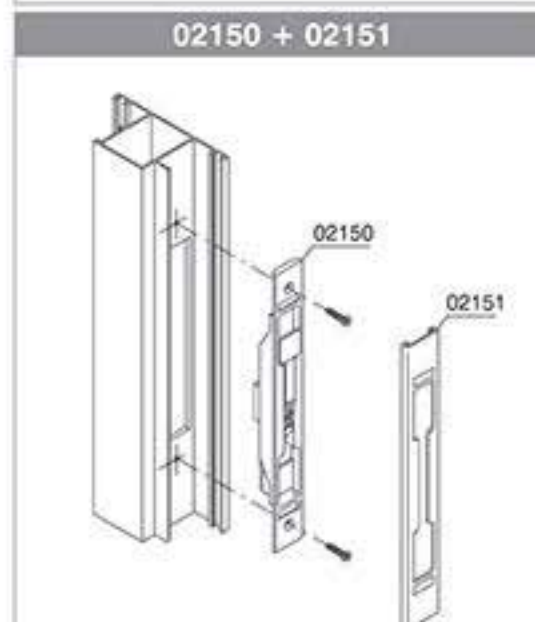
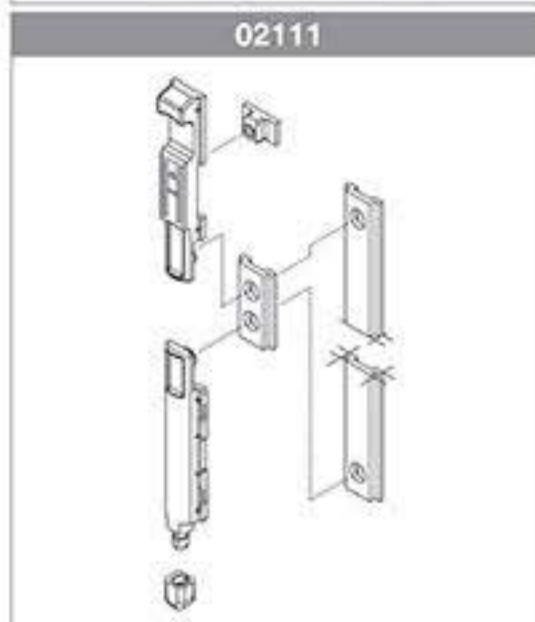
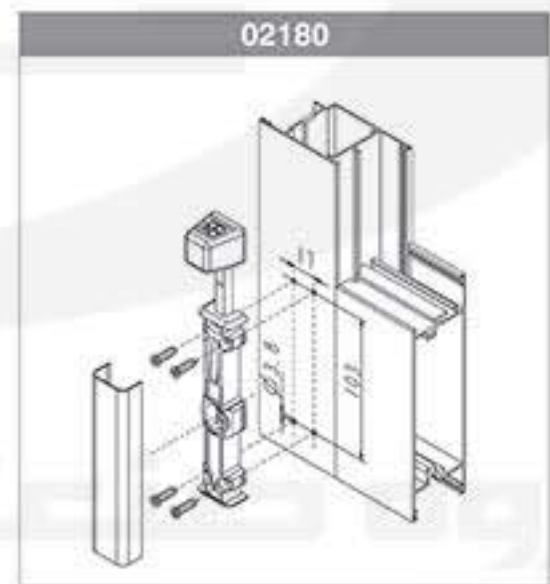
Not thermal-break profile
External/internal opening

Check DOMINA HP catalogue for all details.

HANDLES FOR DOORS AND WINDOWS



BOLTS FOR DOORS AND WINDOWS



DOOR LOCKS

SINGLE DOOR LOCK WITH ROTATING LATCH AND TIPPING DEAD BOLT



Code	Backset	Frontplate
04613	mm 25	mm 22
04614	mm 30	mm 22
04615	mm 35	mm 22
04619	mm 25	mm 24
04620	mm 30	mm 24
04621	mm 35	mm 24

SINGLE DOOR LOCK WITH ADJUSTABLE ROLLER AND TIPPING DEAD BOLT



Code	Backset	Frontplate
04616	mm 25	mm 22
04617	mm 30	mm 22
04618	mm 35	mm 22
04622	mm 25	mm 24
04623	mm 30	mm 24
04624	mm 35	mm 24

MULTI POINT LOCK FOR EUROGROOVE, LEVER ACTIVATION



Code	Backset	Interaxis
04645	mm 35	mm 85
04649	mm 45	mm 85

MULTI POINT LOCK FOR EUROGROOVE WITH BOLT, LEVER ACTIVATION



Code	Backset	Interaxis
04646	mm 35	mm 85
04650	mm 45	mm 85
04699	mm 45	mm 92

MULTI POINT LOCK FOR EUROGROOVE WITH ROTATING LATCH AND TIPPING DEAD BOLT, CYLINDER ACTIVATION

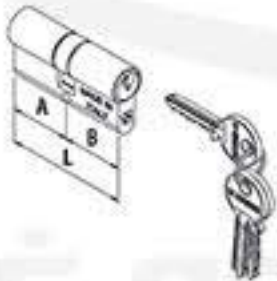


Code	Backset	Frontplate
04627	mm 30	mm 22
04628	mm 35	mm 22

COUNTERPLATES

Description	Code	A	B	C
Counterplate for multipoint door locks for Eurogroove	04630	220.5	22	2.5
"U" shaped striker for single lock	04850	210	24	2
Flat Strike plate for single lock	04859	200	21	2.5
Flat Strike plate for single lock	04639	200	24	3
Under faceplate spacer	04863	306	24	2.5

EUROPEAN FULL CYLINDERS



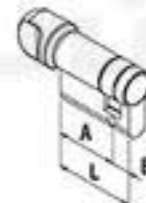
CODE	COMMERCIAL DIMENSIONS	L	A	B
07680	31/31	62	31	31
07681	37/27	64	37	27
07682	35/35	70	35	35
07683	41/31	72	41	31
07684	41/41	82	41	41
07685	51/31	82	51	31
07687	61/31	92	61	31
07688	41/51	92	41	51
07689	91/31	122	91	31

EUROPEAN HALF CYLINDERS



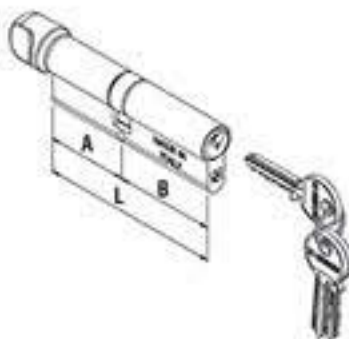
CODE	COMMERCIAL DIMENSIONS	L	A	B
07686	31/10	41	31	10

EUROPEAN HALF CYLINDERS WITH THUMBTURN



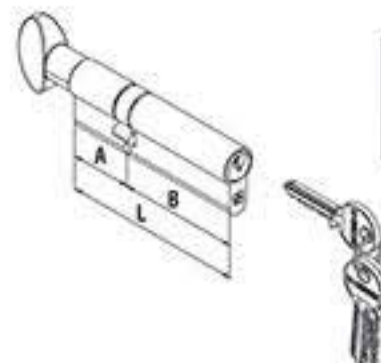
CODE	COMMERCIAL DIMENSIONS	L	A	B
04635	31/10	41	31	10

