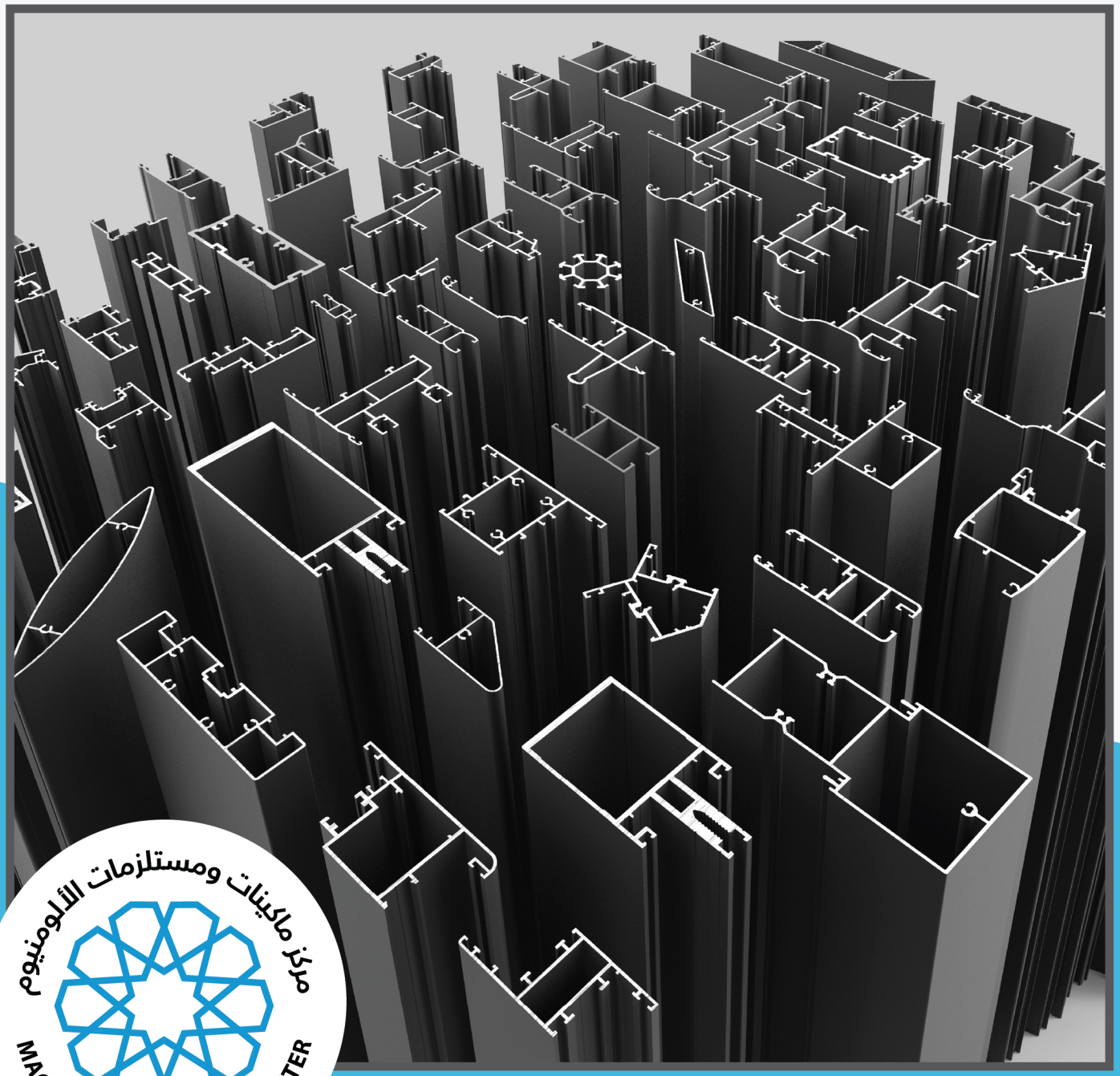
GENERAL CATALOGUE

Aluminum Profiles Systems



مركز ماكينات ومستلزمات الألومنيوم

MACHINES & ALUMINIUM CENTER

2026

Ver. 01

www.mac-alum.com

GENERAL CATALOGUE

Machines and Aluminum Center is an Egyptian based company established in the year 1981 and started its activity with aluminium applications in architectural and construction field.

They represent and cooperate with several leading European firms in field of aluminium business including aluminium fabrication machinery, accessories and hardware for architectural applications and different aluminium systems varying from windows and doors, up to facades and solar control.

Our goal is to supply our clients with whatever is needed to apply our aluminium systems in the building construction. We are specialized in supplying all required machinery, equipments, dies, punches, hardware and fittings for our aluminium systems.

We offer a wide range of products to local market and neighbor countries. Our product range includes windows and doors, partition systems, different façade solutions and the related integrated accessories.

We partner with our customers with value added services which means that with the help of our specialized team of engineers, we provide our clients with technical support to assist them in improving their product's quality.

We are committed to innovative and creative product design to fulfill all architectural requirements. Our products can meet the most exacting engineering and technical standards while overcoming sophisticated design challenges.

Machines & Aluminium Center

مركز ماكينات ومستلزمات الألومنيوم

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Materials

Aluminium Profiles:

All aluminium profiles are made of EN AW 6063 alloy in accordance with EN 755-1 or EN 12020-1, condition T5, T6. The alloy is resistant to corrosion and permits the production of high precision profiles according to EN 755-9.

Gaskets:

All rubber gaskets profiles are produced from ethylene-propylene rubber (EPDM) are used to seal infill units, window middle part in a hardness that suit its applications, ensuring condensate removal and frame-sash connection.

Accessories:

All systems are designed to use most of standard hardware. The hardware should be selected according to the minimum requirements mentioned in the system catalog.

Fixing elements:

All the connectors and fasteners used for profiles, accessories and hardware connection should be made from galvanized steel or stainless steel.

Surface treatment:

All exposed surfaces of the aluminium profiles is treated either by anodizing treatment (QUALANOD certified anodizing) or by electrostatic powder coating to meet international standards (QUALICOAT certified powder coating).

Technical Features

■ In all systems there are varieties available in types and dimensions.

■ Tolerances in weights & dimensions are according to standard EN 755-9, EN 12020-2 or ANSI H35.2-5.

■ The profiles provide a large range of infill types and measures, due to the availability of different profile types and a wide range of gaskets sizes.

■ Glazing gaskets inside and outside of E.P.D.M. all - around, gasket profiles visually are in the same level inside and outside to enhance the gasket visibility.

■ General compatibility of profiles, accessories and gaskets to hence fewer system accessories and reduced warehouse inventory.

■ Charts are available for each system and its profiles indicate allowable panel /sash sizes and the right profile regarding the effective moment of inertia, wind load and window's type to guarantee resistance avoiding any deformation greater than allowable deflection 1/200 of window span according to European Standard hEN 14351-1 under load 500 Pascal up to 1000 Pascal, and up to 2000 Pascal for curtain wall according to EN 13830, charts are available also if requested with deflection (1/175 max 19mm.) of window/façade span according to American Standard) AAMA/WDMA/ CSA 101/I.S.2.

■ Water resistance is confirmed to International standards, water tightness performance varies according to window type and system design with no water penetration under pressure up to 600 Pascal for sliding types, and not less than 900 Pascal for hinged window types and façade types.

■ Air permeability performance varies according to window type and system design, air permeability at pressure 100 Pascal is not greater than 2.25 cubic meter per hour per meter length of opening joint for sliding systems, and not greater than 0.75 cubic meter per hour of opening joint for hinged window types and not greater than 1.5 cubic meter per hour for each square meter of façade types.

Powder Coating

ALWAN is one of the largest facilities in Egypt, in the field of electrostatic application of pure-polyester powder coatings as surface treatment, specifically designed to meet stringent requirements of the construction industry for architectural and industrial aluminum profiles.

We guarantee complete customer satisfaction on all our delivered products. Every production line has a fully equipped laboratory in order to meet all international quality specifications and standards as set by the QUALICOAT organization. The certifications of QUALICOAT Quality Management ISO 9001 and Environmental Management ISO 14001, provide complete quality assurance. We ensure a full control over all the critical parameters concerning chemical pretreatment and the use of enhanced chemical pretreatment process, with high etching degree, in accordance to QUALICOAT specifications, as well as a full control on the painting processes and polymerization during the whole surface treatment procedure. Therefore, through a unique blending system, stringent quality assurance and compliance to measures, consistent quality during the production process is guaranteed.

The application of the above-mentioned steps will assist along the line with the overall excellent properties and the longevity of the color, providing an attractive finish to the projects and building components by ensuring gloss retention, color stability and corrosion protection.

Available Colors

In regards to the colors, they are available in RAL Gloss & RAL matt. The gloss affects how the eye perceives color so some slight variations in the finish may occur. In addition to that, the coating provides a wide range of custom-made colors that gives a variety of effects, including metallic effects.

Most of the colors are available in standard durable and some are available in super durable, which complies with advanced levels of weather resistance, gloss and color retention, and corrosion resistance, when compared to the standard durable specification.

Color customization to our standard products may be available on a request basis, with unlimited options of powder coating. In this respect, Non-standard designs and applications can be reviewed to determine the feasibility on a project-specific basis.

Warranty

The warranty is subject to terms and conditions based on the geographical location & when used on an architectural aluminum substrate.

Standard Durable Class 1: Up to 10 years

Super Durable Class 2: Up to 25 years

Notes:

• As the products are very often used under conditions beyond supplier's control, we cannot guarantee anything but the quality of the product itself.

• It is expected that any fading and/or chalking and/or change in gloss retention, either uniform or non-uniform that a color will experience in the field will result in the falling within acceptable range as specified in the Qualicoat specification standards.

*QUALICOAT is a quality label organization committed to maintaining and promoting the quality of lacquering, painting and coating on aluminum and its alloys, for architectural applications.

CERTIFICATE

for a **COATING APPLICATOR**

QUALICOAT

Inspired by architecture, trusted by professionals

hereby authorises

MACHINES & ALUMINIUM CENTER
12581 6th of October City, Egypt

to use the Quality Label in conformity with the QUALICOAT 2026 Specifications, applicable from 1 January 2026.

The licence is valid for coatings produced at MACHINES & ALUMINIUM CENTER on the coating line(s) as listed below:

No.	Line	Endorsement
1	1– Vertical co...	No endorsement
2		
3		
4		
5		

Licence No.: 1609

Date of Granting: 06.05.2021

Valid until: 31.12.2026

ZÜRICH, 18 DECEMBER 2025

Ivo Vermeeren
President

Coby Armar
Secretary General

QUALICOAT | Tödistrasse 48, 8002 Zurich, Switzerland | www.qualicoat.net

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that Quality Management System of

Machines& Aluminium center

Office: Street No.75, Piece No. 32, 1st Industrial Zone, 6th of October City, Egypt.
Site: Piece No. 213, 2nd Industrial Zone, 6th of October city, Egypt.

Has been successfully assessed as per the requirements of

ISO 9001:2015

For the scope of

Trading, Treatment and Painting of Aluminum Profile

Initial Certification Date: 07-06-2021
Certificate Issue Date: 07-06-2021
Surveillance Validity Date: 06-06-2022
Recertification Date: 06-06-2024

Registration Number: IC-QM-2106051

Issued on behalf of InterCert
Head - Certifications

The validity of this certificate can be verified at **www.intercert.com** or through email at **info@intercert.com**. This certificate is the property of INTERCERT and must be returned on request. Accreditation details are available with IAS, (International Accreditation Services) Inc. USA at **www.iasonline.org**

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Environmental Management System of

Machines & Aluminium center

Office: Street No.75, Piece No. 32, 1st Industrial Zone, 6th of October City, Egypt.
Site: Piece No. 213, 2nd Industrial Zone, 6th of October city, Egypt.

Has been successfully assessed as per the requirements of

ISO 14001:2015

For the scope of

Trading, Treatment and Painting of Aluminum Profile

Initial Certification Date: 07-06-2021
Certificate Issue Date: 07-06-2021
Surveillance Validity Date: 06-06-2022
Recertification Date: 06-06-2024

Registration Number: IC-EM-2106052

Issued on behalf of InterCert
Head - Certifications

The validity of this certificate can be verified at **www.intercert.com** or through email at **info@intercert.com**. This certificate is the property of INTERCERT and must be returned on request. Accreditation details are available with IAS, (International Accreditation Services) Inc. USA at **www.iasonline.org**

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Occupational Health & Safety Management System of

Machines& Aluminium center

Office: Street No.75, Piece No. 32, 1st Industrial Zone, 6th of October City, Egypt.
Site: Piece No. 213, 2nd Industrial Zone, 6th of October city, Egypt.

Has been successfully assessed as per the requirements of

ISO 45001:2018

For the scope of

Trading, Treatment and Painting of Aluminum Profile

Initial Certification Date: 07-06-2021
Certificate Issue Date: 07-06-2021
Surveillance Validity Date: 06-06-2022
Recertification Date: 06-06-2024

Registration Number: IC-OS-2106053

Issued on behalf of InterCert
Head - Certifications

The validity of this certificate can be verified at **www.intercert.com** or through email at **info@intercert.com**. This certificate is

Interpon
POWDER COATINGS
AkzoNobel

Interpon D Approved Applicator

Series D1000

MACHINES AND ALUMINIUM CENTER
(Alwan)
213, 2rd industrial Zone, 6th of October City, Giza
Egypt

Has fulfilled AkzoNobel's tests and inspection regarding the pre-treatment, application, quality management standards and procedures, and complies with the requirements of the Architectural Range Approved Applicator schedule.

This certificate is effective from
12th October 2022 to 11th October 2023

Approved for Aluminium Alloys: AA6060

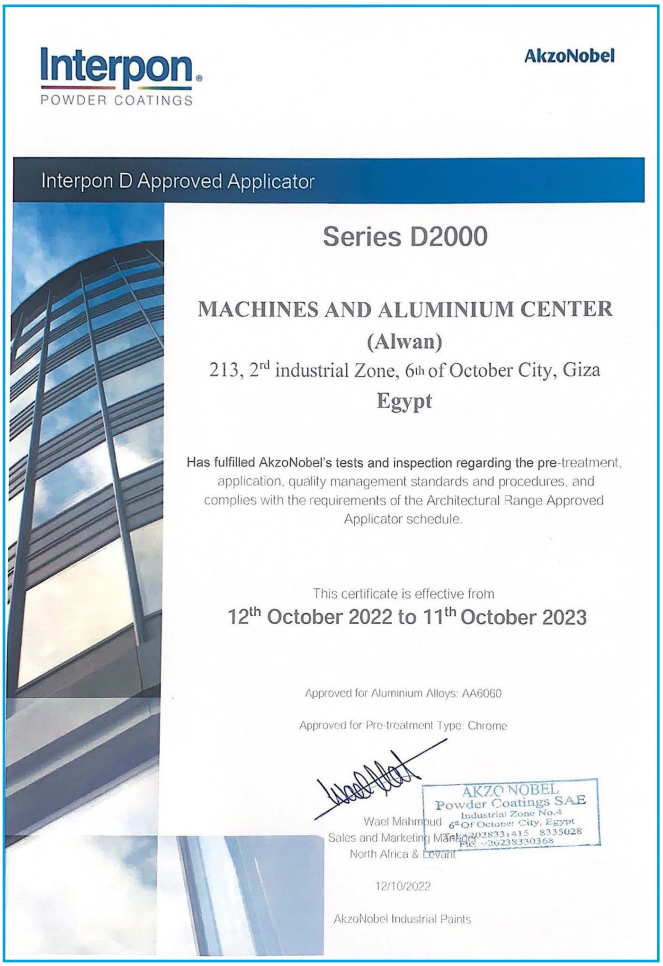
Approved for Pre-treatment Type: Chrome

AKZO NOBEL
Powder Coatings SAE
Industrial Zone No.4
6th Of October City, Egypt
Tel:+2023831415 - 8335028
Fax:+20238330368

Wael Mahmoud
Sales and Marketing Manager
North Africa & Levant

12/10/2022

AkzoNobel Industrial Paints



Interpon
POWDER COATINGS
AkzoNobel

Interpon D Approved Applicator

Series D2000

MACHINES AND ALUMINIUM CENTER
(Alwan)
213, 2rd industrial Zone, 6th of October City, Giza
Egypt

Has fulfilled AkzoNobel's tests and inspection regarding the pre-treatment, application, quality management standards and procedures, and complies with the requirements of the Architectural Range Approved Applicator schedule.

This certificate is effective from
12th October 2022 to 11th October 2023

Approved for Aluminium Alloys: AA6060

Approved for Pre-treatment Type: Chrome

AKZO NOBEL
Powder Coatings SAE
Industrial Zone No.4
6th Of October City, Egypt
Tel:+2023831415 - 8335028
Fax:+20238330368

Wael Mahmoud
Sales and Marketing Manager
North Africa & Levant

12/10/2022

AkzoNobel Industrial Paints

JOTUN

Certificate of Approval

Machines & Aluminium Center
(ALWAN)

is certified as an Approved Applicator to coat

Jotun SuperDurable

a product from Jotun Powder Coatings

This Company fulfils the requirements set by Jotun Powder Coatings for pre-treatment and application of powder coatings. These include having the necessary equipment, process controls and technical knowledge to comply with Jotun Powder Coatings' standards.

December 31, 2025
(Certificate valid until above date)

Authorised Signatory
Jotun Powder Coatings UAE (LLC)

JOTUN

Certificate of Approval

Machines & Aluminium Center
(ALWAN)

is certified as an Approved Applicator to coat

Jotun Durasol

a product from Jotun Powder Coatings

This Company fulfils the requirements set by Jotun Powder Coatings for pre-treatment and application of powder coatings. These include having the necessary equipment, process controls and technical knowledge to comply with Jotun Powder Coatings' standards.

December 31, 2025
(Certificate valid until above date)

Authorised Signatory
Jotun Powder Coatings UAE (LLC)

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10401100	Frame Profile	0.667	254	5.57	3.40	63
10401130	Frame Profile	0.875	369	7.88	9.42	63
10401131	Frame Profile	0.918	369	10.62	9.56	63
10401132	Frame Profile	0.937	381	10.44	11.45	63
10401150	Frame Profile	0.834	408	18.89	7.87	64
10401152	Frame Profile	1.055	442	12.75	25.48	64
10401153	Frame Profile	1.034	457	12.29	24.96	64
10401158	Frame Profile	1.016	437	11.69	23.49	64
10401200	Frame Profile	0.813	287	7.59	9.17	65
10401230	Frame Profile	1.026	402	9.86	19.18	65
10401420	Frame Profile	0.953	373	9.83	7.33	65
10402062	Frame Profile	0.940	355	11.20	6.06	65
10404010	Leaf Profile	0.832	344	7.34	6.75	66
10404020	Leaf Profile	0.978	377	9.31	15.29	66
10404143	Leaf Profile	0.813	340	6.46	7.09	66
10404153	Leaf Profile	0.739	327	6.66	6.64	66
10404210	Leaf Profile	0.832	344	7.34	6.75	67
10404220	Leaf Profile	0.978	377	8.74	15.28	67
10405120	Transom Profile	1.030	377	8.55	15.83	67
10405130	Transom Profile	1.493	501	15.19	101.08	68
10405330	Bottom rail	1.647	540	17.46	121.74	68
10406170	Glass Beading Profile	0.230	153	0.62	0.55	68
10406230	Glass Beading Profile	0.245	161	0.83	0.64	68
10409430	Insert Profile	0.494	265	3.71	2.02	68
10409610	Insert Profile	0.875	319	7.19	6.80	67
10411130	Frame Profile	0.773	333	7.03	8.35	56
10411150	Frame Profile	0.874	392	8.07	19.37	56
10411153	Frame Profile	0.935	428	11.13	23.47	56
10411200	Frame Profile	0.708	273	6.12	6.17	56
10411250	Frame Profile	0.948	412	9.07	26.24	57
10411421	Frame Profile	0.909	365	9.30	7.21	57
10412051	Frame Profile	0.819	307	9.63	3.83	57
10412061	Frame Profile	0.875	323	12.95	3.97	57
10412071	Frame Profile	0.939	343	18.62	4.14	57
10414110	Leaf Profile	0.720	320	6.34	5.51	58
10414119	Leaf Profile	0.801	364	9.12	6.98	58
10414120	Leaf Profile	0.771	340	7.11	9.18	58
10414143	Leaf Profile	0.830	323	6.56	7.56	58
10414153	Leaf Profile	0.797	324	6.73	6.76	58
10414210	Leaf Profile	0.706	320	5.72	5.36	59
10414220	Leaf Profile	0.771	340	6.66	9.18	59
10415120	Transom Profile	0.905	343	7.36	13.54	59

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10415130	Transom Profile	1.360	471	13.67	92.43	60
10415330	Bottom Profile	1.482	528	15.25	111.20	60
10416120	Glass Beading Profile	0.263	172	0.68	0.54	60
10416160	Glass Beading Profile	0.204	138	0.29	0.46	60
10419610	Insert Profile	0.820	332	6.61	5.00	59
10451100	Frame Profile	0.764	264	7.75	3.66	25
10451110	Frame Profile	0.790	280	7.58	3.76	25
10451130	Frame Profile	0.966	370	10.50	9.20	25
10451131	Frame Profile	1.017	384	14.25	9.26	25
10451132	Frame Profile	1.040	390	13.93	11.91	26
10451138	Frame Profile	1.015	374	13.09	10.98	26
10451150	Frame Profile	1.099	430	12.49	21.80	26
10451152	Frame Profile	1.158	440	16.78	26.17	26
10451153	Frame Profile	1.196	467	18.45	29.01	27
10451157	Frame Profile	1.100	436	12.41	21.51	27
10451170	Frame Profile	1.172	462	13.40	34.86	27
10451200	Frame Profile	1.042	318	11.63	13.80	28
10451230	Frame Profile	1.220	410	14.50	23.86	28
10451420	Frame Profile	1.064	382	12.78	8.07	28
10451520	Frame Profile	1.320	422	18.10	23.07	28
10451810	Frame Profile	0.751	257	3.66	7.42	28
10451850	Frame Profile	1.097	433	21.82	10.46	27
10452062	Frame Profile	0.995	357	12.24	6.13	29
10452082	Frame Profile	1.345	448	32.92	7.18	29
10452102	Frame Profile	1.539	492	60.09	8.06	29
10452122	Frame Profile	1.612	509	87.32	8.26	30
10452152	Frame Profile	2.100	609	171.52	9.42	30
10452672	Frame Profile	1.523	398	26.75	7.06	31
10452682	Frame Profile	1.592	418	36.12	7.39	31
10453230	Frame Profile	1.155	369	13.86	21.70	32
10453250	Frame Profile	1.226	416	15.05	37.85	32
10453611	Frame Profile	1.428	464	27.88	11.34	33
10453616	Frame Profile	1.428	464	26.12	11.34	33
10453619	Frame Profile	1.835	525	63.12	16.94	34
10453623	Frame Profile	1.839	482	65.31	13.56	35
10453692	Frame Profile	1.792	504	65.31	17.54	34
10453700	Frame Profile	1.420	377	20.04	22.55	32
10453720	Frame Profile	1.478	414	19.19	24.76	32
10454040	Leaf Profile	1.080	345	10.75	9.65	36
10454100	Leaf Profile	0.929	330	12.51	6.02	36
10454112	Leaf Profile	0.986	357	12.94	7.52	36
10454119	Leaf Profile	0.996	362	13.20	7.83	36

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10454121	Leaf Profile	1.297	401	16.72	16.91	37
10454122	Leaf Profile	1.223	405	17.14	17.27	37
10454129	Leaf Profile	1.149	399	15.92	14.89	37
10454143	Leaf Profile	1.130	362	13.45	10.72	37
10454147	Leaf Profile	1.187	374	14.34	11.66	38
10454153	Leaf Profile	1.126	364	14.51	9.78	38
10454157	Leaf Profile	1.144	373	15.26	10.46	38
10454163	Leaf Profile	1.395	384	19.18	16.59	38
10454181	Leaf Profile	1.253	378	16.67	16.09	39
10454182	Leaf Profile	1.167	378	15.98	16.07	39
10454210	Leaf Profile	0.906	323	9.14	6.33	39
10454220	Leaf Profile	1.064	363	12.21	17.54	39
10454240	Leaf Profile	1.129	351	11.30	11.77	40
10454250	Leaf Profile	1.090	351	11.67	10.72	40
10454320	Leaf Profile	1.438	451	19.38	29.53	40
10454370	Leaf Profile	0.918	336	9.15	6.72	40
10454610	Leaf Profile	1.080	329	12.97	17.34	41
10454620	Leaf Profile	1.080	329	12.47	17.34	41
10454652	Leaf Profile	1.210	367	18.20	21.18	41
10454662	Leaf Profile	1.213	367	21.18	17.27	41
10454750	Leaf Profile	1.570	430	22.30	31.26	42
10454754	Leaf Profile	1.638	434	23.87	42.27	42
10454760	Leaf Profile	1.570	430	21.08	31.26	42
10454764	Leaf Profile	1.639	434	23.00	42.27	42
10454790	Leaf Profile	1.778	413	23.42	38.67	43
10454793	Leaf Profile	1.754	416	22.13	36.66	43
10454810	Leaf Profile	1.086	323	12.92	16.08	43
10454820	Leaf Profile	1.491	359	17.29	33.51	43
10455010	Transom Profile	0.926	354	6.81	8.90	44
10455020	Transom Profile	1.144	373	11.54	19.14	44
10455030	Transom Profile	1.785	492	22.11	116.14	45
10455120	Transom Profile	1.242	393	12.03	19.30	44
10455130	Transom Profile	1.890	512	21.97	123.61	45
10455140	Transom Profile	2.163	572	27.62	222.27	46
10455170	Transom Profile	1.204	355	9.29	17.71	46
10455190	Transom Profile	1.204	355	14.79	10.39	46
10455330	Bottom Rail Profile	1.987	549	143.19	24.28	47
10455340	Bottom Rail Profile	2.268	609	250.72	29.89	47
10455520	Transom Profile	1.768	469	47.79	29.84	44
10456110	Glass Beading Profile	0.289	173	1.02	0.68	48
10456130	Glass Beading Profile	0.270	163	0.75	0.65	48
10456140	Glass Beading Profile	0.262	159	0.64	0.62	48

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10456142	Glass Beading Profile	0.246	148	0.55	0.56	48
10456145	Glass Beading Profile	0.240	145	0.44	0.56	48
10456160	Glass Beading Profile	0.251	152	0.40	0.59	48
10456180	Glass Beading Profile	0.211	138	0.28	0.51	48
10456182	Glass Beading Profile	0.206	126	0.24	0.42	48
10456290	Glass Beading Profile	0.227	118	0.17	0.58	48
10456292	Glass Beading Profile	0.186	91	0.16	0.38	48
10457181	Frame Profile	1.515	502	44.88	12.04	35
10459010	Insert Profile	0.116	84	0.30	0.02	49
10459110	Insert Profile	0.540	242	4.78	1.01	49
10459120	Insert Profile	0.356	187	0.46	1.20	49
10459140	Insert Profile	0.629	239	5.20	1.04	49
10459210	Insert Profile	0.221	102	0.89	0.06	49
10459240	Insert Profile	1.031	283	10.85	4.97	49
10459410	Insert Profile	0.824	285	7.64	5.29	50
10459420	Insert Profile	0.807	282	7.52	5.23	50
10459430	Insert Profile	0.540	278	4.97	2.03	49
10459440	Insert Profile	0.541	260	3.68	0.58	49
10459510	Insert Profile	1.045	345	11.99	17.10	50
10459520	Insert Profile	1.242	387	14.74	34.62	50
10459521	Insert Profile	1.199	379	14.69	34.63	50
10459570	Insert Profile	0.359	177	2.18	0.10	51
10459610	Insert Profile	0.853	310	8.32	5.14	51
10459620	Insert Profile	0.670	199	5.09	2.24	51
10459630	Insert Profile	0.902	268	7.06	3.80	51
10459810	Insert Profile	0.591	174	3.60	0.50	51
10459910	Control Rod	0.146	48	0.19	0.01	51
10459920	Control Rod	0.113	41	0.09	0.00	51
10611100	Frame Profile	1.103	345	18.37	6.20	5
10611110	Frame Profile	1.031	341	18.36	5.75	5
10611130	Frame Profile	1.245	426	23.65	12.10	5
10611138	Frame Profile	1.315	449	29.93	13.80	5
10611150	Frame Profile	1.387	490	27.49	25.59	6
10611152	Frame Profile	1.451	518	34.46	30.88	6
10611153	Frame Profile	1.474	534	36.80	33.80	6
10611158	Frame Profile	1.431	506	35.25	28.58	6
10611200	Frame Profile	1.291	407	25.74	21.04	7
10611210	Frame Profile	1.270	404	25.76	20.57	7
10611300	Frame Profile	1.342	414	28.27	32.36	7
10611320	Frame Profile	1.459	464	30.33	39.34	7
10611810	Frame Profile	1.122	362	18.02	6.25	8
10612082	Frame Profile	1.437	459	36.25	9.05	8

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10612088	Frame Profile	1.577	521	37.87	21.24	10
10612103	Frame Profile	1.719	434	71.20	17.15	8
10613000	Frame Profile	1.248	409	21.17	16.82	9
10613010	Frame Profile	1.290	431	21.64	17.35	9
10613030	Frame Profile	1.403	500	27.93	25.00	9
10613038	Frame Profile	1.458	513	34.61	27.20	9
10613050	Frame Profile	1.510	549	31.90	40.83	10
10613052	Frame Profile	1.593	581	40.00	47.38	10
10614122	Leaf Profile	1.585	459	37.46	23.84	11
10614140	Leaf Profile	1.549	408	30.78	14.22	11
10614150	Leaf Profile	1.474	421	30.37	12.15	11
10614220	Leaf Profile	1.454	468	28.75	27.64	11
10614410	Leaf Profile	1.108	343	17.96	8.56	12
10614430	Leaf Profile	1.211	343	17.41	7.81	12
10614460	Leaf Profile	1.356	360	22.36	9.95	12
10614480	Leaf Profile	1.269	359	21.13	8.53	12
10614517	Leaf Profile	1.013	316	6.73	8.94	13
10614527	Leaf Profile	0.952	308	6.72	8.05	13
10614567	Leaf Profile	1.049	334	7.85	10.04	13
10614587	Leaf Profile	1.154	362	9.60	19.61	13
10614597	Leaf Profile	1.071	381	9.51	17.10	13
10614759	Leaf Profile	2.258	459	32.72	66.66	14
10614769	Leaf Profile	2.258	459	31.60	66.66	14
10614959	Leaf Profile	1.715	414	24.99	32.61	14
10614969	Leaf Profile	1.715	414	23.70	32.61	14
10615020	Transom Profile	1.372	469	26.23	26.58	15
10615110	Transom Profile	1.264	426	21.97	10.73	15
10615120	Transom Profile	1.515	469	28.59	27.88	15
10615130	Transom Profile	1.773	529	36.76	74.90	15
10615140	Transom Profile	2.204	627	49.97	217.19	16
10615340	Transom Profile	2.295	650	54.93	255.60	16
10615710	Transom Profile	1.353	479	22.62	19.29	17
10615720	Transom Profile	1.600	518	29.32	36.97	17
10615760	Transom Profile	1.623	553	27.87	41.08	18
10615910	Transom Profile	2.025	558	67.31	31.03	18
10616140	Glass Beading Profile	0.402	235	2.58	1.24	19
10616160	Glass Beading Profile	0.370	221	2.04	1.18	19
10616170	Glass Beading Profile	0.337	204	1.17	1.08	19
10616180	Glass Beading Profile	0.324	197	0.93	1.04	19
10616190	Glass Beading Profile	0.311	189	0.55	0.97	19
10616192	Glass Beading Profile	0.296	181	0.42	0.90	19
10616193	Glass Beading Profile	0.268	164	0.32	0.77	19

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
10616195	Glass Beading Profile	0.211	102	0.21	0.63	19
10616500	Glass Beading Profile	0.142	71	0.07	0.15	19
10619110	Insert Profile	0.769	349	13.05	2.16	20
10619120	Insert Profile	0.329	173	0.42	0.79	20
10619211	Insert Profile	0.773	256	8.47	2.75	20
10619253	Insert Profile	0.751	262	2.44	8.04	20
10619352	Transom Profile	1.112	346	7.62	19.50	20
10619410	Insert Profile	0.518	159	3.63	0.97	20
10619510	Insert Profile	0.703	323	10.02	4.08	20
10619530	Insert Profile	1.200	377	23.46	11.85	20
10619610	Insert Profile	1.345	399	23.12	9.97	21
10619620	Insert Profile	0.707	246	3.63	2.68	21
10619670	Insert Profile	1.650	524	28.38	32.92	21
10619702	Transom Profile	1.595	438	25.51	48.84	22
10619810	Glass Beading Profile	0.439	246	0.85	2.99	21
10619820	Insert Profile	0.399	135	0.81	1.10	21
10619830	Insert Profile	0.161	71	0.08	0.11	21
20551310	Frame Profile	0.816	352	10.73	3.74	149
20551330	Frame Profile	0.936	427	13.89	9.04	149
20551336	Frame Profile	0.926	426	13.70	8.88	149
20551356	Frame Profile	1.039	568	27.02	22.46	149
20551410	Frame Profile	0.971	427	19.60	4.23	150
20551436	Frame Profile	1.088	502	24.01	9.83	150
20551450	Frame Profile	1.199	569	27.09	22.64	150
20551456	Frame Profile	1.194	568	27.02	22.46	150
20551900	Frame Profile	1.607	634	93.76	7.08	152
20552410	Frame Profile	0.978	436	19.71	3.73	151
20552420	Frame Profile	1.038	460	19.85	3.95	151
20552430	Frame Profile	1.114	526	24.62	9.52	151
20552450	Frame Profile	1.246	574	27.92	21.98	151
20554210	Leaf Profile	0.608	313	1.93	6.78	152
20554216	Leaf Profile	0.600	307	1.87	6.65	152
20554416	Leaf Profile	0.745	342	4.01	6.99	152
20555210	Transom Profile	0.628	238	1.17	6.90	152
20559510	Insert Profile	0.254	151	0.58	0.97	152
20559610	Insert Profile	0.232	88	0.23	0.46	152
20601020	Frame Profile	1.037	330	10.44	7.12	133
20601130	Frame Profile	1.320	484	28.01	14.78	133
20601150	Frame Profile	1.453	528	31.11	31.70	133
20601320	Frame Profile	1.229	412	18.24	8.16	133
20601330	Frame Profile	1.272	455	20.03	15.50	134
20601350	Frame Profile	1.391	519	21.75	31.24	134

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
20601420	Frame Profile	1.469	501	35.48	9.09	134
20601430	Frame Profile	1.550	590	41.15	17.19	134
20601432	Frame Profile	1.650	617	46.59	20.64	135
20601450	Frame Profile	1.663	609	43.93	33.94	135
20601452	Frame Profile	1.750	629	51.41	41.11	136
20601553	Frame Profile	1.760	719	61.06	39.03	136
20601820	Frame Profile	1.725	580	65.74	13.13	136
20601920	Frame Profile	2.315	772	170.87	13.81	137
20601930	Frame Profile	2.457	849	190.51	22.33	137
20602120	Frame Profile	1.279	444	24.48	7.38	137
20602320	Frame Profile	1.173	450	17.47	7.02	138
20602352	Frame Profile	1.498	610	26.66	36.27	138
20602400	Frame Profile	1.419	542	36.27	8.13	138
20602403	Frame Profile	1.404	508	36.75	8.52	139
20602410	Frame Profile	1.394	524	35.68	7.79	139
20602420	Frame Profile	1.422	540	34.43	8.05	139
20602432	Frame Profile	1.623	653	45.80	19.41	140
20602450	Frame Profile	1.645	645	44.00	32.83	140
20602452	Frame Profile	1.725	666	51.31	39.88	141
20602453	Frame Profile	1.718	686	51.26	38.85	141
20602520	Frame Profile	1.570	580	46.96	9.30	142
20602820	Frame Profile	1.683	620	53.33	9.51	142
20602920	Frame Profile	2.320	810	168.42	12.41	142
20604110	Leaf Profile	0.942	409	4.47	12.66	143
20604113	Leaf Profile	0.965	402	4.37	12.60	143
20604220	Leaf Profile	0.883	371	4.36	10.68	143
20604310	Leaf Profile	1.169	460	10.62	14.58	143
20604420	Leaf Profile	1.107	417	10.41	13.11	143
20604510	Leaf Profile	1.060	430	5.18	20.05	144
20604613	Leaf Profile	1.048	423	5.07	19.93	144
20604620	Leaf Profile	1.000	387	5.10	17.36	144
20605110	Transom Profile	0.813	297	1.96	10.73	144
20605220	Transom Profile	0.861	274	4.11	9.78	144
20609210	Insert Profile	0.102	47	0.02	0.02	145
20609220	Insert Profile	0.088	45	0.01	0.02	145
20609510	Insert Profile	0.316	173	0.96	1.55	145
20609520	Insert Profile	0.358	191	1.01	2.38	145
20609620	Insert Profile	0.252	61	0.20	0.31	145
20609710	Insert Profile	0.531	139	1.10	1.64	145
20609910	Control Rod	0.164	92	0.21	0.08	145
20702110	Frame profile	0.957	387	21.91	3.72	126
20702308	Frame profile	0.962	382	19.08	3.85	126

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
20702330	Frame profile	1.104	461	22.85	8.96	126
20702350	Frame profile	1.210	520	25.42	20.34	126
20702408	Frame profile	1.133	461	34.47	4.46	127
20702418	Frame profile	1.173	476	35.71	4.55	127
20702450	Frame profile	1.369	585	45.02	21.87	128
20702710	Frame profile	1.748	658	116.71	6.50	128
20704116	Leaf profile	0.896	429	4.72	15.34	129
20704210	Leaf profile	0.905	435	4.98	16.60	129
20704216	Leaf profile	0.853	405	4.62	14.45	129
20704226	Leaf profile	0.856	378	4.50	12.71	129
20704410	Leaf Profile	1.168	487	12.19	18.52	130
20704416	Leaf profile	1.115	457	11.77	15.96	130
20704420	Leaf Profile	1.131	459	12.06	17.05	130
20704426	Leaf profile	1.081	429	11.56	14.56	130
20705210	Transom Profile	0.714	271	2.29	8.48	129
20709510	Insert profile	0.327	194	1.12	1.90	129
20802220	Frame Profile	1.291	527	5.27	27.56	121
20802420	Frame Profile	1.709	519	14.19	43.63	121
20802620	Frame Profile	1.864	742	7.41	89.74	121
20803220	Frame Profile	0.888	421	1.33	25.07	122
20803420	Frame Profile	0.775	372	0.97	23.47	122
20803620	Leaf Profile	1.020	464	1.08	67.85	122
20804110	Leaf Profile	0.859	324	5.58	10.86	123
20804220	Leaf Profile	0.797	293	5.42	8.96	123
20804310	Leaf Profile	0.851	259	5.99	6.24	123
20804420	Leaf Profile	0.791	230	6.00	5.04	123
20804510	Leaf Profile	0.778	375	8.25	3.77	123
20804620	Leaf Profile	0.713	346	6.69	3.56	123
20805210	Transom Profile	1.013	317	18.49	4.48	123
20805220	Transom Profile	0.877	260	12.73	4.06	123
20809240	Insert Profile	0.156	82	0.00	0.00	122
20809610	Insert Profile	0.297	127	0.67	0.26	122
20842337	Frame Profile	1.779	641	50.79	19.82	109
20842407	Frame Profile	1.892	654	67.79	14.41	109
20842420	Frame Profile	1.931	678	68.14	14.71	110
20842428	Frame Profile	1.938	682	68.80	14.91	110
20842430	Frame Profile	1.993	719	75.60	21.41	111
20842437	Frame Profile	2.022	727	77.62	21.84	111
20842457	Frame Profile	2.157	798	86.02	39.47	112
20842520	Frame Profile	1.978	675	82.08	14.94	112
20842820	Frame Profile	2.283	785	133.05	17.30	113
20842928	Frame Profile	2.935	1011	291.66	22.59	113

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
20844117	Leaf Profile	1.115	445	6.97	21.00	114
20844118	Leaf Profile	1.131	447	7.21	21.79	114
20844130	Leaf Profile	1.073	423	7.13	19.23	114
20844217	Leaf Profile	1.091	432	6.86	20.45	114
20844220	Leaf Profile	1.060	412	7.10	18.77	114
20844227	Leaf Profile	1.066	420	6.99	18.94	114
20844228	Leaf Profile	1.073	421	7.05	19.20	115
20844417	Leaf Profile	1.485	530	21.03	22.64	115
20844427	Leaf Profile	1.437	486	20.85	19.88	115
20844610	Leaf Profile	1.033	437	6.56	15.65	116
20844630	Leaf Profile	0.949	392	6.27	12.84	116
20844660	Leaf Profile	0.690	252	4.00	4.02	116
20844680	Leaf Profile	0.605	207	3.71	2.95	116
20847020	Leaf Profile	0.606	199	4.67	1.06	116
20847330	Leaf Profile	1.259	285	37.00	3.95	116
20848304	Leaf Profile	1.548	427	38.26	11.98	117
20848404	Leaf Profile	1.094	322	21.46	3.50	117
20848414	Leaf Profile	1.848	426	69.66	17.93	117
20849100	Insert Profile	0.769	427	11.31	0.89	115
20849210	Insert Profile	0.165	0	0.00	0.00	115
20849517	Insert Profile	0.502	0	0.00	0.00	115
20849530	Insert Profile	0.448	225	2.41	0.00	116
20849540	Insert Profile	0.159	83	0.03	0.00	117
20849570	Insert Profile	0.329	170	1.92	0.00	116
20849610	Insert Profile	0.386	191	0.94	0.56	115
20849710	Insert Profile	0.986	241	21.41	0.00	117
20849820	Insert Profile	0.229	138	0.18	0.00	116
20849830	Insert Profile	0.319	197	1.50	0.00	116
21001020	Frame Profile	1.504	440	33.37	15.41	87
21001130	Frame Profile	1.667	562	55.42	23.47	87
21001320	Frame Profile	1.781	536	55.32	17.54	88
21001350	Frame Profile	2.025	642	63.39	43.89	88
21001352	Frame Profile	2.098	663	71.33	51.75	89
21001420	Frame Profile	2.014	620	81.82	19.15	89
21001450	Frame Profile	2.263	726	95.50	46.87	90
21001452	Frame Profile	2.279	747	105.80	55.25	90
21001520	Frame Profile	2.135	622	99.71	20.07	91
21001552	Frame Profile	2.456	757	132.82	55.03	91
21002020	Frame Profile	1.631	454	35.26	13.55	92
21002120	Frame Profile	1.883	543	55.86	15.67	92
21002130	Frame Profile	1.800	586	59.93	22.58	93
21002150	Frame Profile	2.097	642	70.54	43.62	93

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
21002300	Frame Profile	1.646	525	52.15	13.82	94
21002320	Frame Profile	1.772	559	54.84	15.17	94
21002352	Frame Profile	2.041	686	71.13	48.30	95
21002400	Frame Profile	1.939	608	80.98	16.12	95
21002403	Frame Profile	1.901	604	77.21	15.68	96
21002420	Frame Profile	2.006	642	81.08	16.93	96
21002432	Frame Profile	2.155	719	96.85	29.85	97
21002450	Frame Profile	2.197	749	95.51	44.19	97
21002452	Frame Profile	2.271	769	105.35	52.05	98
21002453	Frame Profile	2.241	782	102.61	51.12	98
21002470	Frame Profile	2.297	780	100.32	65.78	99
21002520	Frame Profile	2.147	675	100.45	18.14	99
21002720	Frame Profile	3.052	859	293.02	25.87	100
21002820	Frame Profile	2.419	745	155.84	20.18	100
21004110	Leaf Profile	1.366	517	11.17	31.90	101
21004113	Leaf Profile	1.339	502	10.81	29.70	101
21004120	Leaf Profile	1.280	471	10.80	27.12	101
21004141	Leaf Profile	1.253	449	9.98	25.34	101
21004214	Leaf Profile	1.346	512	10.49	30.48	101
21004220	Leaf Profile	1.279	465	10.87	26.82	101
21004224	Leaf Profile	1.265	467	10.36	26.22	102
21004414	Leaf Profile	1.694	578	26.51	32.35	102
21004424	Leaf Profile	1.613	533	26.19	28.71	102
21004518	Leaf Profile	1.435	520	11.12	31.78	104
21004528	Leaf Profile	1.334	470	10.88	26.80	104
21004630	Leaf Profile	1.336	457	10.94	26.30	104
21004718	Leaf Profile	1.789	586	27.48	33.58	104
21004818	Leaf Profile	1.760	575	27.15	32.75	105
21004828	Leaf Profile	1.689	536	26.95	29.54	105
21005110	Transom Profile	1.199	365	4.84	29.41	102
21005140	Transom Profile	1.069	318	6.82	21.25	102
21006120	Glass Beading Profile	0.205	107	0.00	0.00	103
21006180	Glass Beading Profile	0.149	74	0.00	0.00	103
21009210	Insert Profile	0.140	0	0.00	0.00	103
21009220	Insert Profile	0.169	0	0.00	0.00	105
21009230	Insert Profile	0.092	65	0.07	0.03	103
21009510	Sliding Insert Profile	0.654	306	4.82	5.72	103
21009514	Sliding Insert Profile	0.584	274	3.30	4.56	103
21009518	Sliding Insert Profile	0.594	280	3.33	4.69	105
21009560	Sliding Insert Profile	1.352	541	19.54	65.33	103
21009610	Sliding Insert Profile	0.572	159	2.10	1.74	103
21009620	Sliding Insert Profile	0.522	155	1.69	1.50	105

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
21202010	Frame Profile	2.098	526	73.38	16.51	71
21202110	Frame Profile	2.562	598	114.42	19.43	71
21202200	Frame Profile	2.480	610	136.19	18.64	72
21202210	Frame Profile	2.548	630	139.93	19.26	72
21202300	Frame Profile	2.272	593	95.21	17.98	73
21202410	Frame Profile	2.673	713	159.87	20.39	73
21202520	Frame Profile	2.730	726	171.62	21.35	74
21202620	Frame Profile	3.192	770	263.75	24.32	74
21204110	Leaf Profile	1.615	519	15.48	33.07	75
21204120	Leaf Profile	1.550	480	15.34	28.75	75
21204130	Leaf Profile	1.520	475	15.31	28.25	75
21204230	Leaf Profile	1.504	464	15.21	27.49	75
21204310	Leaf Profile	2.443	622	79.26	36.40	76
21204330	Leaf Profile	2.347	577	77.38	31.88	76
21204510	Leaf Profile	1.378	489	13.15	24.53	78
21204520	Leaf Profile	1.260	436	12.90	20.71	78
21204530	Leaf Profile	1.236	409	12.56	19.26	78
21204540	Leaf Profile	1.289	391	11.94	20.95	79
21204560	Leaf Profile	1.097	352	9.41	9.07	83
21204570	Leaf Profile	0.978	296	9.00	6.86	78
21204580	Leaf Profile	0.954	272	8.81	6.31	78
21204721	Leaf Profile	1.485	484	21.94	20.41	79
21206240	Leaf Profile	0.188	104	0.15	0.30	79
21207020	Leaf Profile	0.805	233	9.60	1.57	79
21207120	Leaf Profile	1.000	252	15.85	2.33	79
21207320	Leaf Profile	1.452	320	54.82	4.56	79
21208304	Leaf Profile	1.759	426	50.98	11.70	80
21208404	Leaf Profile	1.246	354	31.64	4.29	80
21208414	Leaf Profile	1.848	426	69.66	17.93	80
21209210	Insert Profile	0.196	84	0.17	0.15	77
21209220	Insert Profile	0.150	79	0.16	0.10	77
21209240	Insert Profile	0.189	94	0.18	0.09	77
21209250	Insert Profile	0.077	40	0.01	0.02	77
21209310	Insert Profile	0.456	164	1.22	1.18	80
21209320	Insert Profile	0.203	98	0.15	0.68	80
21209410	Insert Profile	0.599	256	5.82	2.97	81
21209510	Insert Profile	0.560	239	0.26	5.98	77
21209520	Insert Profile	0.240	132	2.26	0.03	77
21209530	Insert Profile	0.664	337	5.20	8.59	77
21209560	Insert Profile	0.651	289	5.88	4.36	81
21209570	Insert Profile	0.500	221	4.71	1.20	81
21209580	Insert Profile	0.278	129	0.18	0.71	81

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
21209610	Insert Profile	0.562	229	2.66	1.08	77
21209820	Insert Profile	0.247	153	1.93	0.26	81
21209830	Insert Profile	0.309	190	1.85	0.45	81
21222200	Frame Profile	1.216	347	20.22	3.81	83
21222400	Frame Profile	1.666	446	30.80	14.17	83
21223300	Frame Profile	2.736	757	220.78	22.30	82
21223500	Frame Profile	3.097	797	302.50	32.95	82
21229310	Insert Profile	0.173	64	0.09	0.17	83
21229320	Insert Profile	0.544	187	3.68	0.63	83
21229330	Additional Profile	0.434	214	7.24	0.38	83
30521106	Mullion Profile	1.799	432	34.70	20.46	169
30521108	Mullion Profile	2.204	491	81.13	28.14	169
30521111	Mullion Profile	2.808	541	182.52	38.52	169
30521113	Mullion Profile	3.620	591	372.49	49.16	170
30521116	Mullion Profile	3.969	641	564.74	56.53	170
30521118	Mullion Profile	4.438	689	839.38	68.31	171
30521121	Mullion Profile	4.966	739	1159.28	76.40	171
30521122	Mullion Profile	4.770	746	1110.73	82.42	172
30521124	Mullion Profile	5.262	796	1522.27	91.67	172
30521205	Mullion Profile	2.027	445	35.53	20.90	172
30521208	Mullion Profile	2.333	511	99.68	28.26	173
30521211	Mullion Profile	2.936	560	213.07	38.65	173
30521213	Mullion Profile	3.750	611	421.35	49.29	174
30521216	Mullion Profile	4.098	661	627.80	56.66	174
30521218	Mullion Profile	4.694	709	918.09	68.43	175
30521264	Mullion Profile	4.115	637	506.50	54.40	175
30521401	Transom Profile	0.896	307	1.49	6.59	176
30521404	Transom Profile	1.433	372	15.79	15.56	176
30521406	Transom Profile	1.571	403	30.44	18.98	176
30521408	Transom Profile	1.889	452	73.72	25.70	176
30521409	Transom Profile	1.982	471	94.81	27.85	177
30521411	Transom Profile	2.126	501	136.13	31.37	177
30521412	Transom Profile	2.225	521	166.29	33.53	178
30521413	Transom Profile	2.676	550	241.13	42.48	178
30521414	Transom Profile	2.472	572	265.42	39.31	179
30521415	Transom Profile	2.626	577	282.67	42.42	179
30521461	Transom Profile	2.035	496	121.02	29.74	180
30521504	Mullion Profile	1.686	399	24.58	16.68	180
30521506	Mullion Profile	1.778	429	41.53	19.11	180
30521508	Transom Profile	2.058	473	92.06	25.83	181
30521561	Transom Profile	2.215	524	145.54	29.88	181
30521606	Transom Profile	1.350	350	29.50	16.60	181

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
30522206	Mullion Profile	3.024	562	163.83	24.20	182
30522208	Mullion Profile	3.347	612	275.61	31.31	182
30523005	Mullion Profile	0.759	256	7.17	2.79	183
30523013	Mullion Profile	1.846	507	120.76	7.70	183
30523105	Mullion Profile	1.157	355	14.34	4.61	183
30523113	Mullion Profile	2.242	607	181.79	9.30	183
30523604	Mullion Profile	1.673	451	30.56	14.01	184
30523606	Mullion Profile	1.805	585	62.89	11.51	184
30523646	Mullion Profile	1.728	540	64.13	23.52	185
30523656	Mullion Profile	2.563	653	124.00	28.32	185
30524021	Expansion Profile	4.055	508	560.12	50.98	186
30524105	Expansion Profile	0.919	217	4.37	8.92	186
30524108	Expansion Profile	1.451	286	30.27	16.74	186
30524111	Expansion Profile	1.737	333	66.86	21.20	186
30524113	Expansion Profile	2.078	380	121.60	25.22	187
30524116	Expansion Profile	2.396	429	207.57	29.95	187
30524118	Expansion Profile	2.962	477	347.29	37.29	188
30524121	Expansion Profile	2.968	530	438.20	40.81	188
30524122	Expansion Profile	3.386	554	596.19	44.94	189
30524124	Expansion Profile	3.380	602	703.77	48.43	189
30524708	Expansion Profile	1.009	226	12.65	1.20	187
30525001	Pressure Plate	0.193	122	0.19	0.29	190
30525011	Pressure Plate	0.601	210	0.25	5.35	190
30525020	Cover Profile	0.477	112	0.02	3.16	190
30525021	Cover Profile	0.460	146	0.06	3.85	190
30525061	Pressure Plate	1.100	339	11.95	14.12	190
30525072	Pressure Plate	0.444	162	0.33	1.93	190
30525111	Cover Profile	1.150	421	3.90	25.97	190
30525131	Pressure Plate	1.176	434	1.98	52.21	190
30525201	Cover Profile	0.128	78	0.01	0.29	190
30525251	Cover Profile	0.394	199	0.25	5.17	191
30525253	Cover Profile	0.747	254	2.69	10.09	191
30525254	Cover Profile	0.820	274	5.75	11.89	191
30525261	Cover Profile	0.433	216	0.36	5.55	191
30525271	Cover Profile	0.254	127	0.14	1.34	190
30525352	Cover Profile	0.696	234	1.20	8.49	191
30525353	Cover Profile	0.780	254	3.18	10.40	191
30525363	Cover Profile	0.721	240	2.48	8.48	192
30525365	Cover Profile	0.815	274	7.81	11.29	192
30525366	Cover Profile	0.900	301	15.16	14.32	192
30525510	Cover Profile	1.441	374	46.56	15.57	192
30525511	Cover Profile	0.439	166	0.35	2.06	190

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
30525520	Cover Profile	2.150	542	247.00	25.81	193
30525914	Insert Profile	1.750	588	155.37	32.32	193
30526000	Glass Frame Profile	0.116	60	0.05	0.06	194
30526001	Frame Profile	0.251	113	0.22	0.31	194
30526002	Frame Profile	0.300	132	0.00	0.00	194
30526004	Frame Profile	0.485	168	0.00	0.00	194
30526012	Frame Profile	0.377	124	0.00	0.00	194
30526013	Frame Profile	0.421	132	0.00	0.00	194
30526023	Frame Profile	0.563	181	0.00	0.00	194
30526026	Frame Profile	0.663	250	2.74	4.00	194
30526042	Frame Profile	0.767	236	0.00	0.00	194
30526101	Frame Profile	0.535	228	0.00	0.00	194
30526111	Frame Profile	0.656	228	0.00	0.00	194
30526113	Frame Profile	1.616	445	77.47	9.79	195
30526120	Insert Profile	1.003	307	24.43	4.42	195
30526121	Insert Profile	1.113	371	30.87	8.22	195
30526122	Insert Profile	0.826	324	16.58	4.37	195
30526126	Insert Profile	1.206	400	45.46	6.83	196
30526215	Leaf Profile	1.128	309	22.02	6.86	196
30526227	Leaf Profile	1.041	306	18.72	6.06	196
30526255	Leaf Profile	1.259	374	0.00	0.00	196
30526265	Leaf Profile	1.162	374	10.72	22.48	197
30526266	Leaf Profile	1.050	308	19.09	6.18	197
30526267	Leaf Profile	1.149	372	22.23	10.54	197
30526286	Leaf Profile	1.222	355	28.37	10.35	197
30526295	Frame Profile	1.537	349	14.10	16.12	198
30526296	Leaf Profile	2.125	399	40.39	36.91	198
30526298	Leaf Profile	1.745	373	22.37	34.65	198
30526299	Leaf Profile	2.506	454	62.73	48.81	198
30526313	Leaf Profile	1.025	282	11.55	6.31	199
30526333	Leaf Profile	1.186	343	19.20	9.43	199
30526346	Leaf Profile	1.459	410	47.25	10.79	199
30527123	Mullion Profile	2.602	537	89.60	47.69	200
30527133	Mullion Profile	2.529	552	100.68	56.33	200
30528013	Mullion Profile	1.763	488	123.00	3.55	201
30528208	Mullion Profile	2.103	565	105.35	15.95	202
30528213	Mullion Profile	2.696	679	240.50	13.14	201
30529164	Ending Profile	0.545	177	0.00	0.00	202
30529231	Ending Profile	1.303	576	0.70	111.77	203
30529232	Insert Profile	1.361	583	0.00	0.00	203
30529441	Insert Profile	0.384	206	3.82	1.00	202
30529465	Insert Profile	0.489	210	0.00	0.00	202

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
30529466	Insert Profile	0.547	235	3.34	2.44	202
30529467	Insert Profile	0.587	241	6.10	1.60	202
30529495	Insert Profile	0.204	126	0.00	0.00	204
30529496	Insert Profile	0.594	286	0.00	0.00	204
30529497	Insert Profile	0.298	106	0.85	0.32	204
30529498	Insert Profile	0.216	113	0.54	0.20	204
30529510	Corner Profile	0.899	256	8.03	2.23	204
30529611	Spacer	0.189	85	0.12	0.09	203
30529612	Spacer	0.208	80	0.20	0.10	203
30529613	Spacer	0.312	114	0.71	0.44	204
30529623	Spacer	0.149	75	0.00	0.00	203
30529711	Insert Profile	0.339	164	0.00	0.00	204
30621206	Mullion Profile	2.741	505	75.90	36.82	155
30621207	Mullion Profile	2.981	535	122.79	43.03	155
30621209	Mullion Profile	3.221	565	186.11	49.24	156
30621210	Mullion Profile	3.540	595	278.64	56.27	156
30621212	Mullion Profile	3.910	635	430.69	65.10	157
30621215	Mullion Profile	4.253	695	682.70	75.91	157
30621504	Mullion Profile	2.103	446	36.80	25.43	158
30621506	Mullion Profile	2.252	476	60.29	30.32	158
30621507	Mullion Profile	2.435	506	94.66	36.28	159
30621509	Mullion Profile	2.592	536	136.91	41.17	159
30624006	Expansion Profile	1.469	249	11.30	19.66	160
30624007	Expansion Profile	2.017	276	29.71	29.63	160
30624009	Expansion Profile	2.357	304	56.47	37.00	160
30624010	Expansion Profile	2.570	331	88.92	42.35	160
30624012	Expansion Profile	2.965	373	146.78	50.70	161
30624015	Expansion Profile	3.431	433	268.27	60.96	161
30624612	Expansion Profile	0.227	98	0.00	0.00	165
30625011	Pressure Plate	0.719	229	0.00	0.00	162
30625121	Cover Profile	1.196	354	0.00	0.00	162
30625251	Leaf Profile	0.436	216	0.00	0.00	162
30625272	Leaf Profile	0.296	127	0.00	0.00	162
30625426	Leaf Profile	0.487	194	0.00	0.00	162
30626417	Leaf Profile	1.040	308	15.45	4.90	163
30626419	Leaf Profile	1.204	357	27.29	6.20	163
30626427	Leaf Profile	1.064	323	13.80	5.29	163
30626429	Leaf Profile	1.238	368	25.26	6.94	163
30626436	Leaf Profile	1.102	316	15.95	5.85	164
30626437	Leaf Profile	1.210	358	24.39	6.87	164
30626447	Leaf Profile	1.185	339	22.72	6.70	164
30626488	Leaf Profile	1.320	413	28.80	6.51	164

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
30629169	Ending Profile	1.088	336	0.00	0.00	165
30629246	Ending Profile	1.269	582	0.00	0.00	166
30629700	Control Rod	0.194	51	0.01	0.25	165
30629703	Control Rod	0.305	72	0.03	0.52	165
30629816	Insert Profile	1.617	627	0.00	0.00	166
30629826	Insert Profile	0.943	252	0.00	0.00	165
50204210	Fly Screen Leaf Profile	0.313	185	0.29	1.51	207
50251060	Frame Profile	0.319	121	0.00	0.00	207
50251110	Frame Profile	0.351	149	0.00	0.00	207
50252060	Fly Screen Frame Profile	0.938	285	15.62	5.16	207
50252110	Fly Screen Frame Profile	0.590	203	3.52	3.28	207
50254100	Fly Screen Leaf Profile	0.419	233	2.47	0.85	207
50254110	Fly Screen Leaf Profile	0.467	274	0.91	3.68	207
50254140	Fly Screen Leaf Profile	0.567	268	4.96	1.17	207
50254210	Fly Screen Leaf Profile	0.535	272	4.25	1.05	208
50254230	Fly Screen Leaf Profile	0.728	328	12.53	1.18	208
50254231	Fly Screen Leaf Profile	0.728	270	1.18	12.54	208
50254240	Fly Screen Leaf Profile	0.594	265	5.15	1.23	208
50254810	Fly Screen Leaf Profile	0.165	79	0.15	0.21	208
50254830	Fly Screen Leaf Profile	0.307	145	0.69	0.40	208
50254832	Fly Screen Leaf Profile	0.420	158	0.81	1.09	208
50274240	Fly Screen Leaf Profile	0.760	343	2.09	11.75	209
50274241	Fly Screen Leaf Profile	0.752	368	1.94	11.77	209
50274270	Fly Screen Leaf Profile	0.760	343	2.09	11.75	209
50274271	Fly Screen Leaf Profile	0.752	368	1.94	11.77	209
50277420	Fly Screen Leaf Profile	0.788	331	3.61	7.60	209
50277421	Fly Screen Leaf Profile	0.373	151	1.29	0.75	209
50277440	Fly Screen Leaf Profile	0.676	333	2.54	6.34	209
50277541	Fly Screen Leaf Profile	0.478	207	1.73	1.35	209
50279410	Insert Profile	0.297	123	1.24	0.10	209
50281210	Fly Screen Frame Profile	0.634	248	7.89	3.09	210
50284310	Fly Screen Leaf Profile	0.477	165	1.02	2.11	210
50284311	Fly Screen Leaf Profile	0.514	179	1.40	2.23	210
50284460	Fly Screen Leaf Profile	0.630	195	2.08	4.65	210
50284461	Fly Screen Leaf Profile	0.618	200	1.91	4.00	210
50284466	Fly Screen Leaf Profile	0.520	215	1.73	2.76	210
50289210	Fly Screen Leaf Profile	0.615	230	4.89	1.62	210
50289610	Insert Profile	0.302	186	1.06	0.41	210
50289620	Insert Profile	0.672	250	3.13	10.51	210
59005020	Fly Screen Transom Profile	0.375	107	3.13	0.07	208
59005410	Fly Screen Transom Profile	0.610	198	5.99	5.70	208
59009100	Additional Profile	0.100	53	0.01	0.08	208

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
52421100	Slat Profile	0.583	234	0.78	5.42	227
52421108	Slat Profile	2.133	390	93.60	30.81	227
52421111	Slat Profile	2.785	440	200.28	42.34	227
52421211	Slat Profile	3.528	699	422.93	52.82	228
52421606	Slat Profile	1.418	307	32.63	9.73	227
52422110	Slat Profile	0.772	207	1.19	25.08	229
52422115	Slat Profile	1.269	312	4.40	82.46	229
52422120	Slat Profile	1.924	415	10.89	237.71	229
52422210	Slat Profile	0.799	217	1.91	26.98	230
52422215	Slat Profile	1.307	325	7.27	94.78	230
52422220	Slat Profile	1.637	425	9.76	223.52	230
52422310	Slat Profile	0.960	237	2.39	39.21	231
52422315	Slat Profile	1.431	357	8.50	126.04	231
52422320	Slat Profile	1.763	457	10.99	277.06	231
52422620	Slat Profile	1.789	429	9.91	228.58	232
52422770	Slat Profile	0.882	279	15.31	11.84	232
52422771	Slat Profile	1.034	364	15.60	21.91	232
52423106	Slat Profile	0.638	257	8.07	12.39	233
52423208	Slat Profile	0.699	303	13.72	23.91	233
52423312	Slat Profile	0.974	397	30.35	67.28	233
52423710	Slat Profile	0.808	295	9.60	25.13	234
52423712	Slat Profile	0.872	332	13.06	35.06	234
52424115	Slat Profile	1.365	424	4.36	92.47	235
52425223	Slat Profile	2.642	618	16.07	420.51	235
52426170	Frame Profile	0.985	289	20.95	3.23	228
52427170	Frame Profile	1.335	320	20.15	17.15	228
52427610	Slat Profile	1.003	362	2.07	60.86	236
52427612	Slat Profile	0.869	449	3.22	71.10	236
52427710	Slat Profile	1.919	393	12.69	69.27	236
52427712	Slat Profile	1.636	393	7.48	85.78	236
52429120	Additional Pieces	0.143	107	0.83	0.01	228
52429121	Cover Profile	0.142	101	0.00	0.00	228
52429910	Slat Profile	1.411	267	0.07	73.48	236
51321000	Frame Profile	0.794	364	20.08	3.11	213
51321300	Frame Profile	1.119	504	38.19	4.94	213
51324238	Leaf Profile	1.341	531	12.55	30.54	213
51351120	Transom Profile	0.384	181	0.81	2.15	214
51351210	Slat Profile	0.222	86	0.33	0.82	214
51351310	Slat Profile	0.246	85	0.82	0.34	214
51351311	Slat Profile	0.459	174	0.00	0.00	214
51351312	Slat Profile	0.630	271	0.00	0.00	214
51351830	Slat Profile	0.431	137	2.93	2.93	213

Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
51351930	Slat Profile	0.810	137	4.20	3.67	213
51352130	Transom Profile	0.401	160	1.47	2.24	214
51354128	Leaf Profile	0.955	423	9.81	15.68	215
51354210	Slat Profile	0.292	111	0.00	0.00	215
51354310	Slat Profile	0.354	111	0.00	0.00	215
51354410	Transom Profile	0.395	182	3.04	0.34	215
51354510	Slat Profile	0.517	189	3.18	5.30	215
51354538	Frame Profile	0.880	360	6.76	8.02	216
51355160	Transom Profile	0.529	229	5.39	3.20	215
51355220	Transom Profile	0.619	275	6.81	1.65	216
51355230	Transom Profile	0.848	323	9.54	9.06	216
51357439	Frame Profile	0.788	318	2.52	12.88	216
51357460	Frame Profile	0.832	318	11.49	10.70	216
51359310	Spacer	0.290	117	0.40	1.92	216
54881510	Frame Profile	0.988	425	0.68	50.00	239
54881520	Frame Profile	1.088	457	2.00	48.94	239
54881830	Frame Profile	1.408	566	14.52	63.47	239
54883181	Ending Profile	0.614	282	0.40	16.06	240
54883280	Ending Profile	0.615	306	3.24	16.07	240
54883985	Transom Profile	0.997	282	17.44	42.30	240
54884841	Slat Profile	0.482	241	1.30	5.73	240
54884861	Slat Profile	0.517	284	1.53	11.35	240
54884881	Slat Profile	0.660	329	1.68	28.65	240
71441448	Mullion Profile	1.216	328	7.09	7.09	243
71441488	Mullion Profile	1.486	484	32.35	5.58	243
71443242	Transom Profile	0.562	171	3.11	1.06	243
71443252	Transom Profile	0.692	191	6.02	1.33	243
71443273	Transom Profile	1.015	262	17.88	1.70	243
71443276	Transom Profile	1.056	352	19.73	1.58	244
71443284	Transom Profile	1.112	306	23.45	1.91	244
71445220	Transom Profile	0.414	120	1.55	1.09	244
71445242	Transom Profile	0.626	218	3.50	1.79	244
71446212	Transom Profile	1.235	293	44.36	2.18	245
71446272	Transom Profile	1.736	466	211.76	1.77	245
71447211	Mullion Profile	1.283	382	14.93	19.26	245
80011500	Additional Profile	0.421	180	0.04	6.13	224
80451150	Frame Profile	1.215	418	13.70	24.91	52
80451152	Frame Profile	1.353	433	19.42	28.82	52
80451420	Frame Profile	1.123	346	12.83	8.35	52
80451520	Frame Profile	1.311	387	17.78	23.42	52
80452072	Frame Profile	1.506	417	30.01	8.51	53
80452101	Frame Profile	1.833	444	68.70	7.67	53

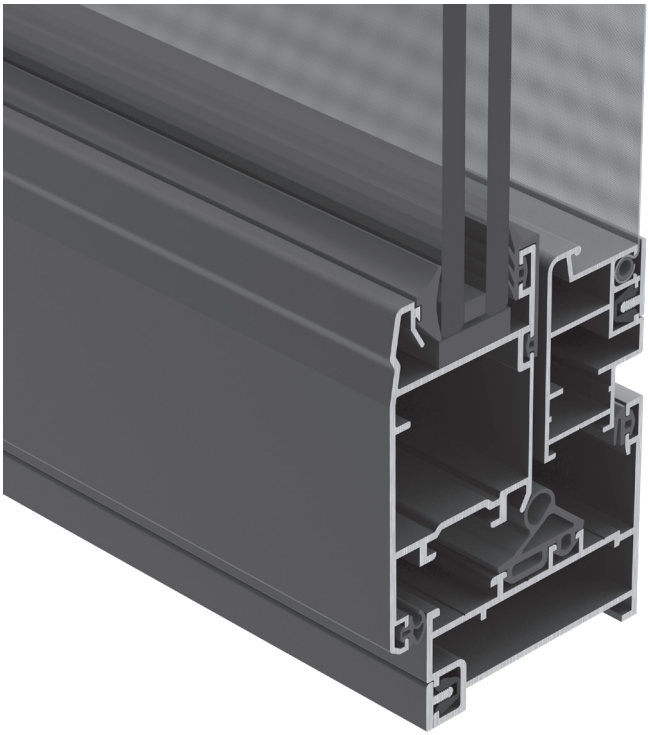
Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
80454010	Leaf Profile	1.156	328	12.41	8.00	53
80454112	Leaf Profile	1.046	321	13.15	7.87	54
80454121	Leaf Profile	1.601	397	20.88	20.13	54
80454122	Leaf Profile	1.280	354	17.10	18.13	54
80454280	Leaf Profile	1.336	356	12.21	17.54	54
80615760	Transom Profile	1.742	555	30.55	43.86	22
90011100	Gasket Cover	0.092	42	0.01	0.01	219
90011300	Gasket Cover	0.240	116	1.66	0.03	219
90011302	Gasket Cover	0.308	154	2.05	0.24	219
90011303	Gasket Cover	0.285	156	1.95	0.17	219
90011304	Gasket Cover	0.259	131	1.81	0.05	219
90011305	Gasket Cover	0.275	139	1.76	0.05	219
90011308	Gasket Cover	0.291	140	1.89	0.27	219
90011500	Gasket Cover	0.348	183	6.10	0.03	220
90011502	Gasket Cover	0.424	204	6.64	0.38	220
90011503	Gasket Cover	0.402	219	7.49	0.32	220
90011504	Gasket Cover	0.370	191	6.73	0.07	220
90011505	Gasket Cover	0.383	194	6.40	0.07	220
90011507	Gasket Cover	0.383	186	6.30	0.04	220
90011700	Gasket Cover	0.418	215	11.29	0.04	220
90011702	Gasket Cover	0.473	233	11.31	0.43	220
90021100	Gasket Cover	0.543	245	0.05	22.75	219
90021200	Gasket Cover	0.181	81	0.01	0.11	219
90021210	Gasket Cover	0.566	281	0.05	33.48	219
90021220	Gasket Cover	0.272	121	1.93	0.04	219
90021700	Gasket Cover	0.378	182	8.99	0.05	219
90029200	Additional Profile	0.070	38	0.02	0.00	219
90031110	Additional Profile	0.192	90	0.05	0.56	221
90031230	Additional Profile	0.317	155	2.18	0.59	221
90031231	Additional Profile	0.396	191	3.08	0.47	221
90031550	Additional Profile	0.502	247	5.29	5.66	221
90031551	Cover Profile	0.663	246	6.45	6.54	221
90032320	Cover Profile	0.294	166	0.43	1.56	221
90041530	Additional Profile	0.578	243	3.13	8.93	221
90051100	Additional Profile	0.767	270	11.85	1.06	222
90051101	Additional Profile	0.588	296	0.14	0.00	222
90051240	Additional Profile	0.407	198	3.15	0.65	222
90051400	Additional Profile	0.216	114	0.97	0.14	222
90051402	Additional Profile	0.701	268	12.18	2.90	222
90051403	Additional Profile	0.845	355	15.01	8.98	222
90059336	Additional Profile	0.626	246	8.51	1.58	222
90085100	Connection Profile	2.345	413	120.10	30.67	223

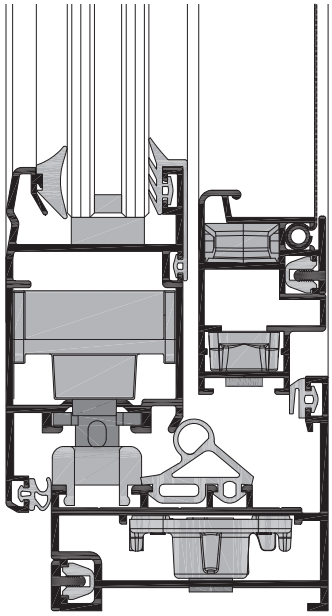
Profile No.	Description	Weight / Metre	Surface Area	Ix-Value	Iy-Value	Page No.
		in kg	in mm	in cm4	in cm4	
90085120	Transom Profile	0.817	180	5.42	2.71	223
90085140	Connection Profile	2.389	497	174.20	55.31	223
90085312	Connection Profile	1.638	362	95.63	13.41	224
90085525	Connection Profile	0.483	197	1.18	5.48	224
90093011	Connection Profile	0.107	61	0.11	0.02	224
90095001	Additional Profile	0.228	115	0.07	0.46	224
90095226	Cover Profile	0.386	129	0.79	1.42	224
90099280	Insert Profile	0.169	45	0.01	0.02	224
90099290	Insert Profile	0.296	77	0.01	0.02	224

PROFILES

ROCK 60

Hinged System





- Available in 3 different various designs, classic, concealed and in-frame fly screen innovation.
- Concealed opening frame that makes fixed and openable panels have the same outside appearance (optional).
- One frame can hold glass sash with integrated openable fly screen sash, both can be fully inward opened.
- Can be provided with triple glazing and with double glazing without losing its integrated fly screen capabilities.
- Used for doors and windows with large openings to obtain a wide view.

Complies with European norm hEN 1435-1

Air Permeability	(Class 4) up to 600 pa.
Water Tightness	(Class E900) up to 900 pa.
Resistance to wind load	(Class C4) up to 1600 pa.

Technical Characteristics

Frame Depth

61 mm. to 104 mm.

Frame Height

52 mm. to 130 mm.

Sash Depth

39 mm. to 71 mm.

Sash Height

57 mm. to 113 mm.

Max Glass Thickness

Up to 36 mm.

Max Sash Weight

Up to 160 kg.

Sealing Type

EPDM gasket with central gasket

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011

CLASSIFICATION ASSESSMENT
N. 0714-CPR-1312 DATED FEBRUARY, 12 2016

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Hinged Window, Single Leaf (open in).
Model:	ROCK 60 – Hinged System **Width**= 800 mm, **Height** = 1,200 mm, Thickness = 70 mm
Fabrication number:	-
Date of fabrication:	2016
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/7, dated February 10, 2016, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified,

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	CLASS 4
WATERTIGHTNESS:	CLASS E900
RESISTANCE TO WIND LOAD:	CLASS C4

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, February 12, 2016

Resp. Tecnico ECO S.p.A.
Ing. Gianluca Campodoni

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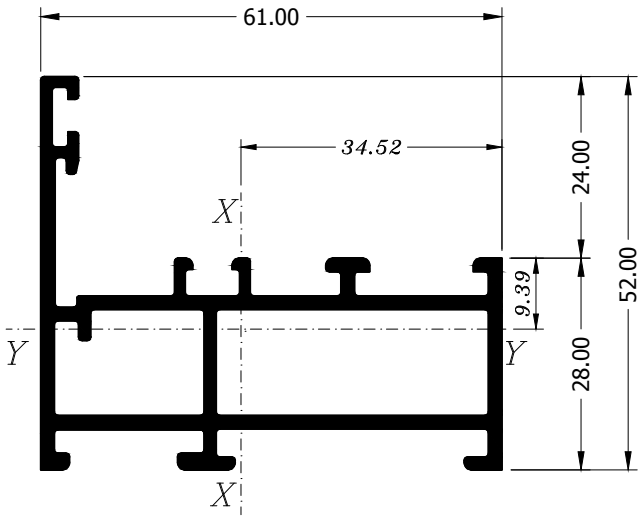
48018 Faenza (RA) - ITALY
Tel. +39 0546 624911 • Fax +39 0546 624922
E-mail: info@eco-cert.it • www.ecocertificazioni.eu



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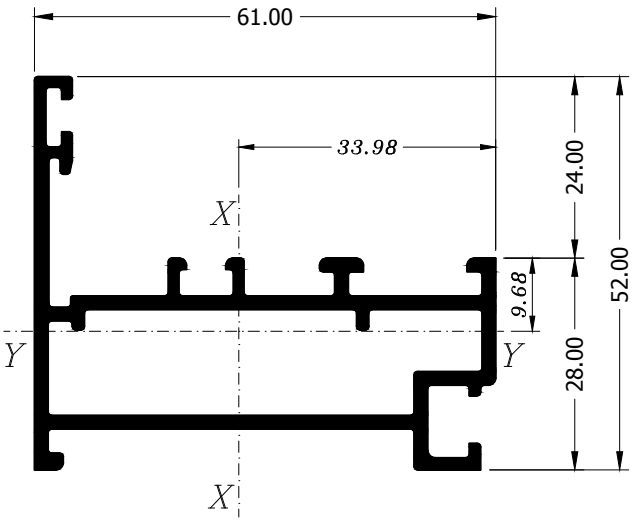

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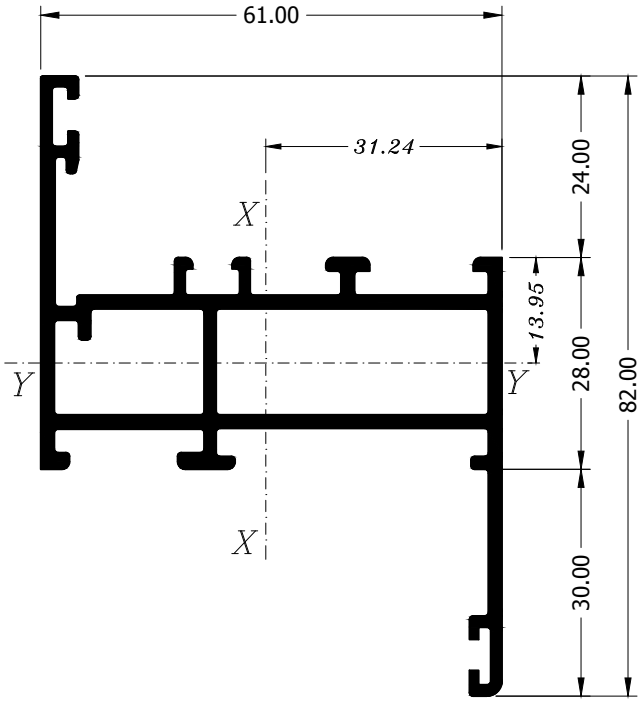

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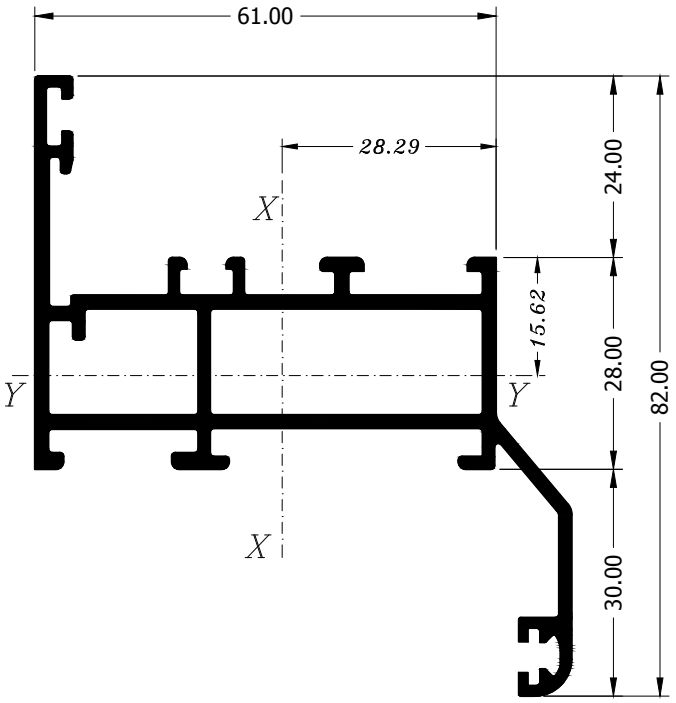

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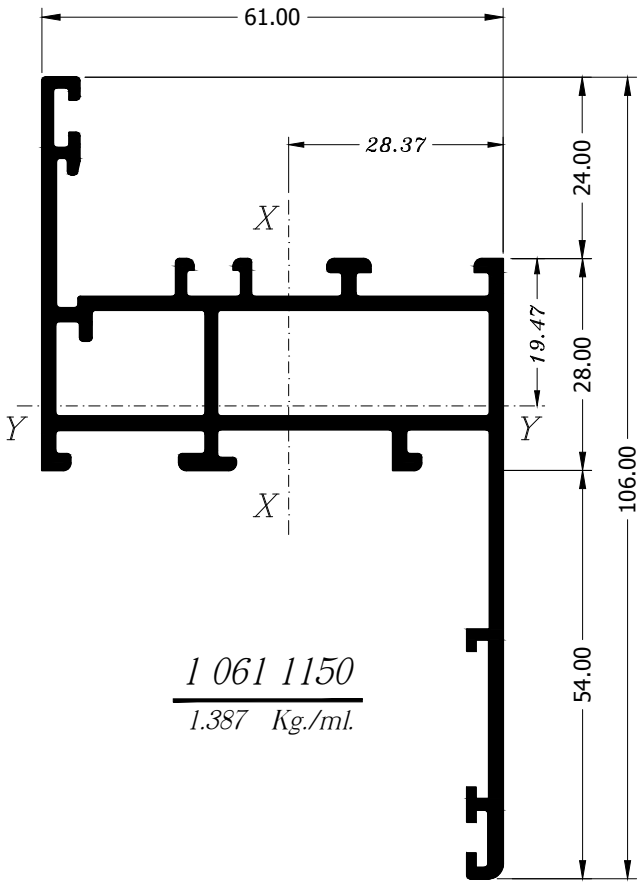

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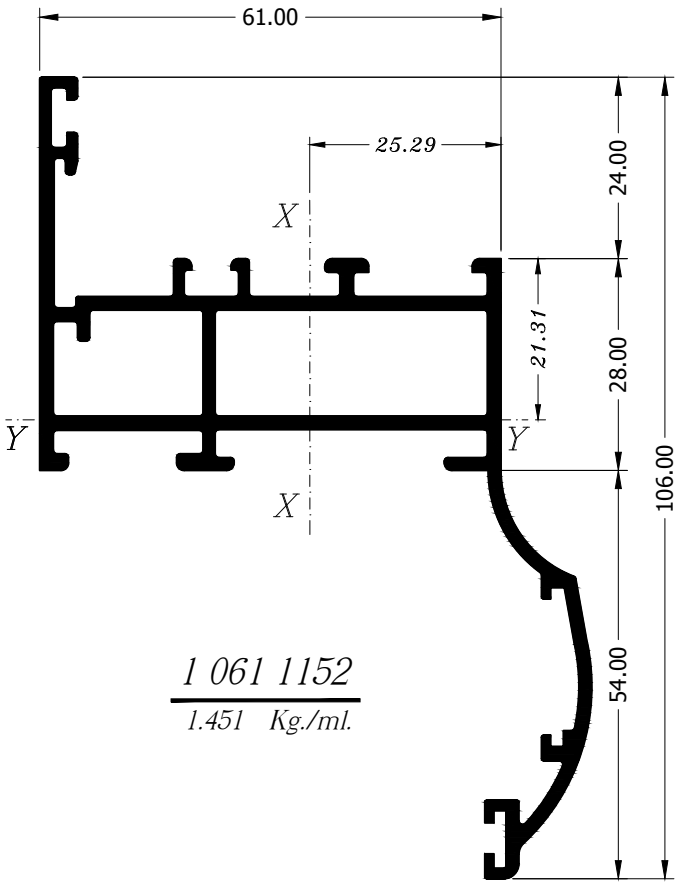

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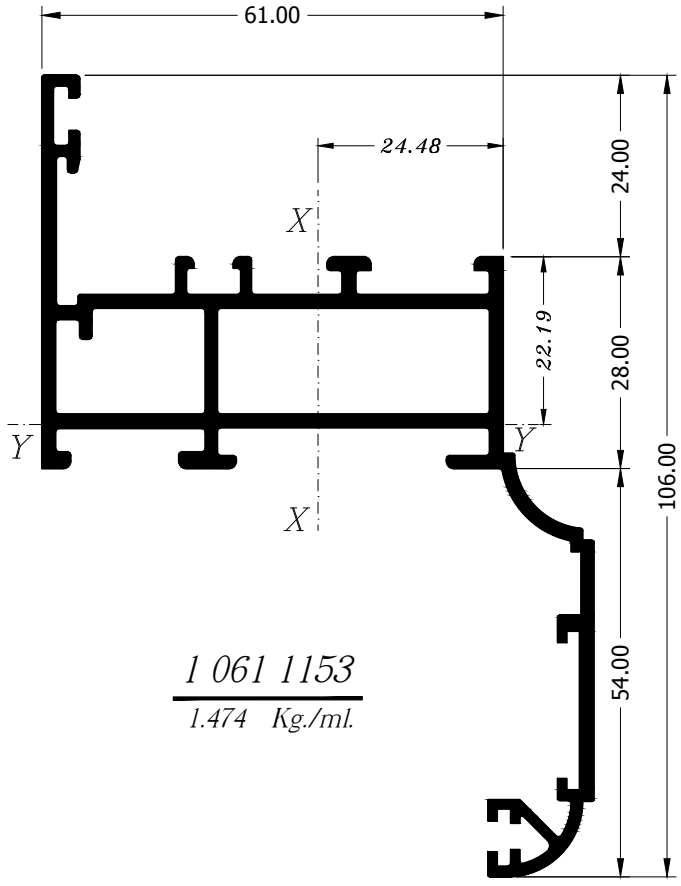

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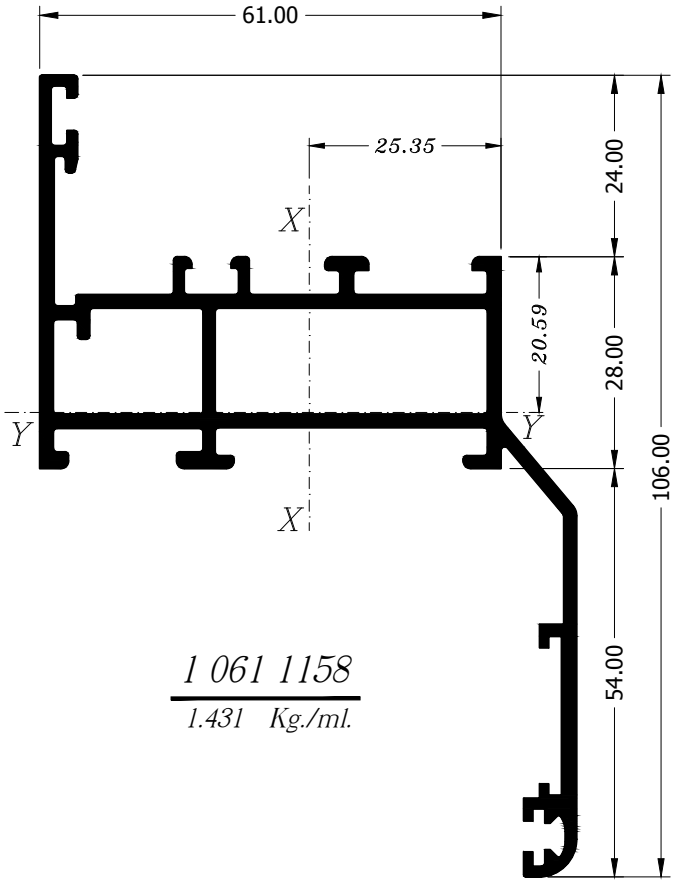

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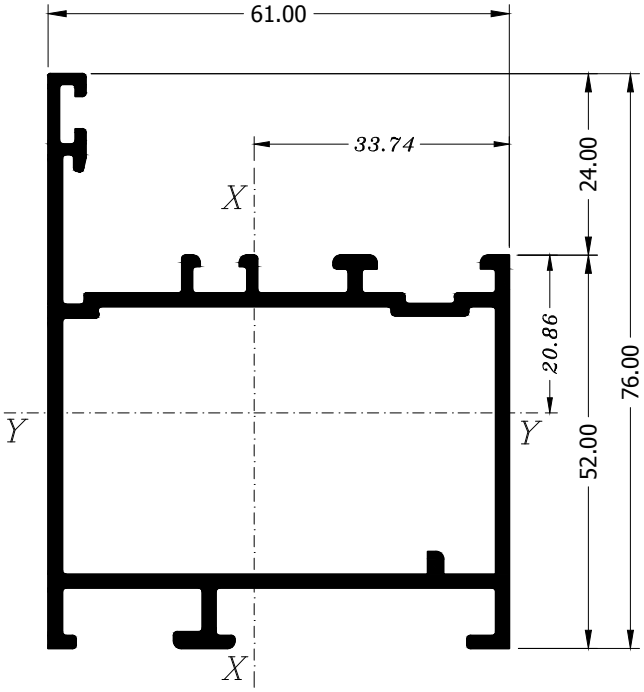

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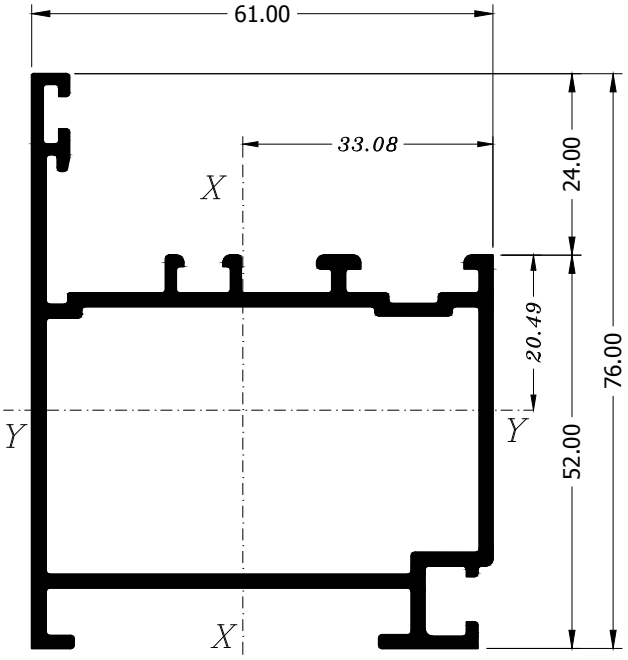

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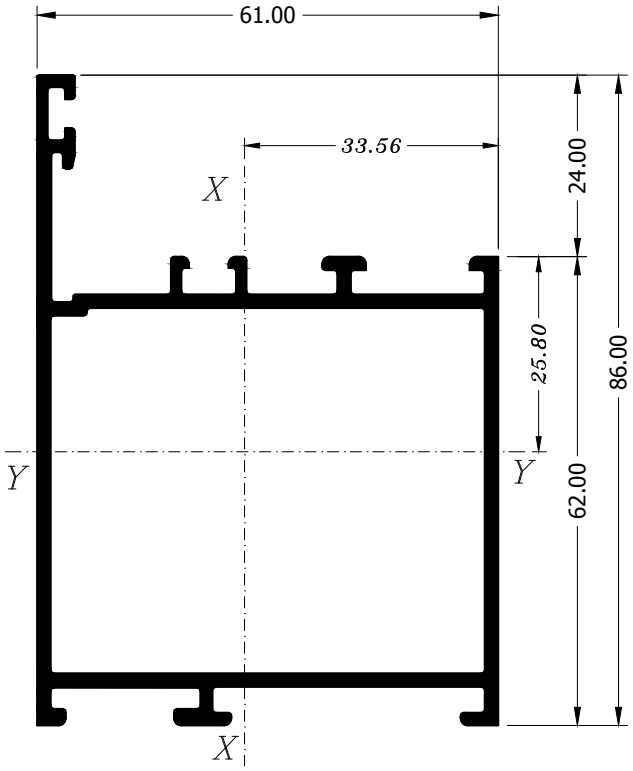

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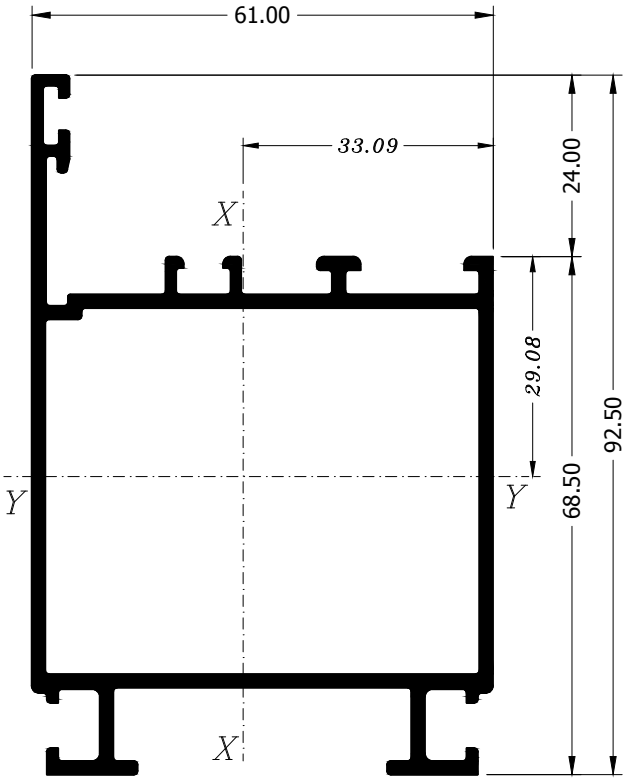

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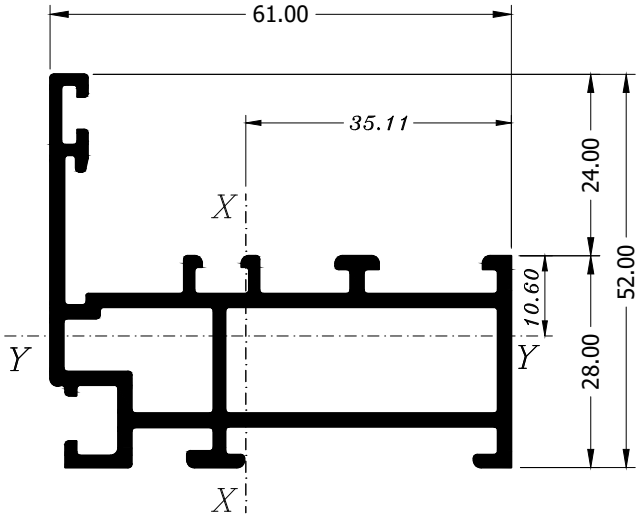

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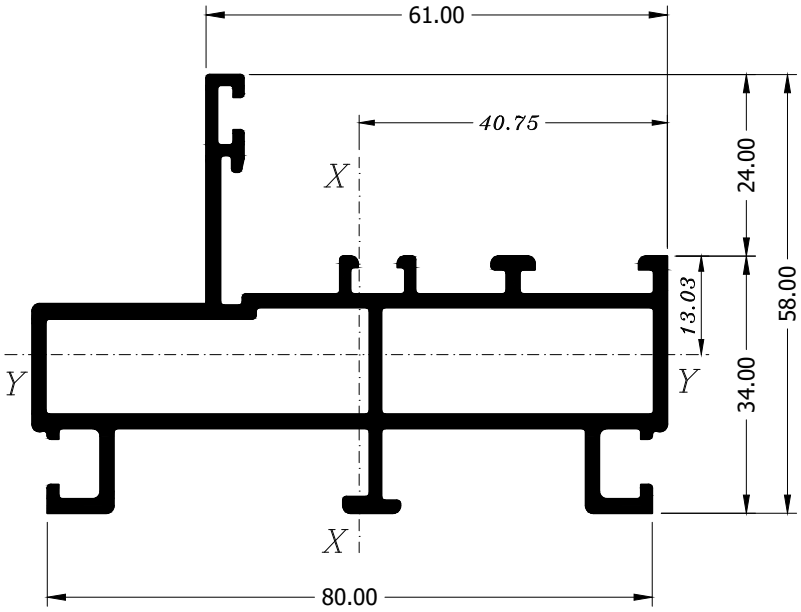

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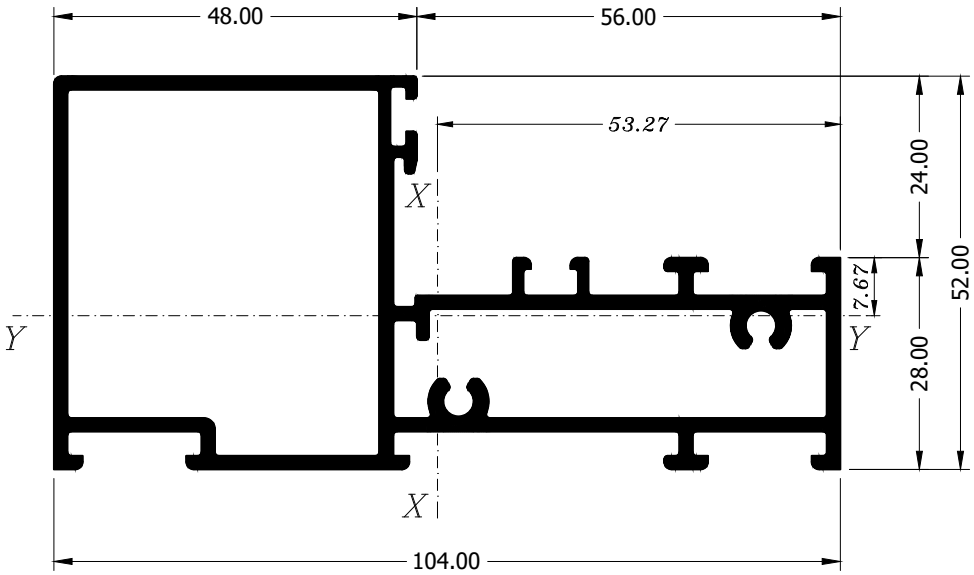

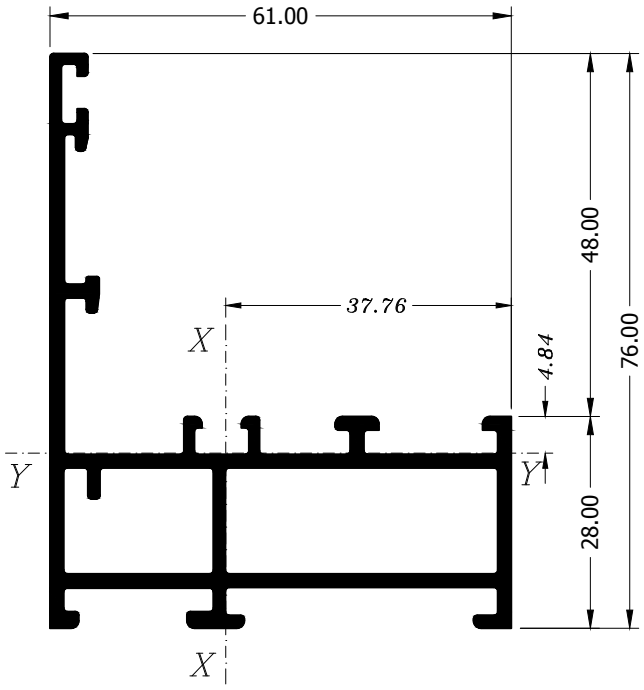

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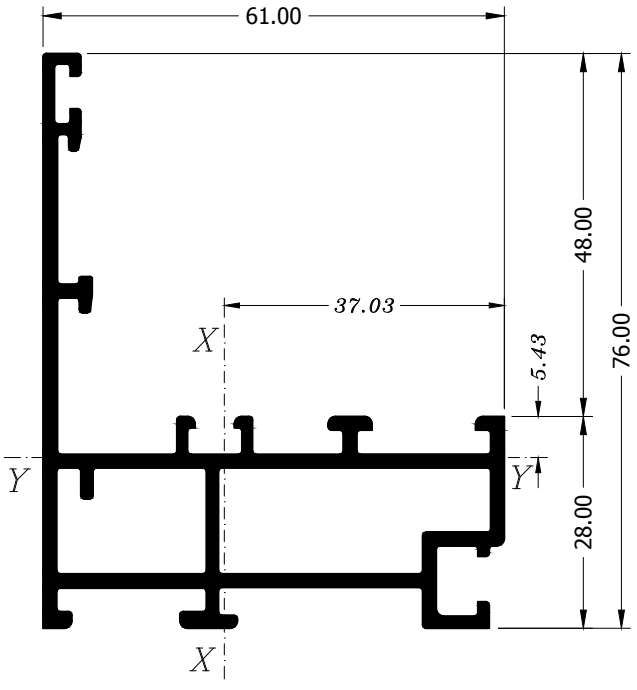

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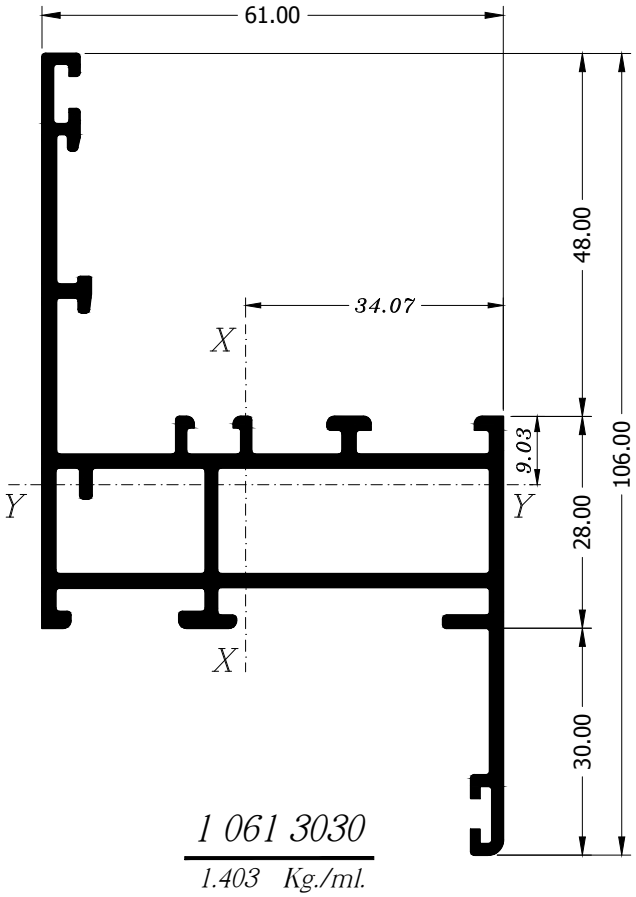

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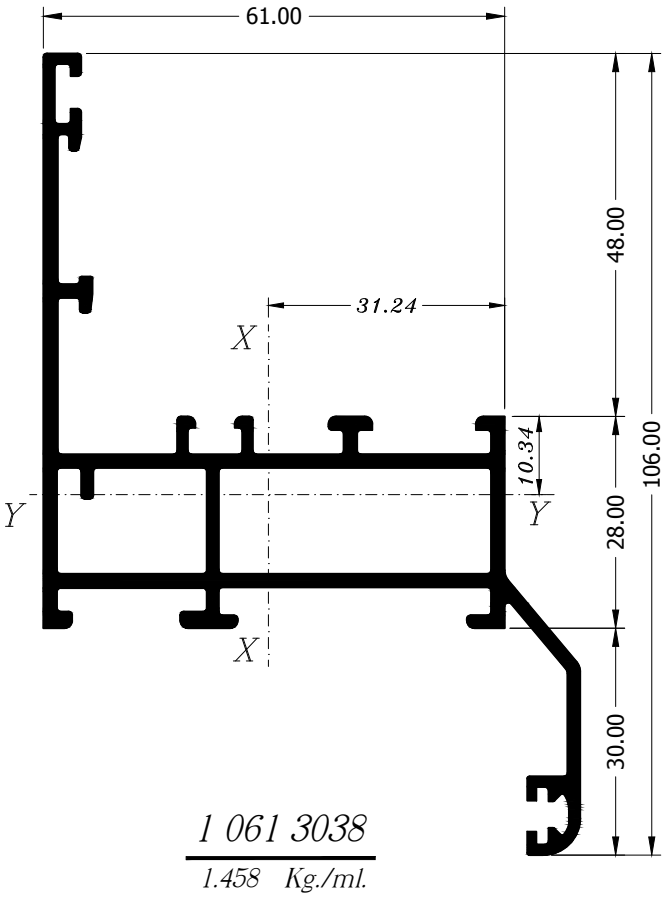