EUROPEAN FULL CYLINDERS WITH THUMBTURN



CODE	COMMERCIAL DIMENSIONS	L	A	B
04633	41/51	92	41	51
04634	31/31	62	31	31
04636	61/31	92	61	31
04637	31/61	92	31	61

EUROPEAN FULL CYLINDER WITH LARGE THUMBTURN



CODE	COMMERCIAL DIMENSIONS	L	A	B
04647	31/61	92	31	61

SOME OF PROJRCT REFERENCES



گروه صنعتی آلومینیوم غدیر

PROJECT NAME	CONSULTANT	CONTRACTOR	FABRICATOR
UAE			
INDIGO TOWER	Ws Atkins & Partners	Al Rostamanni Pegel	Arabian Aluminium
MADINA TOWER	KEO	Emirates Belbadi	Arabian Aluminium
PALM JUMEIRAH	KEO		Thomas Bennett Gulf
ARABIAN RANCHES	Schuster Pechtold Partners	Al Basti Mukta	Bosco -
DISCOVERY GARDENS	ECG		Arabian Aluminium
INTERNATIONAL CITY	ACE	Dubai Contracting	Global Pioneer – Al Siraj
AL MUROJ COMPLEX	ARTEC Consultant	Al Ahmadi	ALUMCO
DUBAI MARINA	HOK	EMAAR	Alabbar Group
BIN HAMM TOWERS	Space Consultant	Sweden & General Nile	BOSCO
JUMA AL MAJID TOWERS	Khatib & Alami Consultants	ACC	Alabbar Group
CRYSTAL PLAZA	Adnan Saffarini	Transemirates General	Alabbar Group
SAUDI ARABIA			
CORNICHE DREAM TOWER – JEDDAH	Ideal Engineering Consult	Kamal Zubair	Al Watania Aluminium
CORNICHE DREAM TOWER – RIYADH	Saudi Architect	Al Tameer Dev.	SIAB Aluminium
KING ABDALLAH UNIERSITY (KAUST)	Zuhair Fayez & Partners	Saudi Bin Ladin Group	United Arab Aluminum
PRINCESS NOURA UNIVERSITY	Perkins & Wills	Saudi Oger	Al Fanar Aluminium
KING SAUD UNIVERSITY	Saud Comsulting Group	Bin Ladin Contracting	ALUMCO
CLOCK TOWER ROYAL HOTEL	SL - Rasch	Bin Ladin Contracting	ALUMCO
QATAR			
AL HODAIFI TOWER	ACG	Midmac Contracting	Alabbar Group
INDIA			
SIGNATURE TOWER	Mok & Associates	Uni-Sing projects	Al Karma
THE ICON	Hafeez Consultant	Hafeez Contractor	Star Alubuild
GLOBAL BUSINESS PARK	HOK/Bose – Sikka	SB Developers	Al Karma
INFOSYS KONARK	Venkatraman & Associates	Infosys	Al Karma
FIRST INDIA PLACE	Chandrashenkar Kanetkar	Vatika Greenfield	Al Karma
THE IMPERIAL TOWERS	Hafeez Consultant	Hafeez Contractor	SP Fabricators
ITC GRAND CENTRAL SHERATON	Hafeez Consultant	Hafeez Contractor	Ahlcons India
MALAYSIA			
HSBC ANNEXE	Michael Ong Chartered.	Quill Construction	CML Aluminium
THE TROIKA	Connell Wagner Malaysia	IJM	Angkasa Jasa
PANORAMA CONDOMINIUM	RSP Architect	LKH	PWC
SAINT MARY RESIDENCES	Fenestra Malaysia	Fenestra Malaysia	Lucksoon Metalworks
MENARA FELDA	Meinhardt	Putra Perdana	Angkasa Jasa
PAVILION RESIDENCES	GDP Architects	Putra Perdana	Angkasa Jasa
THAILAND			
PARK VENTURE	P & T Group	Thai Obayahsi	YHS International
QUATTO SUKHUMVIT 55	DB Studio	Saengfa Construction	KYS
AMANTRA LUMPINI	Tendem Architect	Syntech	GAG
THE RIVER	Steven	Bui Thai	Peterson 1991
KPI BUILDING	Frame Architect	Powerline Public Co.,LTd	KYS
AUGUSTON CONDO SUKHUMVIT 24	P & T Group	Syntech	KYS

GIESSE CHAMPION PLUS MULTILOCK

Fastening system safe and fast to install

The Champion Plus accessories system is the ideal solution to create multipoint locking for a sliding casement. Multilocks are available with from 1 to 3 locking points to be able to accessorize windows and doors effectively. A wide range of accessories to meet every need of the window-makers as well as customer.

Components

Champion Plus Multilock

Champion Plus is available with a 7.5 or 15 mm entry, to be chosen according to the geometry of the profile used, and in different sizes (length) for the construction of doors and windows of different sizes. Available in a version with a lock (Art. 02728000), ideal for balcony doors that open onto gardens or terraces.



Champion Plus Multilock Fixing Kit

The fastening kits have been designed to ensure the highest performance for every installation. The kits are specific for the type of multilock (1 – 2 – 3 points) and type of profile used. Giesse has now designed specific fastening kits for the most widely used systems on the market (see summary table).

Examples of adapters for Fixing Kit



200 kg of mechanical strength for each locking point
To ensure greater security for doors and sliding windows. Giesse has tested the locking points of the Champion Plus hardware up to 200 kg. A significantly higher value compared to a traditional recessed handle.

Ease of assembly
The accessories in the Champion Plus line are practical and fast to install on a profile. Suitable "Fixing kit" depending on the series of profiles used. Each kit has been specially designed for inserting and fastening the rod in the profile practically, fast and easy.

Same styling for all openings
The new Prima window handle with a special opening device grants the same design for all types of opening in the house.

Wide range of finishes
The new window handles are available in RAL powder coated finishes and trend finishes to allow the best aesthetic combinations also on aluminum profiles with a steel or stained wood finish.



Incorrect movement safety device
On request it is possible to apply the incorrect movement safety device to prevent accidental closure of the hardware with the sash open.



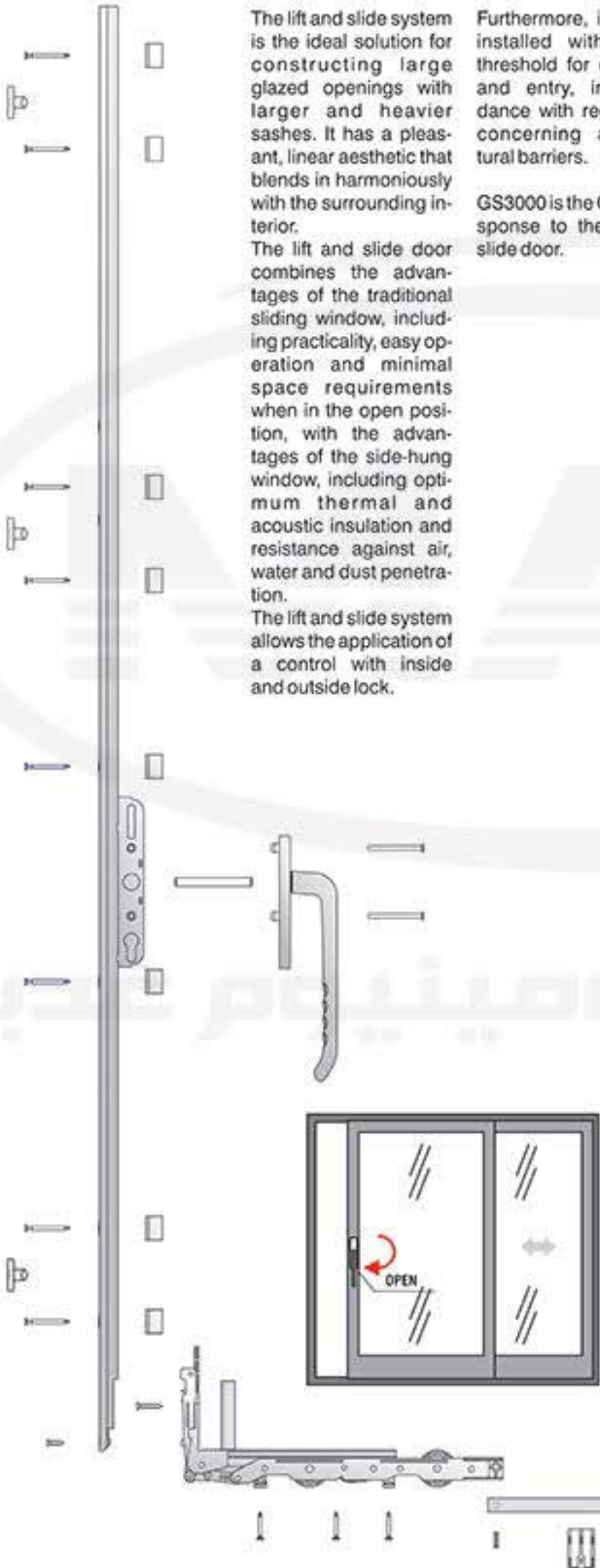
Mechanism components

To move the multilock rod Giesse offers various solutions depending on whether you have to accessorize the main or secondary sash.

<p>Prima window handle 02762...</p> <p>C/C distance 43 mm. Square pin of 7 mm in zinc-coated steel. Swivel covering rose in zamak. Prima line handle in zamak. RAL and trend finishes available.</p>	<p>Recessed window handle 02760... 02761...</p> <p>C/C distance 43 mm Square pin of 7 mm in zinc-coated steel. This article can be combined with the external recess handle art. 02764. RAL and trend finishes available.</p>	<p>External recessed pull handle 02764...</p> <p>External recess handle can be combined with the Prima window handle art. 02762 or with the recess window handle art. 02760/02761. Ideal for all those balcony doors that open onto gardens or patios thanks to a facilitated opening.</p>	<p>Double Prima window handle 02763...</p> <p>Double Prima window handle, applicable on a sliding sash where the fastening mechanism components are inside as well as outside. Recommended in balcony door solution the Champion Plus with cylinder multilock art. 02728.</p>	<p>Blind recess handle for opposite sash 02765...</p> <p>Blind recess handle that is applied on the opposite sash with no hardware.</p>	<p>Incorrect movement safety device 02770</p> <p>PATENTED</p> <p>Possibility of incorrect movement safety device on the hardware which prevent the complete closing of the sash.</p>
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GS3000 LIFT AND SLIDE

Giesse presents the new line of products for Lift and Slide openings



The lift and slide system is the ideal solution for constructing large glazed openings with larger and heavier sashes. It has a pleasant, linear aesthetic that blends in harmoniously with the surrounding interior.

The lift and slide door combines the advantages of the traditional sliding window, including practicality, easy operation and minimal space requirements when in the open position, with the advantages of the side-hung window, including optimum thermal and acoustic insulation and resistance against air, water and dust penetration.

The lift and slide system allows the application of a control with inside and outside lock.

Furthermore, it can be installed with a low threshold for easy exit and entry, in accordance with regulations concerning architectural barriers.

GS3000 is the Giesse response to the lift and slide door.

A system of robust and reliable mechanisms which, with a simple movement of the special handle, effortlessly lifts the sash, for a perfectly smooth and silent sliding action.



Advantages

Range

The Giesse lift and slide range incorporates different mechanisms for the construction of sashes with maximum weight of 150 kg or 250 kg and maximum height of 3 m and maximum width of 3,4 m.

The wide selection of items enables the GS3000 system to be adapted to the various types of lift and slide profiles available on the market.

Practical opening and design

GS3000 is operated by simply turning the special extended handle, which controls the lifting and lowering of the sash and enables it to slide.

Two types of elegant extended handle are available in the main standard Giesse finishes, compatible with the colour of the door fixture. The handles are available in the single version with or without key, and the double version with key.

Reliability and durability

The robust and reliable components guarantee the long-term functionality and smooth sliding action of the fixture. In fact, according to the operating principle of the system, the carriage wheels revert to a resting position when the door is closed, to prevent them from buckling.

Standard lock

The control rods are available with three different backsets of 37,5 mm (with and without key), 27,5 and 25 mm. The versions with lock are compatible with standard European profile cylinders.

Micro-ventilation

The micro-aeration device, with a special locking point, enables the sash to be moved slightly to one side so that the room can be aerated with the door closed.

Safety and seal

The door can be fitted with up to five locking points for effective and secure fastening.

Easy assembly

The system is simple and intuitive to assemble. All the components can be fitted together quickly and easily.

Corrosion resistance

The choice of high-quality materials, such as stainless steel, makes the product highly resistant to corrosion. Furthermore, the finish of the handles complies with the high quality standards common to all Giesse products.

NEW GS 1000

Giesse's new tilt-and-slide system has been reinvented in terms of performance and aesthetics

The robustness and reliability of the fitting allow you to create wings to up to 2700 mm in height and 200 kg in weight, therefore meeting the require-

ments of ever-larger opening parts. These panels are easy to use and slide very smoothly. The product range has been

enhanced, allowing you to choose between various models, depending on the size and weight of the wing and the application require-

ments. Versions with an automatic catch are operated by a conventional cremone or handle, for panels of up to 160 kg,

while versions with forced control are operated by special cremones with long handles, for panels of up to 200 kg.

The new, flat aesthetic of the carriage cover and the moulded line of the side plugs give the frame a compact, modern and pleasant design.



Product range

FORCED CONTROL VERSION

Semi-automatic operation via a special, long-handled cremone

GS1000-HD 160

Max. panel weight 160 kg
Panel width up to 2000 mm and panel height up to 2700 mm
Single carriages with moulded side reinforcements and side plugs

GS1000-HD 200

Max. panel weight 200 kg
Panel width up to 2000 mm and panel height up to 2700 mm
Double carriages with moulded side reinforcements and side plugs

MANUAL CONTROL VERSION

Manual operation via cremone/standard handle

GS1000-ML version

Max. panel weight 100 kg
Panel width up to 1280 mm and panel height up to 2380 mm
Single carriages without side reinforcements and flat side plugs

GS1000-HL

Max. panel weight 160 kg
Panel width up to 1680 mm and panel height up to 2380 mm
Single carriages with moulded side reinforcements and side plugs



Advantages

NEW DESIGN

The new carriage reinforcement covers, which are moulded and small in size, give the frame a modern, pleasant line.

AUTOMATIC CATCH

The automatic catch device of the wing makes windows and doors very easy to close and is available on all models in the product range.

INCORRECT MOVEMENT SAFETY DEVICE

The new incorrect movement safety device for the forced control version prevents the cremone from operating when the wing is in the open sliding position. This safeguards the fitting against damage. The device also prevents the wing from lifting



IDEAL FOR LARGE PROFILES

The large size of the carriages allows the wing to exit the frame by up to 117 mm. This makes the product ideally suited for use on very deep, thermally-cut profiles.

MORE ADJUSTMENTS

The new, adjustable side reinforcements allow you to adjust the entrance and exit of the wing in the best way.








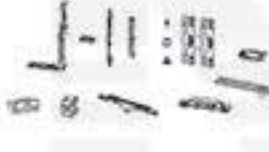
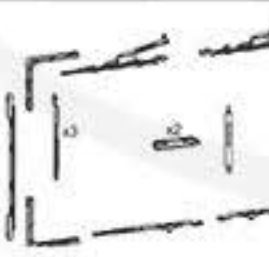









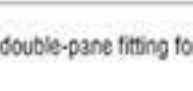

FAST, SAFE FASTENING

The use of Torx screws on the parts of the fitting guarantees fast and safe fastening of the components.