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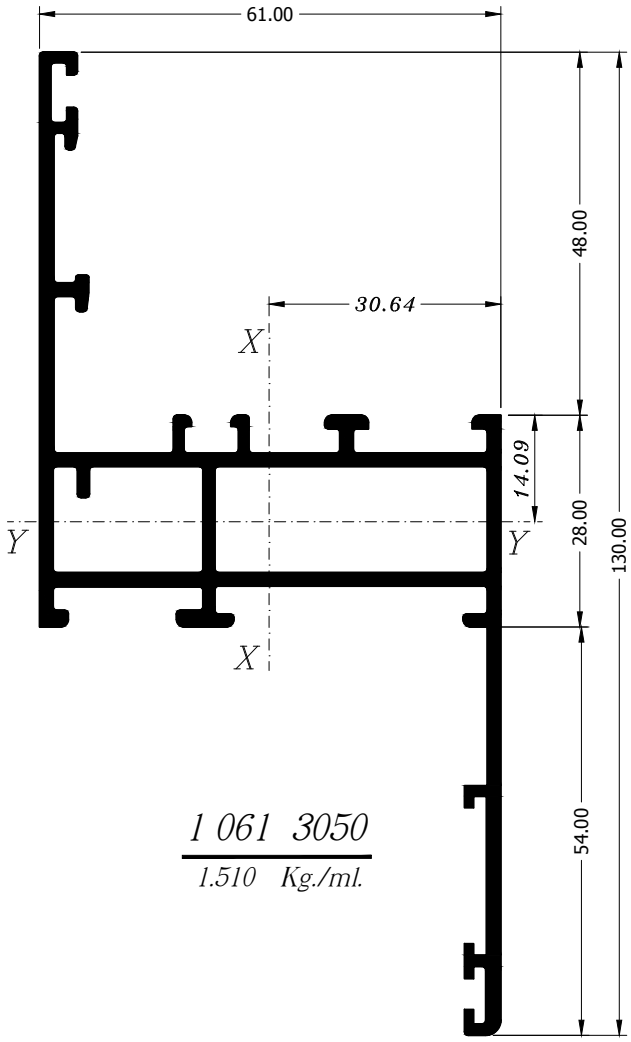

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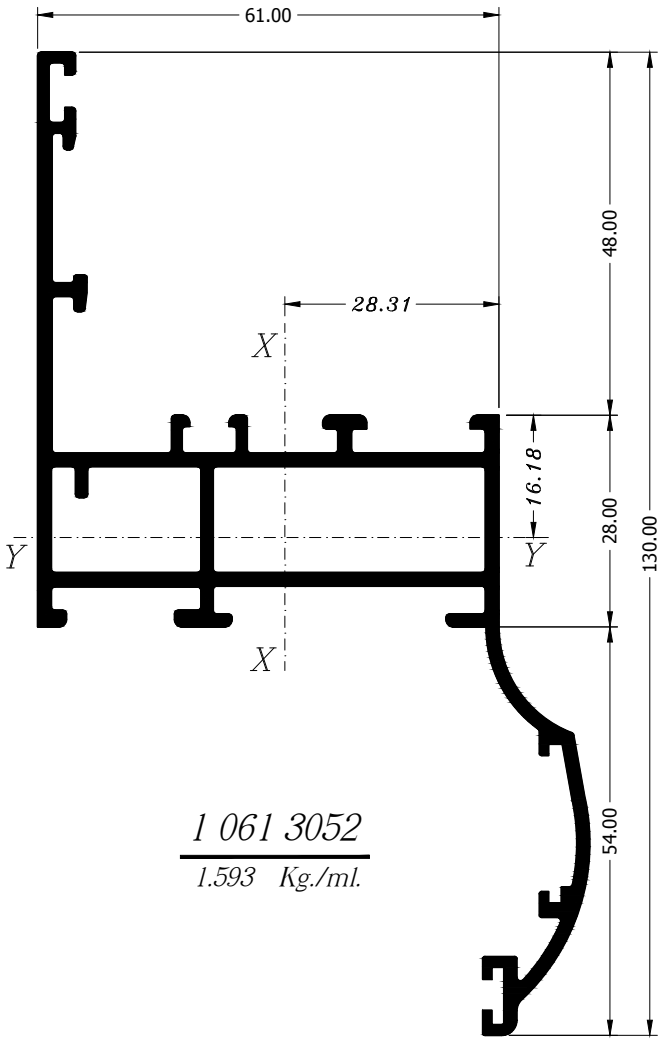

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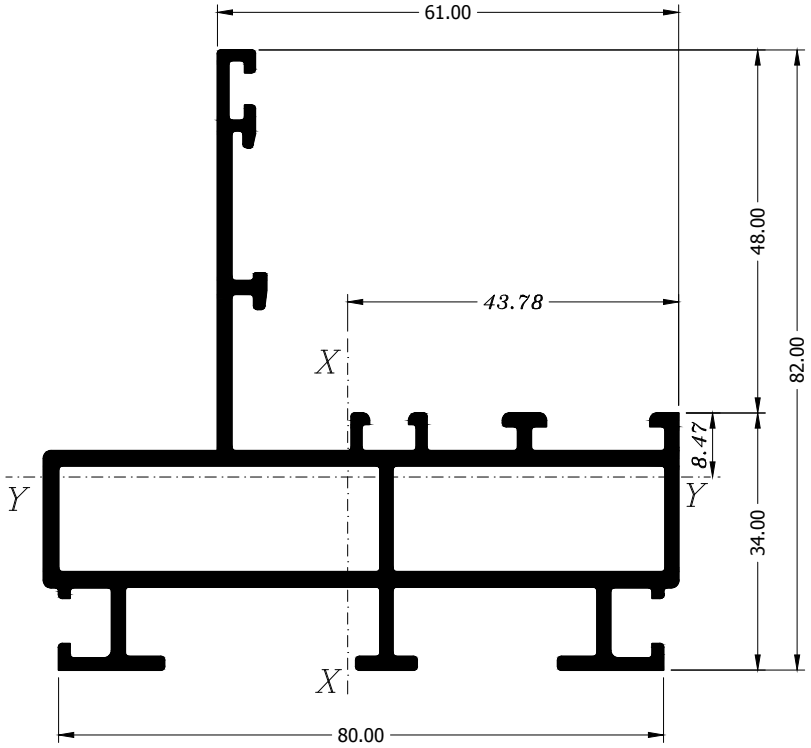

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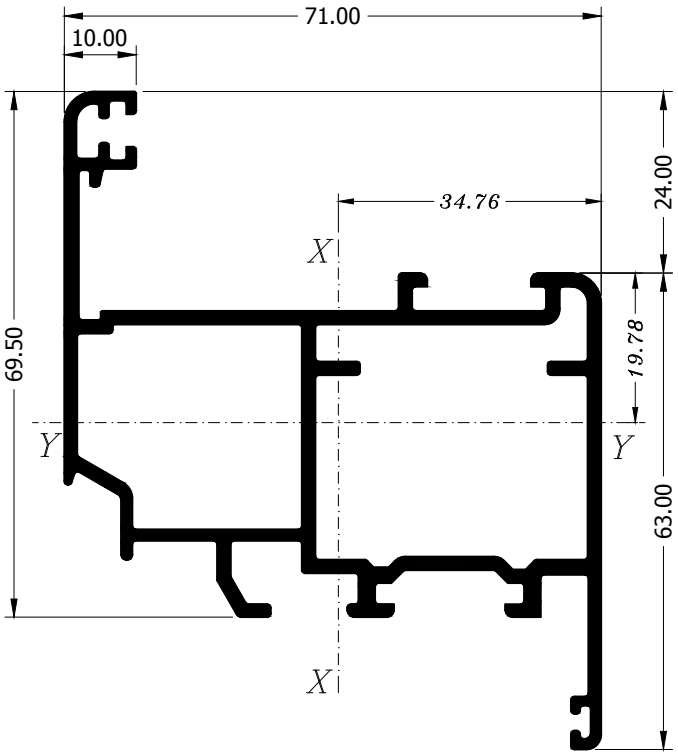

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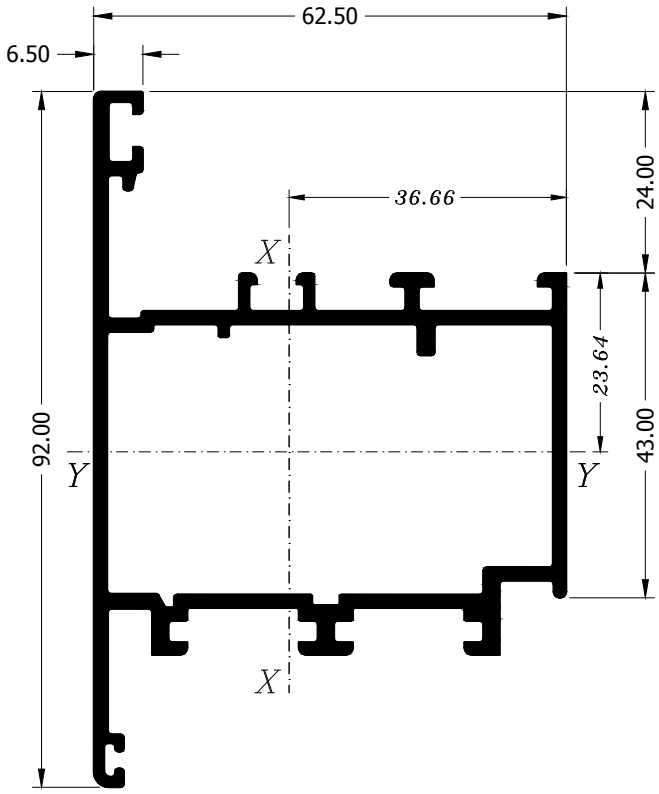

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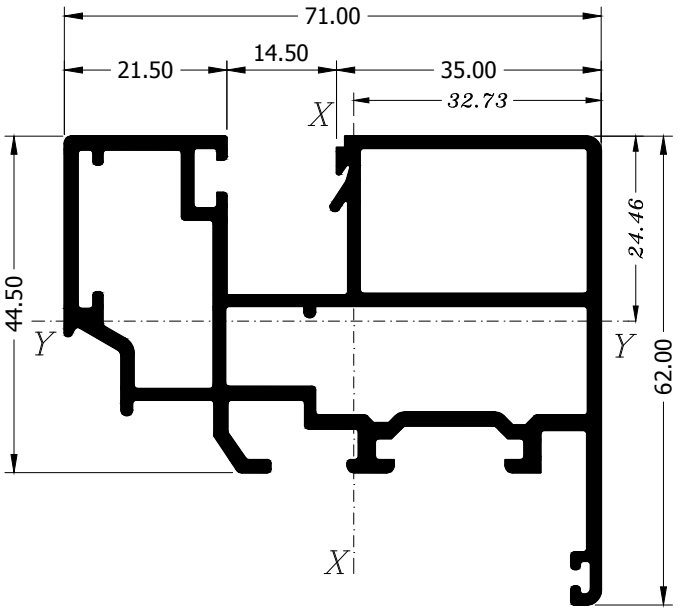

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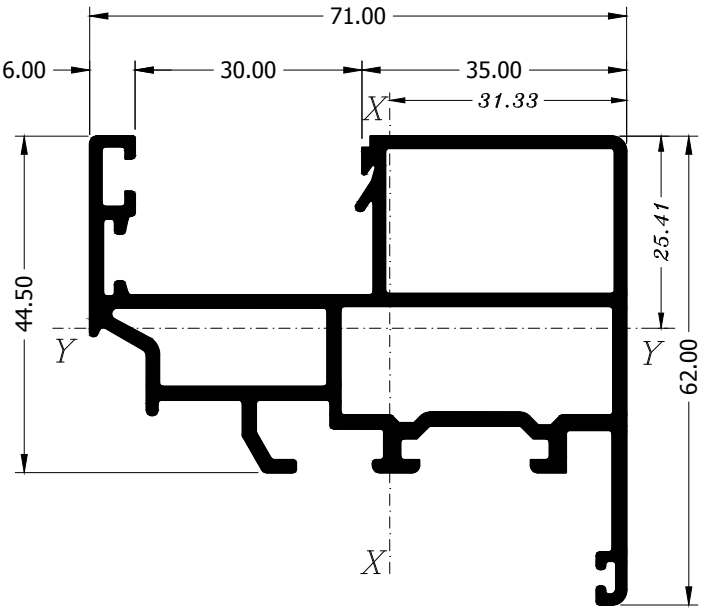

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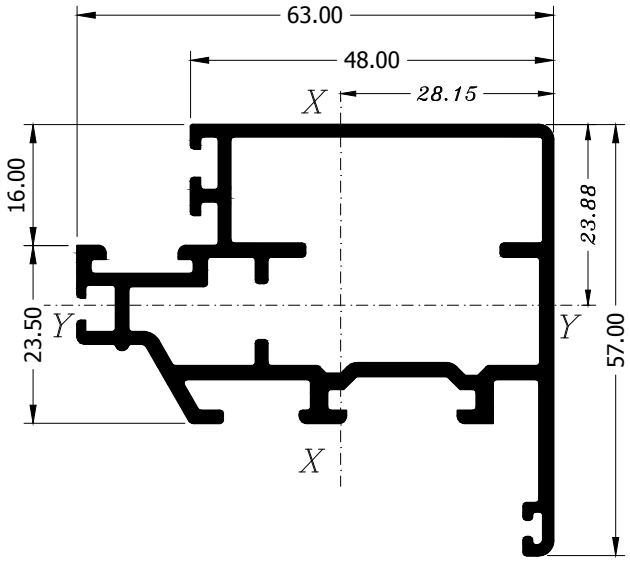

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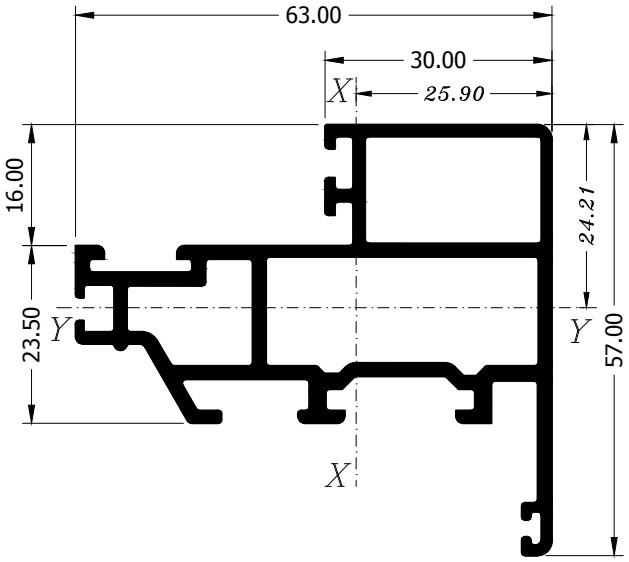

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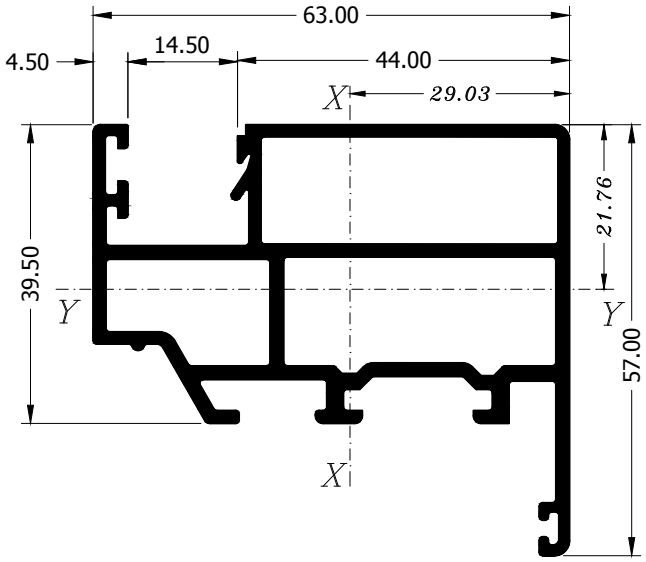

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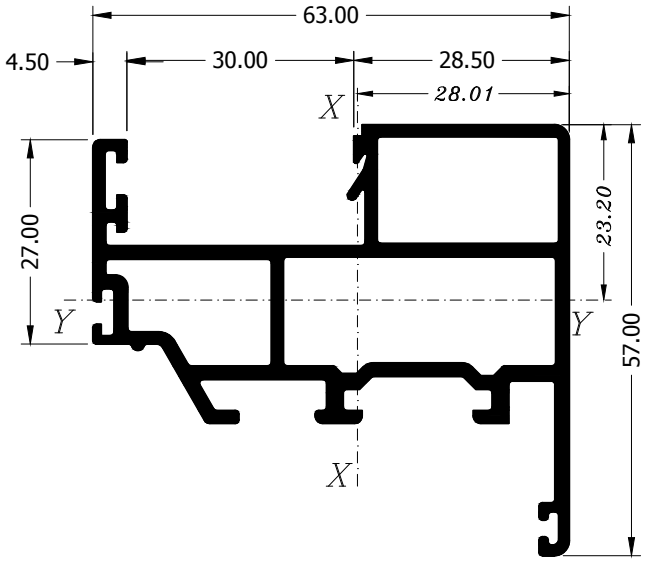

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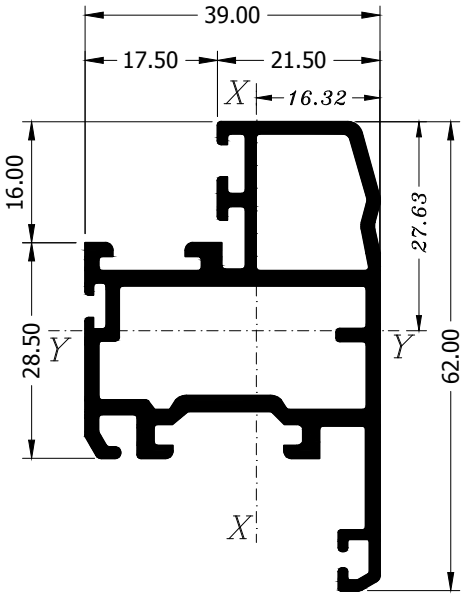

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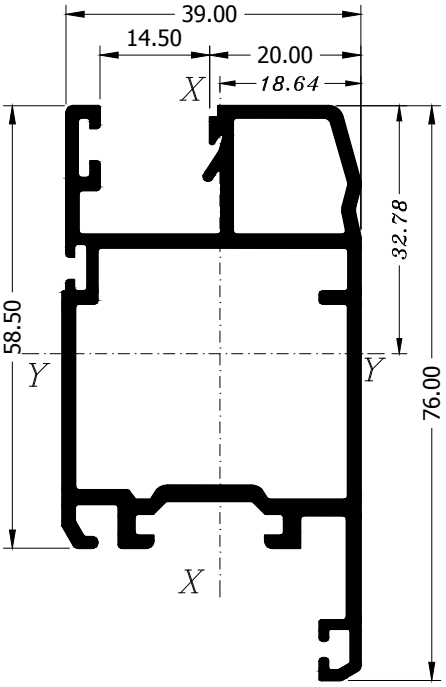

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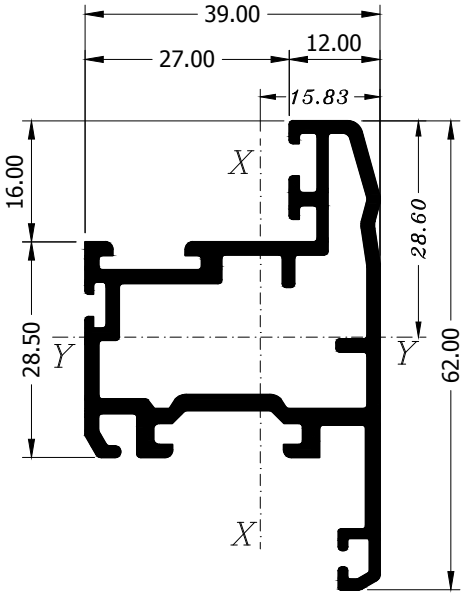

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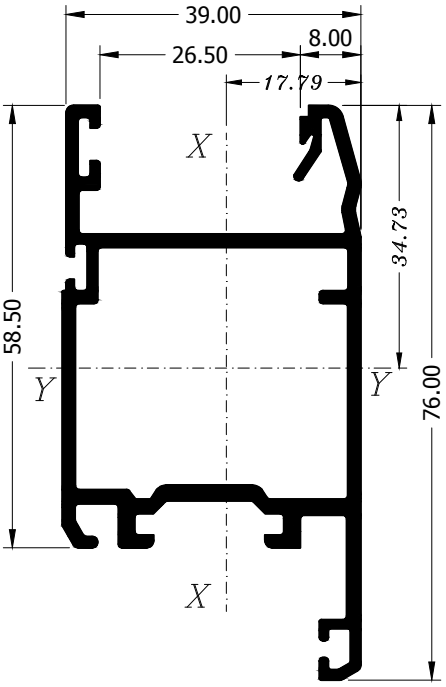

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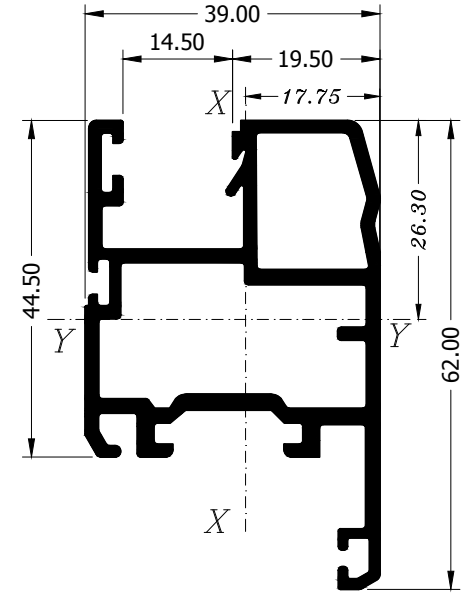

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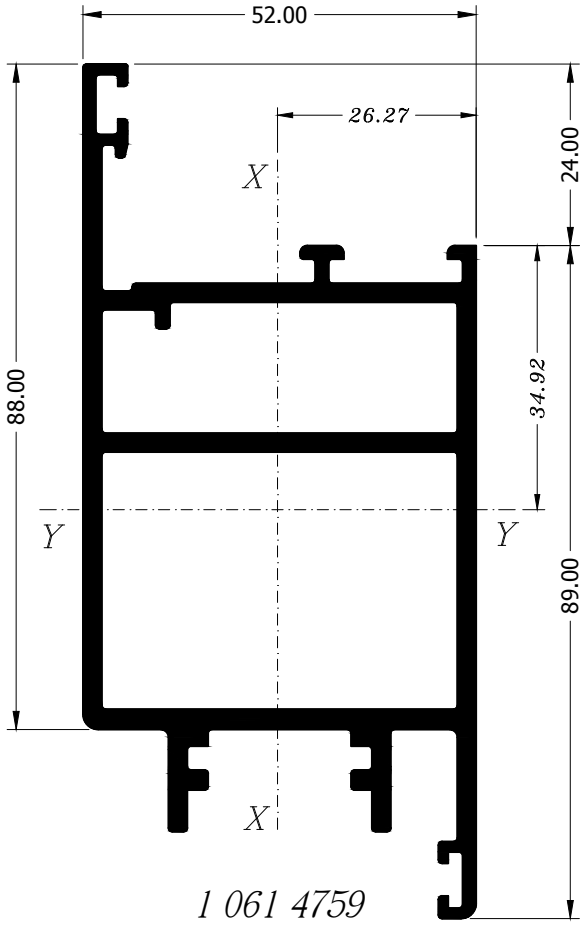

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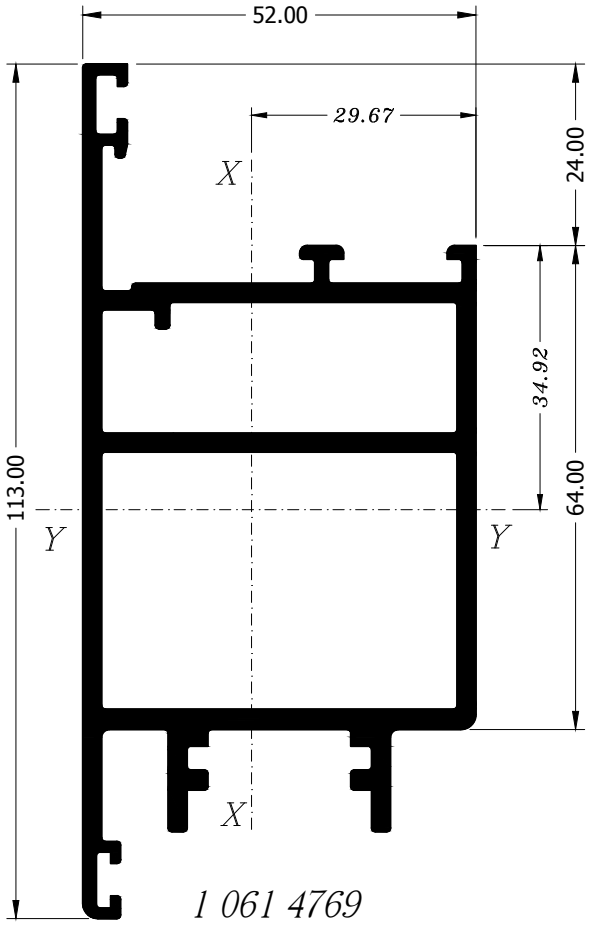

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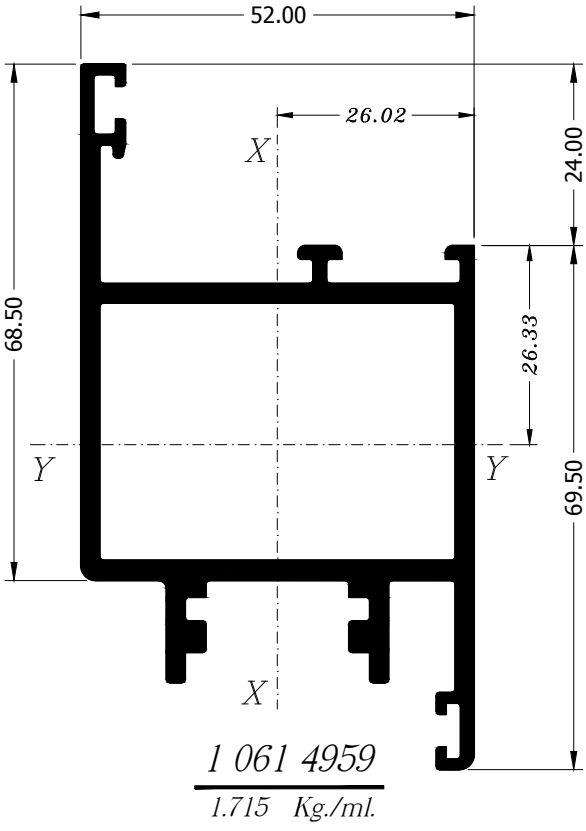

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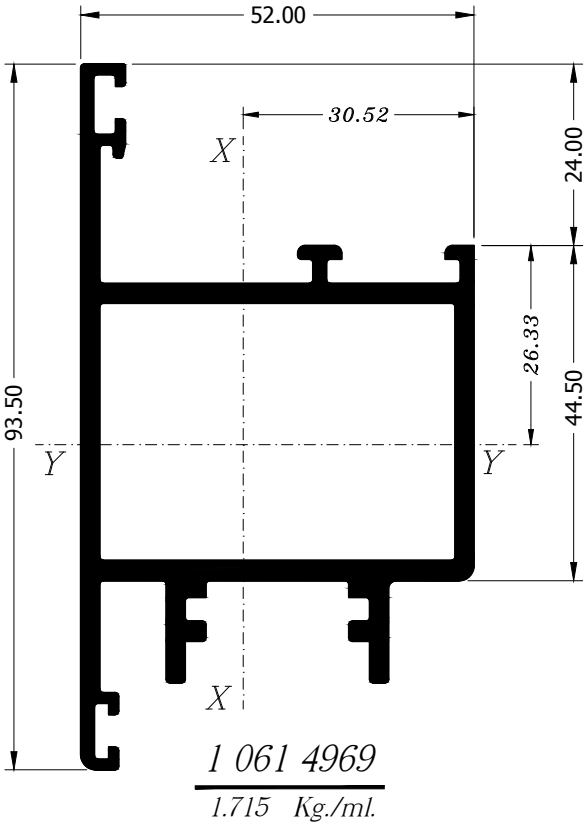

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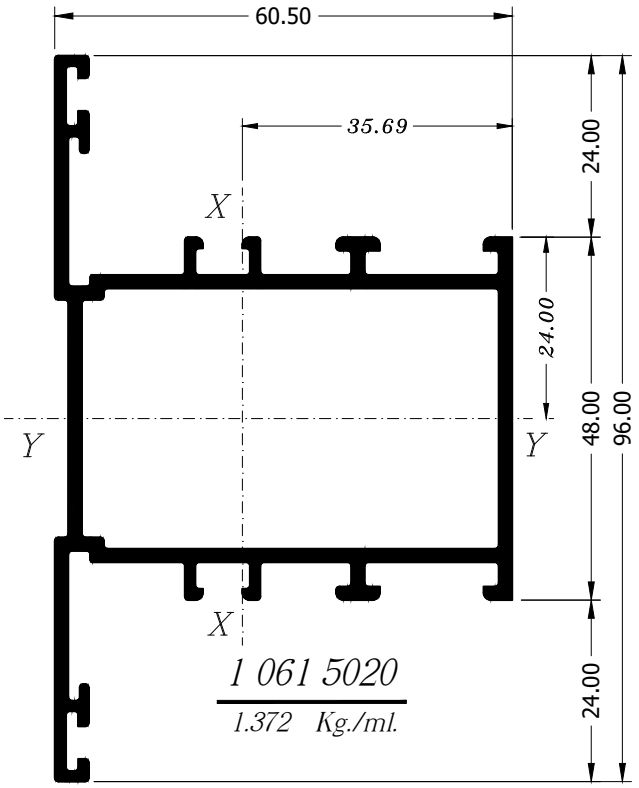

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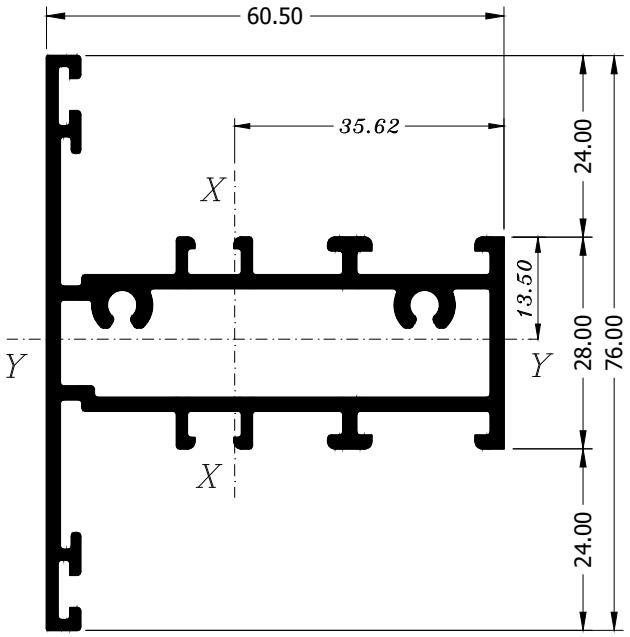

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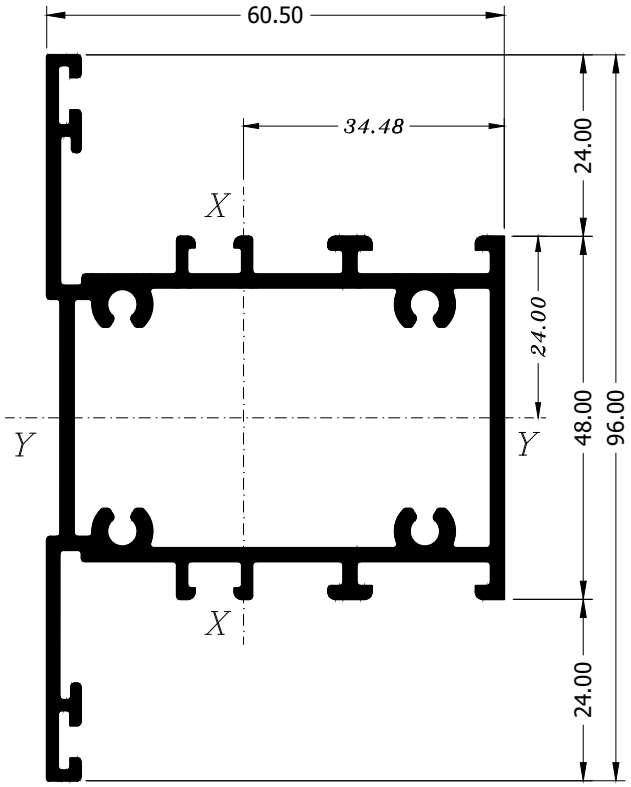

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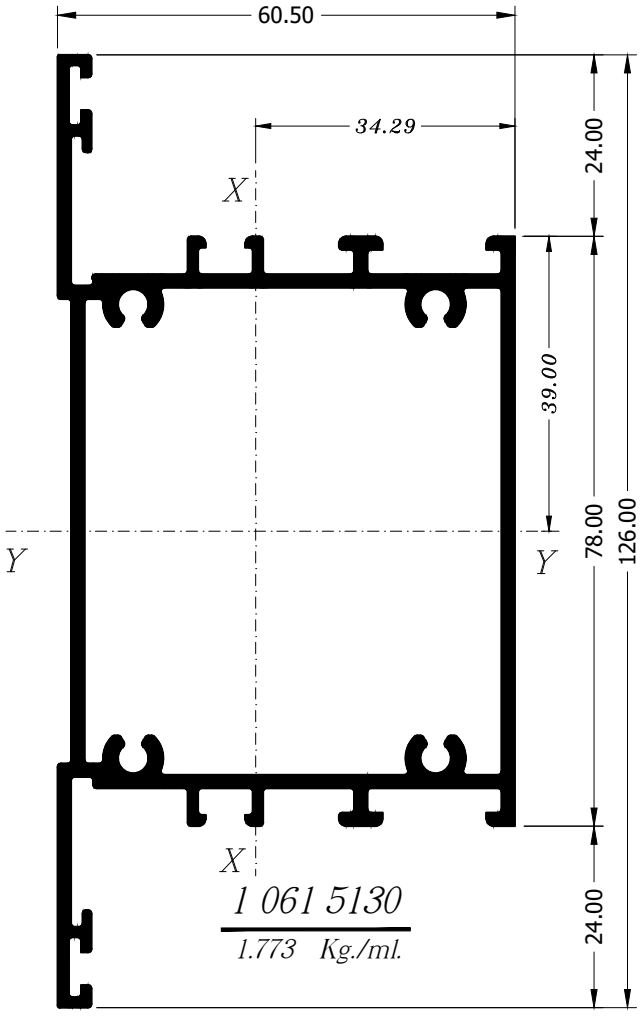

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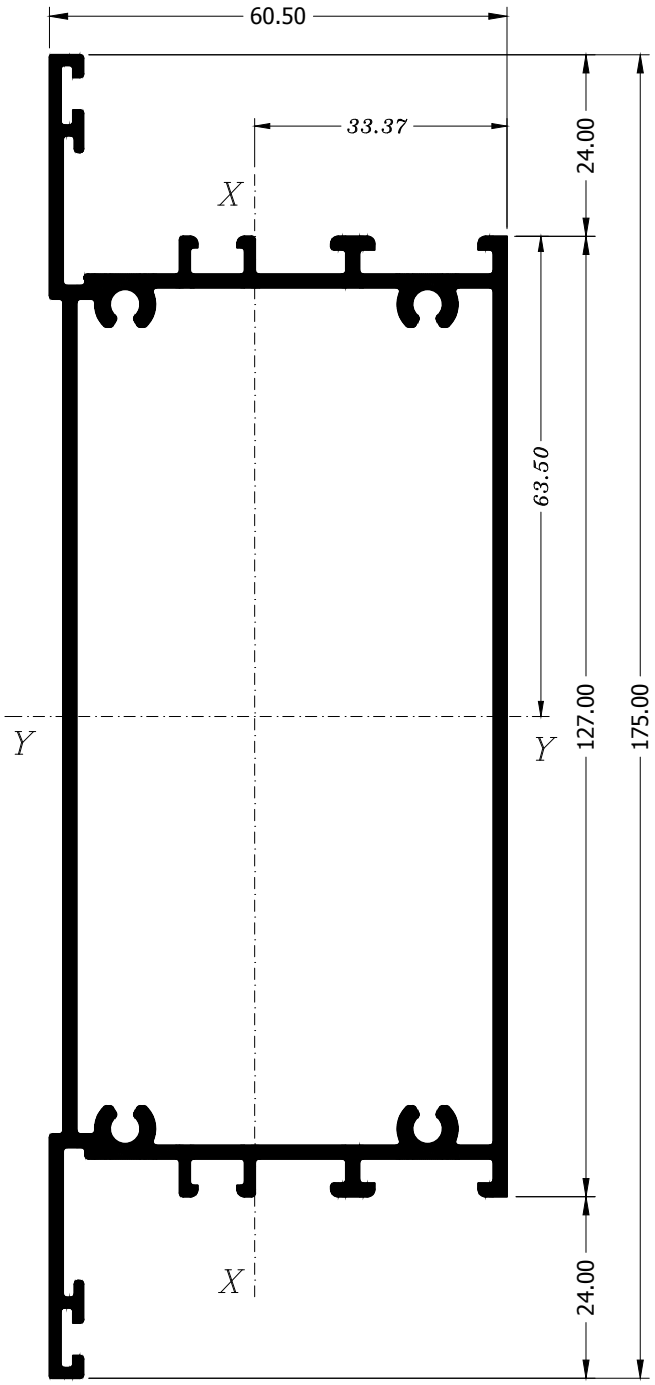

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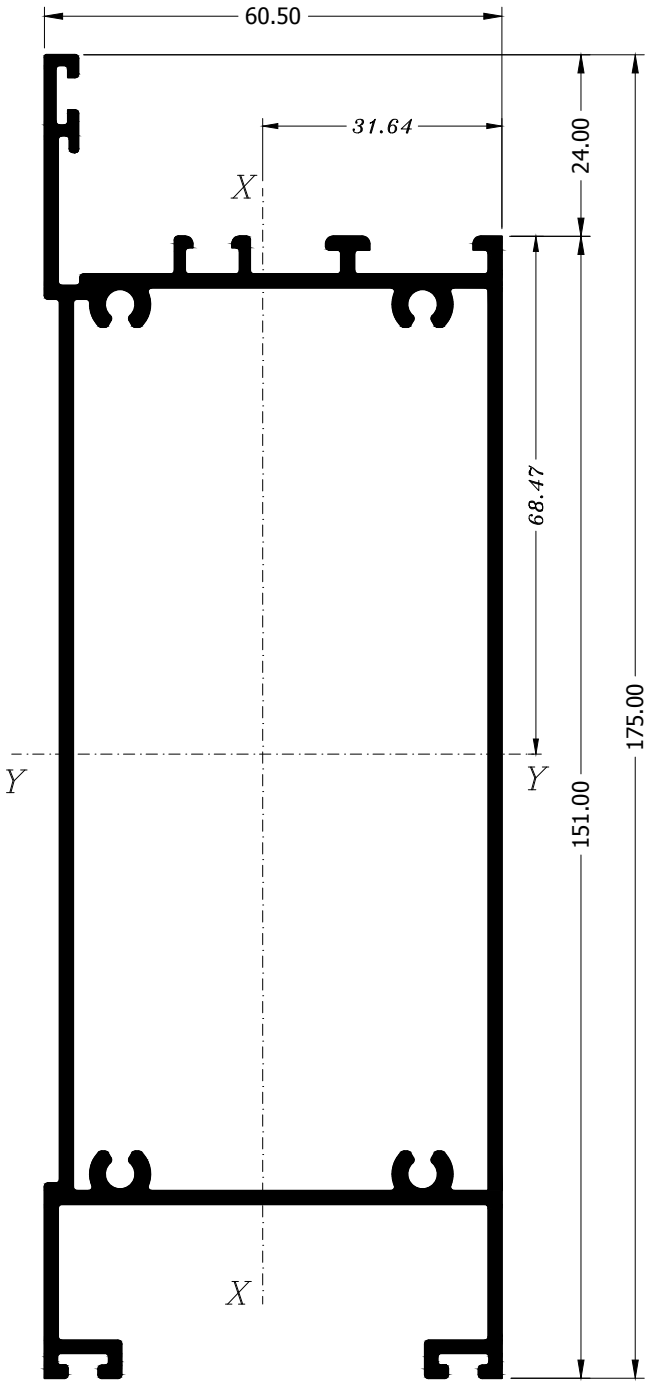

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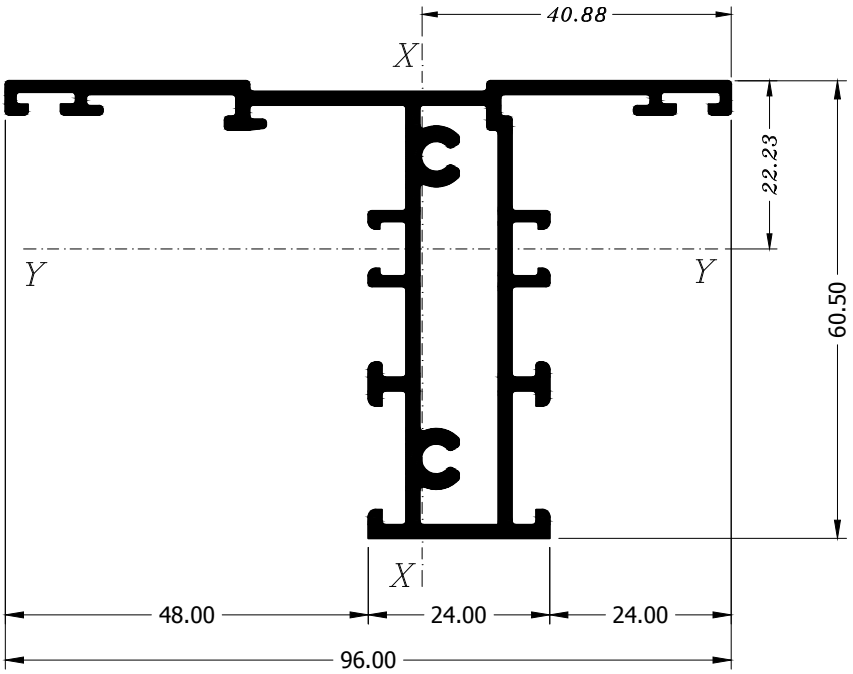

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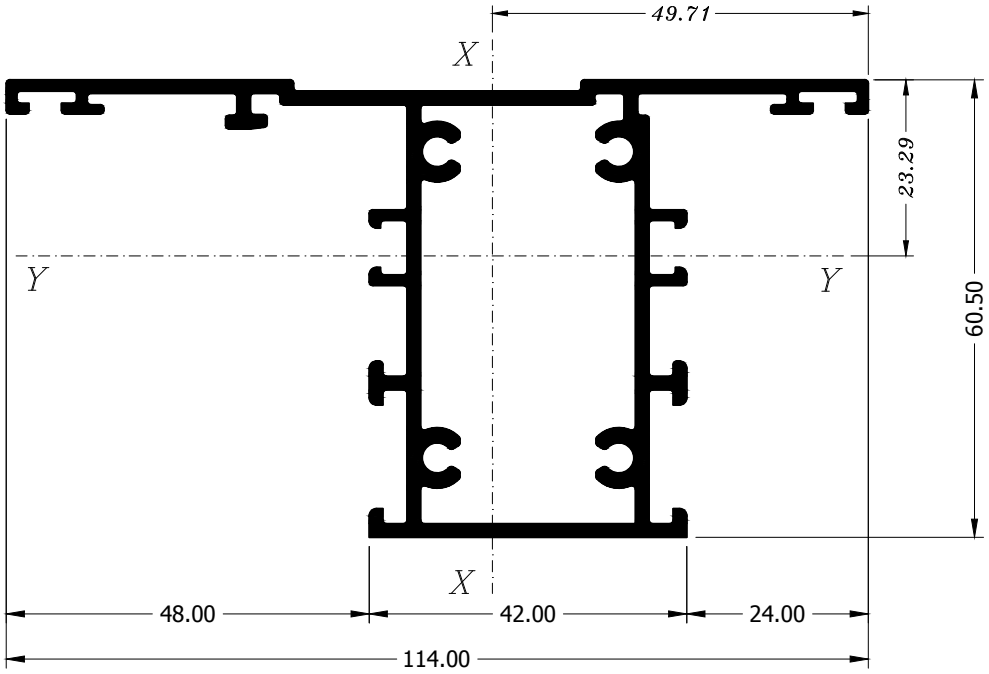

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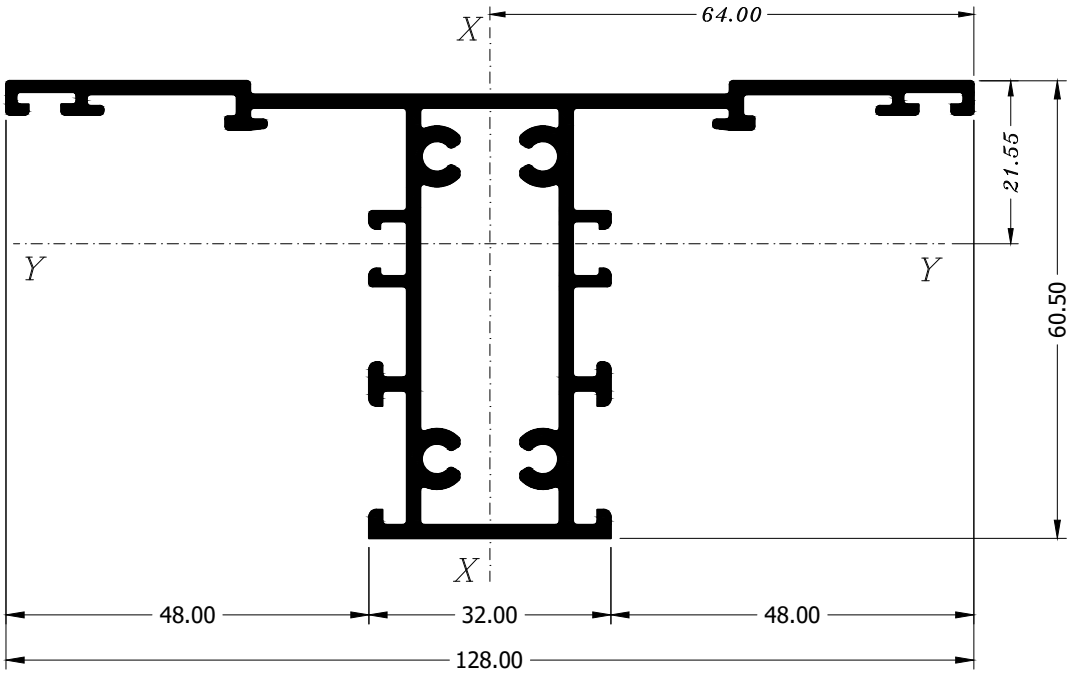

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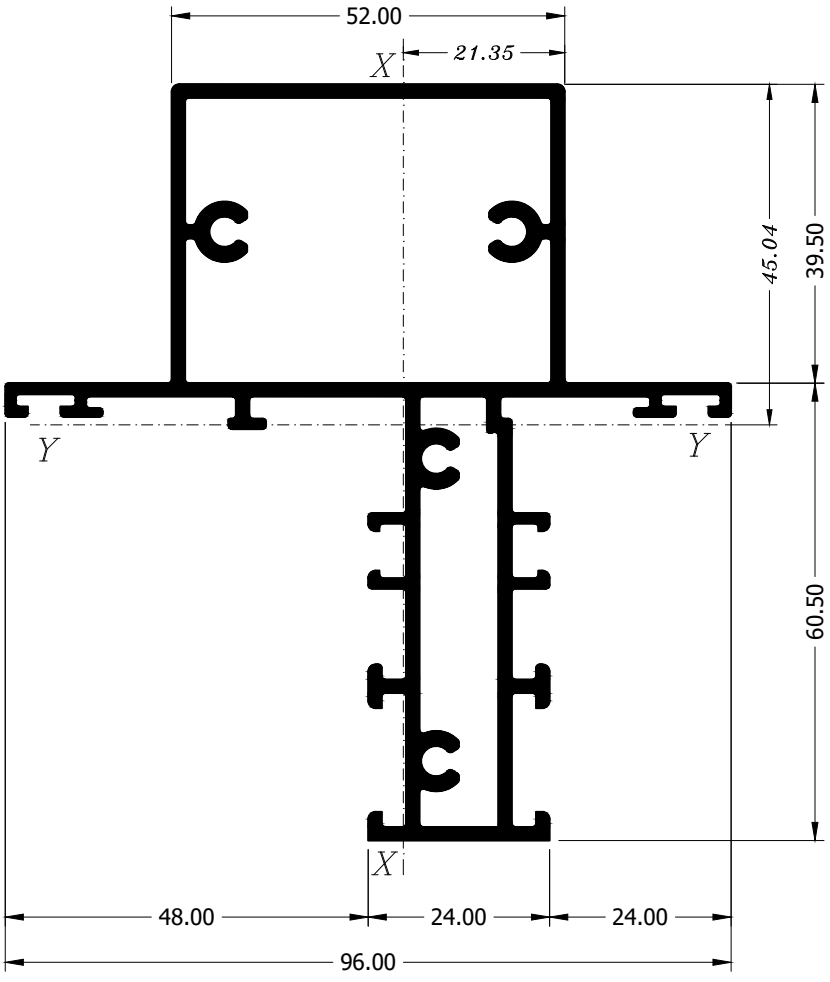

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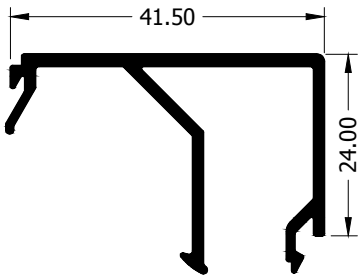

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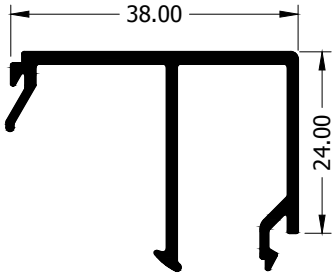

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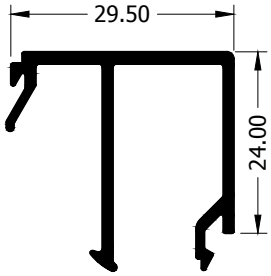

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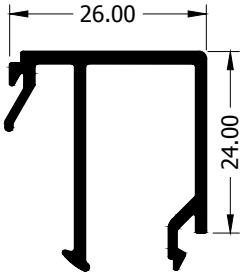

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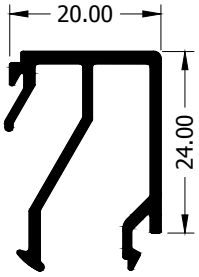

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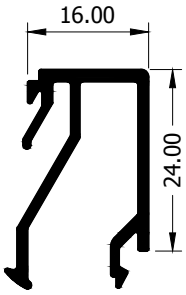

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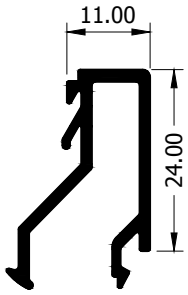

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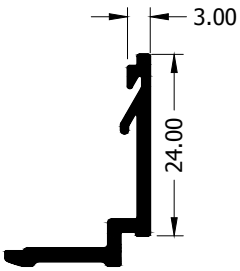

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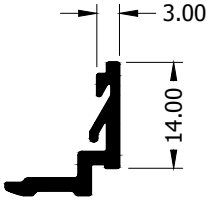

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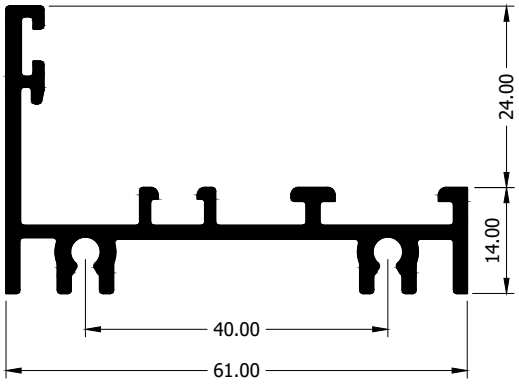

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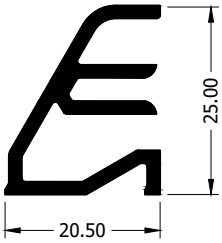

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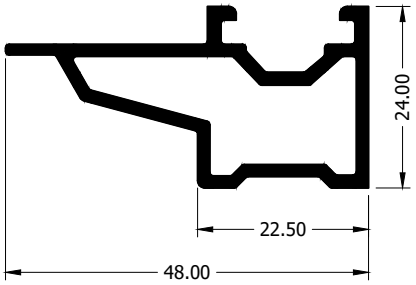

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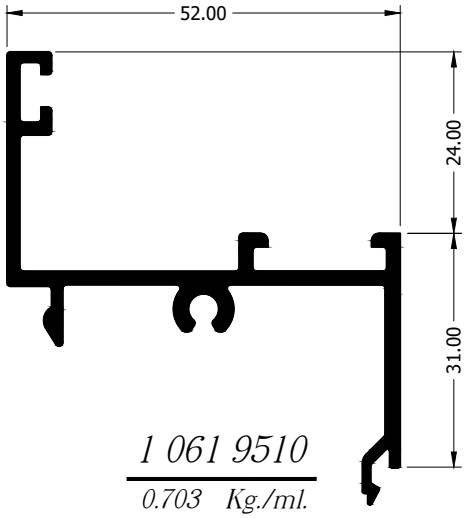

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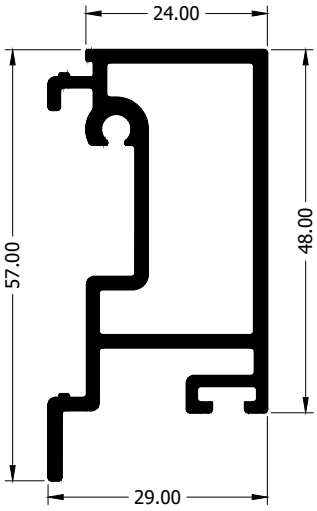

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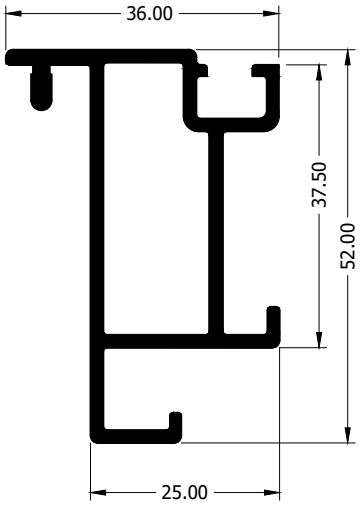

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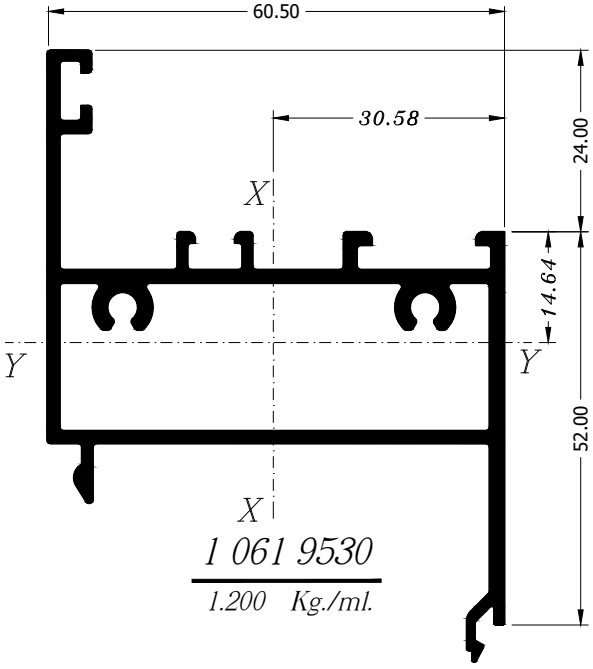

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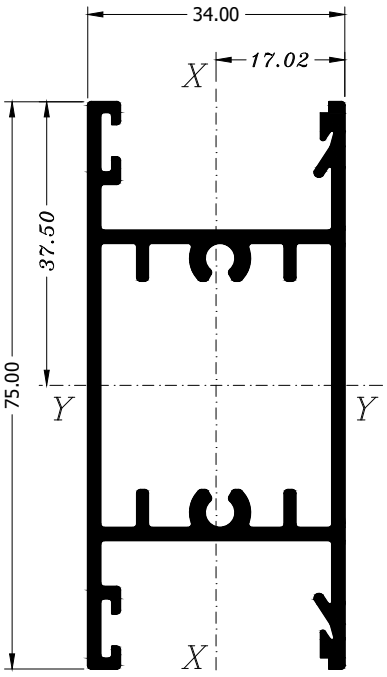

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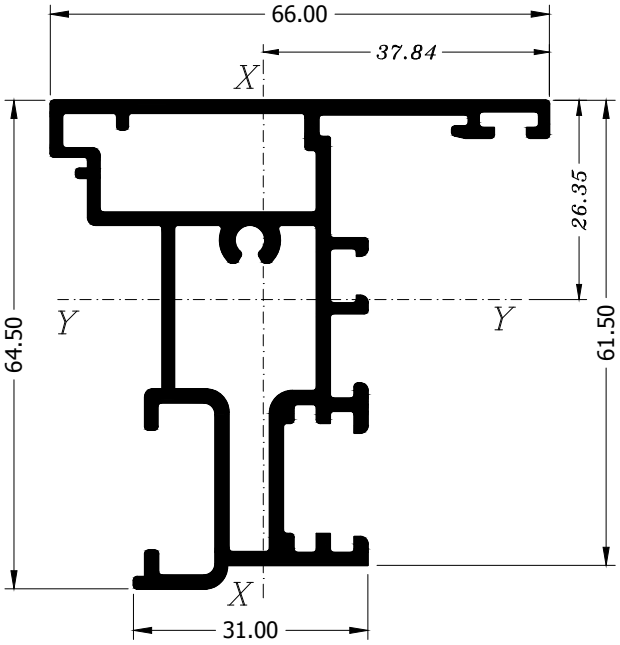

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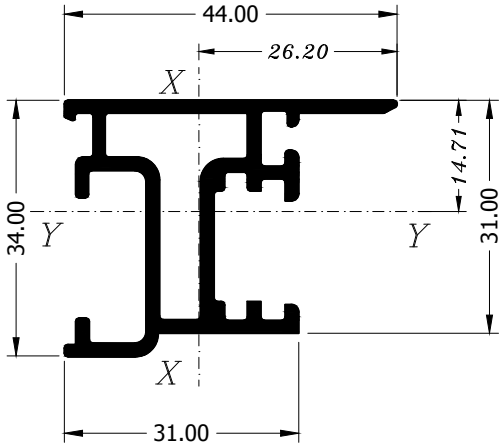

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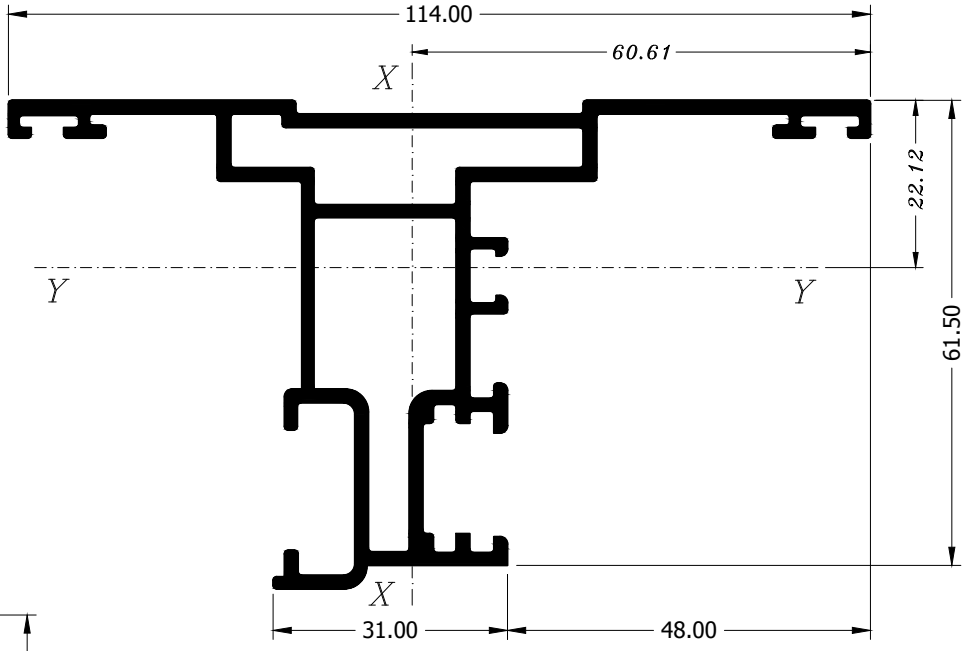

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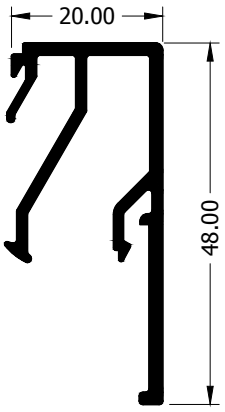

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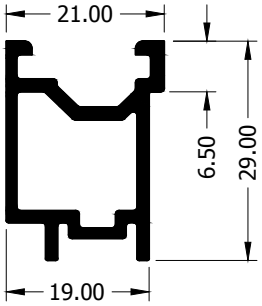

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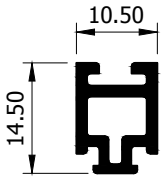

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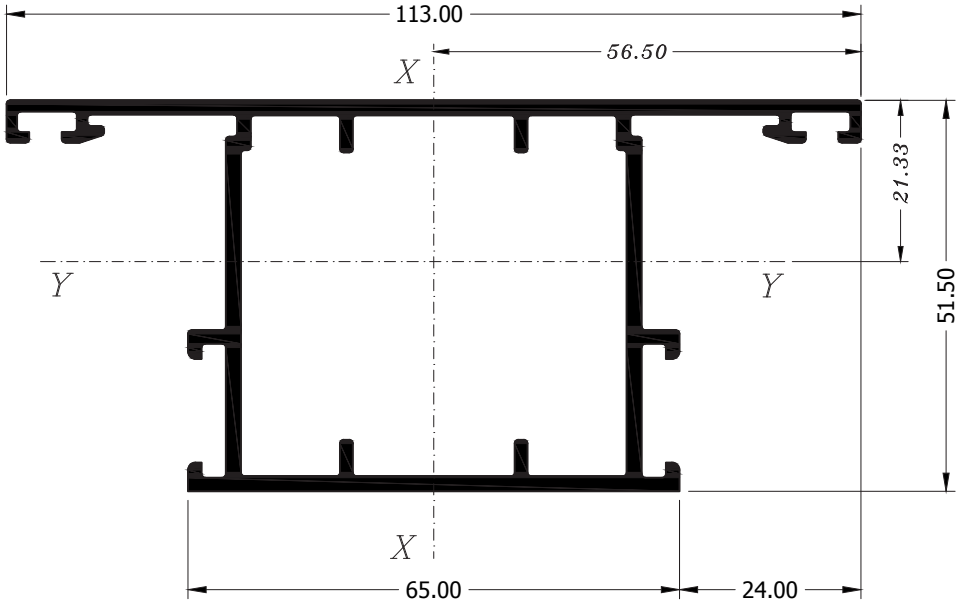

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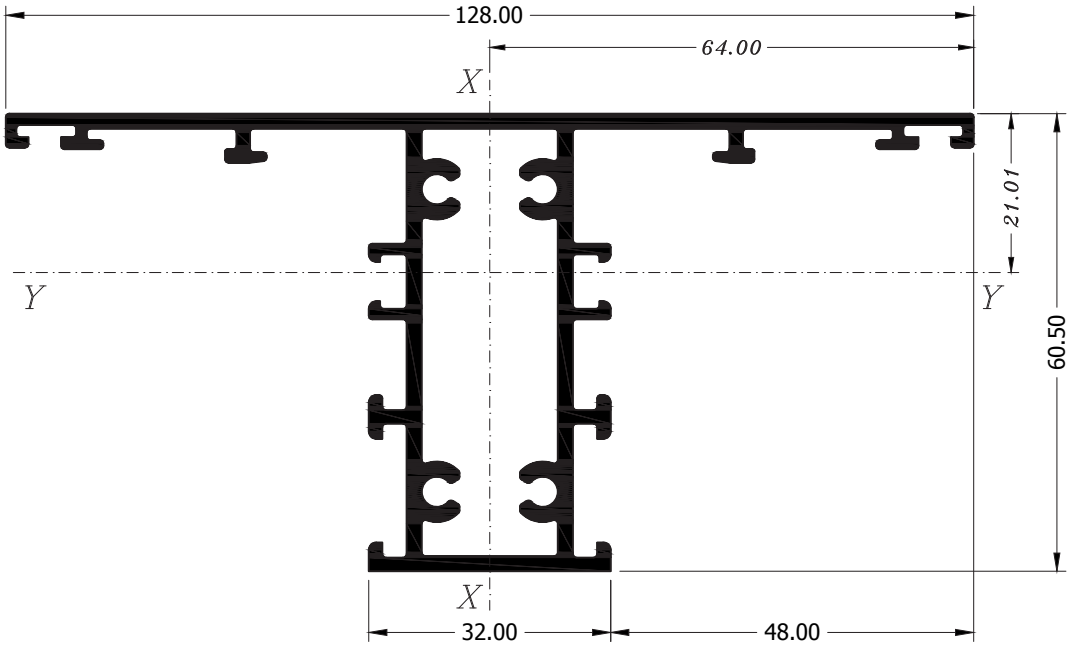

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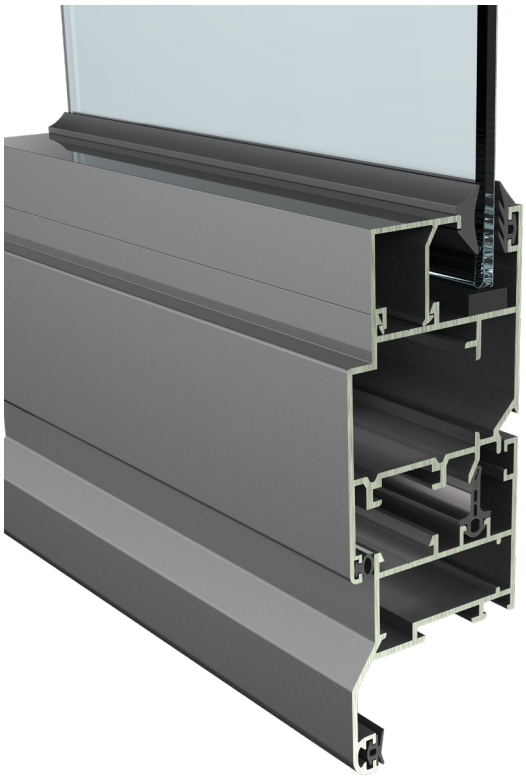
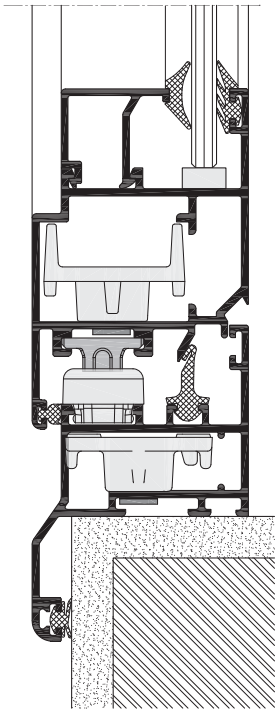
This profile is
specially produced for rolling machines





SONATA 45

Hinged System

- Wide variety of frames and sashes in design and aesthetic shapes that match the architectural trends while offering a full range of accessories for various types of openings.
- Offers a solution for every standard application for inward and outward opening windows and flush doors.
- Offers integrated inward or outward hinged doors solution with facade systems adding an aesthetic value to the glass facades.
- Used for doors and windows with medium to large openings.

Complies with European norm hEN 1435-1

Air Permeability	(Class 4) up to 600 pa.
Water Tightness	(Class E900) up to 900 pa.
Resistance to wind load	(Class C4) up to 1600 pa.

Technical Characteristics

Frame Depth
45 mm. to 154 mm.
Frame Height
46 mm. to 116 mm.
Sash Depth
46 mm. to 52 mm.
Sash Height
64 mm. to 100 mm.
Max Glass Thickness
Up to 44 mm.
Max Sash Weight
Up to 160 kg.
Sealing Type
EPDM gasket with central gasket

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011

CLASSIFICATION ASSESSMENT
N. 0714-CPR-1288 DATED AUGUST, 05 2015

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Single hinged window, inward opening.
Model:	SONATA 45 Width= 800 mm, Height = 1,200 mm, Thickness = 53 mm
Fabrication number:	-
Date of fabrication:	2015
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/1, dated August, 05 2015, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified,

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	**CLASS 4**
WATERTIGHTNESS:	**CLASS E900**
RESISTANCE TO WIND LOAD:	**CLASS C4**

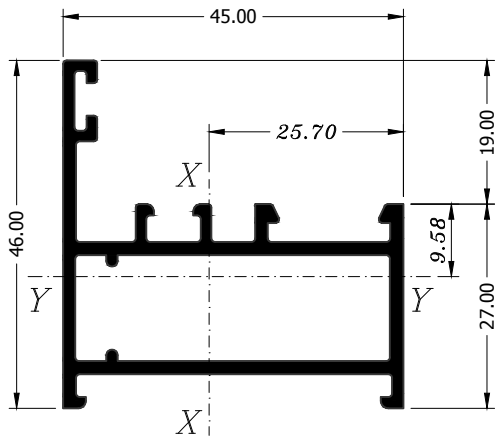
The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, August, 05, 2015

The undersigned ECO Certificazioni S.p.A. [illegible]
Eng. Gianluca Cam[illegible]

ECO CERTIFICAZIONI S.P.A. - ITALY - Via Mengolina, 33 FAENZA (RA) - www.eco-cert.it

ECO Certificazioni S.p.A. - Via Mengolina, 33
48018 Faenza (RA) - ITALY
Tel. +39 0546 624911 - Fax +39 0546 624922
E-mail: info@eco-cert.it - www.ecocertificazioni.eu



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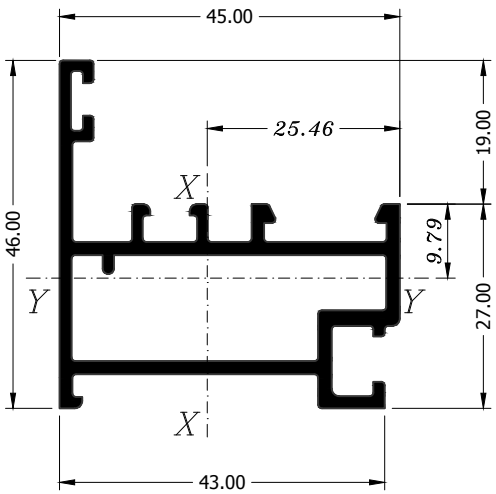

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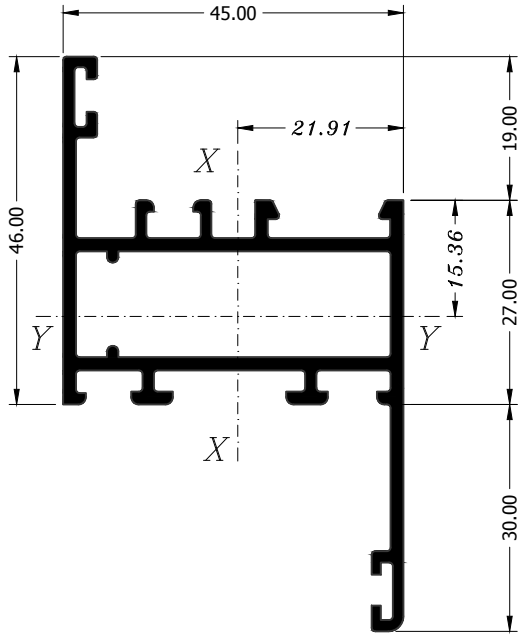

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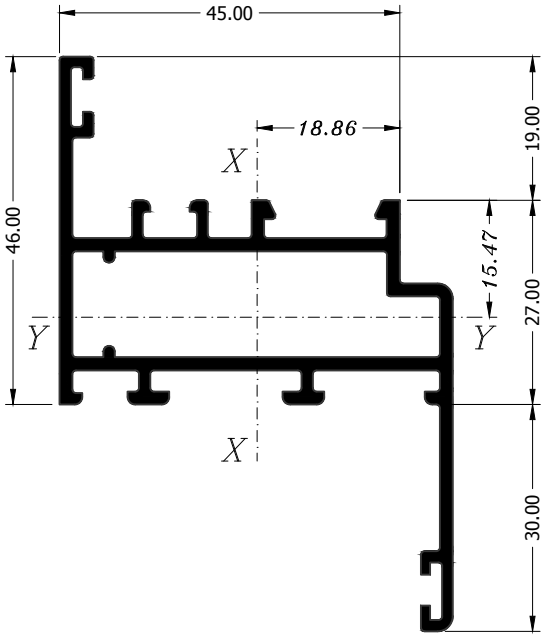

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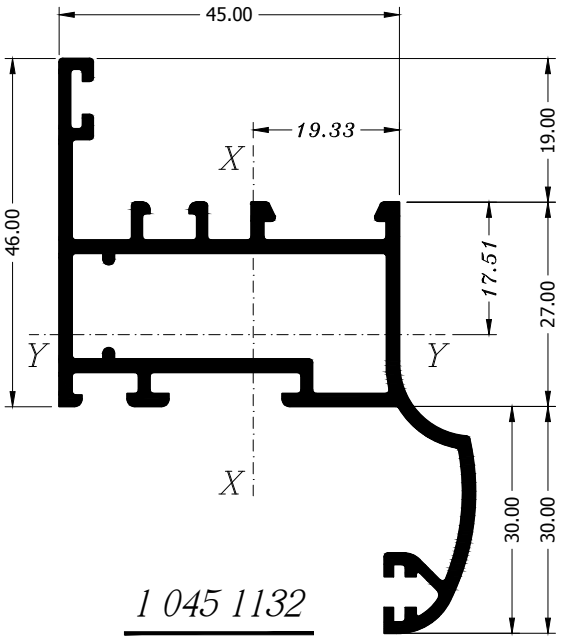

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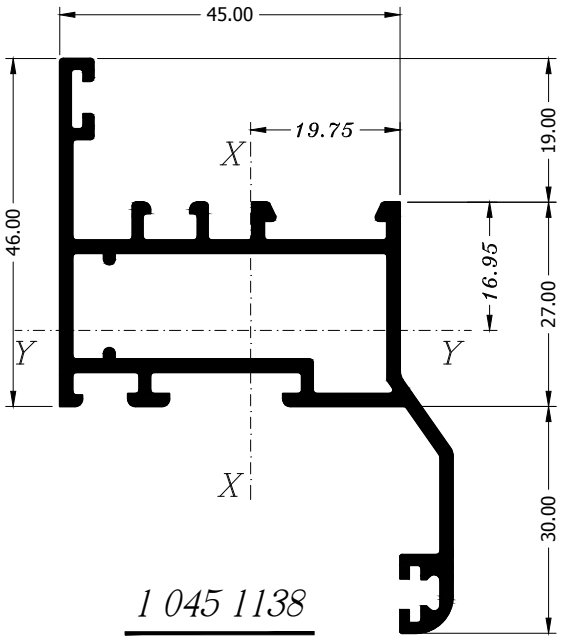

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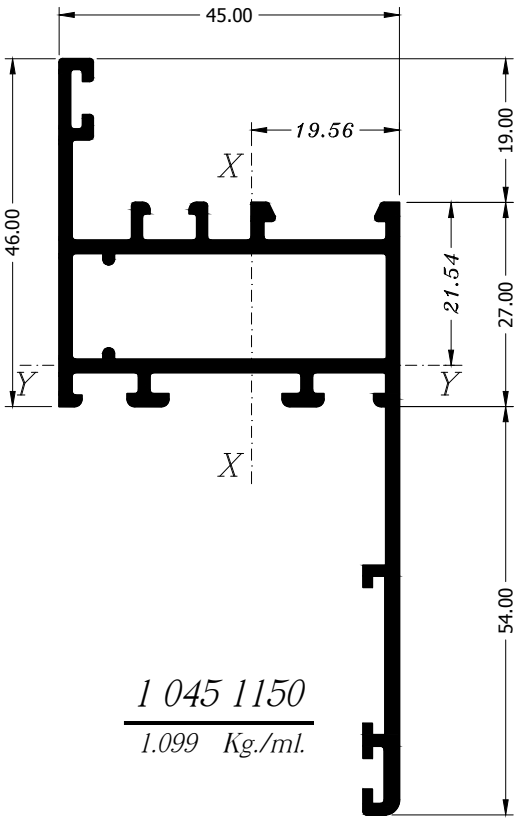

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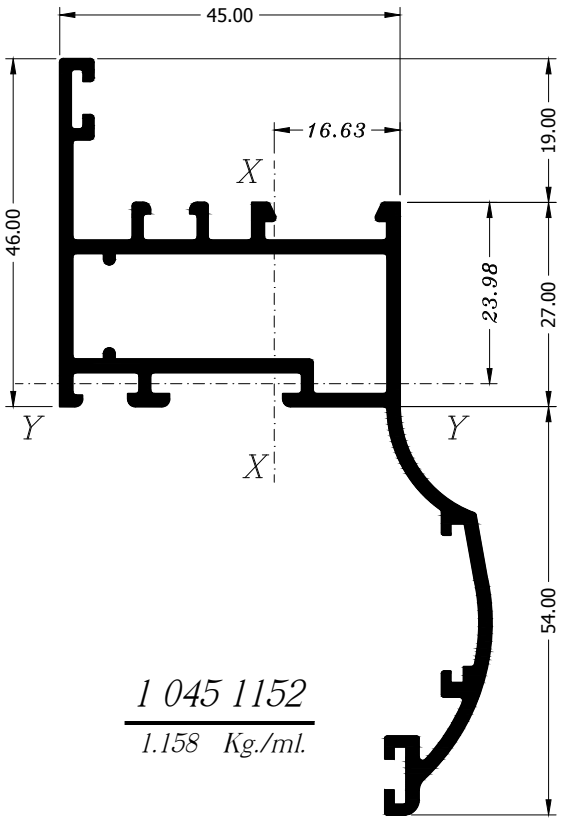

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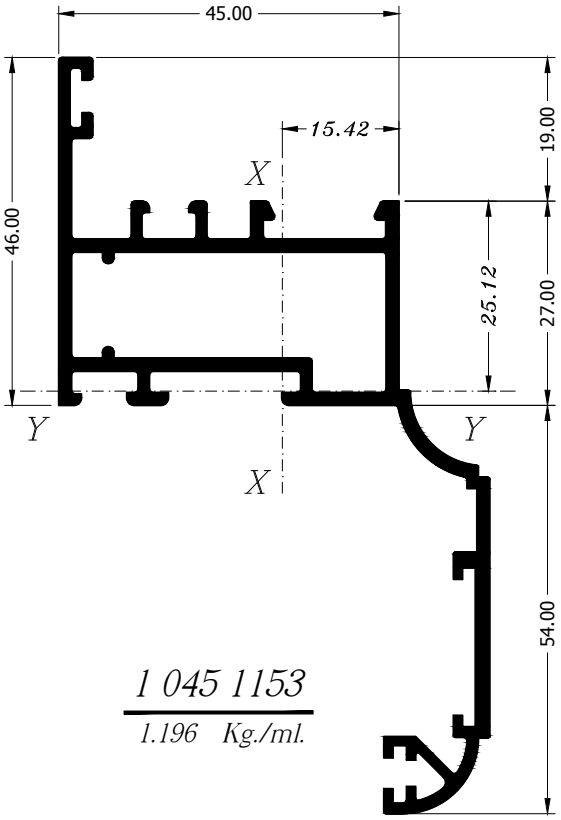

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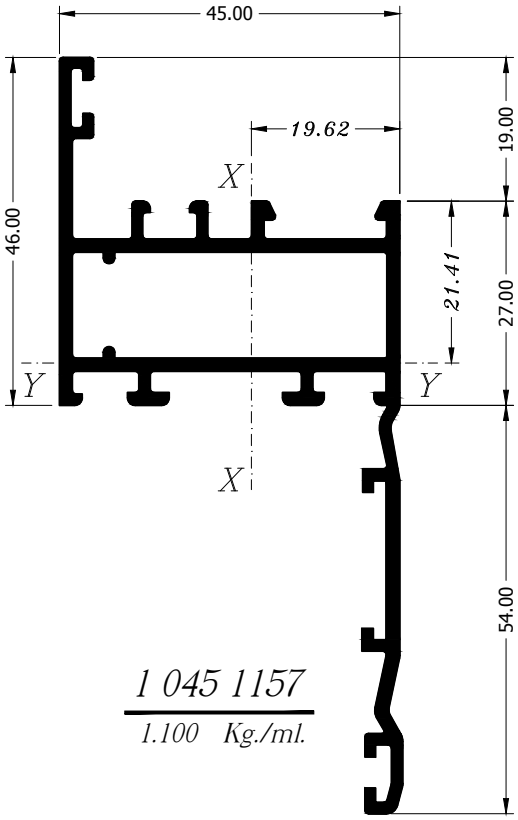

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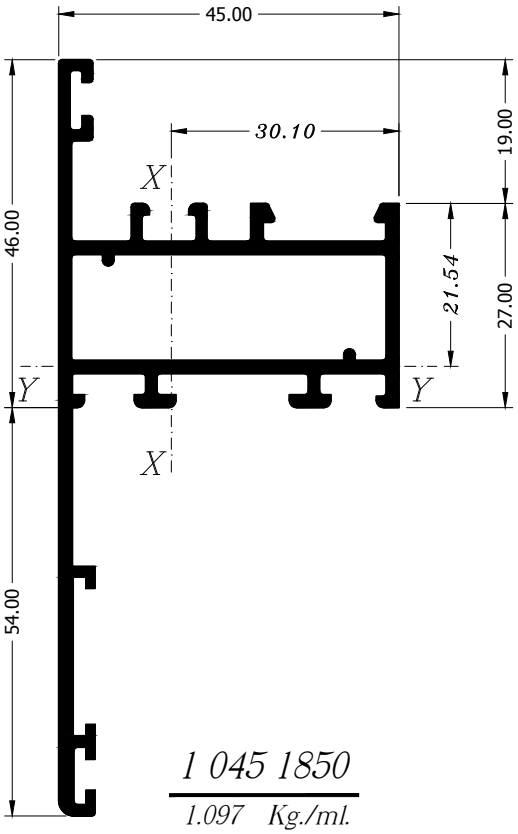

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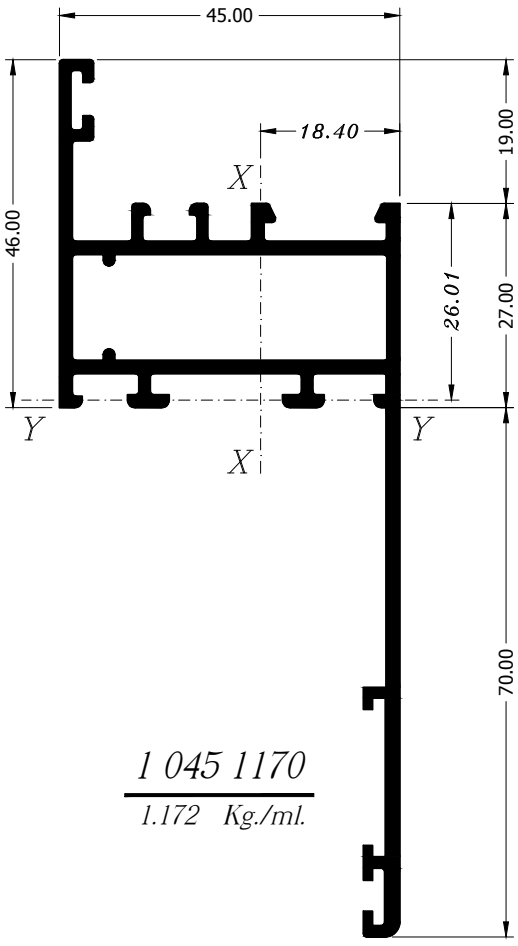

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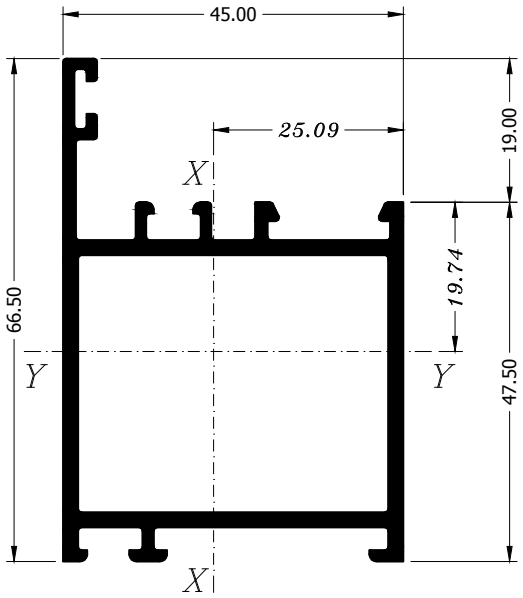

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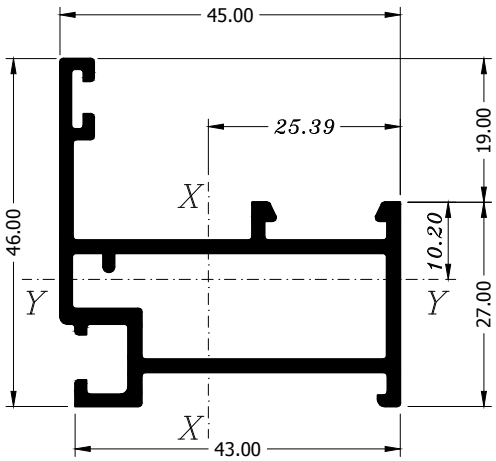

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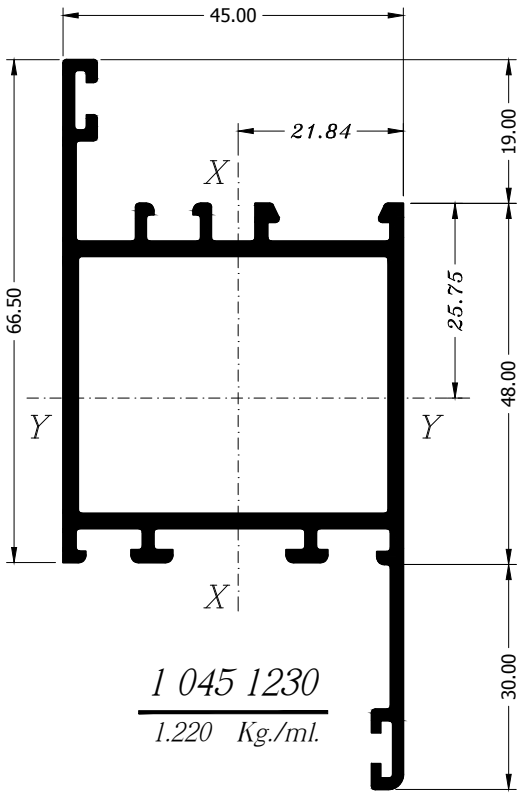

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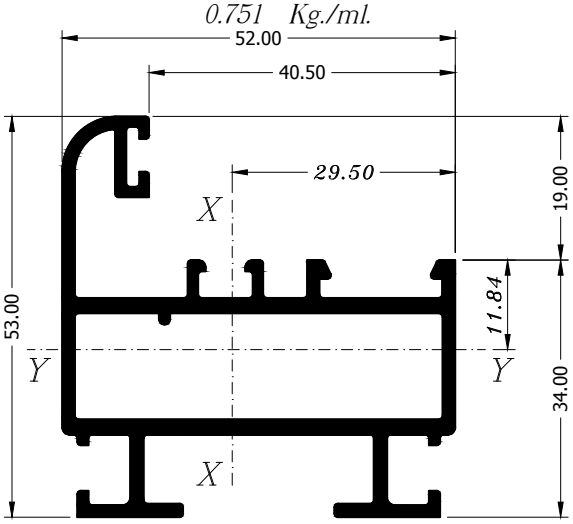

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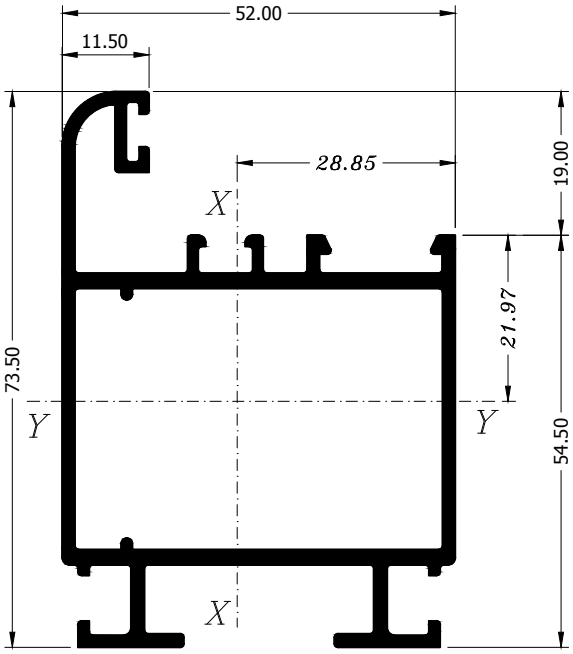

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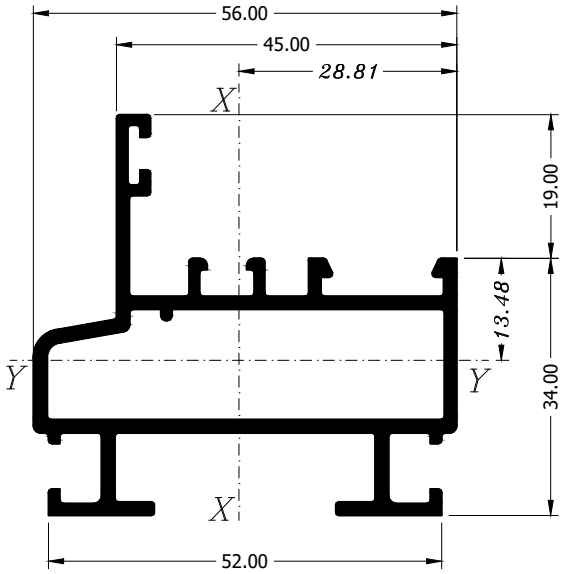

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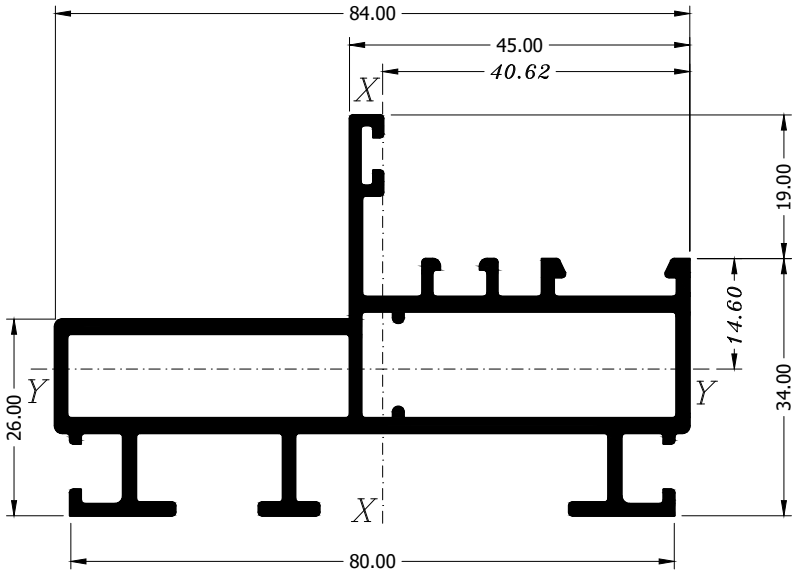

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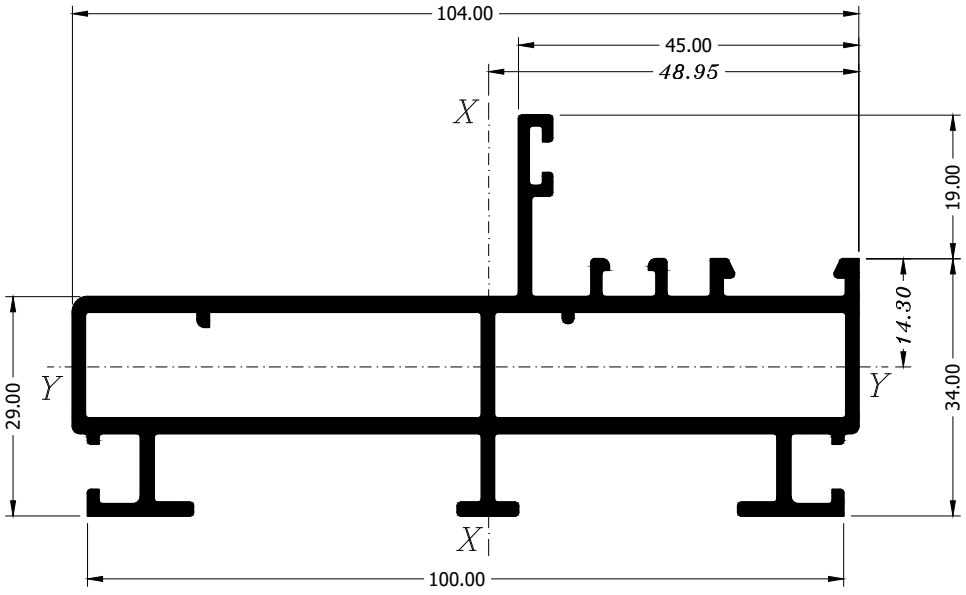

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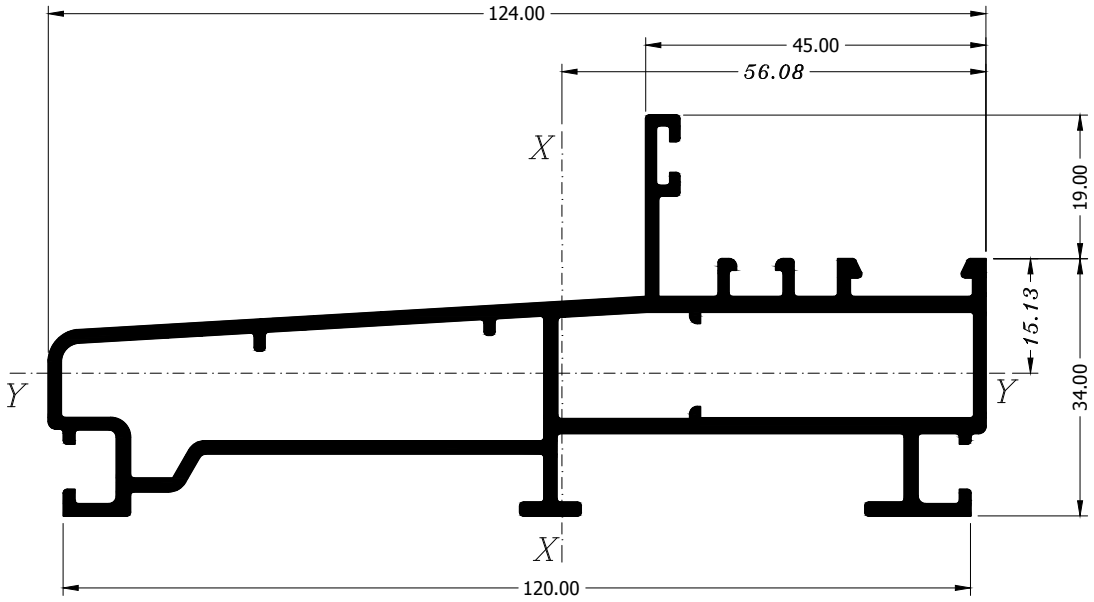

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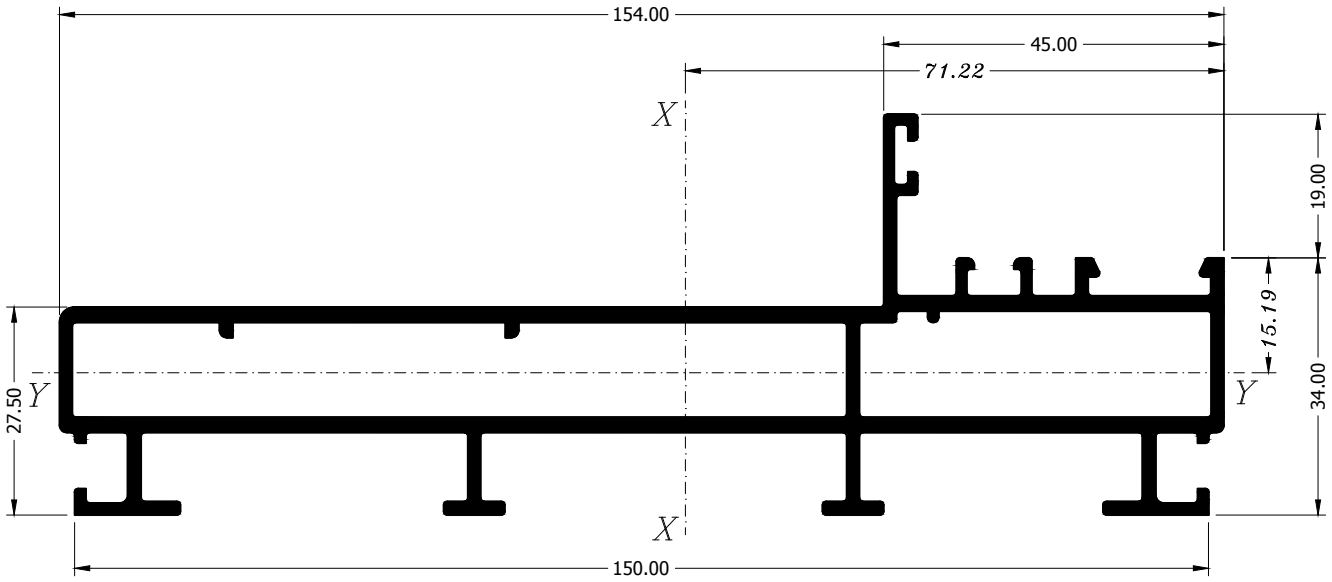

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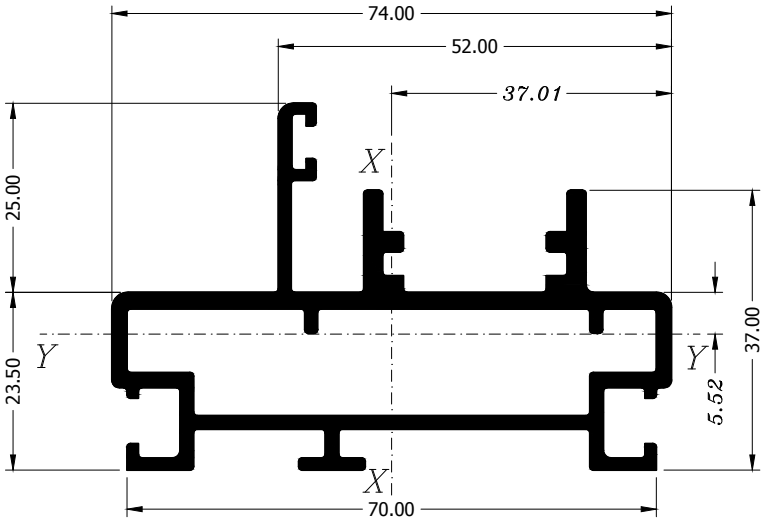

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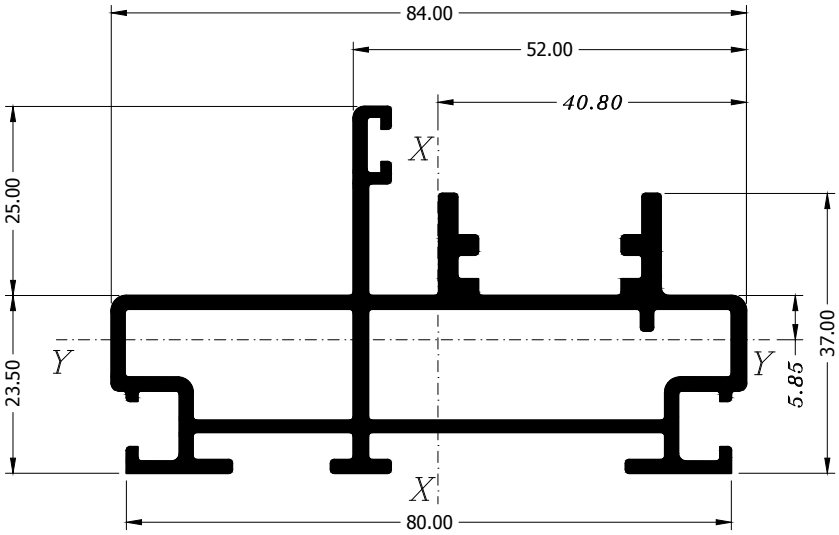

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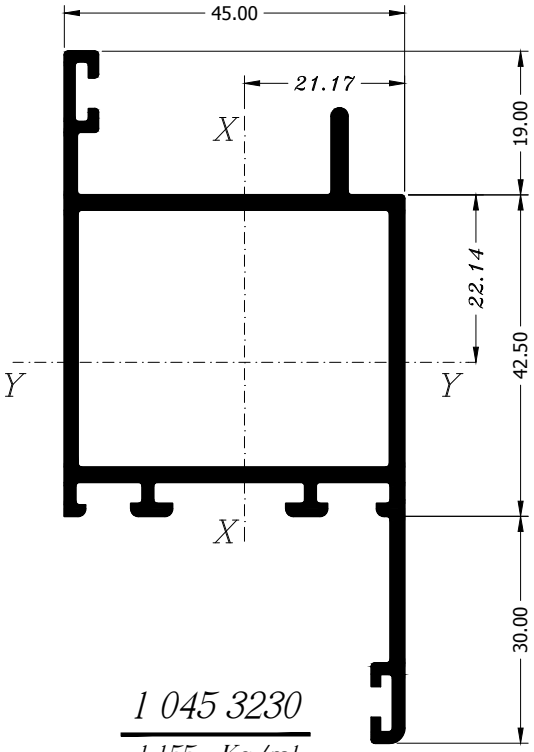

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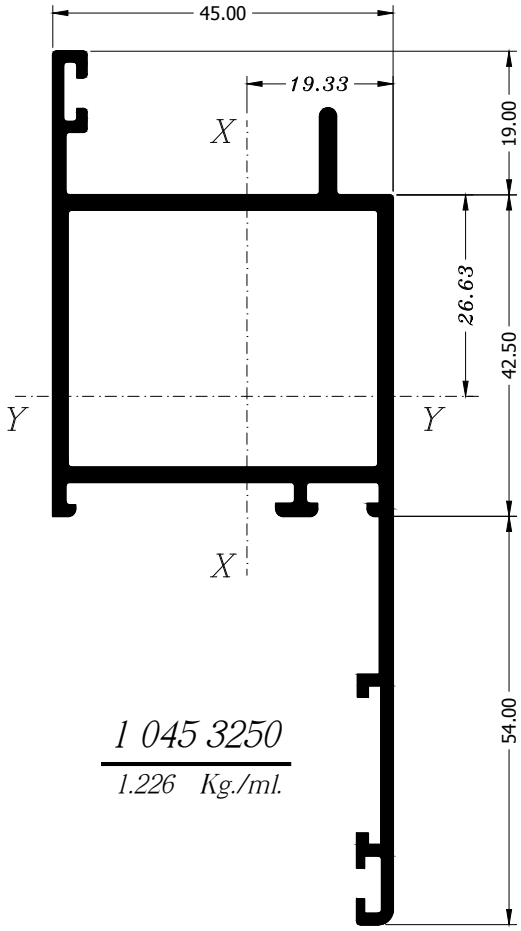

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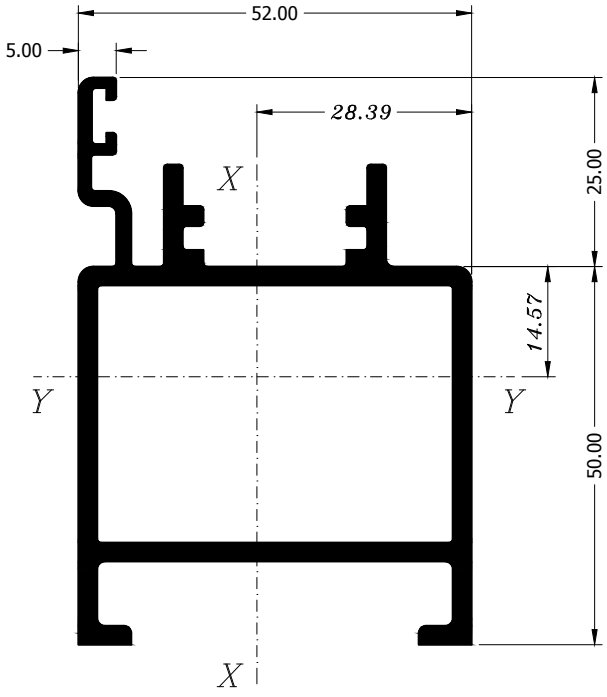