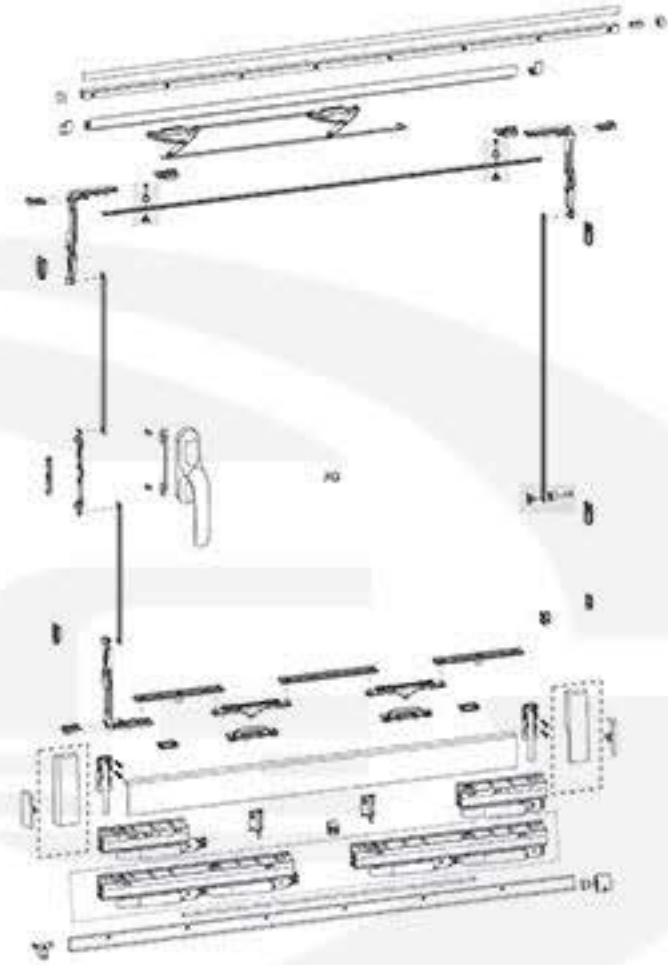
NEW GS 1000

Summary table of components

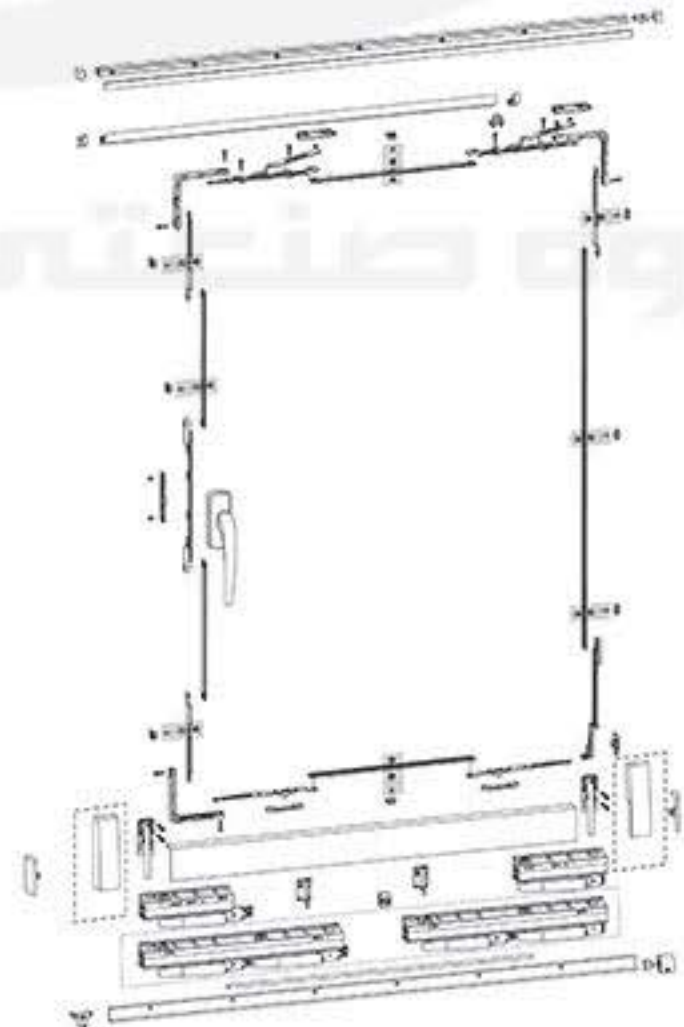
Component image	Art.	Description
	09761	670-880 GS1000 PROFILE SET
	09762	881-1080 GS1000 PROFILE SET
	09763	1081-1280 GS1000 PROFILE SET
	09764	1281-1480 GS1000 PROFILE SET
	09765	1481-1680 GS1000 PROFILE SET
	09766	1681-2000 GS1000-HD PROFILE SET
	09774	GS1000 ACCESSORIES SET
	09775	GS1000 ACCESSORIES SET WITH REINFORCEMENTS
	09776	GS1000 RH SINGLE CARRIAGE SET
	09777	GS1000 LH SINGLE CARRIAGE SET
	09778	RH DOUBLE CARRIAGE SET
	09779	LH DOUBLE CARRIAGE SET
	09723	630-930 MM WIDTH SCISSOR ARM
	09724	931-1280 MM WIDTH SCISSOR ARM
	09725	1281-1680 MM WIDTH SCISSOR ARM
	09700	ADDITIONAL ARM
	09780	C.E GS1000 ML-HL BASE FITTING SET
	09781	GS1000-HD LH FITTING SET
	09782	GS1000-HD RH FITTING SET
	09785	C.E. STRIKER SET 10-14 GS1000-HD
	09786	C.E. STRIKER SET 12-15 GS1000-HD
	09787	C.E. STRIKER SET 13.5-16.8 GS1000-HD
	09788	C.E. STRIKER SET 14-18 GS1000-HD
	09791	C.E. 14/18 GS1000-HD LH INCORRECT MOVEMENT SAFETY DEVICE SET
	09792	C.E. 14/18 GS1000-HD RH INCORRECT MOVEMENT SAFETY DEVICE SET
	09793	C.E. GS1000-HD LH INCORRECT MOVEMENT SAFETY DEVICE SET
	09794	C.E. GS1000-HD RH INCORRECT MOVEMENT SAFETY DEVICE SET
	09736FFFN	GS1000-HD RH CREMONE
	09737FFFN	GS1000-HD LH CREMONE
	09738FFFN	GS1000-HD RH CREMONE WITH KEY
	09739FFFN	GS1000-HD LH CREMONE WITH KEY
	09789	GS1000 SUPPORT BLOCK
	09790	GS1000 MOBILE STRIKER
	09804	HOLE ALIGNMENT TEMPLATE
	09805	TRACK FIXING TEMPLATE
	09806	SIDE-HUNG WINDOW STRIKER TEMPLATE
	09801	GS1000 CARRIAGE DRILLING TEMPLATE
	09741000N	GS1000-HD CREMONE DRILLING TEMPLATE
	09803	GS1000-HD ARMS AND CORNER CLEAT DRILLING TEMPLATE

European double-pane fitting for handle, fitting set for R40 series and Cremone Cover fitting set also available.

GS 1000 - HL



GS 1000 - HD



DOOR RANGE - NEW DOMINA HP



New styling and unified $\varnothing 11$ mm machining for all fixing systems



The Domina HP front-application hinge, top of the company's door range in terms of performance and reliability, incorporates some major new aesthetic and functional innovations:

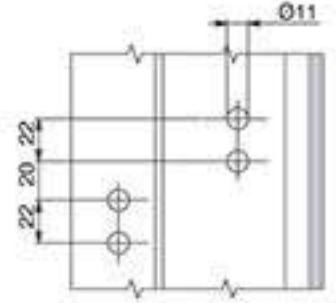
- The new design of the screw coverplates, which gives the hinge an attractive, linear appearance in perfect harmony with the door.
- The new M12 direct fixing screw for thermal-break profiles, which al-

lows for rapid and simple application of the hinge to the profile without the need for counterplates and using standard $\varnothing 11$ mm holes.

- Elimination of the centring bushings to allow the hinge to be coupled with ALL Domina HP fixing systems, which can be chosen according to application requirements and are available for purchase separately from the hinge.

separately from the hinge.

- The use of locking grub screws on both hinge bodies, to be tightened after making the adjustments.
- Double range of shim steps:
 - with centring bushing
 - without bushings

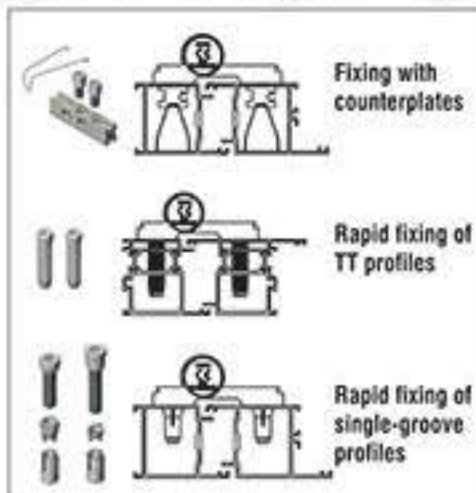


HP Cover: same performance and machinings, different design

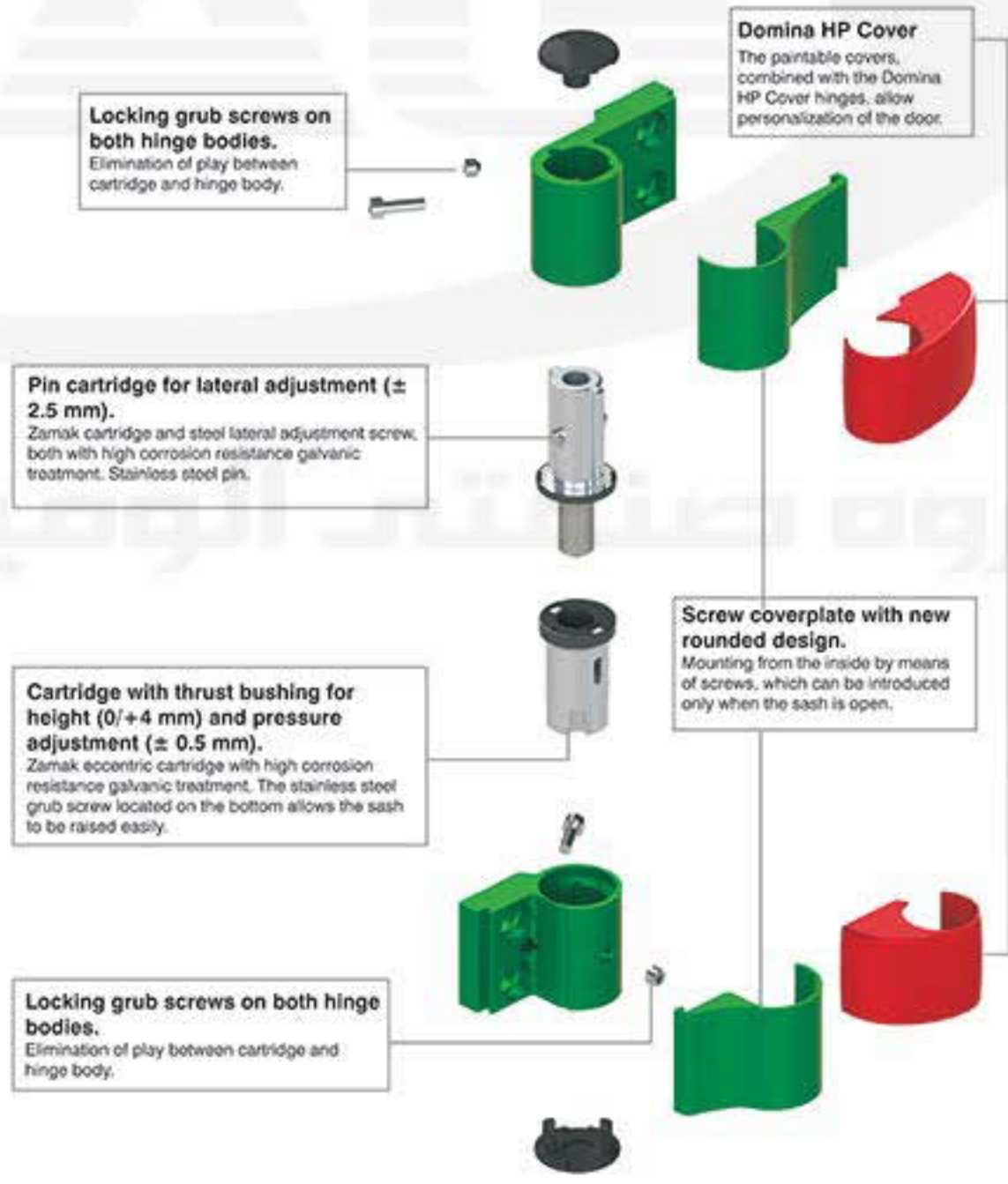


DOMINA HP - DOMINA HP COVER

4	7	5÷7	0	1	4	1	12÷14
1	2	3	4	5	6	7	8



1. Category of use (1-4, 4=heavy duty)
2. Durability (3=10,000 cycles, 4=25,000 cycles, 7=200,000 cycles)
3. Test door mass (0-7, 7=160 kg)
4. Fire/smoke resistance (0-1, 0=not suitable)
5. Safety in use (1= safe use)
6. Corrosion resistance (0-4, 4=very high resistance)
7. Burglar resistance (0-1, 1=suitable)
8. Grade (1-14, 14=best overall characteristics)



DOOR LOCKS

The most complete multipoint hardware for E.G. available on the market

The Giese handle-operated multipoint lock for Euro Groove and the natural evolution of door

locks. Unlike traditional locks, the two-way (up-down) motion is caused by the rotation of the han-

dle rather than the key. Joined to the polyamide rod by specific connection adapters, the lock pro-

vides multipoint locking. The number and position of the locking points can be chosen as desired on

all sides of the frame. The characteristics of this lock are particularly suitable for

use on balcony doors.



Two-way door lock

Code	Description	BACKSET [mm]	FRONTPLATE WIDTH [mm]	COMPATIBLE COUNTERPLATES
04627	TWO-WAY DOOR LOCK	30	22	04630-04639-04659-04660
04628	TWO-WAY DOOR LOCK	35	22	04630-04639-04650-04660

Lever activated multipoint door lock

Code	Description	BACKSET [mm]	C/C HANDLE CYLINDER [mm]	FRONTPLATE WIDTH [mm]	BOLT	COMPATIBLE COUNTERPLATES
04645	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	35	85	22	NO	04655
04646	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	35	85	22	YES	04655
04649	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	45	85	22	NO	04655
04650	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	45	85	22	YES	04655
04698	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	45	92	22	NO	04655
04699	LEVER ACTIVATED MULTIPPOINT DOOR LOCK	45	92	22	YES	04655

Cylinders for doors



QUICK MOUNTING PRIMA HANDLE

Giese expands its range of aluminium door handles with an innovative concept for the aluminium fixtures market: quick mounting. The Prima quick mounting double handle installs in just a few easy steps.

The handle, designed to fit to the outside of the door, is fixed to the steel square pivot, which engages with a special bushing on the internal handle.

This type of assembly, without bolts to secure the handles to the pivot, as is the case with free pivot designs, provides a perfect seal against the profile and eliminates slackening or play between the handles in use. The quick mounting pivot design means that dou-

ble handles can now be installed in half the time required for conventional handles.

The Prima double handle is secure against tampering, since it can only be removed by loosening the special grub screw on the internal handle, either with the supplied wrench or with a screwdriver.

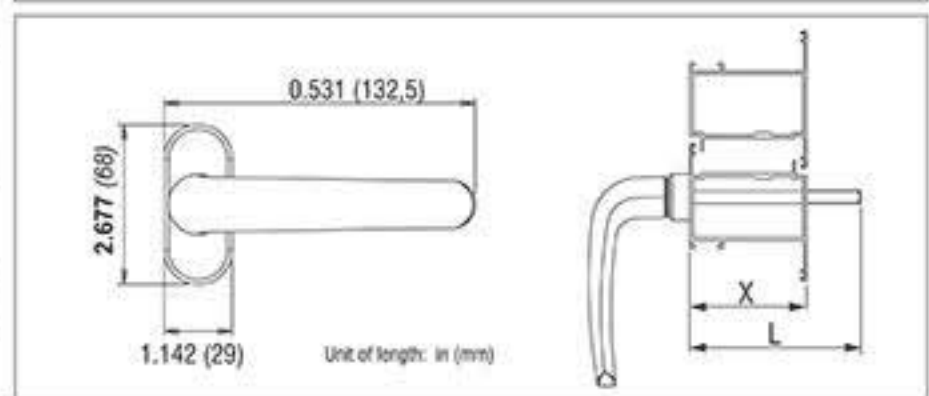
Its high quality materials and solid mounting to the profile give the handle exceptional performance, rated category 3 (200,000 cycles) under EN1906, the standard which defines the requisites and test methods for door handles and knobs.

The Prima double handle has special reversible return springs, so

that it can be installed for two-way operation (up/down), thus making it compatible with Giese handle-operated multipoint locks.

Its styling is identical to that of the historic Prima handle, slightly revised to bring it up to date. The handle is available in new high quality finishes including silver, gold, bronze, titanium and false stainless anodised finishes.

The double handle is supplied with an aluminium cylinder cover in matching finish.