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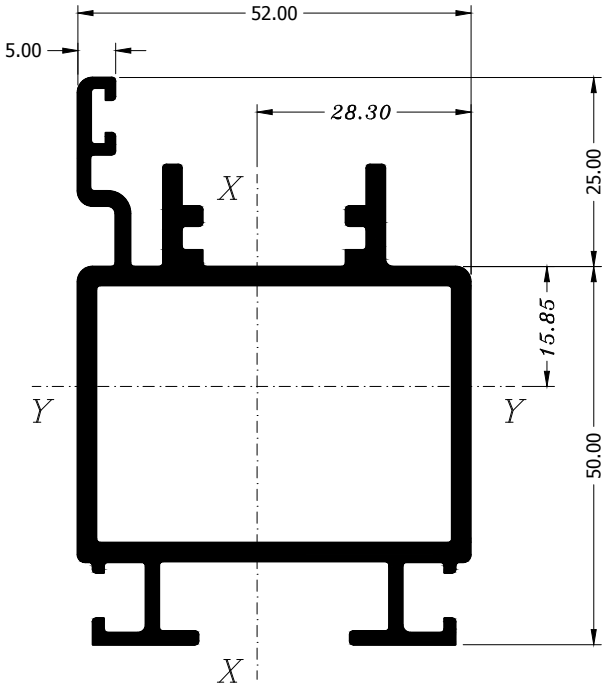

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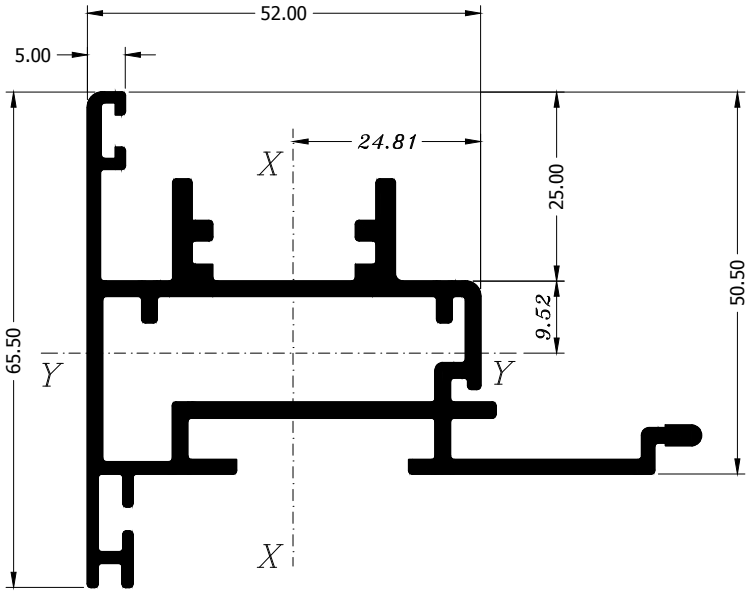

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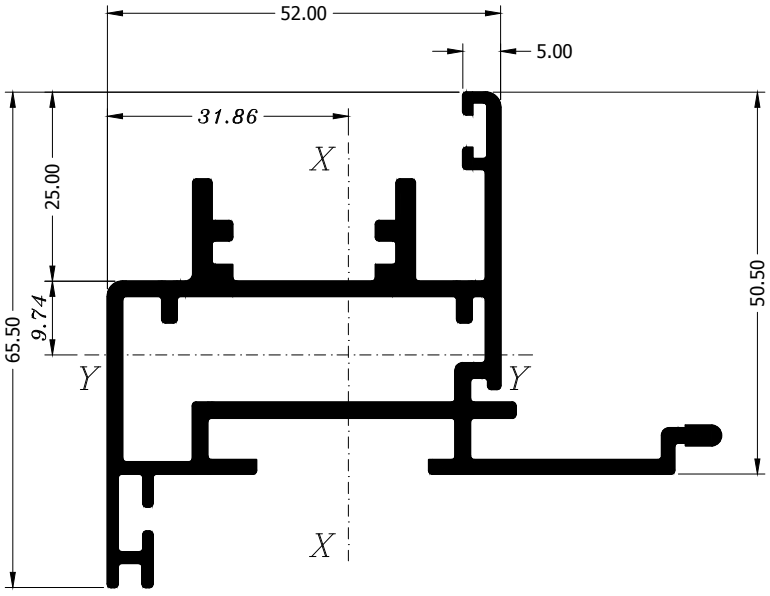

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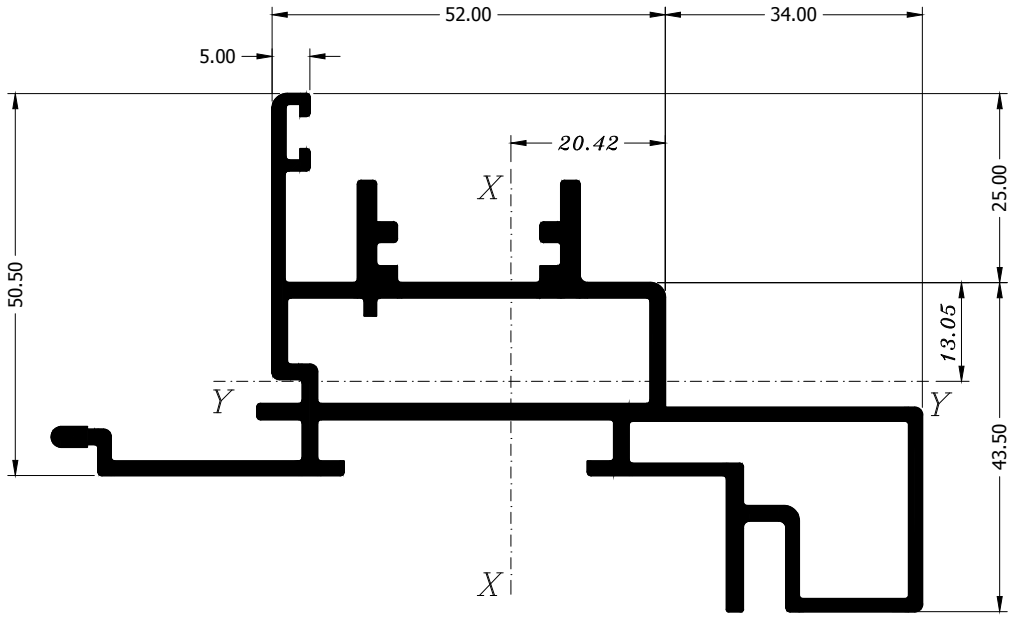

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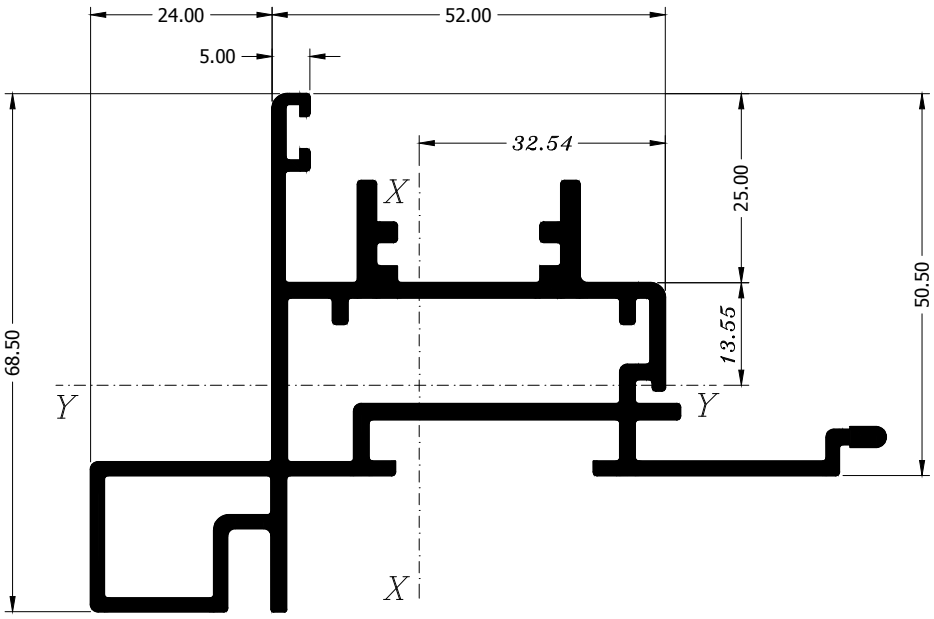

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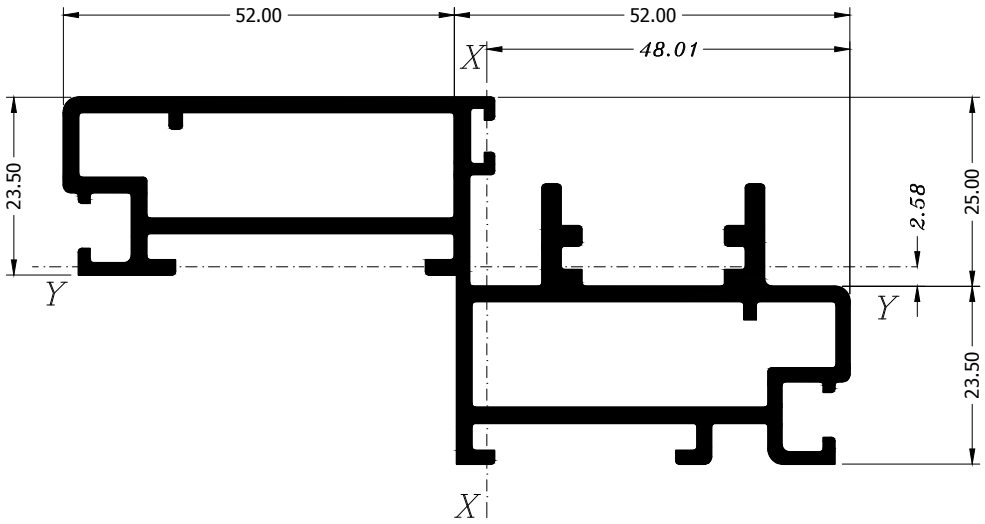

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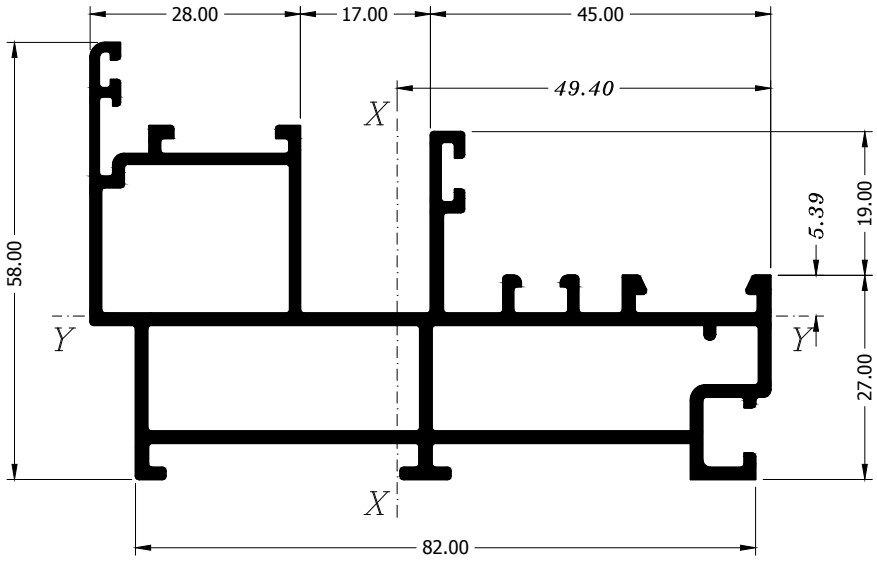

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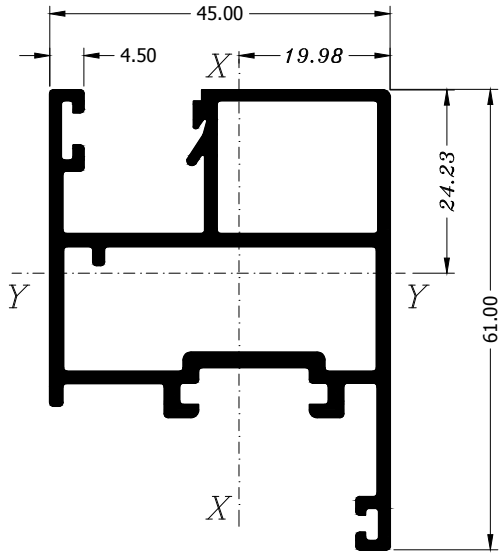

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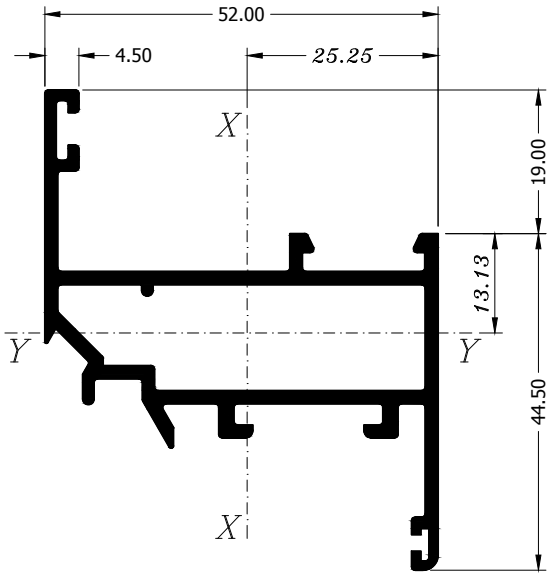

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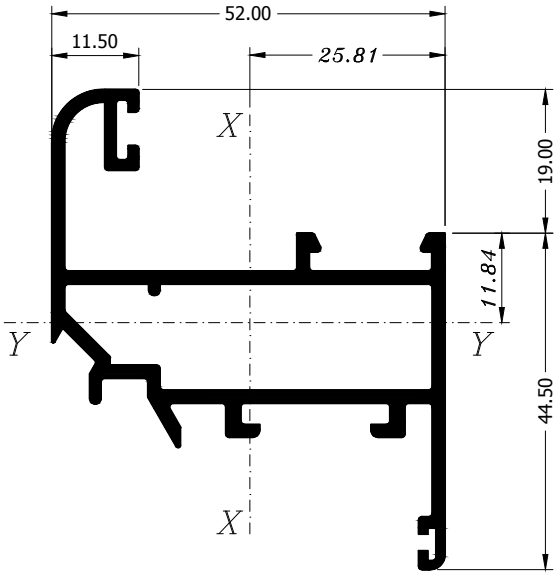

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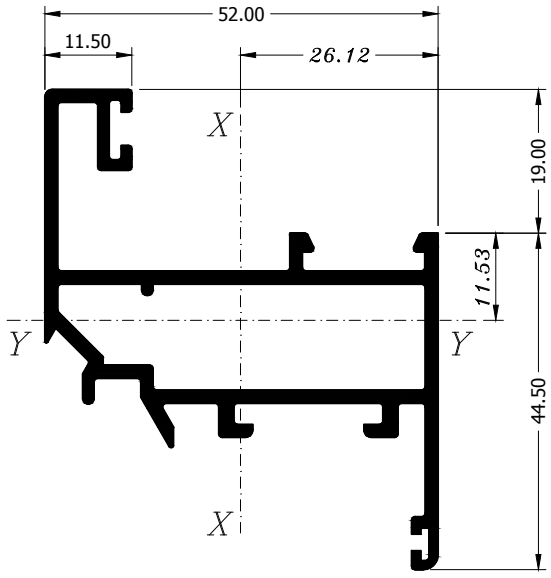

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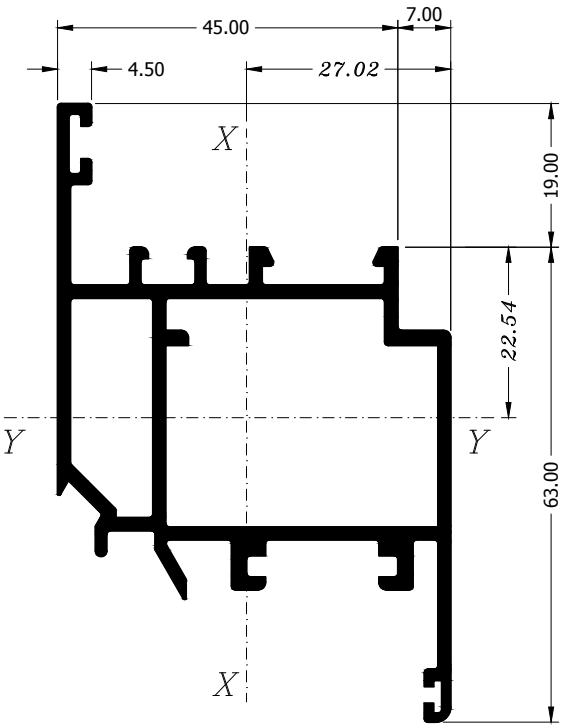

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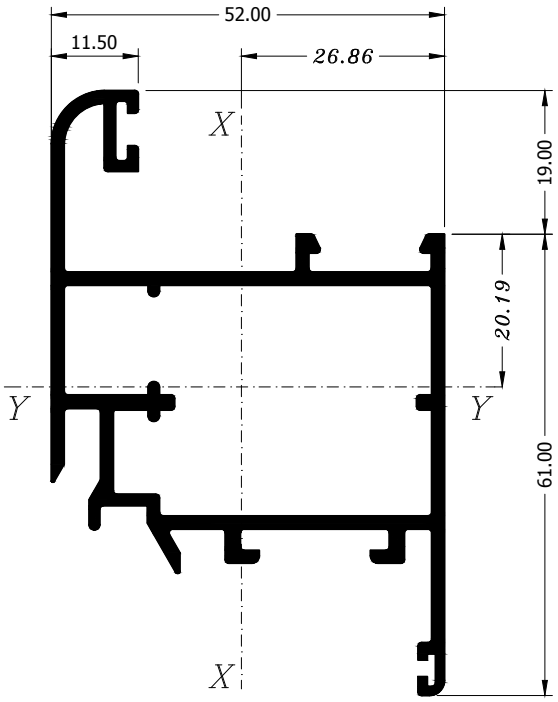

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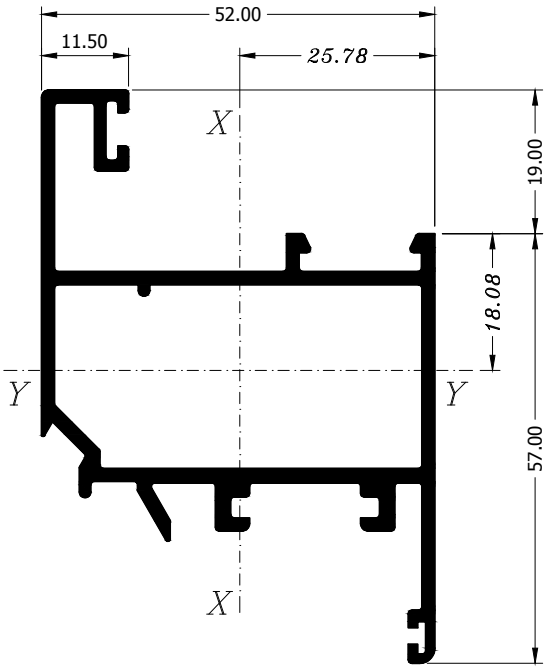

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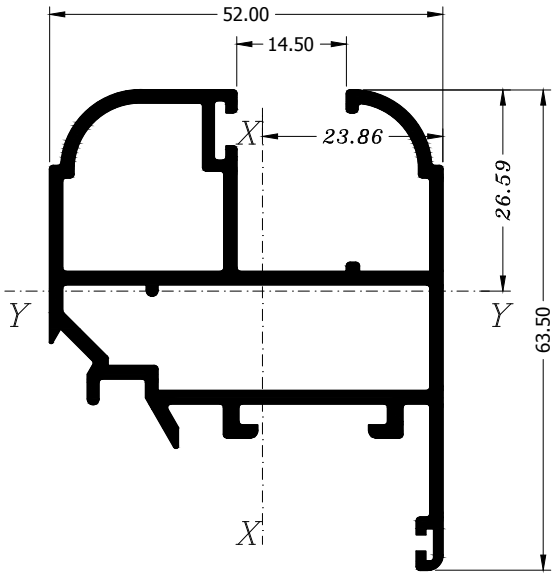

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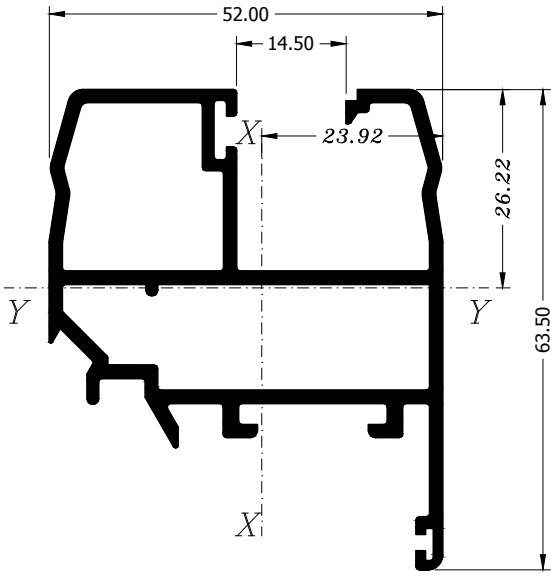

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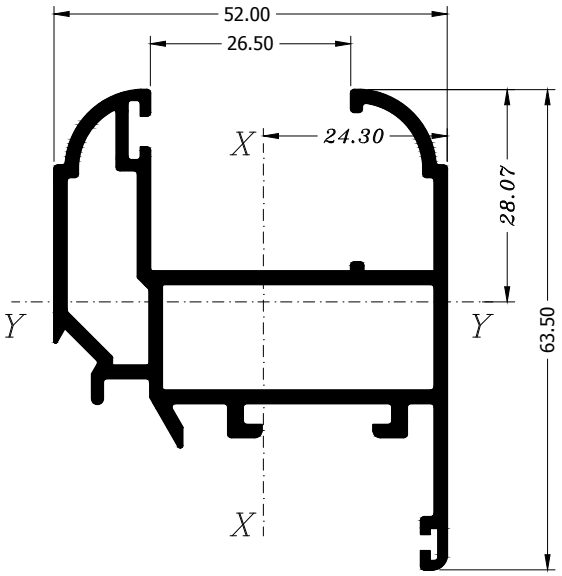

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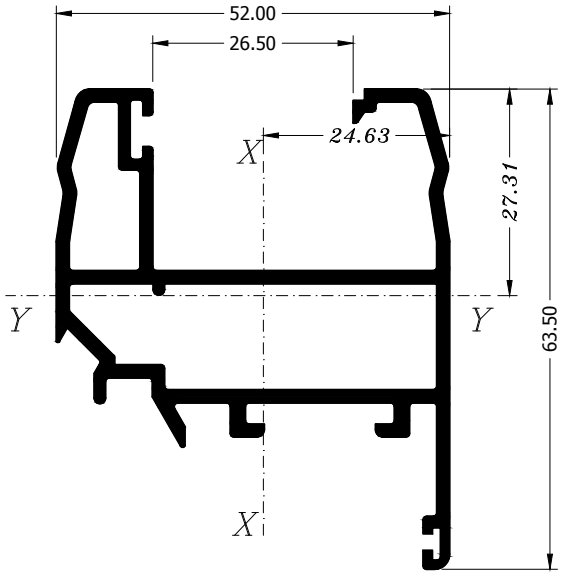

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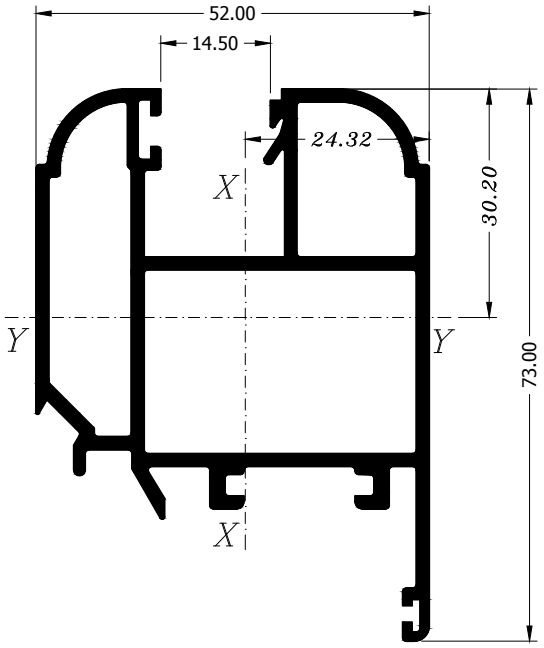

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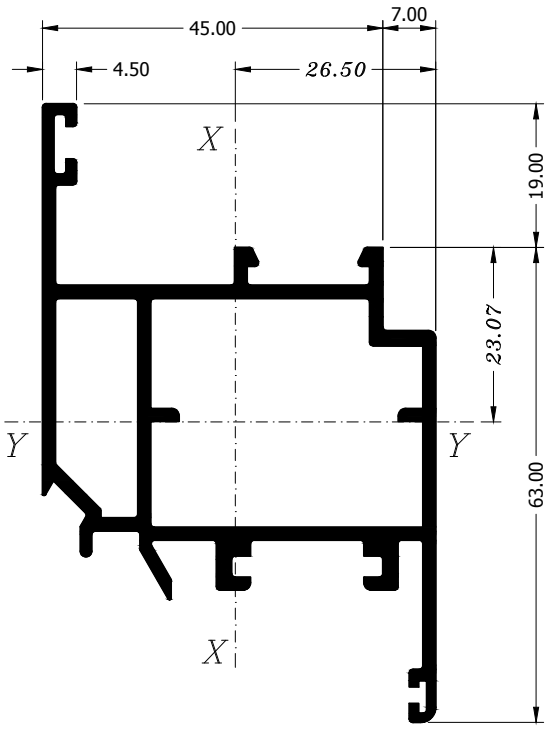

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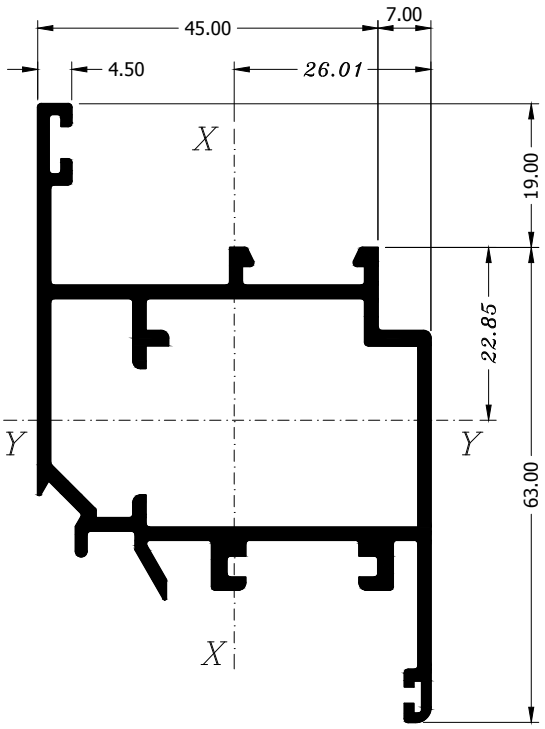

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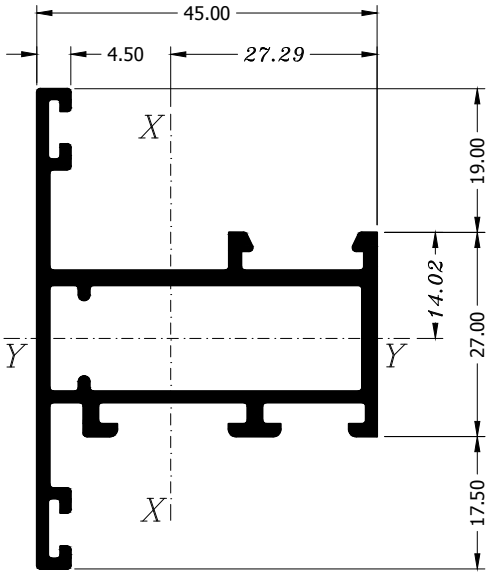

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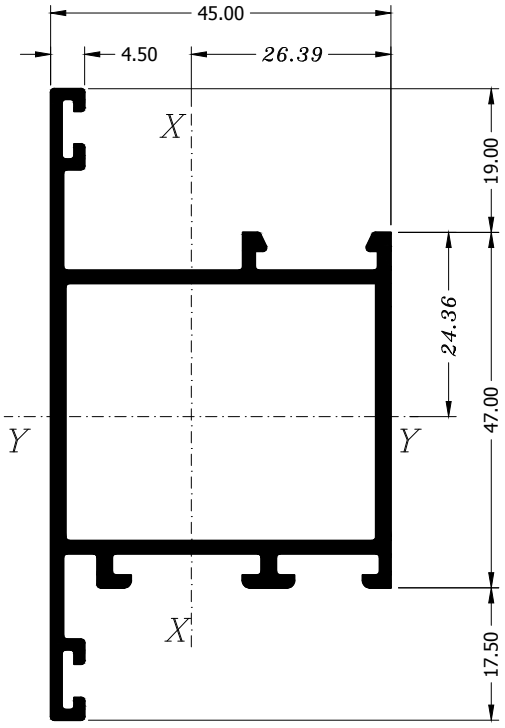

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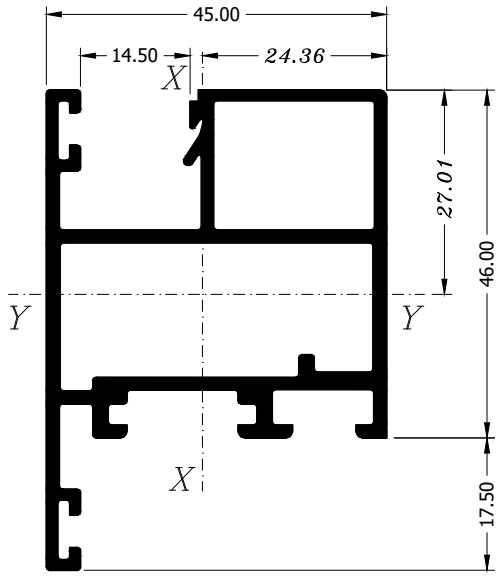

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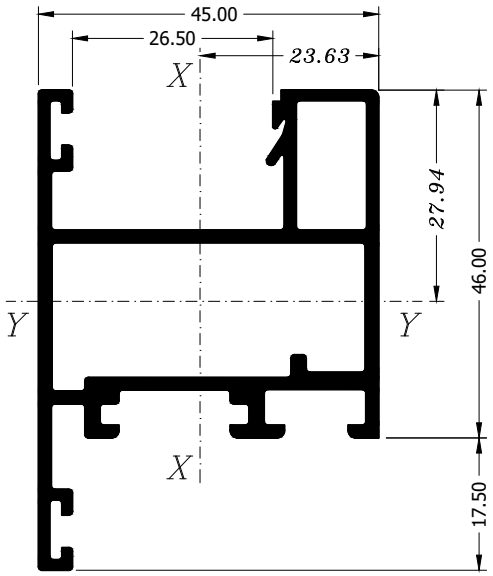

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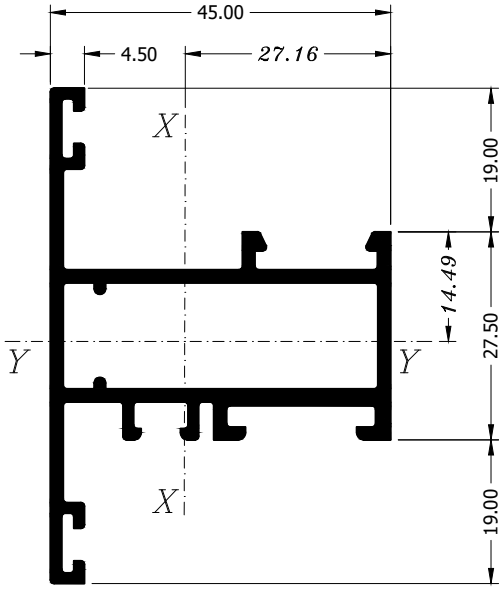

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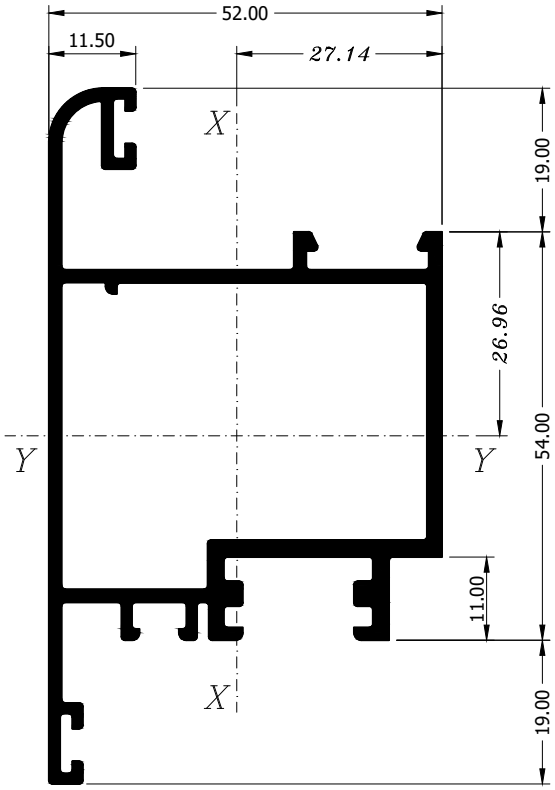

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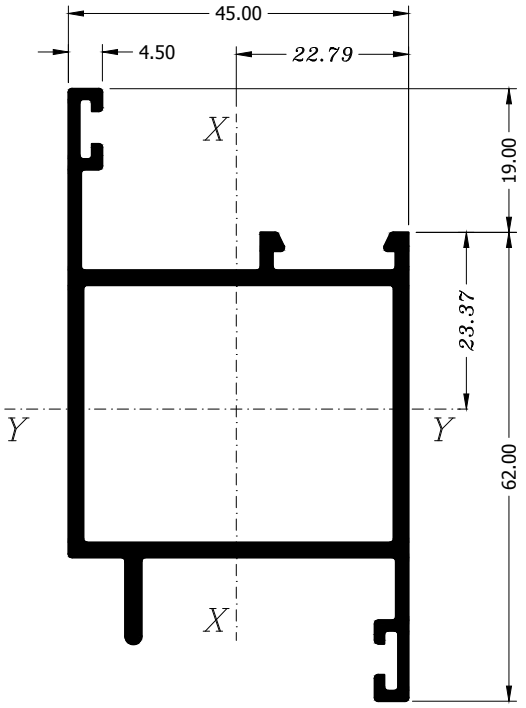

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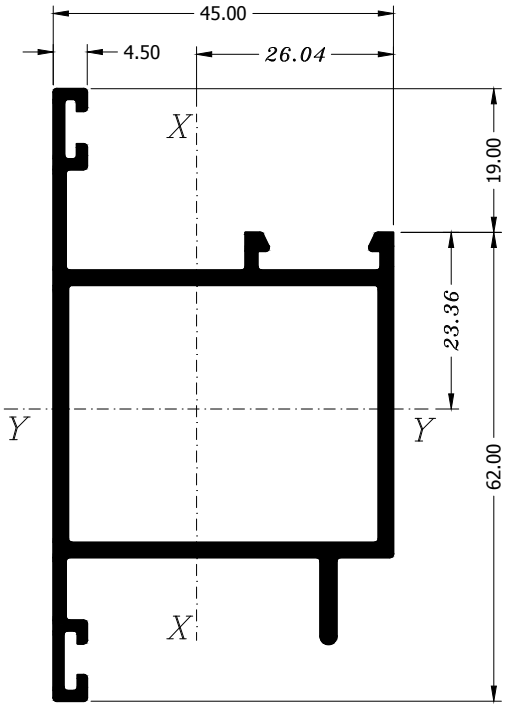

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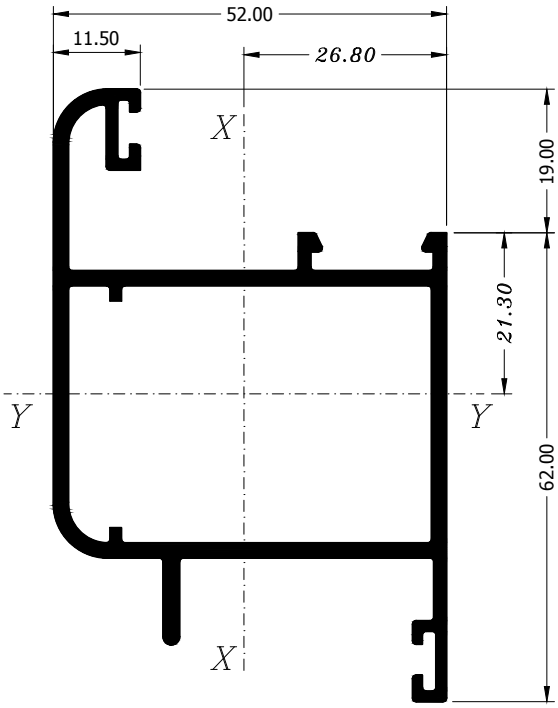

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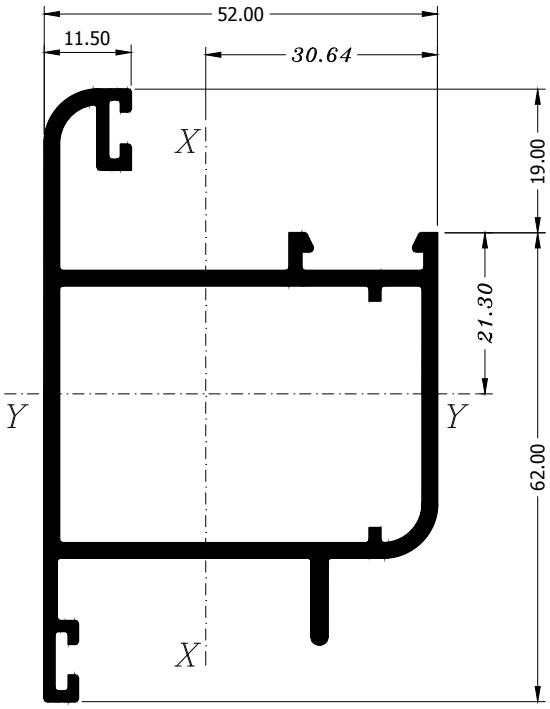

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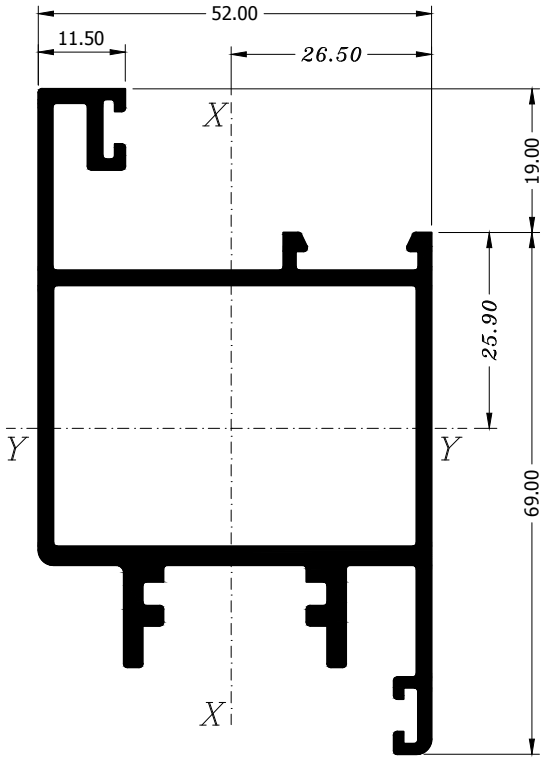

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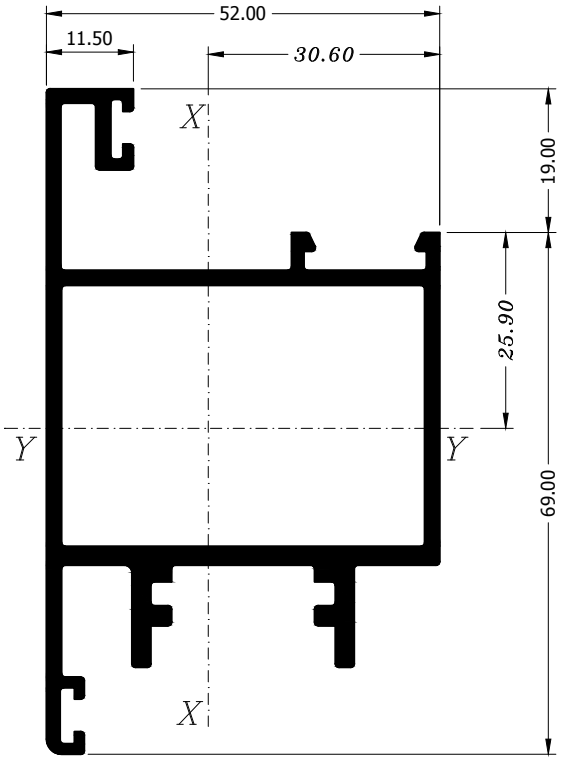

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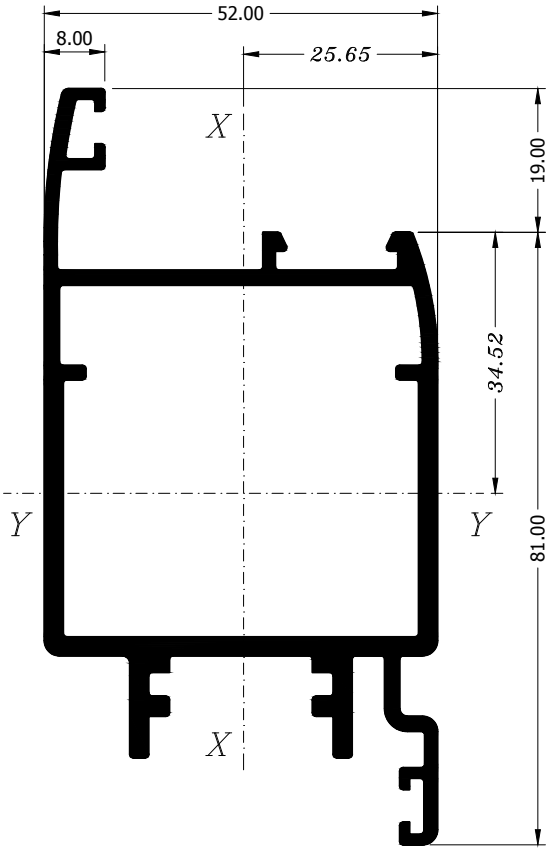

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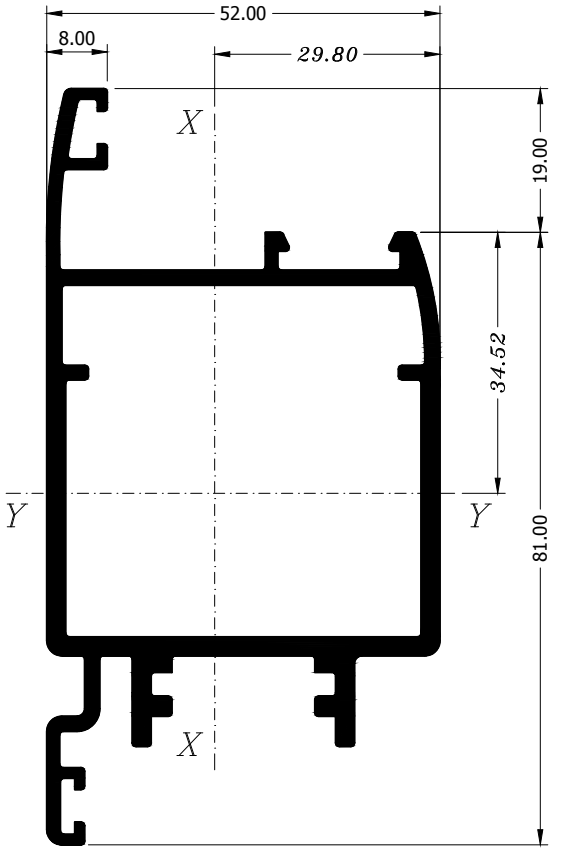

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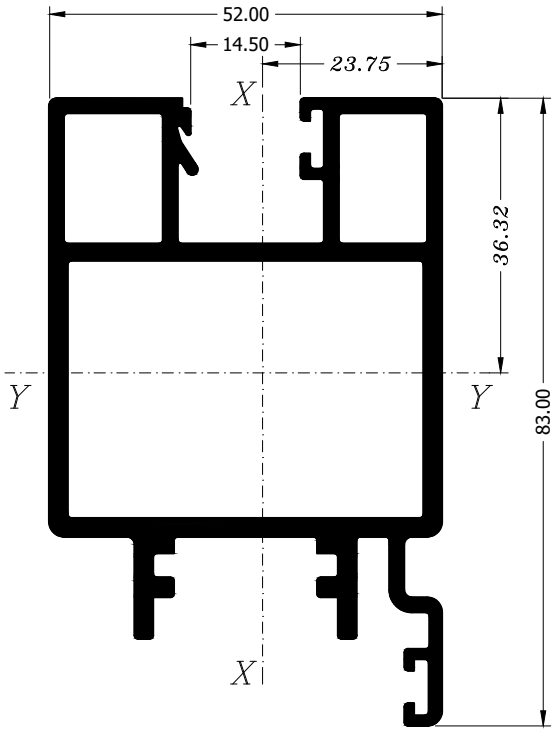

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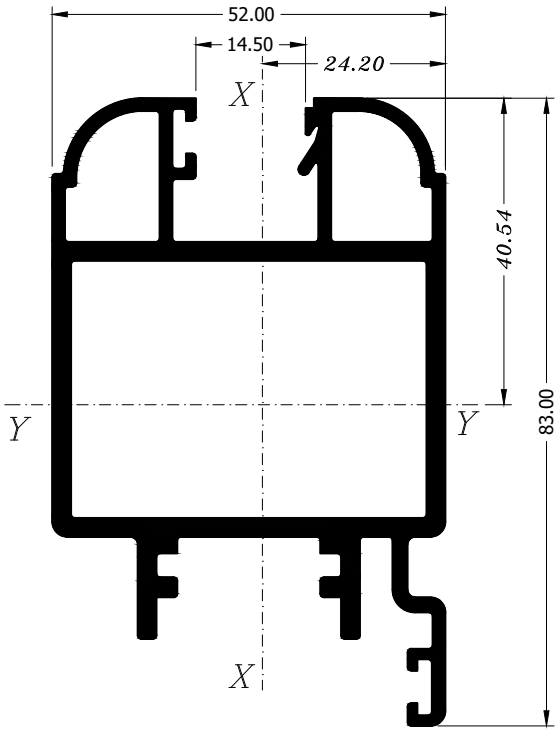

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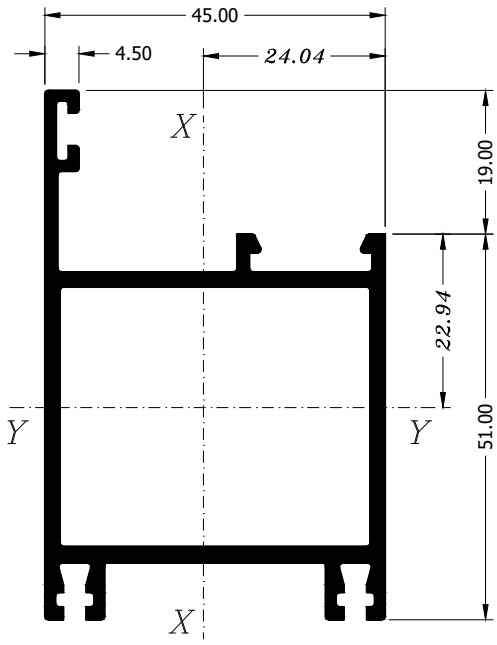

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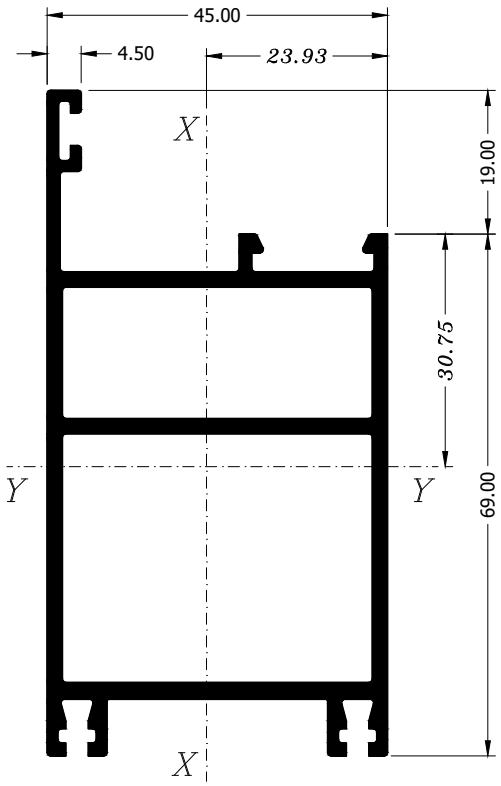

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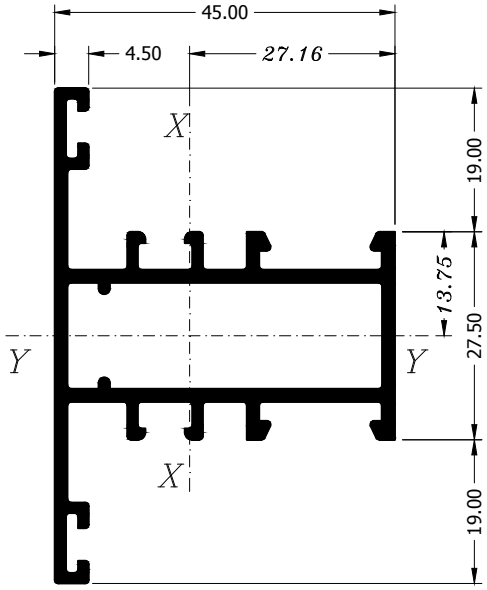

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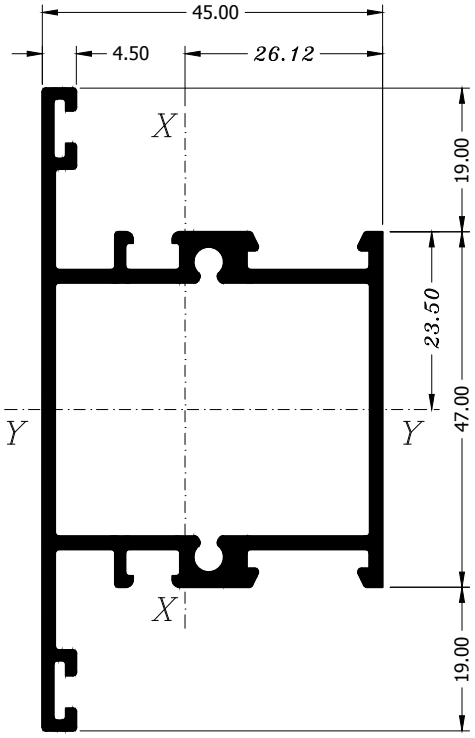

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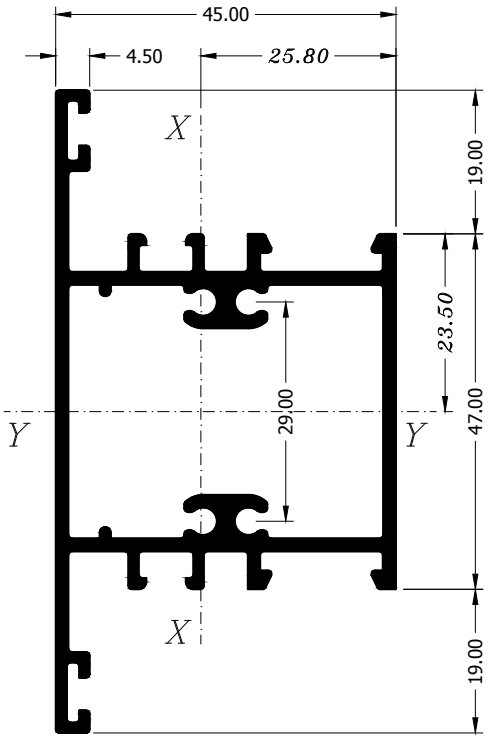

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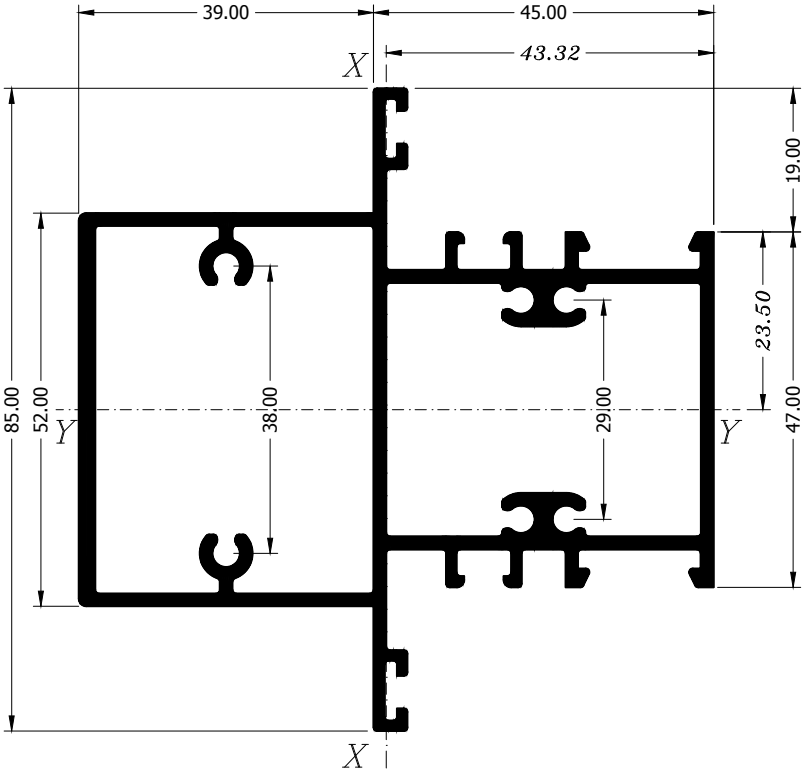

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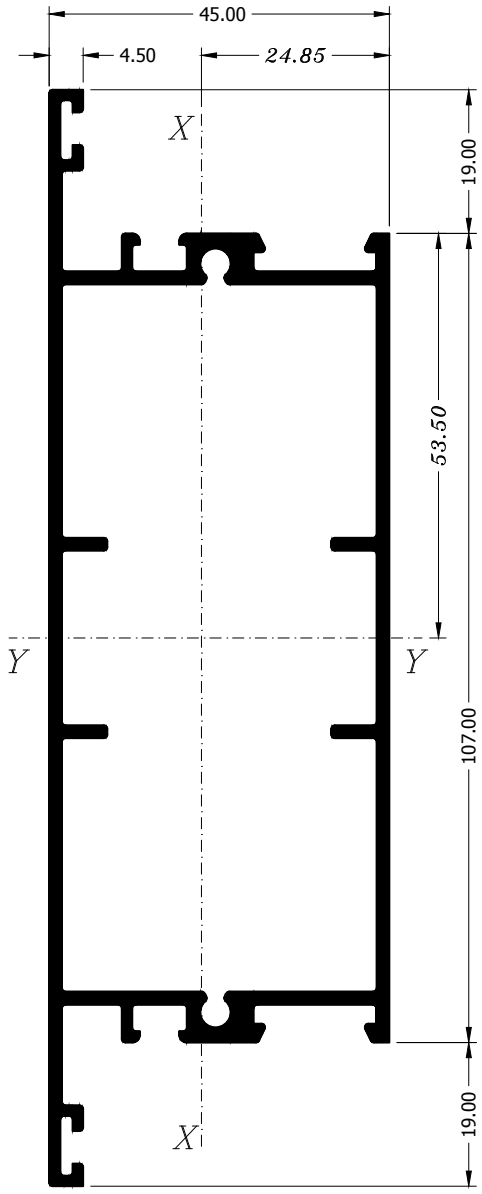

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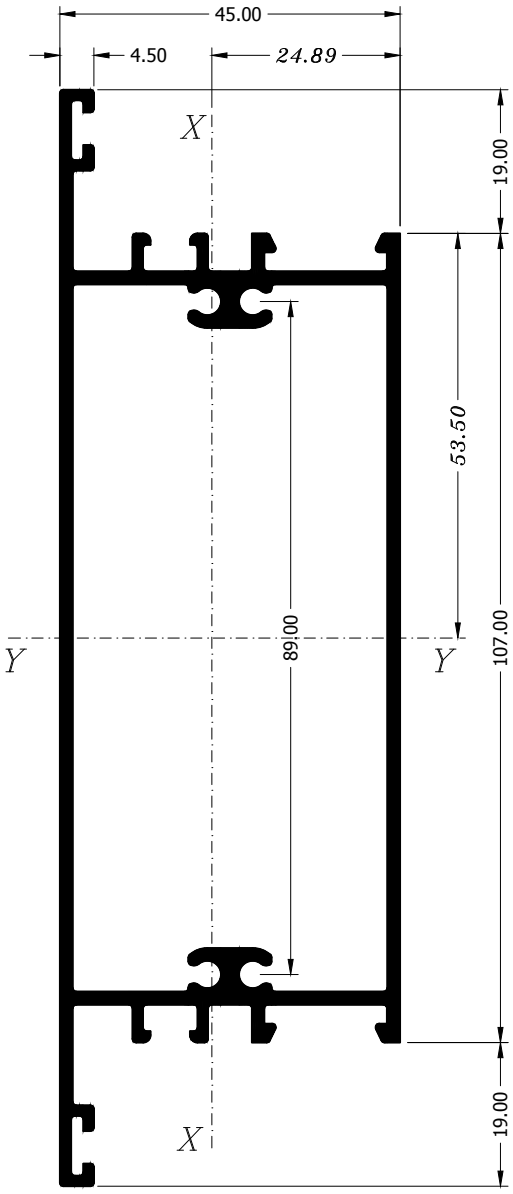

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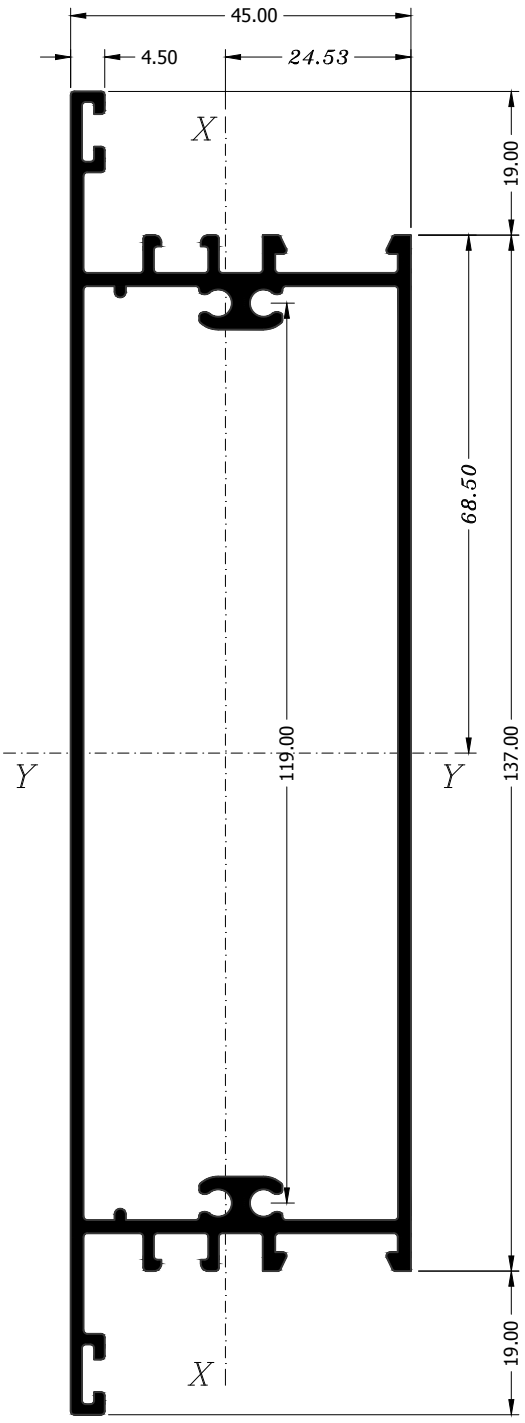

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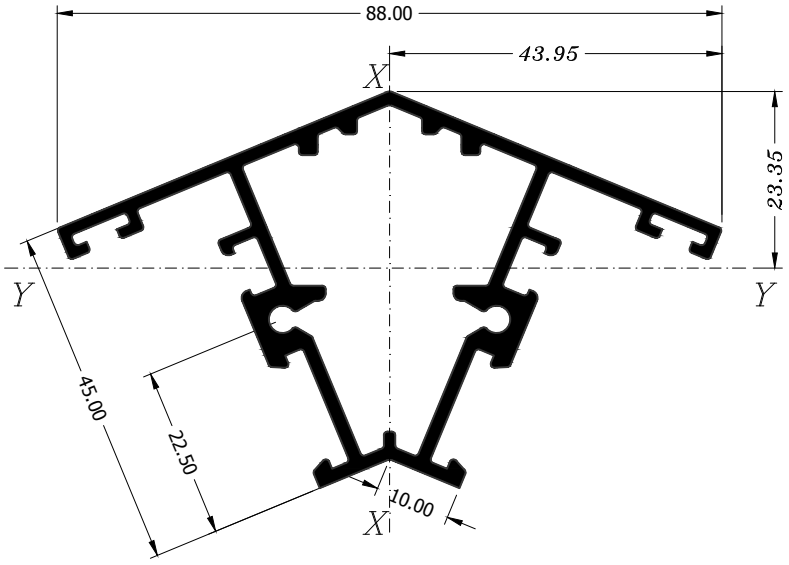

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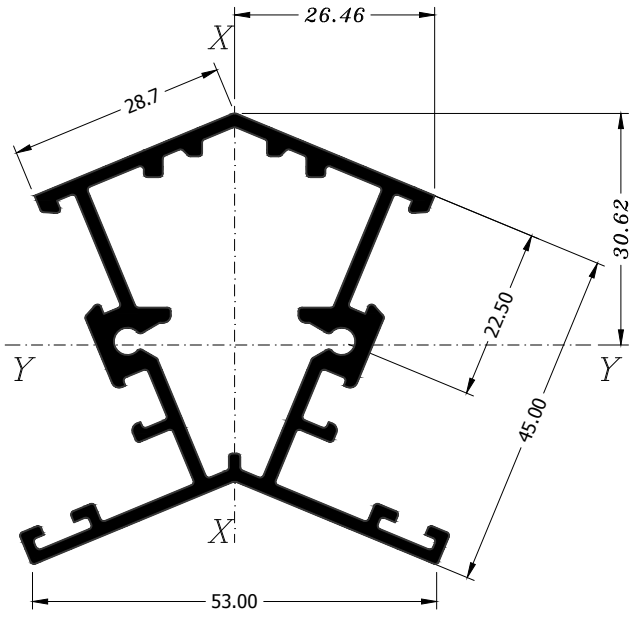

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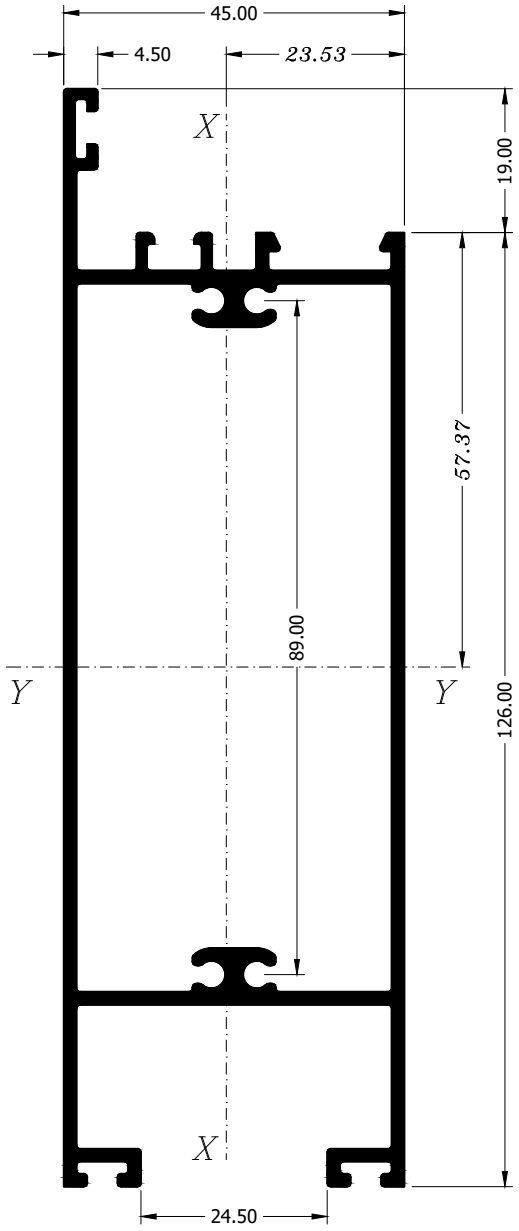

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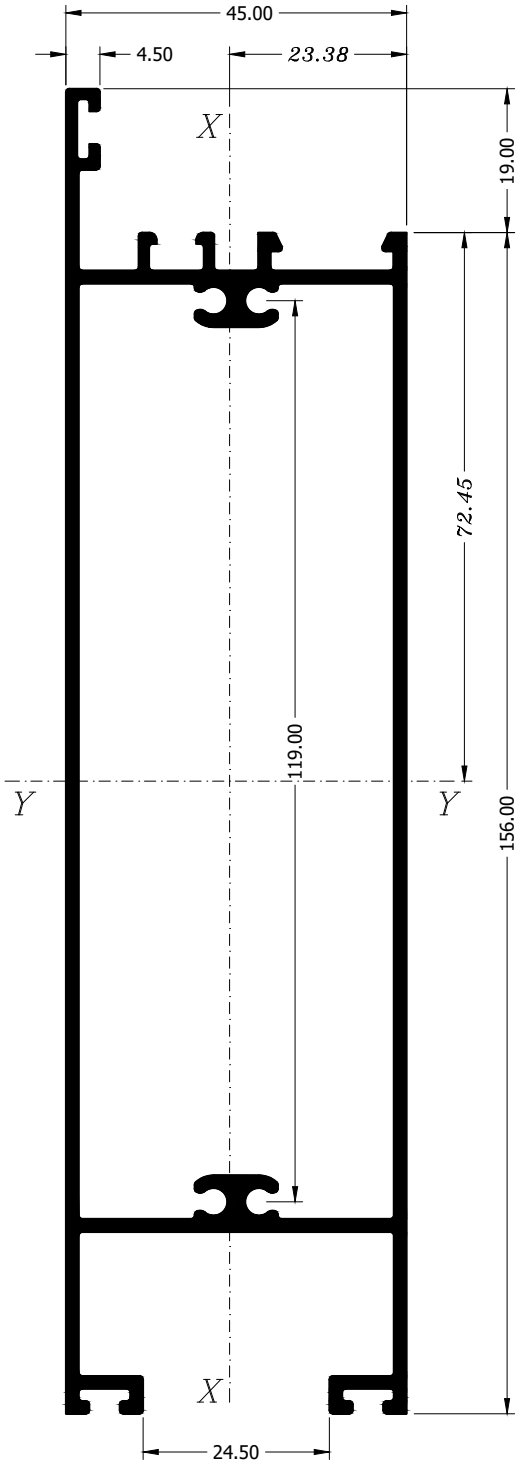

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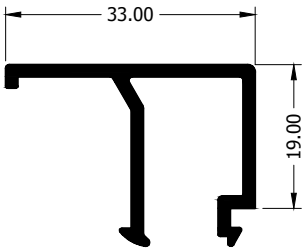

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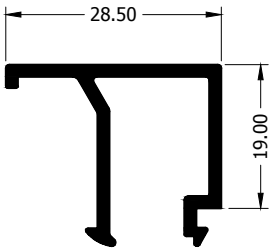

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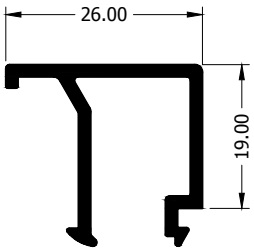

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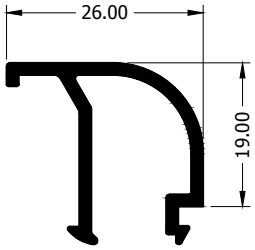

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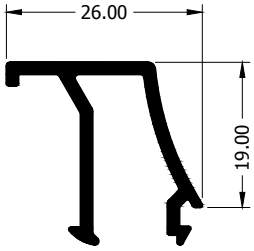

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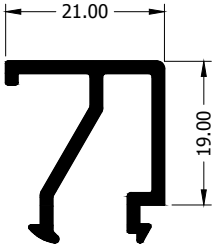

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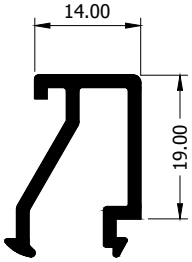

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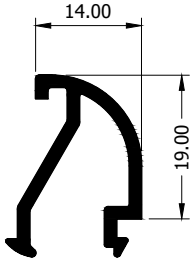

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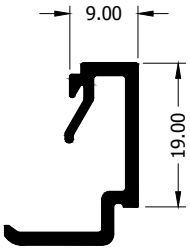

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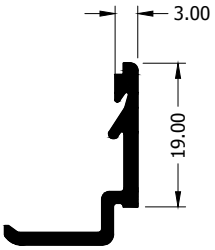

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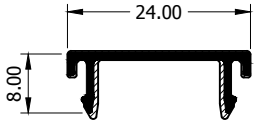

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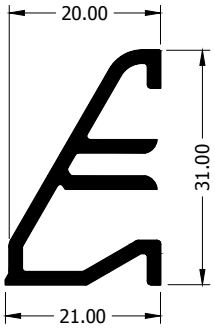

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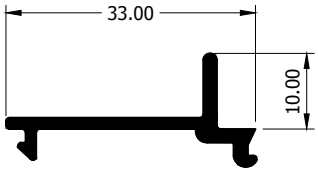

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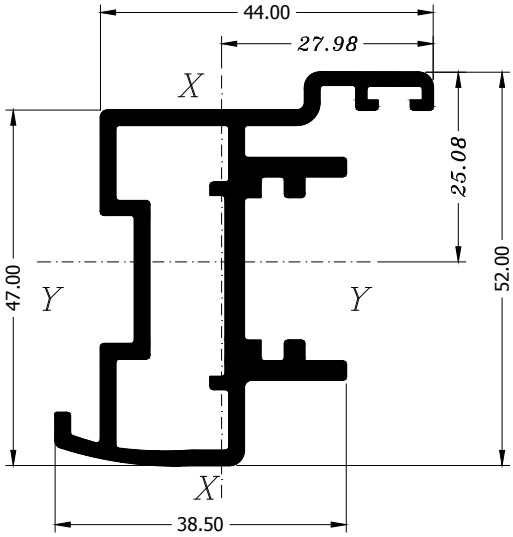

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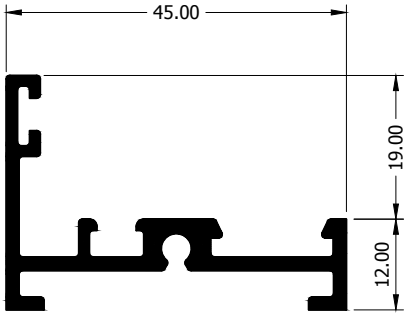

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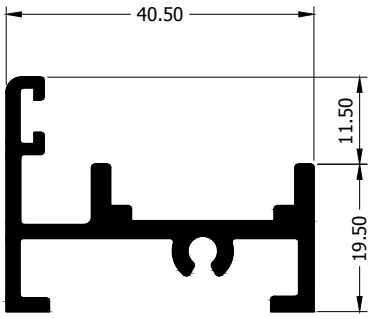

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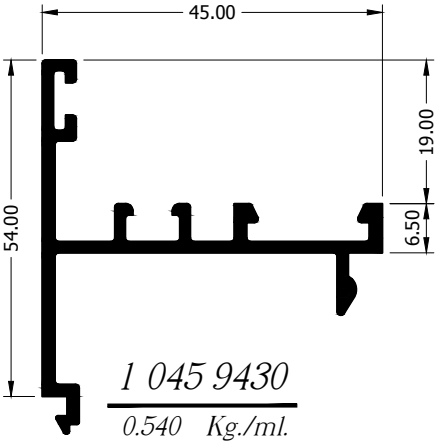

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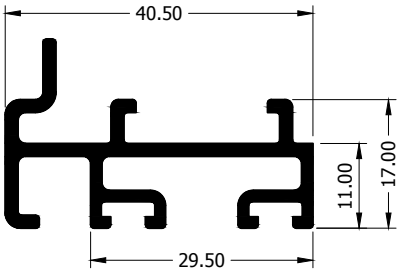

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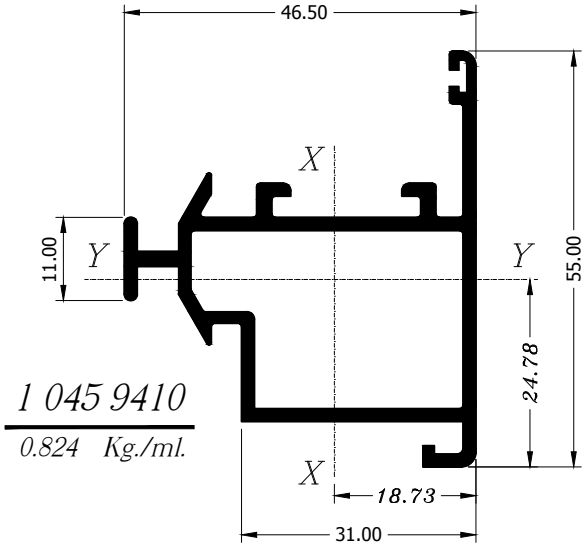

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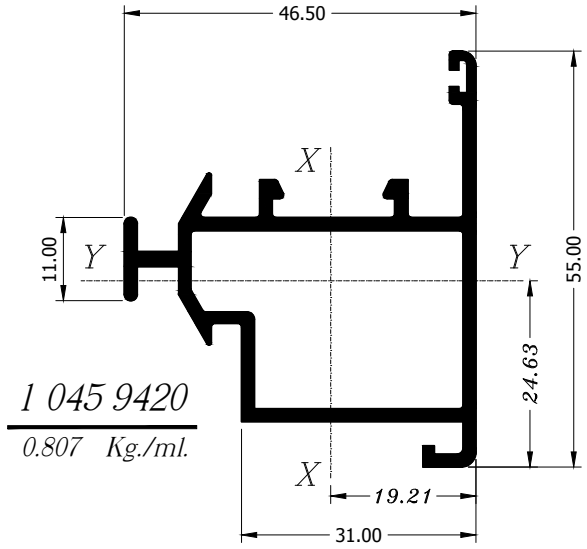

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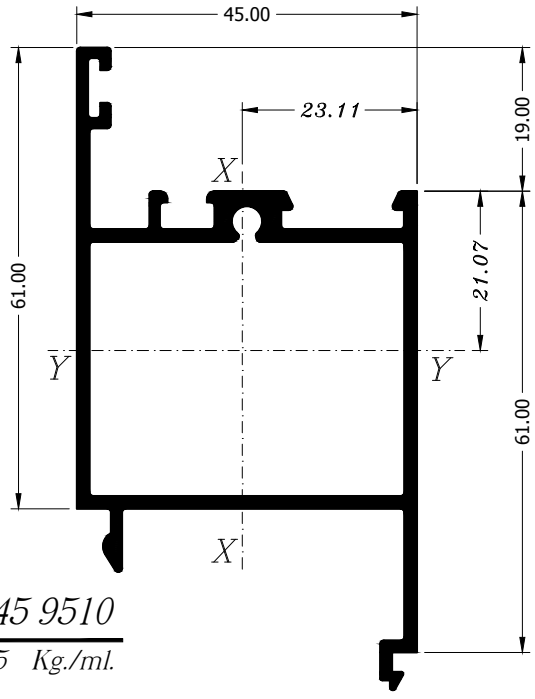

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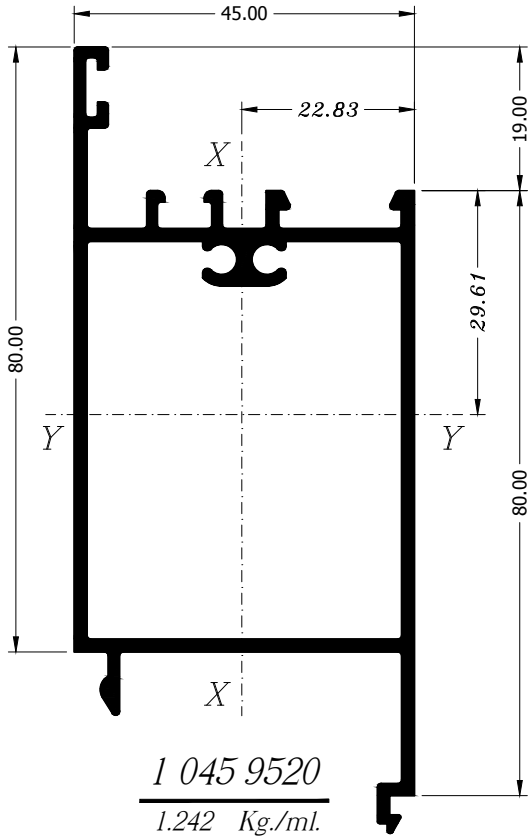

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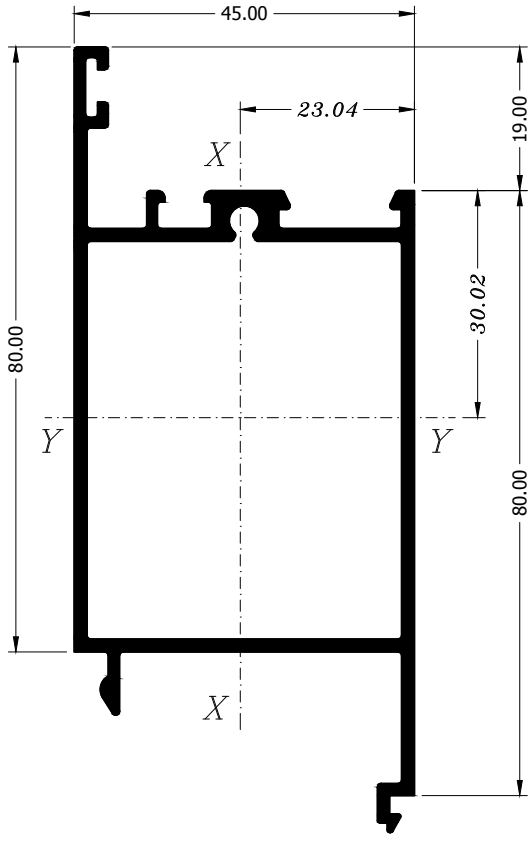

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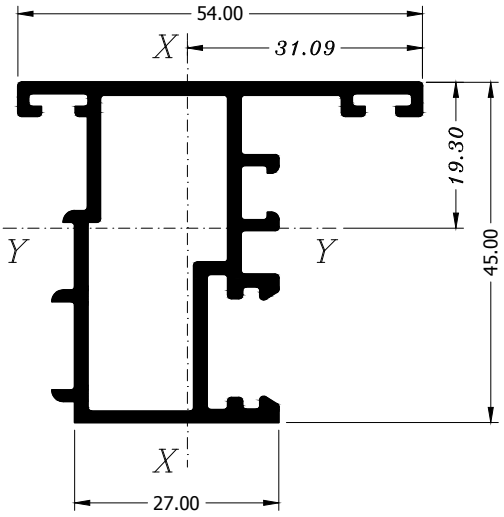

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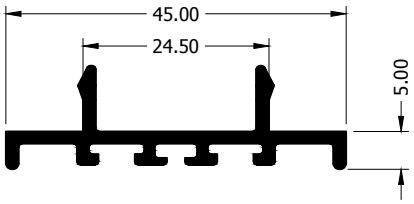

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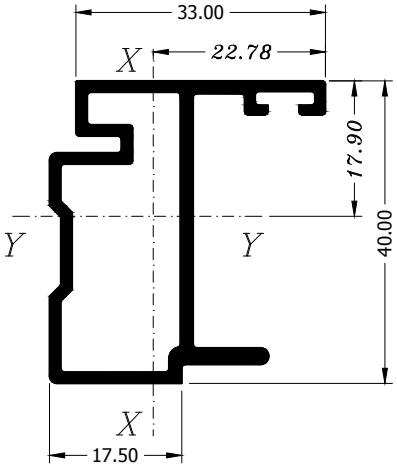

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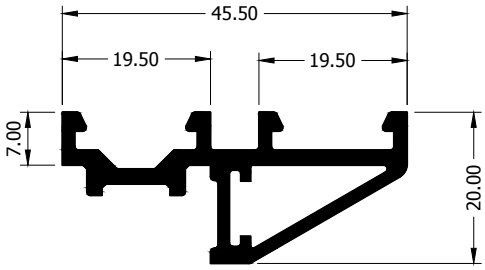

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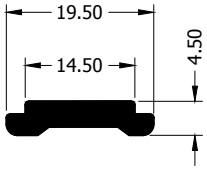

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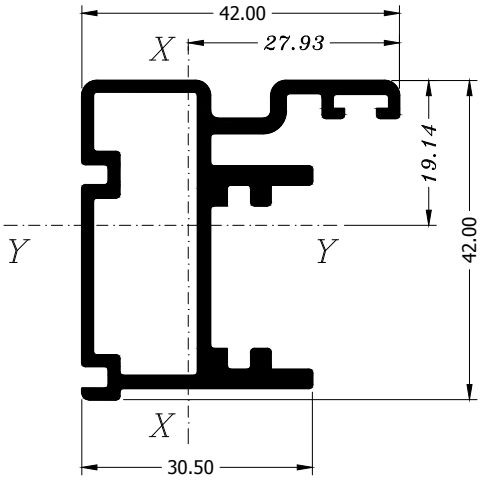

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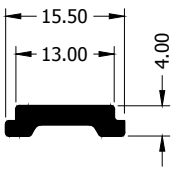

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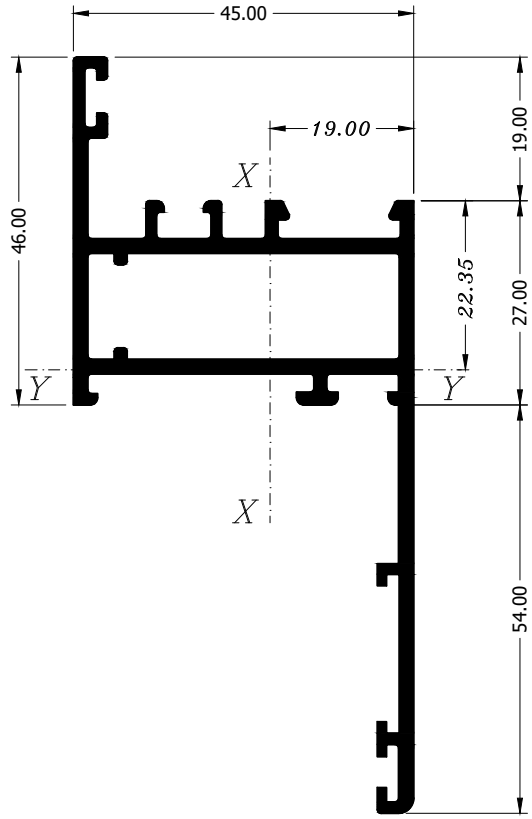

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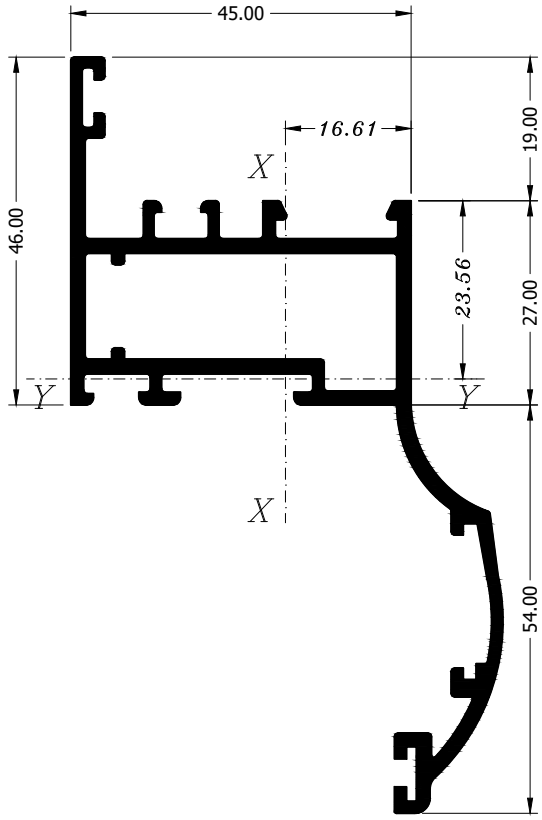

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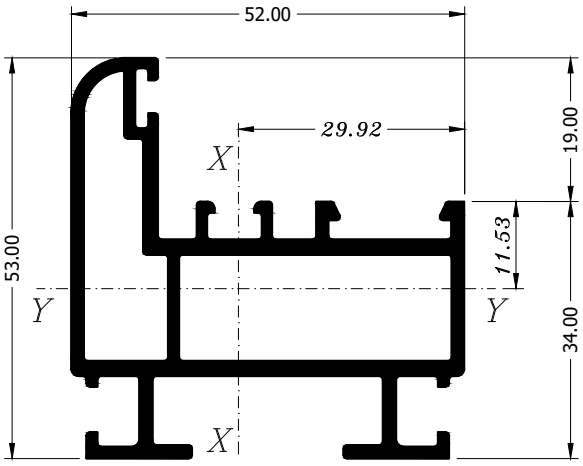

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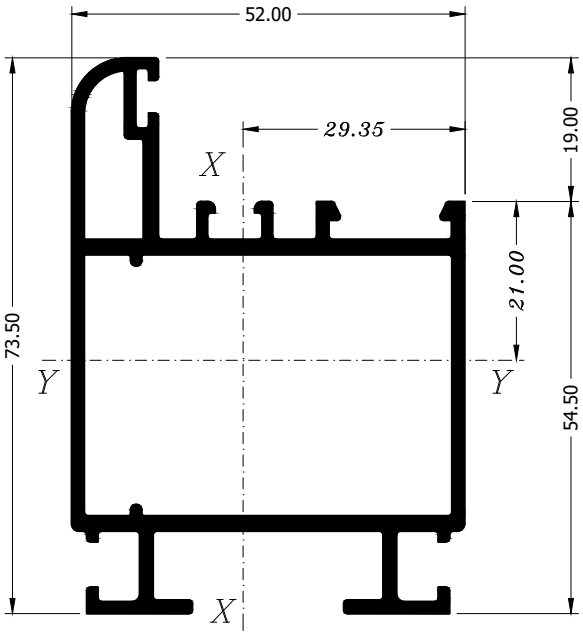

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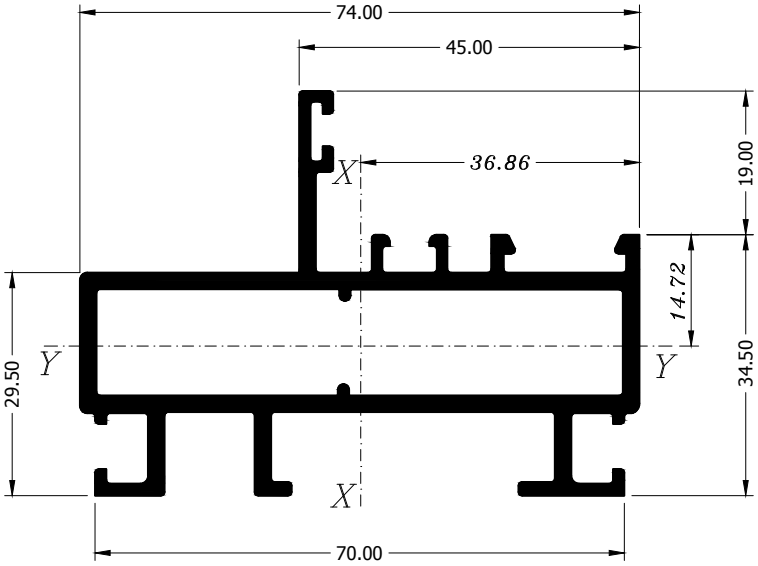

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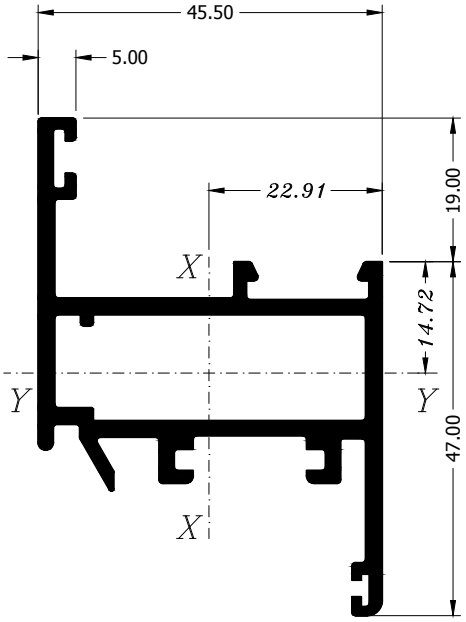

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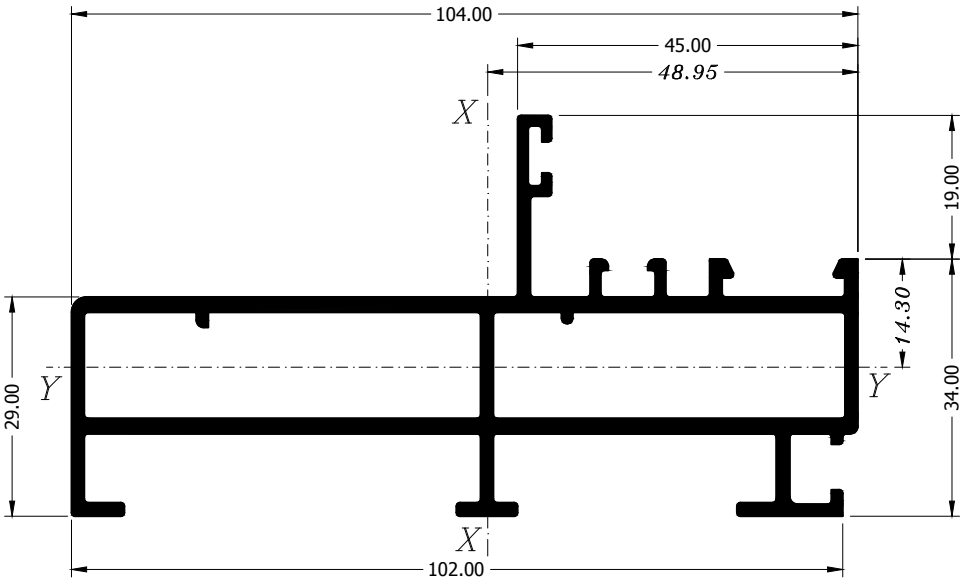

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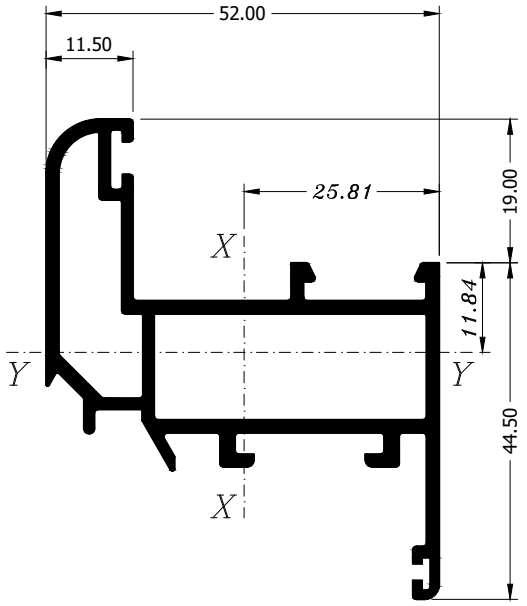

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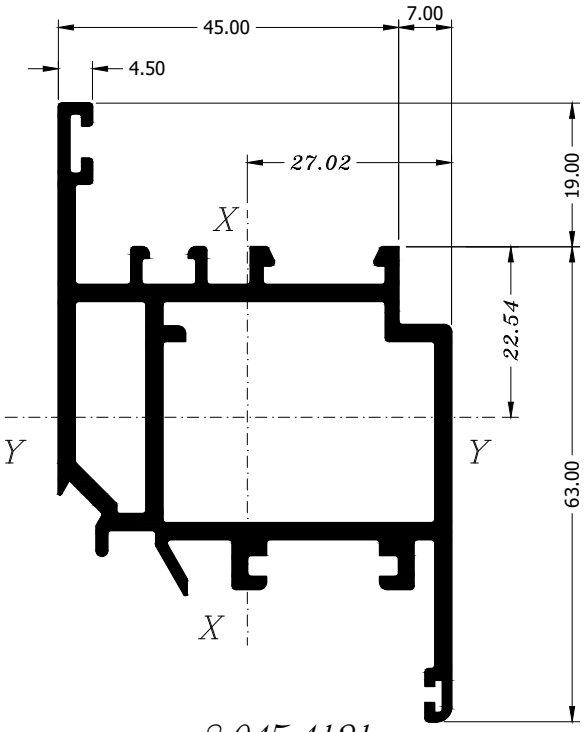

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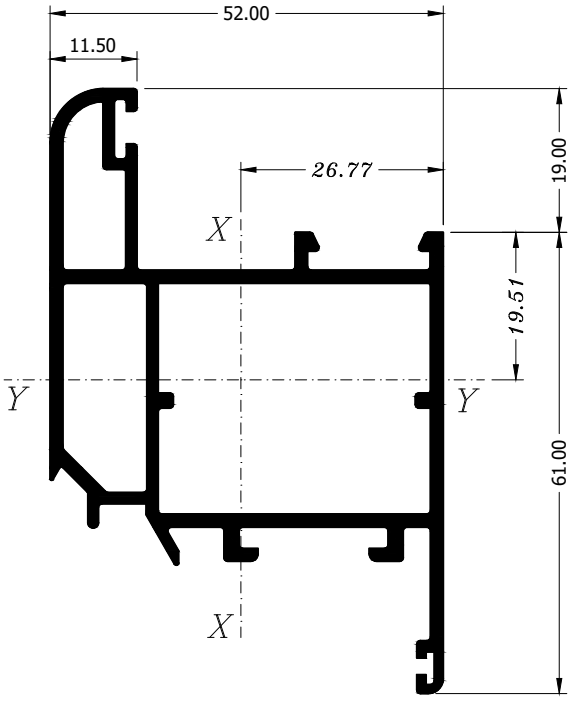

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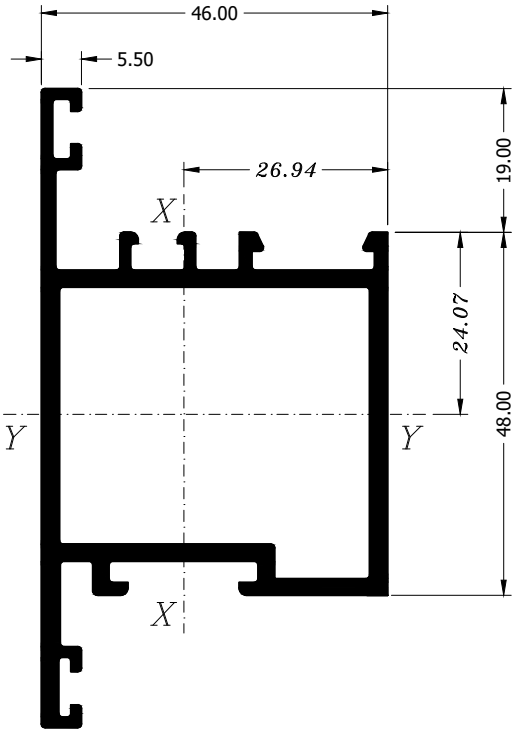

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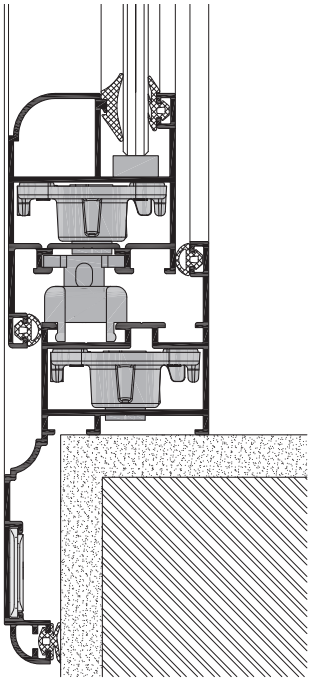


VOLTA 40

Hinged System

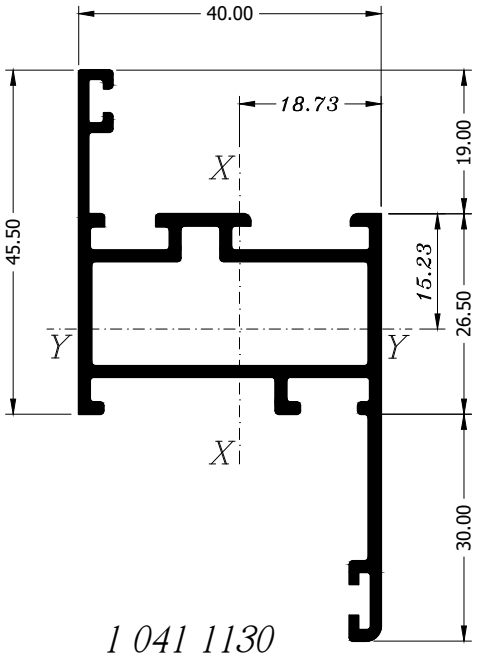
- Ideal solution for small to medium openings for economic residential buildings.
- The system is available in inward and outward opening windows and doors.
- Same profile can be used as frame or sash (optional).
- Offers an extensive range of profiles for the construction of elegant and moderately priced aluminium frames in functional style.
- Allows the fabrication, production and easy assembly of windows and doors in less time.

Technical Characteristics

Frame depth
40 mm. to 64 mm.
Frame Height
46 mm. to 110 mm.
Sash Depth
40 mm. to 48 mm.
Sash Height
65 mm. to 75 mm.
Max Glass Thickness
Up to 18 mm.
Max Sash Weight
Up to 90 kg.
Sealing type
EPDM gasket

Complies with European norm hEN 1435-1

Air Permeability	(Class 4) up to 600 pa.
Water Tightness	(Class E1050) up to 1050 pa.
Resistance to wind load	(Class C4) up to 1600 pa.