Root	Description	Note	L in (mm)	X in (mm)
02424N	PRIMA DOOR HANDLE FAST ASSEMBLY COUPLE	pair	5.118 (130)	2.756÷3.150 (70÷80)
02426	PRIMA DOOR HANDLE FAST ASSEMBLY COUPLE	pair	5.905 (150)	3.543÷3.937 (90÷100)
02430	PLATES COVER CYLINDER COUPLE	pair	-	-

GIESSE OS OPERATOR 2.0 FOR OUTWARD OPENING

Components of the OS Operator 2.0 system

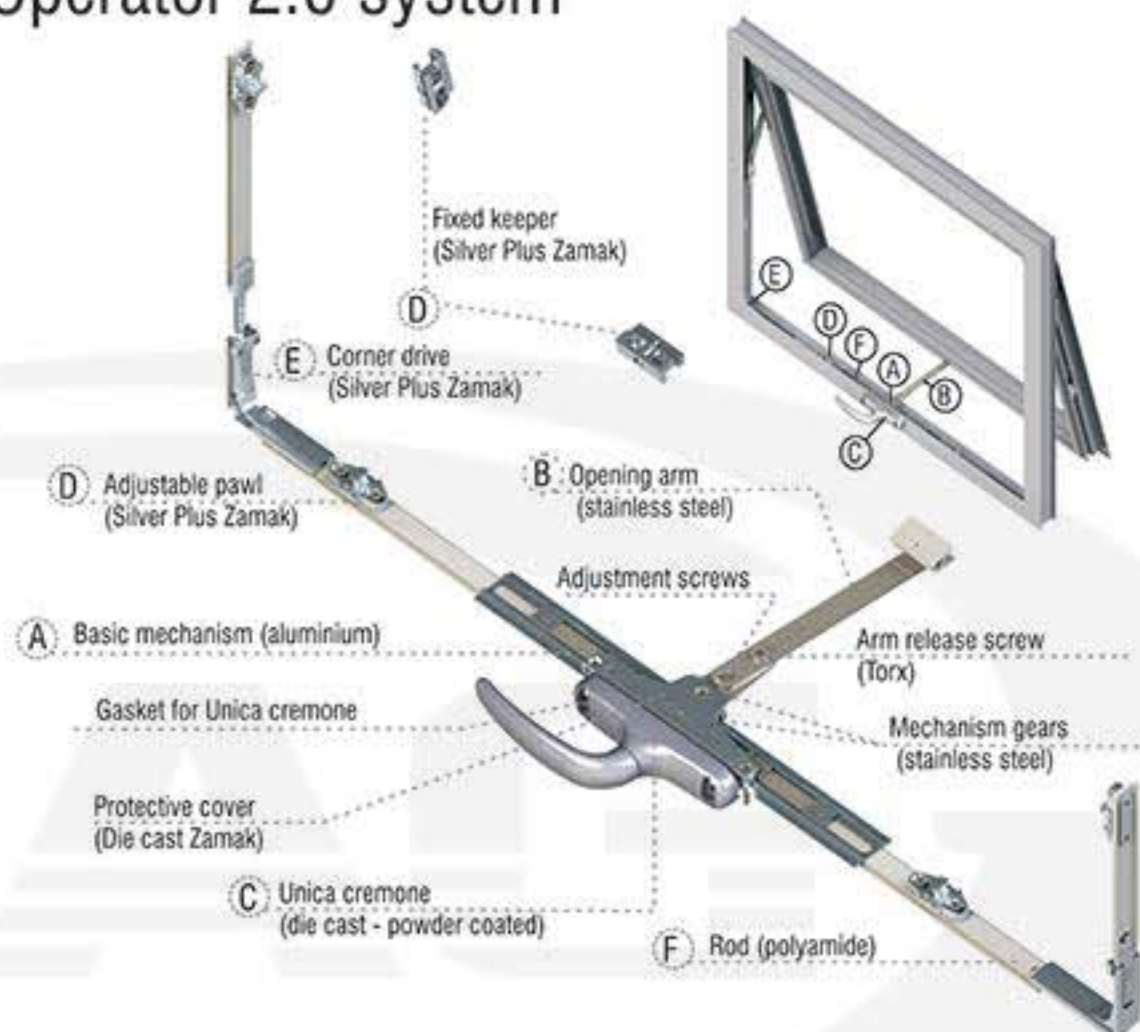
Depending on the particular design requirements, the adoption of a new and specific corner drive means that locking points can now be provided on the 2 sides of the sash lying at right angles to the cremone rod. The OS Operator system consists of 4 main accessories:

- A) Basic mechanism, item 02009, length 317 mm
- B) Arm, available in 2 lengths, 152 and 172 mm, selected according to the preferred distance of the sash from the frame when open;
- C) Unica cremone, available in various models according to the particular design requirements;

D) Locking points consisting of an adjustable pawl on the frame and fixed keeper on the sash, the number selectable according to the particular design requirements;

E) New corner drive now available, item 02066, compatible with frames having a 15/20 mm groove and designed to transmit the movement of the cremone rod to other sides of the window.

The mechanism and the various locking points are interconnected by a polyamide rod (F), item 03524, suitable for frames with 15/20 mm Euro groove.



	Description	Item code	Length of mechanism mm	Length of mechanism inches	Pieces per box	
A	Mechanism	OS Operator 2.0 basic mechanism	02009 000	317	12.480"	10
B	Arm	OS Operator arm - nylon slide - 172	02054 000	172	6 3/4"	10
		OS Operator arm - nylon slide - 152	02055 000	152	6"	10
		OS Operator arm - aluminium slide - 172	02064 000	172	6 3/4"	10
		OS Operator arm - aluminium slide - 152	02065 000	152	6"	10
C	Cremone	Unica cremone	01171...	120	4 23/32"	10
		Unica Key cremone	01172 ...	120	4 23/32"	10
		Long handle cremone	01128 ...	172	6 25/32"	10
		Away cremone (detachable handle)	01127 ...	/	/	10
		Handle for Unica Away cremone	01129 ...	172	6 25/32"	10
D	Locking point	Locking point (pawl + keeper)	02067 000			10
E	Corner cleat	Corner drive	02066 000			10
F	Connection rod	Rod cut from bulk roll, for 15/20 groove	03524 590 N (black)	200 m	656.17 ft	1
		Rod cut from bulk roll, for 15/20 groove	03524 542 N (grey)	200 m	656.17 ft	1
Other items	Gasket for Unica cremone	06951 000				100
	Set of wrenches for fixing OS Operator hardware	02003 000				20

GIESSE OS OPERATOR 2.0

Improving the appearance and performance of outward opening windows

Giesse has developed the revolutionary OS Operator system for outswing casement windows still further! No standing still for us - with the new 2.0 version, even more innovative features than before.

Introduction

In creating and designing the OS Operator mechanism, Giesse Research & Development has succeeded in simplifying the hardware offered currently by certain markets for side-hung and top-hung windows. Fixtures today are often

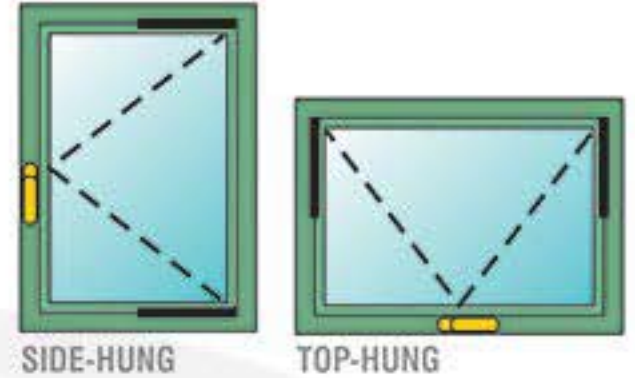
fitted with a mechanism known as a "window crank", consisting essentially of a lever that can be turned to push the sash open (and pull it shut). This operates in conjunction with an independent and separate locking

system (generally cam handles) used to secure the sash when closed.

What Giesse has done is to simplify these 2 conventional separate operations by combining them into a single movement of the

cremone handle.

If the window has a fly screen, the new function brings the added advantage that there is no need to open the screen in order to close the locking points.



SIDE-HUNG

TOP-HUNG

Advantages

- Corrosion-proof materials used
- A single mechanism for opening and closing the window realising all the locking points
- Number of locking points from 1 to 6, applicable on 3 sides
- Cremone gears and mechanism in stainless steel
- A wide range of cremones available for all requirements
- Mechanism tested up to 15,000 cycles (more than 12 years)

The System

The OS Operator 2.0 system is a set of accessories allowing the user to push a casement sash open (then pull it shut), and at the same time operate multiple locking points on three sides of the fixture.

The initial movement of the cremone handle (0°-60°) releases the locking

points; thereafter, as the handle is turned further (60°-180°), the internal mechanism turns an arm that will swing the sash open to a given angle, determined by the length of the arm.

From the open position, turning the handle in the opposite direction will close the sash and re-

engage the locking points.

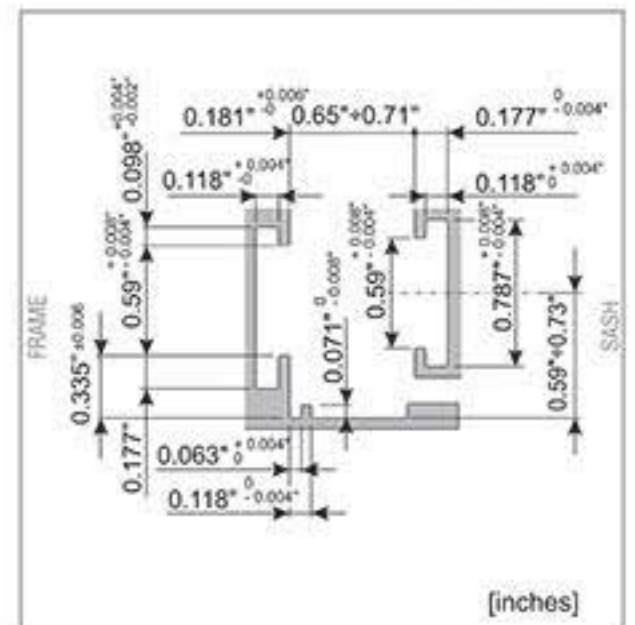
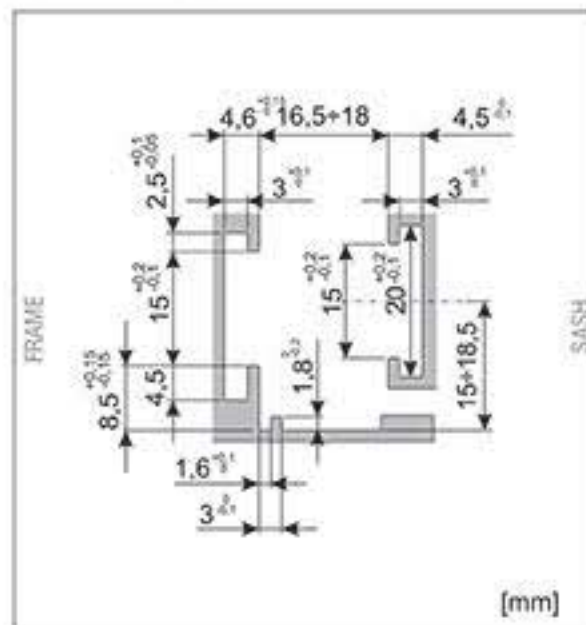
The System is suitable for both top hung and side hung windows and can be made to operate multiple locking points, from 1 to 6.

To enable installation, the frame and sash profiles must have a specific interface, as

indicated in the drawing.

The OS Operator 2 system simplifies and speeds up the job of the window manufacturer, improves the performance of the fixture, and is easy to use once installed.

OS Operator is a Giesse patented system.





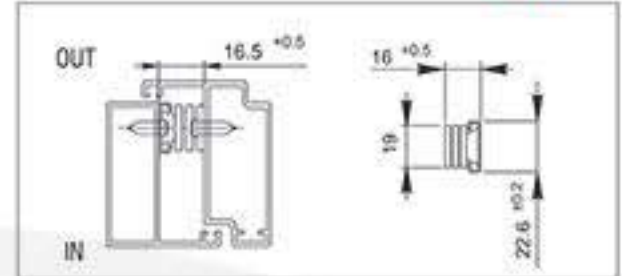
GHADIR ALUMINIUM IND. GROUP

GIESSE ARMS FOR OUTWARD OPENING

GS HD type "P" arms up to 180 kg



Giesse has developed a new arm 26" for TOP HUNG, able to reach 180 kg. With this new product Giesse has increased the performance for the TOP HUNG window.



GS HD TYPE "P"							DIMENSIONS FOR TOP HUNG		
DESCRIPTION ARM	Code Article	Opening System	F.Stay Width Dimen. (mm)	Stack Height (mm)	F.Stay Size (mm)	Opening Angle Max.	Height Vent From To. (mm)	Width Vent Max. (mm)	Max. Vent Weight (Kg)
GS HD - 26" 180 Type P	08348000	Top	23	16+0.5	690	20°	2000	1500	155
						7° (*)	2500 (*)	1700 (*)	180 (*)
GS HD - 10" Type P	08534000N	Top	23	16+0.5	261.5	35°	700	1200	50
GS HD - 12" Type P	08535000N	Top	23	16+0.5	317.5	30°/35°	800	1200	60
GS HD - 14" Type P	08536000N	Top	23	16+0.5	353.5	30°/35°	1000	1300	69.5
GS HD - 16" Type P	08537000N	Top	23	16+0.5	414.5	30°/35°	1200	1400	88.5
GS HD - 18" Type P	08538000N	Top	23	16+0.5	458.5	25°/30°	1400	1400	102
GS HD - 20" Type P	08539000N	Top	23	16+0.5	511.5	25°/30°	1600	1500	135
GS HD - 22" Type P	08540000N	Top	23	16+0.5	556.5	20°/25°	1700	1500	137
GS HD - 24" Type P	08541000N	Top	23	16+0.5	602.5	20°/25°	1800	1500	139
GS HD - 28" Type P	08542000N	Top	23	16+0.5	707.5	10°/15°/20°	2000	1500	155

(*) With the use of an additional limit arm.

On the basis of Giesse experience in the field of continuous facades, a new range of caliper

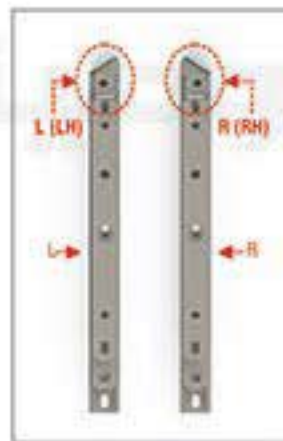
arms has been developed, specifically for Euro grooves. Their rugged and versatile de

sign make these articles ideal for use in outward opening windows of medium size and

weight, with Euro groove. Depending on the type of arm used, it is possible to make win

dows weighing up to 180 kg. The arms are tested according to specifica

tions of the technical standard: CEN/TS 13126-6: 2004 par. 7.6.

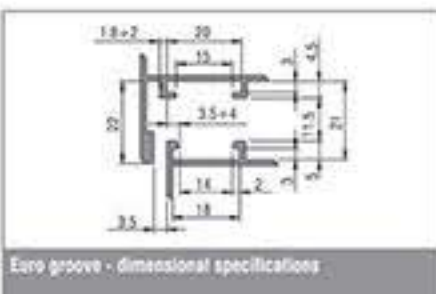


Top Hung (outwards opening)

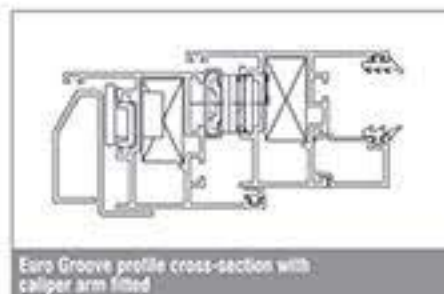
Code Giesse	Description	Arm dimensions		TOP/SIDE HUNG	Maximum sash dimensions		Capacity and max. opening		Material
		Inches	mm		Width mm	Height mm	Angle °	Load capacity KG	
08351	GACS 22" ARM - TYPE P - TOP HUNG - FAIR	22"	567	Top	1700	1500	20	100	AlSi 304
						≤ 1000	45°	80	
						> 1000 ≤ 1500	30° with extra limiter arm		
08352	GACS 28" ARM - TYPE P - TOP HUNG - FAIR	28"	711	Top	1700	2000	15	100	AlSi 304

Side Hung (outwards opening)

Code Giesse	Description	Arm dimensions		TOP/SIDE HUNG	Maximum sash dimensions		Capacity and max. opening		Material
		Inches	mm		Width mm	Height mm	Angle °	Load capacity KG	
08349	GACS 10" ARM - TYPE TS - TOP/SIDE HUNG - FAIR	10"	259	Top	1500	650	50	50	AlSi 304
				Side	660	1500	50 - 84	35	
08350	GACS 16" ARM - TYPE TS - TOP/SIDE HUNG - FAIR	16"	412	Top	1500	800	30	100	AlSi 304
							50	55	
				Side	760	1600	30 - 50 - 90	42	
					700		30	60	
							50 - 90	42	



Euro groove - dimensional specifications



Euro Groove profile cross-section with caliper arm fitted

FUTURA 3D 130 TILT-AND-TURN WINDOW

Increased applicable window dimensions

The product innovations that GIESSE has applied to its FUTURA 3D 130 Euro Groove tilt-and-turn window have enabled the application range of this piece of hardware to be extended to larger window dimensions so as to meet the evolving needs of architects, designers and consequently window manufacturers.