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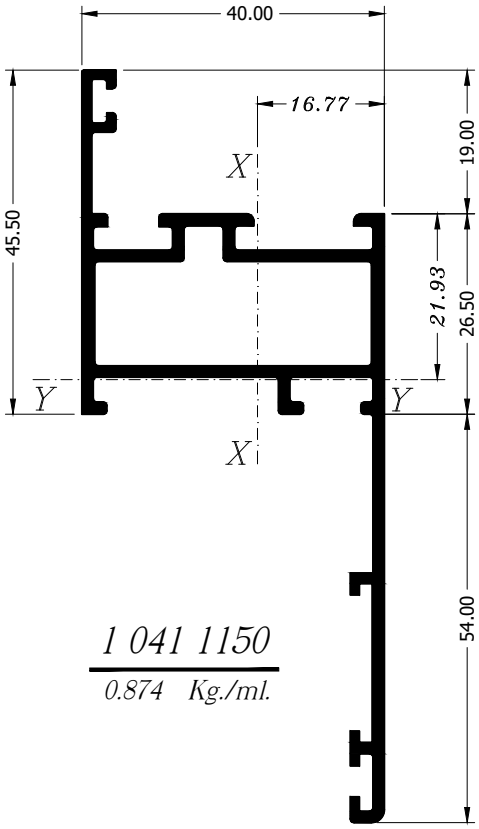

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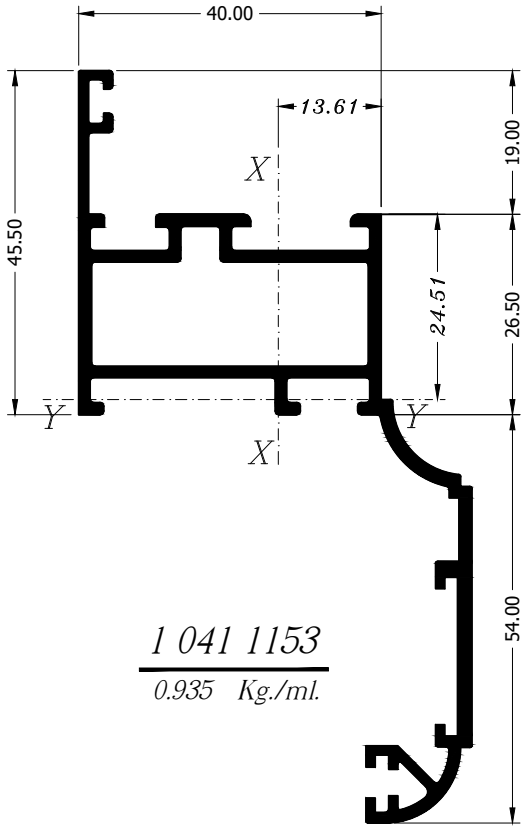

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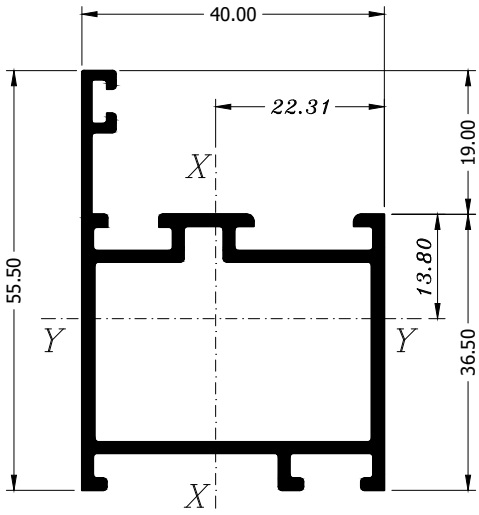

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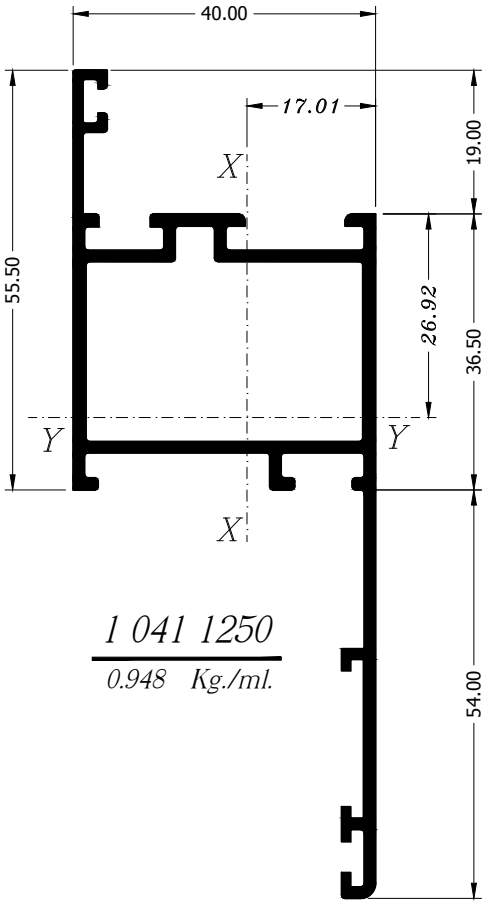

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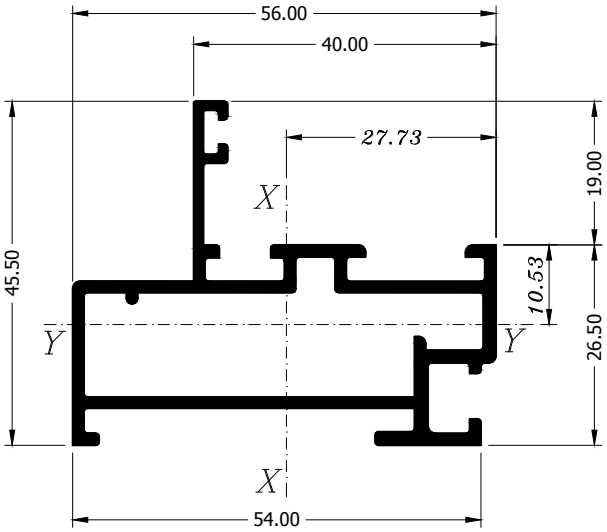

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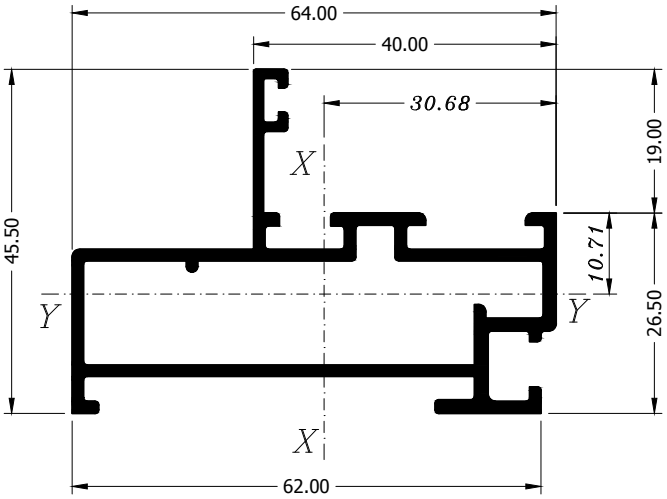

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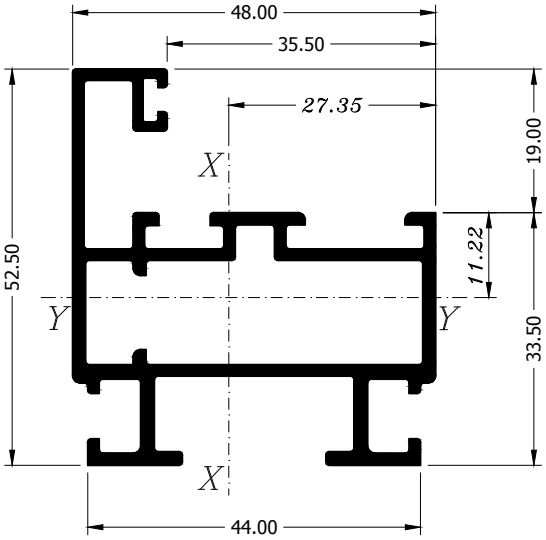

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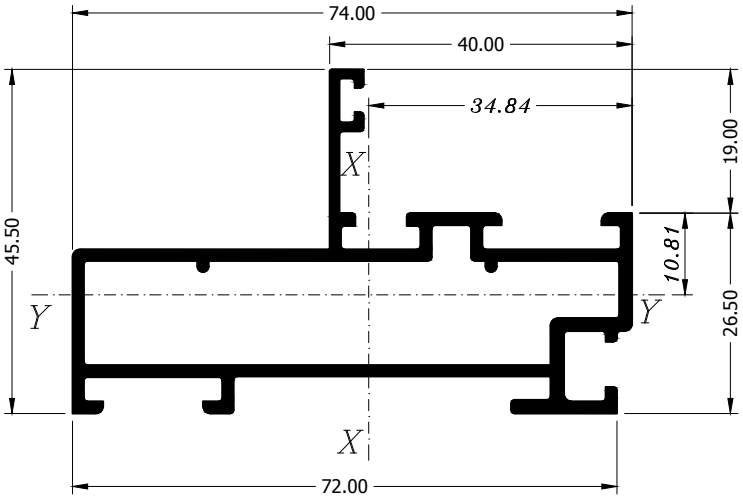

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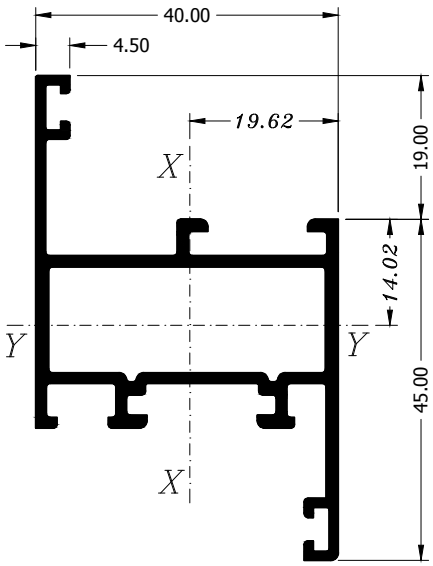

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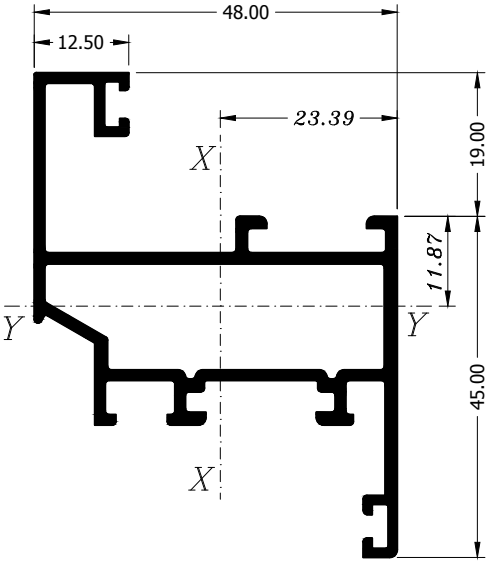

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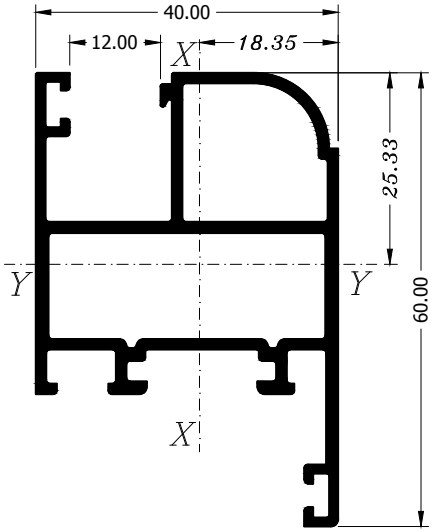

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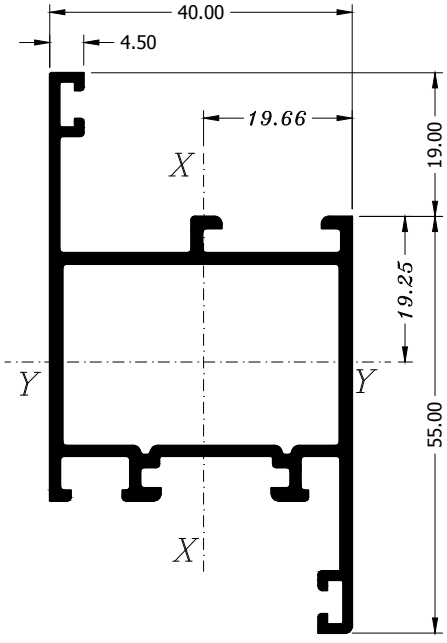

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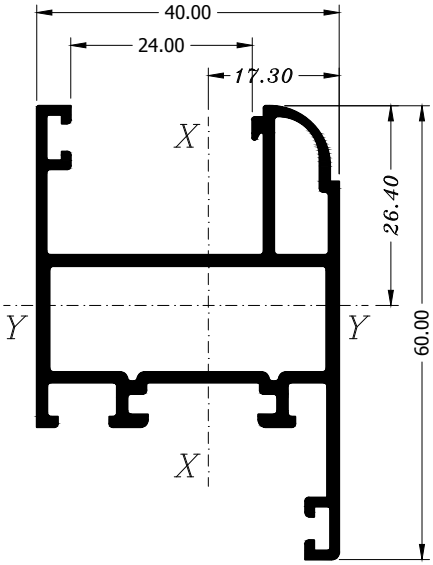

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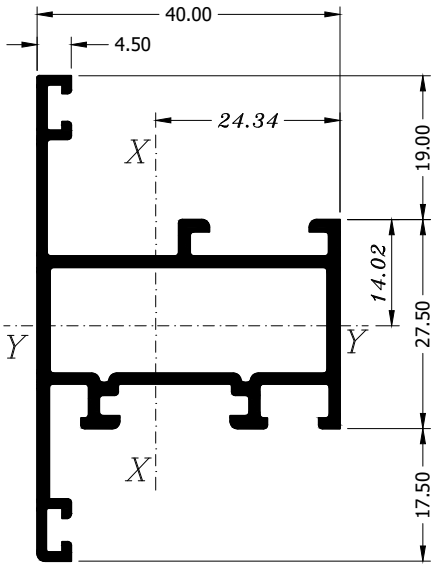

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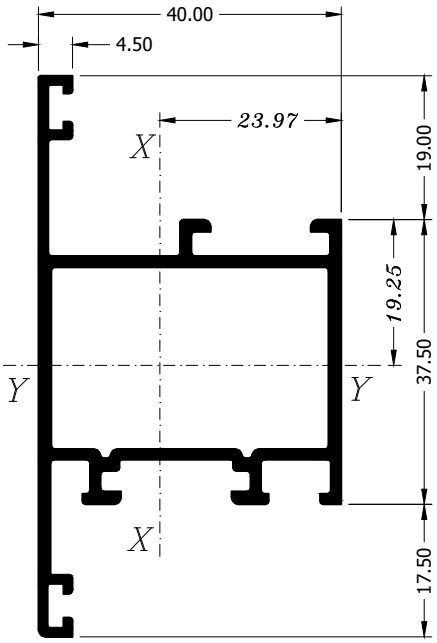

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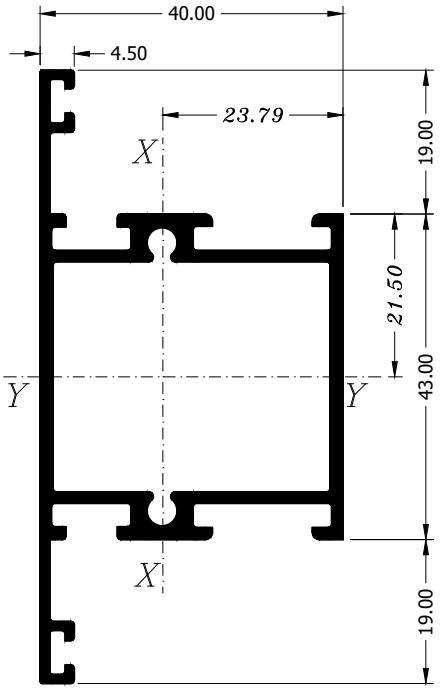

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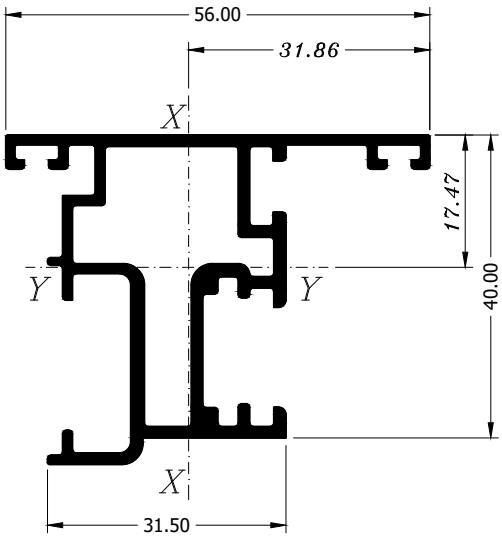

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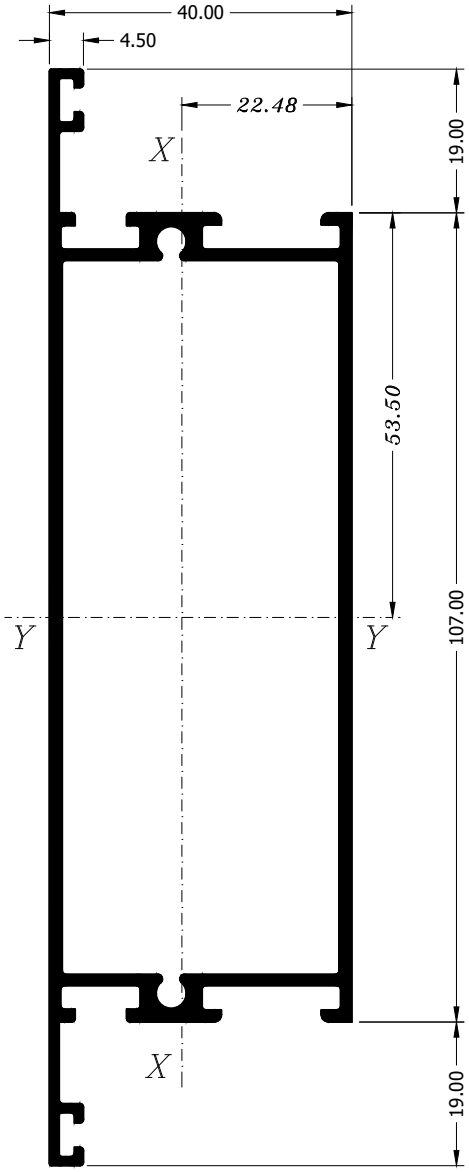

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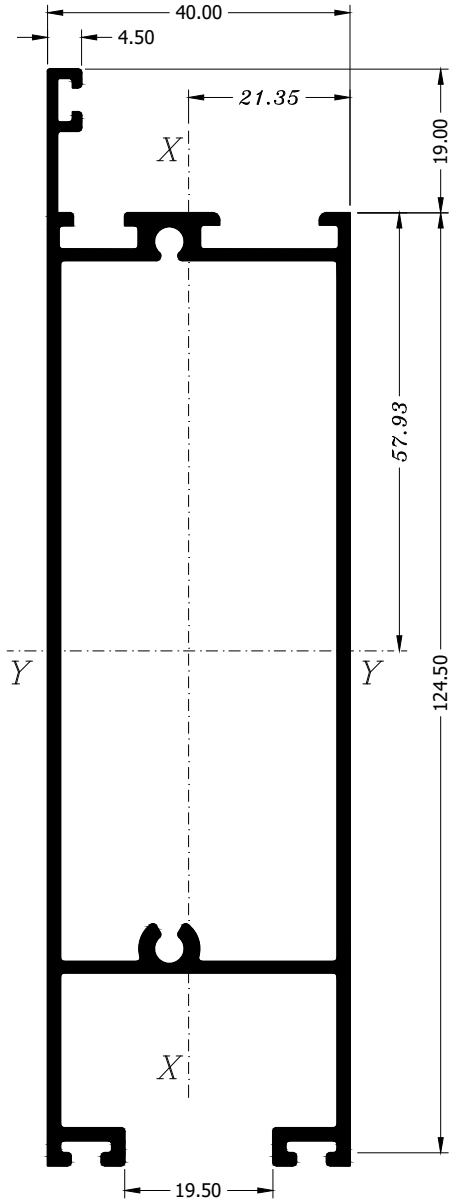

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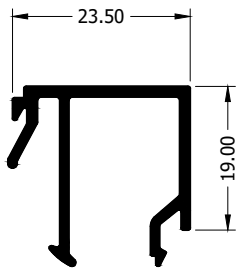

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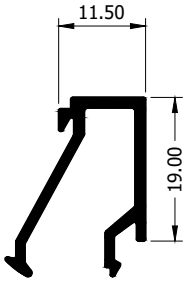

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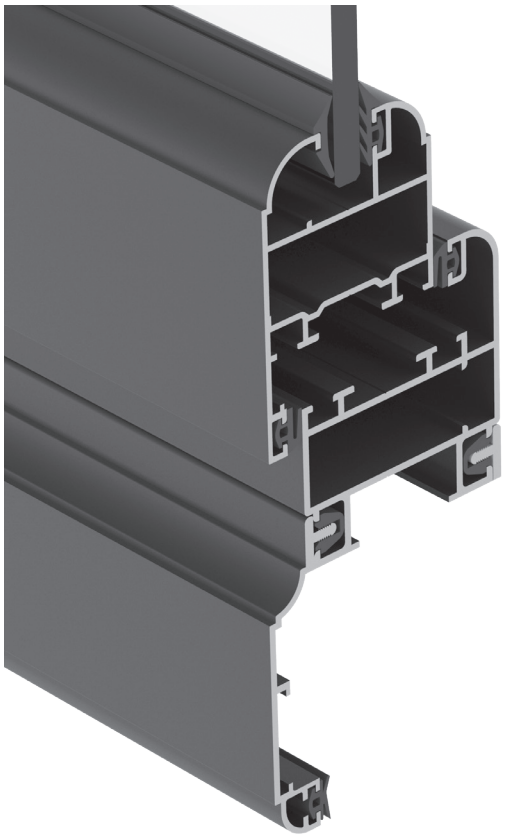
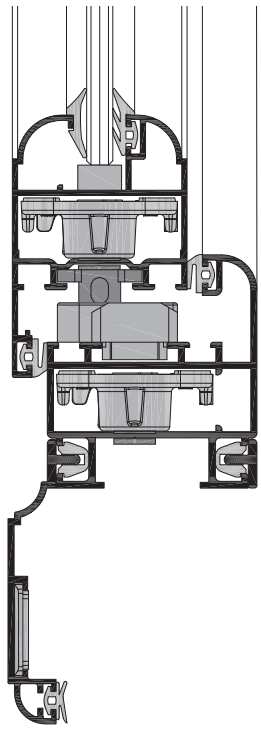




SAMBA 40

Hinged System

- Allows the fabrication, production and easy assembly of windows and doors in less time.
- Offers an extensive range of profiles for the construction of elegant and moderately priced aluminium frames in functional style.
- The system is available in inward and outward opening windows and doors.
- Same profile can be used as frame or sash (optional).
- Ideal solution for small to medium openings for economic residential buildings.

Technical Characteristics

Frame Depth
40 mm. to 56 mm.
Frame Height
47 mm. to 101 mm.
Sash Depth
40 mm.
Sash Height
67 mm. to 83 mm.
Max Glass Thickness
Up to 18 mm.
Max Sash Weight
Up to 90 kg.
Sealing Type
EPDM gasket

Complies with European norm hEN 1435-1

Air Permeability	(Class 4) up to 600 pa.
Water Tightness	(Class E1050) up to 1050 pa.
Resistance to wind load	(Class C4) up to 1600 pa.

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011

CLASSIFICATION ASSESSMENT
N. 0714-CPR-1311 DATED FEBRUARY, 12 2016

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Hinged Window, Single Leaf (open in).
Model:	SAMBA 40 – Hinged System **Width**= 800 mm, **Height** = 1,200 mm, Thickness = 40 mm
Fabrication number:	-
Date of fabrication:	2016
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/6, dated February 09, 2016, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified,

THE FOLLOWING CLASSIFICATION IS AWARDED

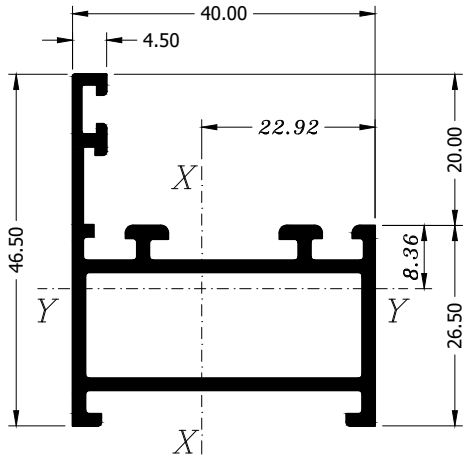
AIR PERMEABILITY:	**CLASS 4**
WATERTIGHTNESS:	**CLASS E1050**
RESISTANCE TO WIND LOAD:	**CLASS C4**

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, February 12, 2016

Resp. Tecnico ECO S.p.A.
Ing. Gianluca Campodoni

ECO Certificazioni S.p.A. - Via Mengolina, 33
48018 Faenza (RA) - ITALY
Tel. +39 0546 624911 - Fax +39 0546 624922
E-mail: info@eco-cert.it - www.ecocertificazioni.eu



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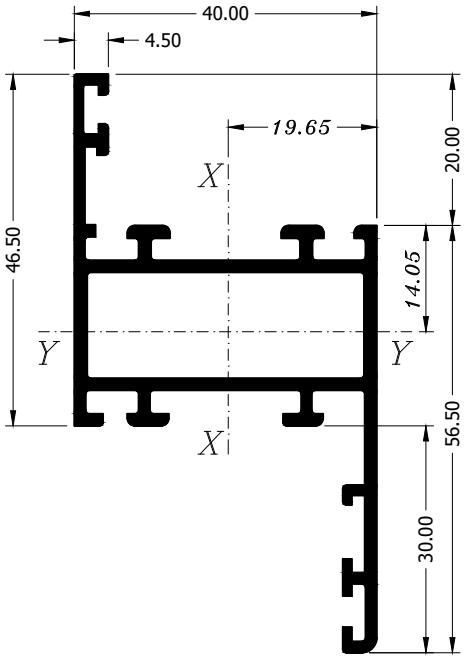

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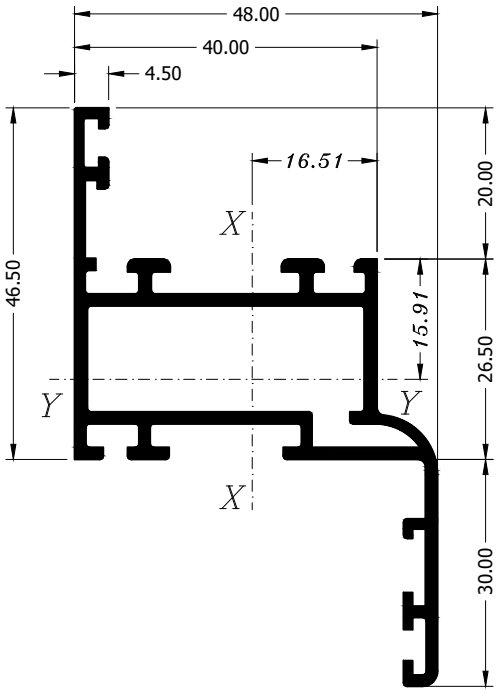

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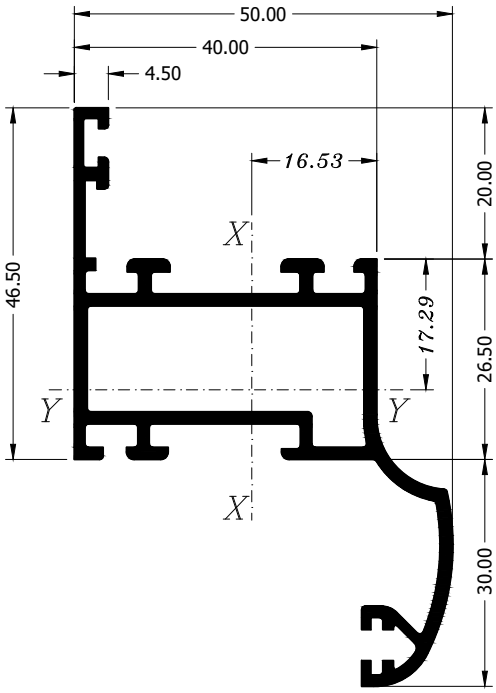

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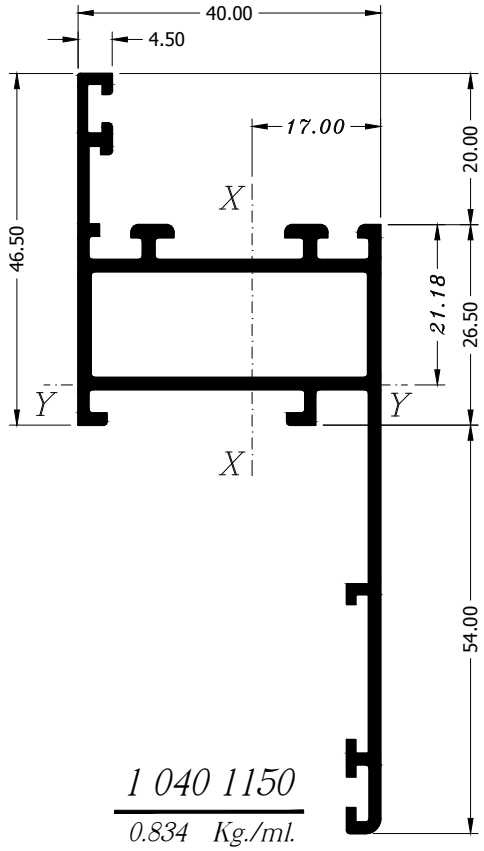

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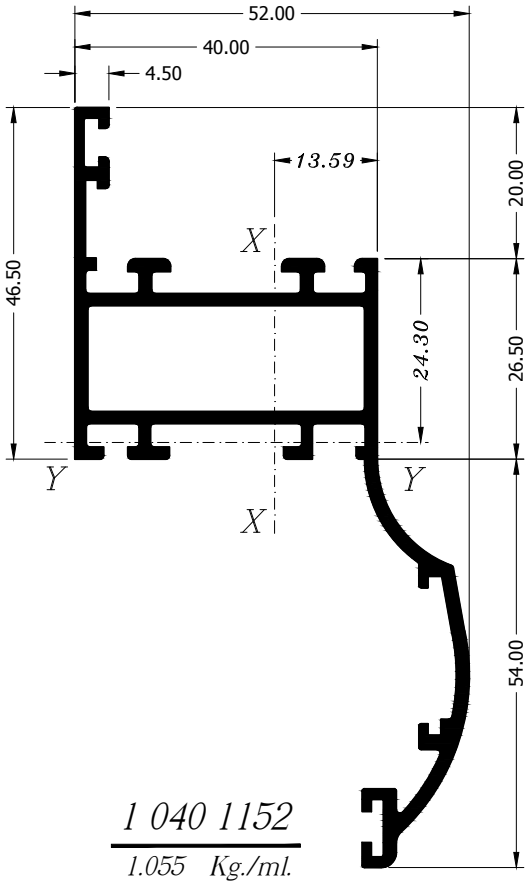

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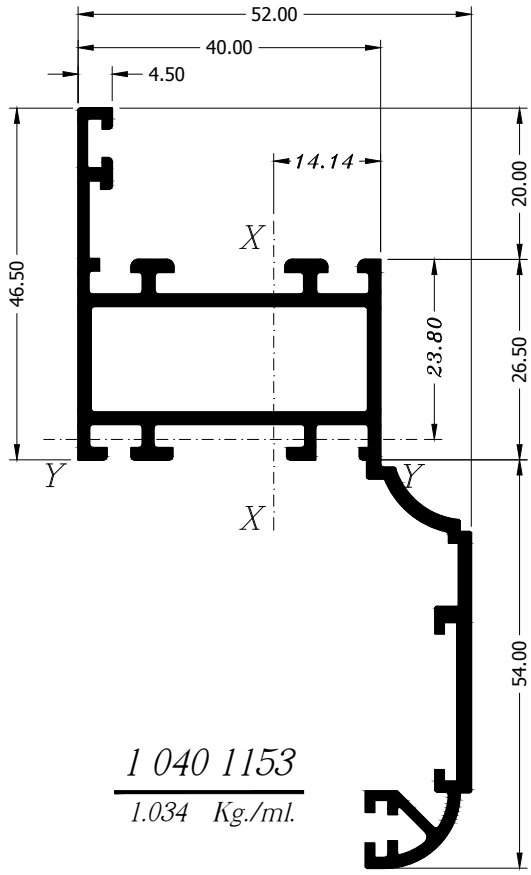

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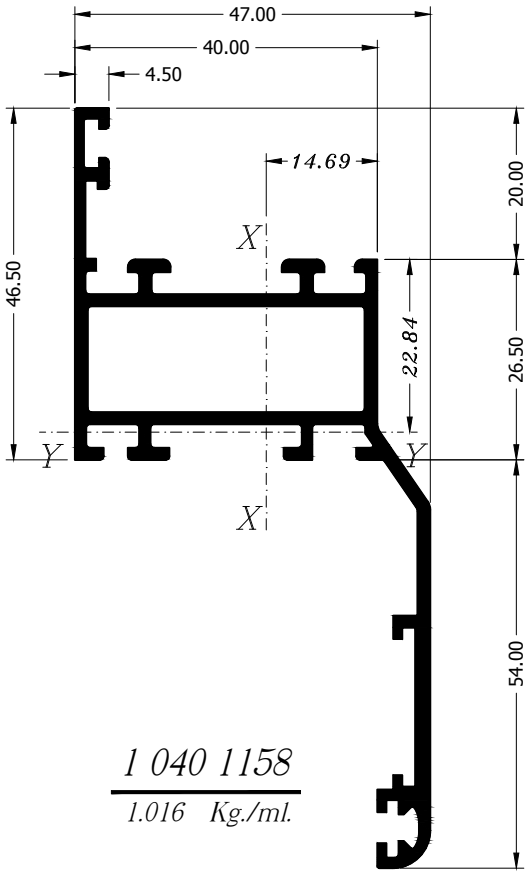

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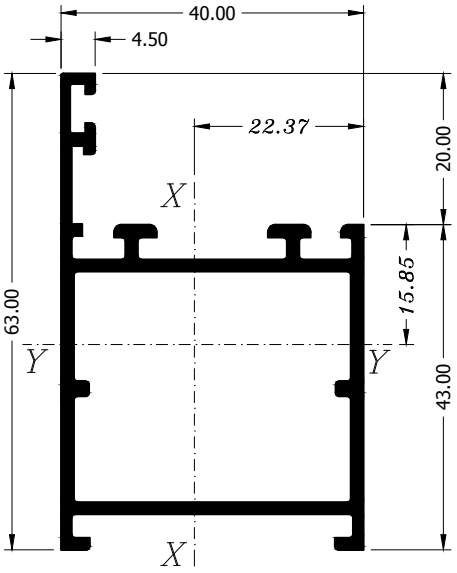

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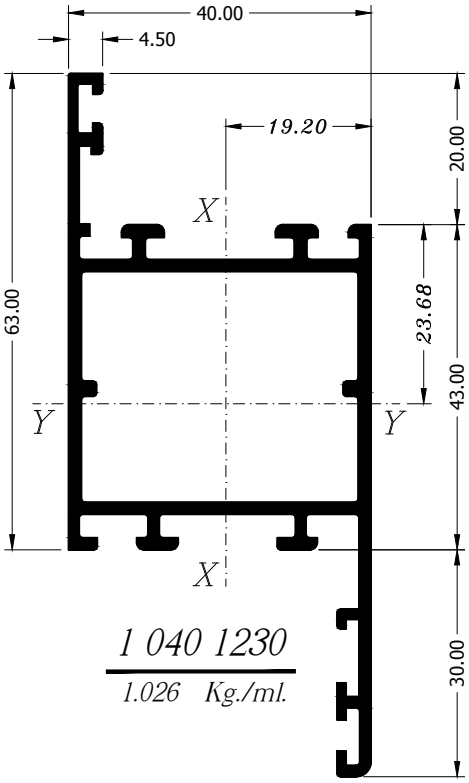

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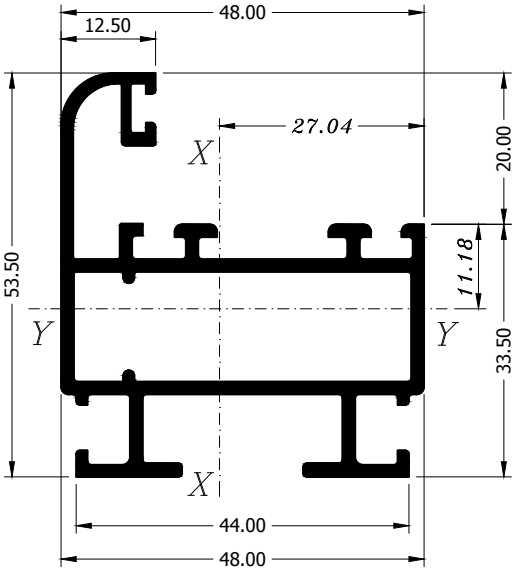

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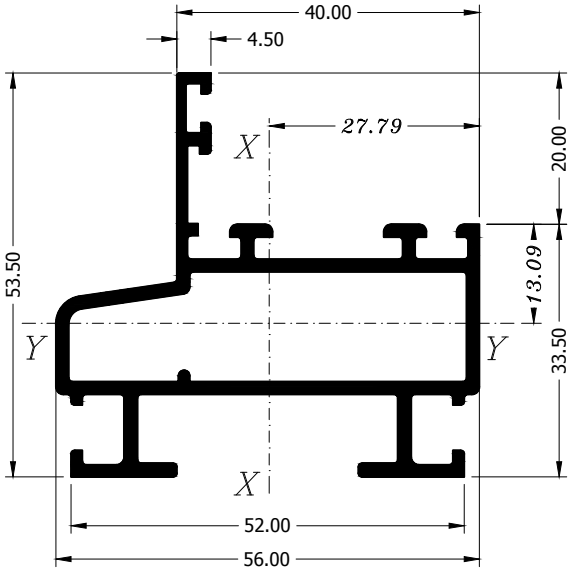

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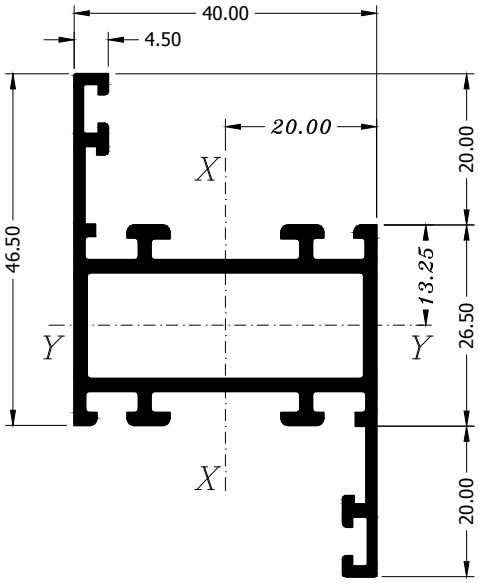

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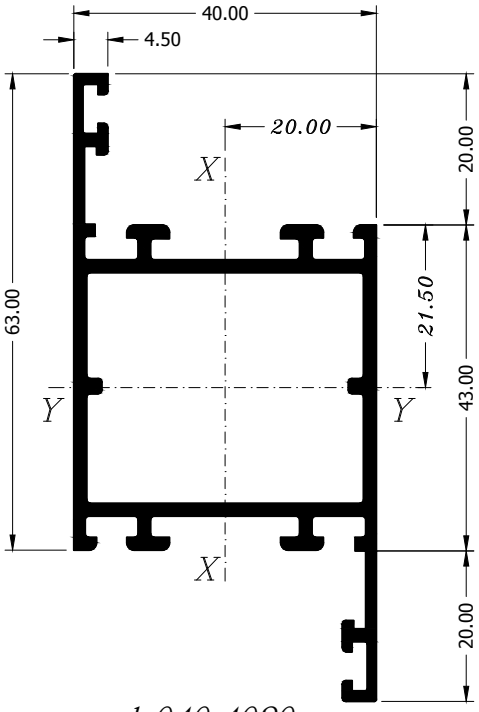

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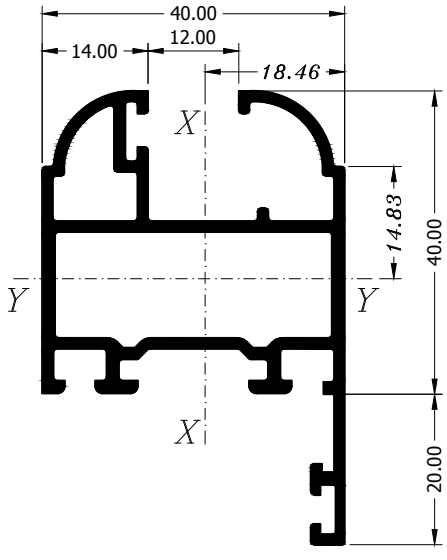

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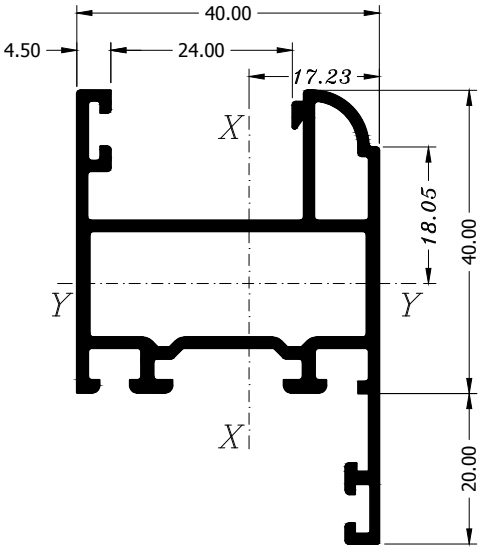

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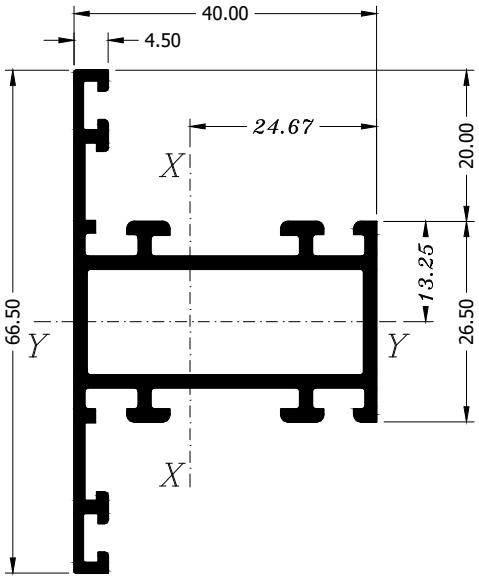

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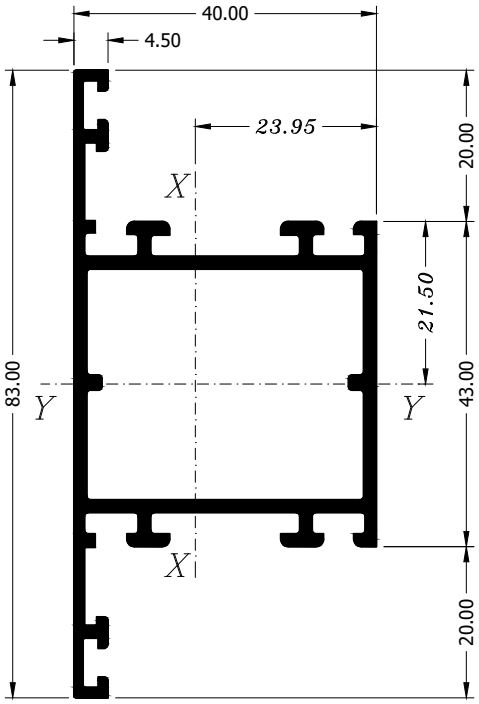

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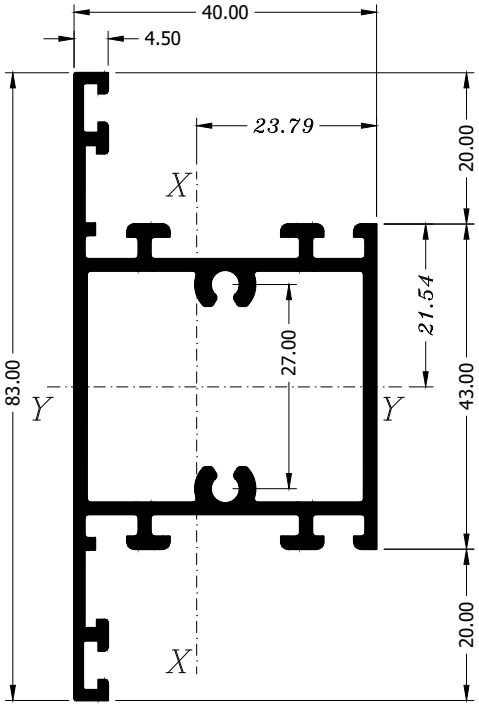

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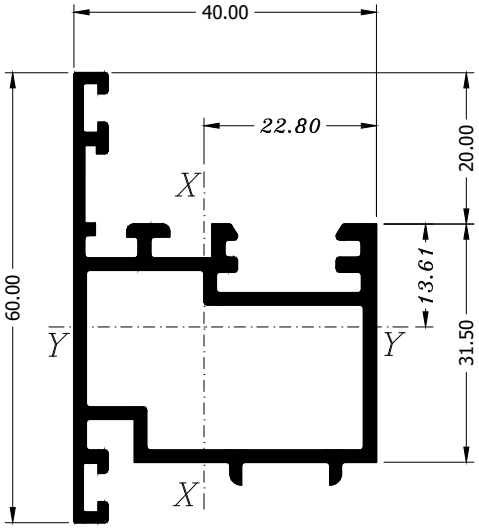

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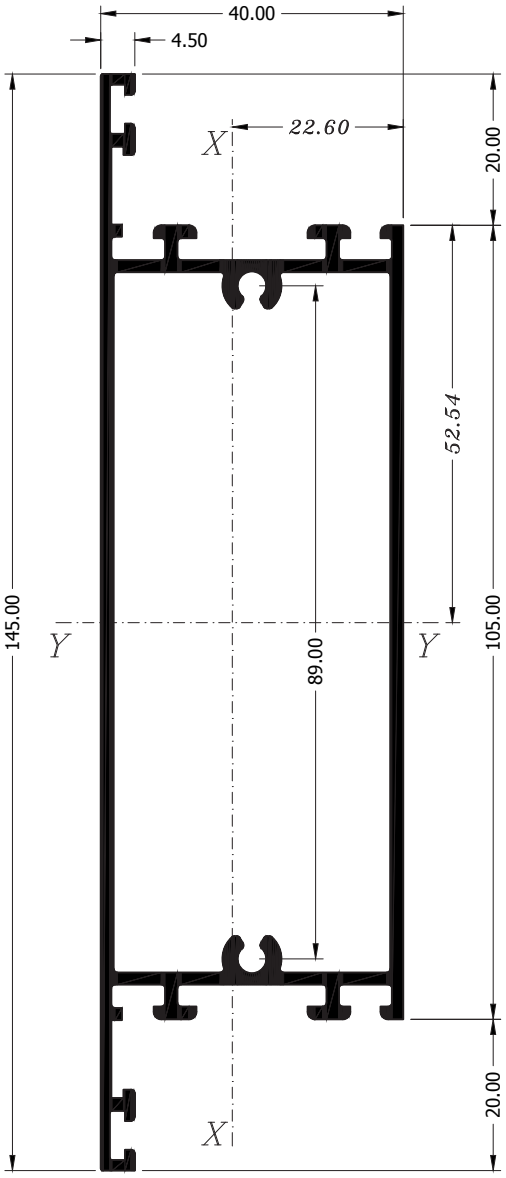

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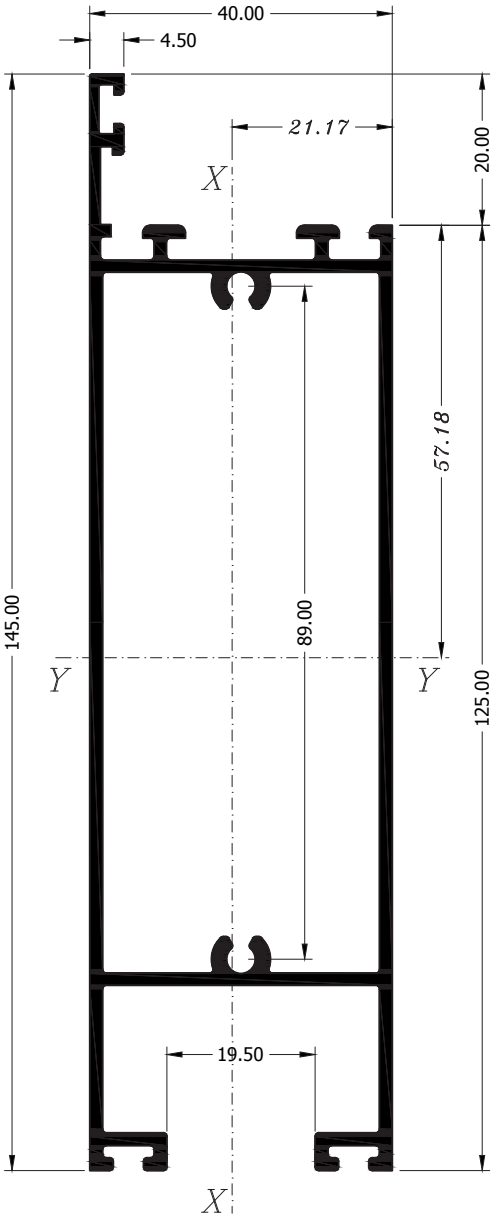

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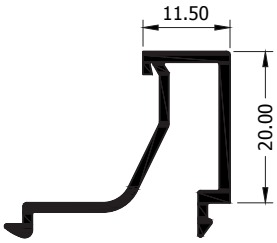

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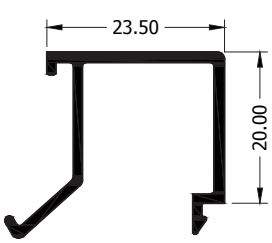

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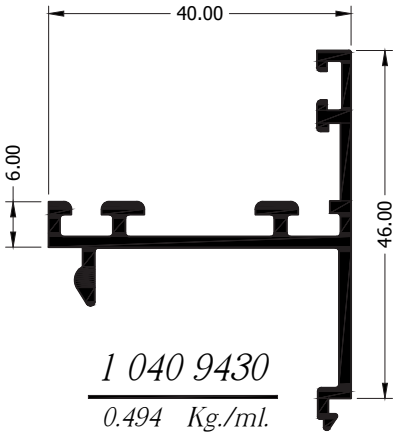

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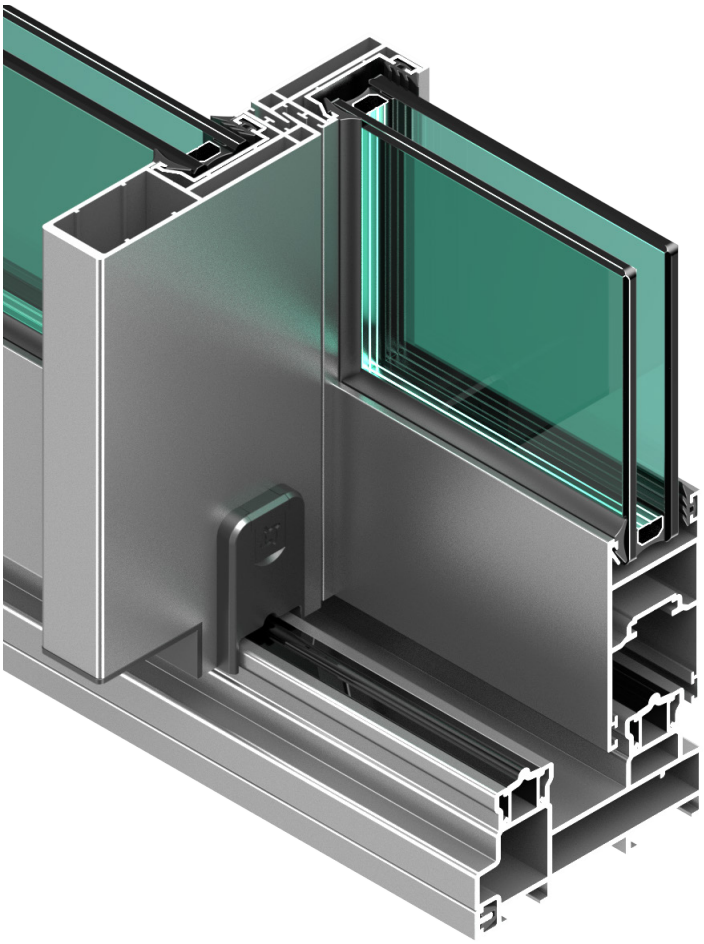

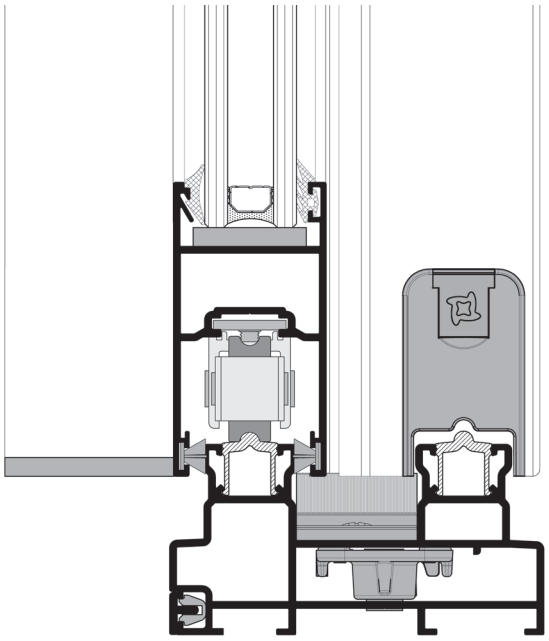

TENDU 120 - SLIM - PLUS
Sliding System

- Offers integrated sliding door solution with facade systems adding an aesthetic value to the glass facades (optional).
- Offers an extensive range of accessories including integrated lift & slide accessories.
- Obtains excellent technical performance and air permeability classifications, using gasket instead of pile weather-strip (optional).
- Used for doors and windows with heavy large sash to obtain a wide view.

Complies with European norm hEN 1435-1

Air Permeability	(Class 3) up to 600 pa.
Water Tightness	(Class 6A) up to 250 pa.
Resistance to wind load	(Class B3) up to 1200 pa.

Technical Characteristics

Frame Depth

98 mm. to 134 mm.

Frame Height

52 mm.

Sash Depth

40 mm.

Sash Height

86 mm.

Max Glass Thickness

Up to 27 mm.

Max Sash Weight

Up to 250 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes EPDM gaskets for tilt and slide

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011

CLASSIFICATION ASSESSMENT
N. 0714-CPR-1290 DATED AUGUST, 05 2015

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Sliding French door, 2 sliding sashes.
Model:	TENDU 120
	Width= 2,200 mm, Height = 2,200 mm, Thickness = 108 mm
Fabrication number:	-
Date of fabrication:	2015
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/3, dated August, 05 2015, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified,

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	**CLASS 3**
WATERTIGHTNESS:	**CLASS 6A**
RESISTANCE TO WIND LOAD:	**CLASS B3**

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, August, 05, 2015

The undersigned ECO Certificazioni S.p.A. Scheme Manager CPR

Eng. Gianluca Campedelli

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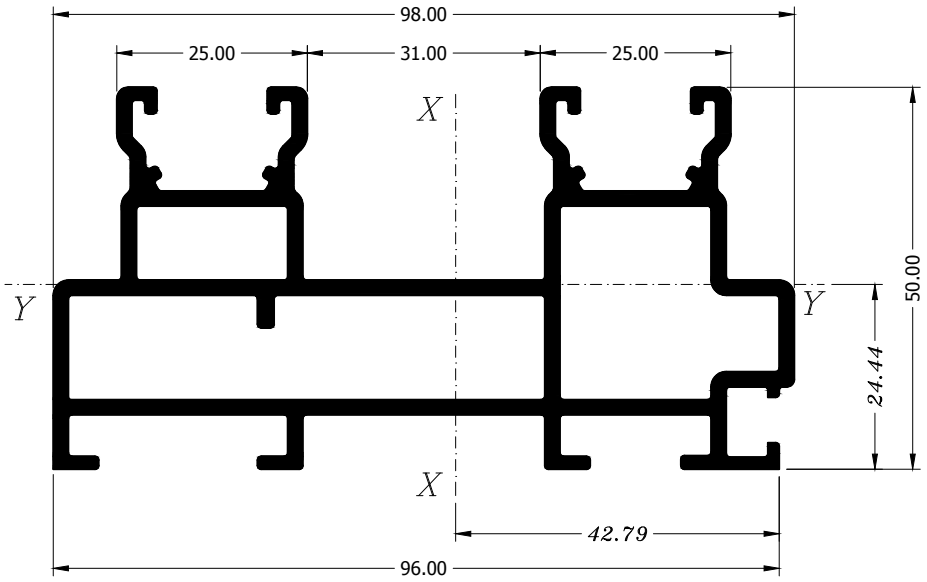
ECO Certificazioni S.p.A. - Via Mengolina, 33
48018 Faenza (RA) - ITALY
Tel. +39 0546 624911 - Fax +39 0546 624922
E-mail: info@eco-cert.it - www.ecocertificazioni.eu



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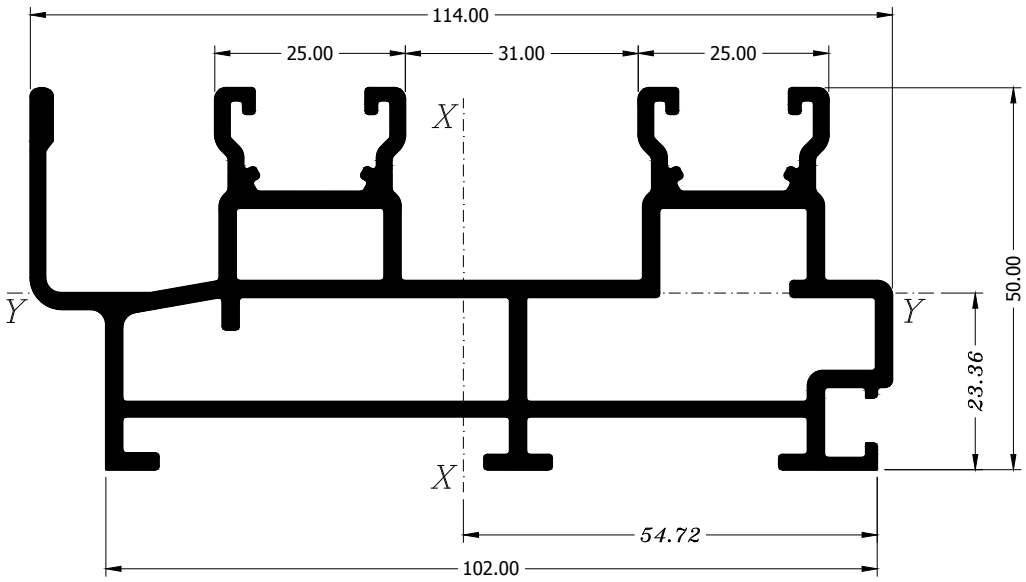

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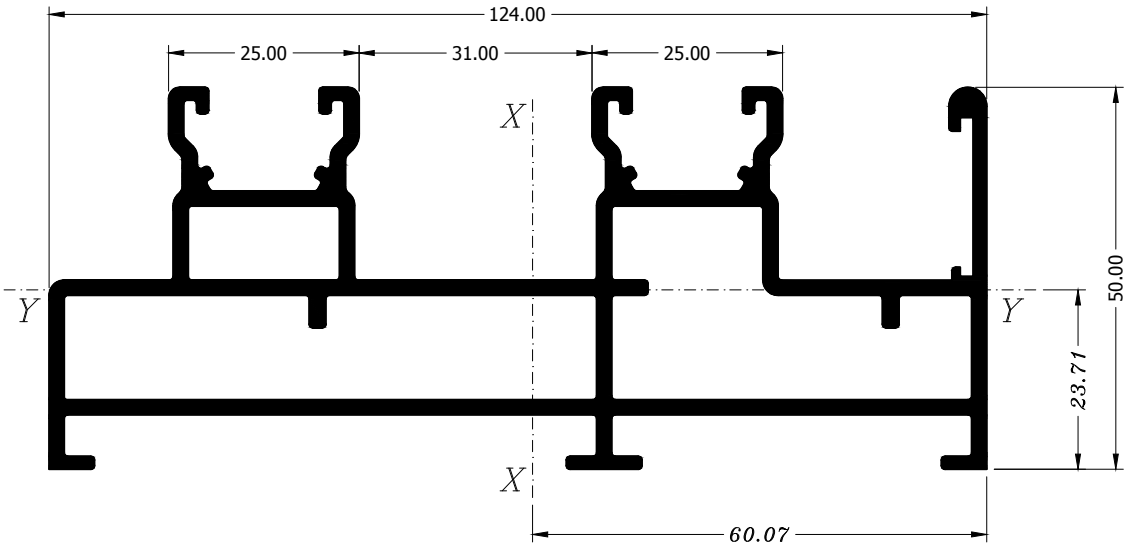

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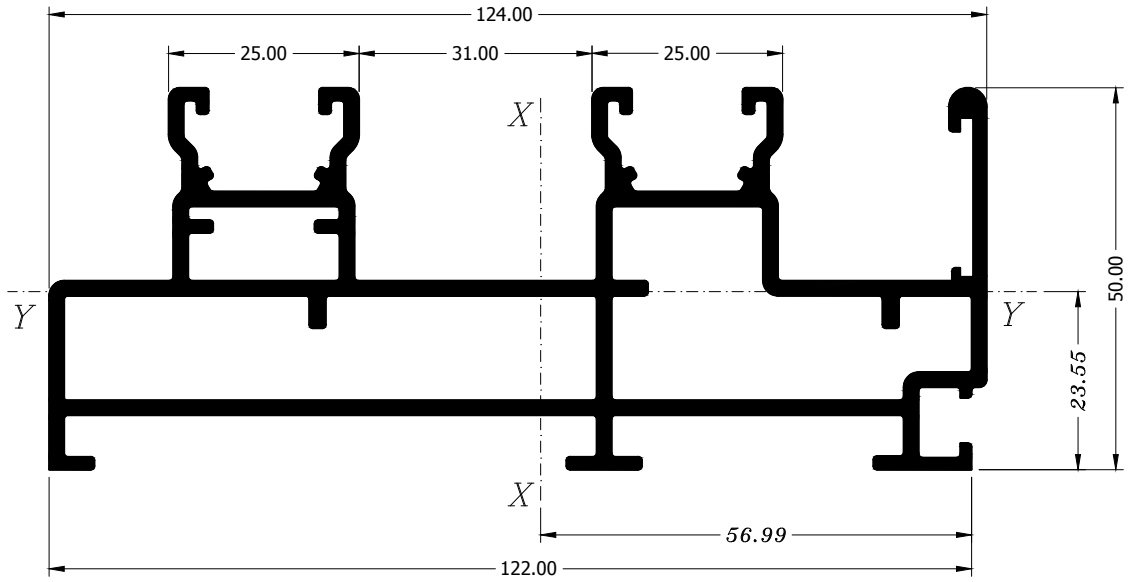

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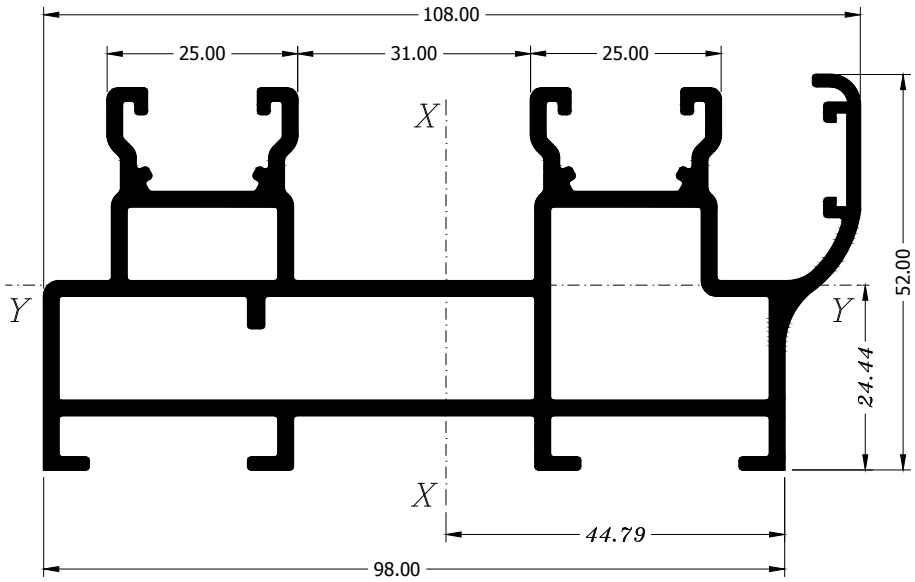

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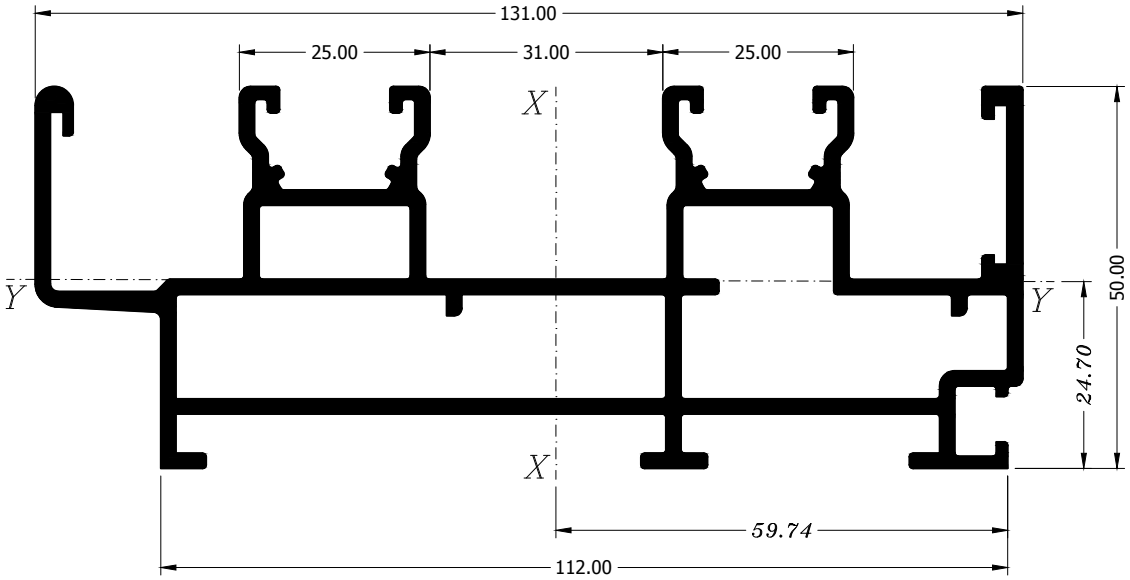

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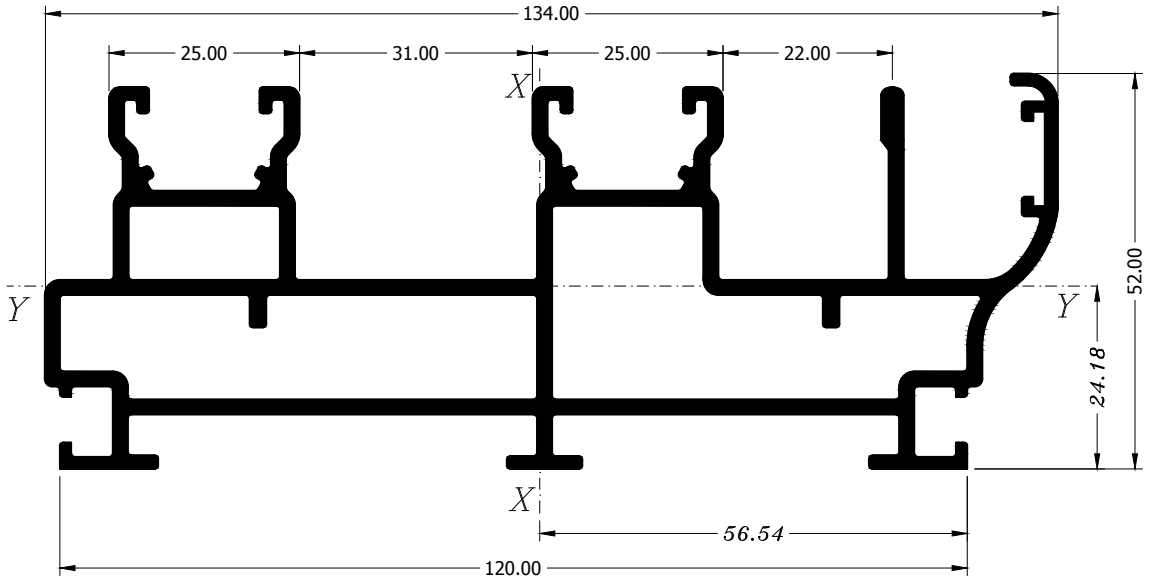

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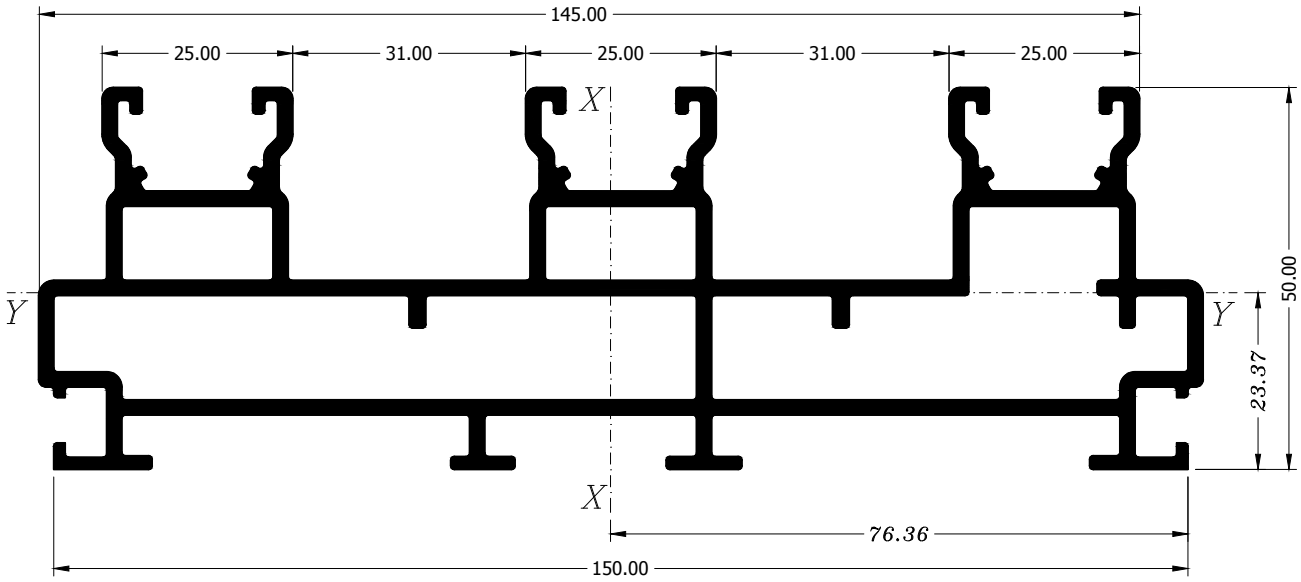

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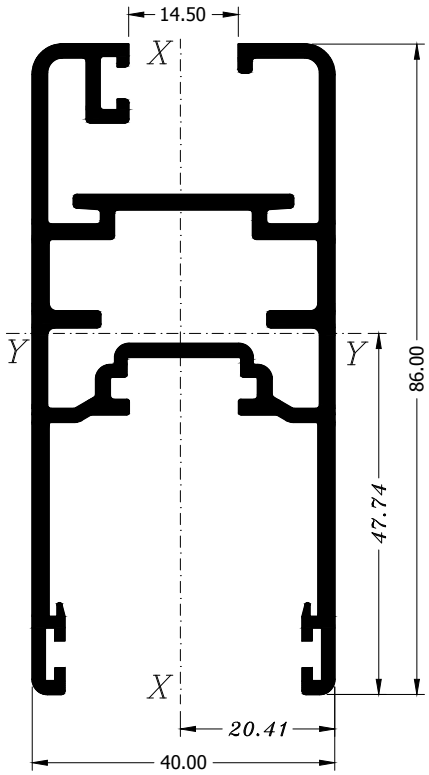

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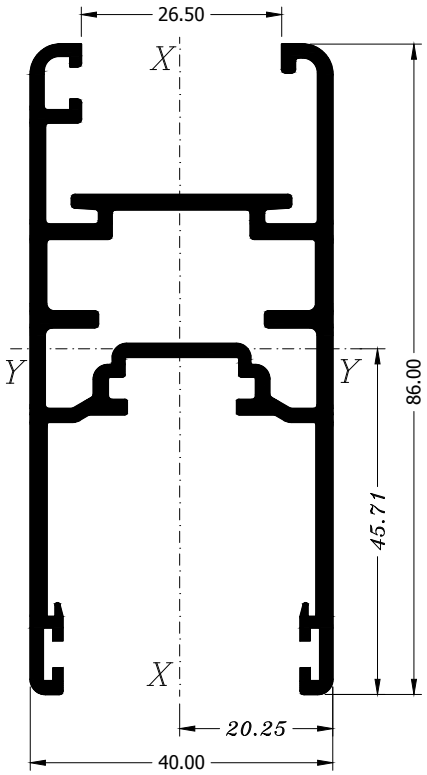

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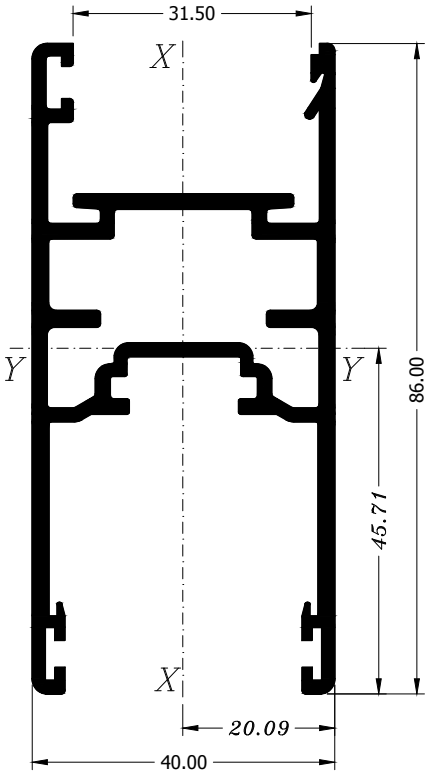

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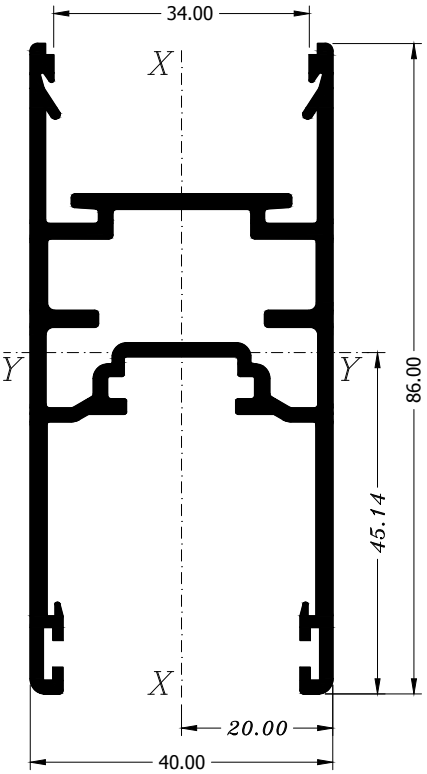

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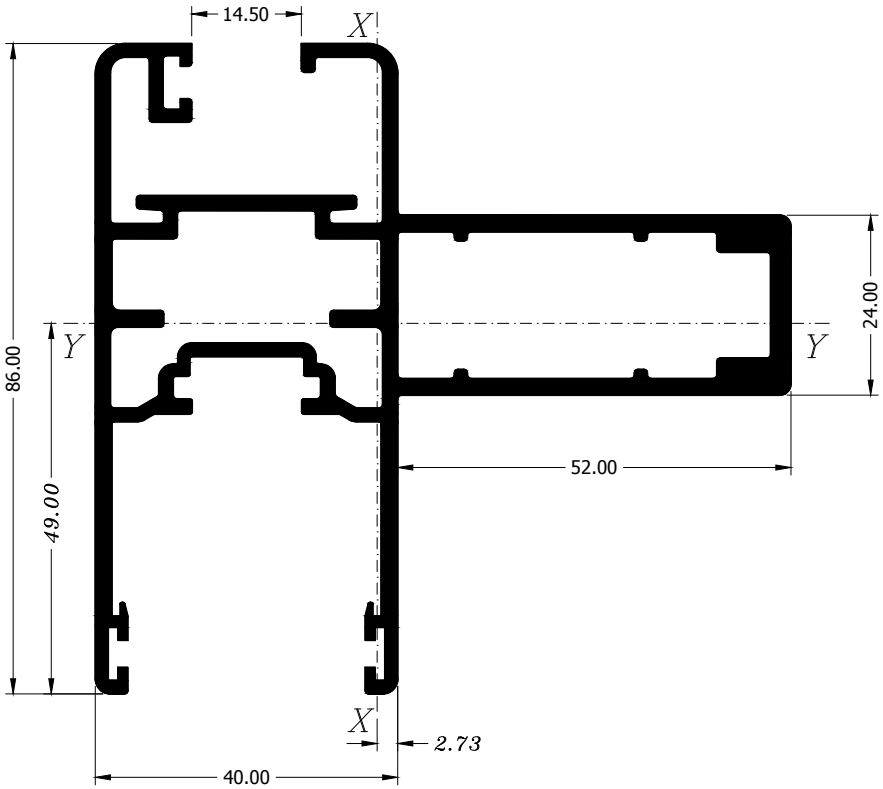

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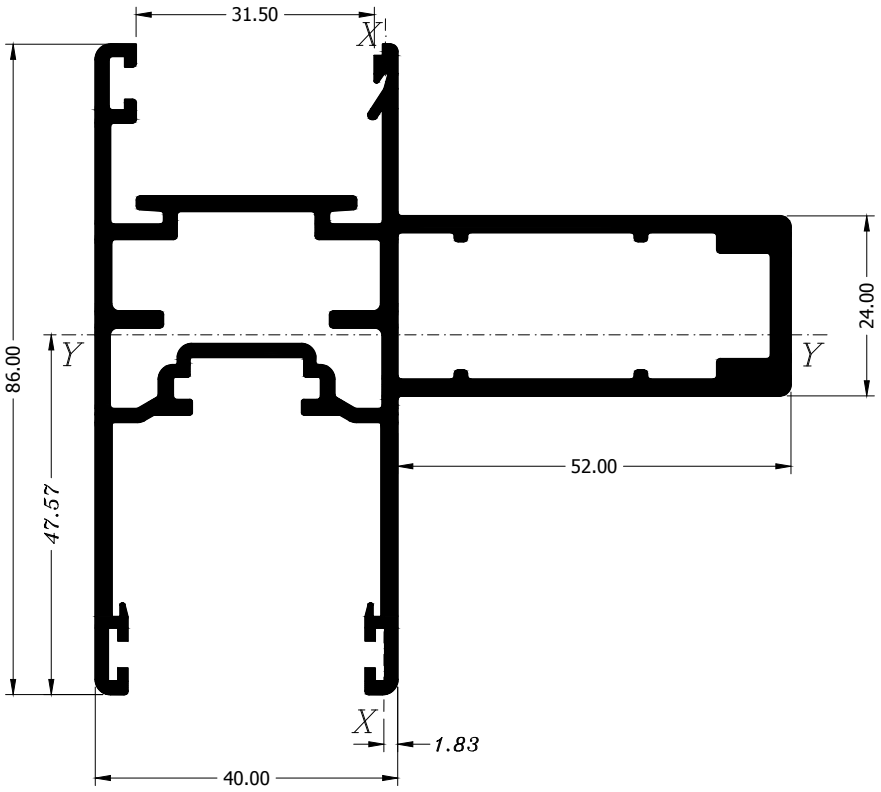

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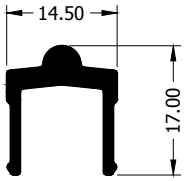

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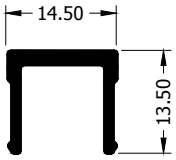

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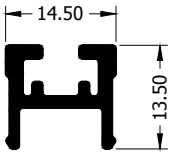

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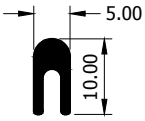

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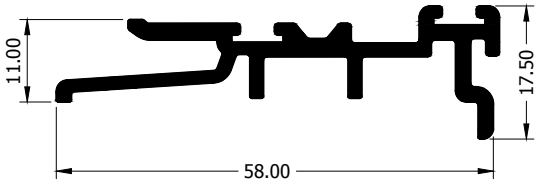

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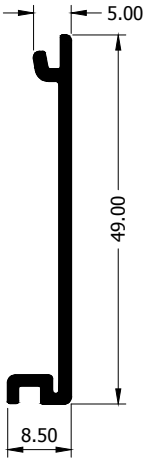

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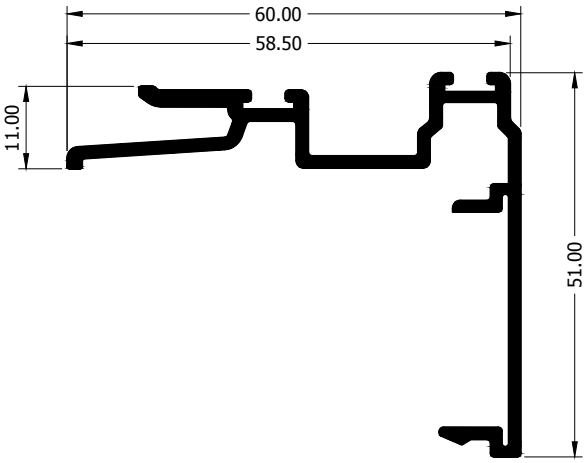

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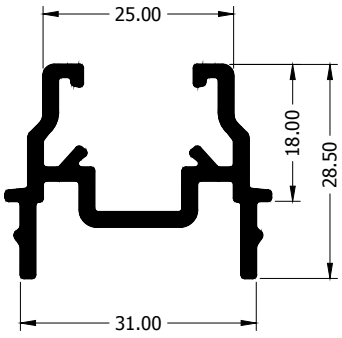

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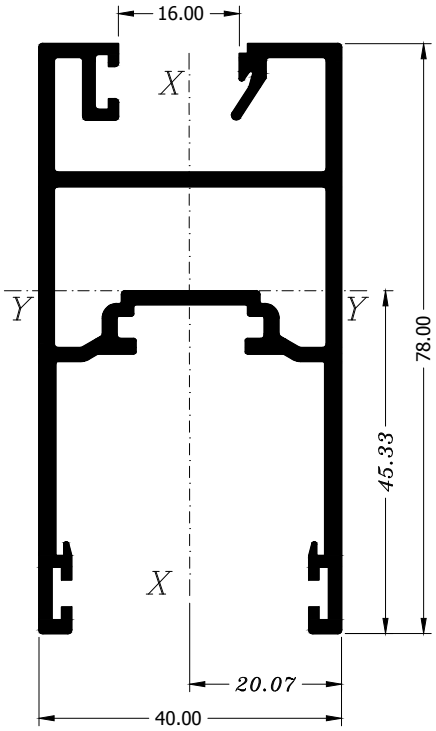

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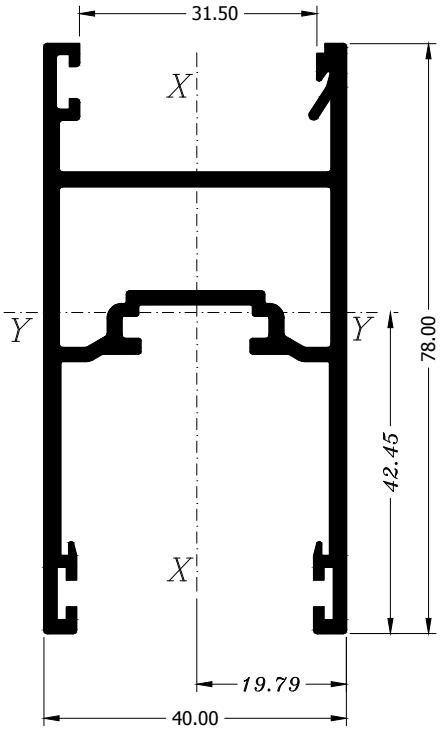

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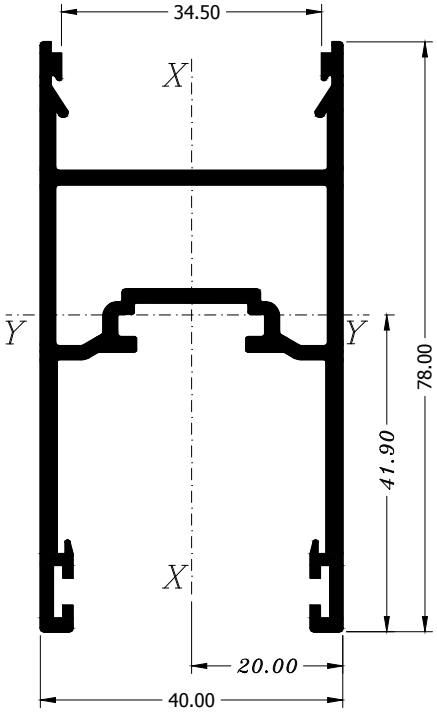

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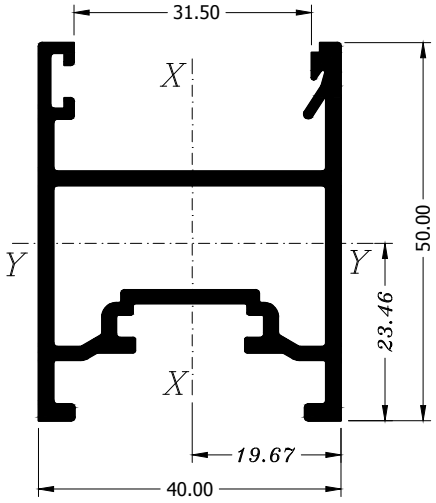

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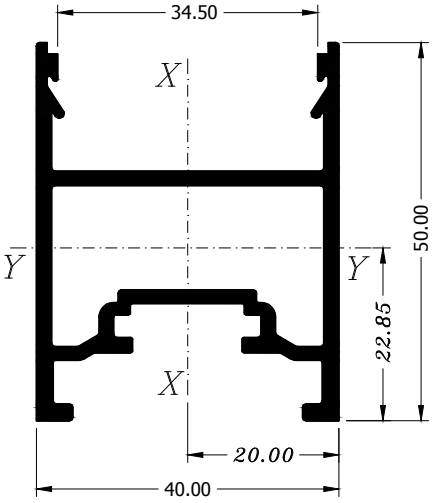

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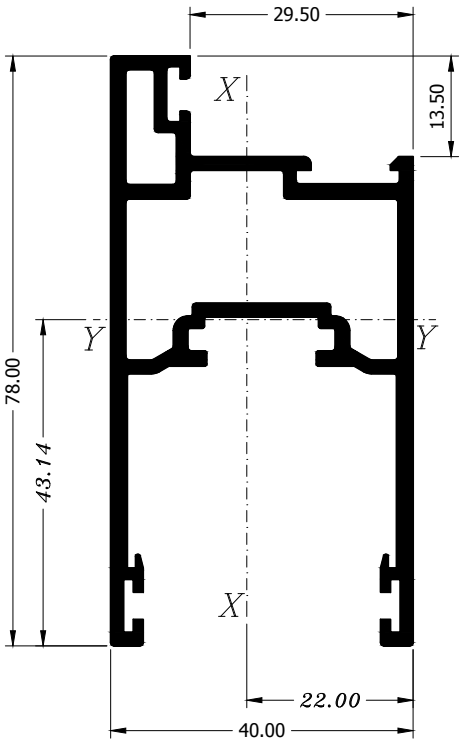

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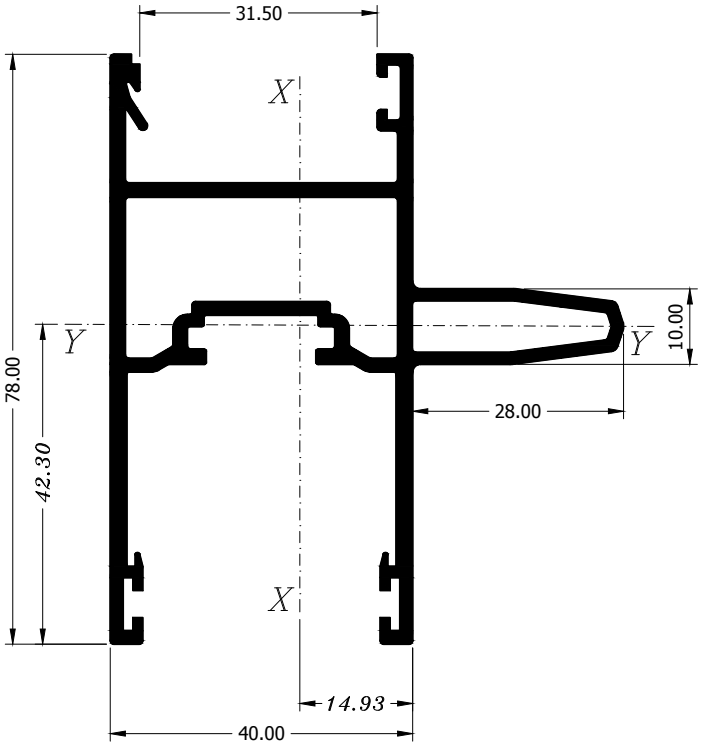

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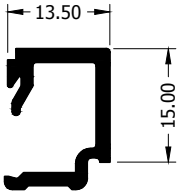

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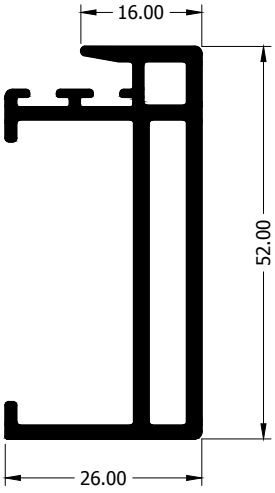

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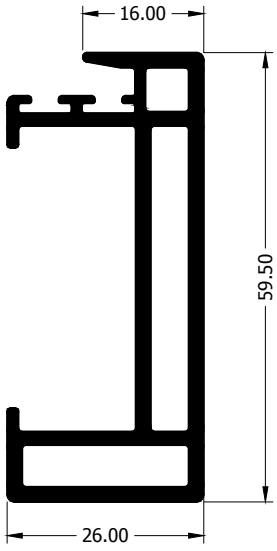

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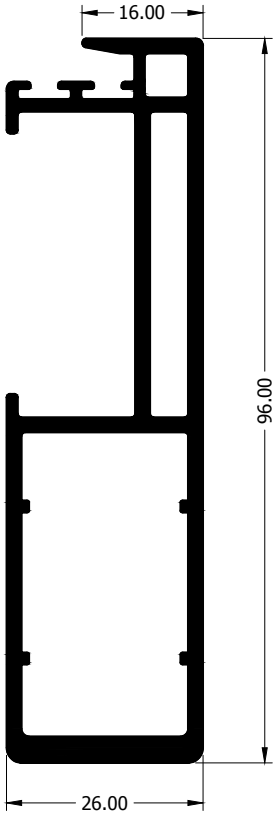

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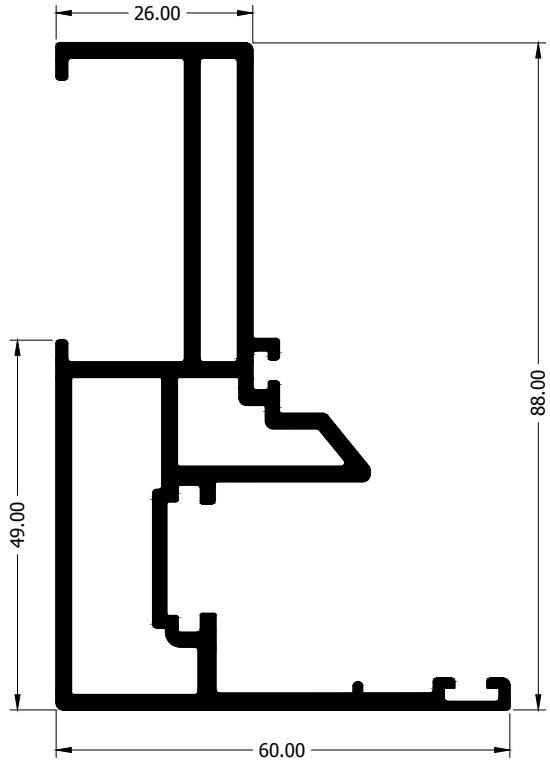

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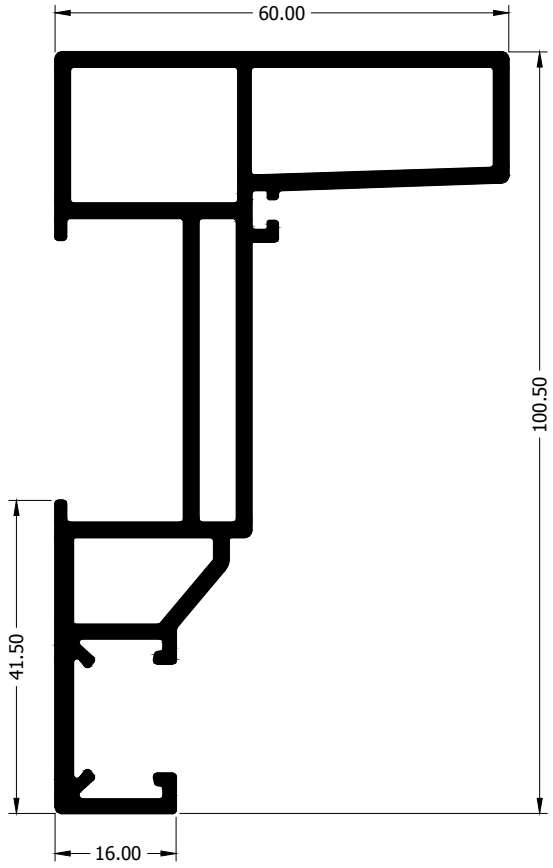

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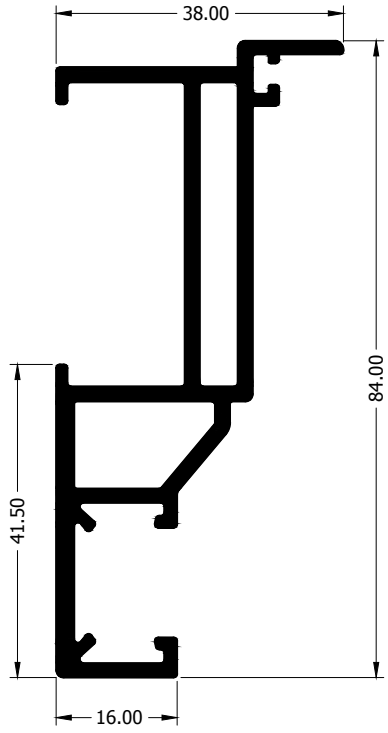

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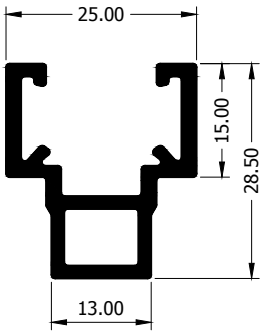

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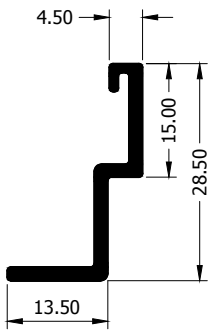

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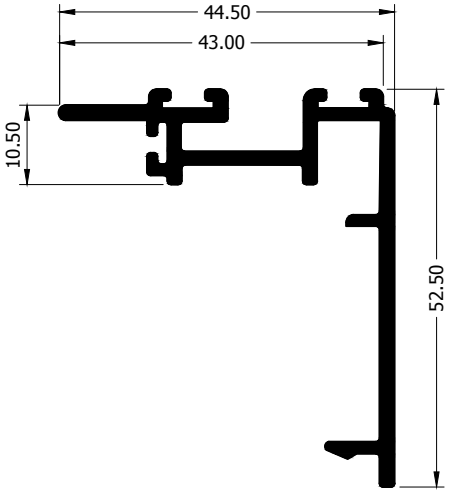

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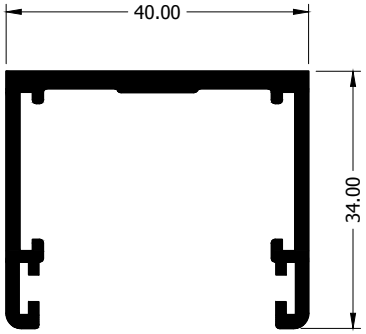

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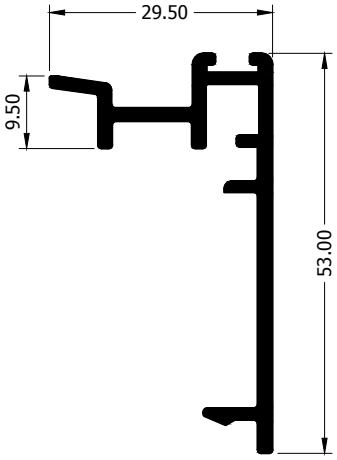

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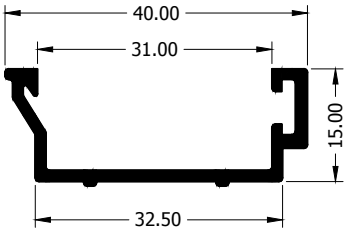

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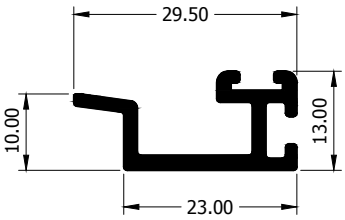

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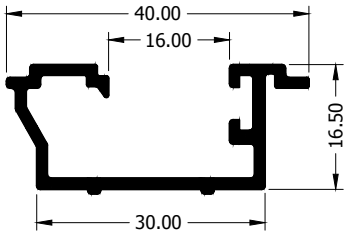

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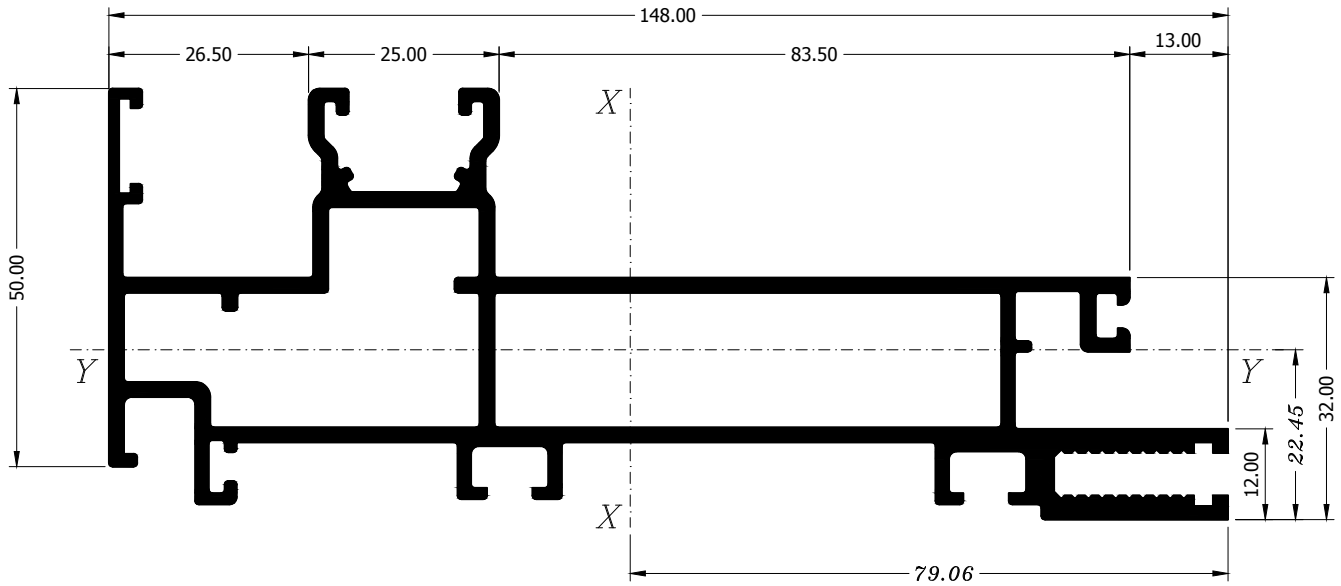

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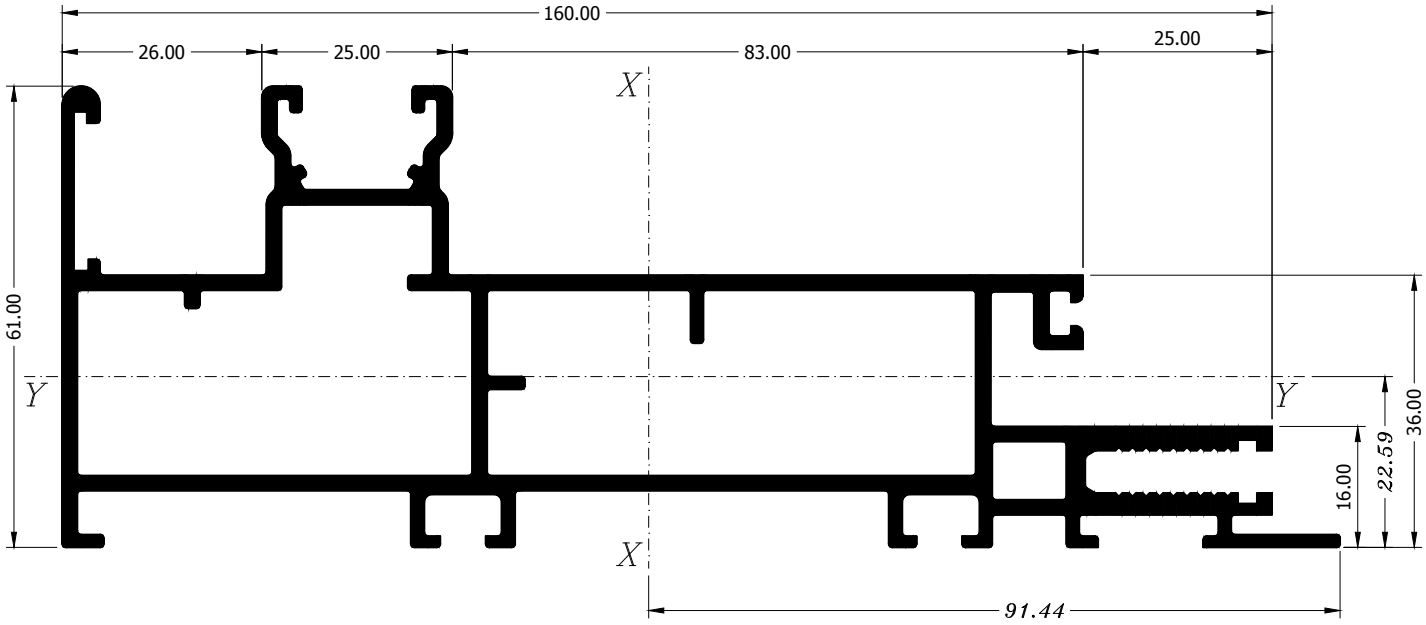

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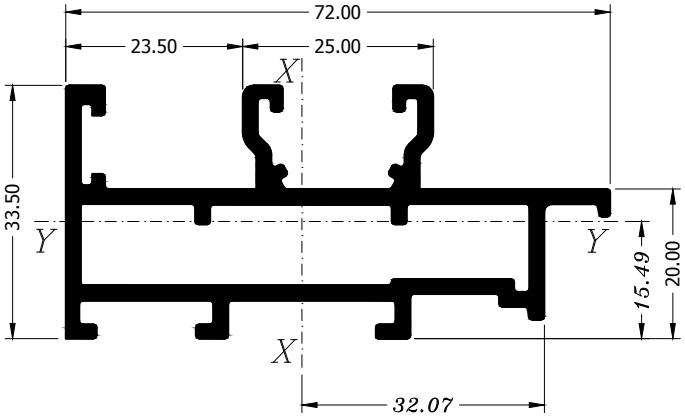

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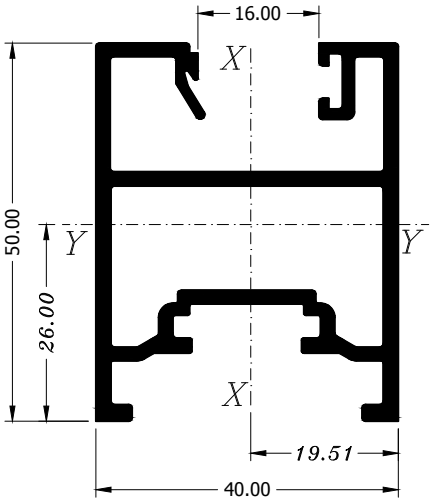

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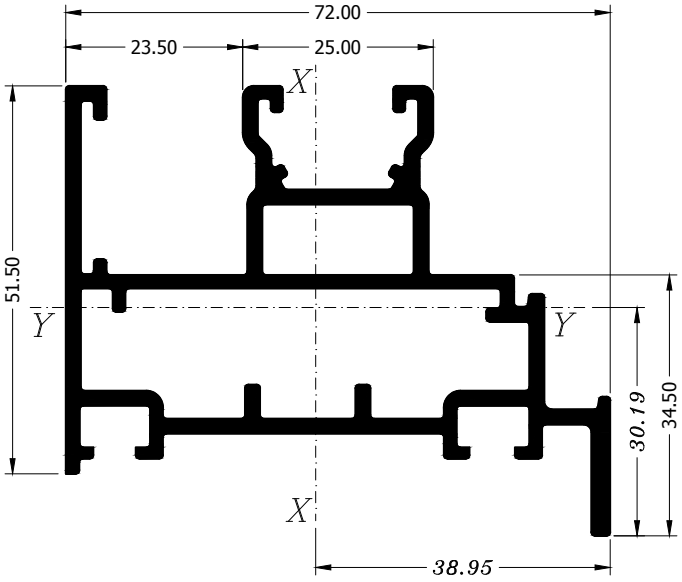

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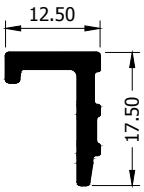

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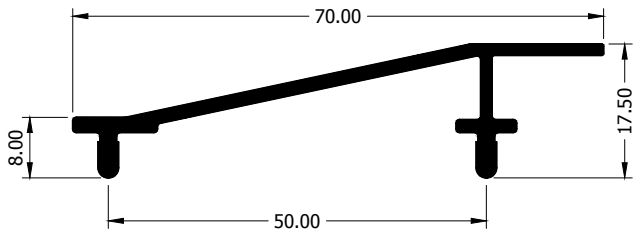

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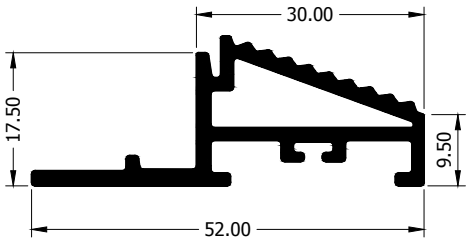

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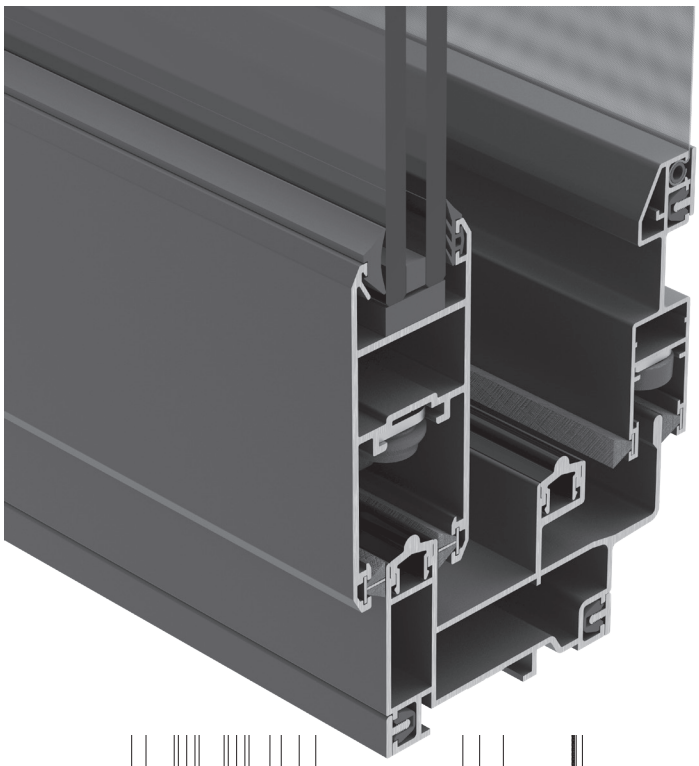
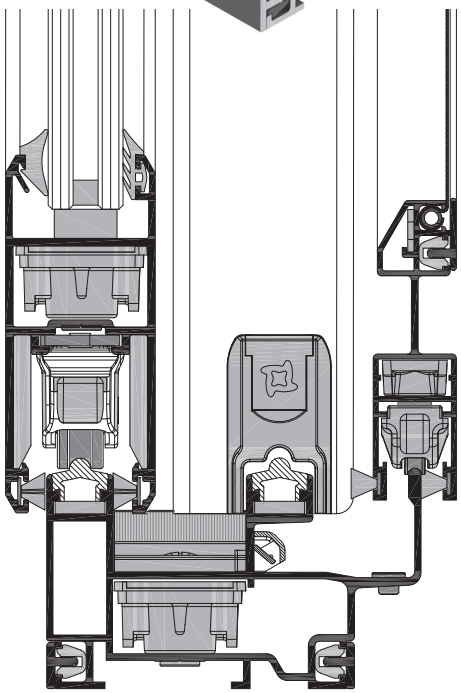
JUMBO 100
Sliding System





- Wide variety of frames and sashes in design and aesthetic shapes that match the architectural trends.
- Available in the double or triple track design, structures with up to six leaves.
- Used for doors and windows with large openings.
- Wide range of locking systems including multi locking points and anti-lift blocks.
- Most of the accessories can be adjusted and fixed with set screws.

Complies with European norm hEN 1435-1

Air Permeability	(Class 3) up to 600 pa.
Water Tightness	(Class 8A) up to 450 pa.
Resistance to wind load	(Class B2) up to 800 pa.

Technical Characteristics

Frame Depth

74 mm. to 134 mm.

Frame Height

53 mm. to 107 mm.

Sash Depth

36 mm.

Sash Height

86 mm.

Max Glass Thickness

Up to 26 mm.

Max Sash Weight

Up to 200 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011

CLASSIFICATION ASSESSMENT
N. 0714-CPR-1289 DATED AUGUST, 05 2015

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT

Type:	Sliding French door, 2 sliding sashes.
Model:	JUMBO 100 Width= 2,200 mm, Height = 2,200 mm, Thickness = 94 mm
Fabrication number:	-
Date of fabrication:	2015
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/2, dated August, 05 2015, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified.

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	**CLASS 3**
WATERTIGHTNESS:	**CLASS 8A**
RESISTANCE TO WIND LOAD:	**CLASS B2**

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, August, 05, 2015

The undersigned ECO Certificazioni S.p.A. Scheme Manager CPR
Eng. Gianluca Campodonico

ECO CERTIFICAZIONI S.p.A. - ITALY - Via Mengolina, 33 FAENZA (RA) - www.eco-cert.it

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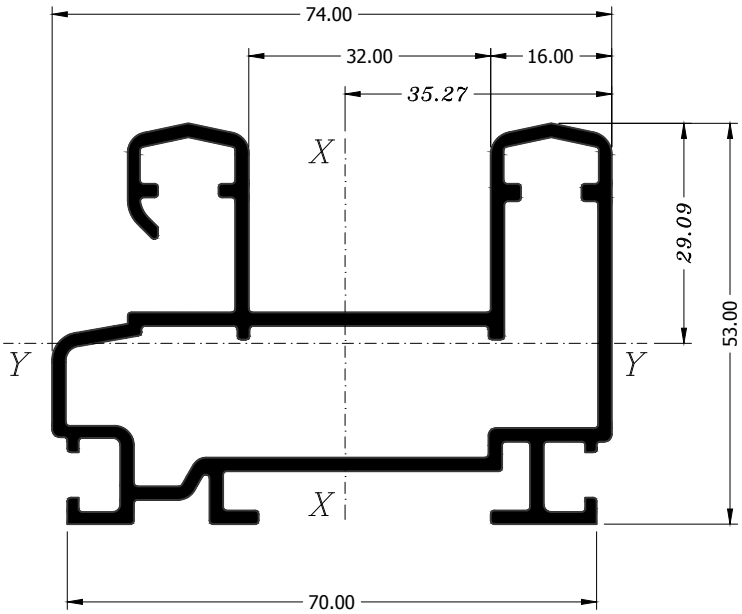
48018 Faenza (RA) - ITALY
Tel. +39 0546 624911 • Fax +39 0546 624922
E-mail: info@eco-cert.it • www.ecocertificazioni.eu



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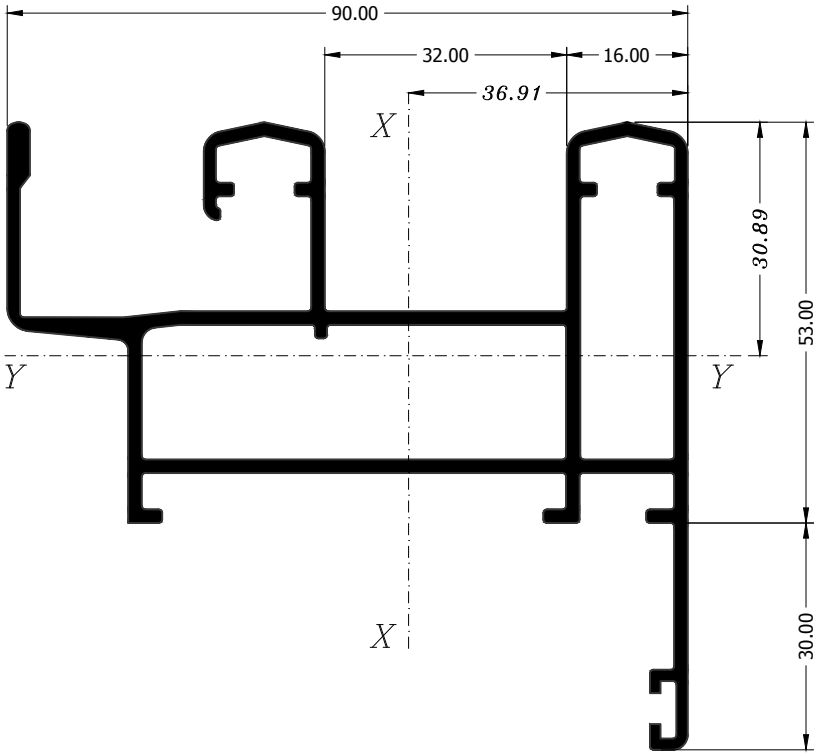

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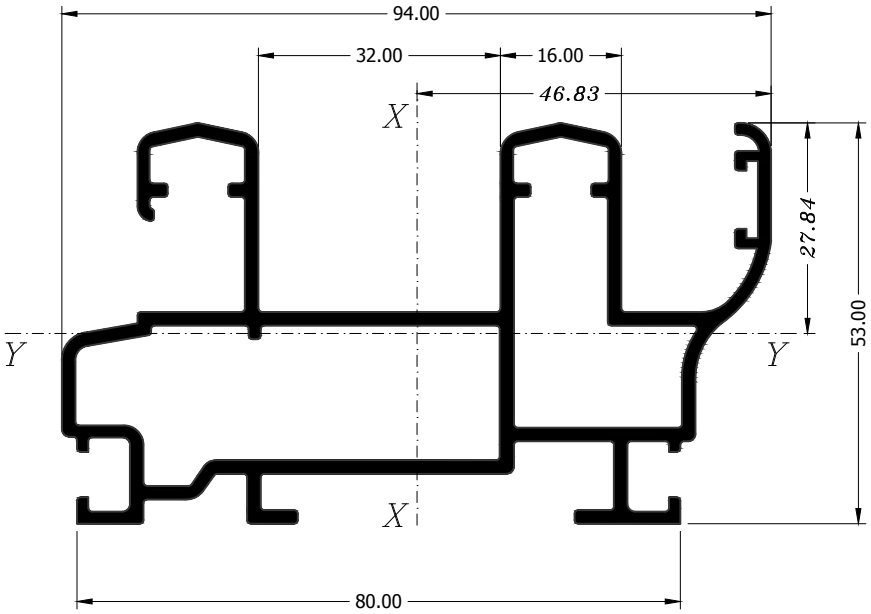

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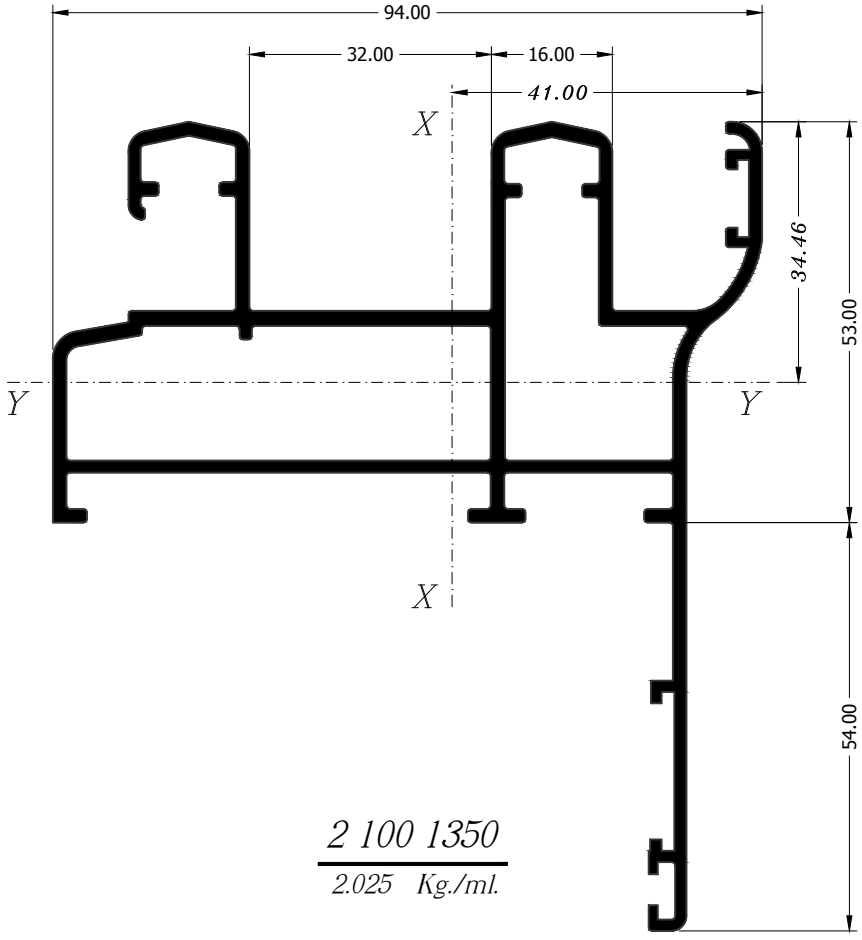

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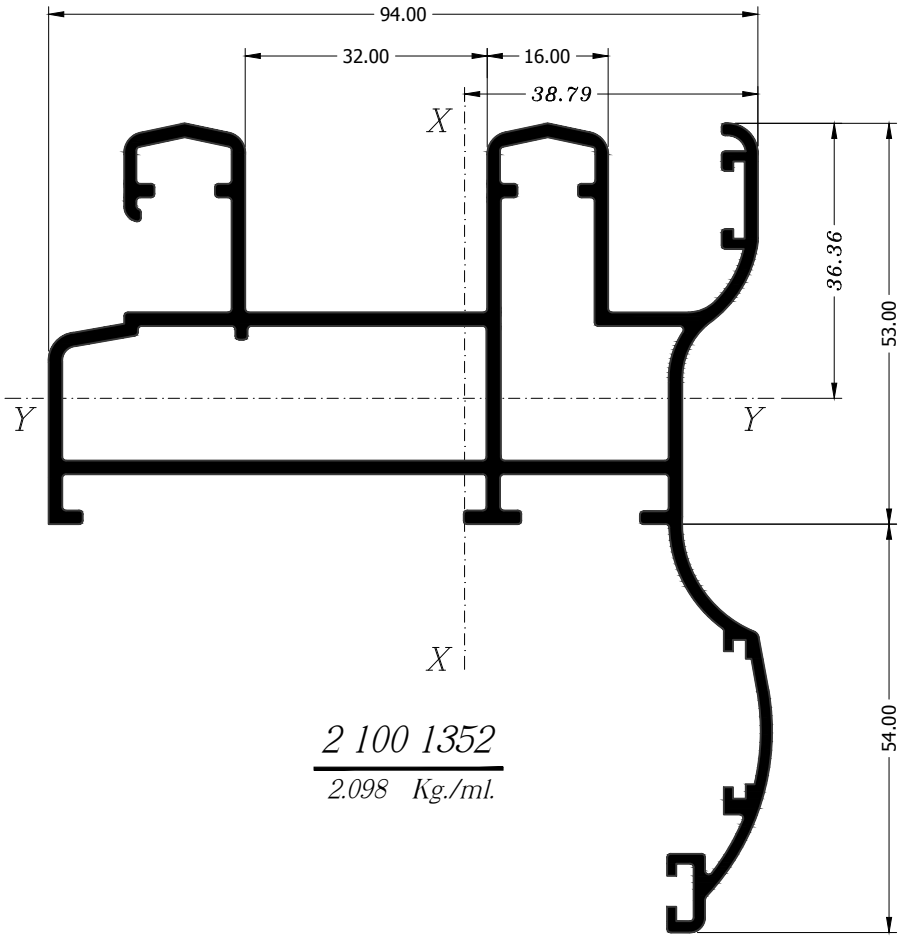

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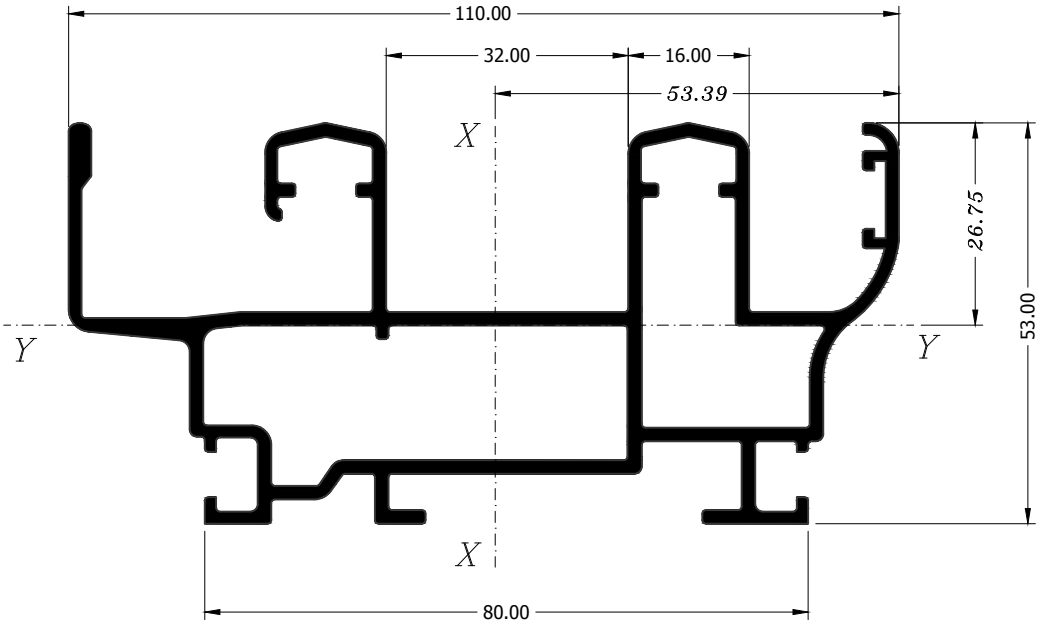

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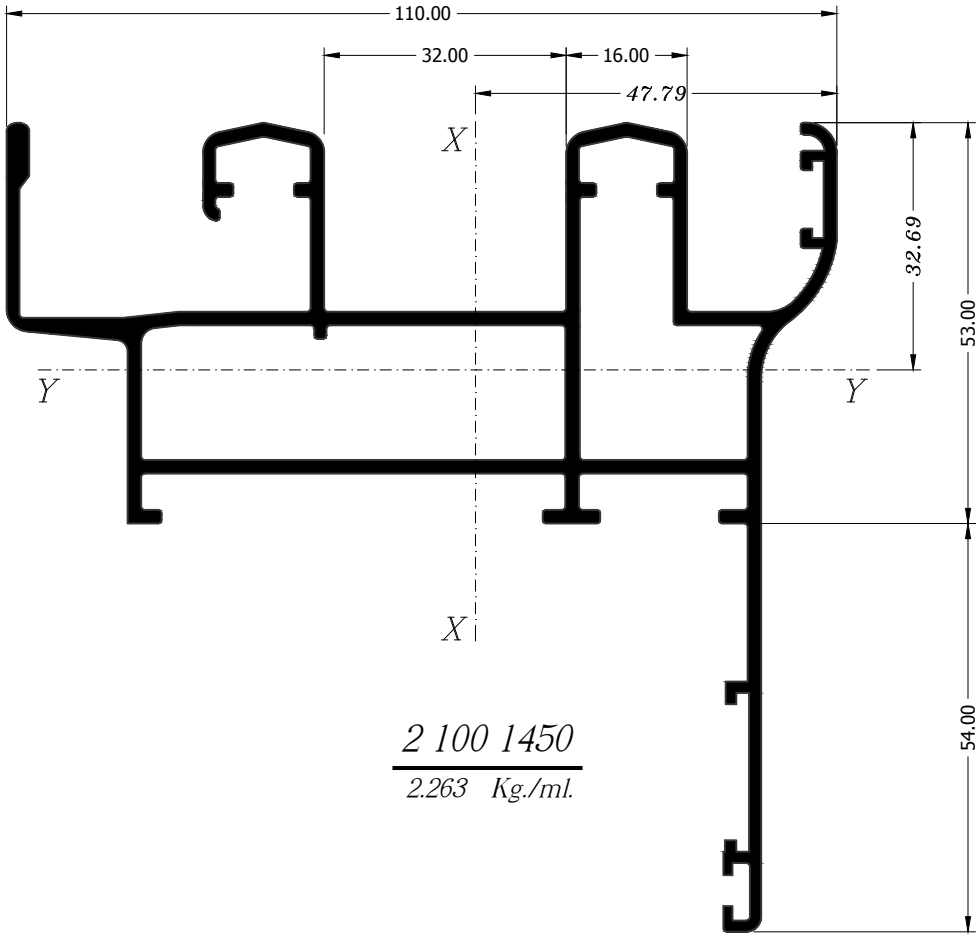

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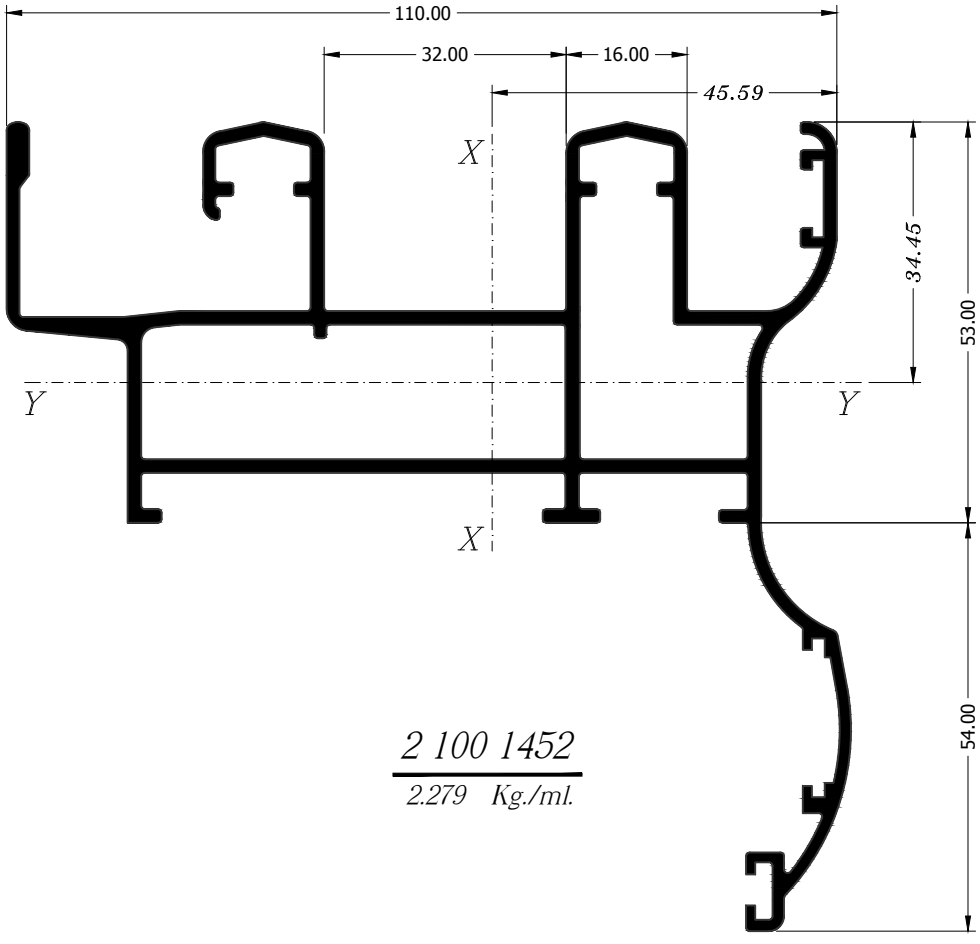

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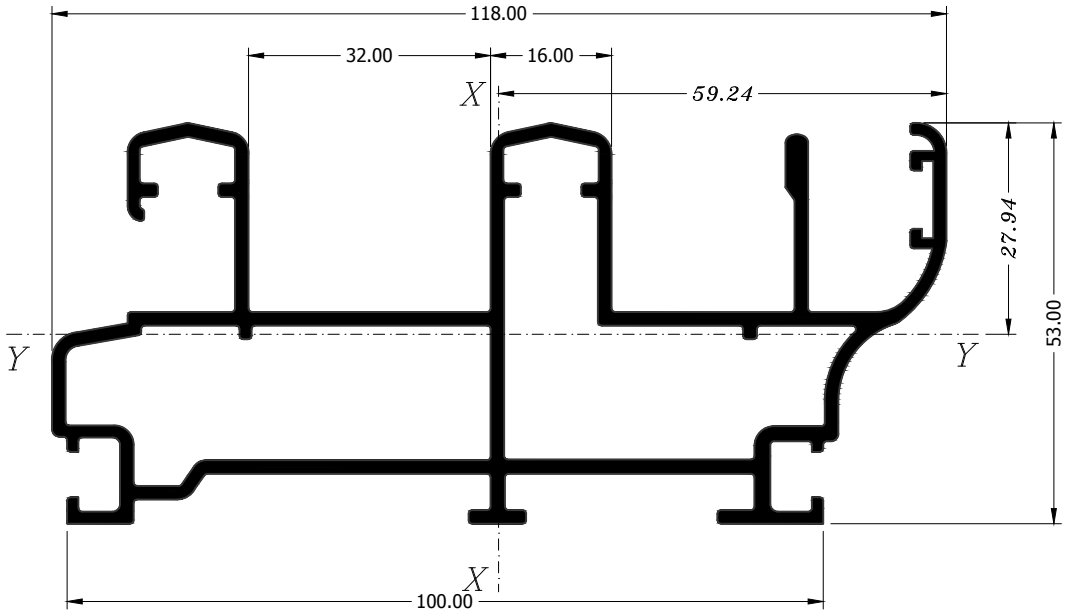

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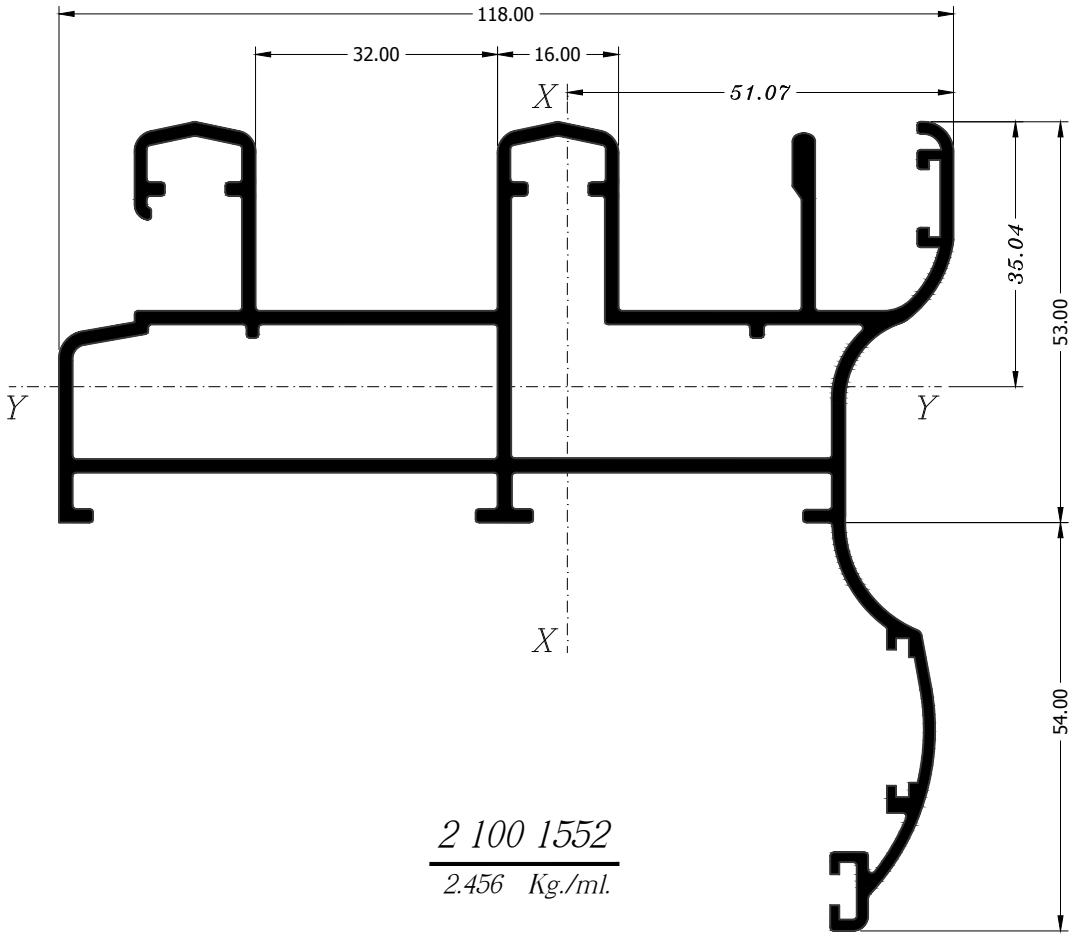

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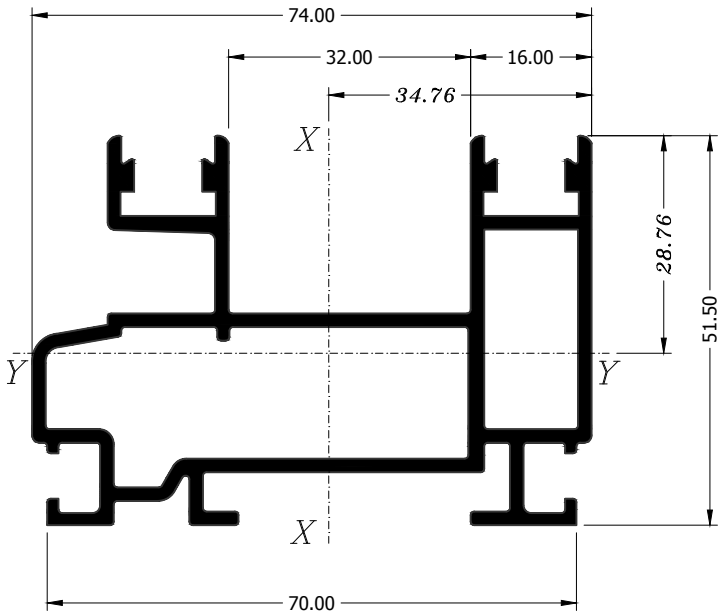

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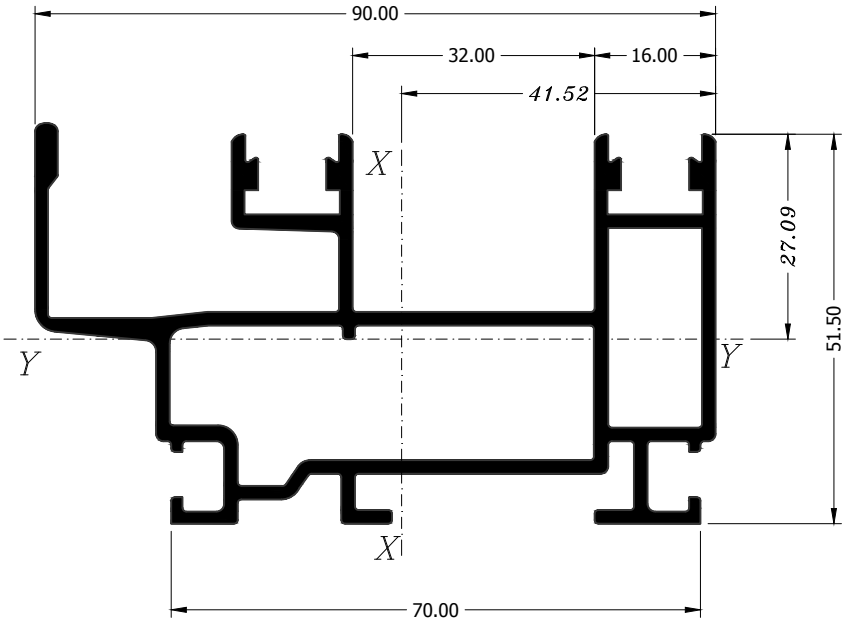

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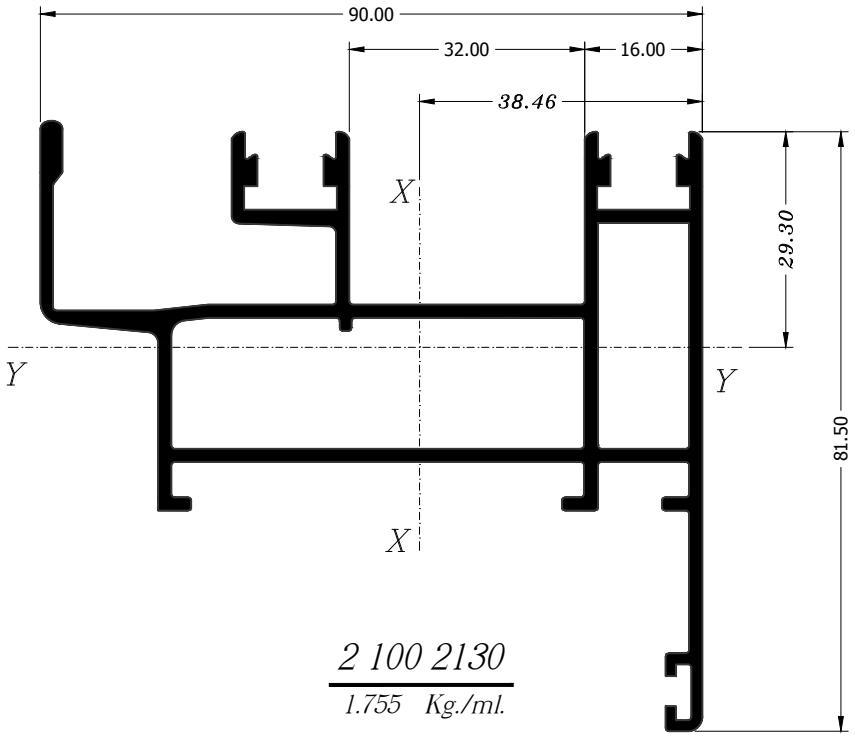

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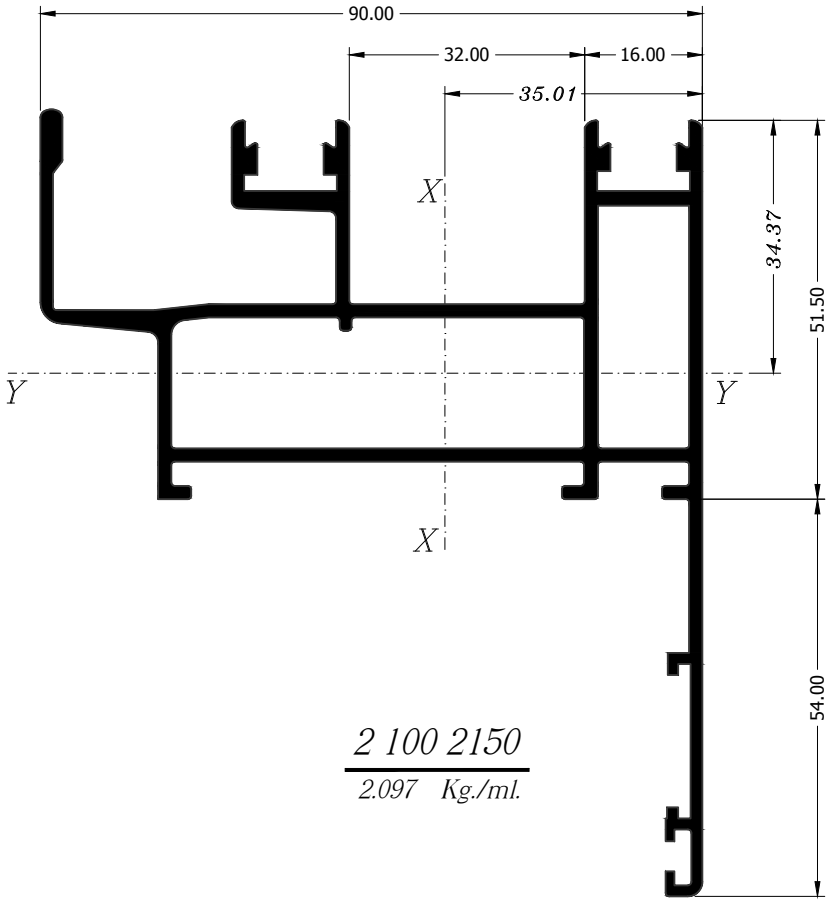

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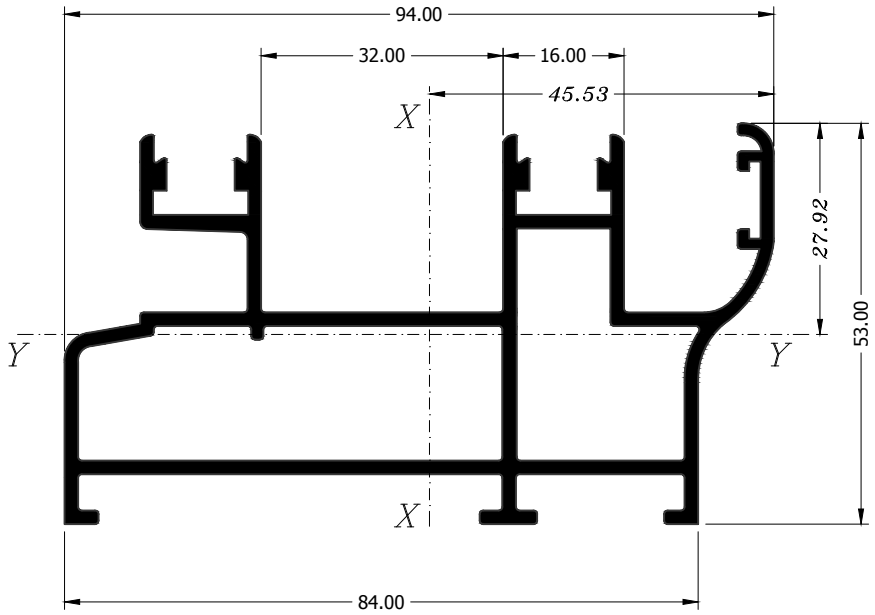

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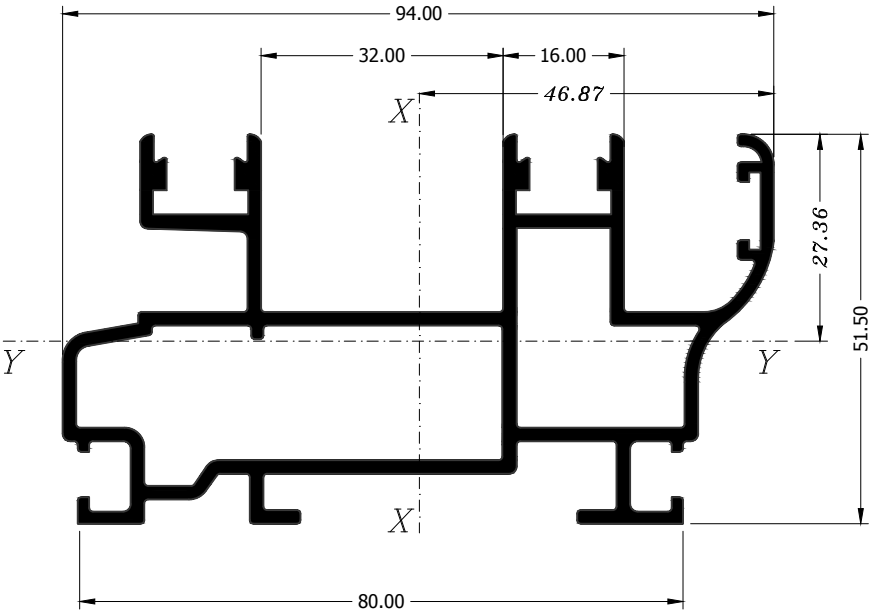

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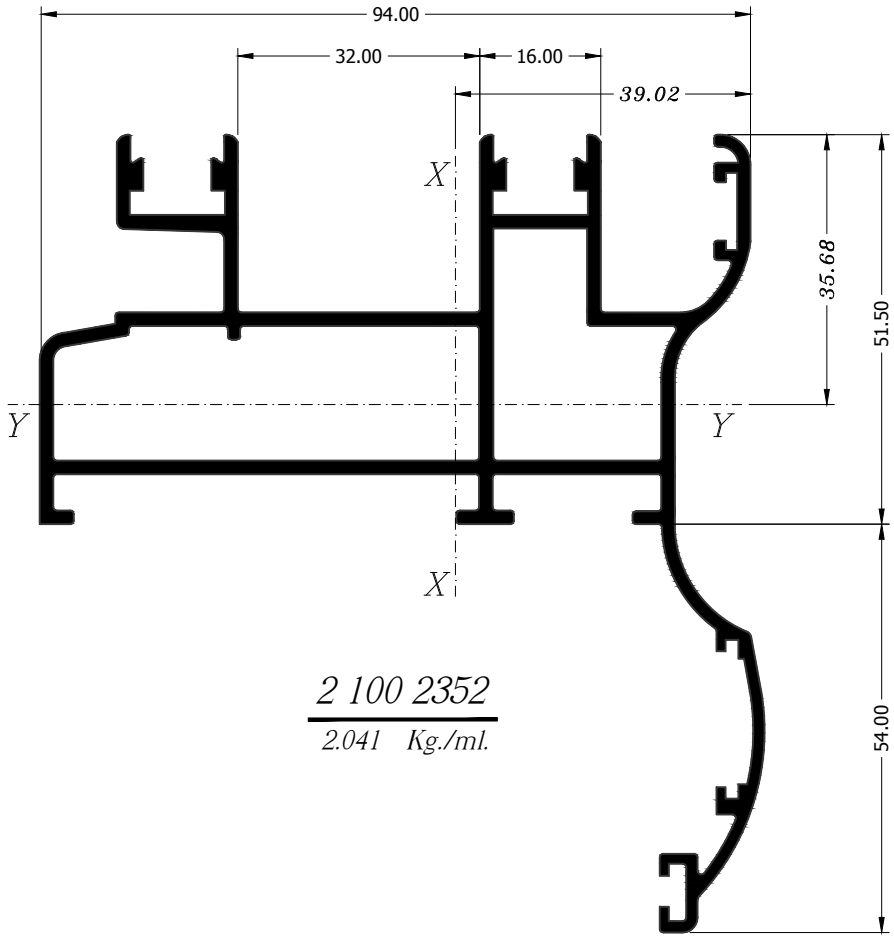

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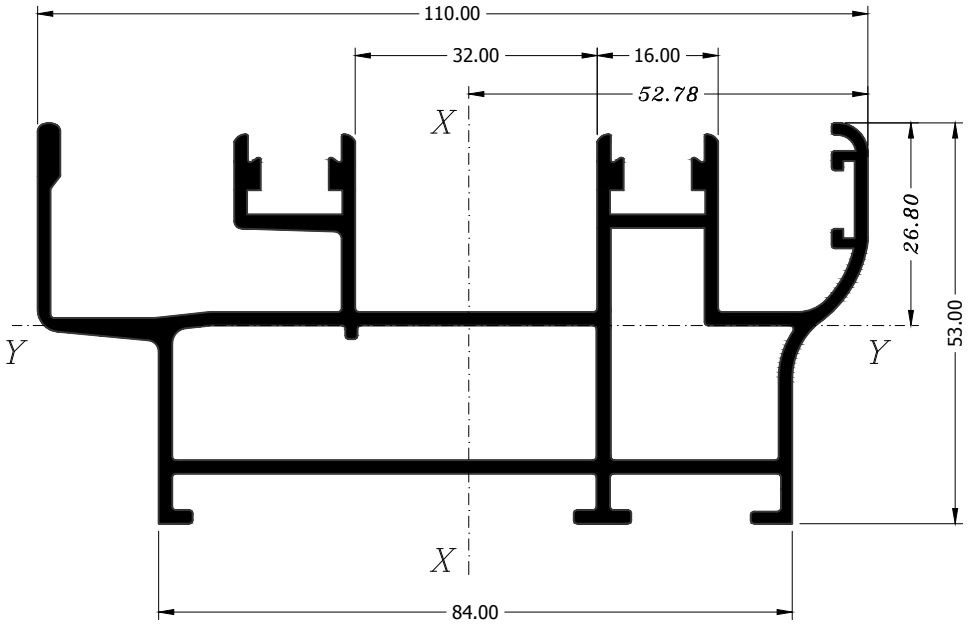

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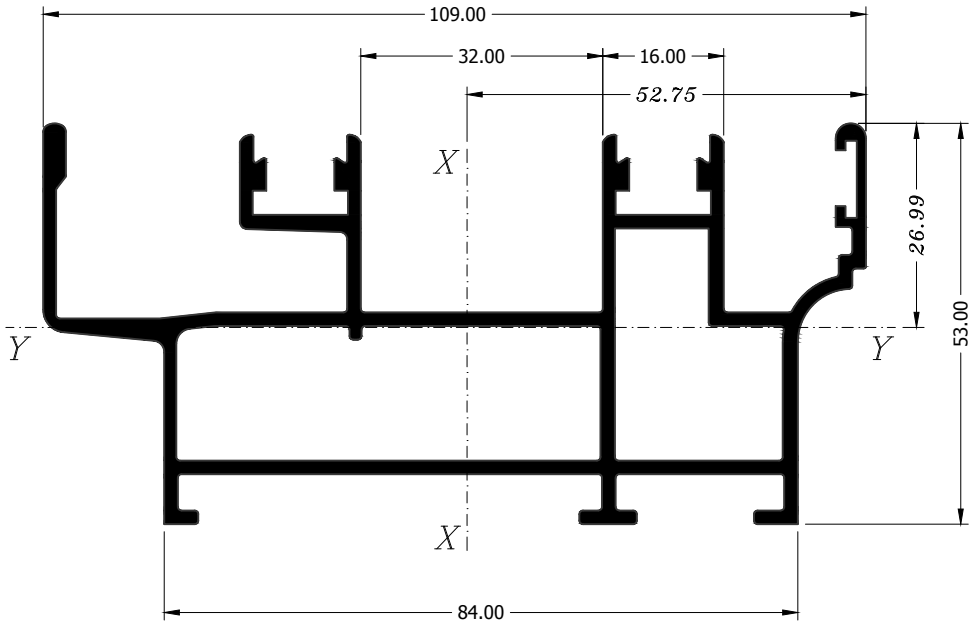

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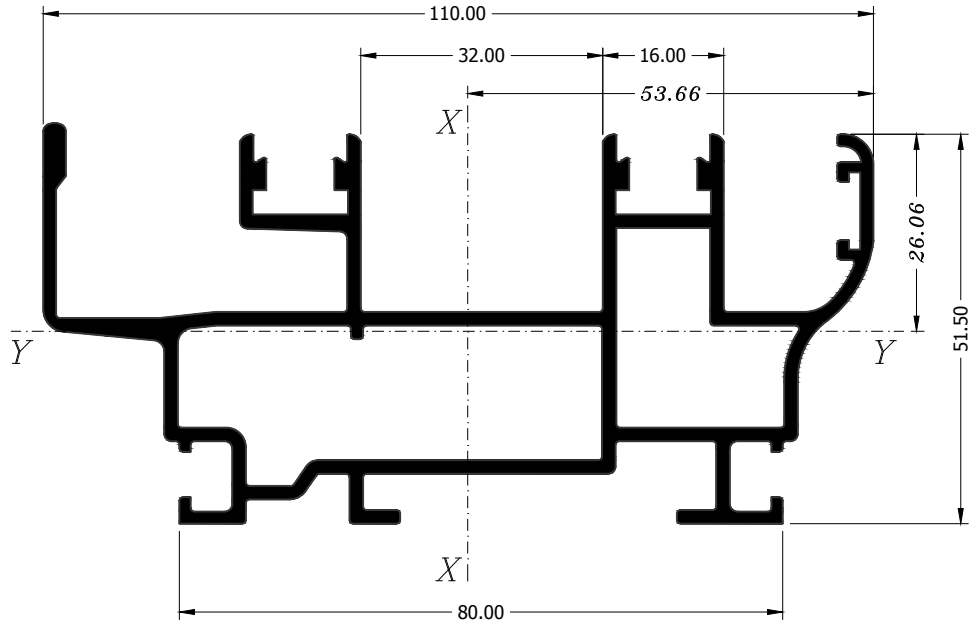

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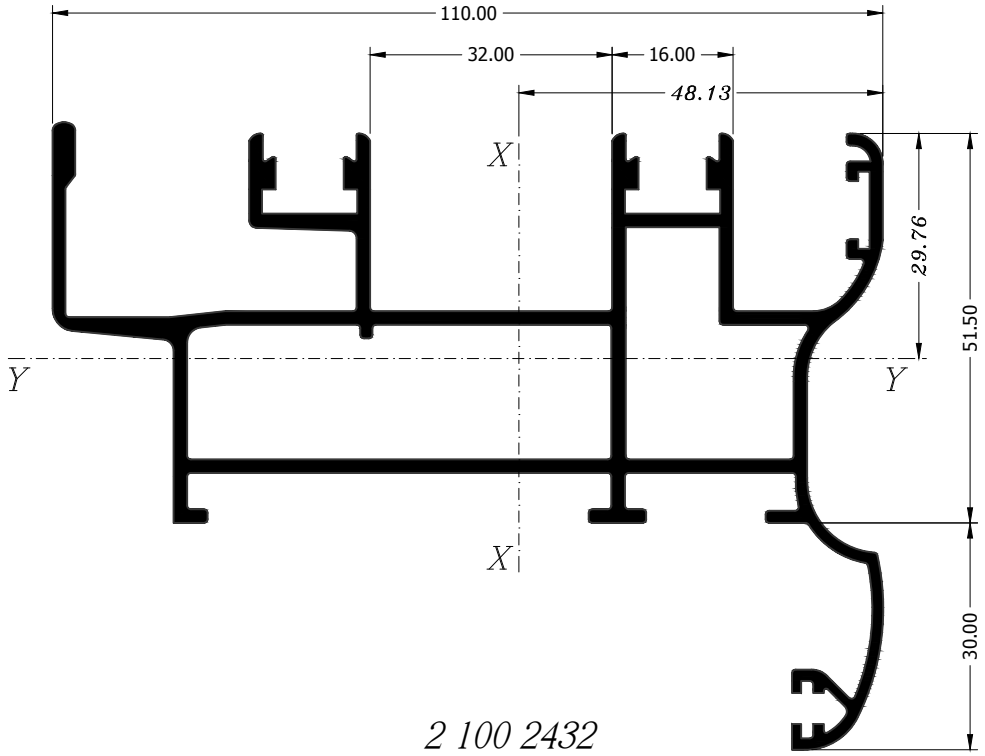

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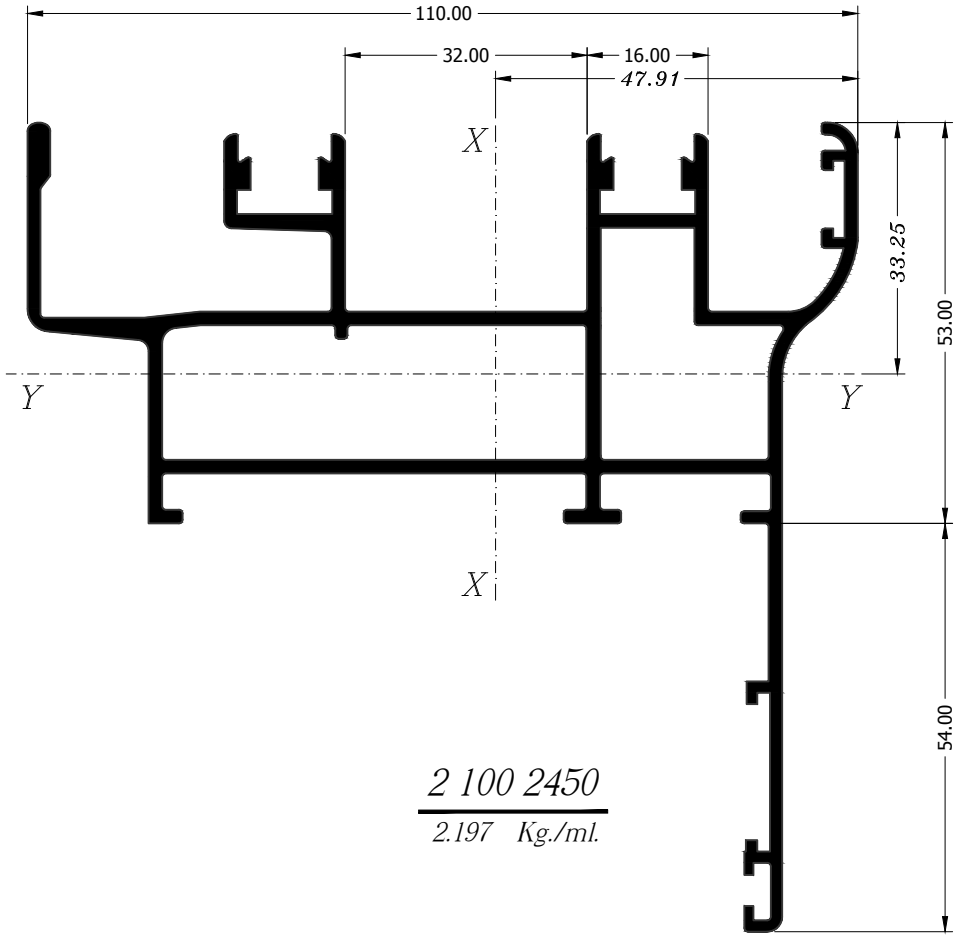

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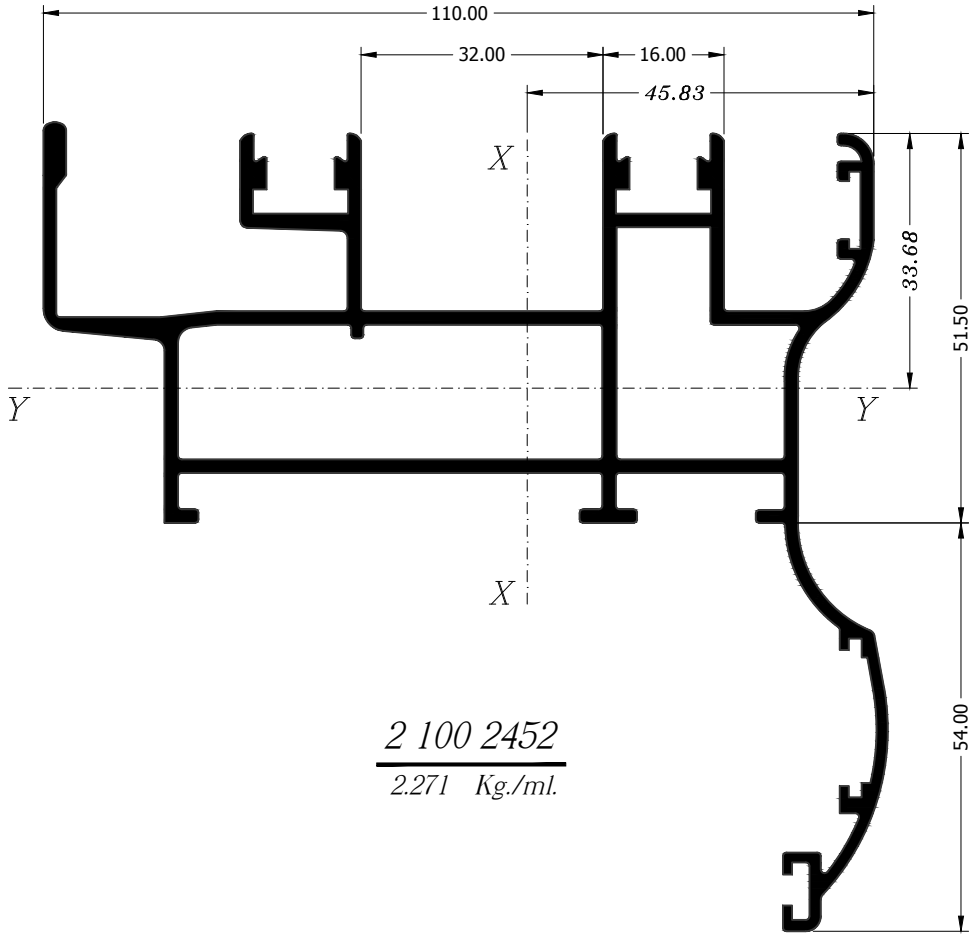

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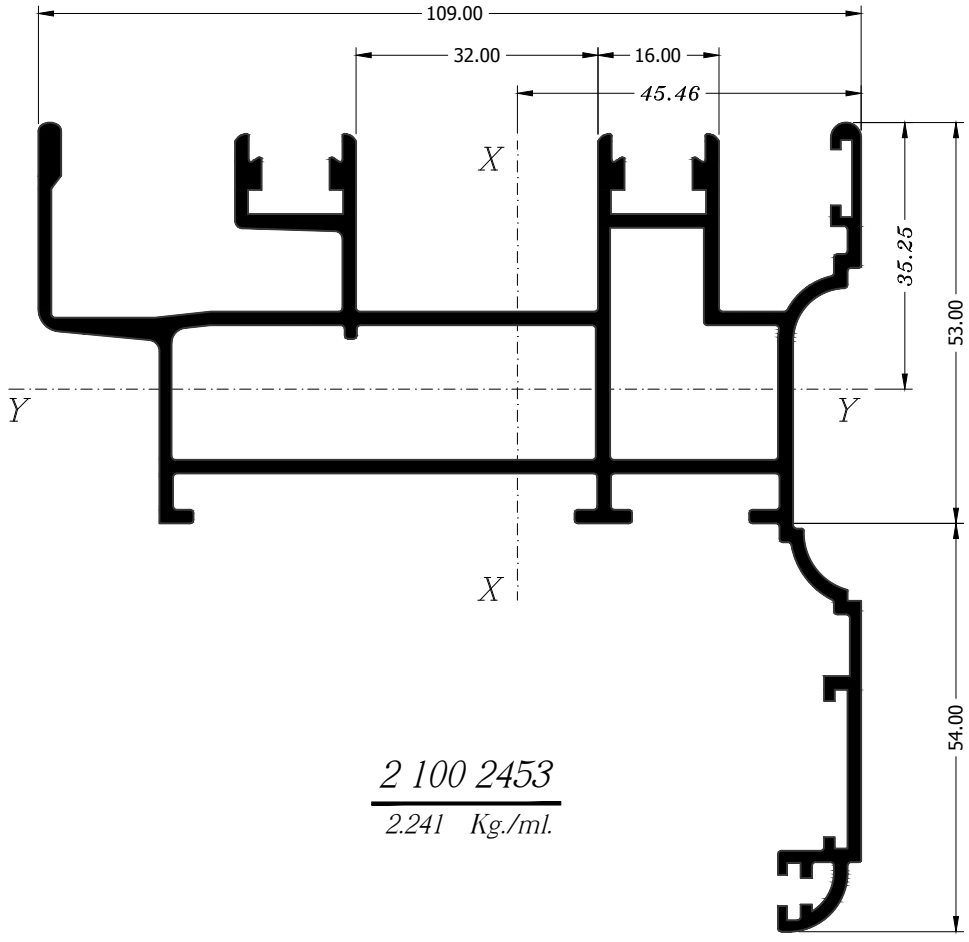

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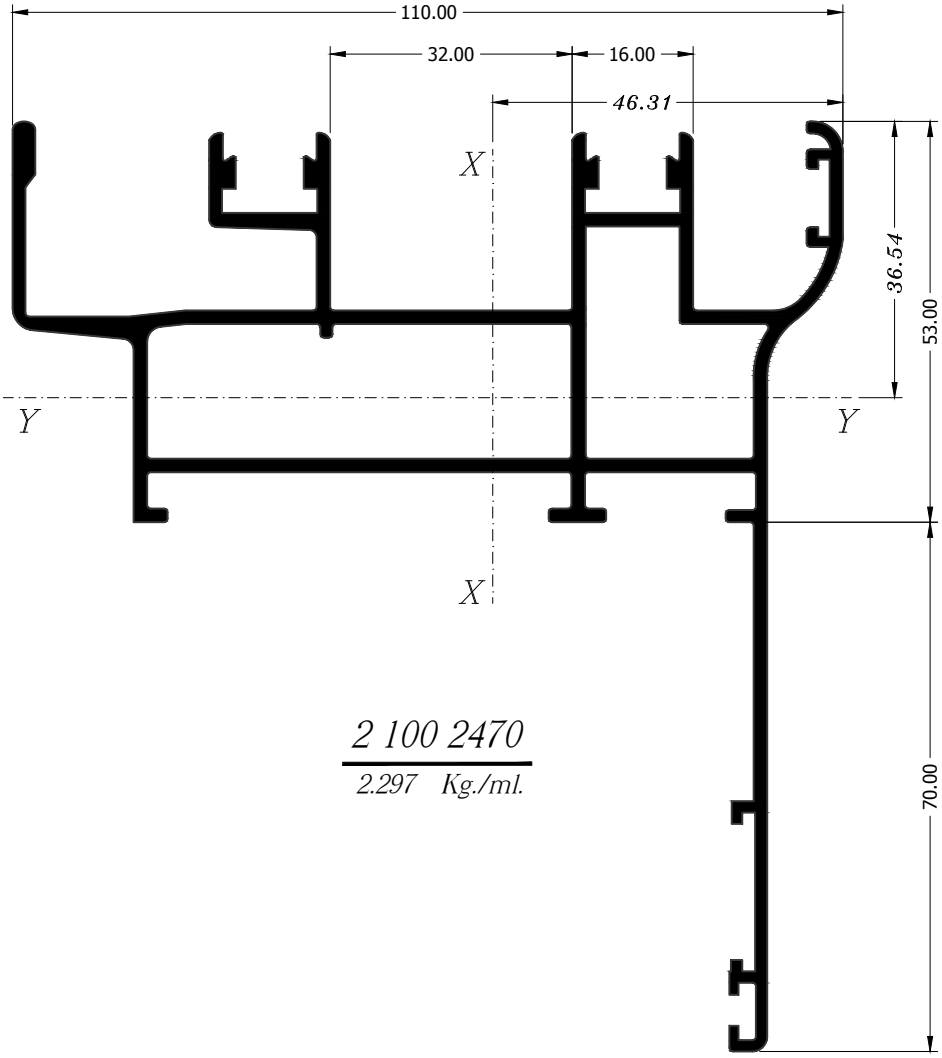

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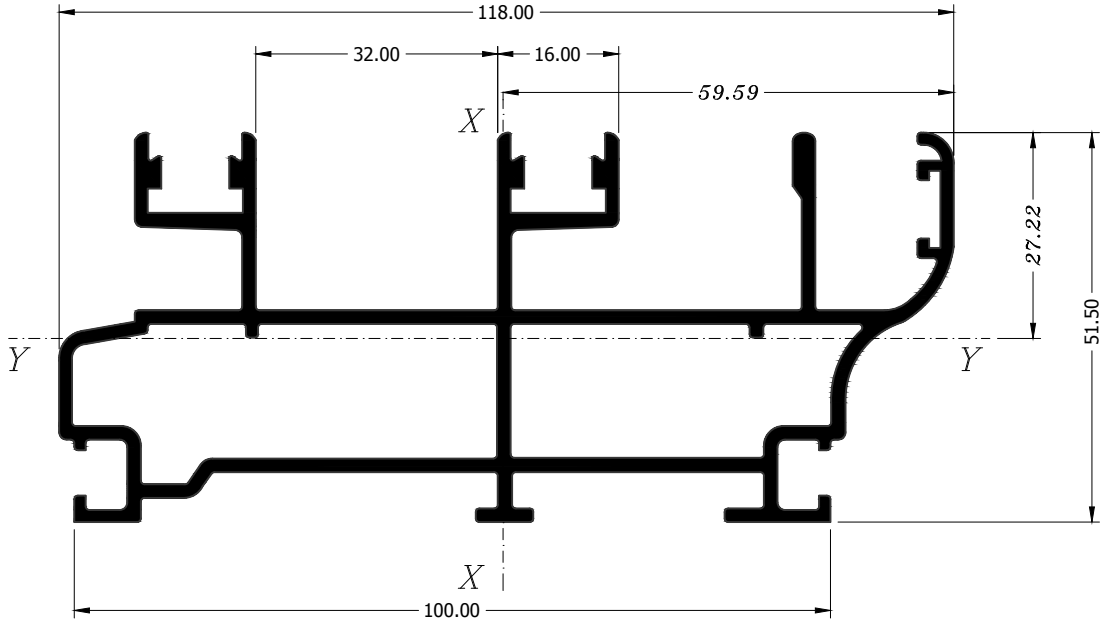

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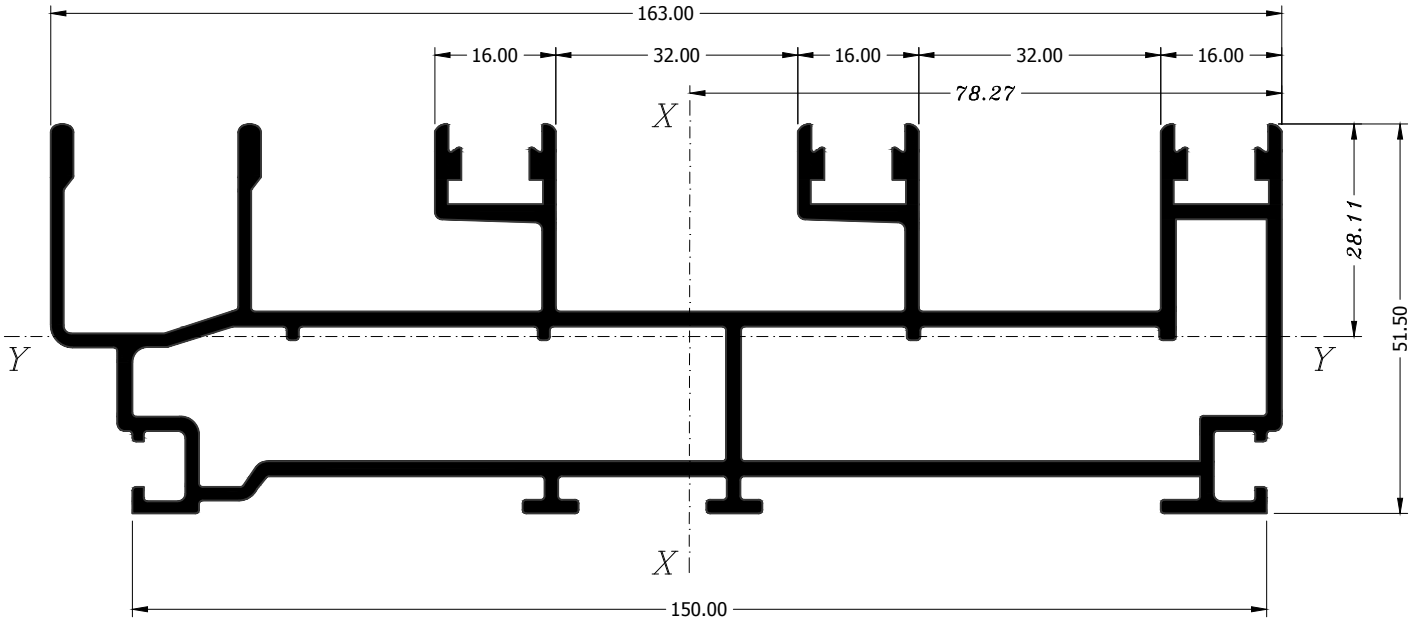

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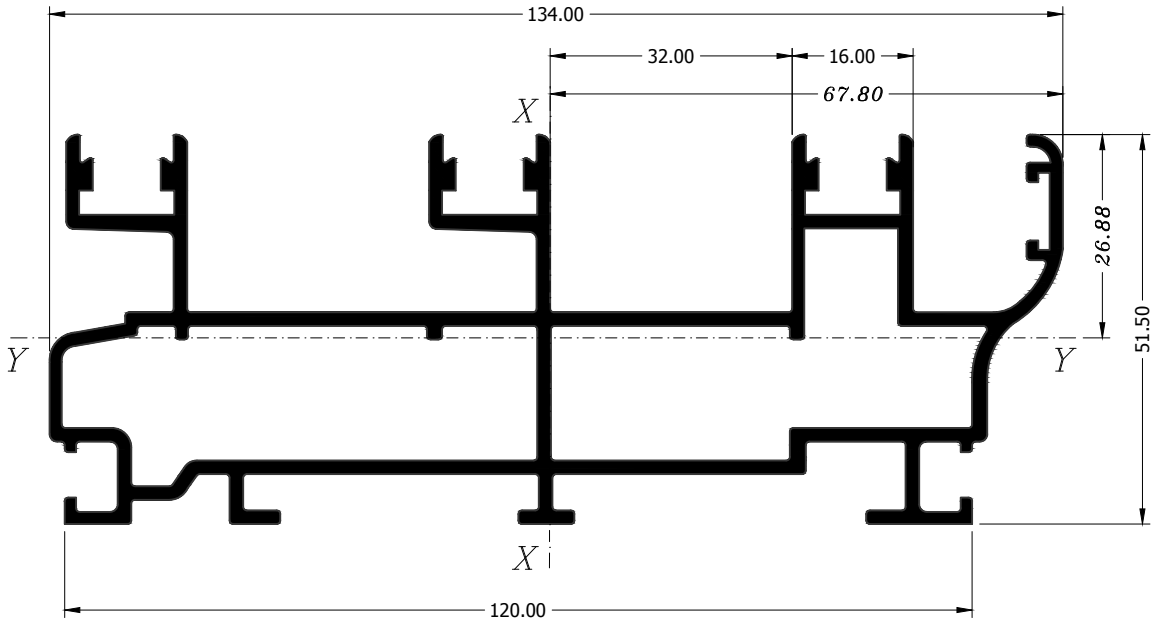

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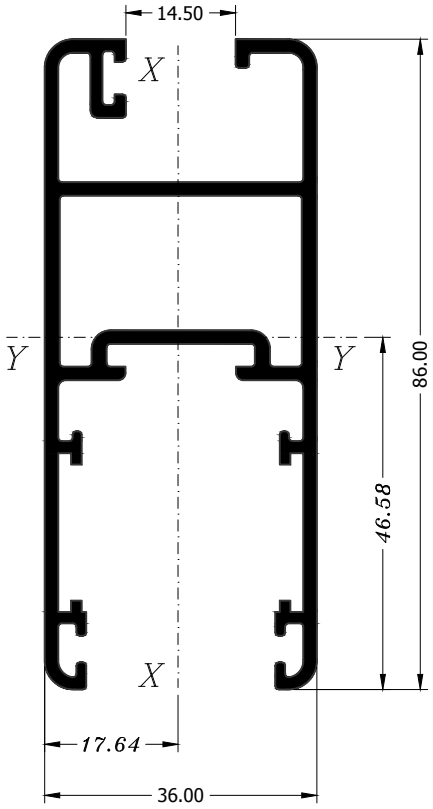

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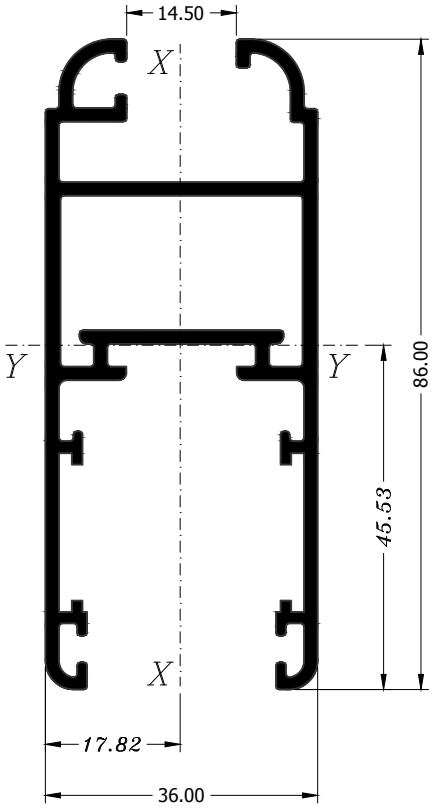

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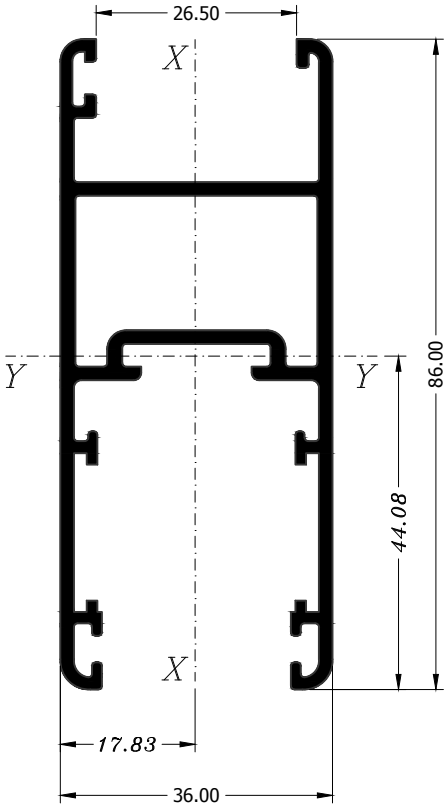

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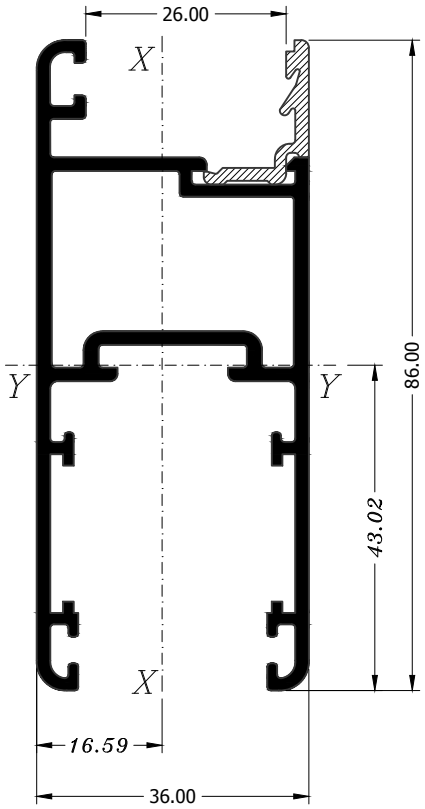

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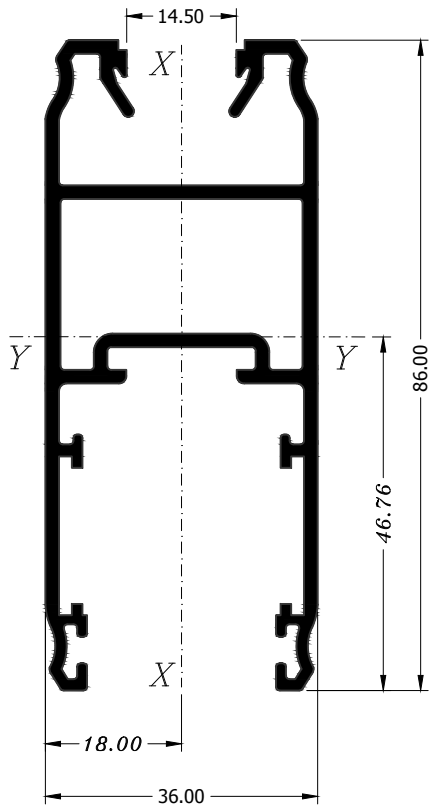

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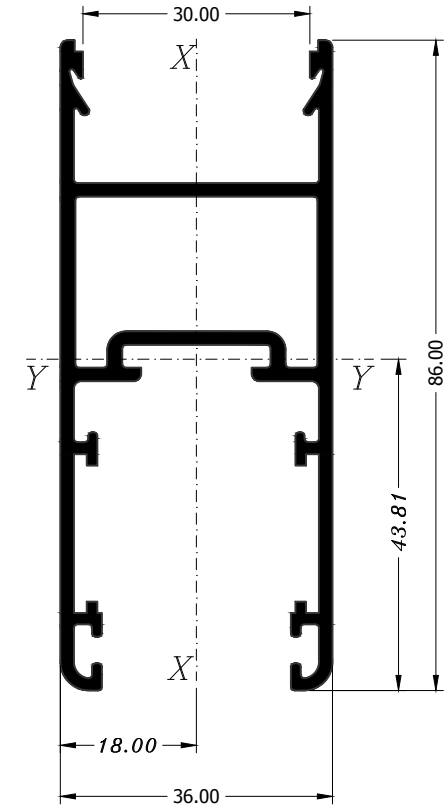

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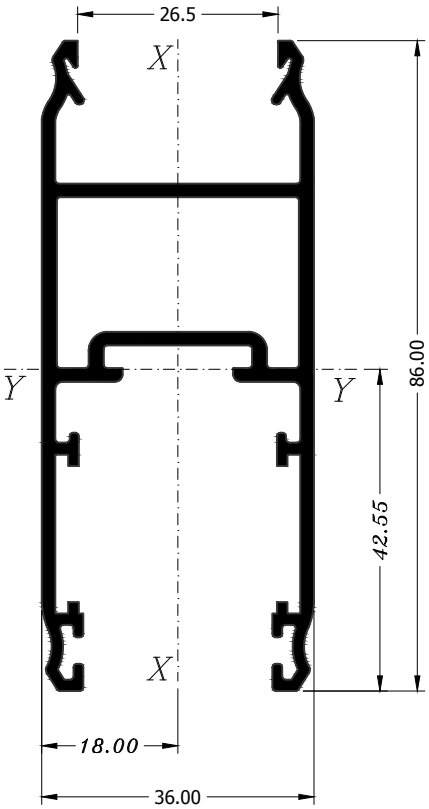

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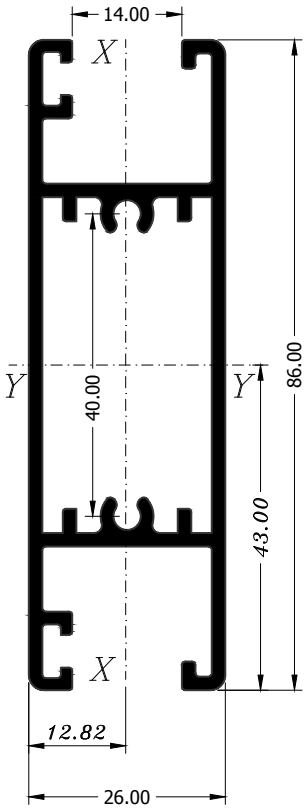

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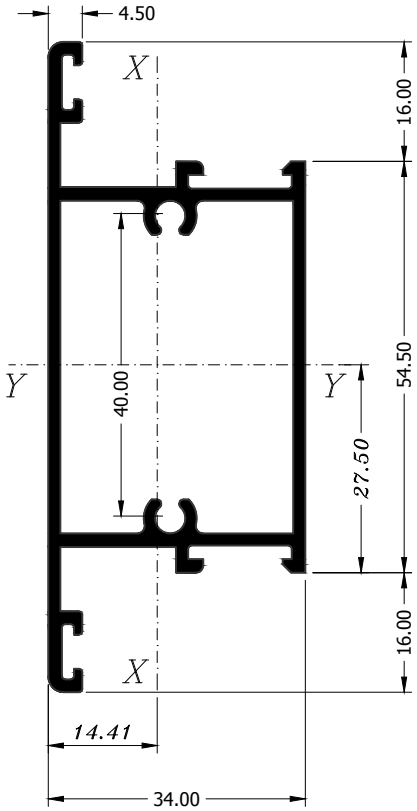

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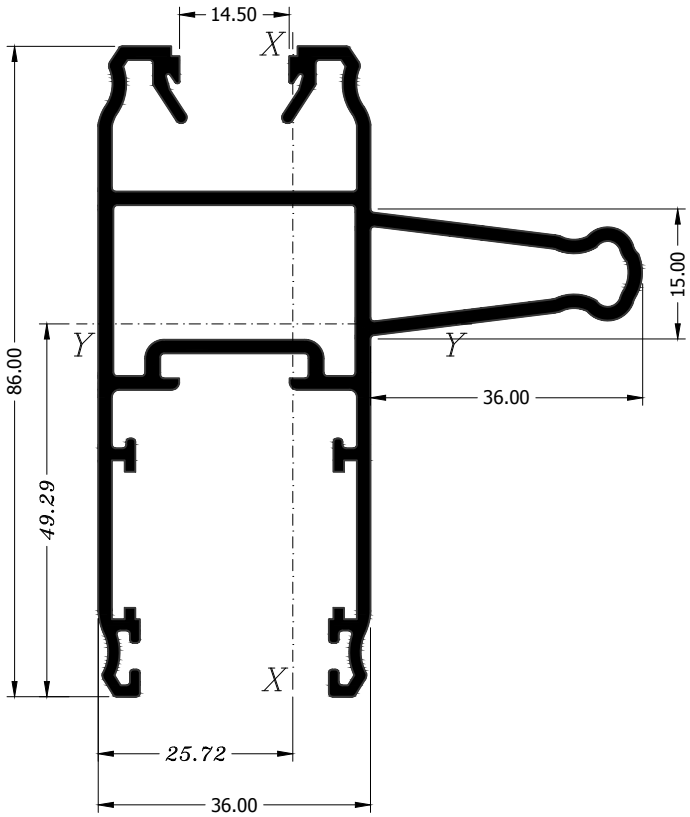

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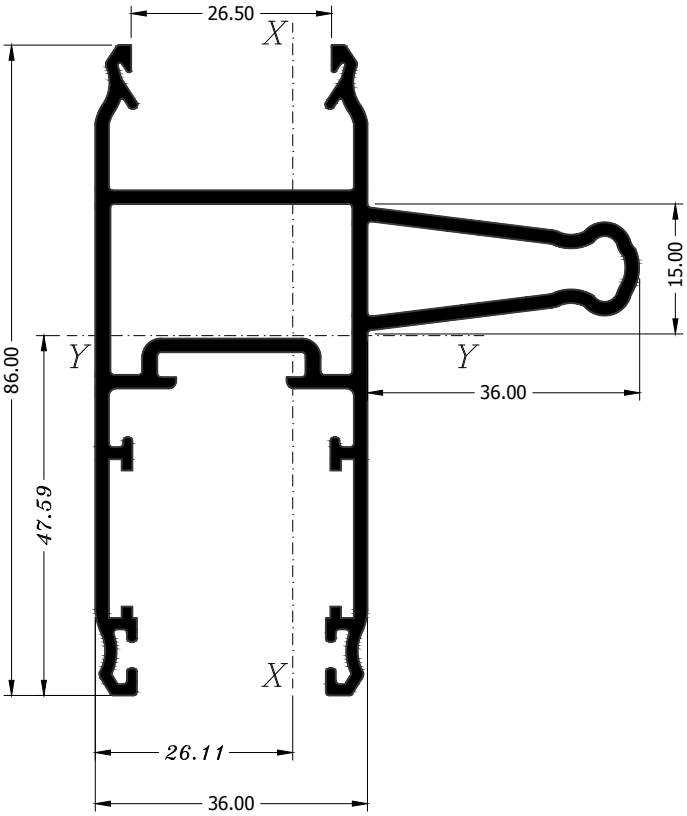

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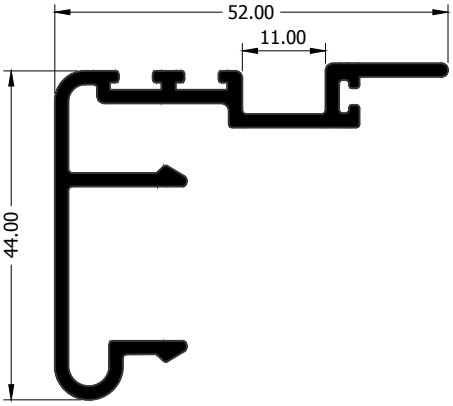

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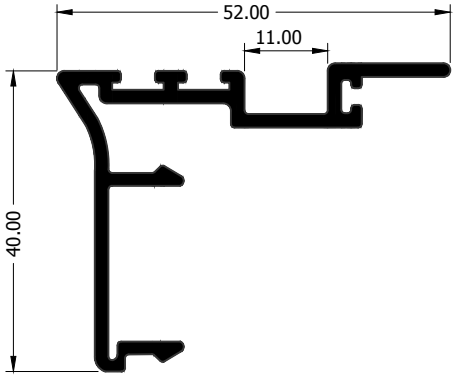

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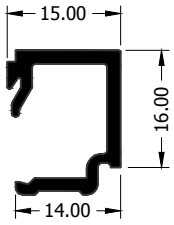

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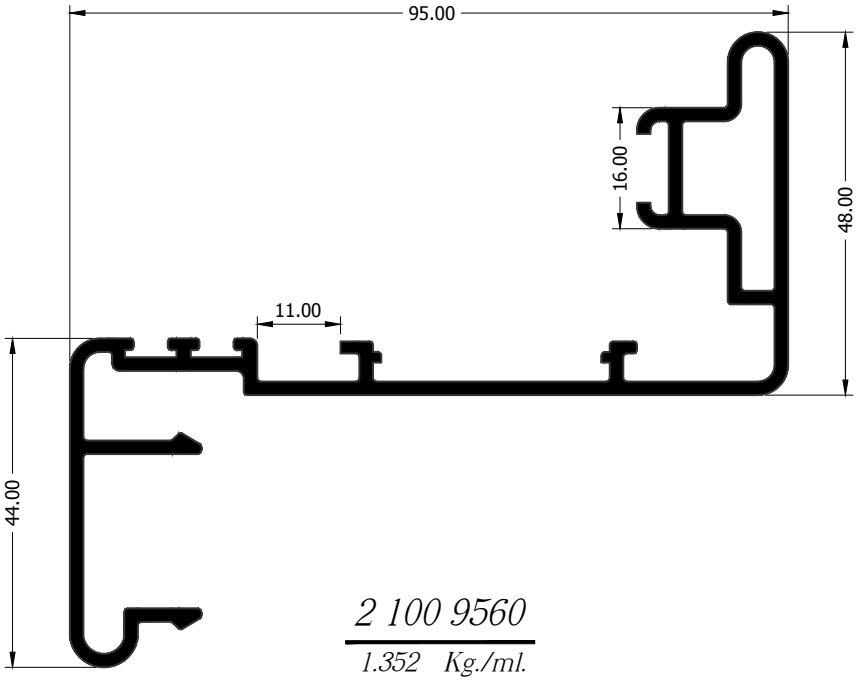

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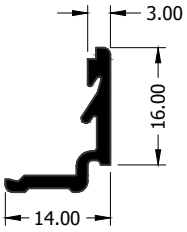

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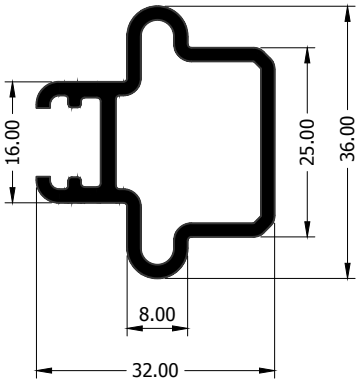

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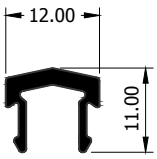

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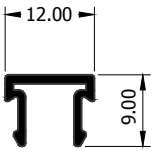

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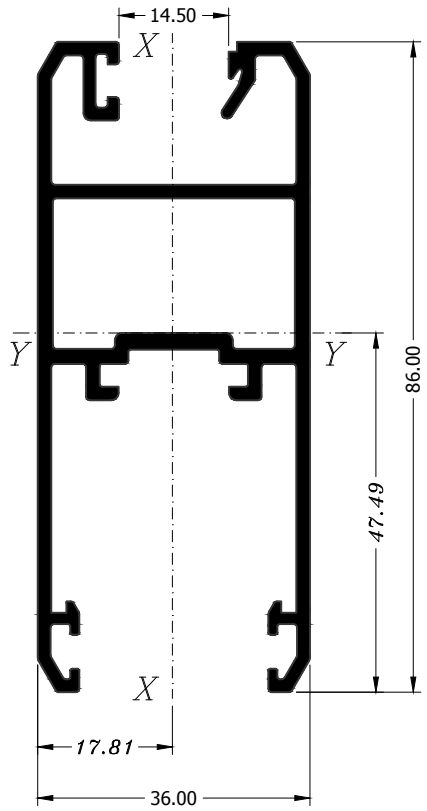

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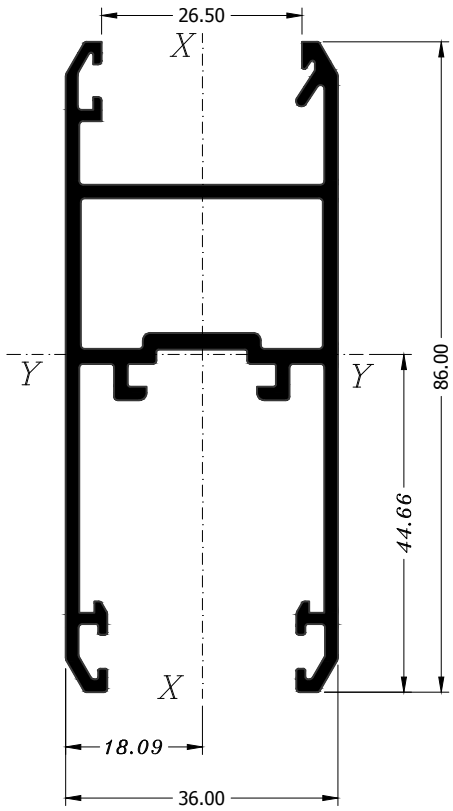

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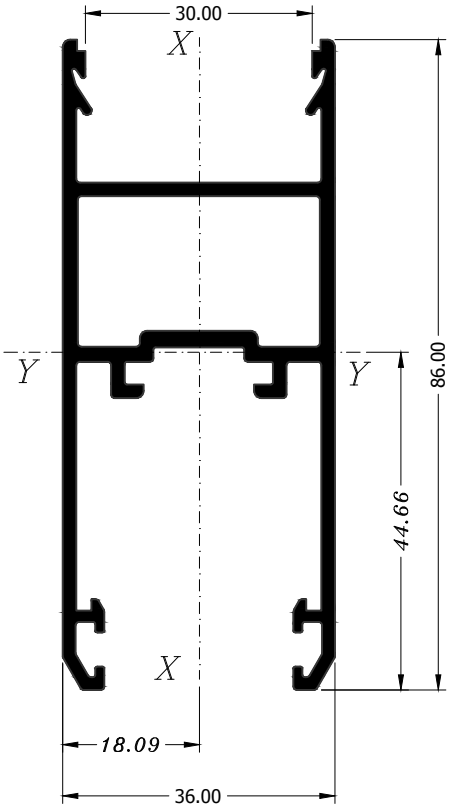

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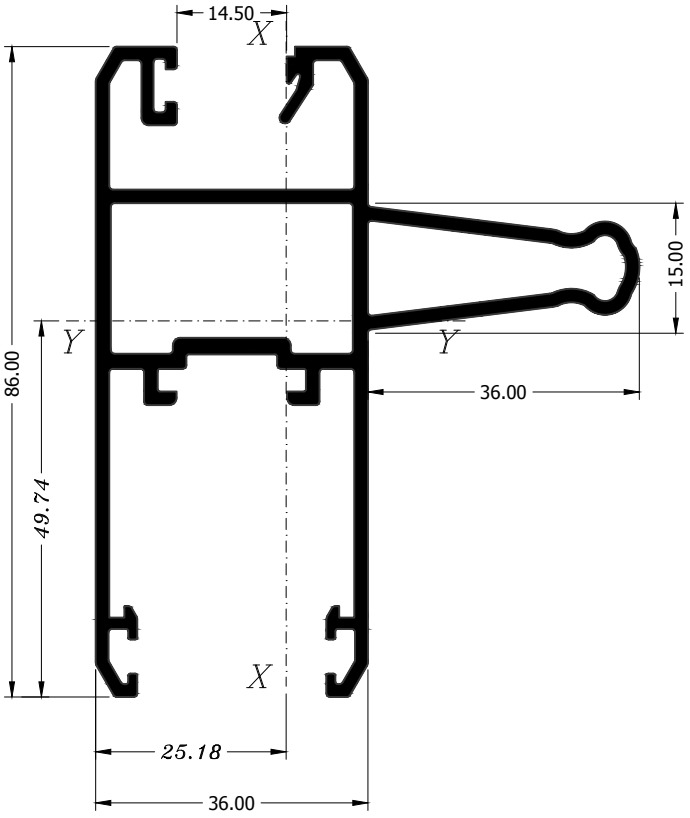

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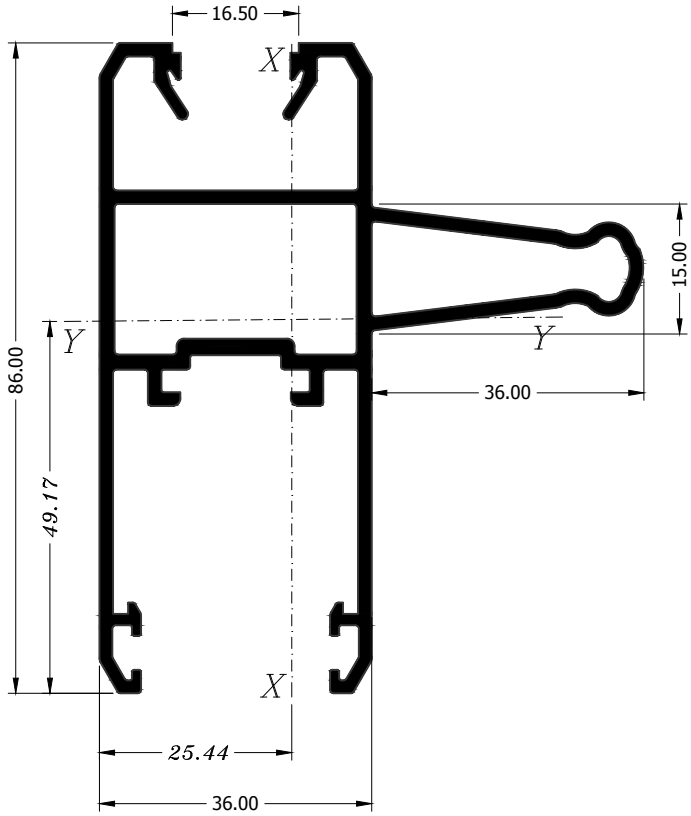

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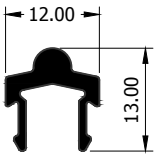

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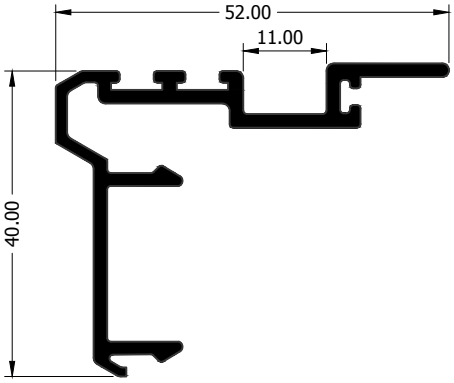

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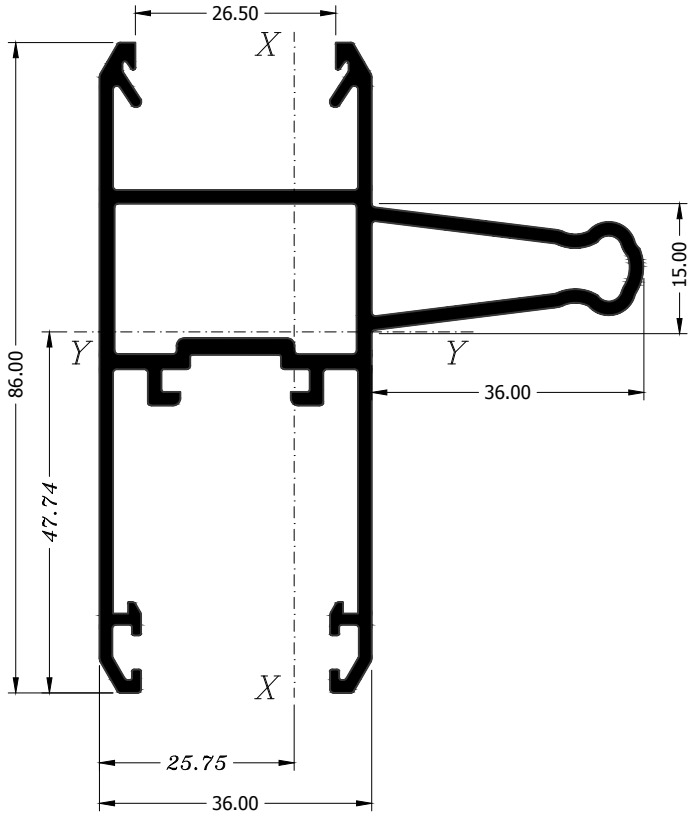

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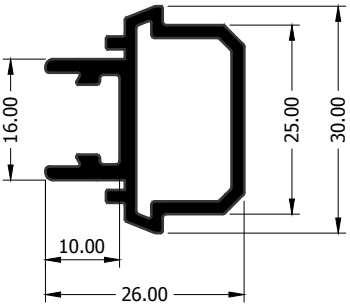

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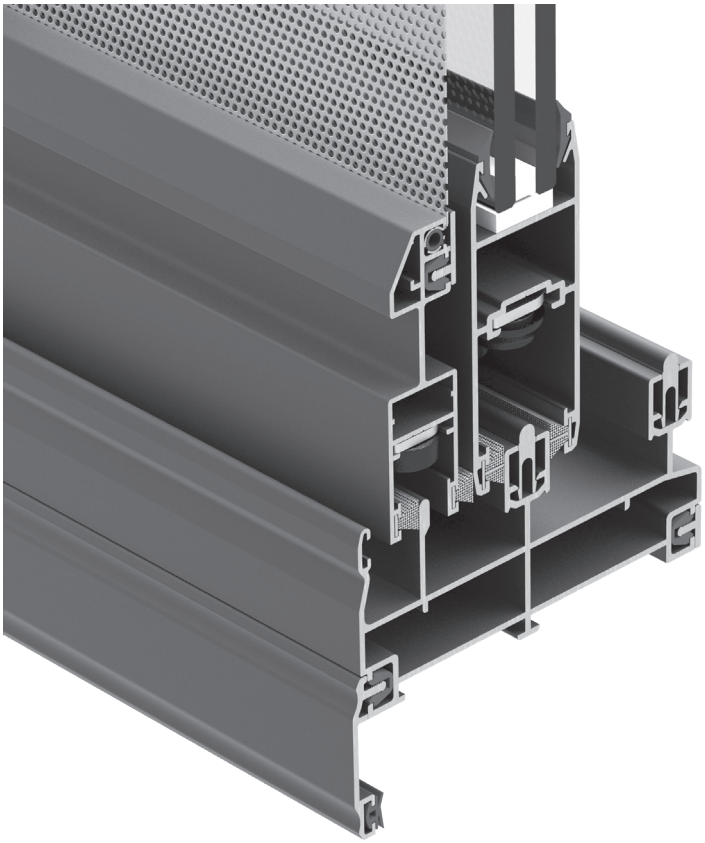

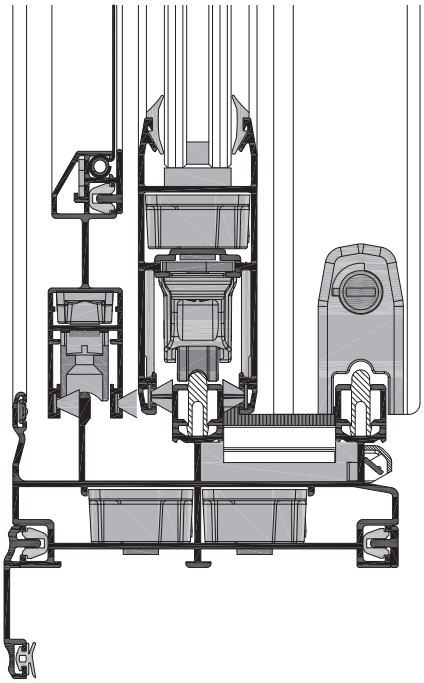

TEMPO 84 - SLIM
Sliding System

- Frame and sash are designed in soft-line modern look, suitable for modern buildings, renovation projects, residential and service buildings.
- Available in the double or triple track design, structures with up to six leaves.
- Low sill rail is available for patio doors and balconies.
- Aluminium or stainless-steel clip-on rails to simplify maintenance.
- Integrated fly screen sash, available inside or outside.

Complies with European norm hEN 1435-1

Air Permeability	(Class 3) up to 600 pa.
Water Tightness	(Class 9A) up to 600 pa.
Resistance to wind load	(Class C4) up to 1600 pa.

Technical Characteristics

Frame Depth

76 mm. to 169 mm.

Frame Height

50 mm. to 102 mm.

Sash Depth

32 mm.

Sash Height

80 mm.

Max Glass Thickness

Up to 24 mm.

Max Sash Weight

Up to 200 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011
CLASSIFICATION ASSESSMENT
N. 0714-CPR-1301 DATED NOVEMBER, 30 2015

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Sliding window, two sashes.
Model:	TEMPO 84 Width= 1,860 mm, Height = 1,460 mm, Thickness = 32 mm
Fabrication number:	-
Date of fabrication:	2015
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/4, dated November 26, 2015, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified.