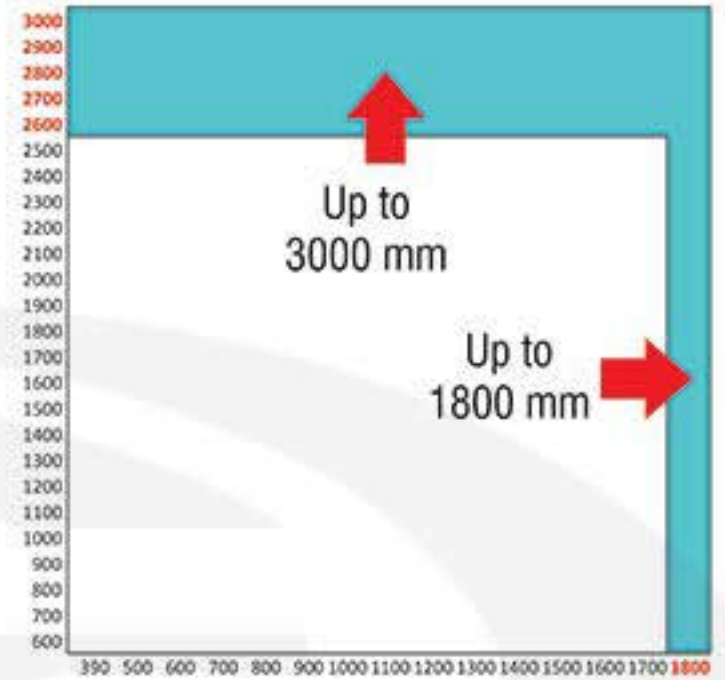
The hardware used on FUTURA 3D 130 tilt-and-turn windows can accommodate windows of maximum height 3000 mm and width 1800 mm

while delivering the same reliability and guaranteed load capacity as the previous range.

The load capacity of 130 kg is still guaranteed and the QM328 certification obtained by GIESSE at the IFT institute in Rosenheim has also been extended to cover this new range.

Strengths

- IFT Qm328 certification for the new sizes.
- The largest dimensions available on the market.
- Larger dimensions, guaranteed load capacity.



Increased application range for the T1 arm

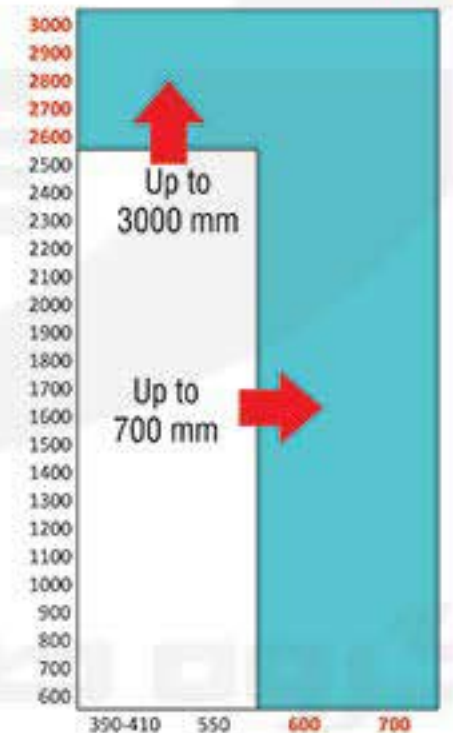
The same innovations that made it possible to extend the FUTURA 3D 130 hardware application range have also allowed the T1 short arm application to be extended to a maximum width of 700 mm, almost a third larger than the previous limit of 550 mm. Consequently, the T1, T1 micro, T1 Logica and T1





Logica-micro arms can be applied to windows with a maximum width of 700 mm.

The T1 and T2 arm ranges have been extended without altering the tilt-and-turn window's performance characteristics such as maximum guaranteed load capacity.

Strengths

- Expanded range for T1 arm, retaining the same performance features as the T2 arm.
- Improved warehouse stock management.
- Compatible with SPAZIO GIESSE formulas.



	Closure mechanism	Hinges	Arms	Driver
				
	10 pcs.	10 pcs.	10 pcs.	10 pcs.
FUTURA 3D 130	04704000 Mech.Traditional (Cremone)	04711... Hinges (3D 130)	04200000 Type 1 (130) 04201000 Type 2 (130)	01033K Prima Cremone 01090K Euro Cremone
	04705000 Mech.Traditional (window handle)	04711... Hinges (3D 130)	04200000 Type 1 (130) 04201000 Type 2 (130)	02484 Prima Window Handle 02460 Master Window Handle

GIESSE GREEN LEED

50 YEARS OF EXPERIENCE AND WORLDWIDE RECOGNITION

Giesse has been operating for almost half a century in the field of design, construction and sale of door and window hardware and mechanisms as testified by its countless references worldwide. Giesse's success is mainly due to its attention to product quality.

PRODUCTION PROCESS AND PRODUCT CERTIFICATIONS IN ACCORDANCE WITH THE MAIN INTERNATIONAL STANDARDS

- The Giesse quality system is based on continual improvement of processes and control systems and the search for new technologies capable of maintaining consistent product quality over time. In 1994 Giesse gained **ISO 9001:2008 certification** from TÜV Italia. In 2009 Giesse obtained **ISO 14001 Environmental Management System Certification** in accordance with UNI EN ISO 14001 regarding care for the environment in all company production processes.
- Our presence in all world markets through membership of various associations such as **AAMA, UNCSAAL and AWA** testifies to our knowledge of the specific regulations in force in each country.
- Giesse tests the performance of its accessories to international standards at its own research and testing laboratory using equipment validated by certification bodies for different countries' legislation.

ENERGY SAVING AND REDUCTION OF CO2

With regard to the process of optimizing energy resources and protecting the environment (the primary objectives of an environmental management system), Giesse launched the "LIGHT UP GIESSE LESS" project in 2006. This project aims to optimize energy consumption and protection of the environment which, until today, consists of:

Combined heat and power system

The combined heat and power system comprises a motor used to convert fuel (methane gas from the network) into mechanical energy. This motor is able to recover the thermal energy contained in outputs from the engine itself. A generator produces electrical energy using the mechanical energy of the motor. Using the new system Giesse was able to increase efficiency and therefore reduces CO2 emissions from the existing burners in the plant. The saving in primary energy (fuel), achieved through combined generation, reduces the emission of CO2 into the atmosphere by more than 40%. The project was completed and fully implemented as of April 2008.

Photovoltaic system covering the plant

The photovoltaic system is operating in Fossatone di Medicina plant since 2010. 3600 solar panels, covering a total area of 9000 square meters, have been installed. The clean energy generated allows GIESSE to prevent 388 tons of carbon dioxide emissions, saving 140 TOE (tons of oil equivalent) per year.

Research and development for the benefit of people and the environment

The research of materials with a low impact on the environment, but maintaining the high Quality Giesse standard, leads to the new ECO-sustainable finishing GS Silver Plus, a dedicated zamak finishing. All Giesse products are treated and painted in the internal system, using only dust-based, thermosetting, non-toxic paints. This allows Giesse to meet environmental standards as well as policies for the protection and safety of workers.

The use of quality raw materials, together with the application of all of the treatments introduced to date, ensures that Giesse products attain grade 4 rating according to standard EN 1670, in adherence with the European standards governing accessories for windows and doors.

LEED CREDITS®

- Giesse can contribute to LEED certification by providing documentation certifying that its products comply with the criteria for specific LEED® categories.



GSG International S.p.A.
quality management system certification
No. 50 100 8200



GSG International S.p.A.
environmental management system certification
No. 50 100 8502



- MR 2 Credit - Construction waste management
- MR 4 Credit - Recycled content
- MR 5 Credit - Materials extracted, harvested and manufactured within a certain distance of the project site (regional materials)