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	**CLASS 3**
WATERTIGHTNESS:	**CLASS 9A**
RESISTANCE TO WIND LOAD:	**CLASS C4**

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, November 30, 2015

The undersigned ECO Certificazioni S.p.A. Scheme Manager CPR-3
Eng. Gianluca Campolesi

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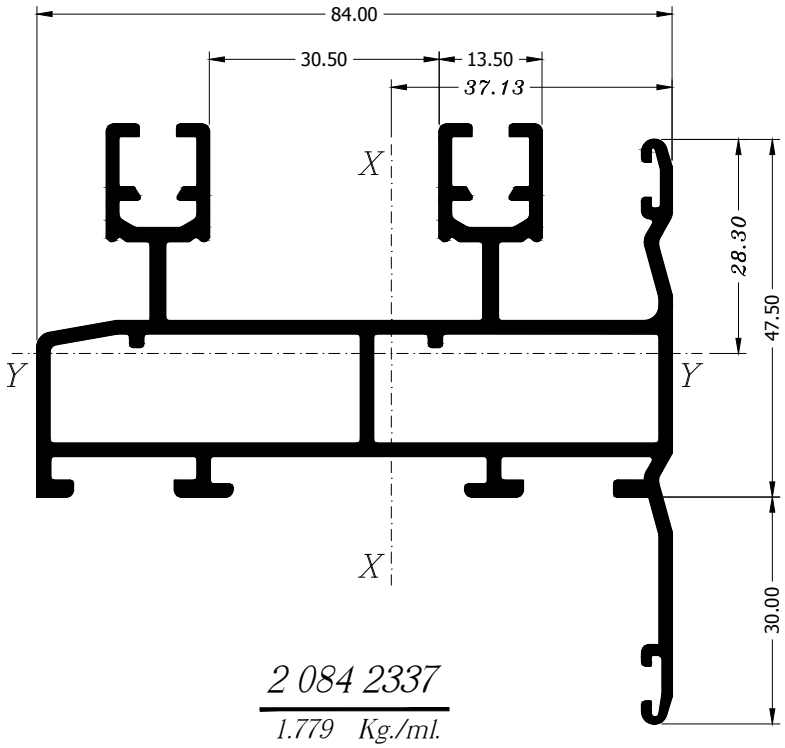
Tel. +39 0546 624911 • Fax +39 0546 624922
E-mail: info@eco-cert.it • www.ecocertificazioni.eu



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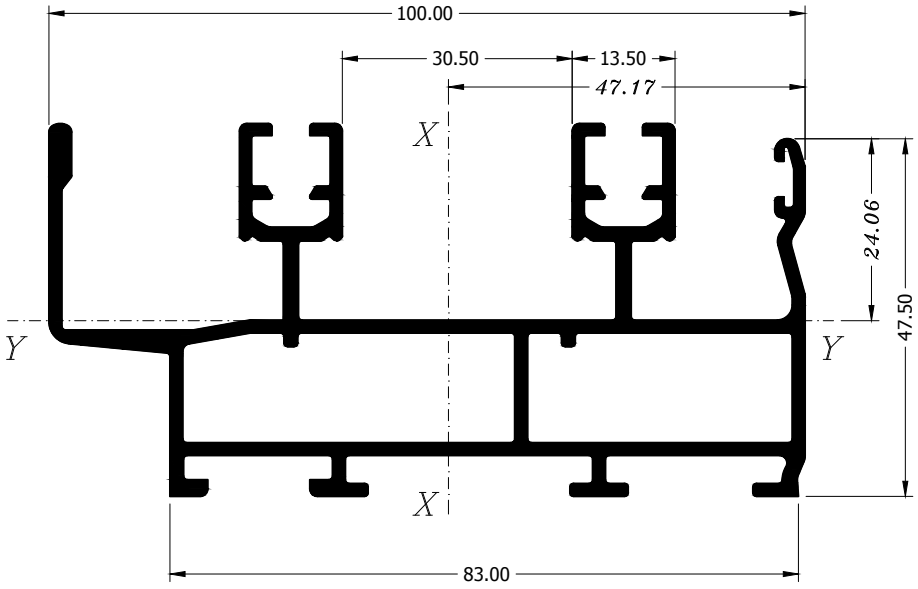

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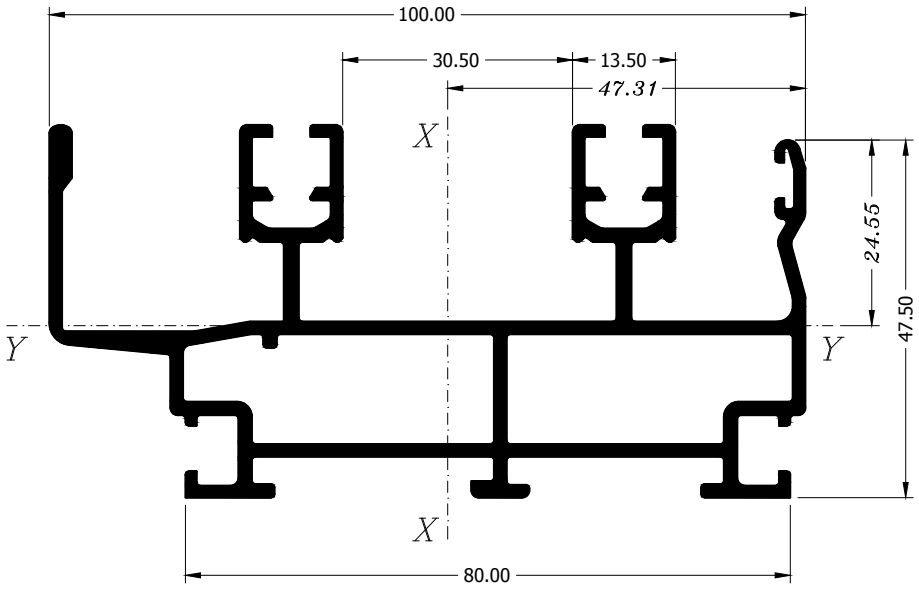

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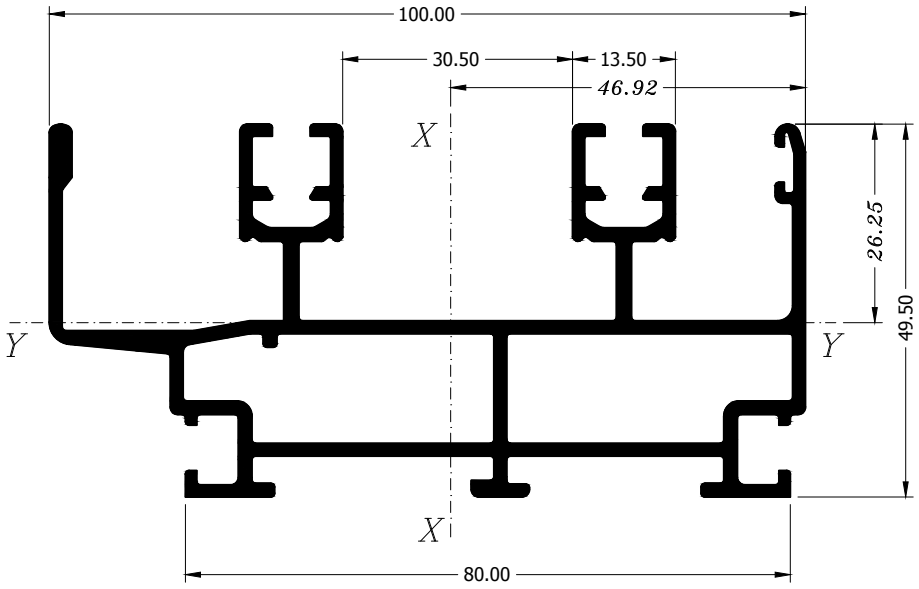

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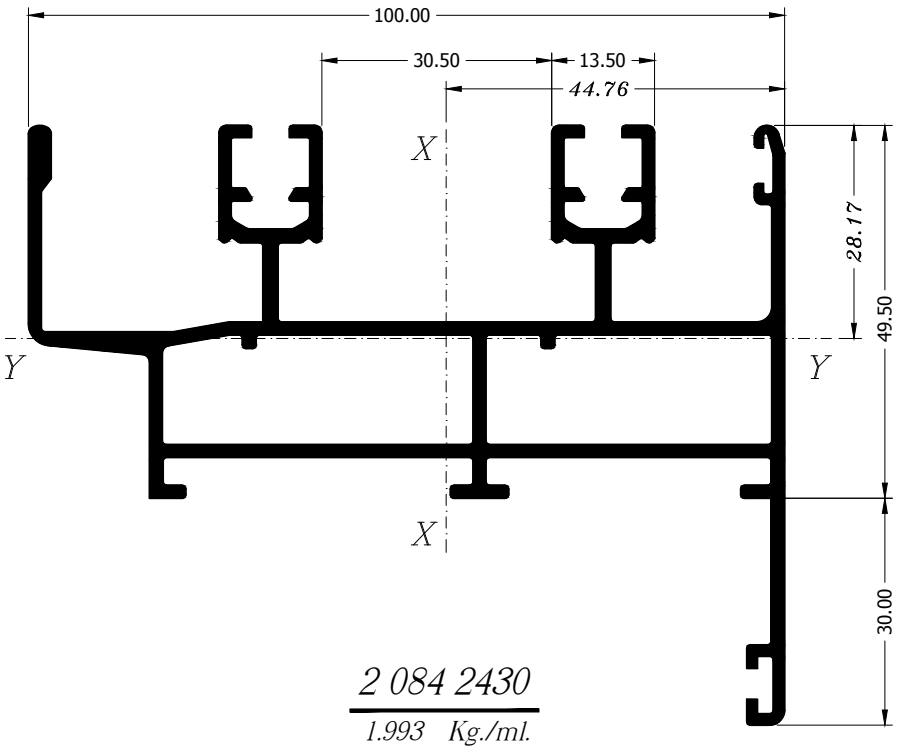

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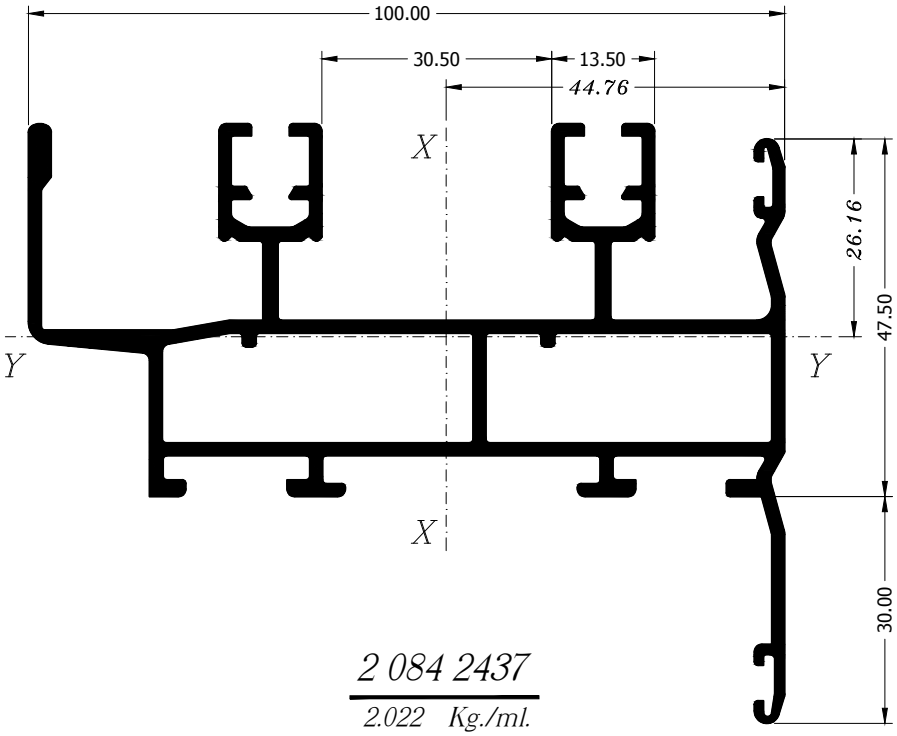

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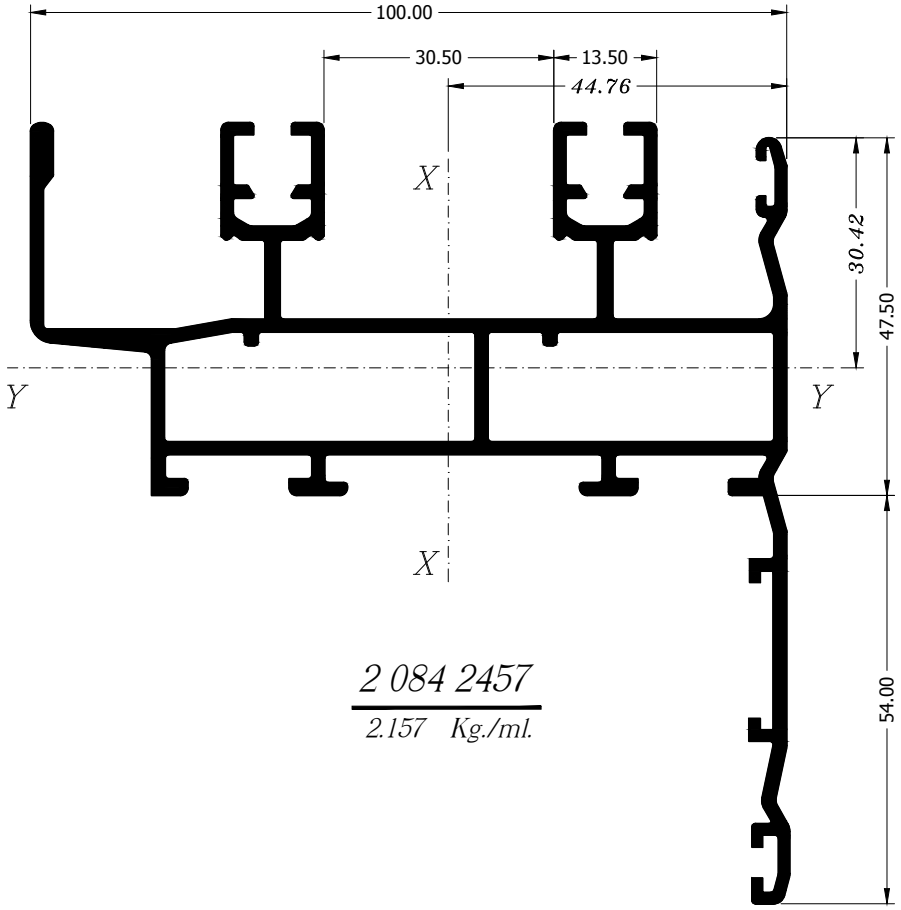

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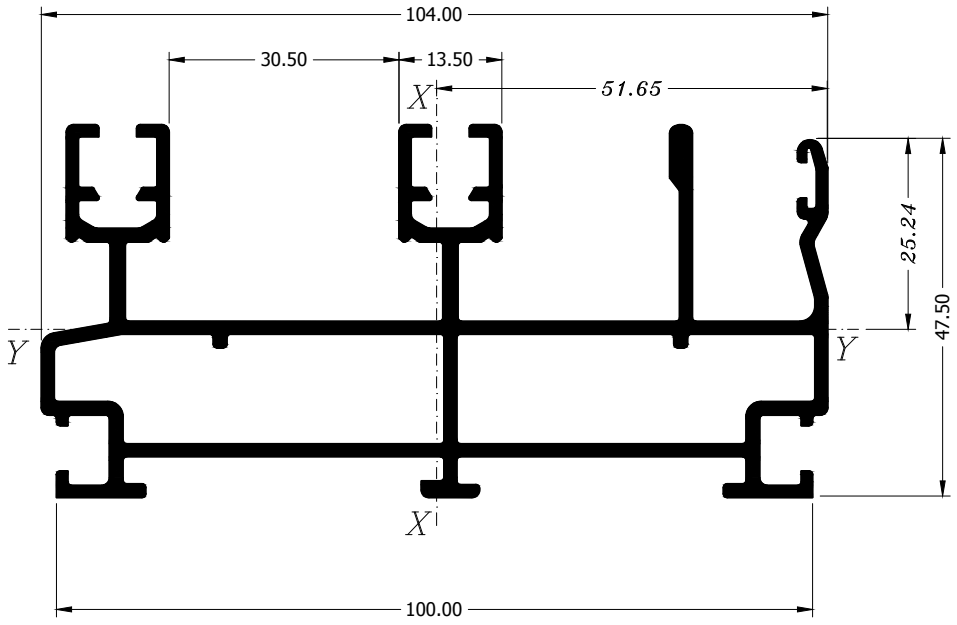

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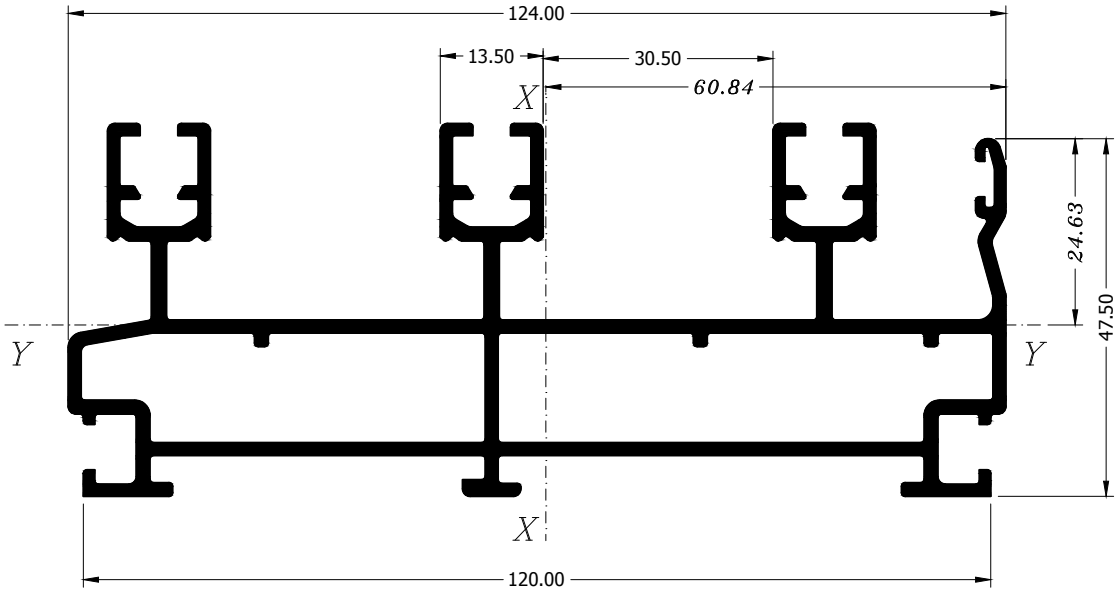

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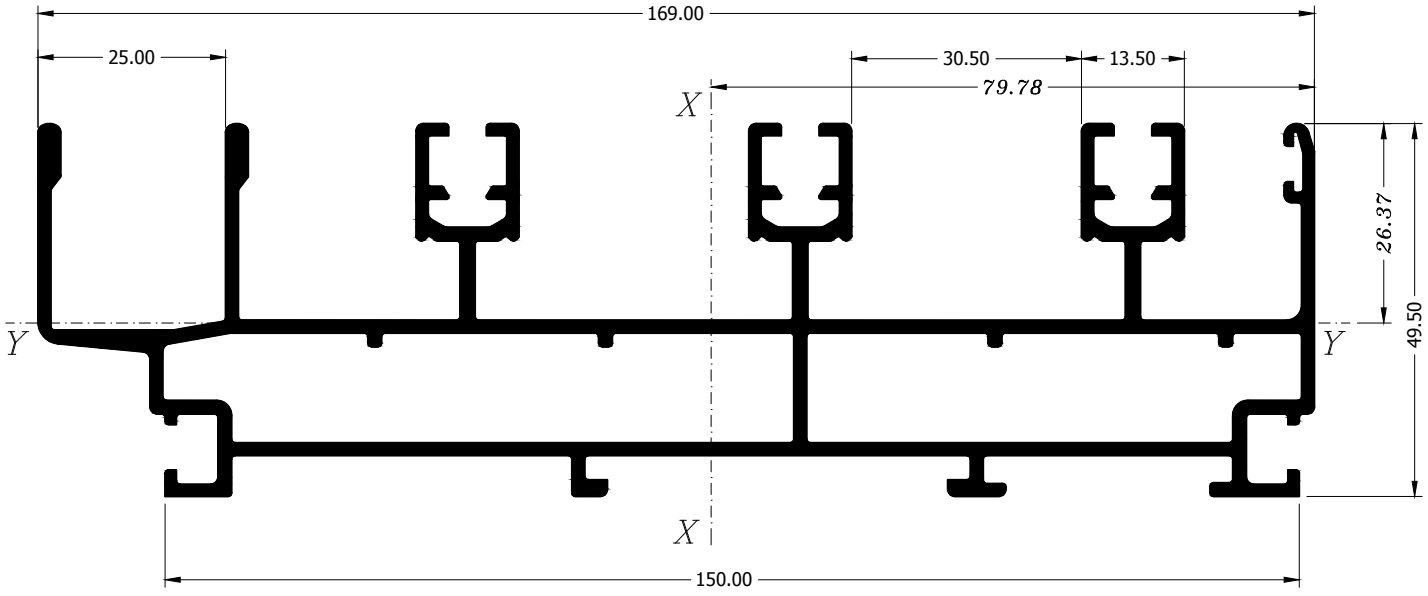

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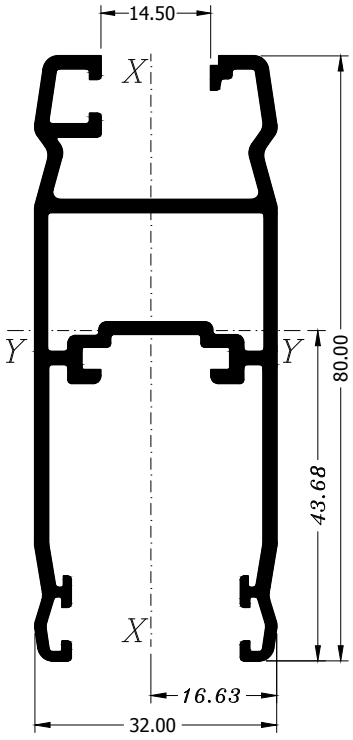

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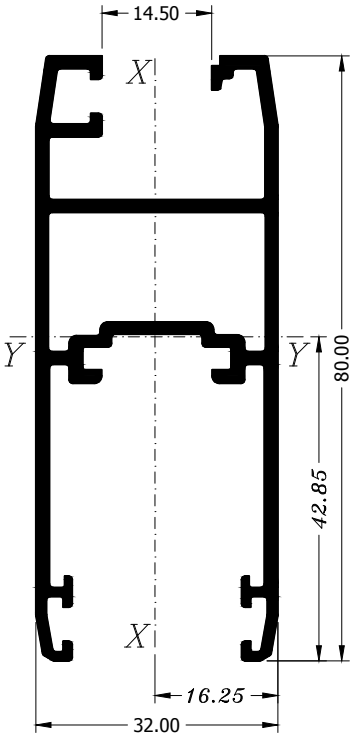

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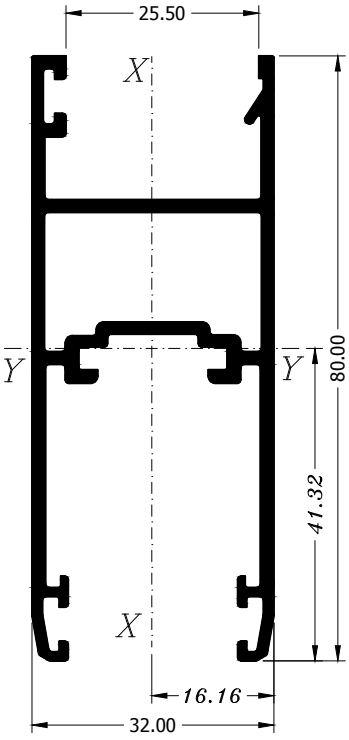

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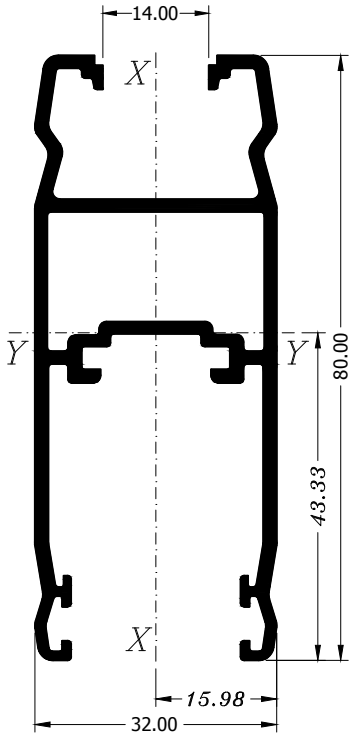

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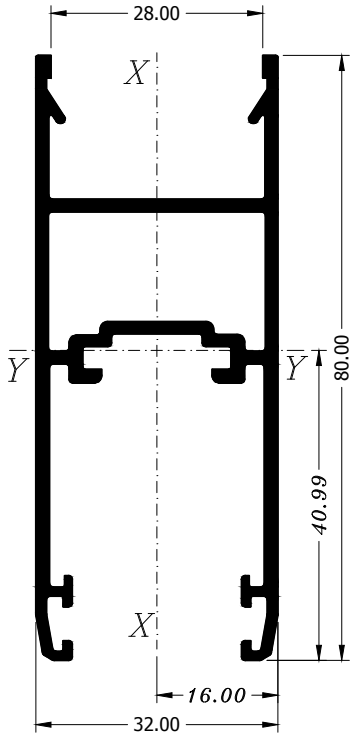

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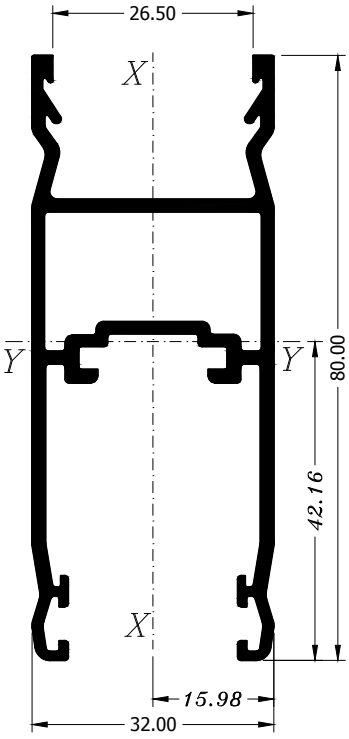

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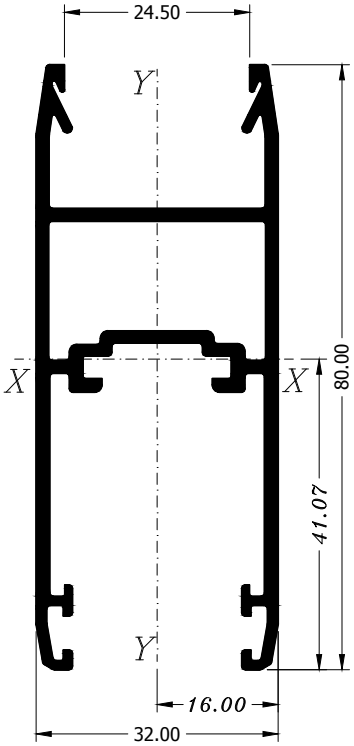

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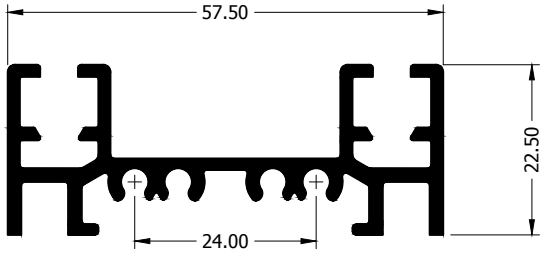

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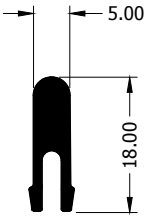

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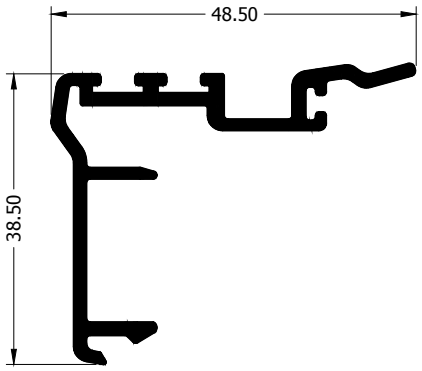

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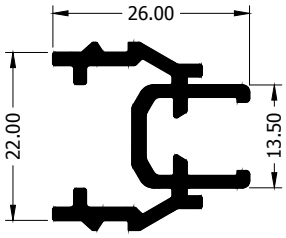

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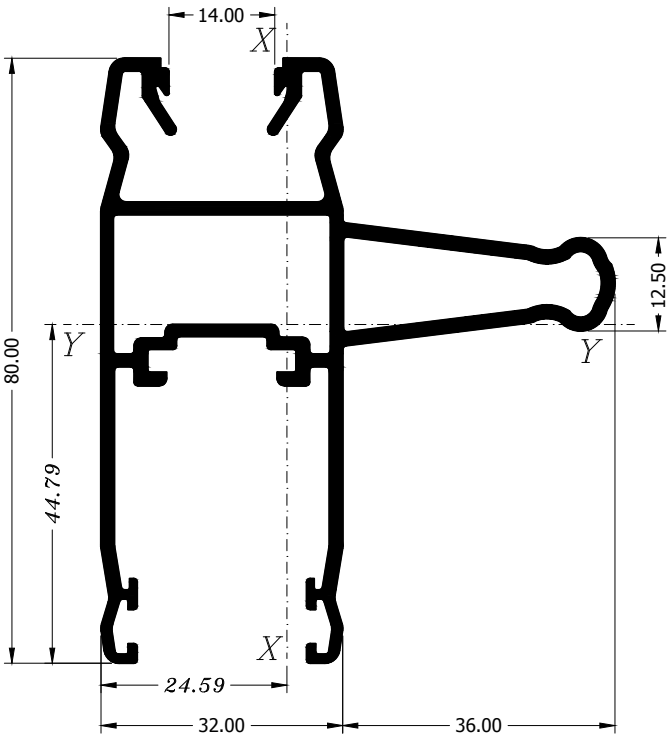

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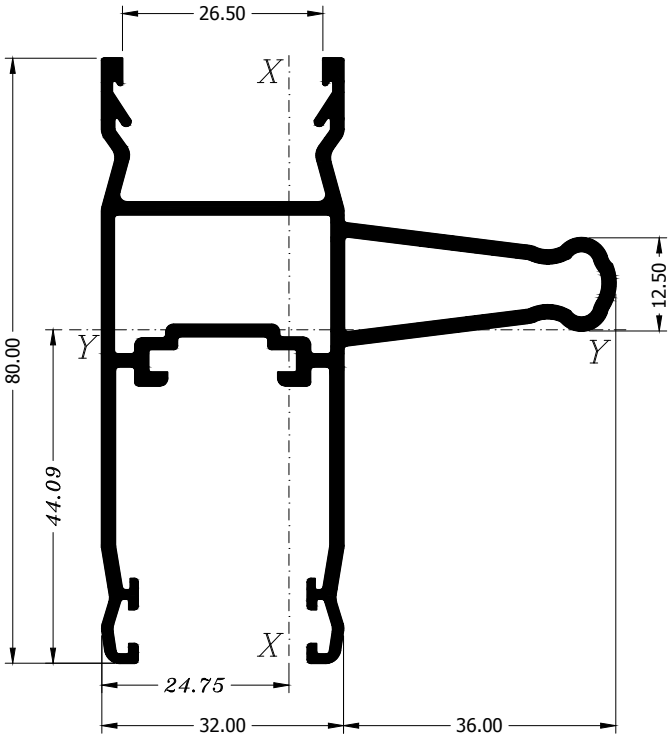

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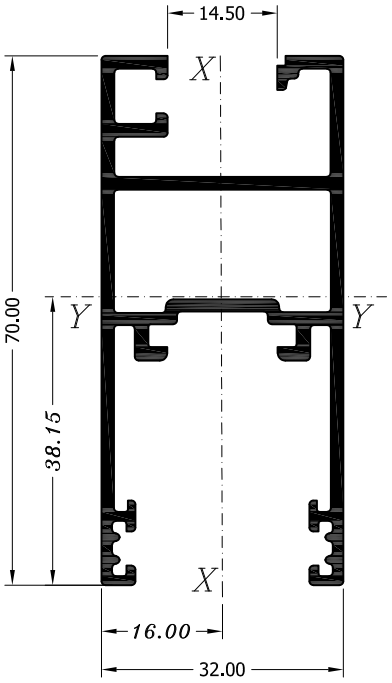

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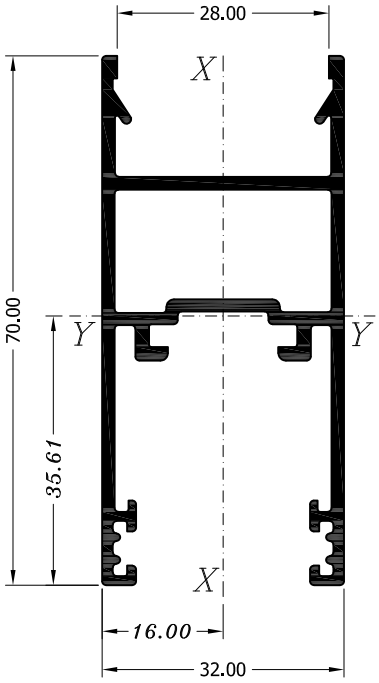

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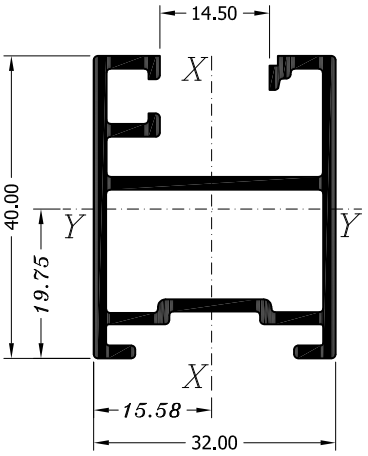

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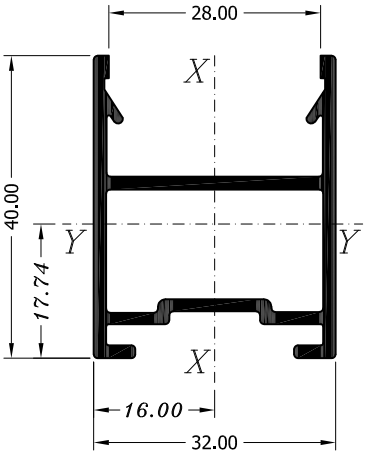

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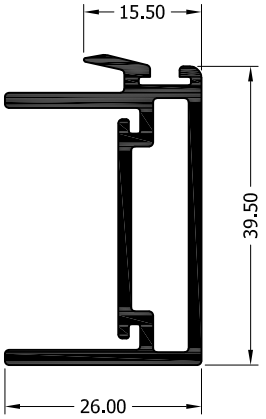

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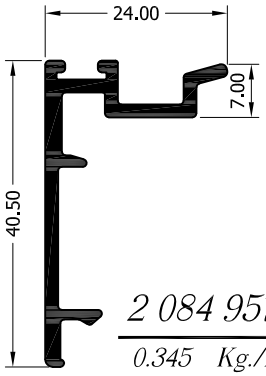

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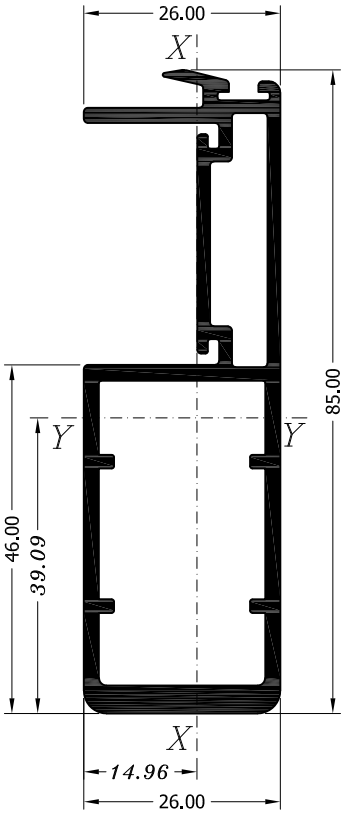

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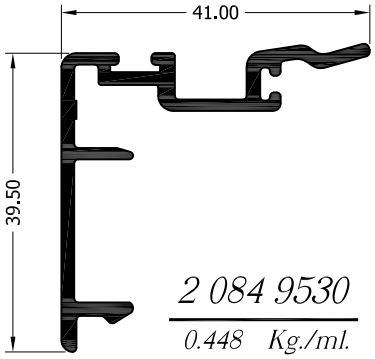

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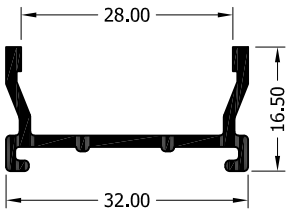

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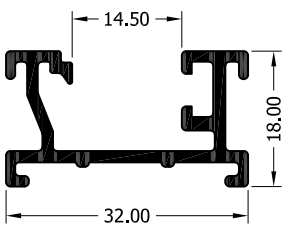

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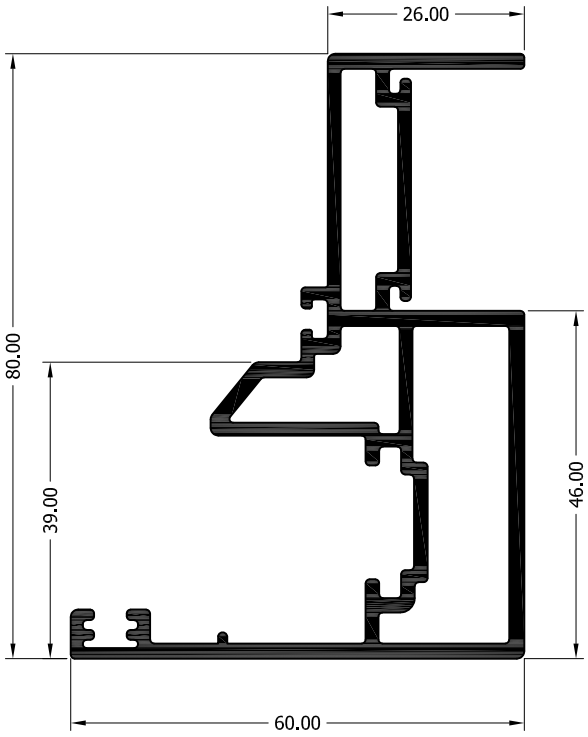

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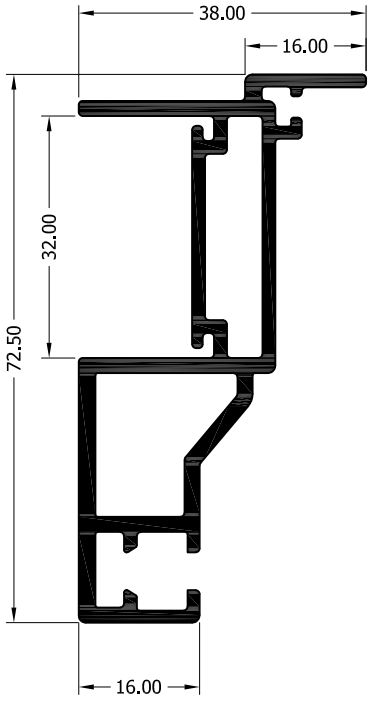

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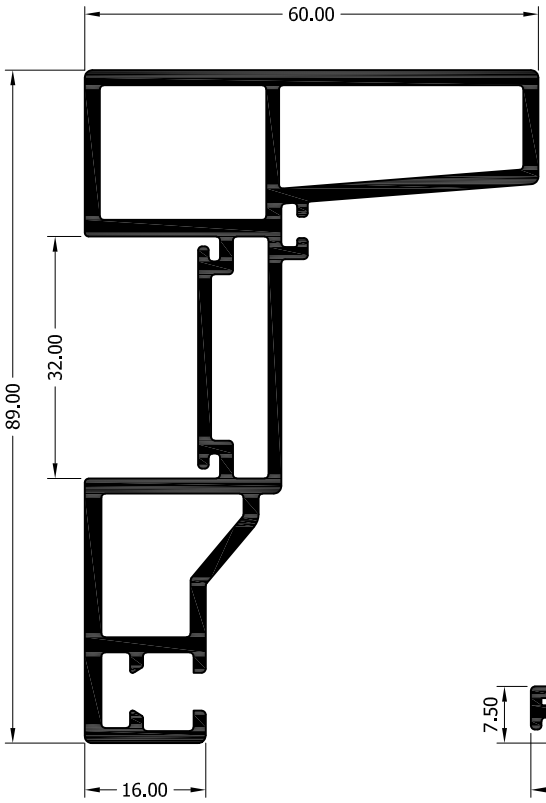

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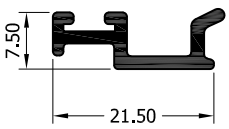

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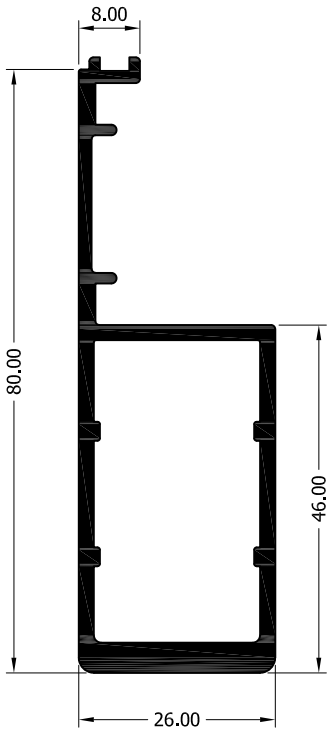

2 084 9710

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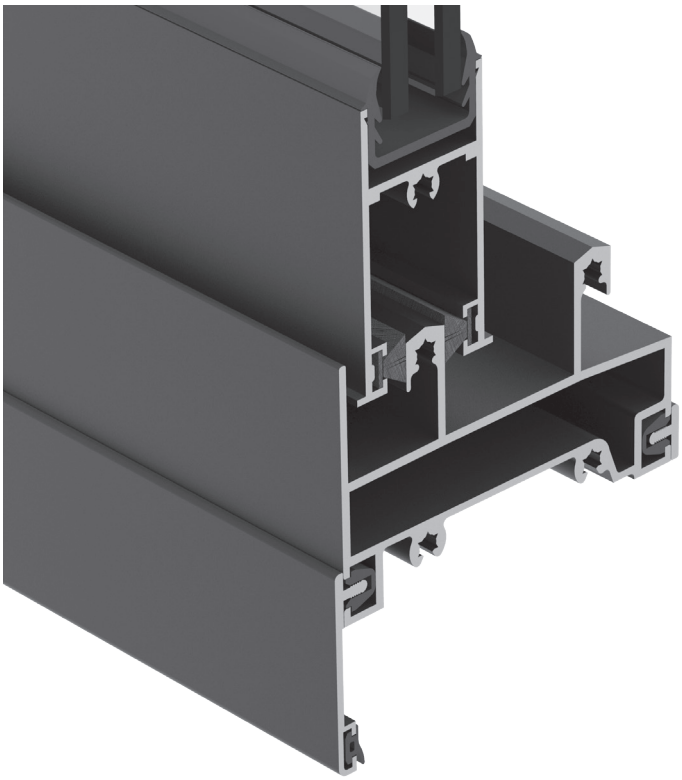
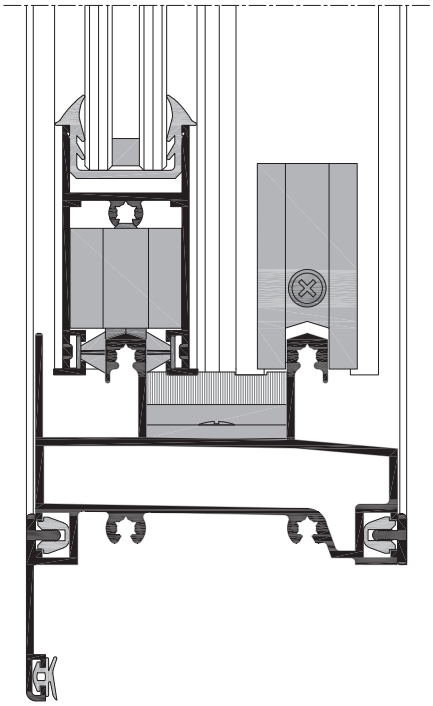




CLASSIC 80

Sliding System

- Classic sliding window or sliding door with slim frame design.
- Used for doors and windows with moderate openings and economic residential buildings.
- Frames and sashes are cutting and assembled on 90 degrees while offering 45 degrees cutting trims.
- Allows the fabrication, production and easy assembly of windows and doors in less time.
- Available in the double or triple track design, structures with up to six leaves.

Technical Characteristics

Frame Depth

80 mm. to 124 mm.

Frame Height

26 mm. to 51 mm.

Sash Depth

32 mm.

Sash Height

43 mm. to 61 mm.

Max Glass Thickness

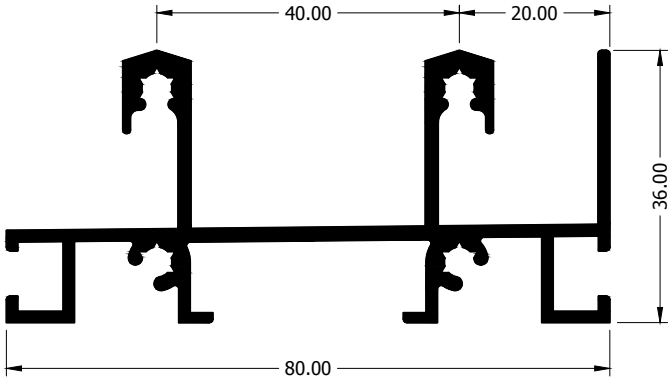
Up to 21 mm.

Max Sash Weight

Up to 80 kg.

Sealing Type

With two rows of high-density brushes



2 080 2220

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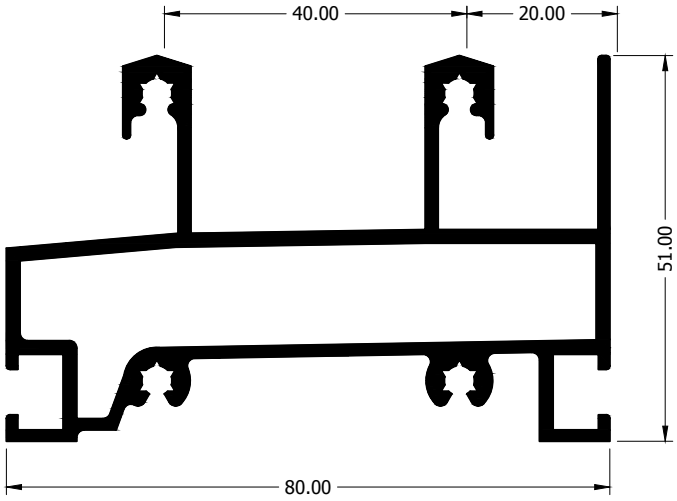

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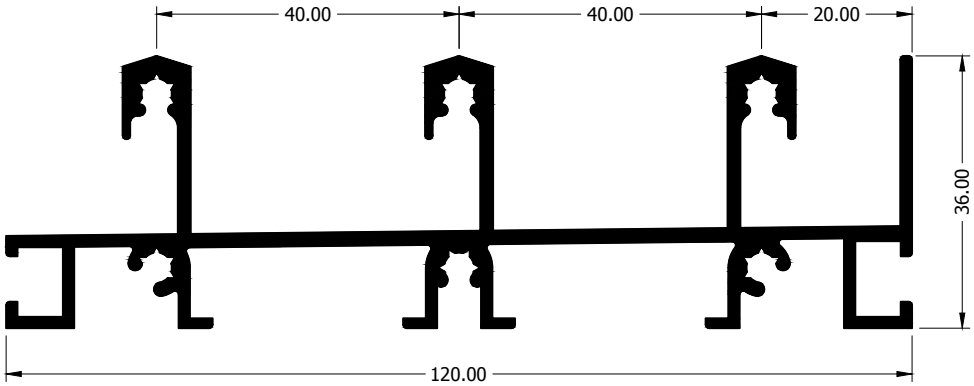

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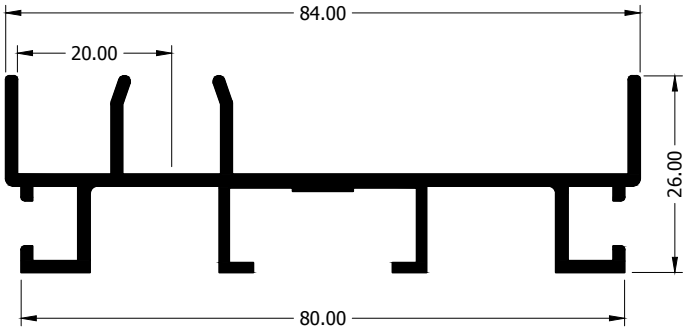

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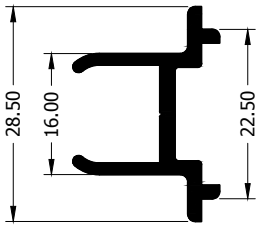

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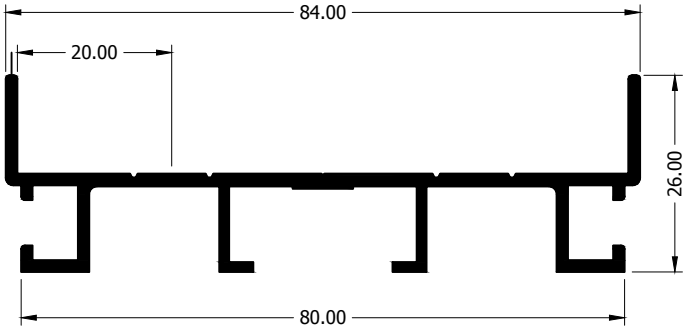

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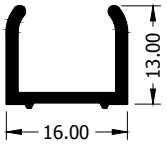
0.775 Kg./ml.



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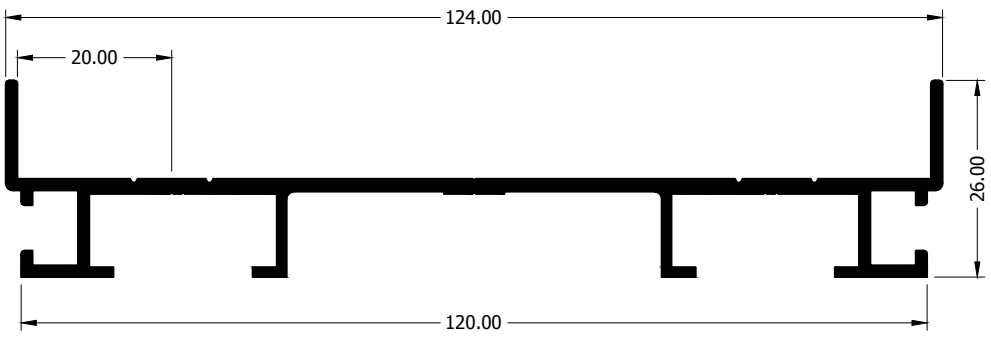

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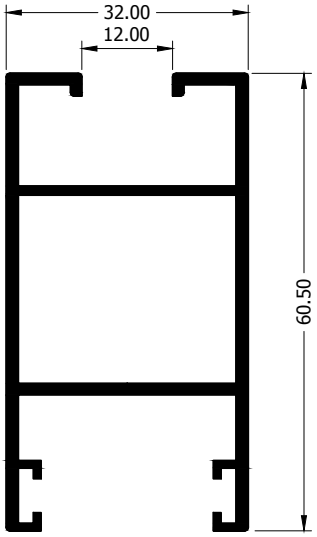
1.020 Kg./ml.



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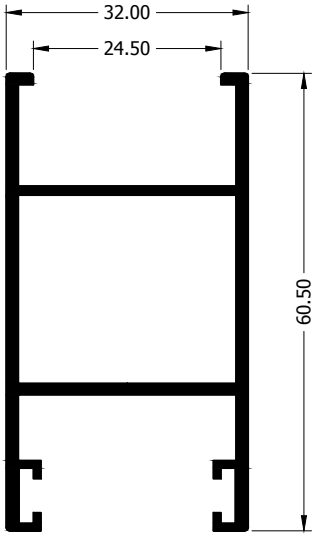

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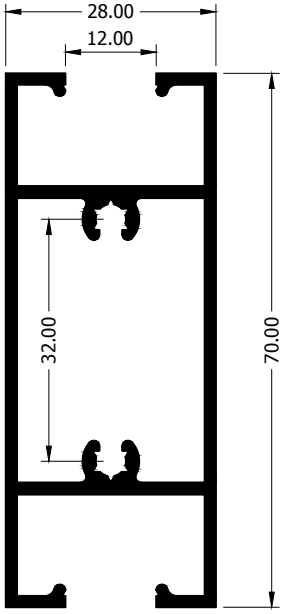

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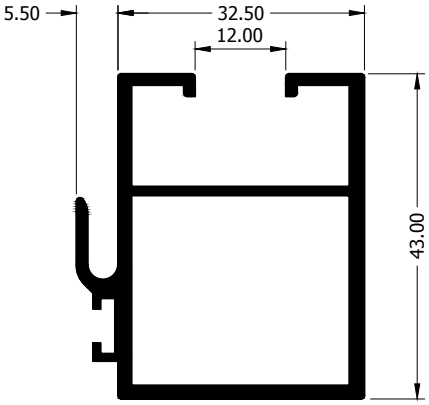

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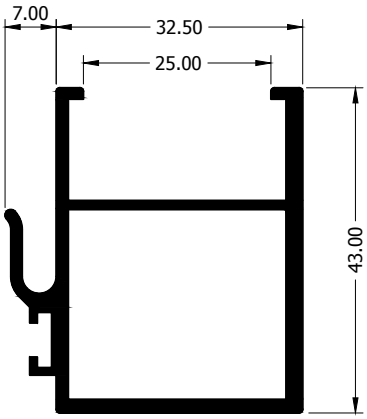

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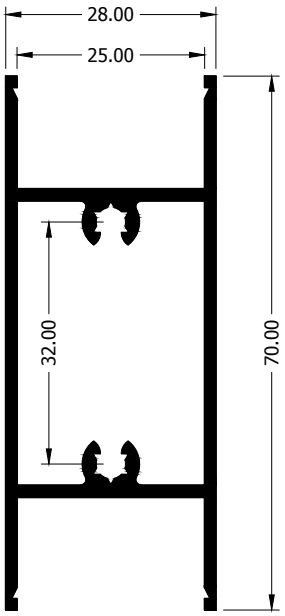

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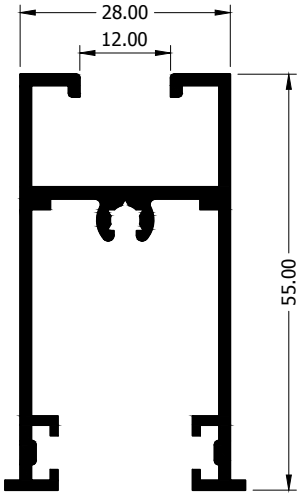

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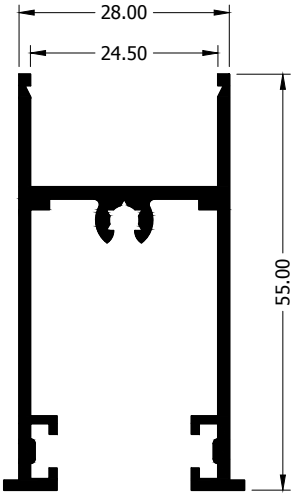

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0.713 Kg./ml.

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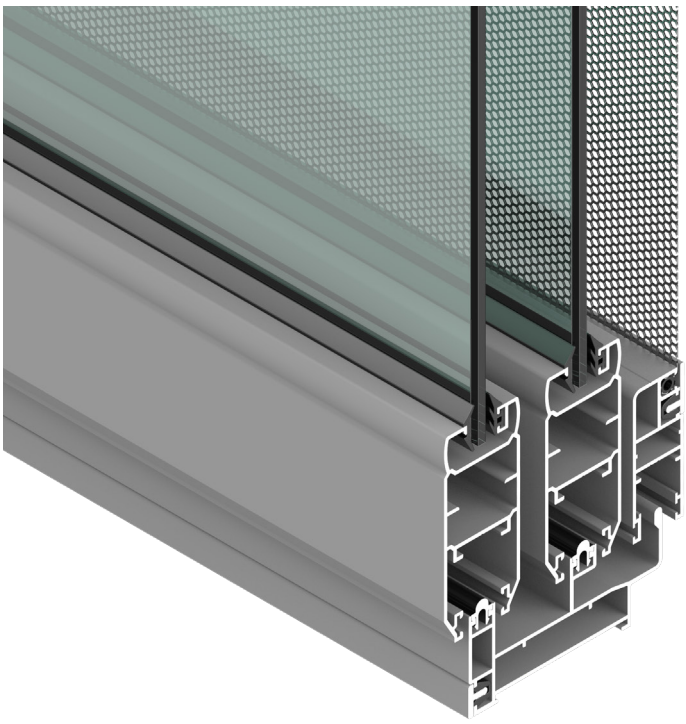
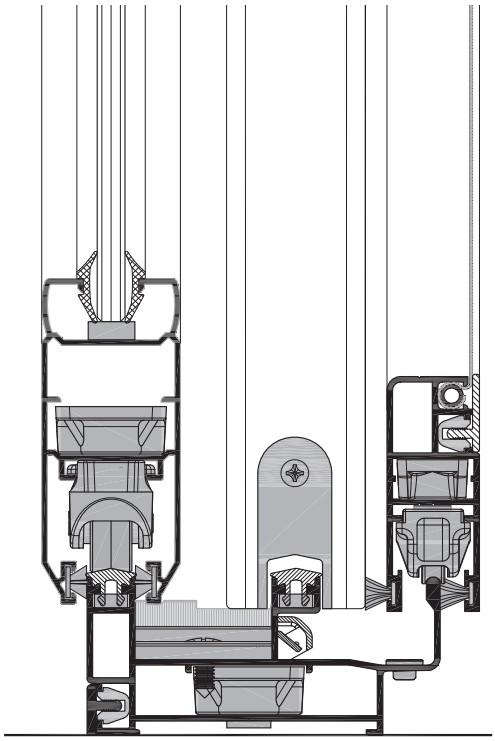




ALTO 70

Sliding System

- Offers an extensive range of profiles for the construction of elegant and moderately priced aluminium frames for windows and doors.
- Ideal solution for small to medium doors for economic residential buildings.
- Most of the accessories can be adjusted and fixed with set screws.
- Offering a very competitive solution.

Technical Characteristics

Frame Depth

56 mm. to 74 mm.

Frame Height

37 mm. to 94 mm.

Sash Depth

30 mm.

Sash Height

60 mm. to 72 mm.

Max Glass Thickness

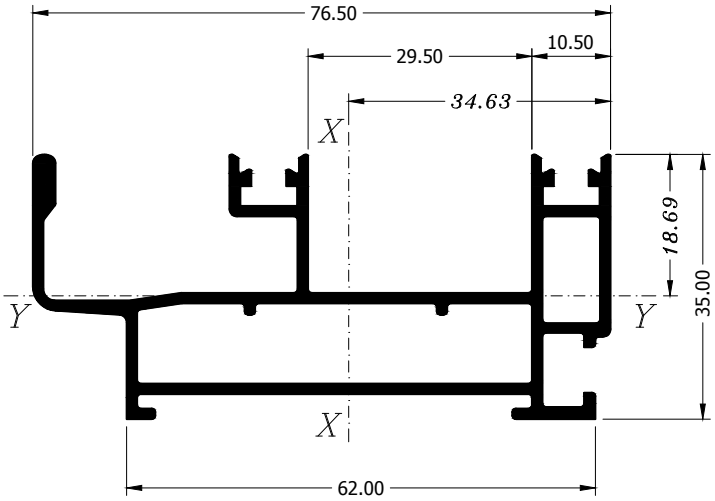
Up to 18 mm.

Max Sash Weight

Up to 100 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes



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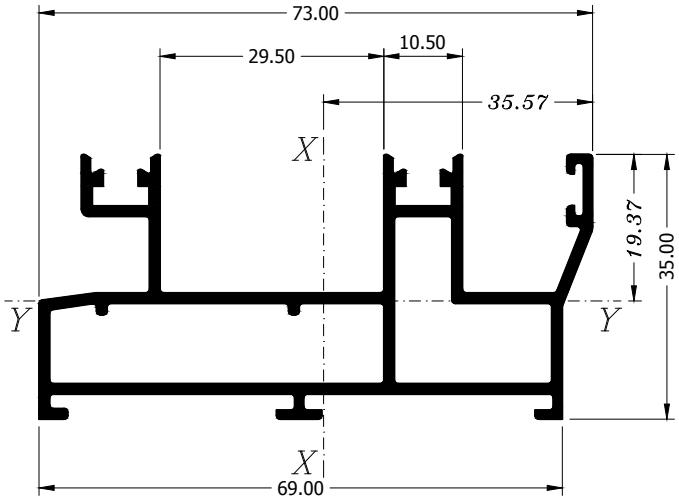

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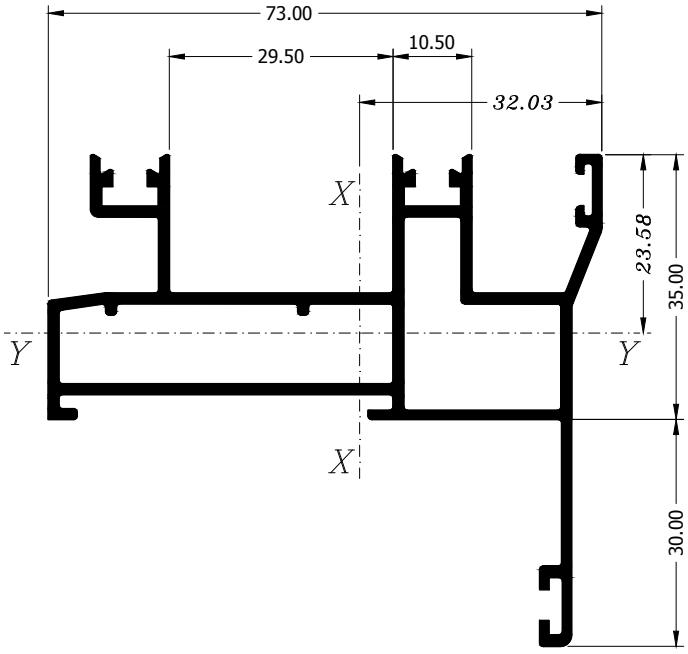

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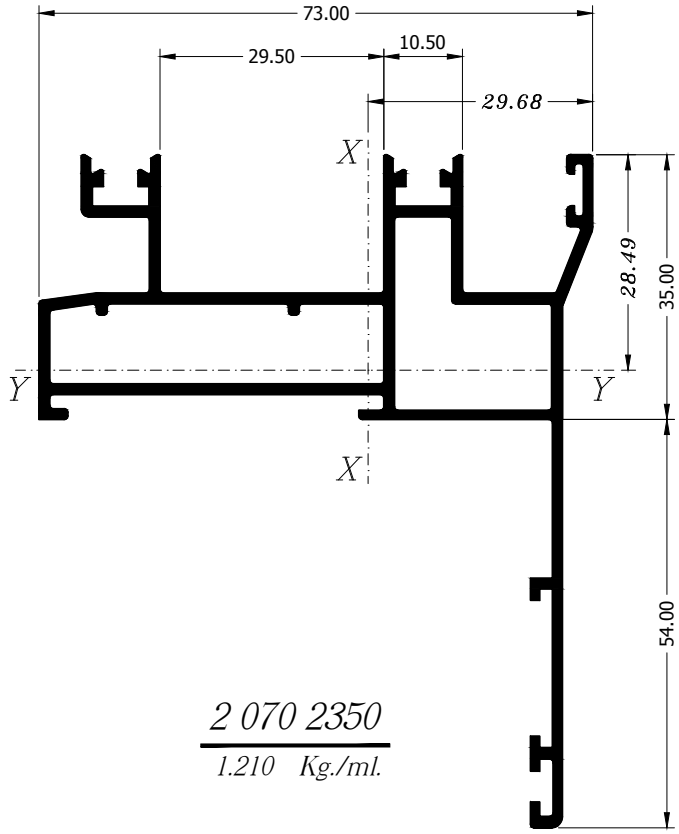

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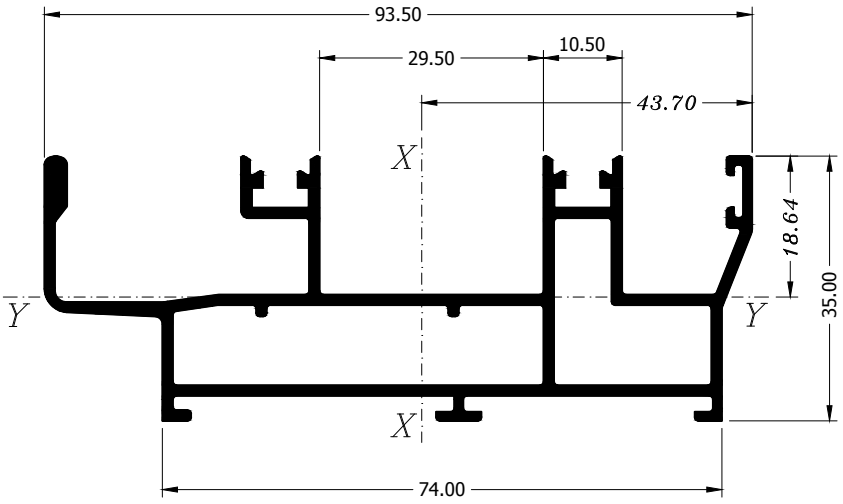

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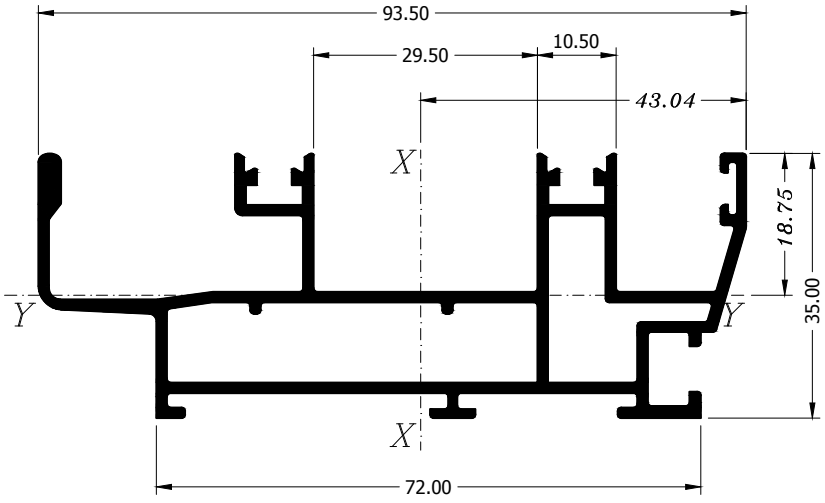

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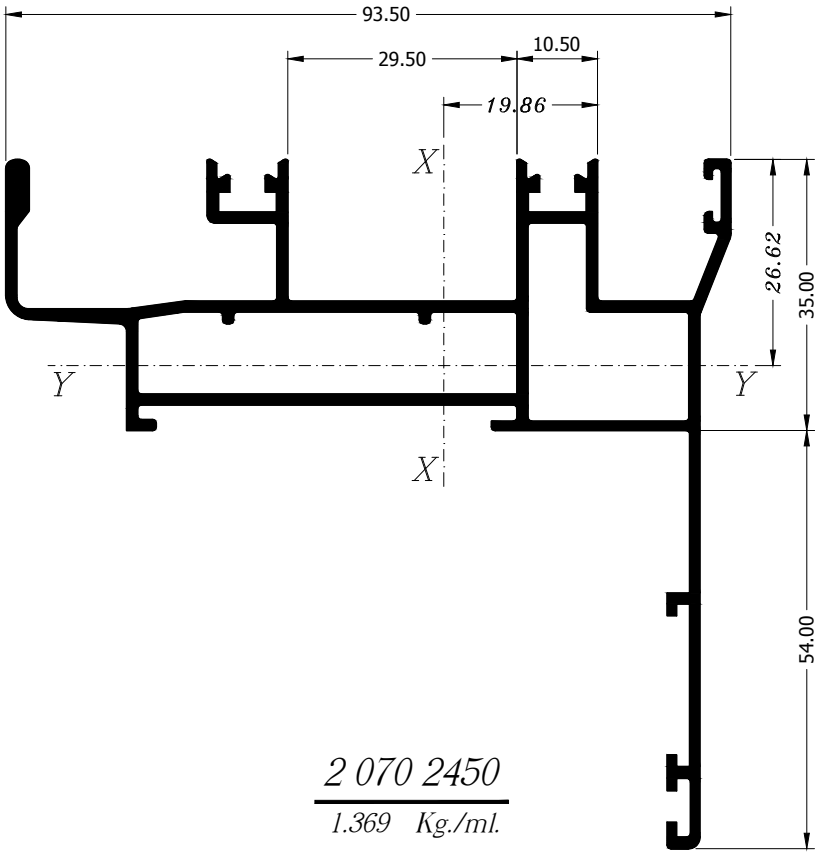

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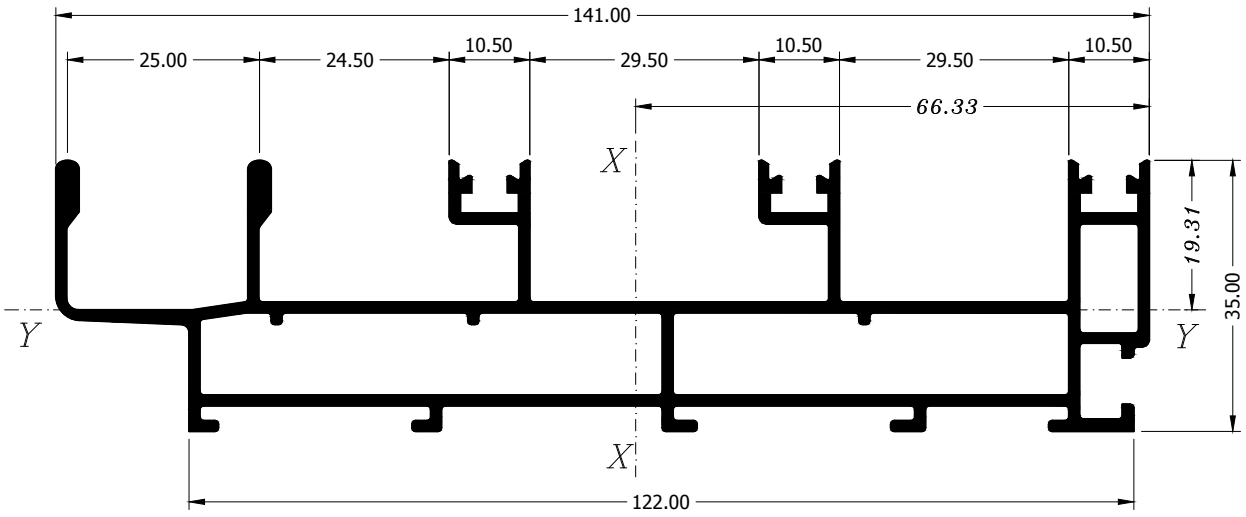

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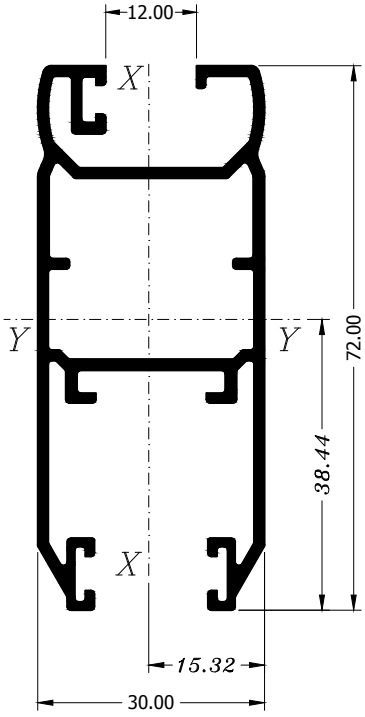

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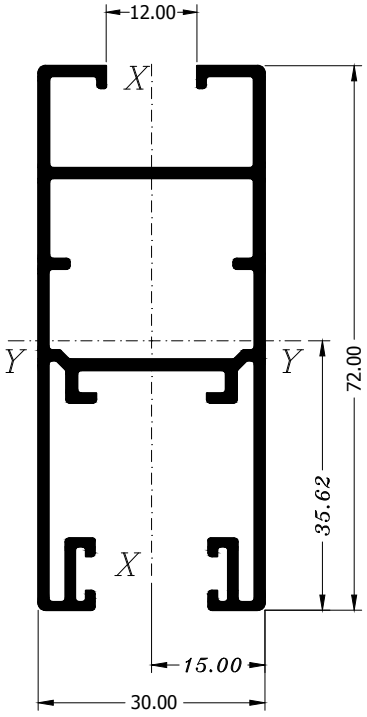

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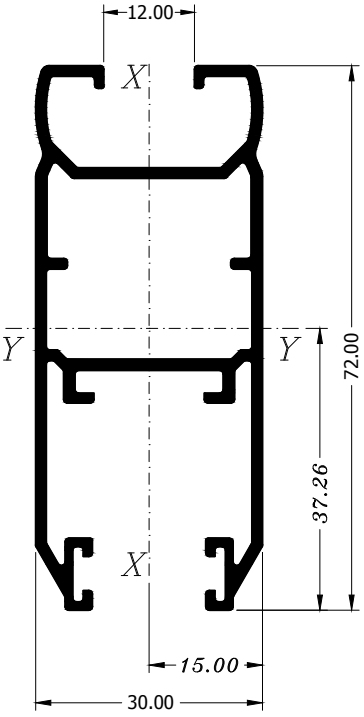

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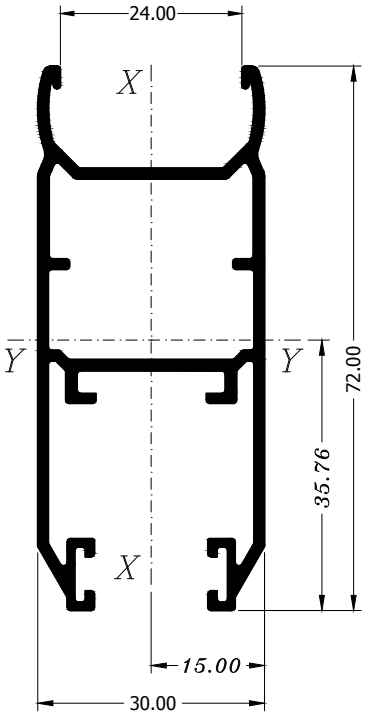

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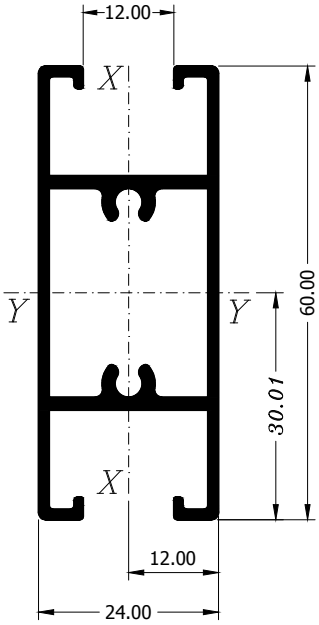

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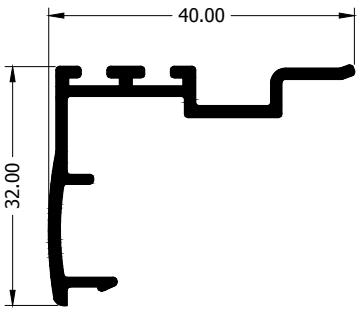

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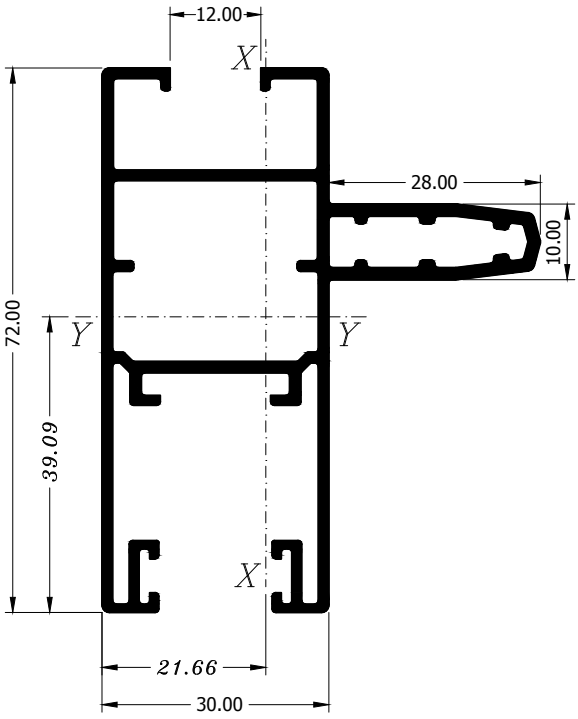

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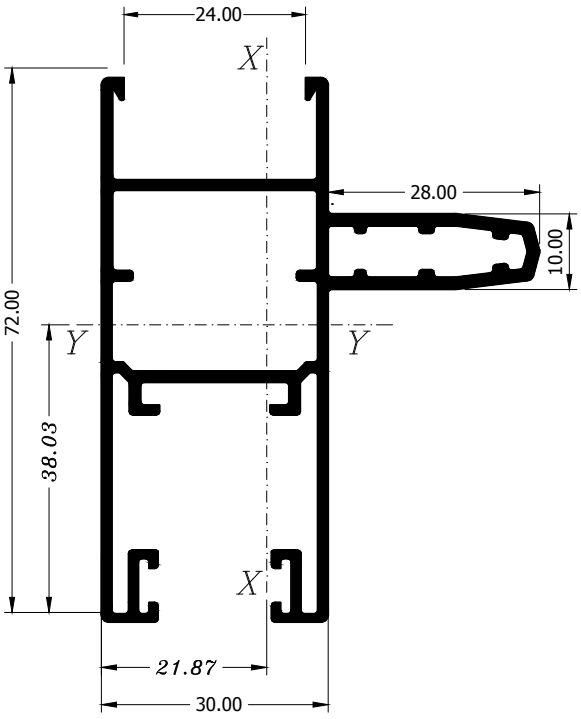

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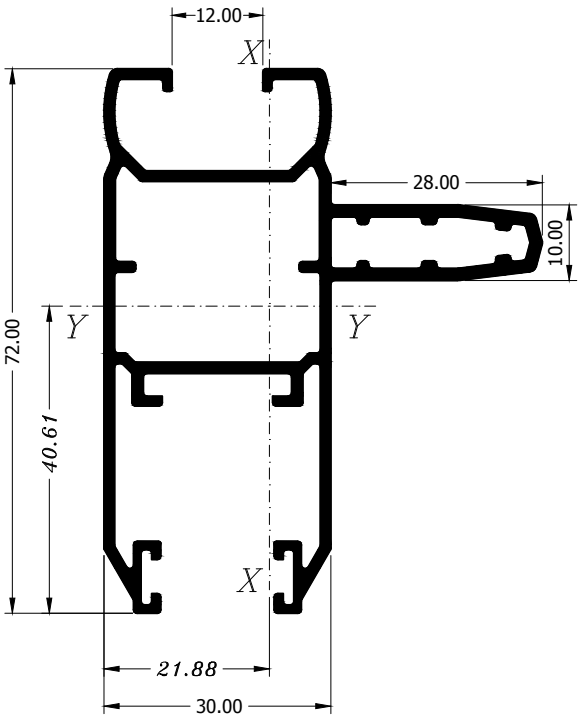

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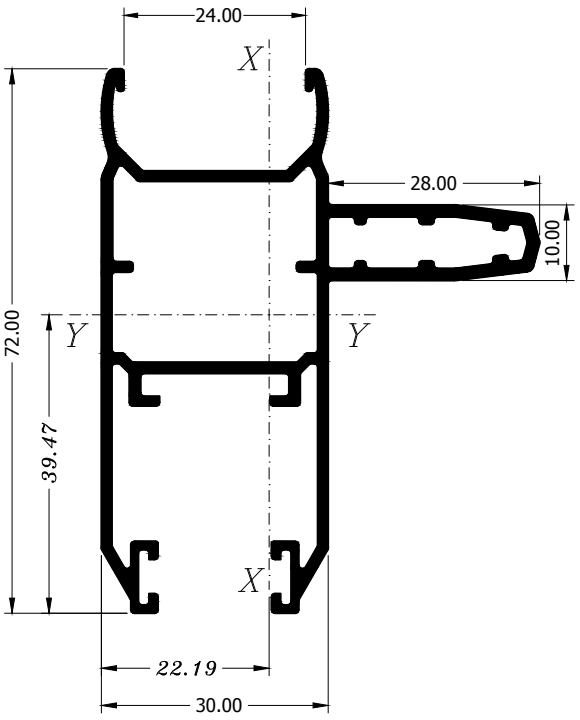
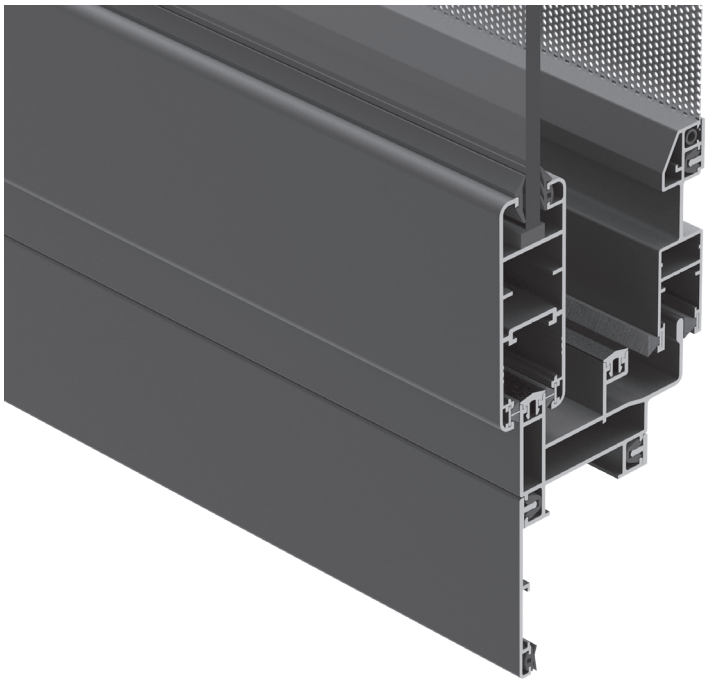


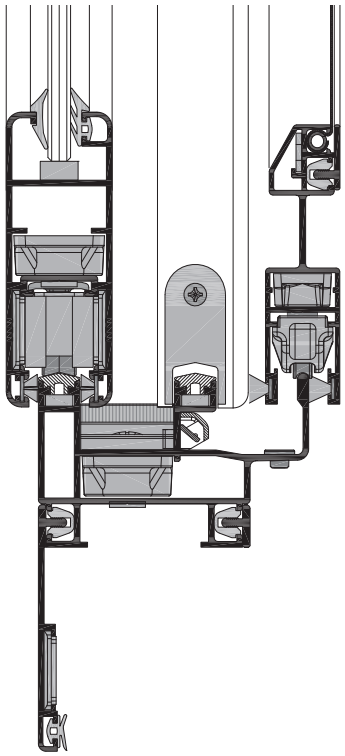
2 070 4426

1.081 Kg./ml.

TANGO 60

Sliding System





- Wide variety of sashes in shapes and dimensions that matches available frames with functional and soft line design.
- Wide range of locking systems and multi locking points and anti-lift blocks.
- Available in the double or triple track design, structures with up to six leaves.
- Integrated fly screen sash, available inside or outside.
- Most of the accessories can be adjusted and fixed with set screws.

Complies with European norm hEN 1435-1

Air Permeability	(Class 3) up to 600 pa.
Water Tightness	(Class 5A) up to 200 pa.
Resistance to wind load	(Class C4) up to 1600 pa.

Technical Characteristics

Frame Depth

48 mm. to 147 mm.

Frame Height

46 mm. to 100 mm.

Sash Depth

28 mm.

Sash Height

67 mm. to 78 mm.

Max Glass Thickness

Up to 20 mm.

Max Sash Weight

Up to 120 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes

ECO CERTIFICAZIONI

EUROPEAN CERTIFYING ORGANIZATION S.P.A.
NOTIFIED TESTING LABORATORY N. 0714
FOR REGULATION (EU) No 305/2011
CLASSIFICATION ASSESSMENT
N. 0714-CPR-1302 DATED NOVEMBER, 30 2015

In compliance with Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, that replaces Council Directive 89/106/EEC and lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express their performance in relation to their essential characteristics and taking account of the horizontal legal framework for the marketing of products in the internal market, established by Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, as well as by Decision No. 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products,
and in compliance with hEN 14351-1:2006 – A1:2010 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, which is currently in force,
European Certifying Organization S.p.A., notified laboratory NB 0714, carried out the following:

type-testing

for the determination of the essential characteristics

Air Permeability – Water tightness – Resistance to Wind Load

on the below mentioned external pedestrian doorset without resistance to fire and/or smoke leakage characteristics
In compliance with EN 12207:1999, EN 12208:1999, EN 12210:1999 – Classification,
EN 1026:2000, EN 1027:2000, EN 12211:2000 – Tests and calculations
System of assessment and verification of constancy of performance 3

The specimen, as provided by the Manufacturer, was identified as follows:

DESCRIPTION OF THE PRODUCT	
Type:	Sliding window, two sashes.
Model:	TANGO 60 Width= 1,860 mm, Height = 1,460 mm, Thickness = 28 mm
Fabrication number:	-
Date of fabrication:	2015
PRODUCED IN THE FACTORY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT
PLACED ON THE MARKET BY	
Name:	MACHINES & ALUMINIUM CENTER
Adress:	122, MOHIY AL-DIN ABU AL-EZZ ST., DOKKI - GIZA - EGYPT

Taking into account the documentation submitted by the Manufacturer and on the basis of the results of the type-testing carried out, as described in the laboratory report ECO CP0025/5, dated November 30, 2015, in accordance with Annex ZA of hEN 14351-1:2006 – A1:2010 and with the EN 12207:1999, EN 12208:1999 and EN 12210:1999 classification, to the specimen, as previously identified,

THE FOLLOWING CLASSIFICATION IS AWARDED

AIR PERMEABILITY:	**CLASS 3**
WATERTIGHTNESS:	**CLASS 5A**
RESISTANCE TO WIND LOAD:	**CLASS C4**

The results refer only to the specimen that has been provided by the Manufacturer and submitted to type-testing listed above.
This classification assessment consists of 1 page and its reproduction is permitted in full only.

Faenza, November 30, 2015

The undersigned ECO Certificazioni S.p.A. Scheme Manager CPR
Eng. Gianluca Campolesi

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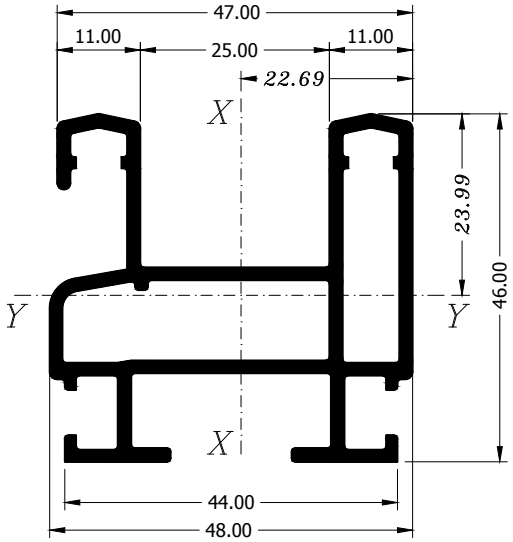
E-mail: info@eco-cert.it • www.ecocertificazioni.eu



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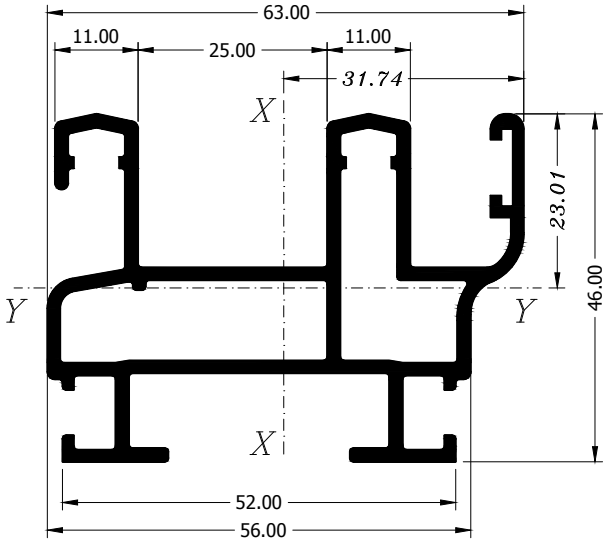

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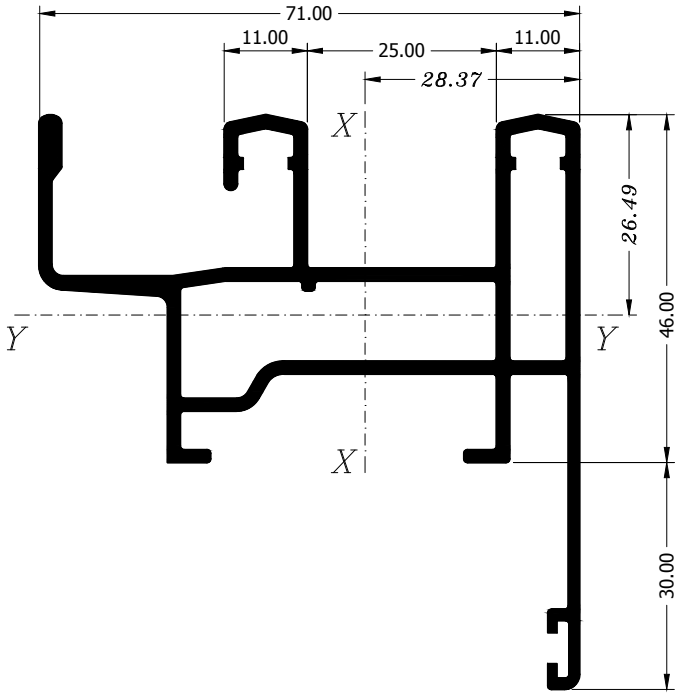

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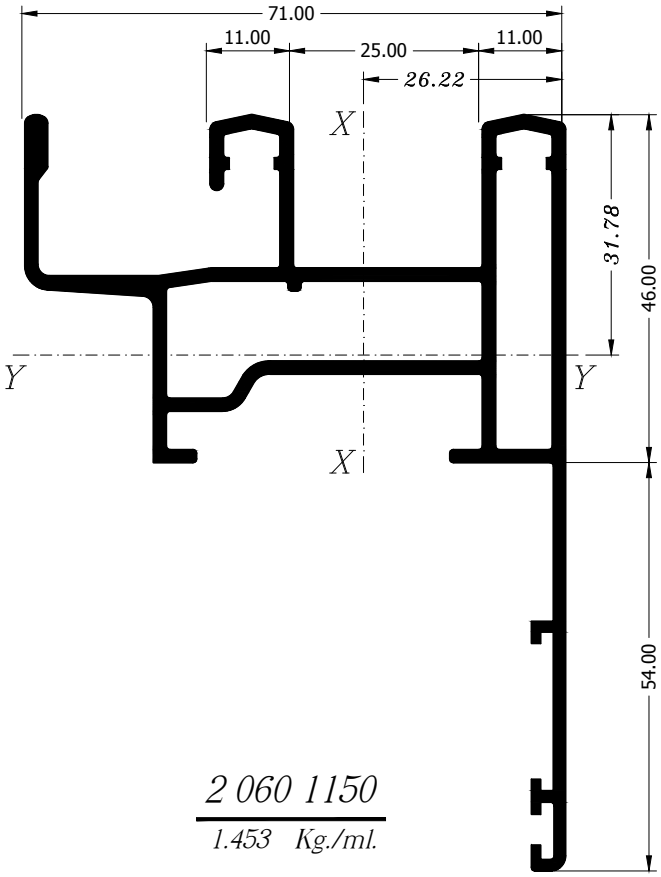

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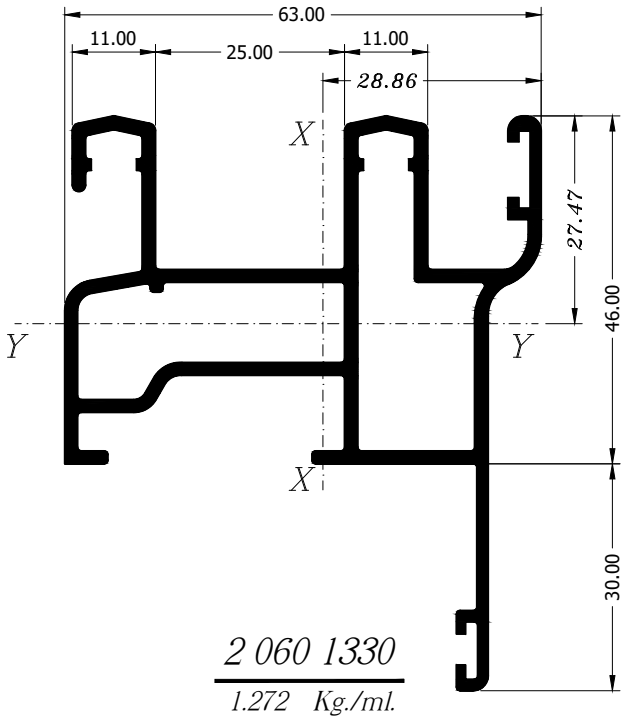

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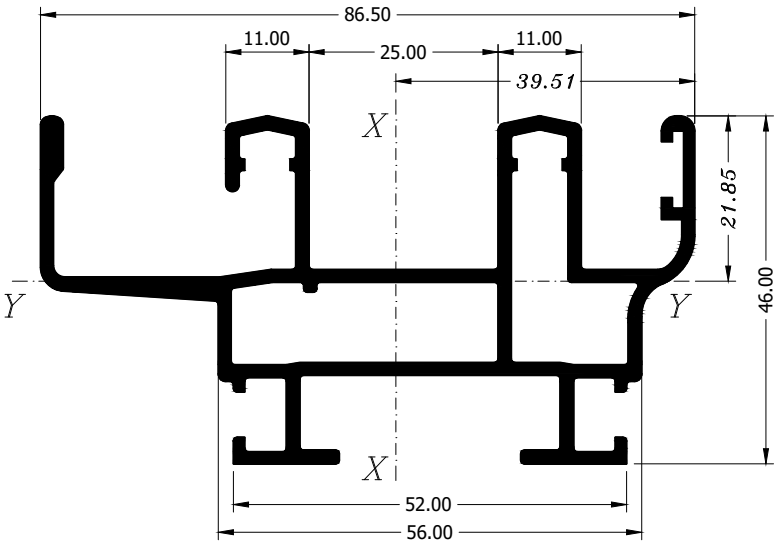

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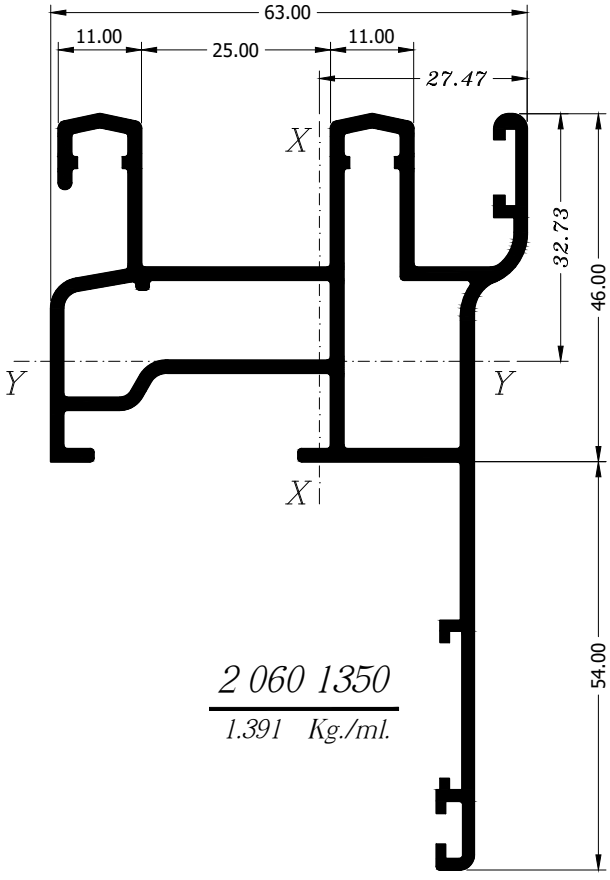

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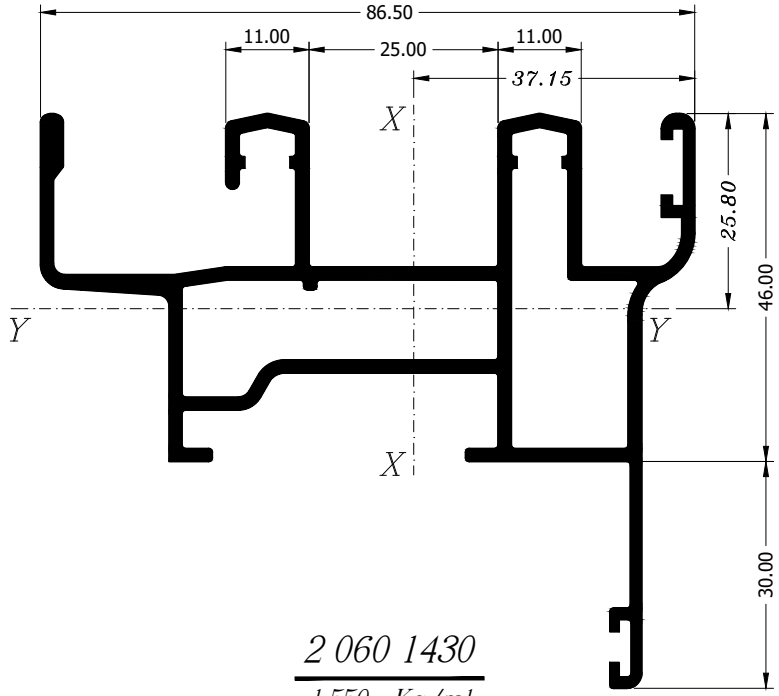

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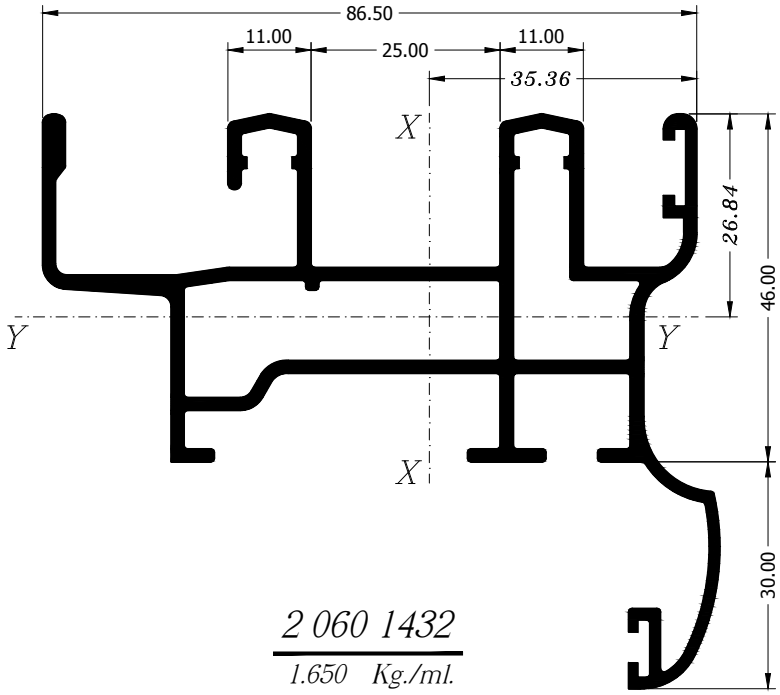

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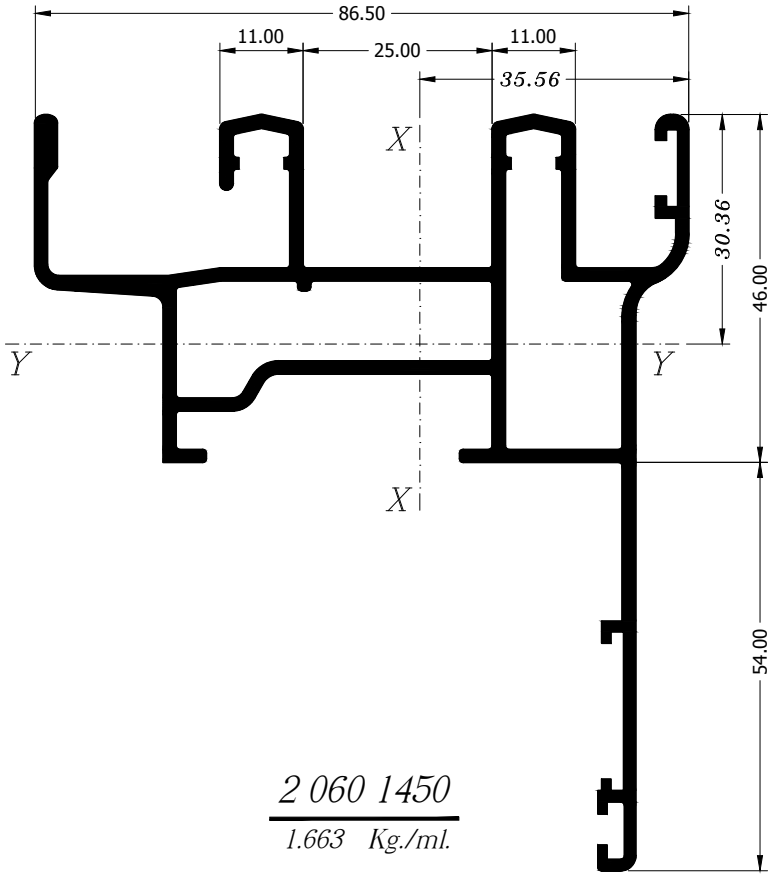

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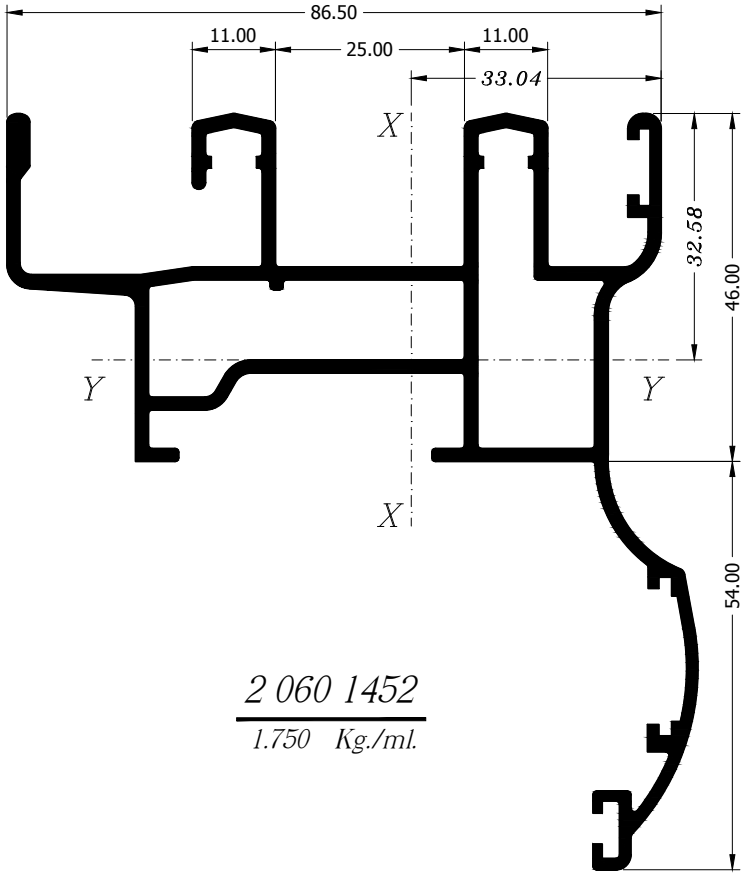

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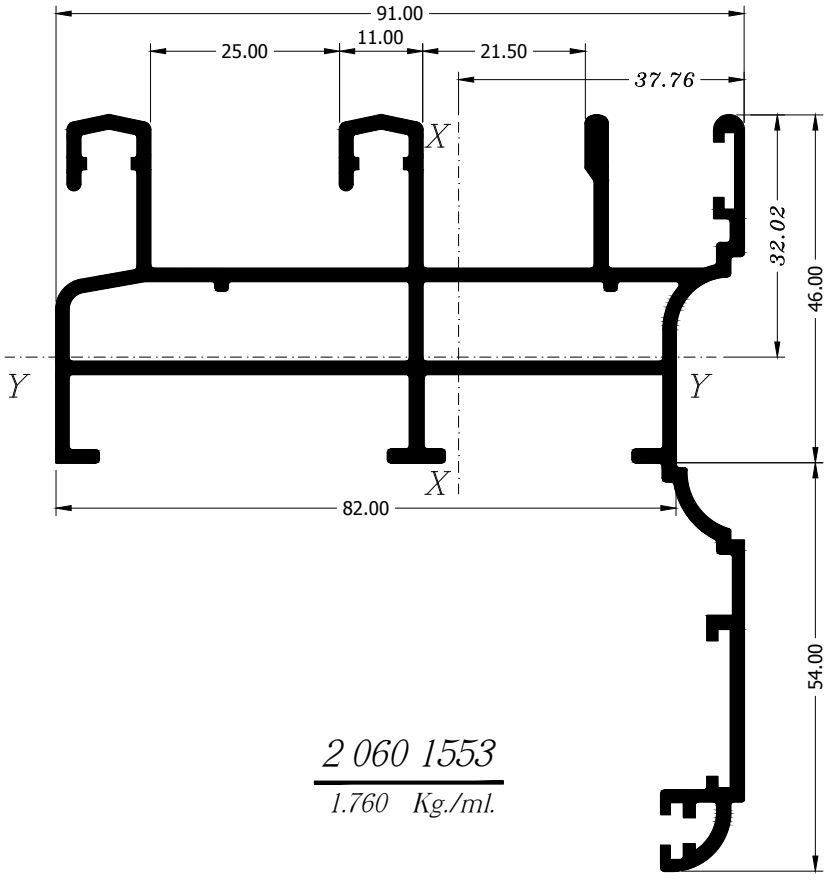

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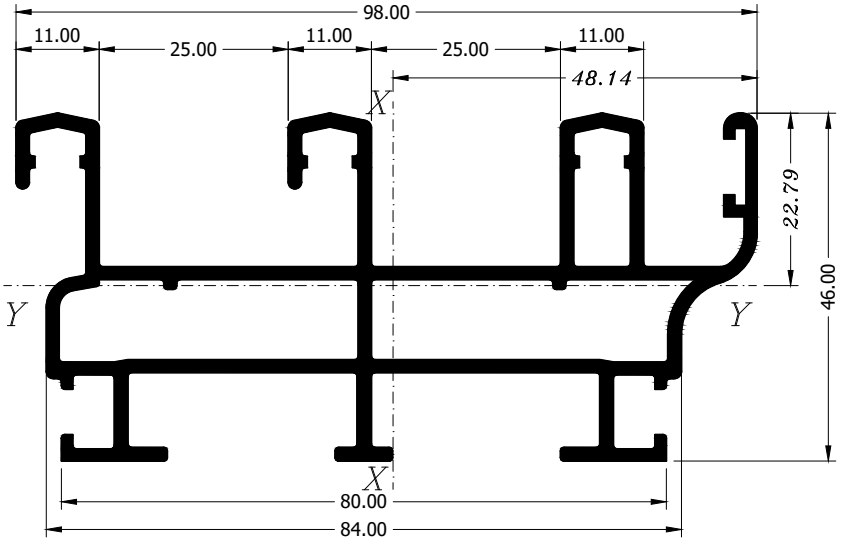

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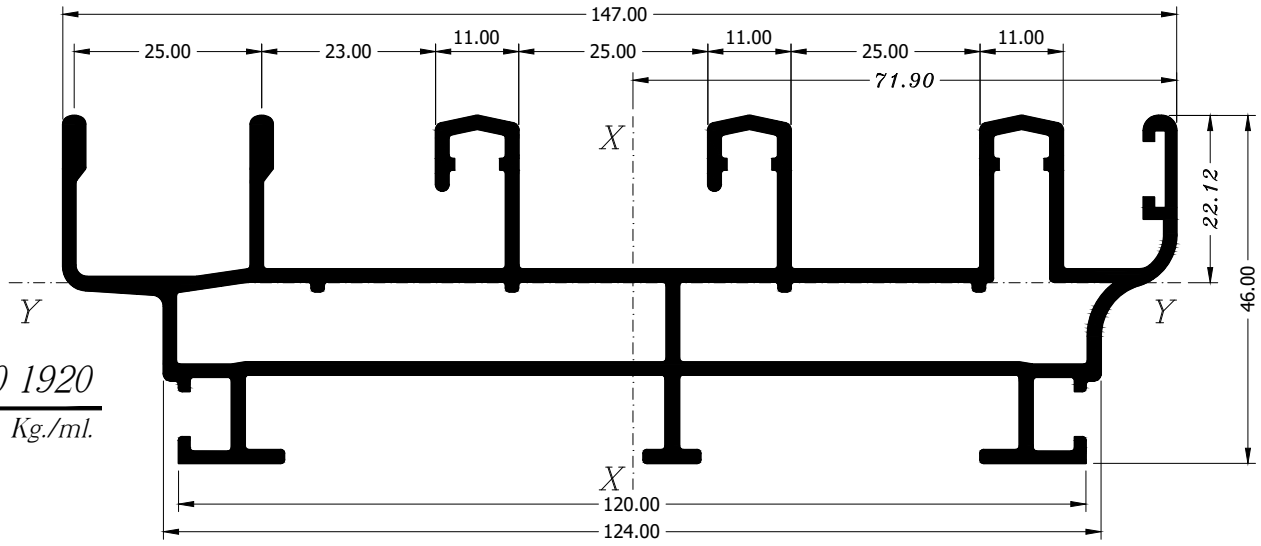

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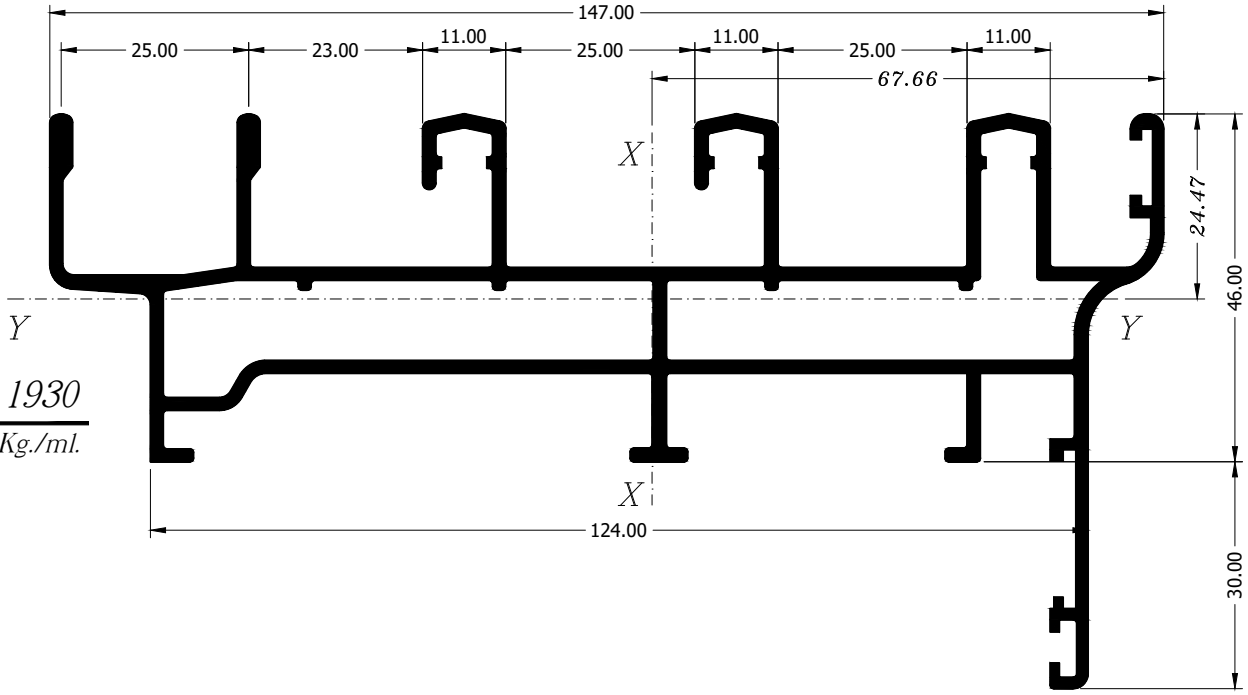

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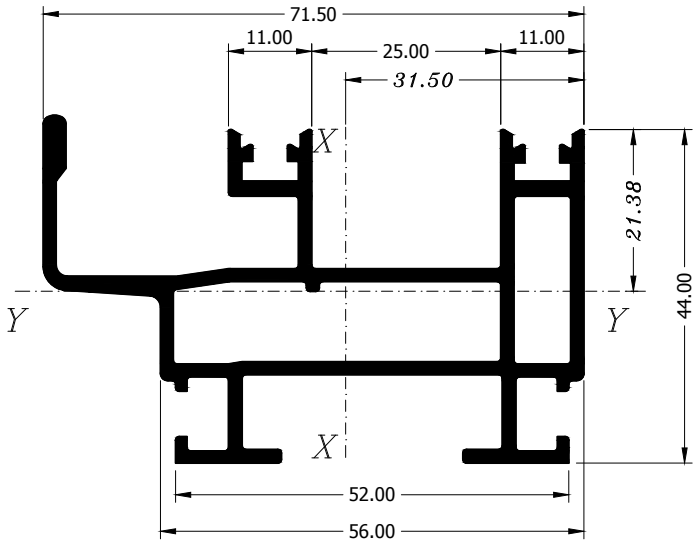

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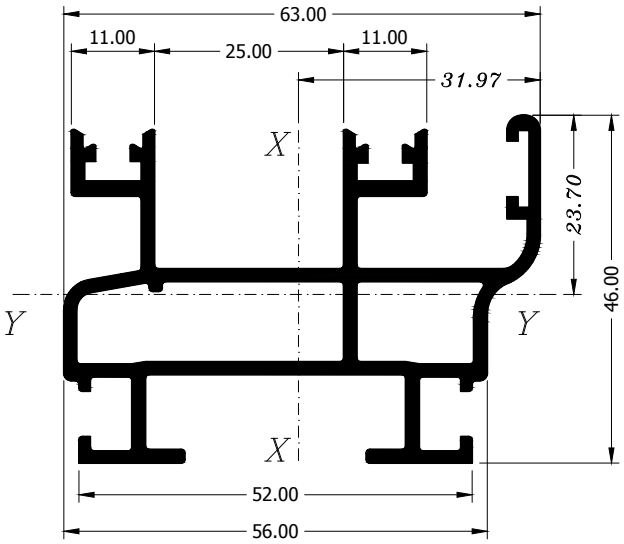

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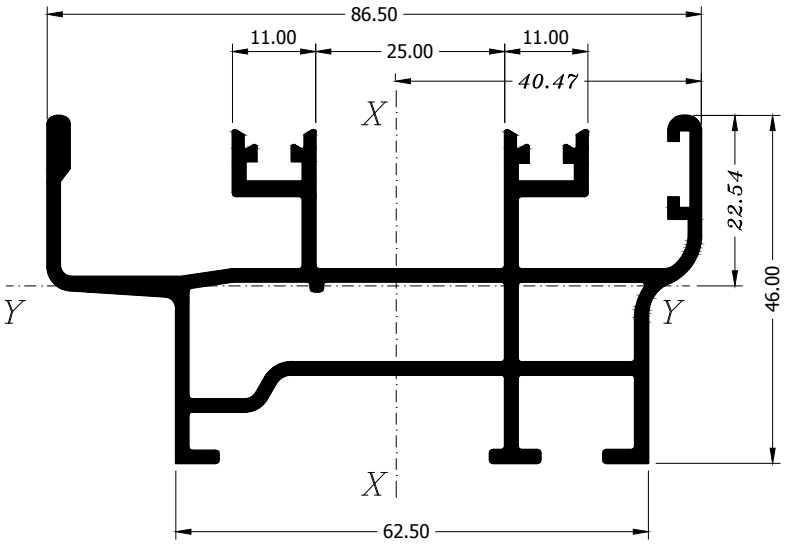

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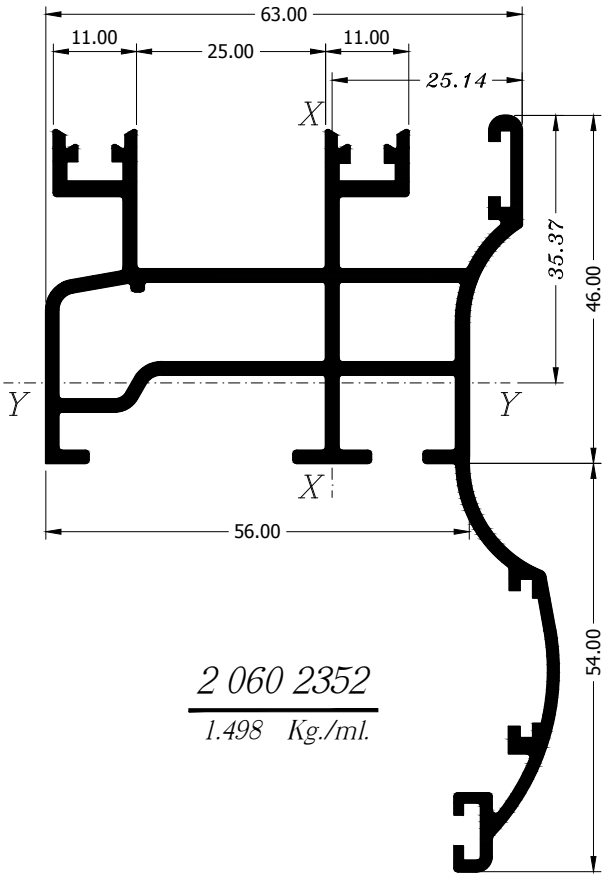

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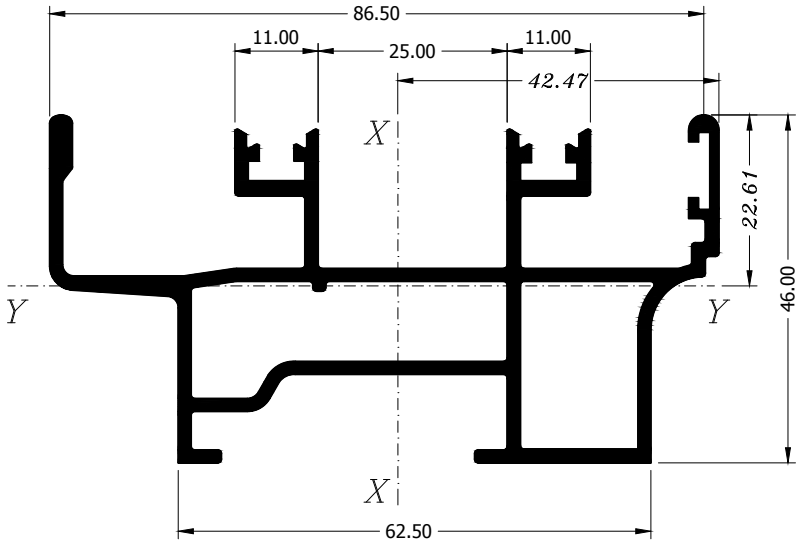
2 060 2403

1.404 Kg./ml.



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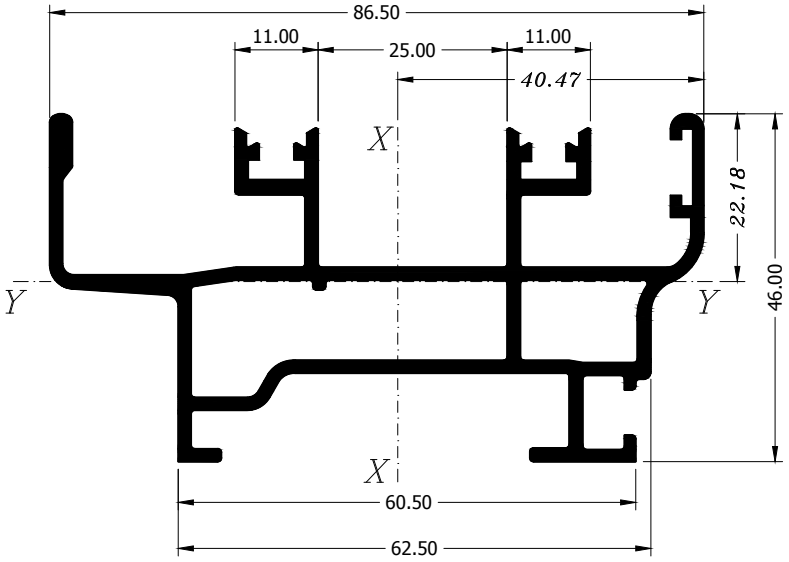

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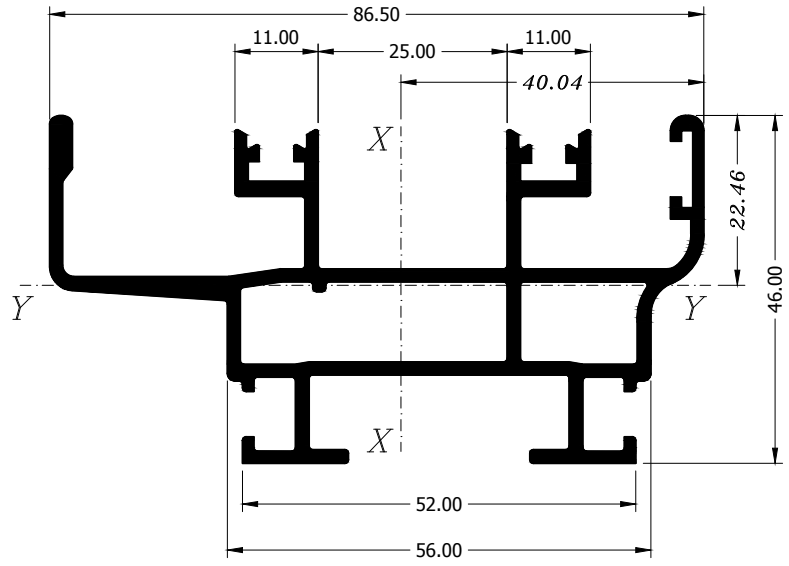

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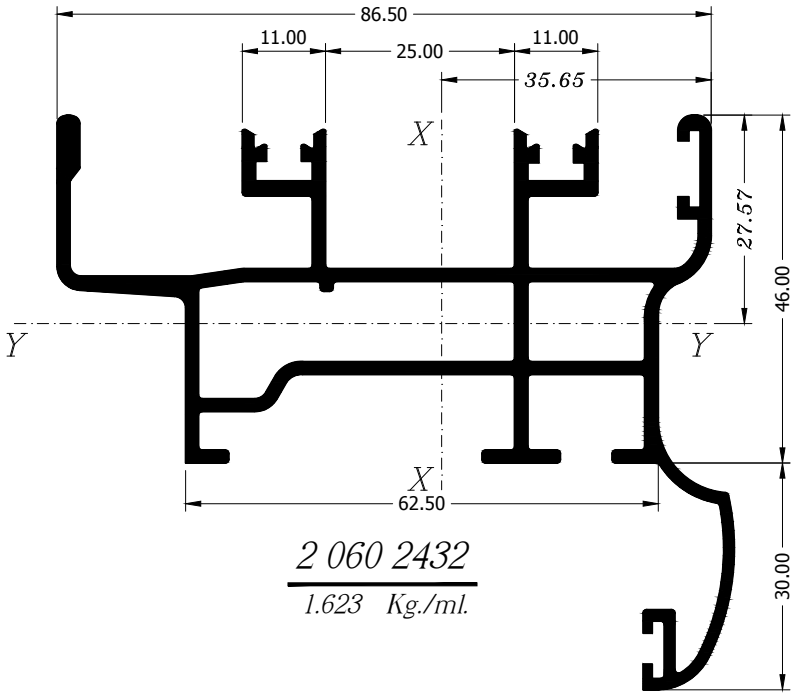

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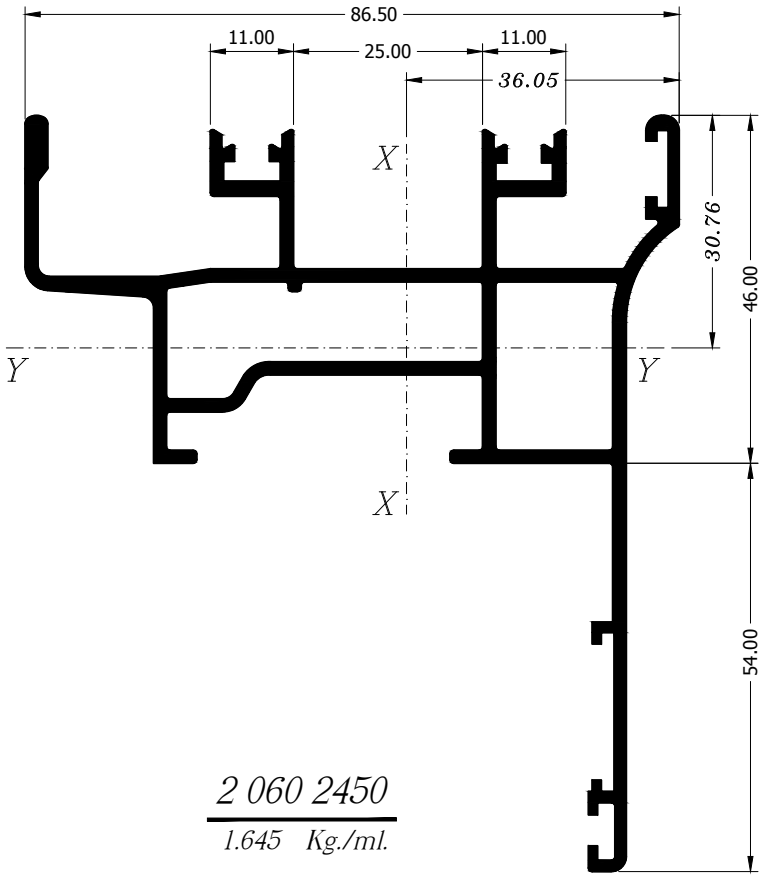

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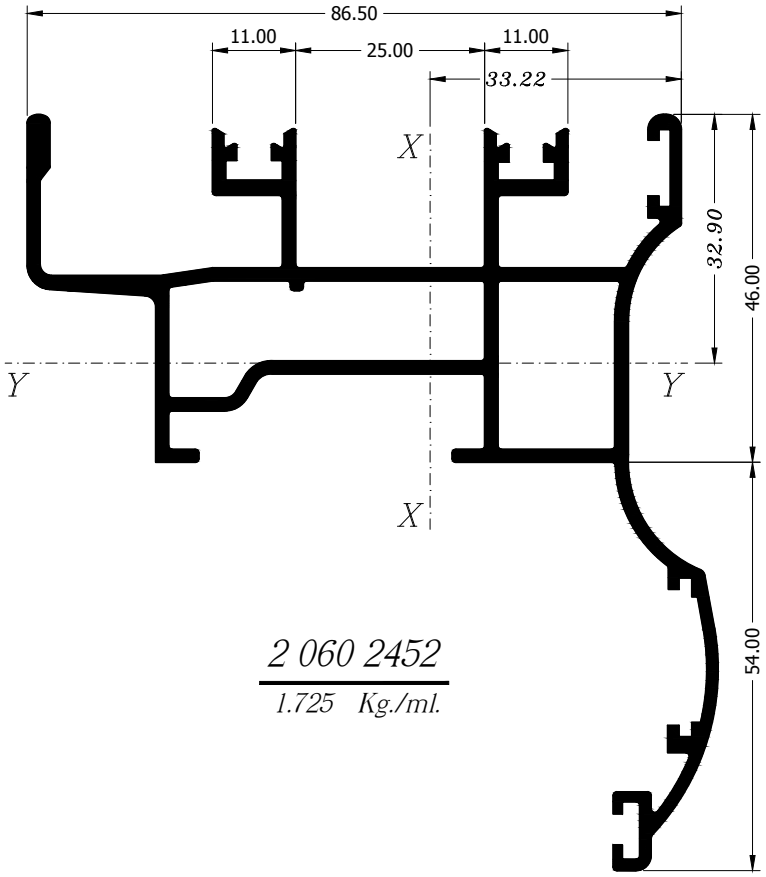

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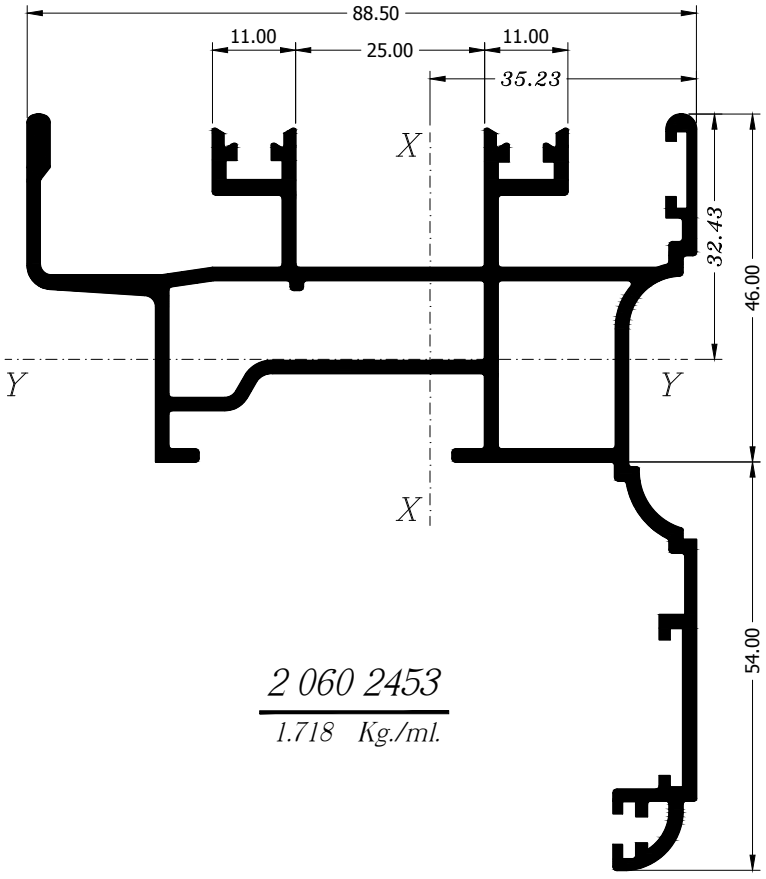

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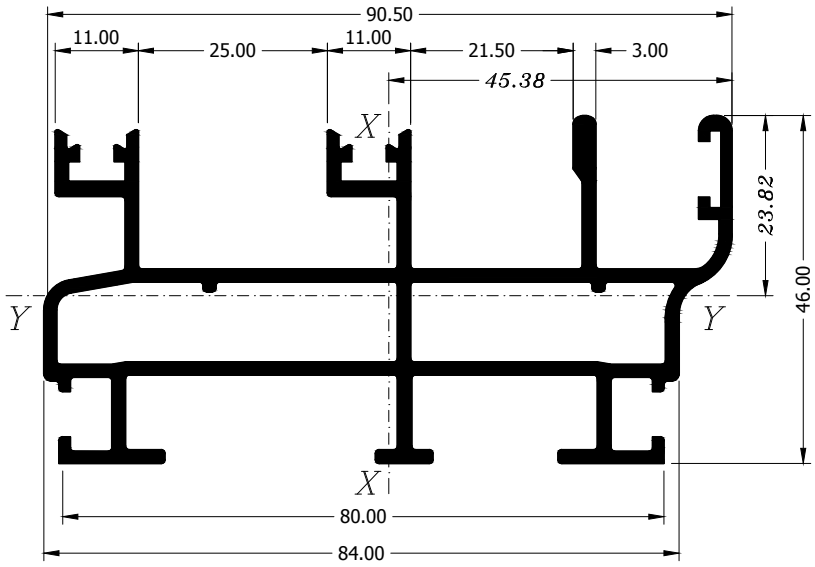

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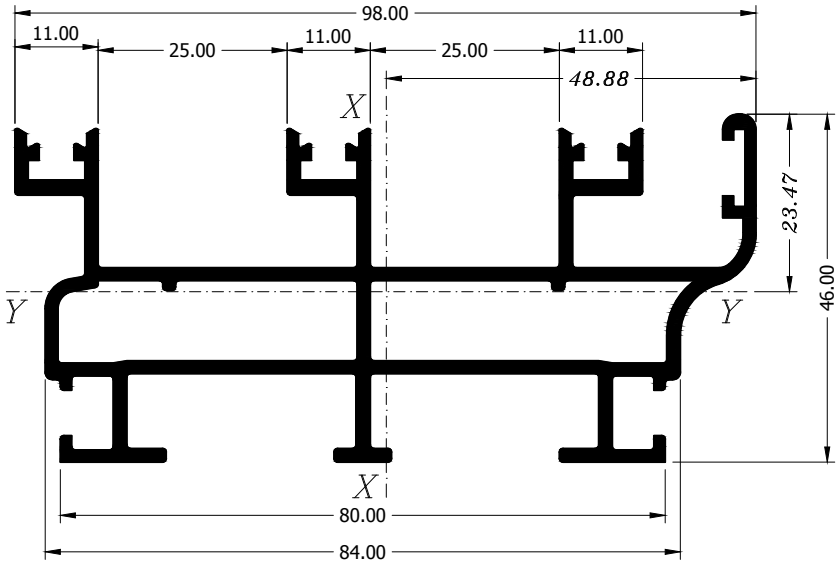

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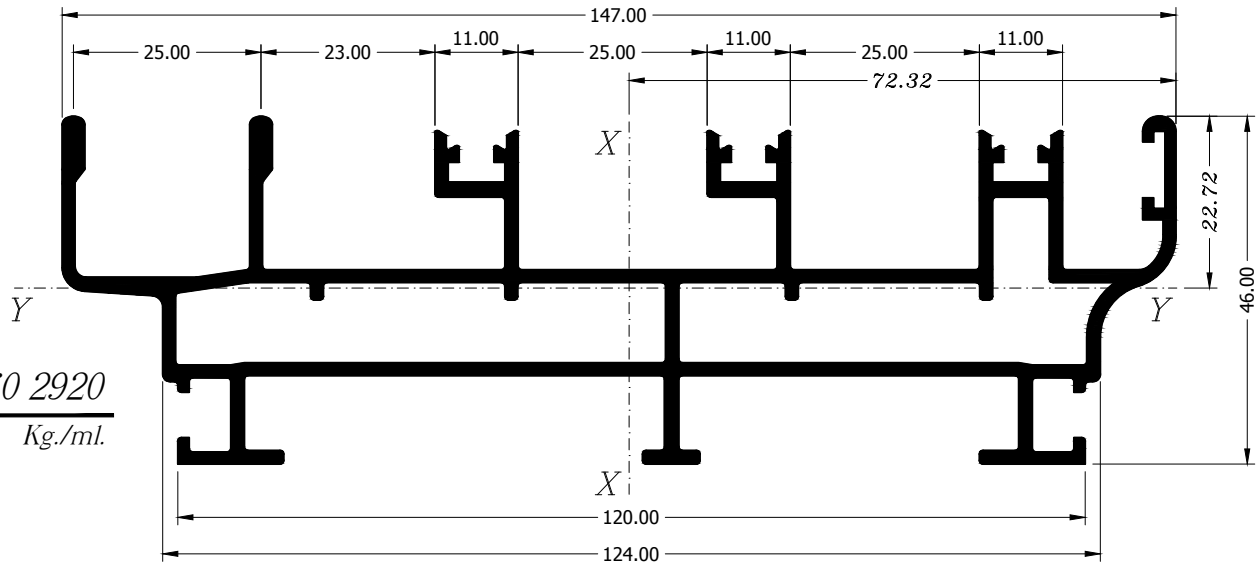

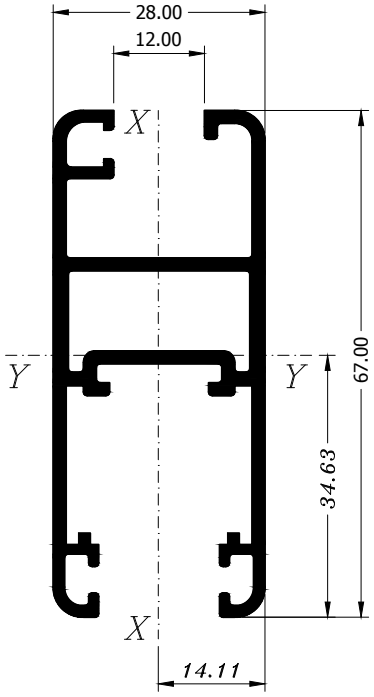

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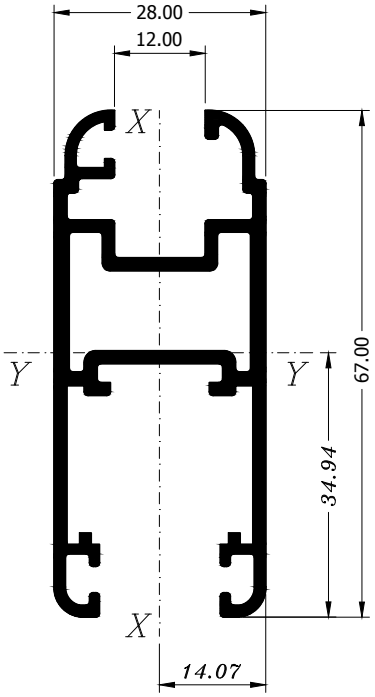

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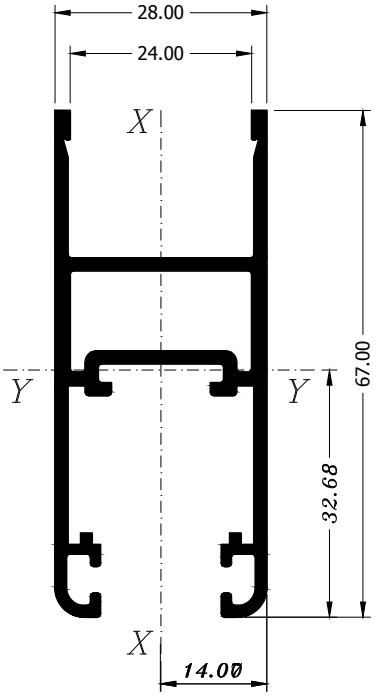

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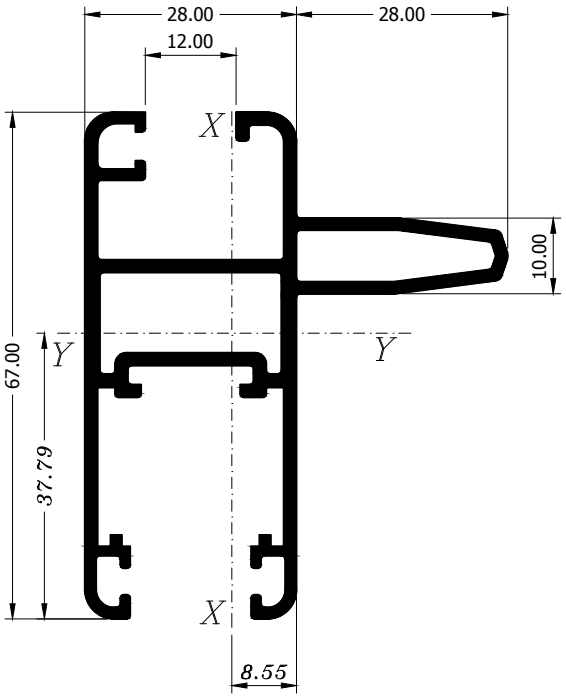

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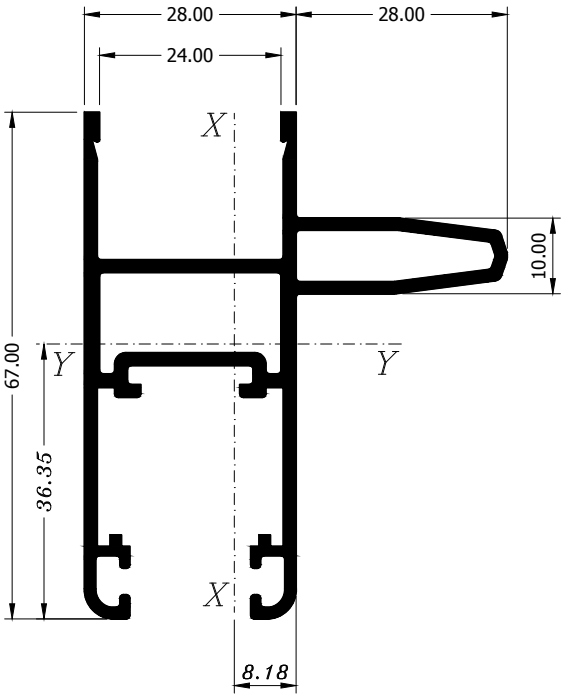

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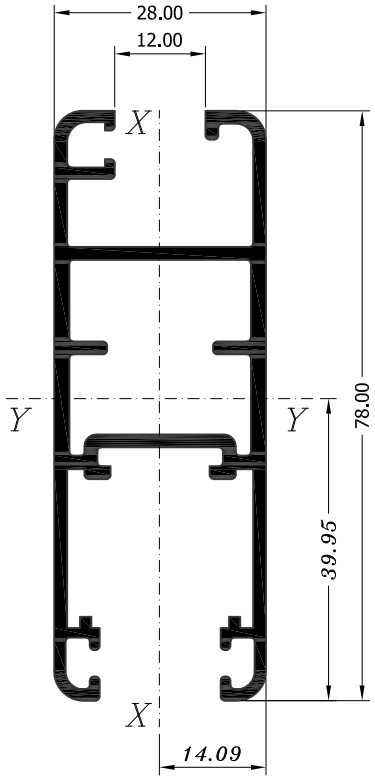

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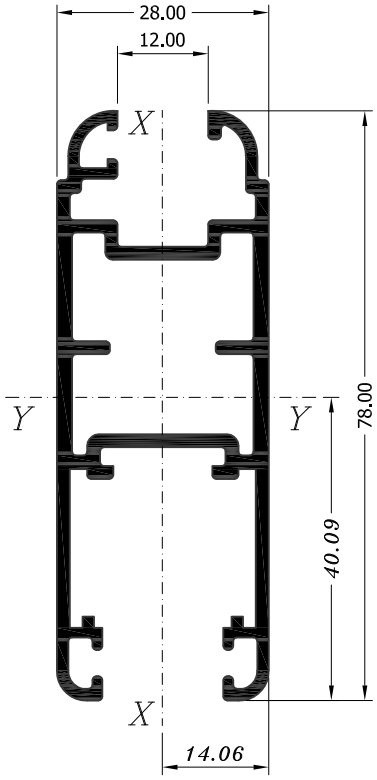

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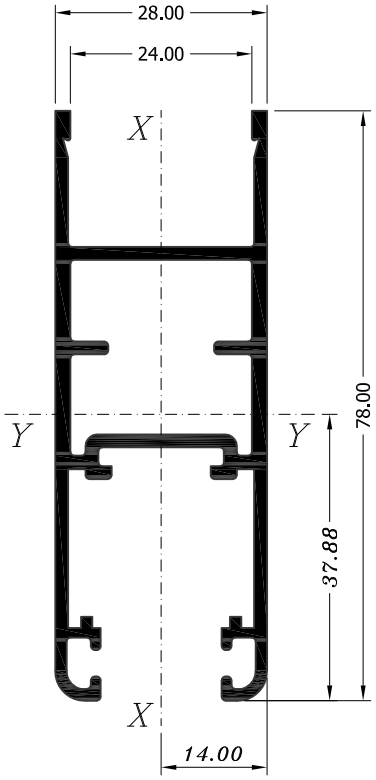

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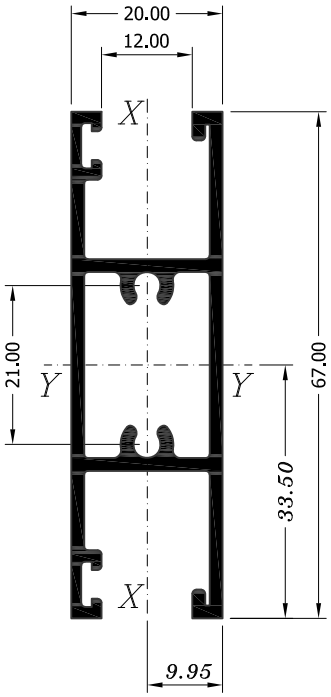

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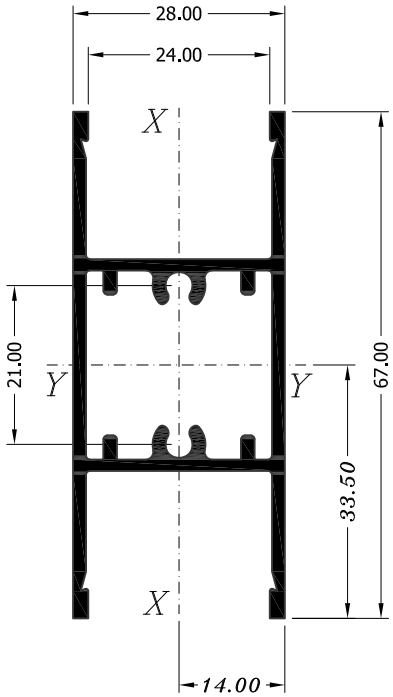

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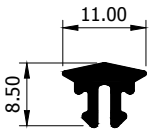

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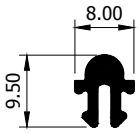

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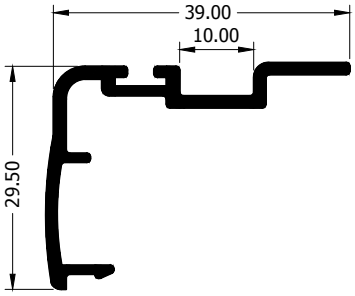

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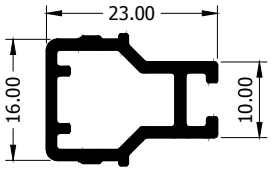

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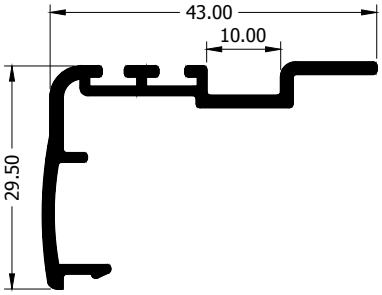

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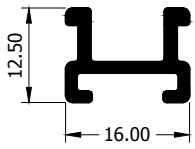

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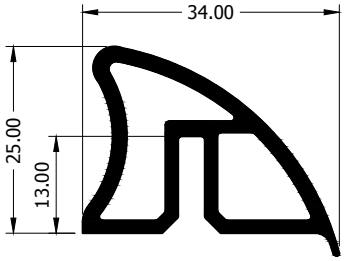

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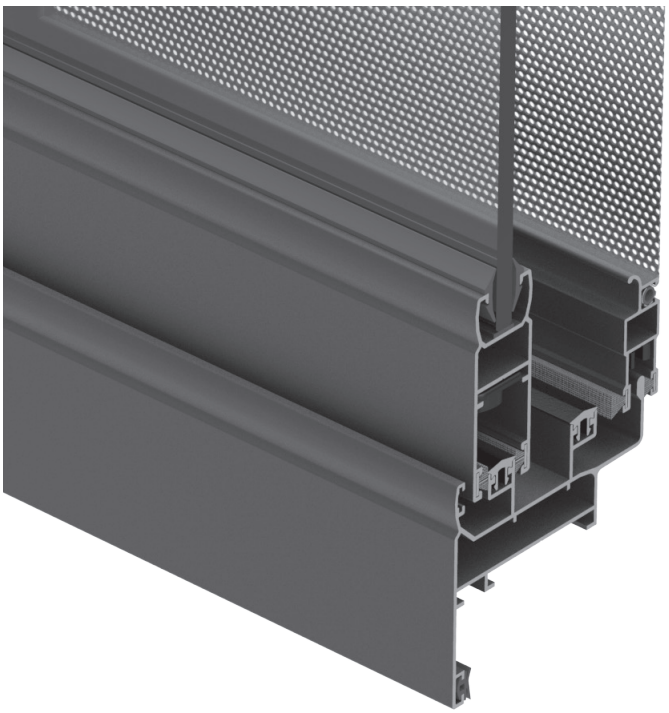
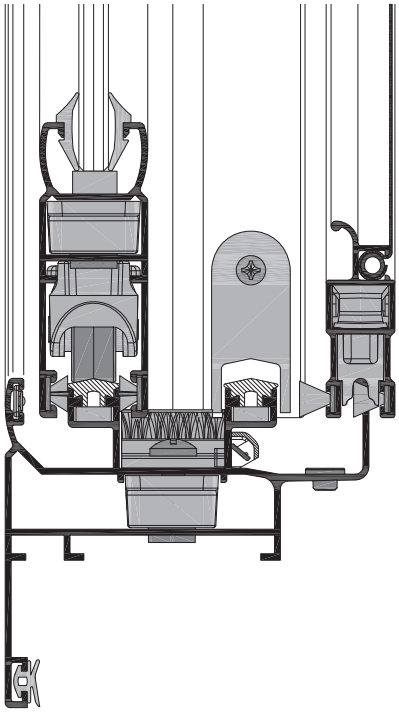




NANO 55

Sliding System

- Ideal solution for small to medium windows for economic residential buildings.
- Offers an extensive range of profiles for the construction of elegant and moderately priced aluminium frames in functional style.
- Offering a very competitive solution.
- Available in the double or triple track design, structures with up to six leaves.
- Most of the accessories can be adjusted and fixed with set screws.

Technical Characteristics

Frame Depth

56 mm. to 125 mm.

Frame Height

37 mm. to 91 mm.

Sash Depth

22 mm.

Sash Height

60 mm.

Max Glass Thickness

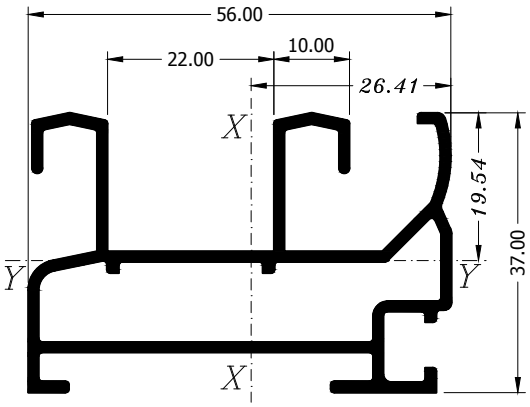
Up to 8 mm.

Max Sash Weight

Up to 60 kg.

Sealing Type

Perimetrical, with two rows of high-density brushes



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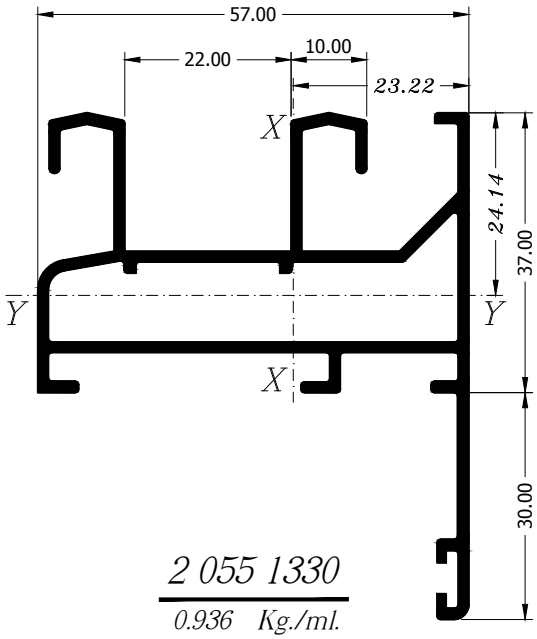

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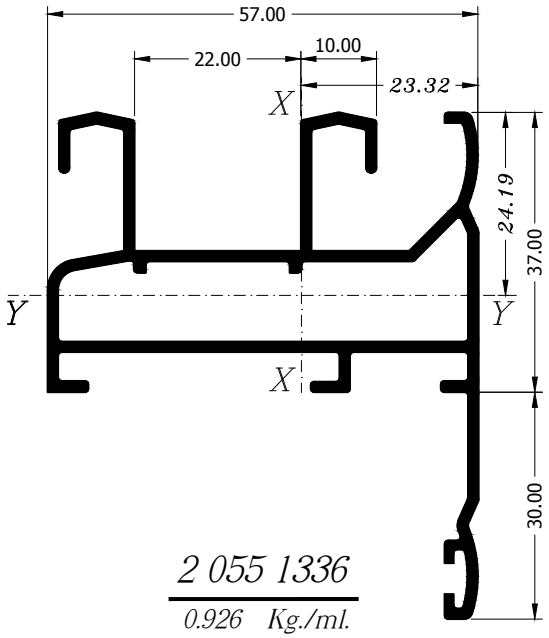

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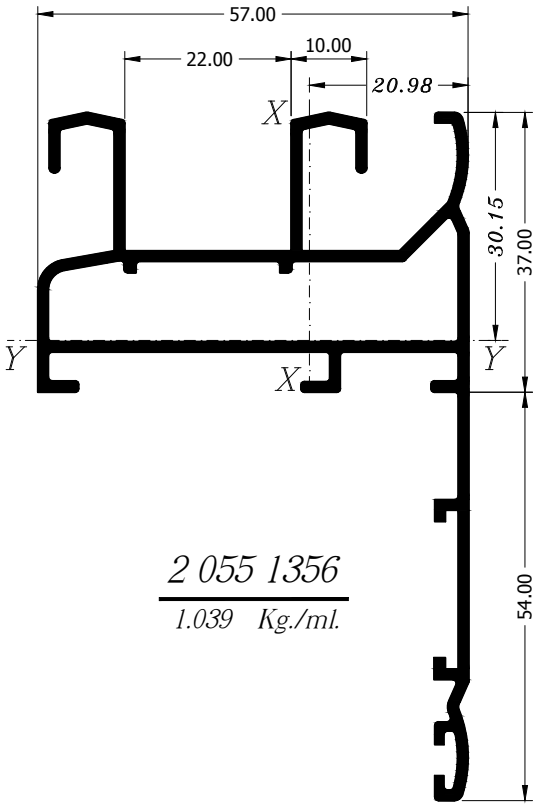

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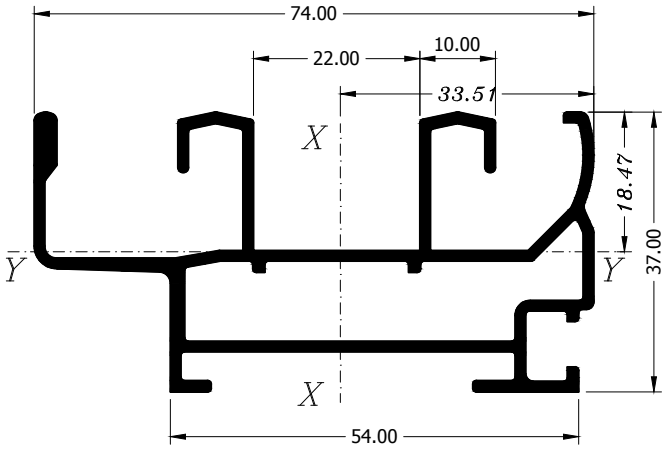

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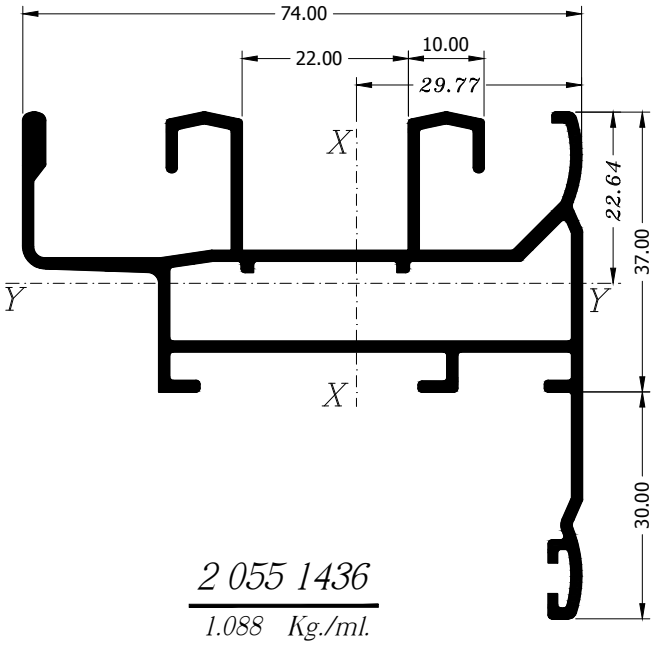

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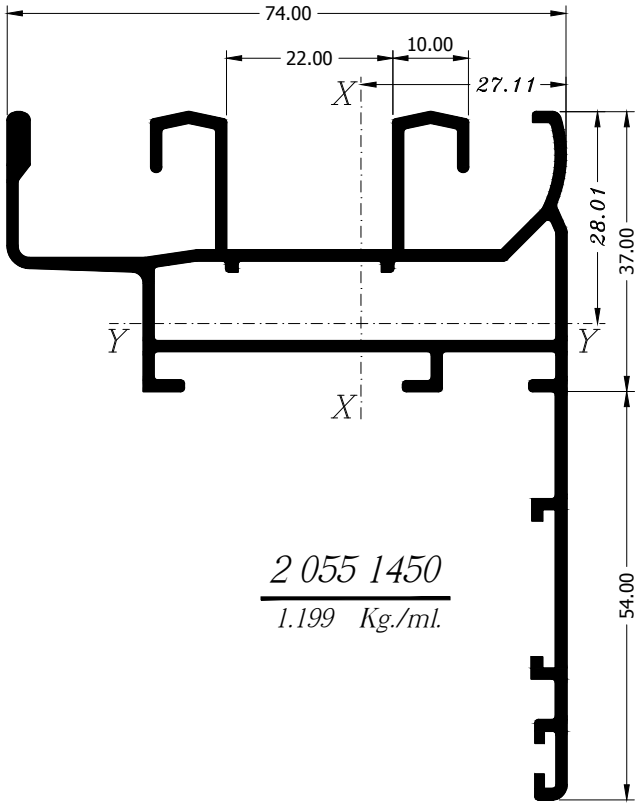

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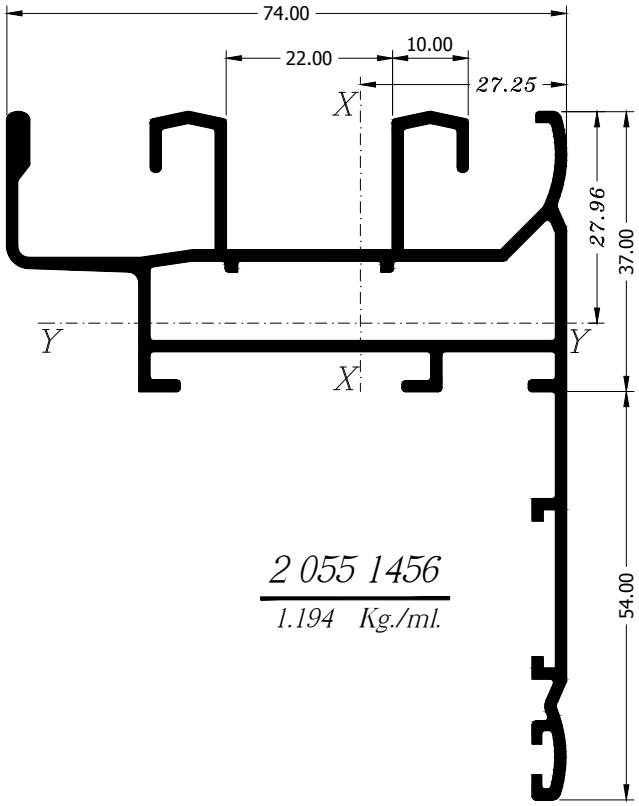

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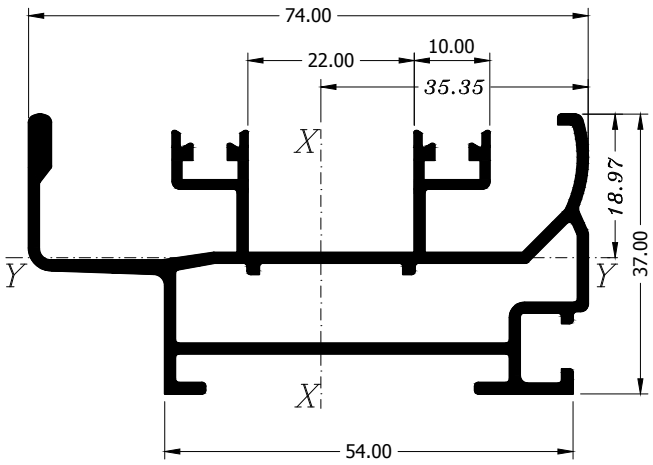

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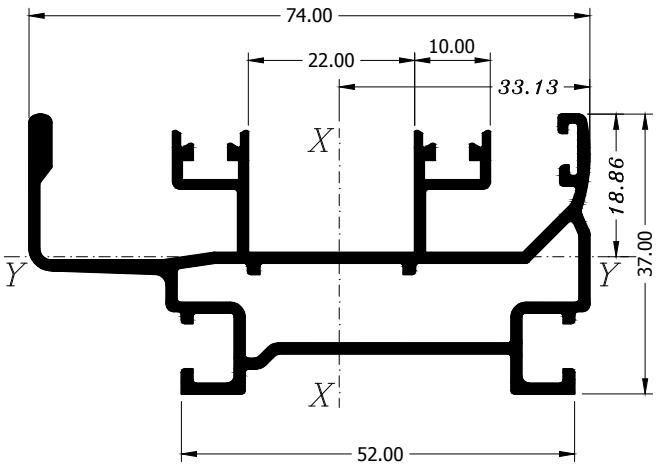

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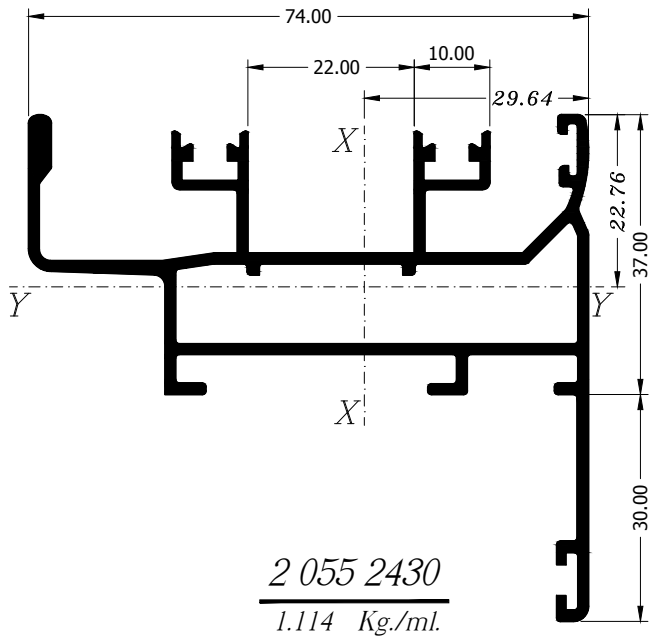

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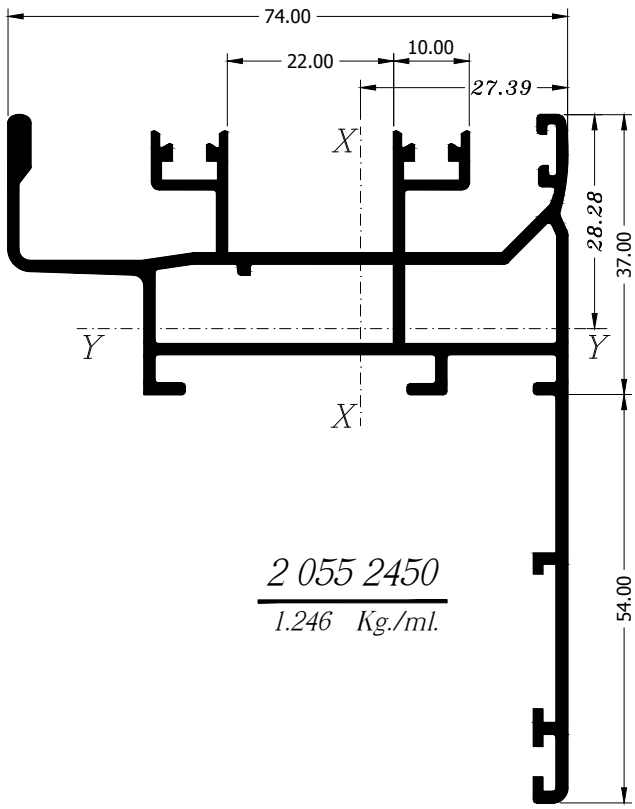

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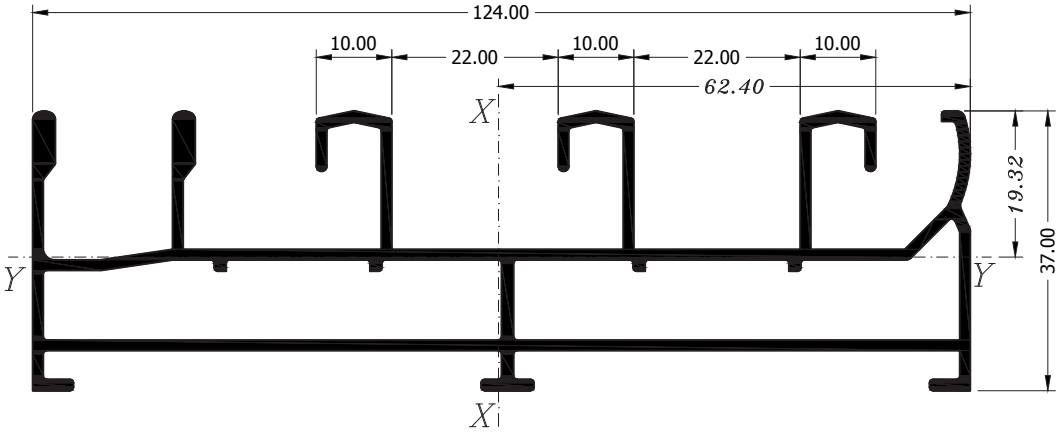
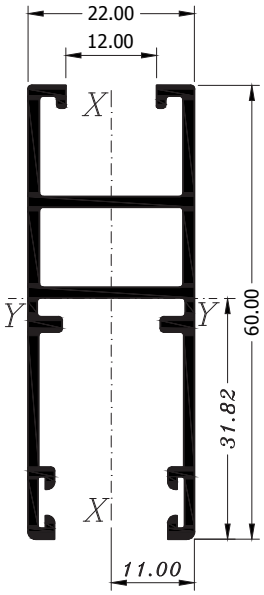


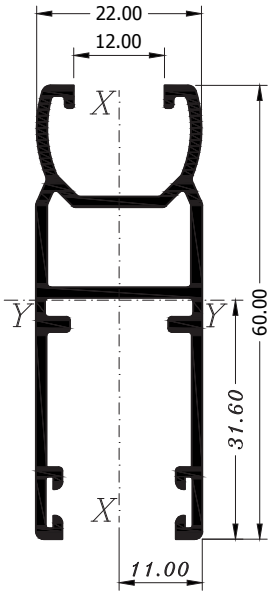
2 055 1900

1.607 Kg./ml.



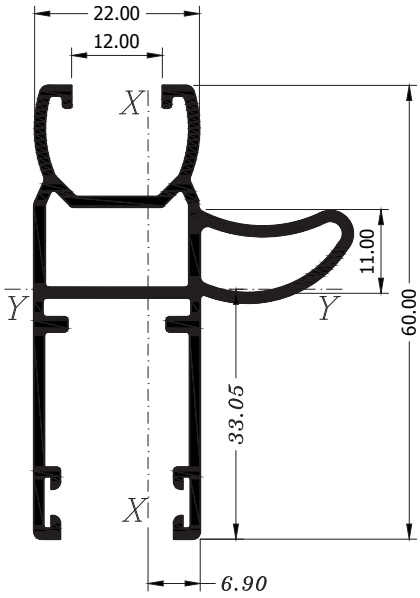
2 055 4210

0.608 Kg./ml.



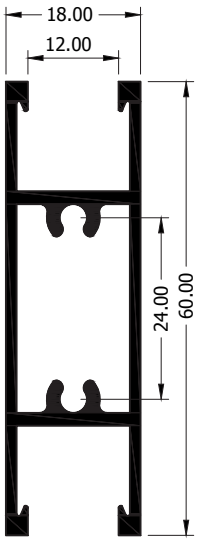
2 055 4216

0.600 Kg./ml.



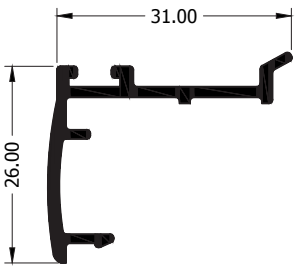
2 055 4416

0.745 Kg./ml.



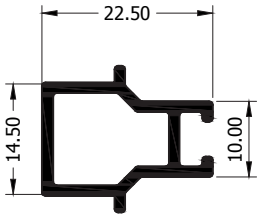
2 055 5210

0.628 Kg./ml.



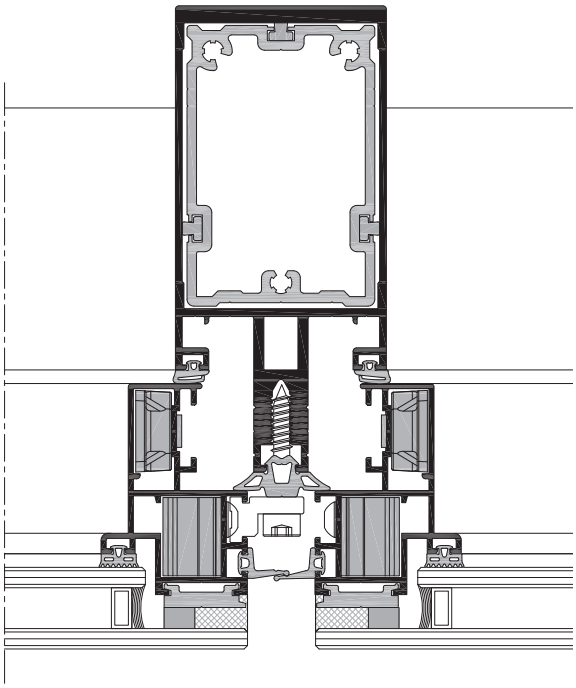
2 055 9510

0.254 Kg./ml.



2 055 9610

0.232 Kg./ml.



PANORAMA 62

Curtain Wall System

- Wide variety of profiles (mullions and transoms) with different dimensions and moment of inertia to fulfill the structural requirements.
- Available in 3 different glazing appearances, conventional curtain wall, full structural glazing and semi structural glazing (same appearance for fixed and opening panels internally & externally).
- Improved statical values due to inserted standard steel or aluminum profiles.
- unique transom connector for gapless.

Technical Characteristics

Mullion Depth

62 mm.

Mullion Height

92 mm. to 187 mm.

Transom Depth

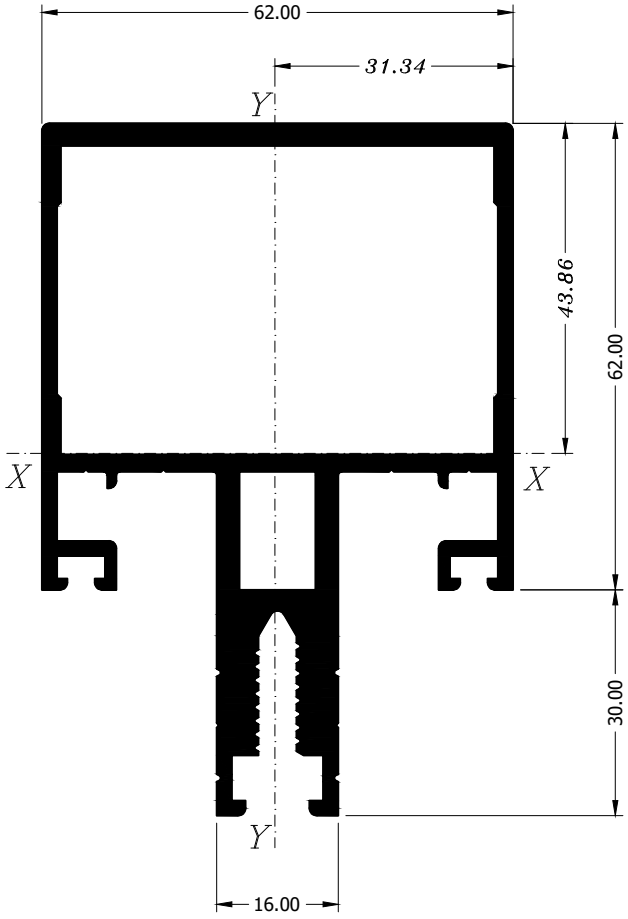
62 mm.

Transom Height

77 mm. to 122 mm.

Max Sash Weight (Top Hung)

130 kg.

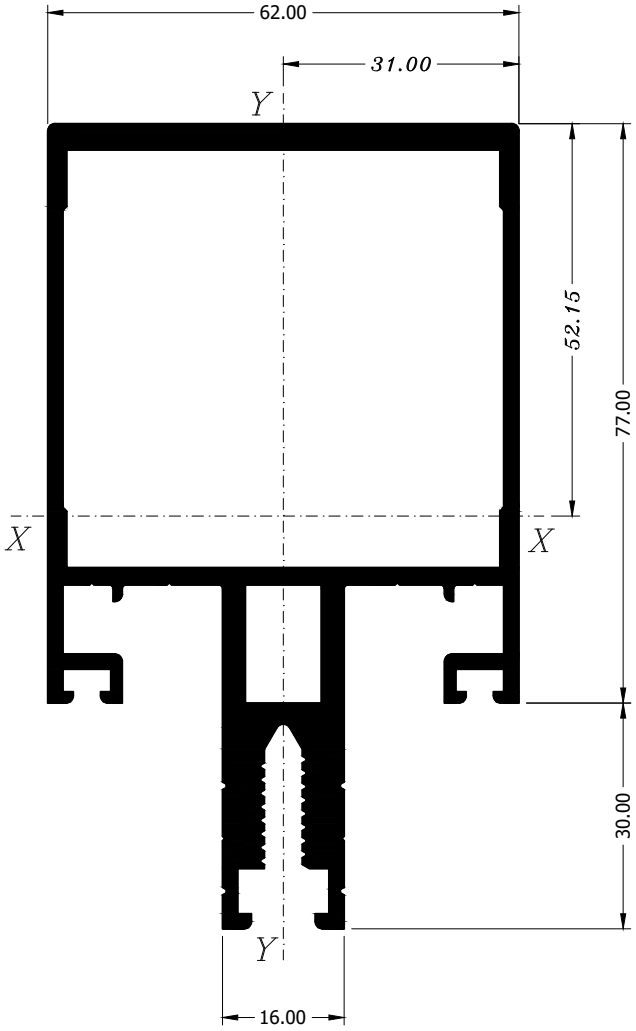


3 062 1206

2.741 Kg./ml.

I_x = 75.89 Cm^4

I_y = 36.81 Cm^4

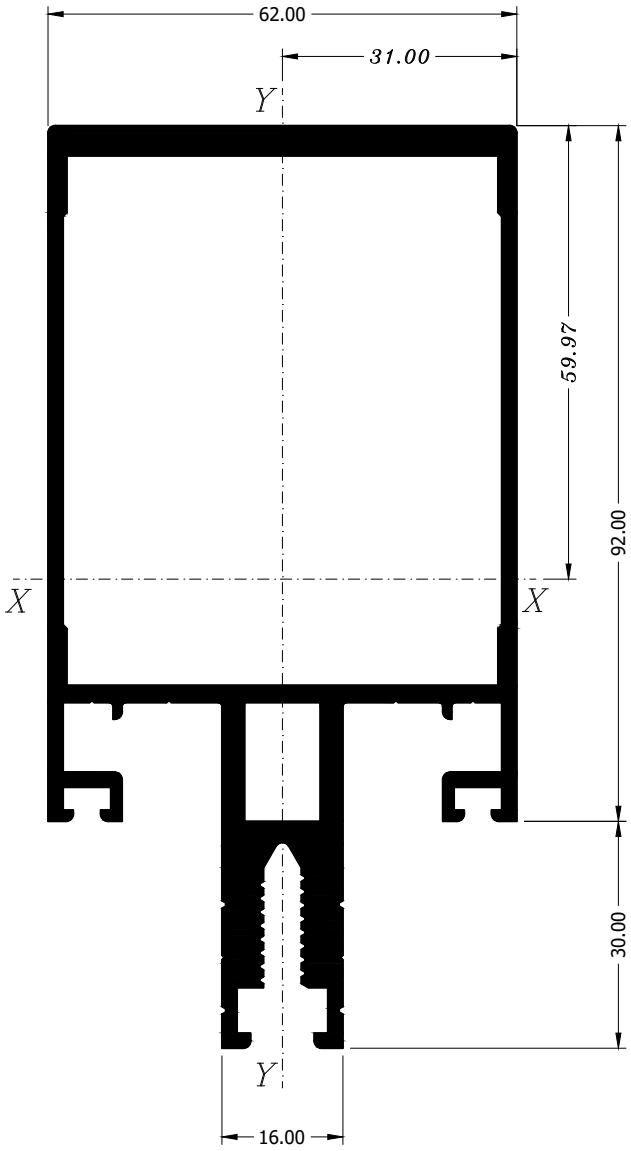


3 062 1207

2.981 Kg./ml.

I_x = 122.79 Cm^4

I_y = 43.02 Cm^4

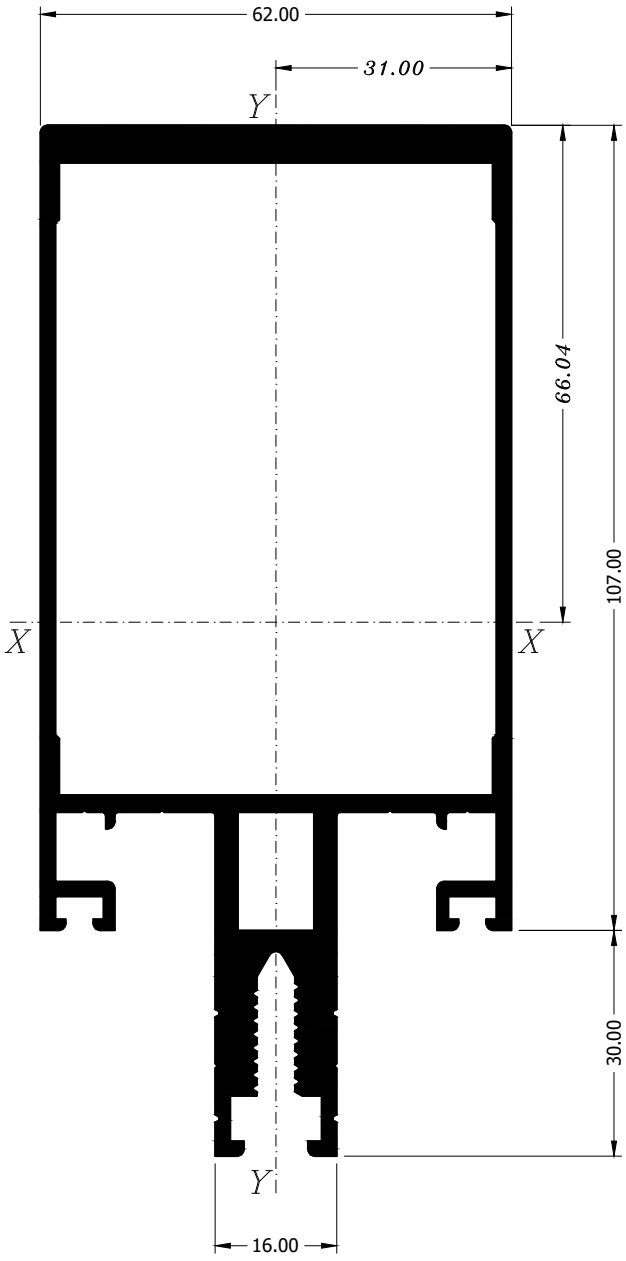


3 062 1209

3.221 Kg./ml.

$I_x = 186.11$ Cm^4

$I_y = 49.24$ Cm^4

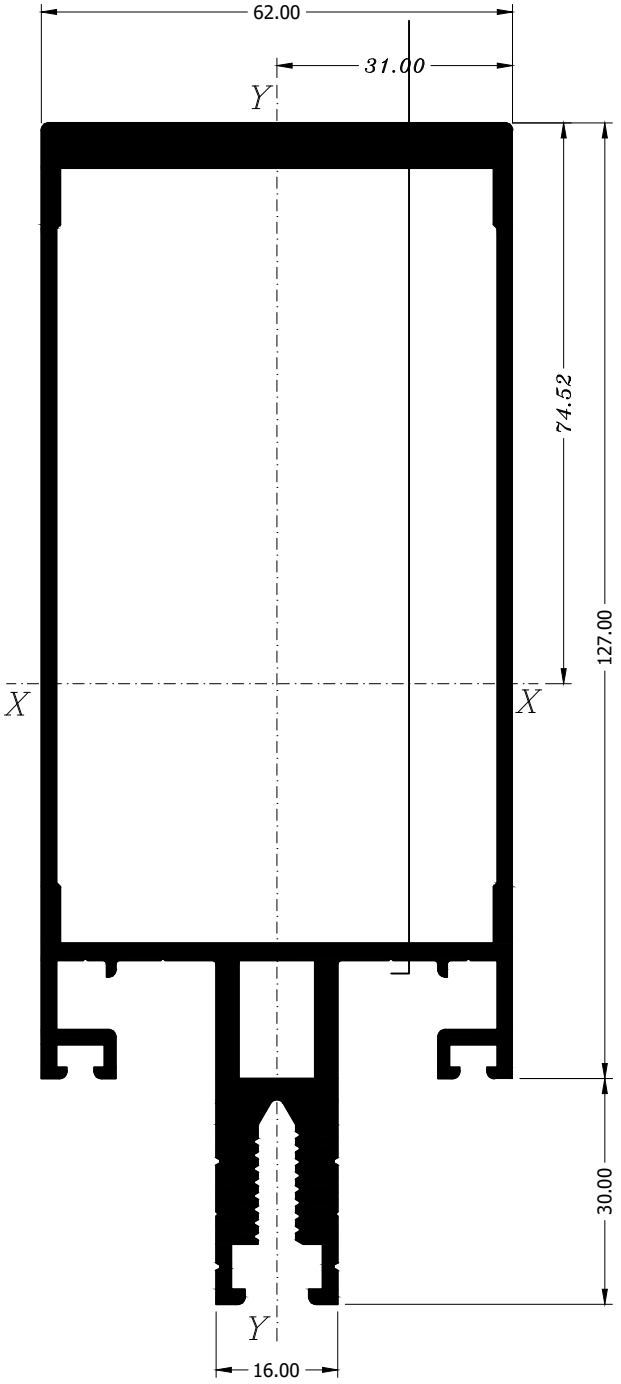


3 062 1210

3.540 Kg./ml.

$I_x = 278.60$ Cm^4

$I_y = 56.27$ Cm^4

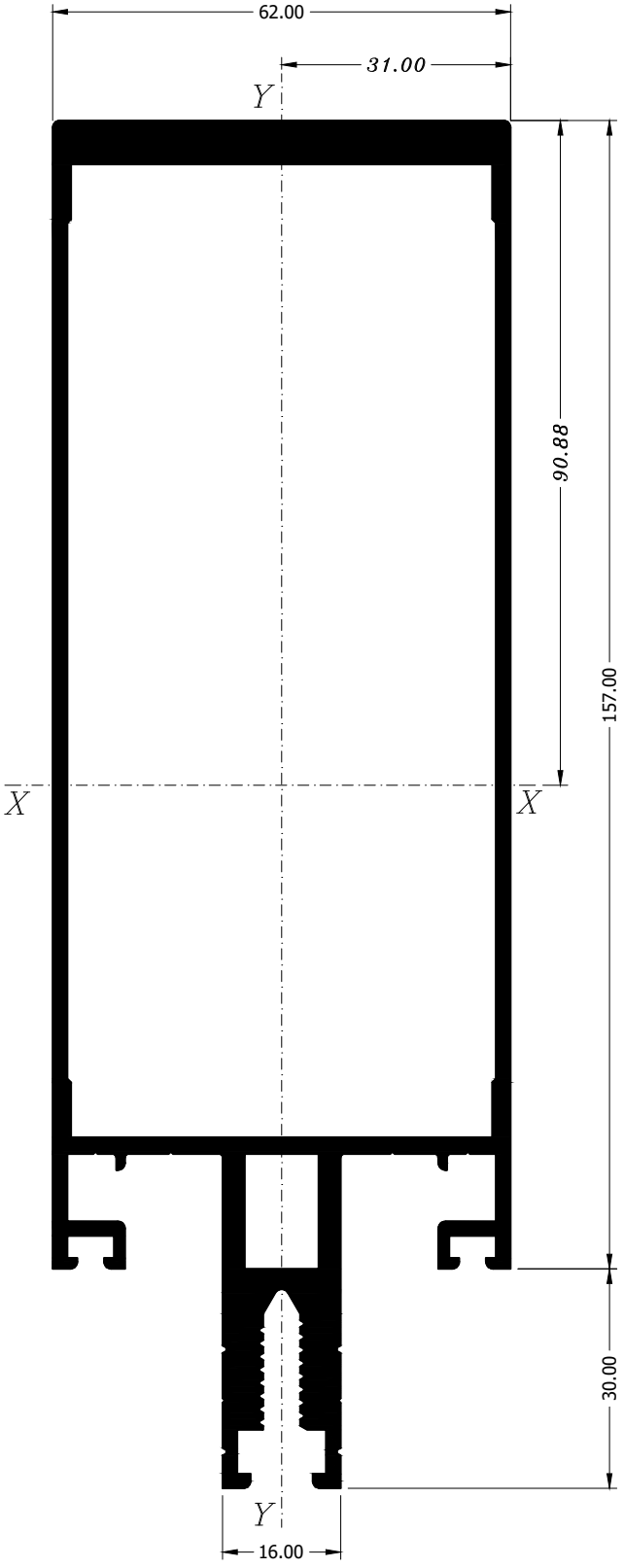


3 062 1212

3.910 Kg./ml.

$I_x = 430.69$ Cm^4

$I_y = 65.10$ Cm^4



3 062 1215

4.253 Kg./ml.

$I_x = 682.70$ Cm^4

$I_y = 75.91$ Cm^4

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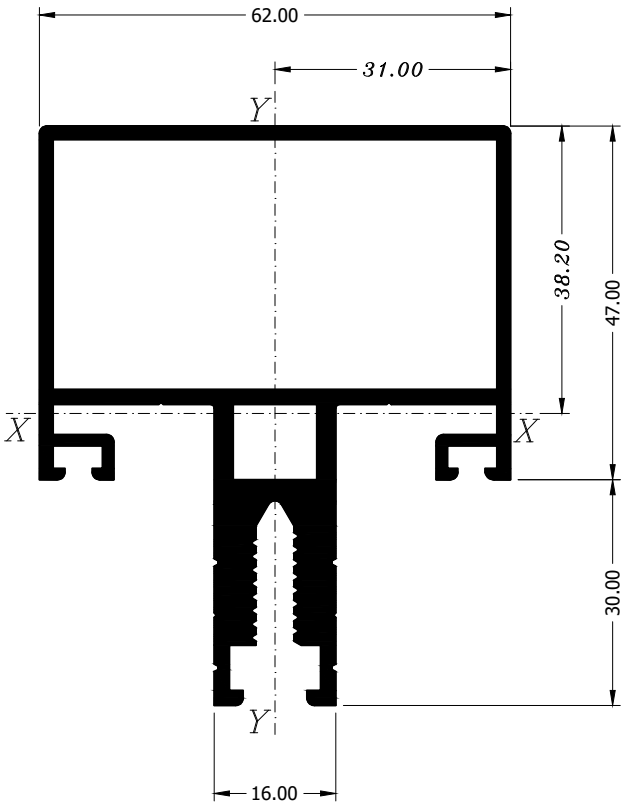
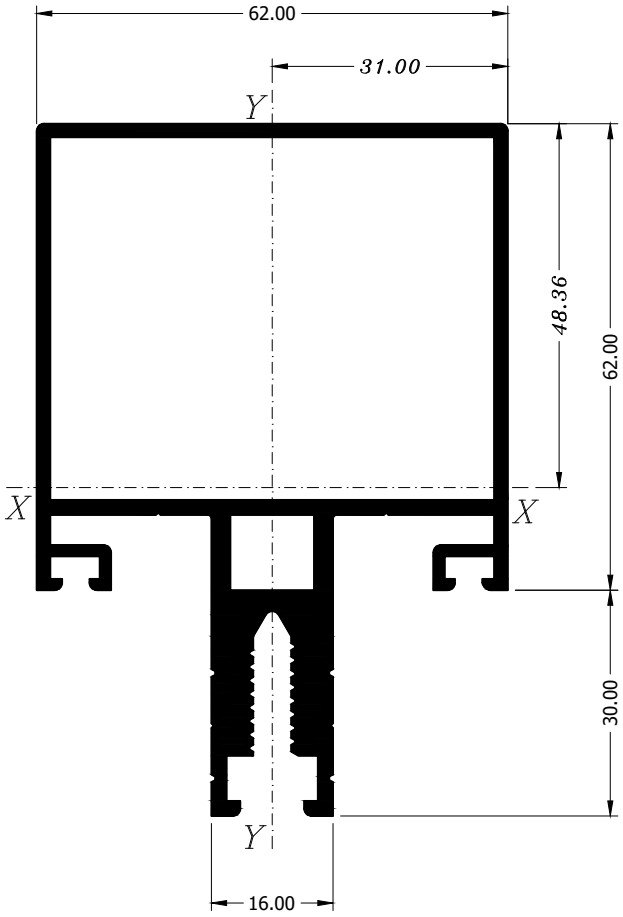


3 062 1504

2.103 Kg./ml.

I_x = 36.80 Cm^4

I_y = 25.42 Cm^4

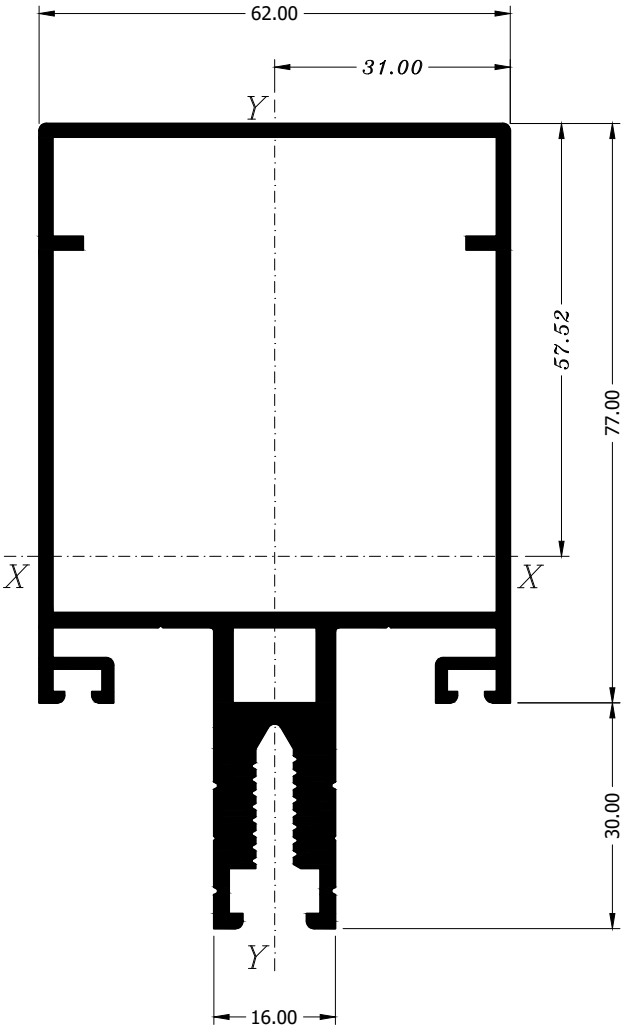


3 062 1506

2.252 Kg./ml.

I_x = 60.29 Cm^4

I_y = 30.31 Cm^4

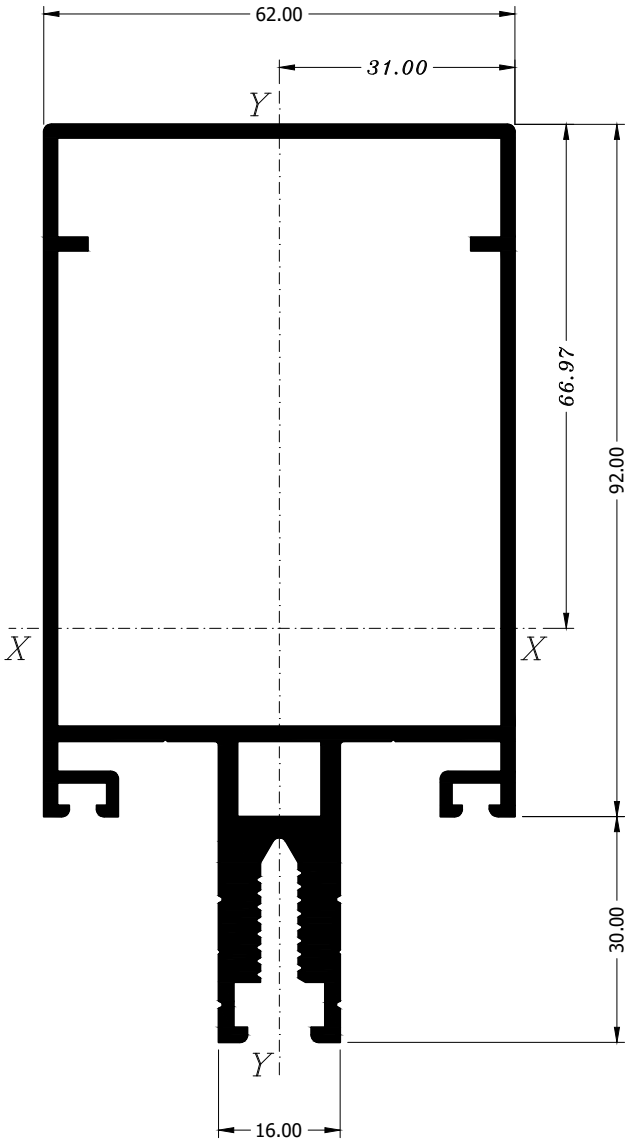


3 062 1507

2.435 Kg./ml.

I_x = 94.66 Cm^4

I_y = 36.28 Cm^4

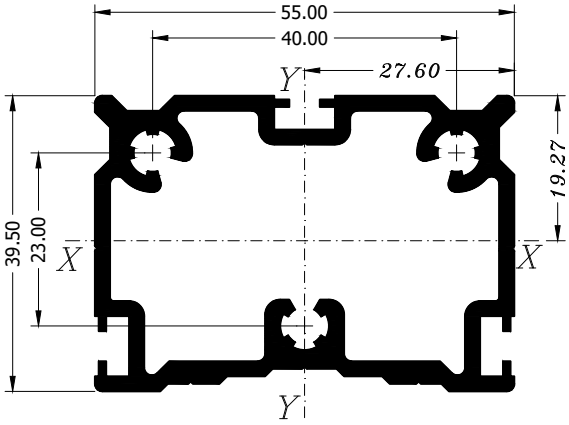


3 062 1509

2.592 Kg./ml.

I_x = 136.91 Cm^4

I_y = 41.17 Cm^4

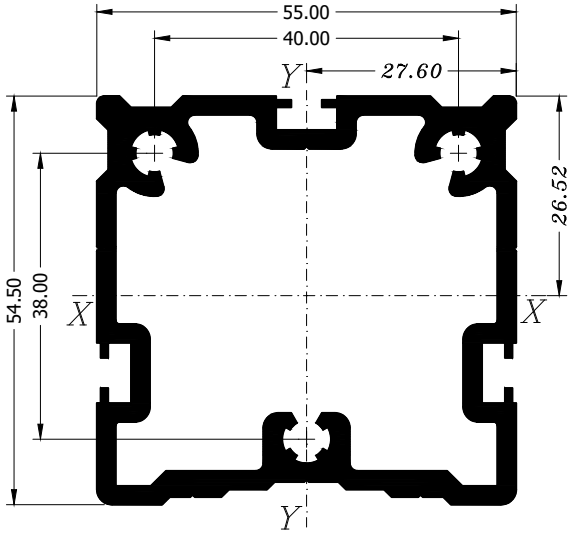


3 062 4006

1.469 Kg./ml.

I_x = 11.29 Cm^4

I_y = 19.66 Cm^4

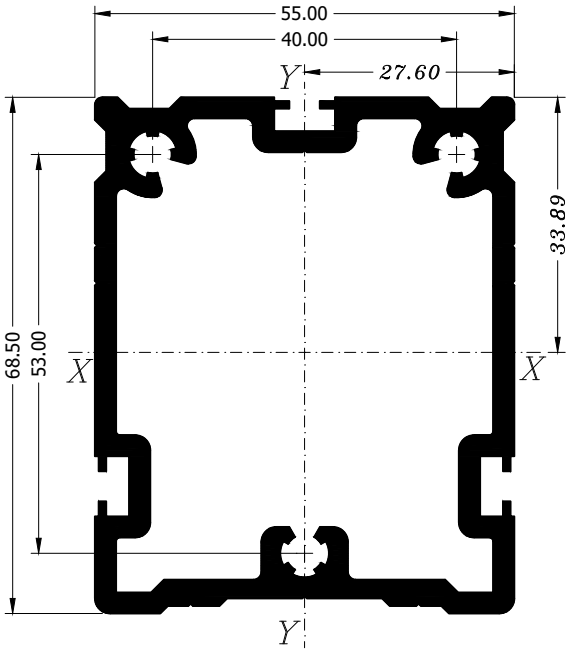


3 062 4007

2.017 Kg./ml.

I_x = 29.71 Cm^4

I_y = 29.63 Cm^4

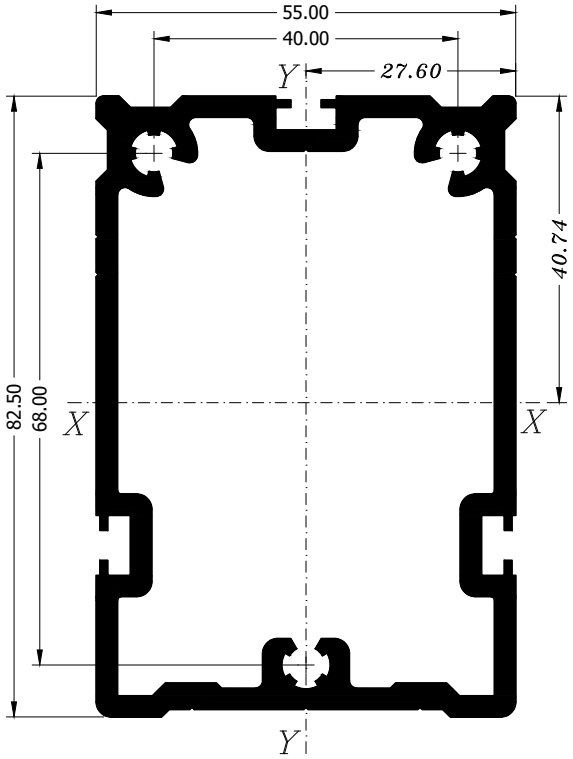


3 062 4009

2.357 Kg./ml.

I_x = 56.47 Cm^4

I_y = 36.99 Cm^4

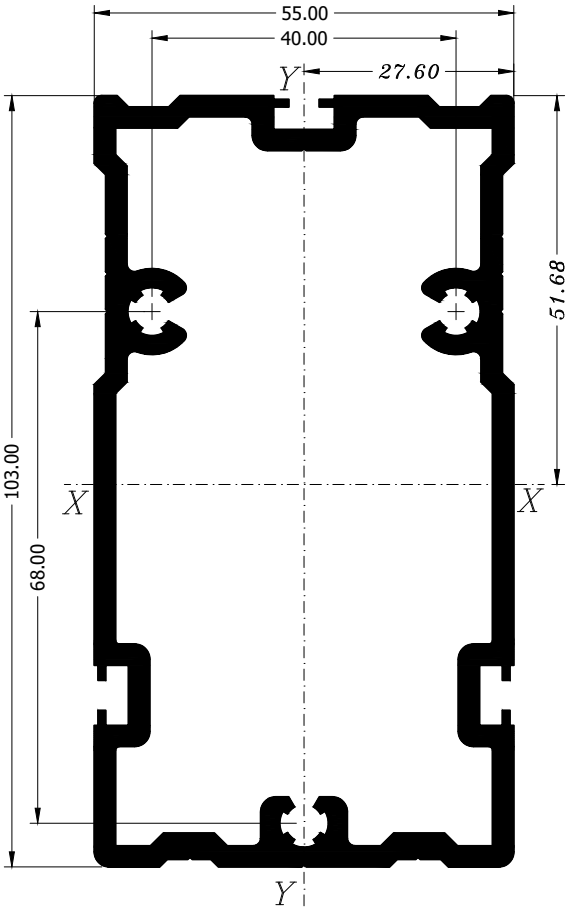


3 062 4010

2.570 Kg./ml.

I_x = 88.91 Cm^4

I_y = 42.35 Cm^4

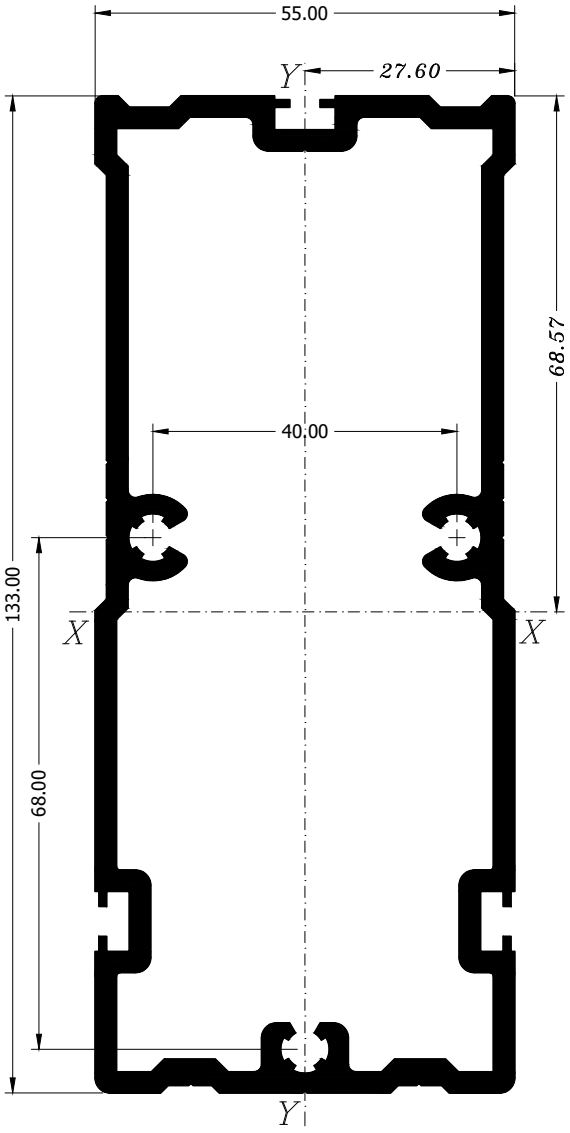


3 062 4012

2.965 Kg./ml.

$I_x = 146.78$ Cm^4

$I_y = 50.70$ Cm^4



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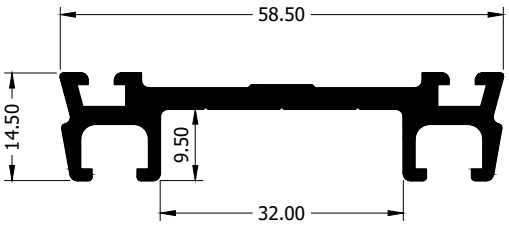
3.431 Kg./ml.

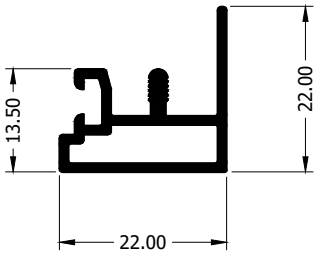
$I_x = 268.26$ Cm^4

$I_y = 60.96$ Cm^4



3 062 5011

0.719 Kg./ml.



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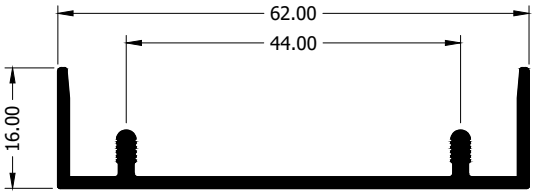

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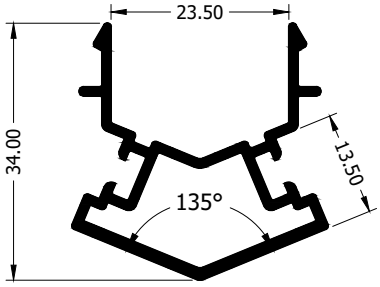
0.436 Kg./ml.

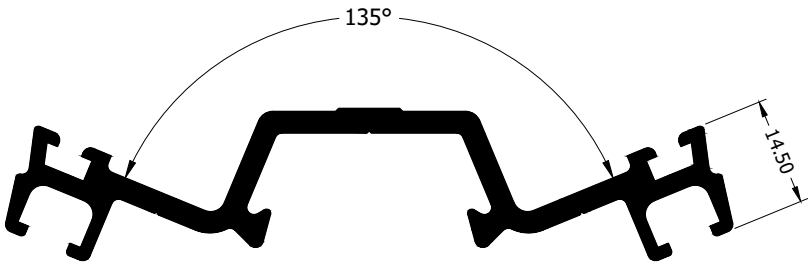


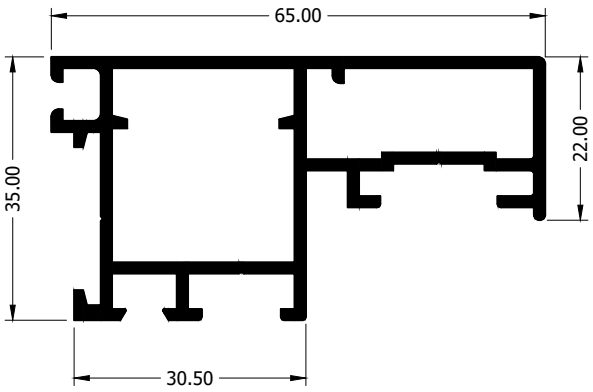
3 062 5426

0.487 Kg./ml.

3 062 5121

1.196 Kg./ml.





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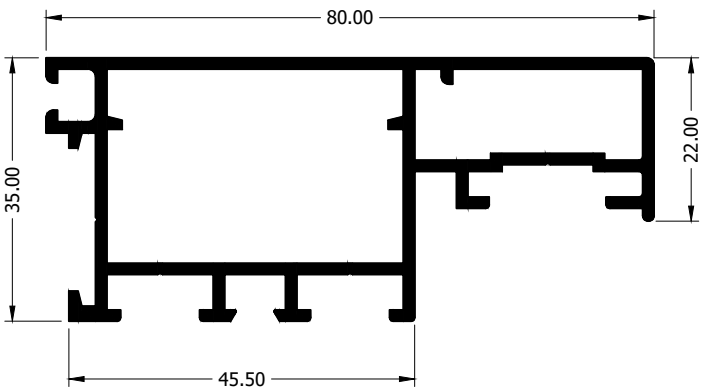
1.040 Kg./ml.



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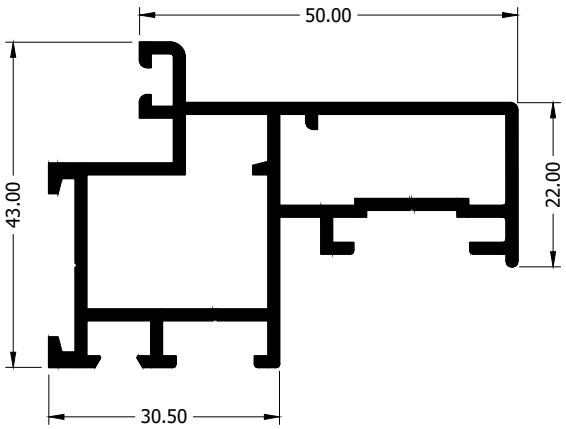
1.204 Kg./ml.



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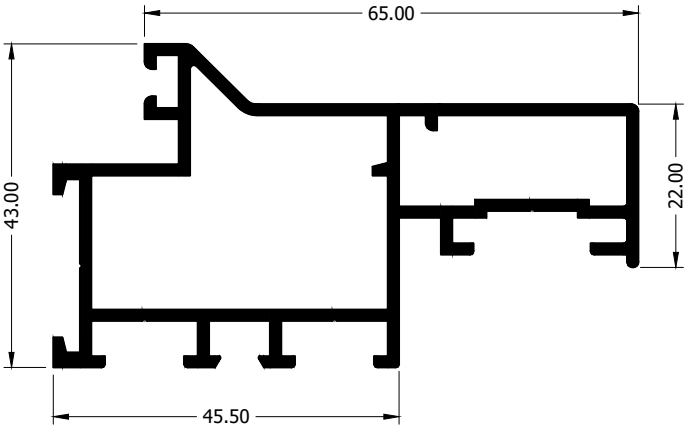

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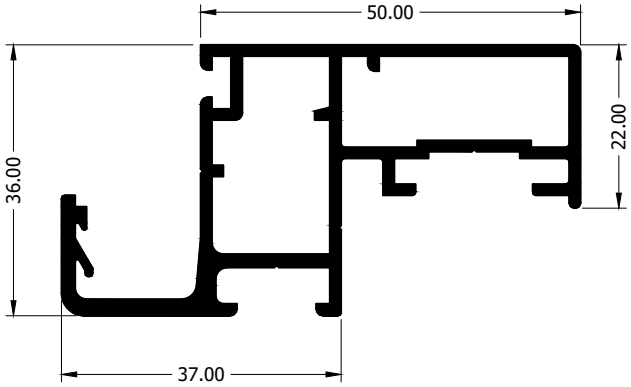
1.238 Kg./ml.



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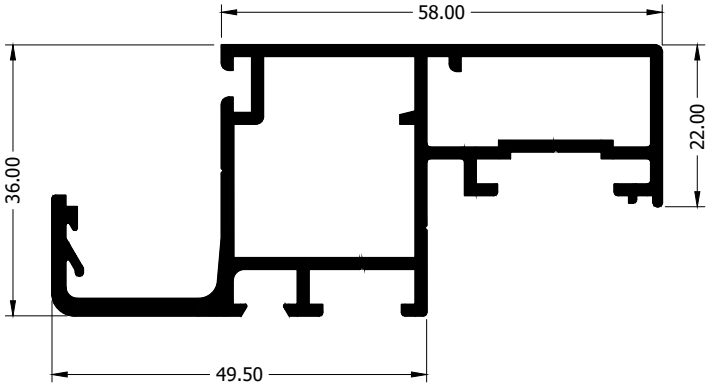
1.102 Kg./ml.



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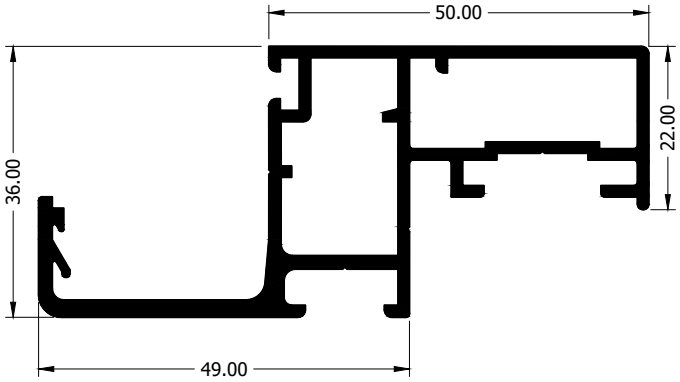
1.210 Kg./ml.



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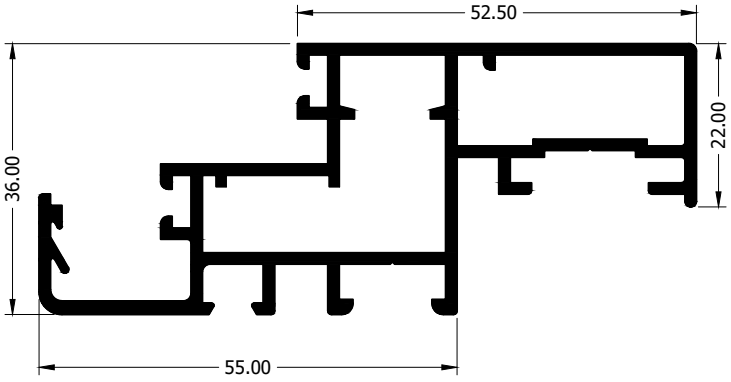
1.185 Kg./ml.



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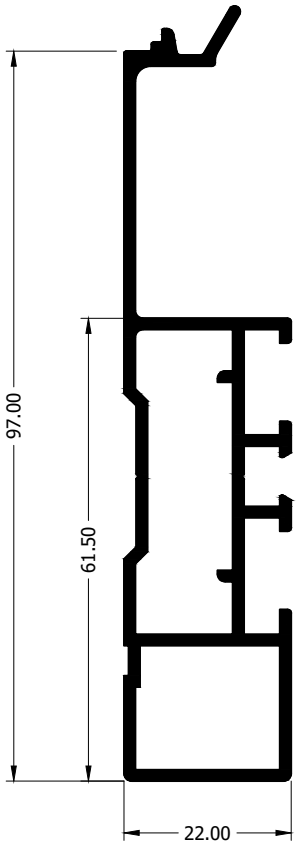
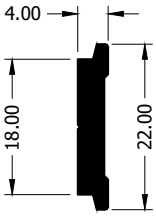
1.320 Kg./ml.



3 062 9169

1.088 Kg./ml.



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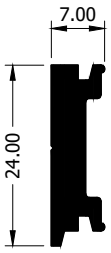
0.194 Kg./ml.



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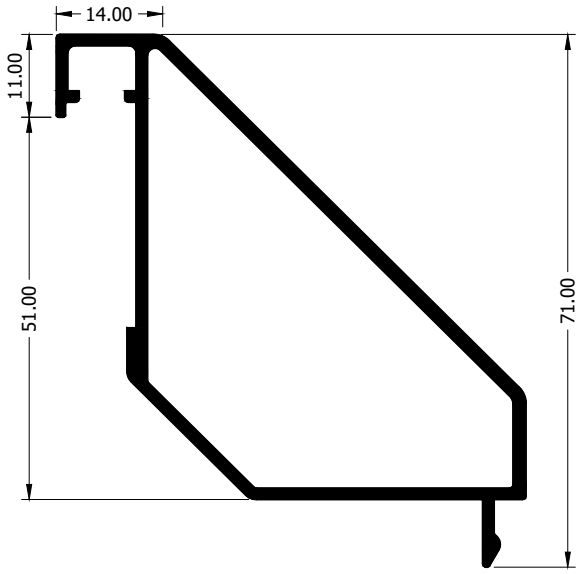
0.305 Kg./ml.



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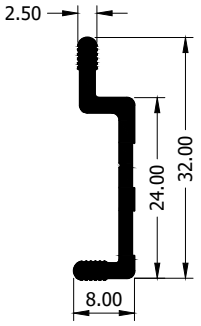
0.943 Kg./ml.



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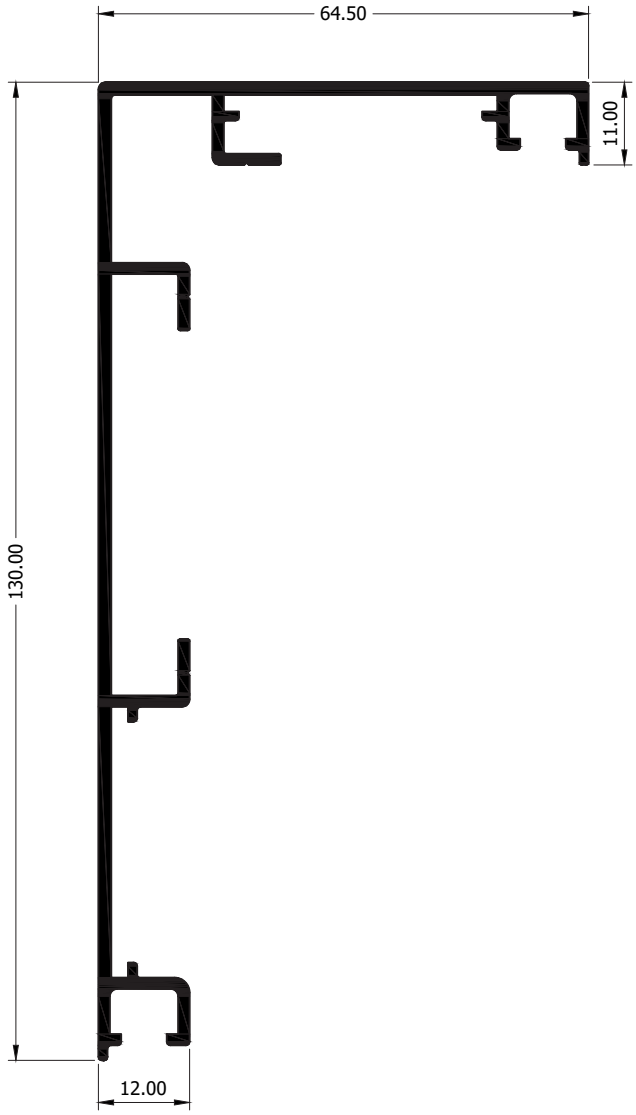
0.227 Kg./ml.



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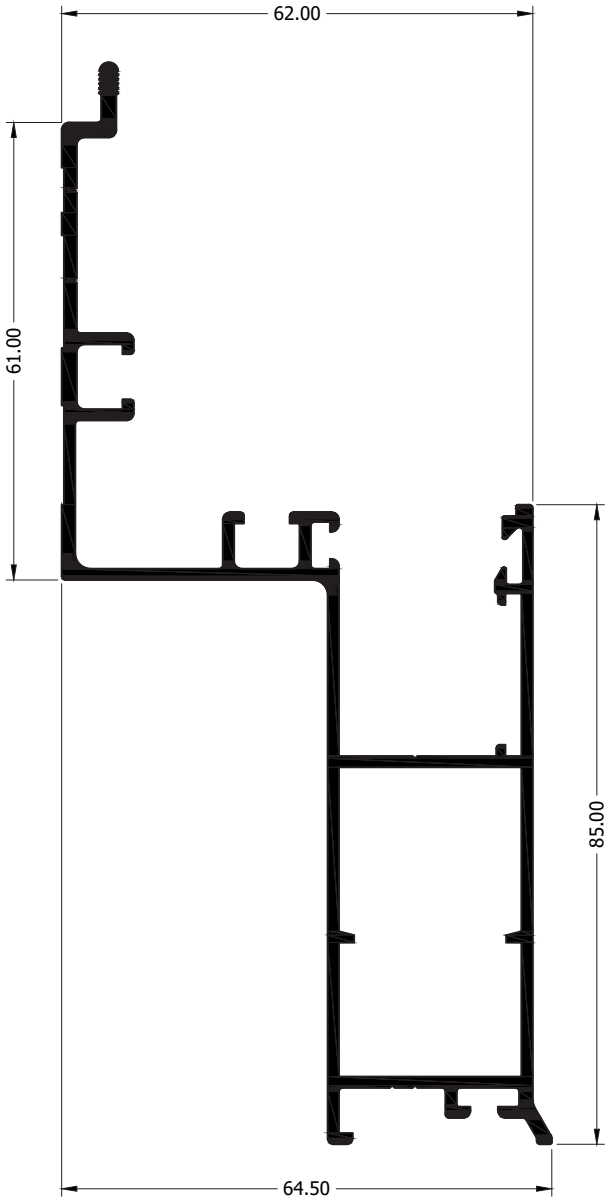
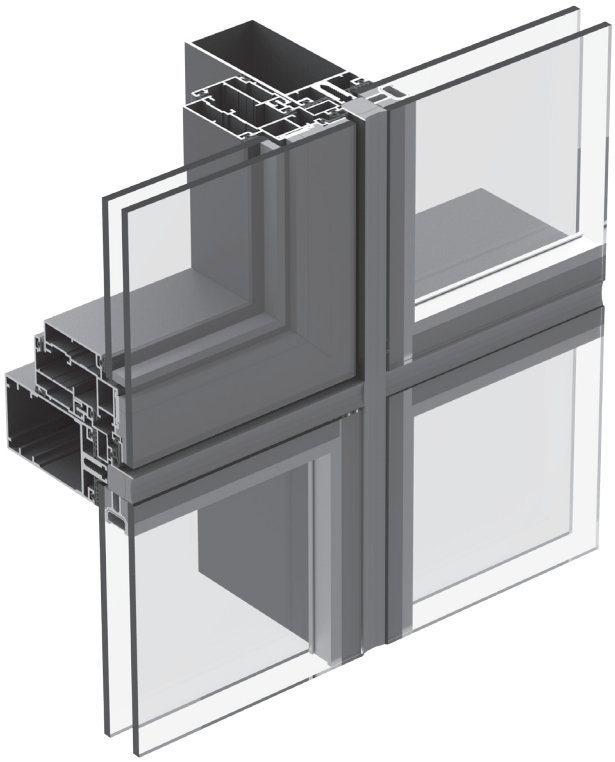
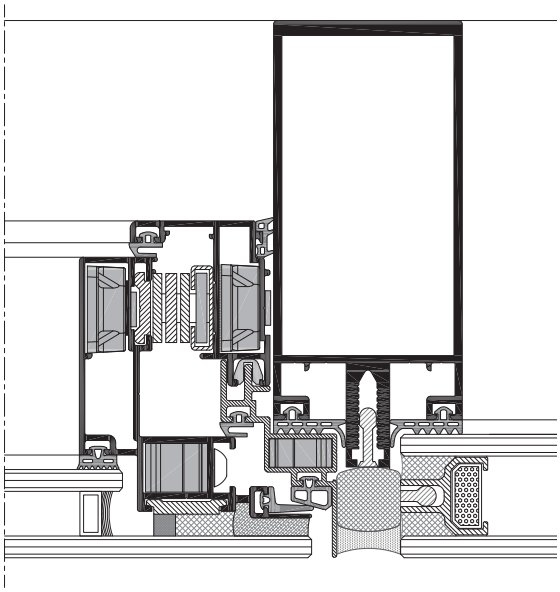
1.269 Kg./ml.



3 062 9816

1.617 Kg./ml.





PANORAMA 52

Curtain Wall System

- Available in 3 different glazing appearances, conventional curtain wall, full structural glazing and 2 way structural glazing.
- Integrated with different types of windows and entrance doors (inward – outward opening), including projection top hung/parallel opening type.
- Allow same profile for mullion and transom (option).
- Controlled drainage system via a special transom gasket.
- Allow mullion and transom connections with or without notching of mullion or transom.

Technical Characteristics

Mullion Depth

52 mm.

Mullion Height

85 mm. to 245 mm.

Transom Depth

52 mm.

Transom Height

45 mm. to 135 mm.

Max Sash Weight (Top Hung)

130 kg.

Complies with European norm hEN 1435-1

Air Permeability	(Class AE750)
Water Tightness	(Class RE900) up to 900 pa.
Resistance to wind load	up to 2000 pa.
Impact Resistance	(Class I5/E5)
UF values	1.8 to 3.3 W/m²K DIN EN ISO 10077-2

IRCCOS S.r.l.

Istituto di Ricerca e Certificazione per le Costruzioni Sostenibili

Notified Body No. 1994 in accordance with Regulation CPR (UE) No. 305/2011

CERTIFICATE

n. 0070/2019

The laboratory **IRCCOS S.r.l.**

declares that:

the product constituted by an Aluminium Curtain Wall
with gaskets between glasses, trade name

"PANORAMA 52 – STRUCTURAL GLAZING"

produced by:

Machines and Aluminim Center
122 MOHIY ALDIN ABU ELEZZ ST.
12411 GIZA GIZA EGITTO

Successfully passed the following tests with the reported classes:

Air Permeability – positive pressure: class AE750
Air Permeability – negative pressure: class AE750
Watertightness under static pressure: class RE900
Resistance to wind loads – positive pressure: 2000 Pa
Resistance to wind loads – negative pressure: 2000 Pa

according to the following standards:

EN 13830:2015
EN 12153:2000 - EN 12152:2002
EN 12155:2000 - EN 12154:1999
EN 12179:2000 - EN 13116:2001

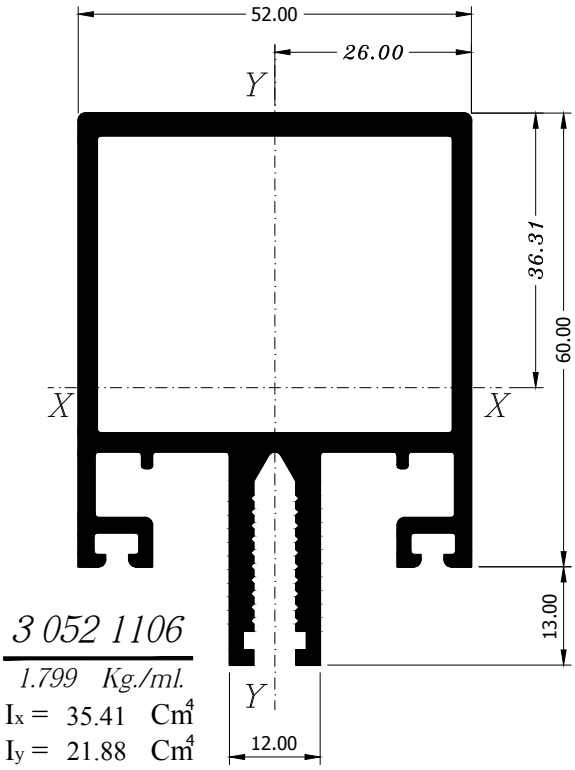
Technical Operator
Stefano Galli

IRCCOS S.r.l.
Istituto di Ricerca e Certificazione
per le Costruzioni Sostenibili
via Grandi n° 17, 21017 Samarate (VA)
C.F./P.IVA 05159630960

2nd August 2019

For complete results see the Test Report No. 0322/RP/19 issued on 2nd August 2019.
The results obtained refer exclusively to the samples tested.

IRCCOS S.r.l. - Via Achille Grandi 17 – 21017 Samarate (VA) - Tel. 0331 594628
Unità operativa secondaria – Via dell'Industria, 6 – 72017 – Ostuni Z.I. (BR)
Cap. Soc. €89.220,80 I.V. - C.F. e P. Iva 05159630960 - R.E.A. VA-351993 - www.irccos.com

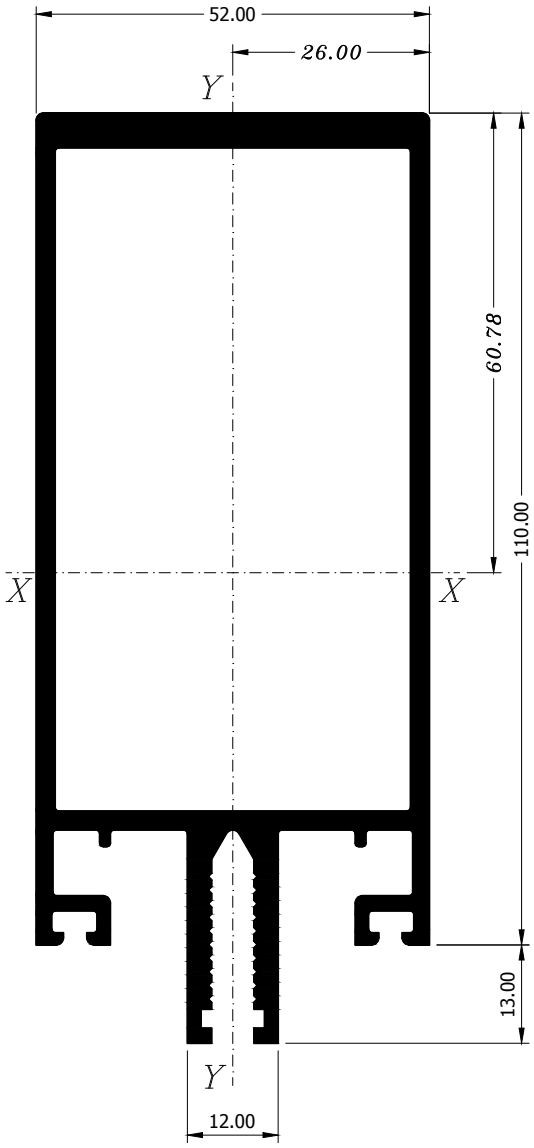


3 052 1106

1.799 Kg./ml.

I_x = 35.41 Cm^4

I_y = 21.88 Cm^4

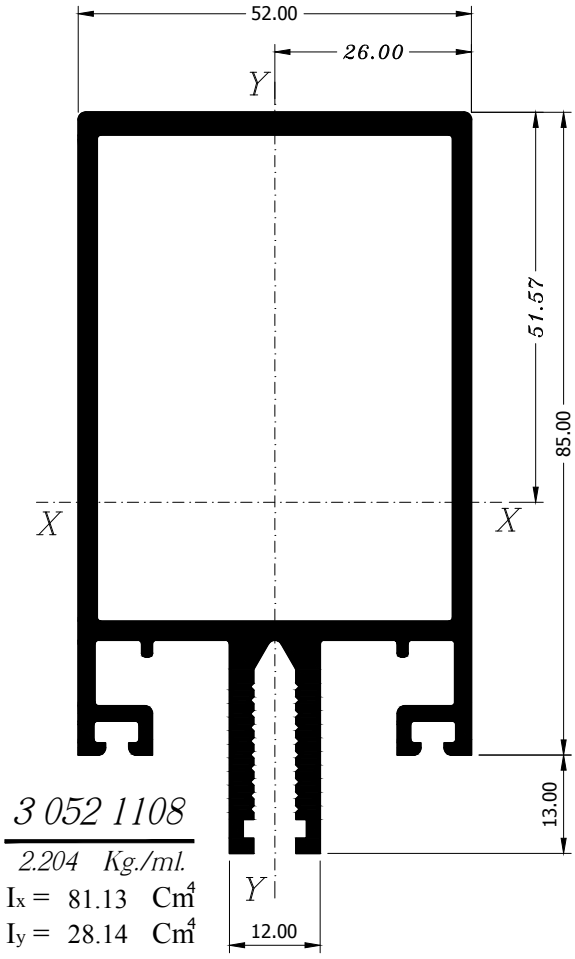


3 052 1111

2.808 Kg./ml.

I_x = 182.52 Cm^4

I_y = 38.52 Cm^4

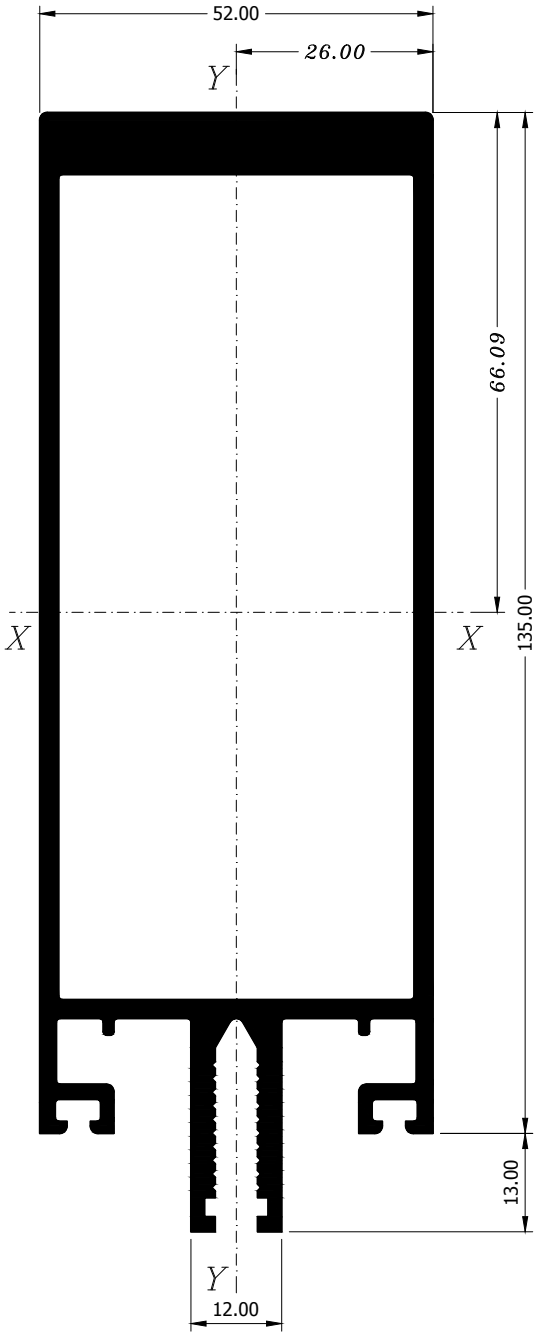


3 052 1108

2.204 Kg./ml.

I_x = 81.13 Cm^4

I_y = 28.14 Cm^4

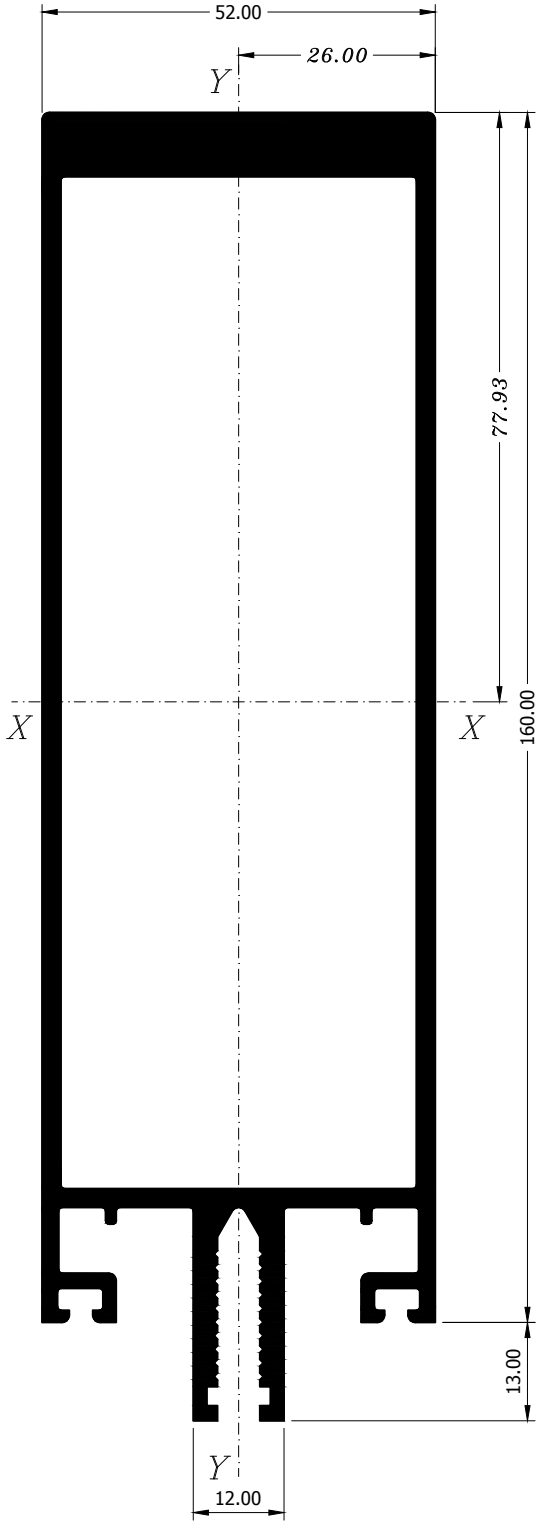


3 052 1113

3.620 Kg./ml.

$I_x = 372.49$ Cm^4

$I_y = 49.16$ Cm^4

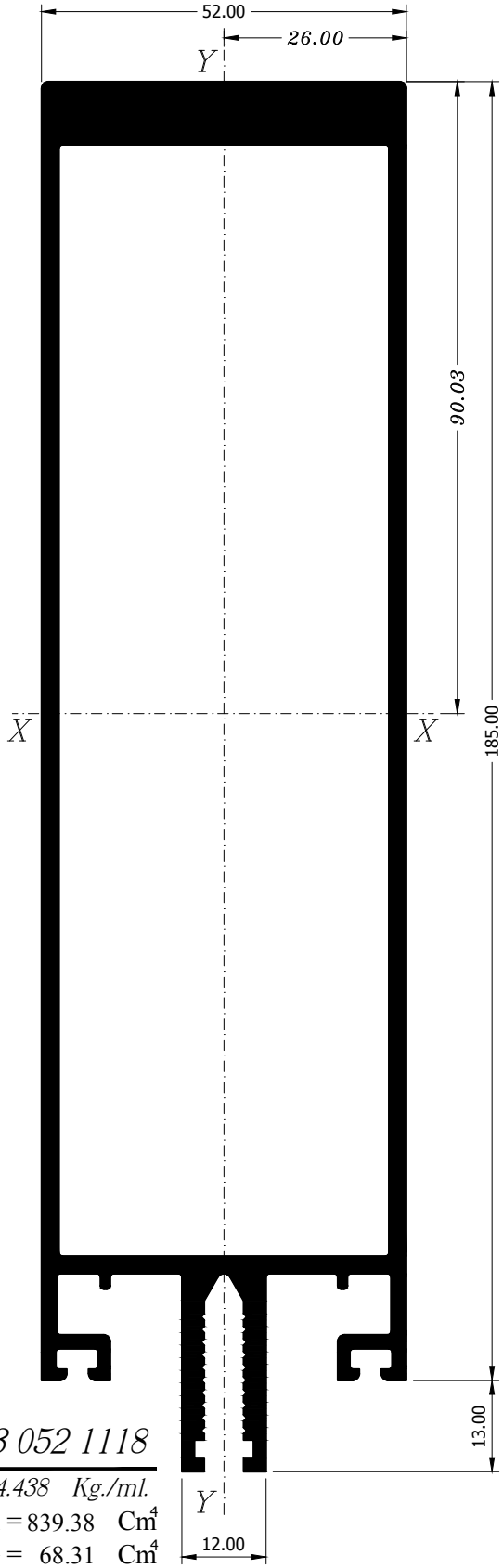


3 052 1116

3.969 Kg./ml.

$I_x = 564.74$ Cm^4

$I_y = 56.53$ Cm^4

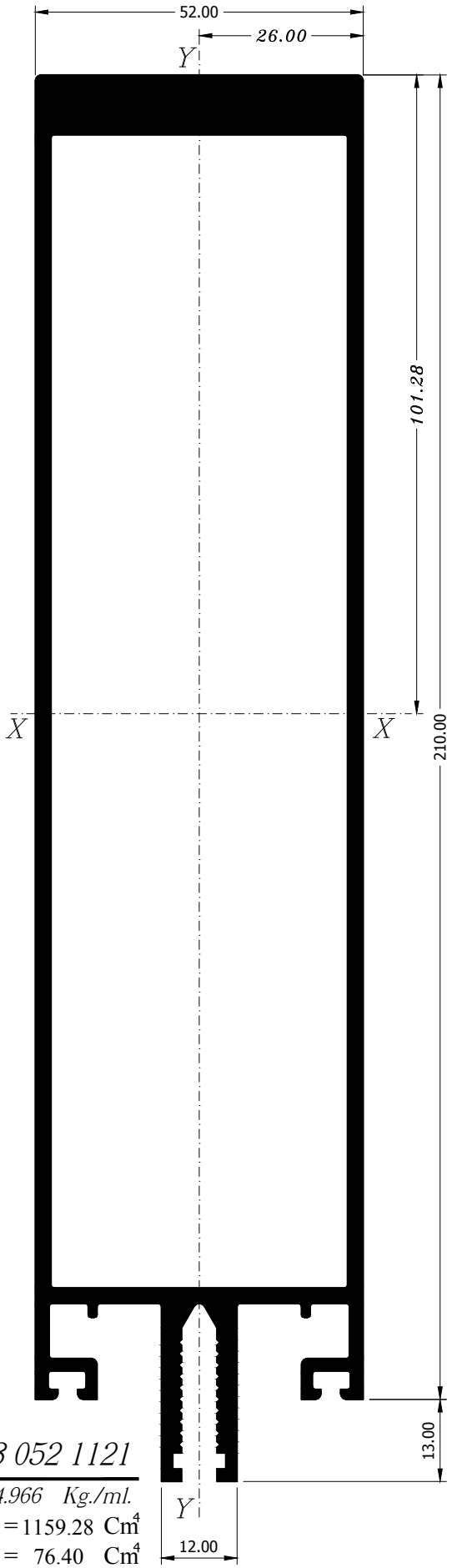


3 052 1118

4.438 Kg./ml.

I_x = 839.38 Cm^4

I_y = 68.31 Cm^4



3 052 1121

4.966 Kg./ml.

I_x = 1159.28 Cm^4

I_y = 76.40 Cm^4

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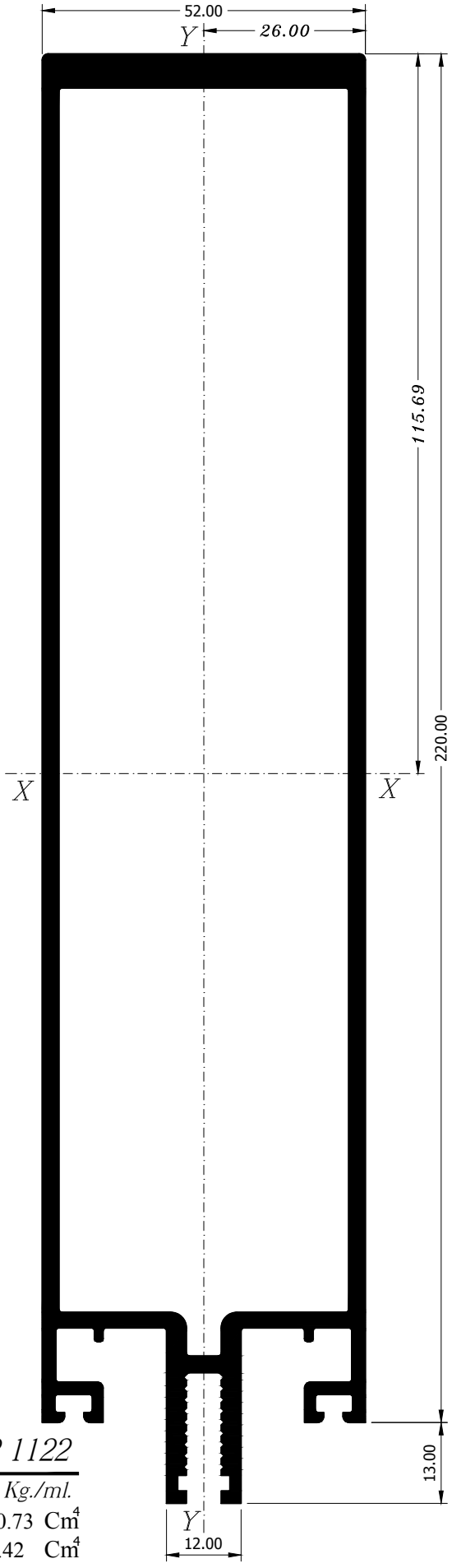
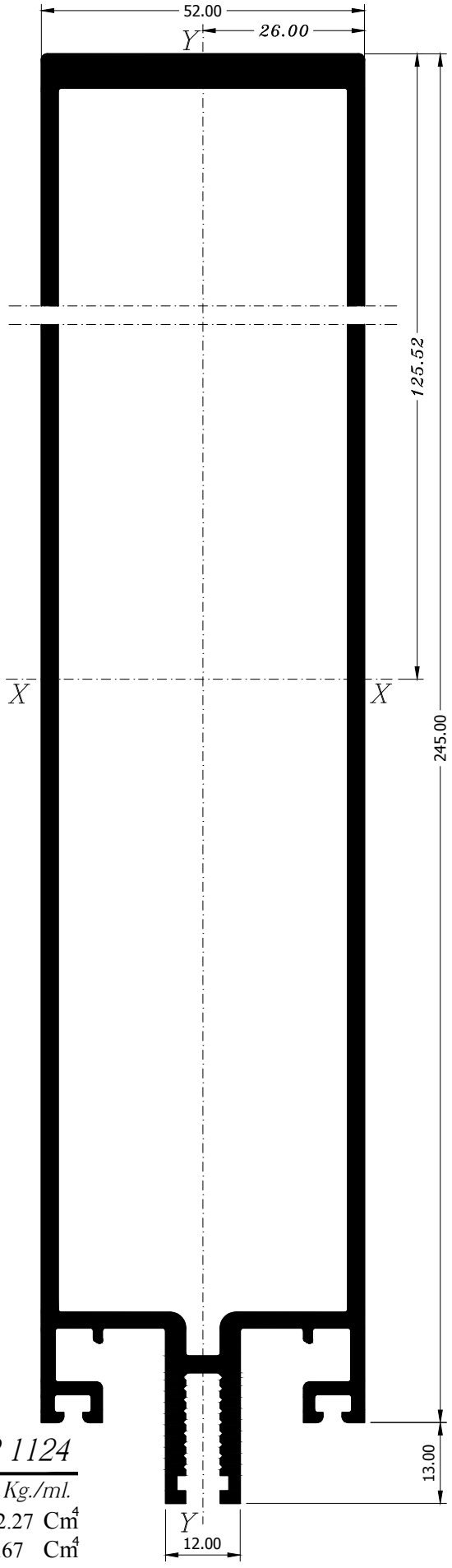


3 052 1122

4.770 Kg./ml.

I_x = 1110.73 Cm^4

I_y = 82.42 Cm^4



3 052 1124

5.262 Kg./ml.

I_x = 1522.27 Cm^4

I_y = 91.67 Cm^4

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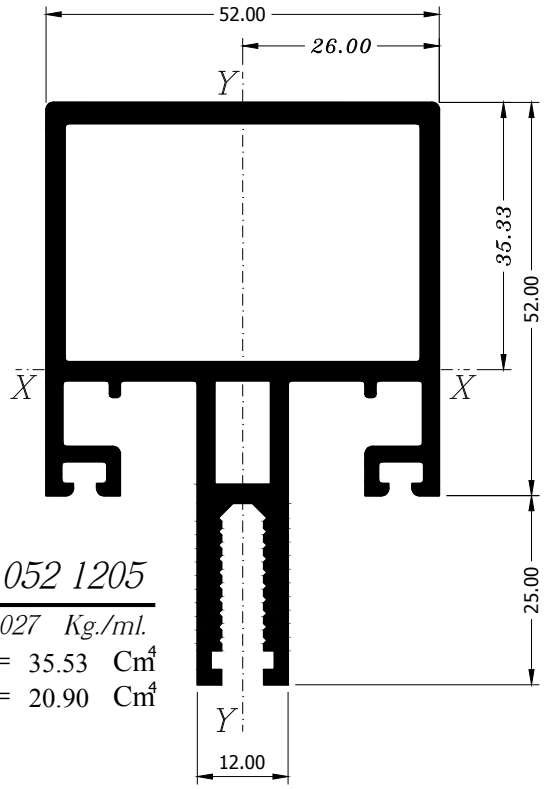
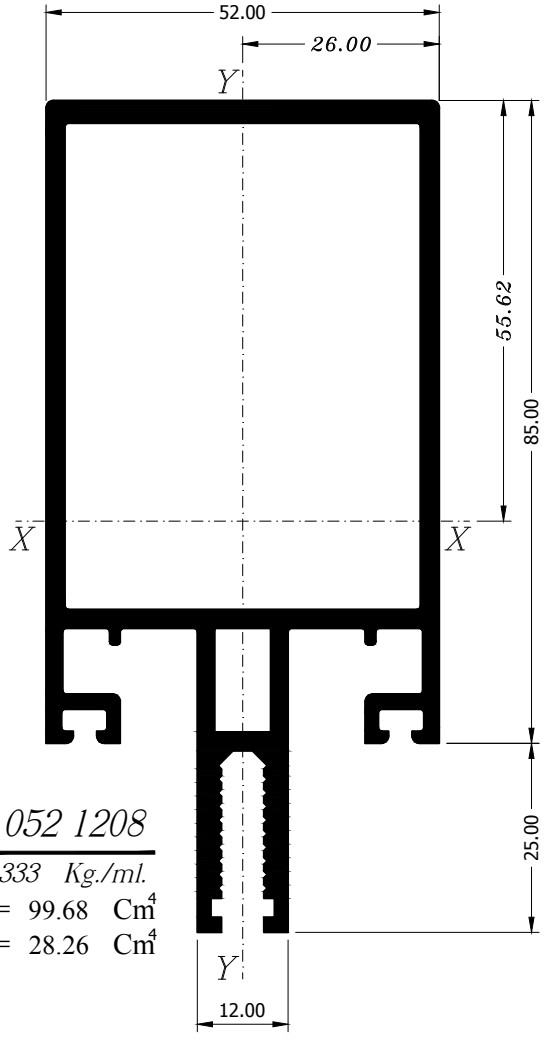


3 052 1205

2.027 Kg./ml.

I_x = 35.53 Cm^4

I_y = 20.90 Cm^4

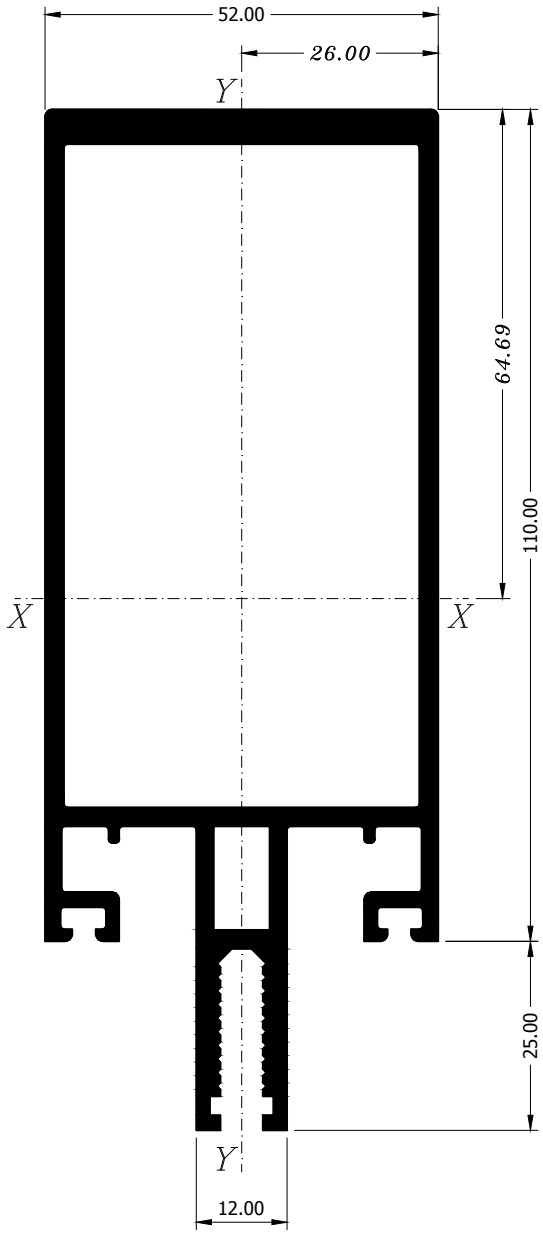


3 052 1208

2.333 Kg./ml.

I_x = 99.68 Cm^4

I_y = 28.26 Cm^4



3 052 1211

2.936 Kg./ml.

I_x = 213.07 Cm^4

I_y = 38.65 Cm^4

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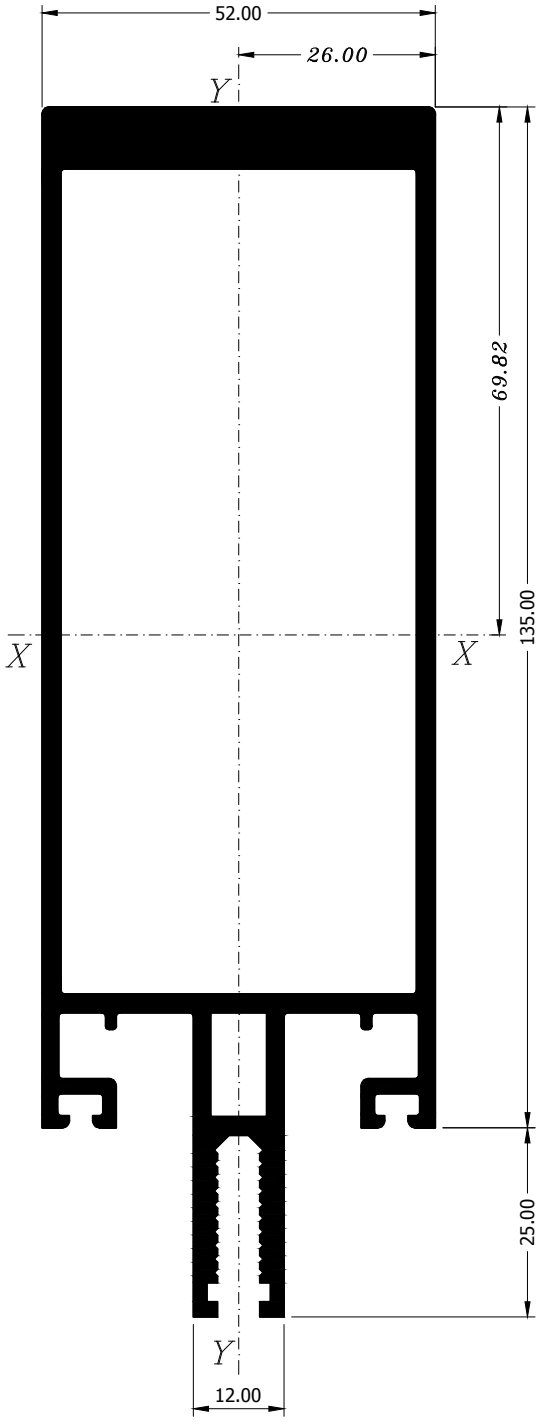
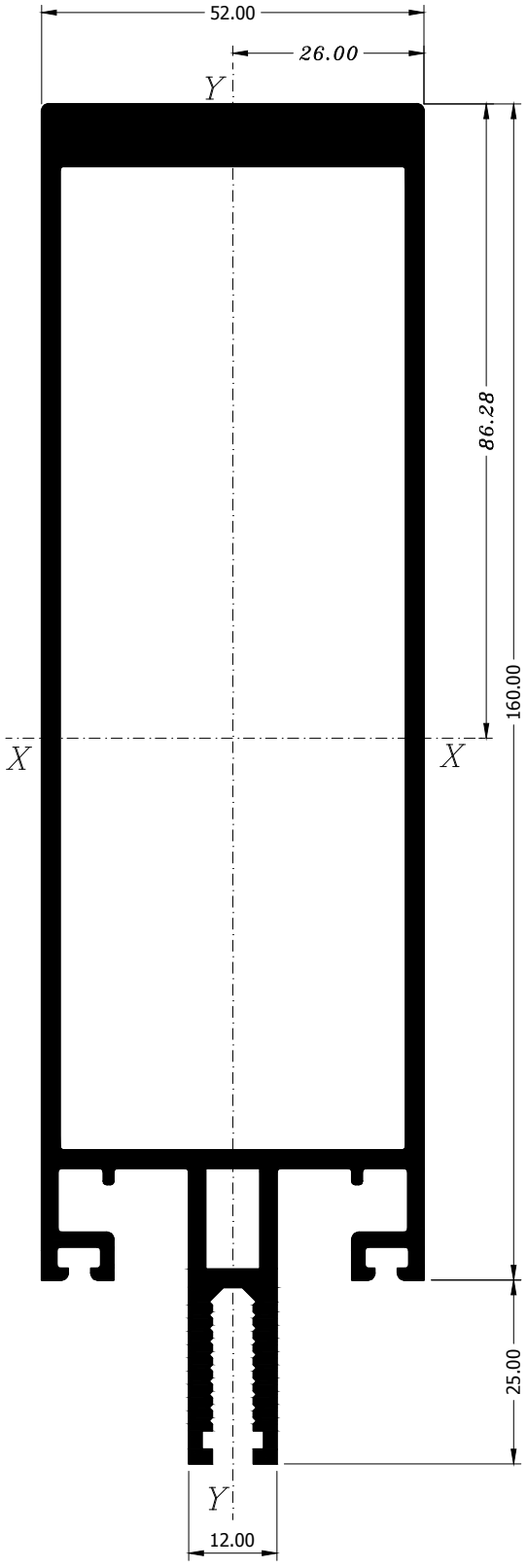


3 052 1213

3.750 Kg./ml.

I_x = 421.35 Cm^4

I_y = 49.29 Cm^4

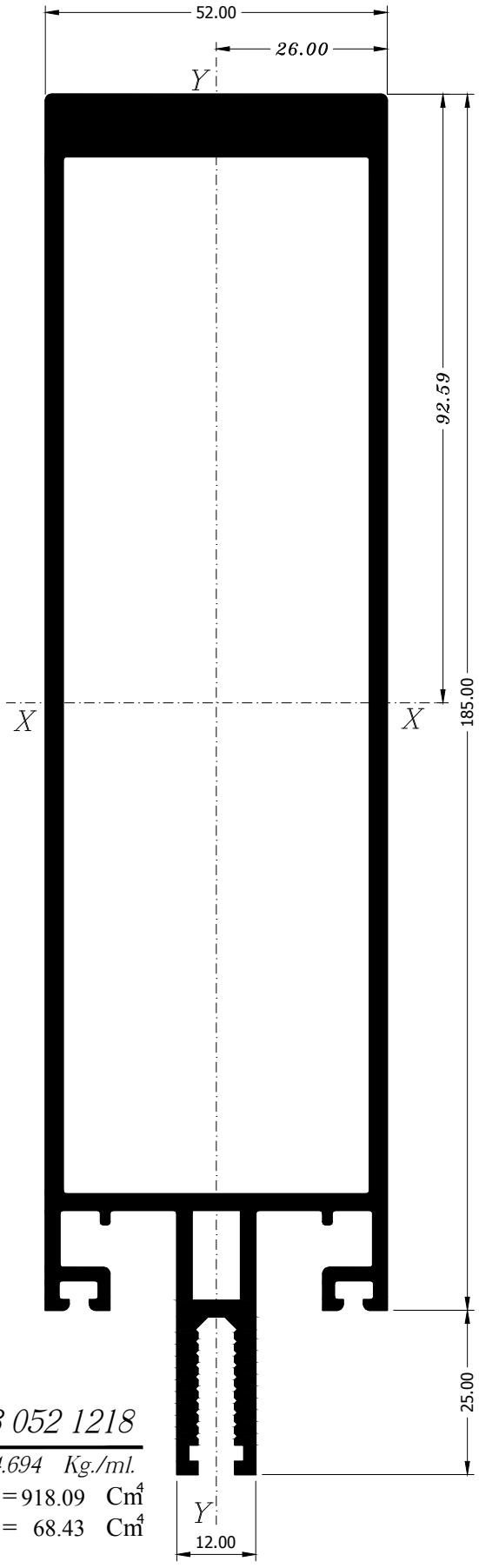


3 052 1216

4.098 Kg./ml.

I_x = 627.80 Cm^4

I_y = 56.66 Cm^4

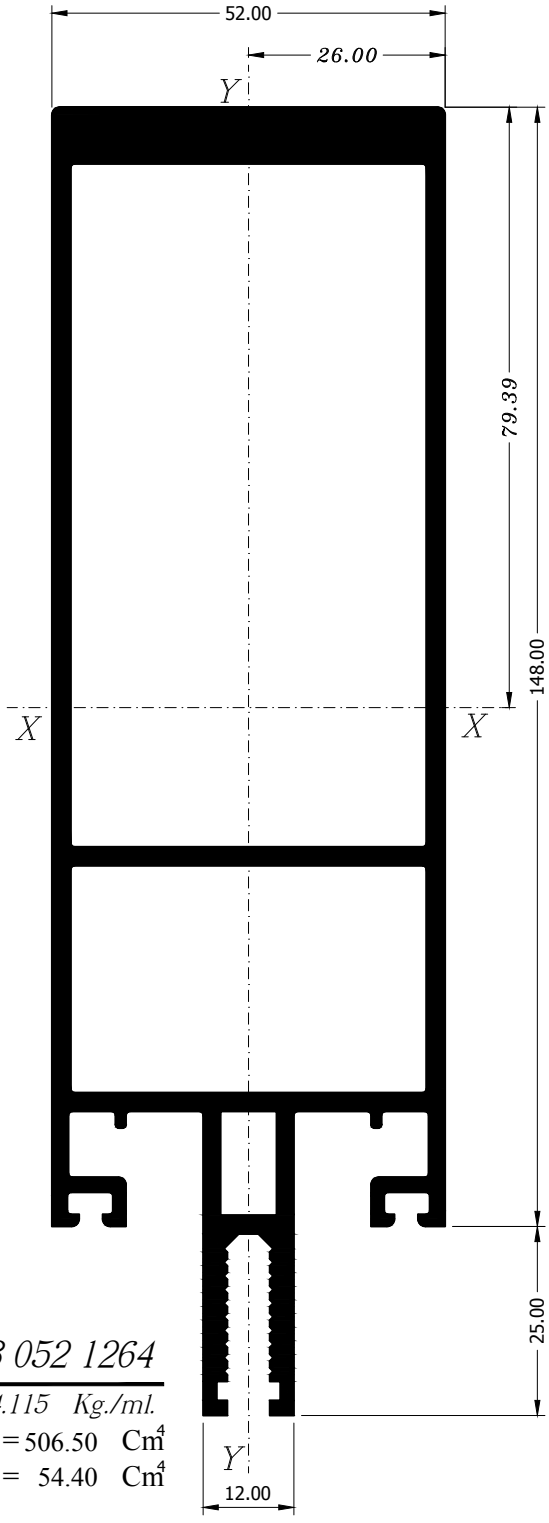


3 052 1218

4.694 Kg./ml.

I_x = 918.09 Cm^4

I_y = 68.43 Cm^4



3 052 1264

4.115 Kg./ml.

I_x = 506.50 Cm^4

I_y = 54.40 Cm^4

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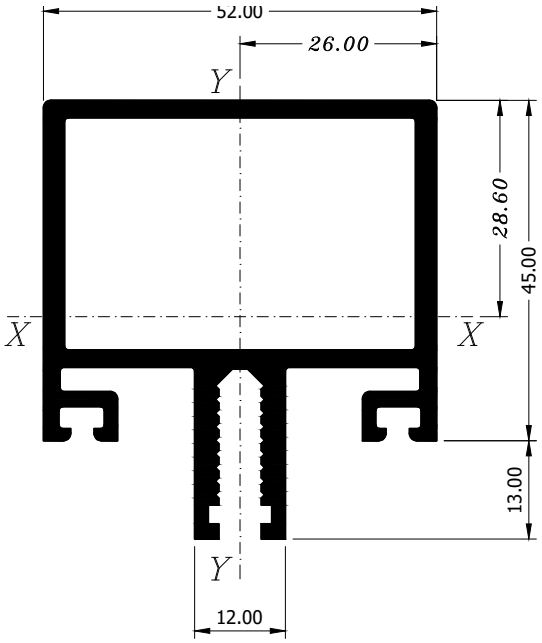
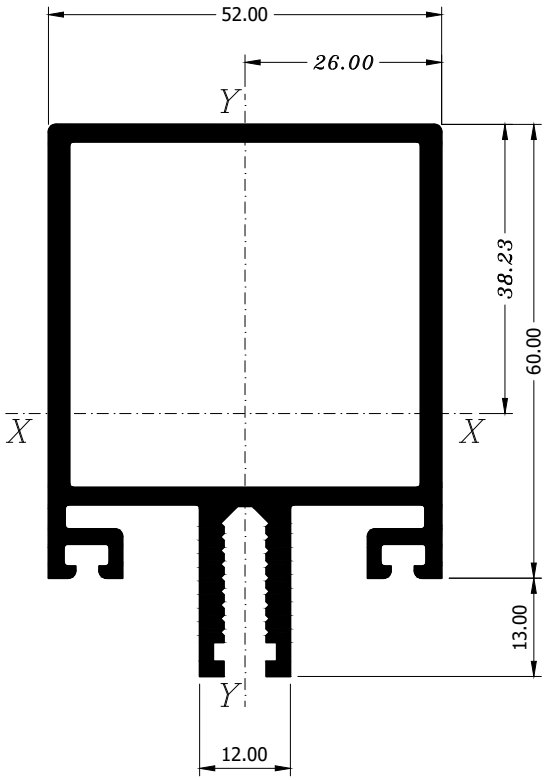


3 052 1404

1.433 Kg./ml.

I_x = 15.79 Cm^4

I_y = 15.56 Cm^4

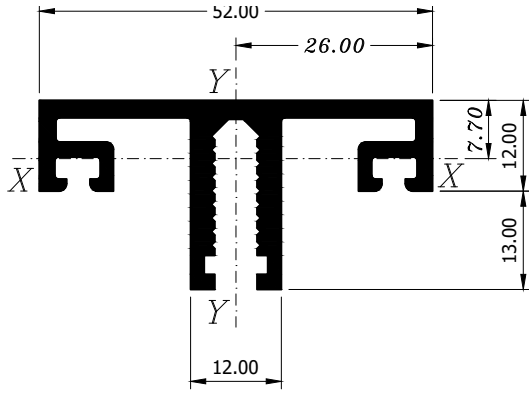


3 052 1406

1.571 Kg./ml.

I_x = 31.41 Cm^4

I_y = 19.59 Cm^4

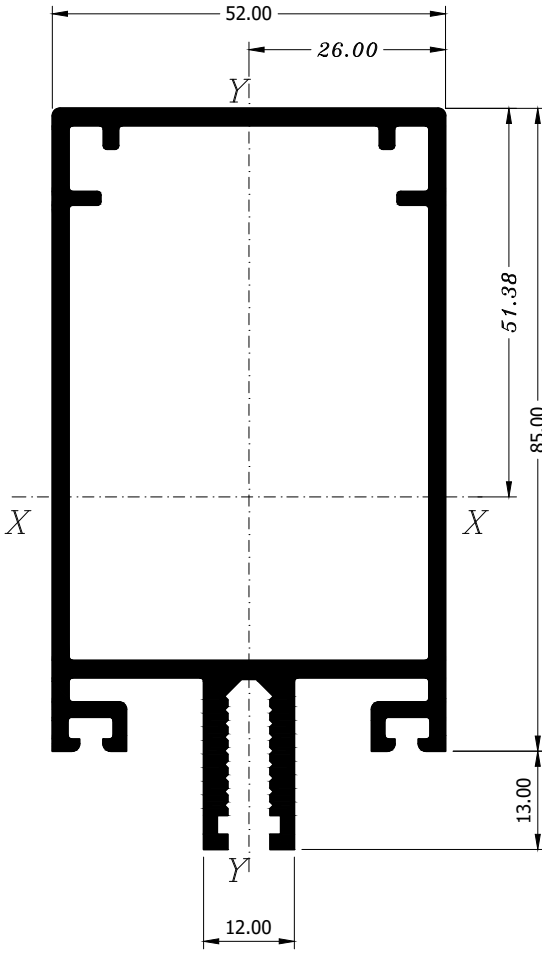


3 052 1401

0.896 Kg./ml.

I_x = 1.49 Cm^4

I_y = 6.59 Cm^4

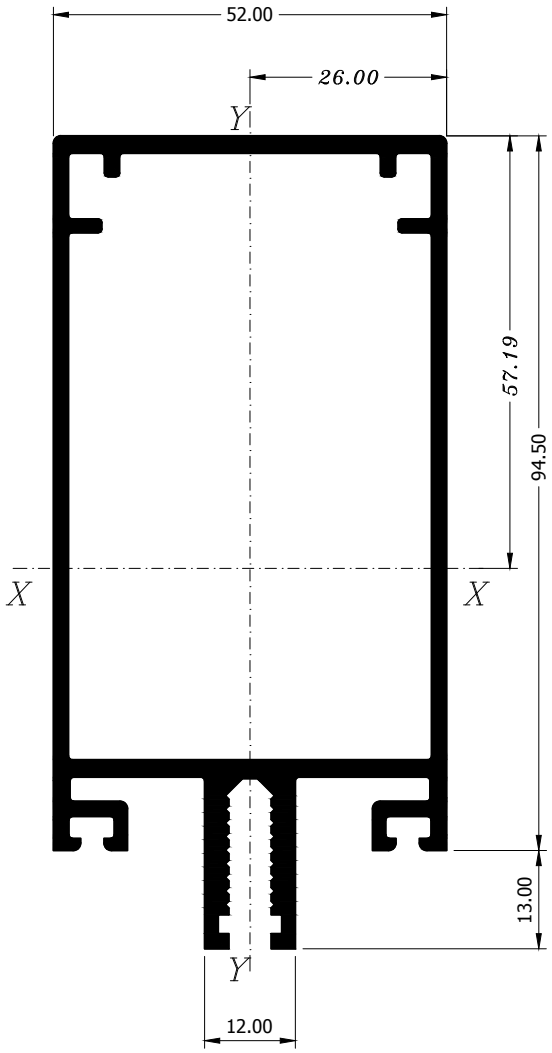


3 052 1408

1.889 Kg./ml.

I_x = 73.72 Cm^4

I_y = 25.70 Cm^4

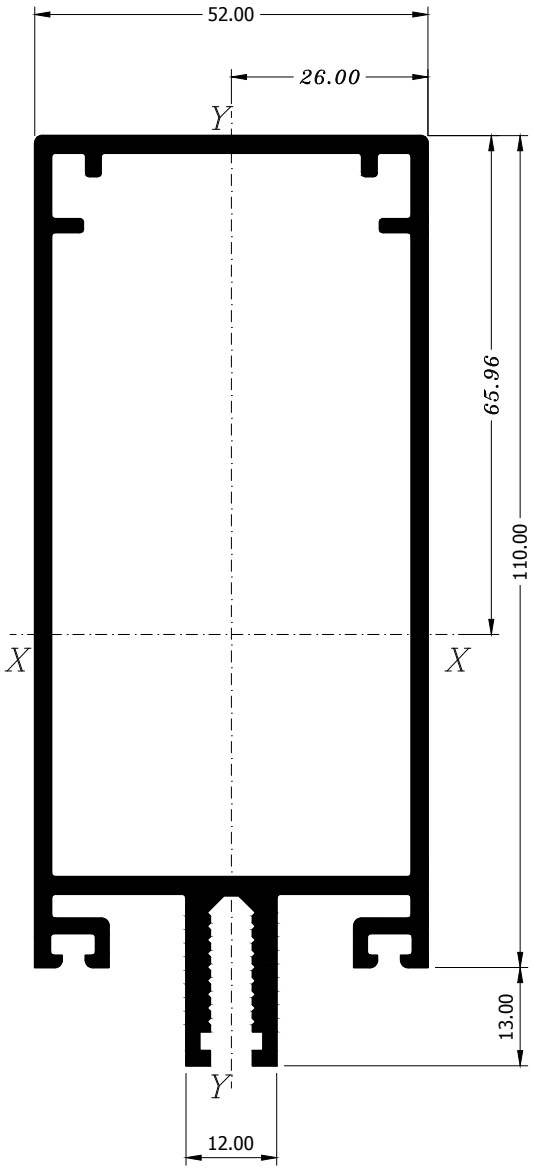


3 052 1409

1.982 Kg./ml.

I_x = 94.81 Cm^4

I_y = 27.85 Cm^4

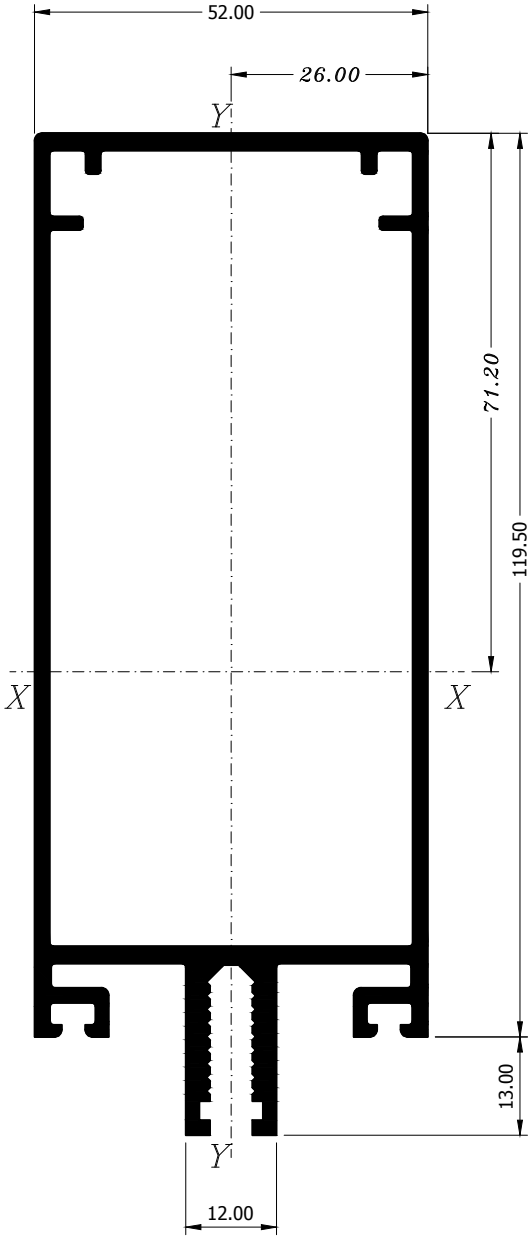


3 052 1411

2.126 Kg./ml.

I_x = 136.13 Cm^4

I_y = 31.37 Cm^4

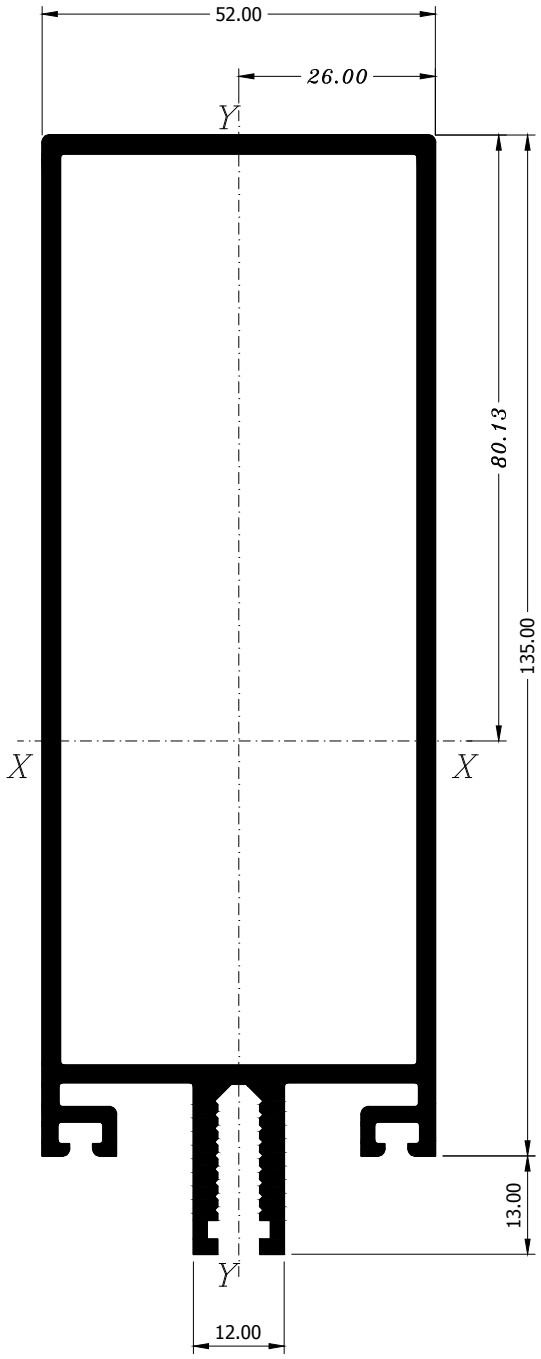


3 052 1412

2.225 Kg./ml.

I_x = 166.29 Cm^4

I_y = 33.53 Cm^4

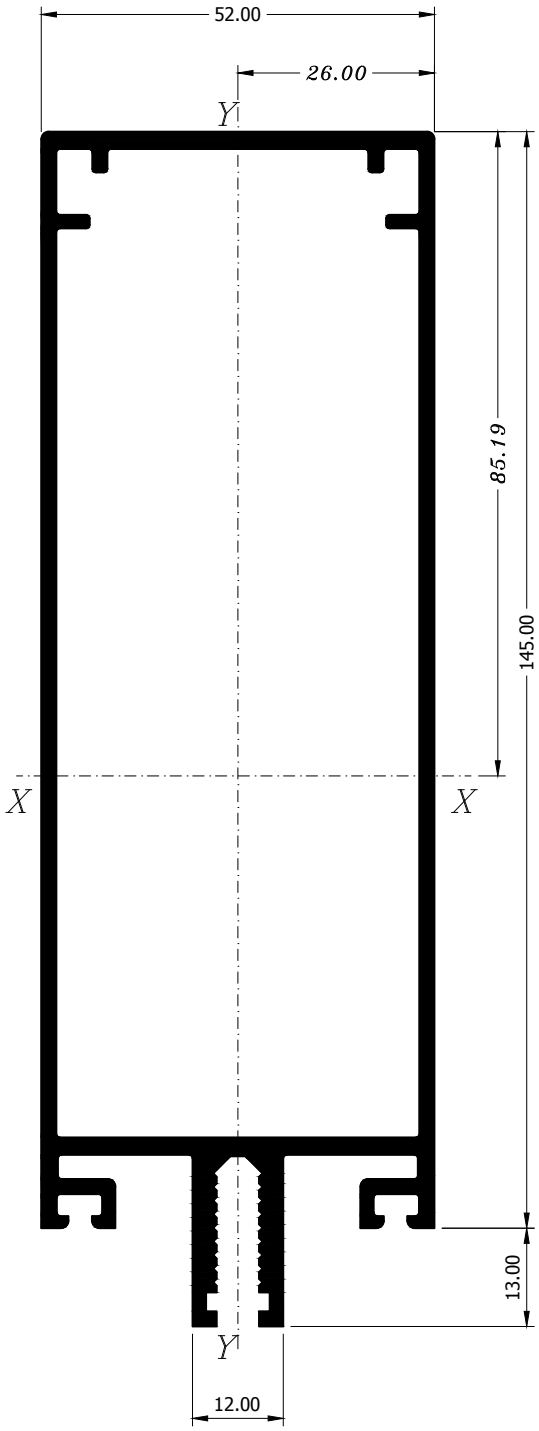


3 052 1413

2.676 Kg./ml.

I_x = 241.13 Cm^4

I_y = 42.48 Cm^4

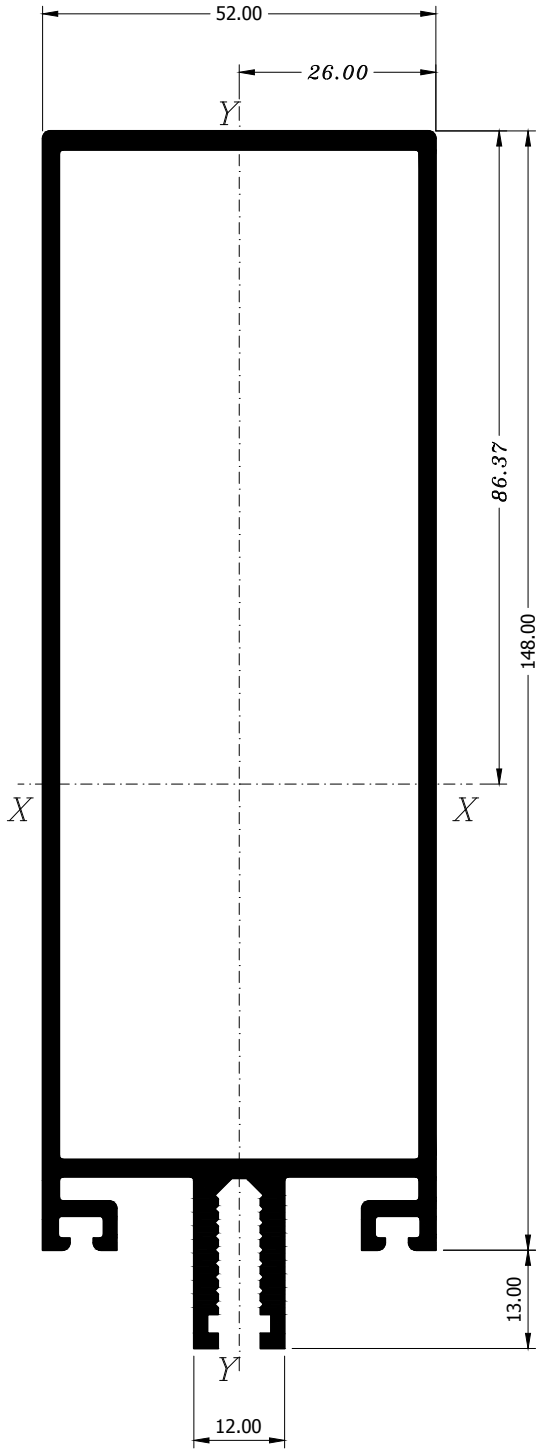


3 052 1414

2.472 Kg./ml.

I_x = 265.42 Cm^4

I_y = 39.31 Cm^4

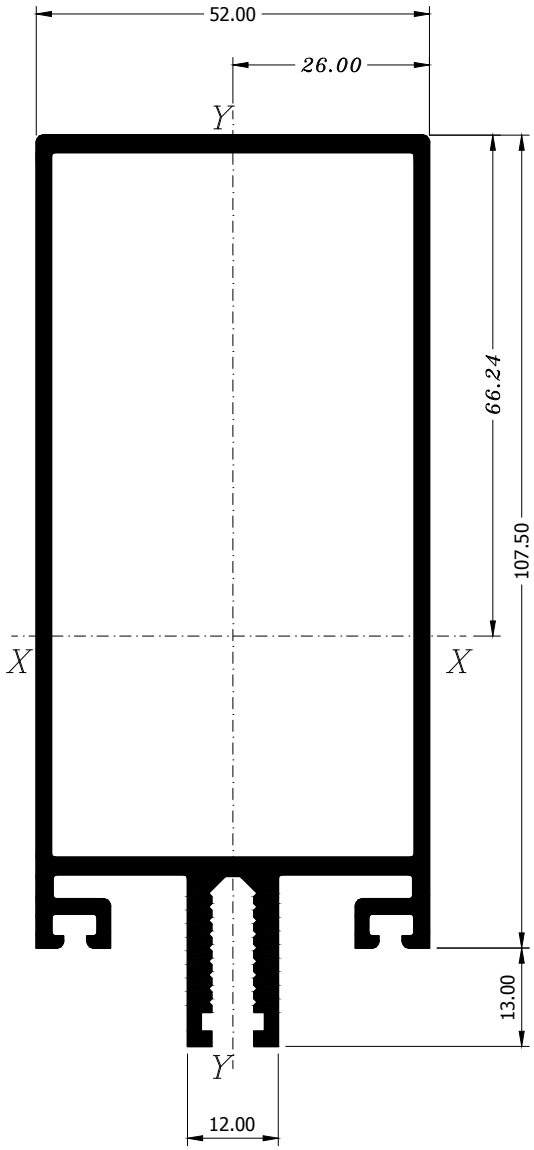


3 052 1415

2.626 Kg./ml.

I_x = 42.42 Cm^4

I_y = 46.82 Cm^4

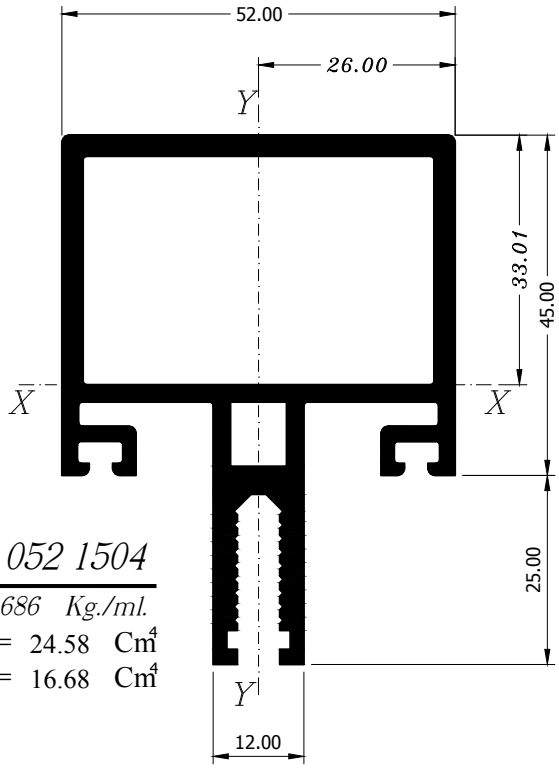


3 052 1461

2.035 Kg./ml.

I_x = 121.02 Cm^4

I_y = 29.74 Cm^4

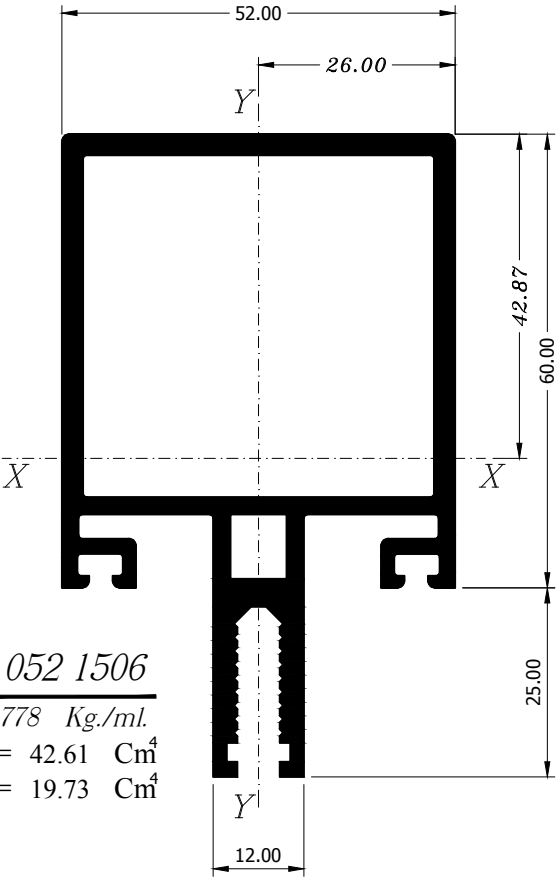


3 052 1504

1.686 Kg./ml.

I_x = 24.58 Cm^4

I_y = 16.68 Cm^4

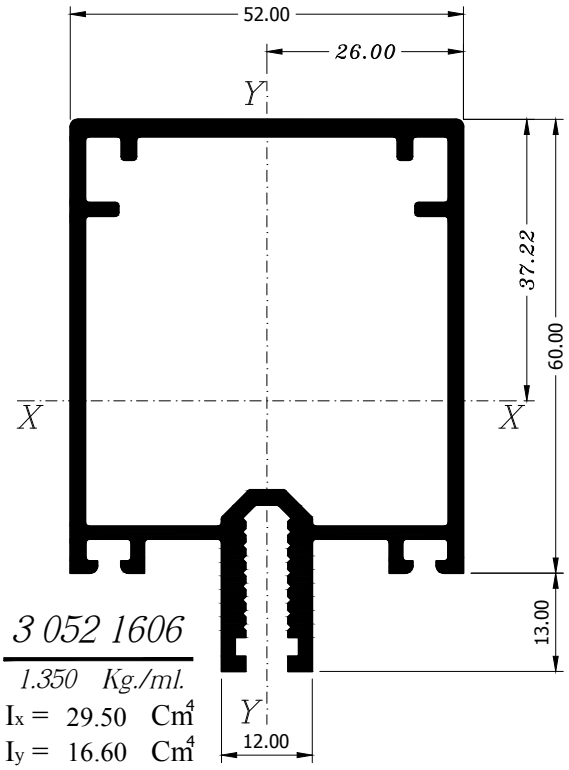


3 052 1506

1.778 Kg./ml.

I_x = 42.61 Cm^4

I_y = 19.73 Cm^4

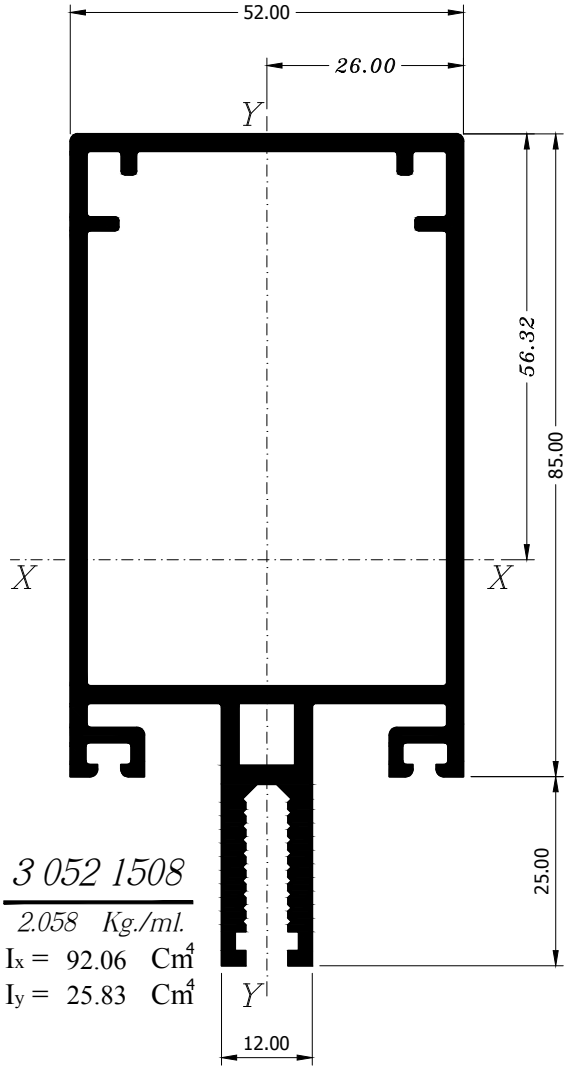


3 052 1606

1.350 Kg./ml.

I_x = 29.50 Cm^4

I_y = 16.60 Cm^4

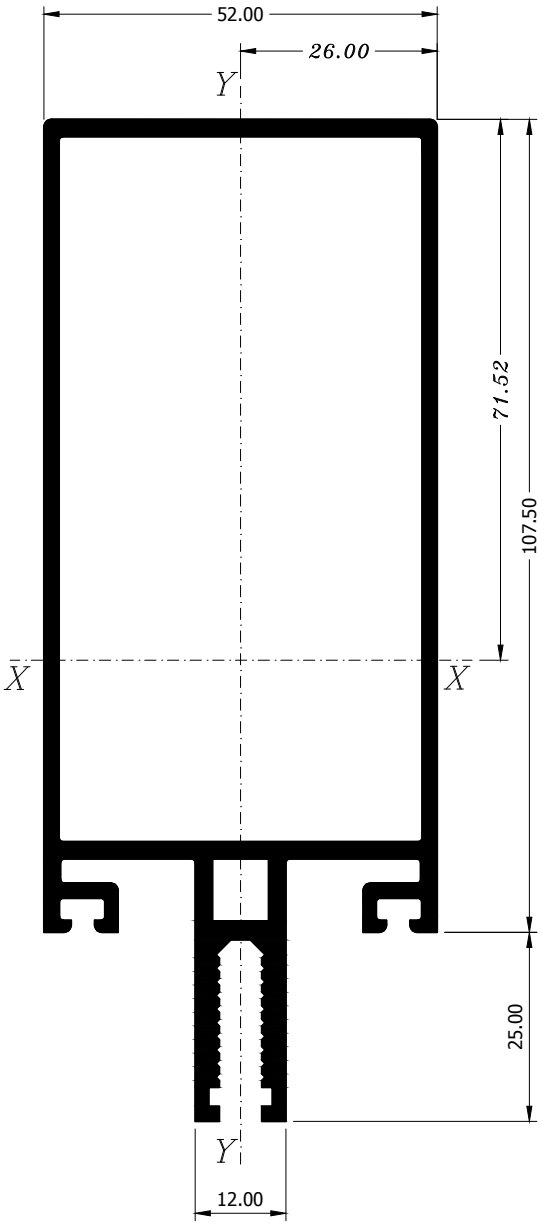


3 052 1508

2.058 Kg./ml.

I_x = 92.06 Cm^4

I_y = 25.83 Cm^4

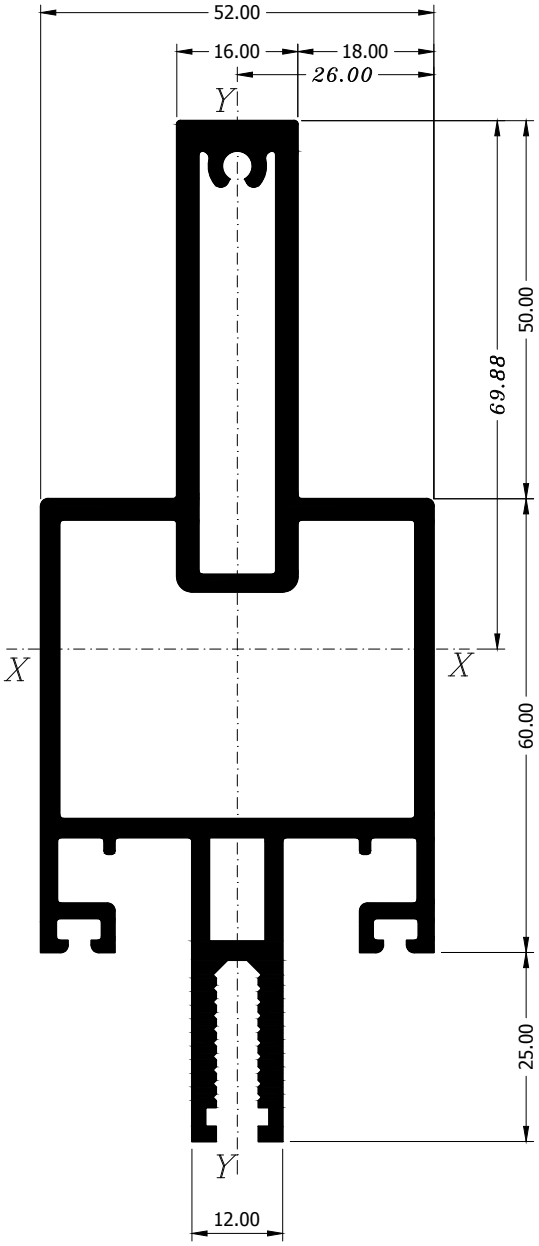


3 052 1561

2.215 Kg./ml.

I_x = 145.53 Cm^4

I_y = 29.87 Cm^4

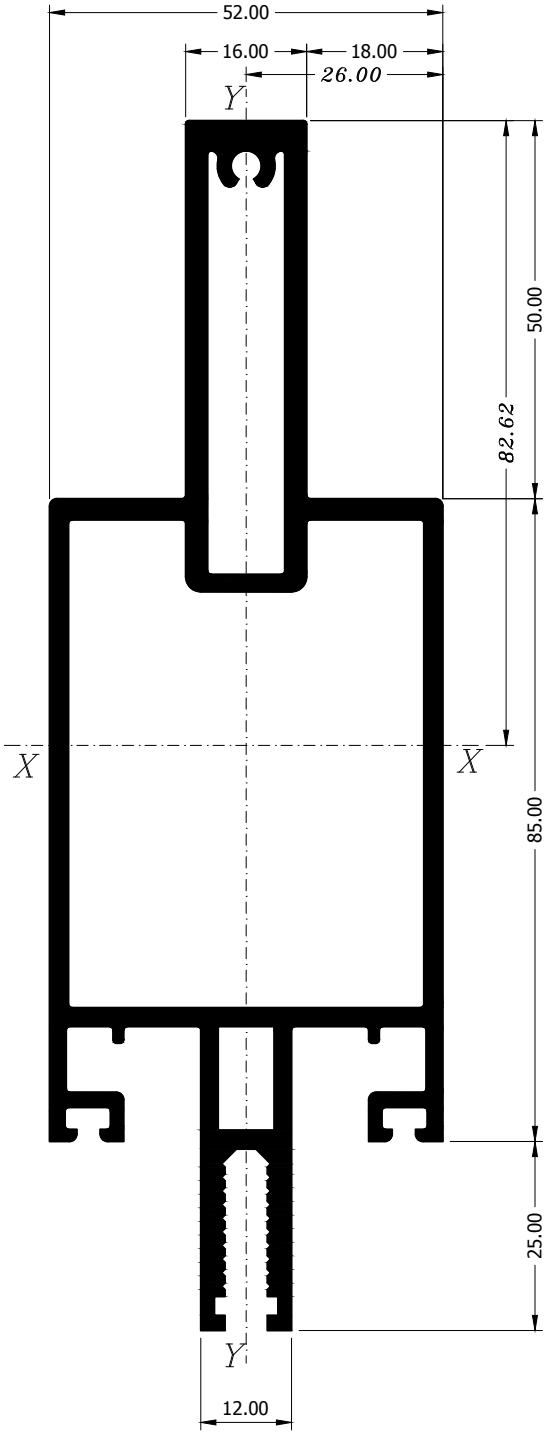


3 052 2206

3.024 Kg./ml.

$I_x = 163.83$ Cm^4

$I_y = 24.20$ Cm^4

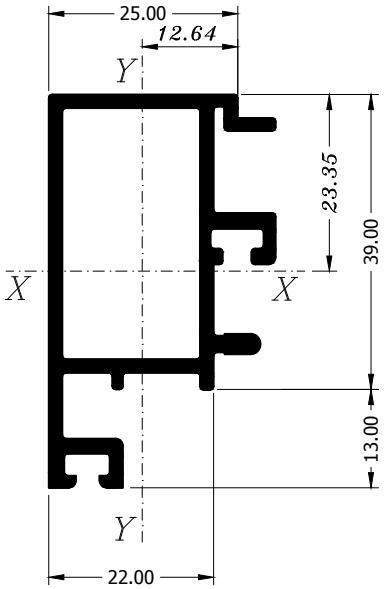


3 052 2208

3.347 Kg./ml.

$I_x = 275.61$ Cm^4

$I_y = 31.31$ Cm^4

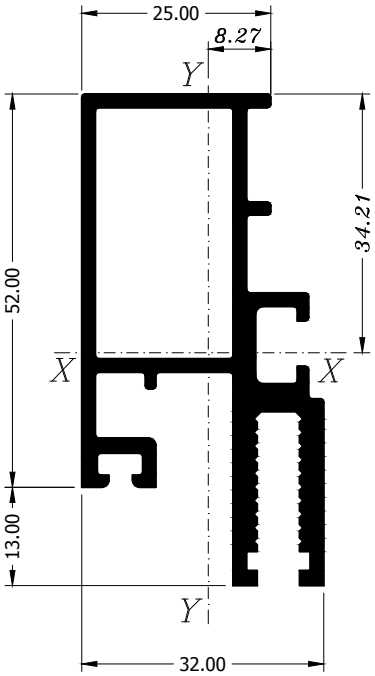


3 052 3005

0.759 Kg./ml.

I_x = 7.17 Cm^4

I_y = 2.79 Cm^4

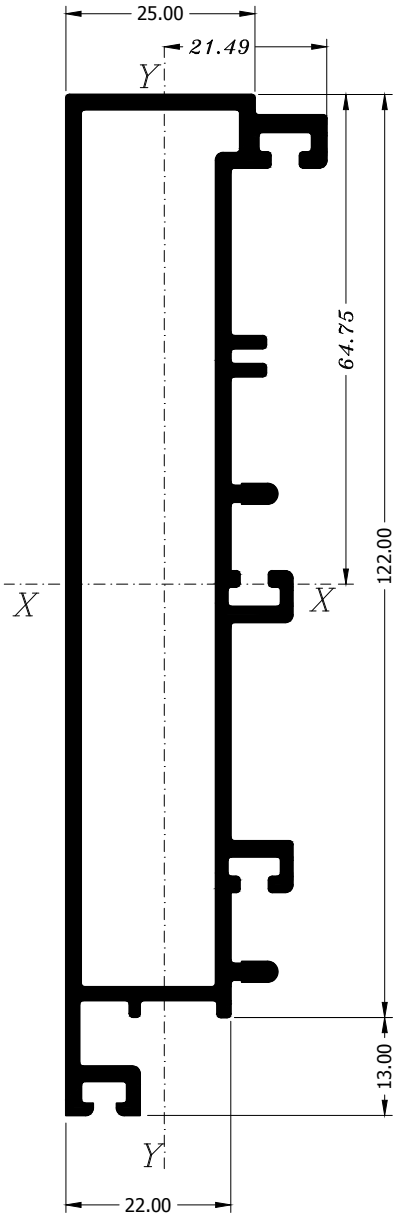


3 052 3105

1.157 Kg./ml.

I_x = 14.34 Cm^4

I_y = 4.61 Cm^4

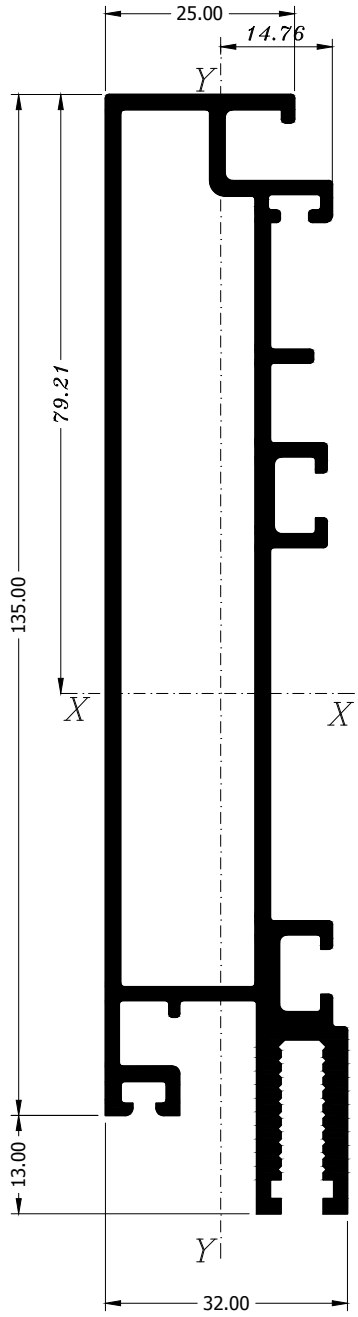


3 052 3013

1.846 Kg./ml.

I_x = 120.76 Cm^4

I_y = 7.70 Cm^4

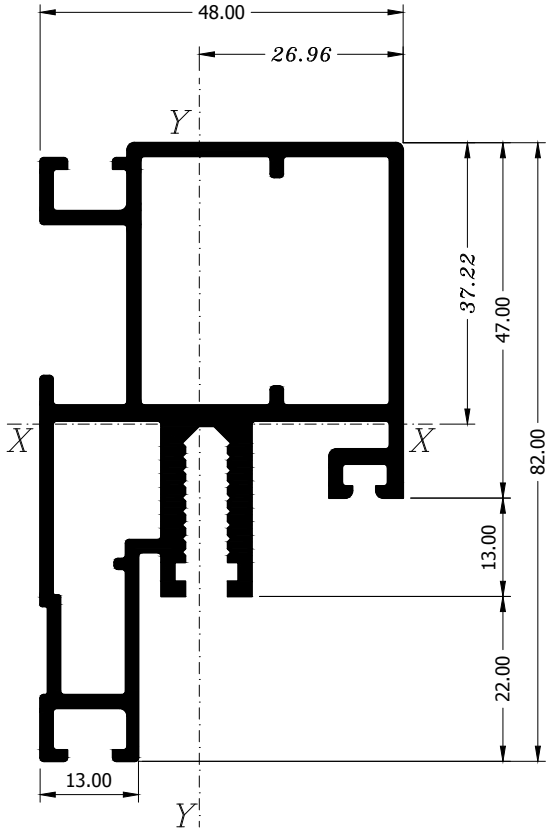


3 052 3113

2.242 Kg./ml.

I_x = 181.79 Cm^4

I_y = 9.30 Cm^4

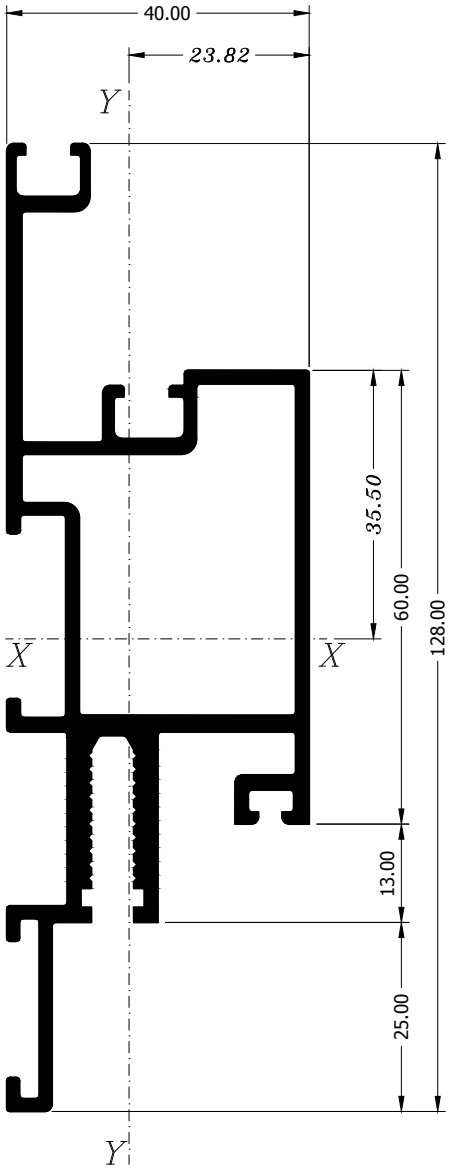


3 052 3604

1.673 Kg./ml.

I_x = 30.56 Cm^4

I_y = 14.01 Cm^4

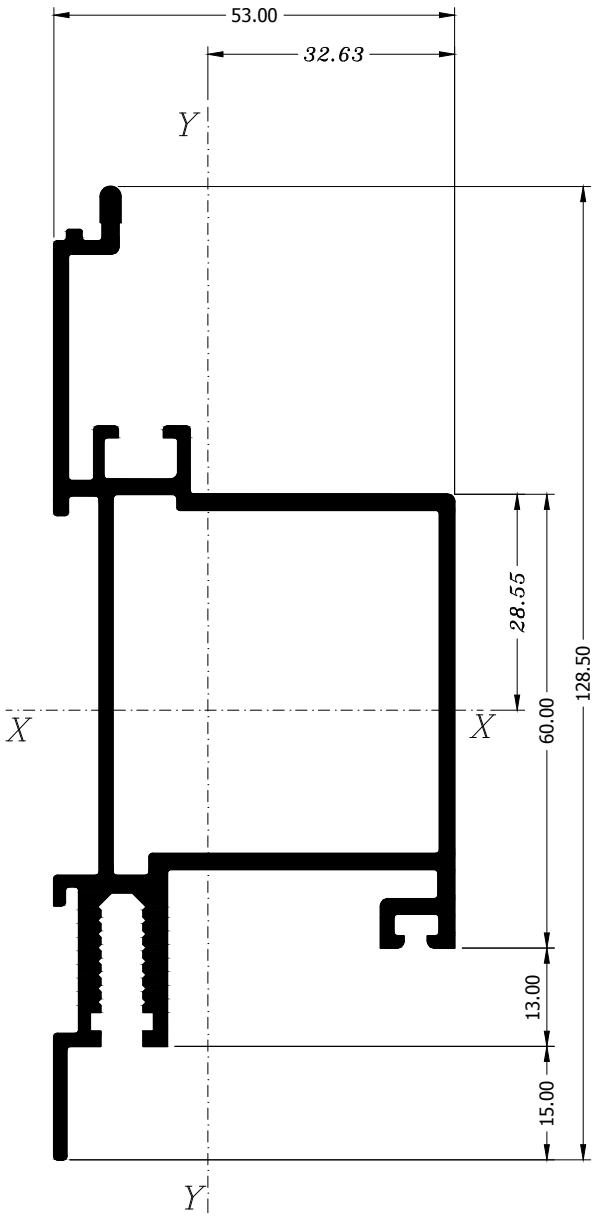


3 052 3606

1.805 Kg./ml.

I_x = 62.89 Cm^4

I_y = 11.51 Cm^4

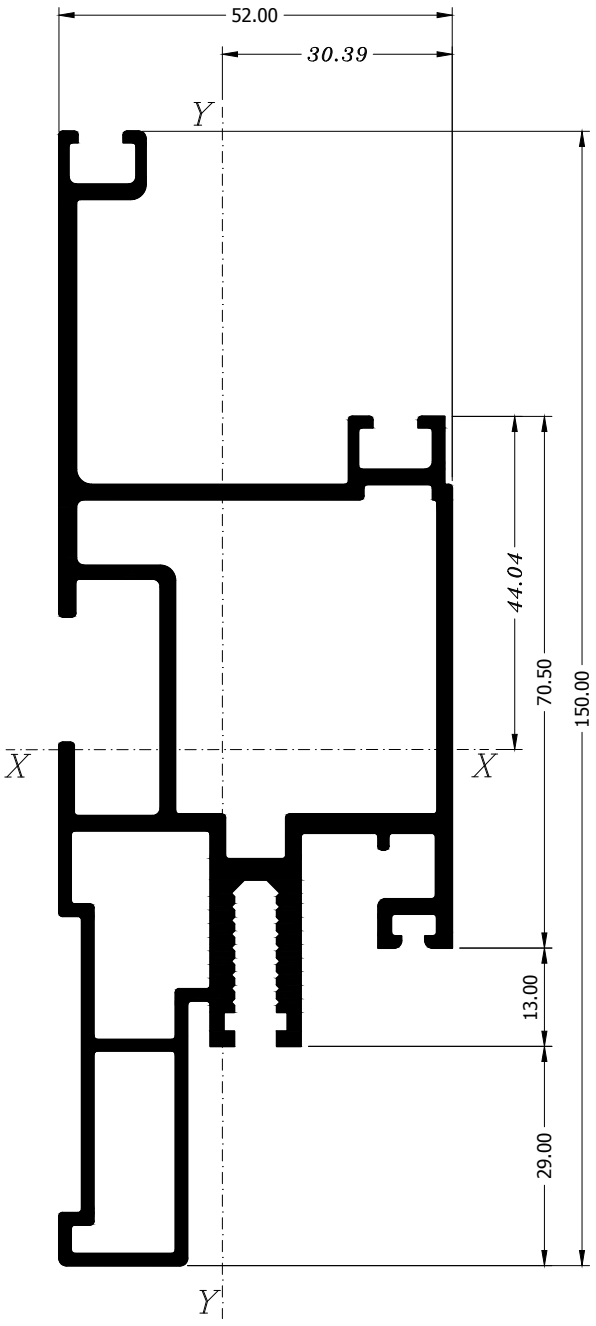


3 052 3646

1.728 Kg./ml.

I_x = 64.13 Cm^4

I_y = 23.52 Cm^4

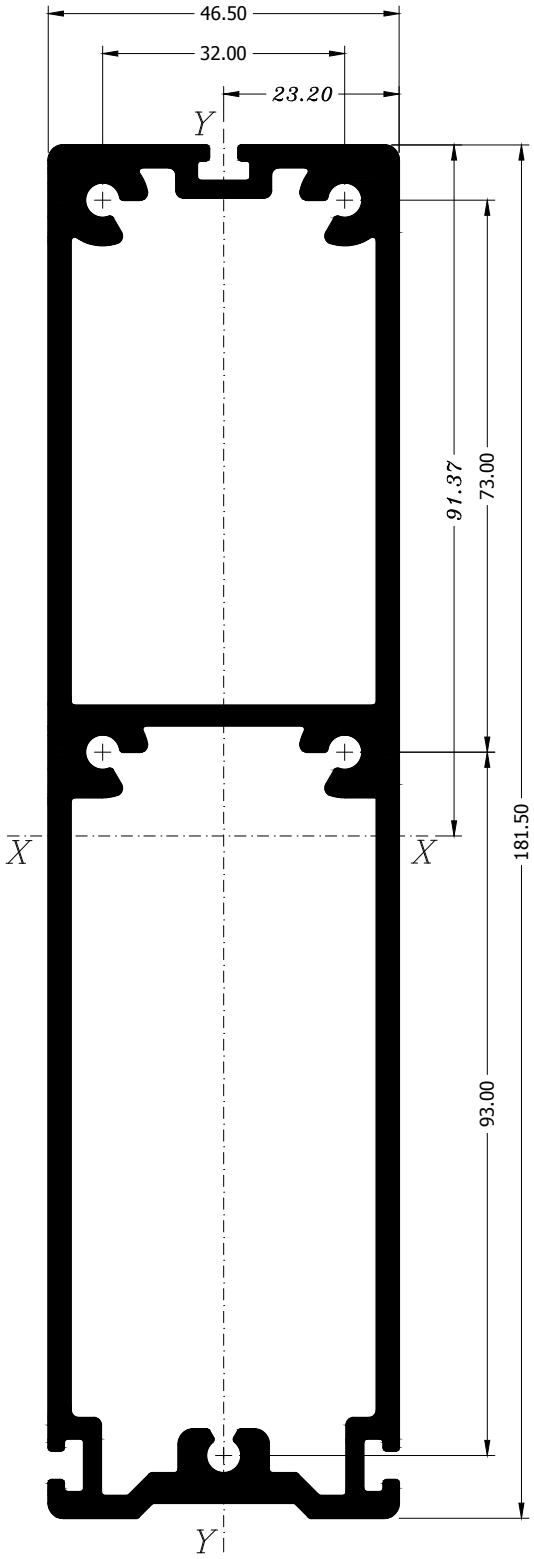


3 052 3656

2.563 Kg./ml.

I_x = 124.00 Cm^4

I_y = 28.32 Cm^4



3 052 4021

4.055 Kg./ml.

I_x = 560.12 Cm^4

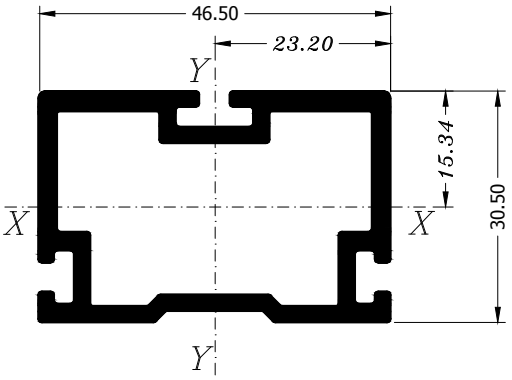
I_y = 50.98 Cm^4

3 052 4105

0.919 Kg./ml.

I_x = 4.37 Cm^4

I_y = 8.92 Cm^4

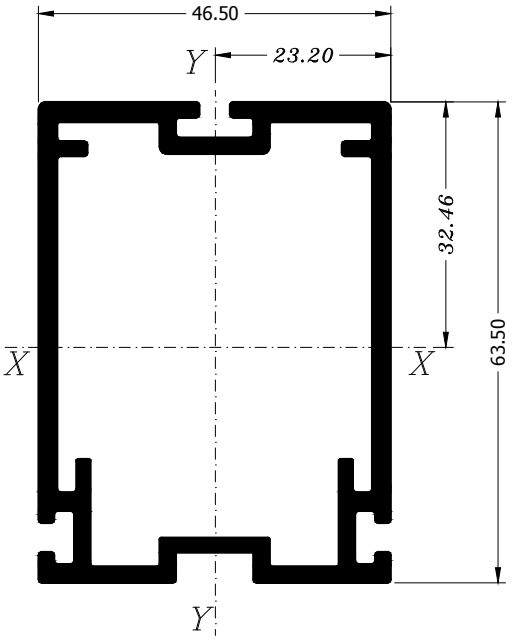


3 052 4108

1.451 Kg./ml.

I_x = 30.27 Cm^4

I_y = 16.74 Cm^4

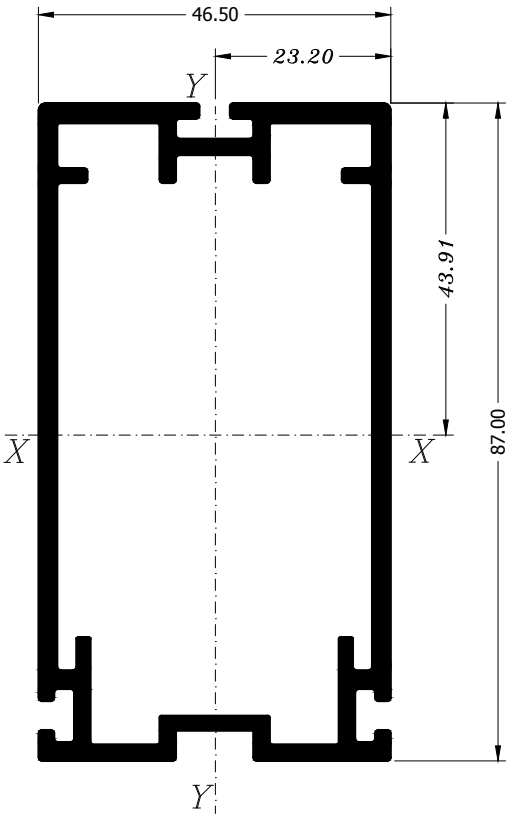


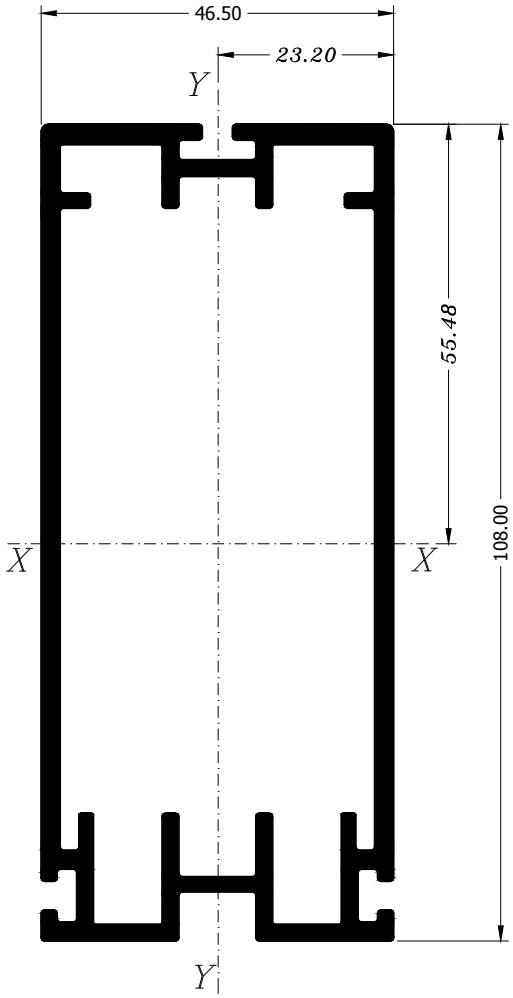
3 052 4111

1.737 Kg./ml.

I_x = 66.86 Cm^4

I_y = 21.20 Cm^4



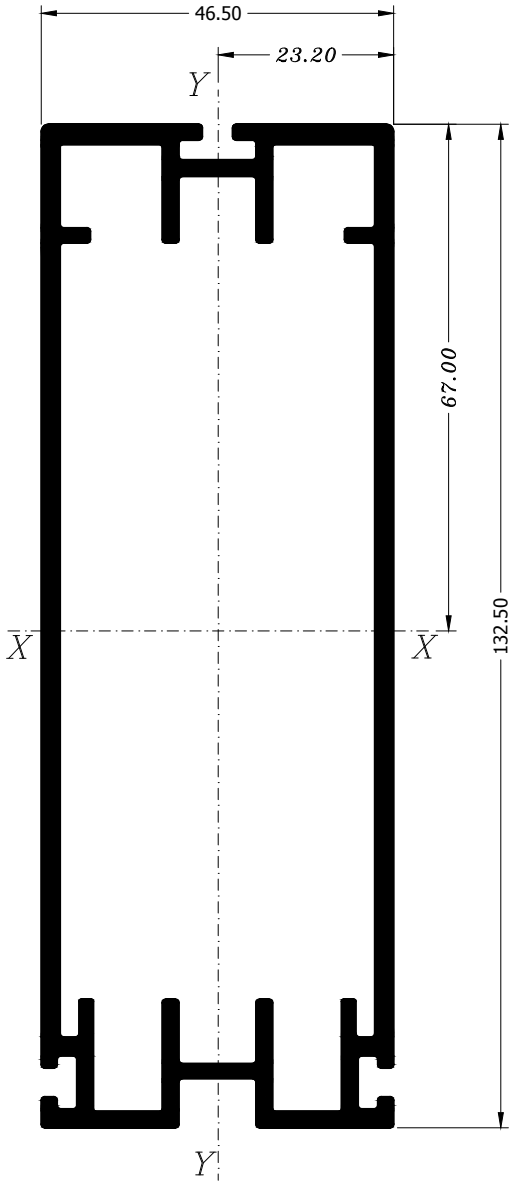


3 052 4113

2.078 Kg./ml.

$I_x = 121.60$ Cm^4

$I_y = 25.22$ Cm^4

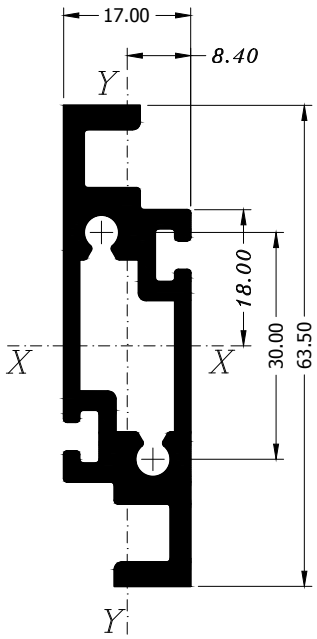


3 052 4116

2.396 Kg./ml.

$I_x = 207.57$ Cm^4

$I_y = 29.95$ Cm^4



3 052 4708

1.009 Kg./ml.

$I_x = 12.65$ Cm^4

$I_y = 1.20$ Cm^4

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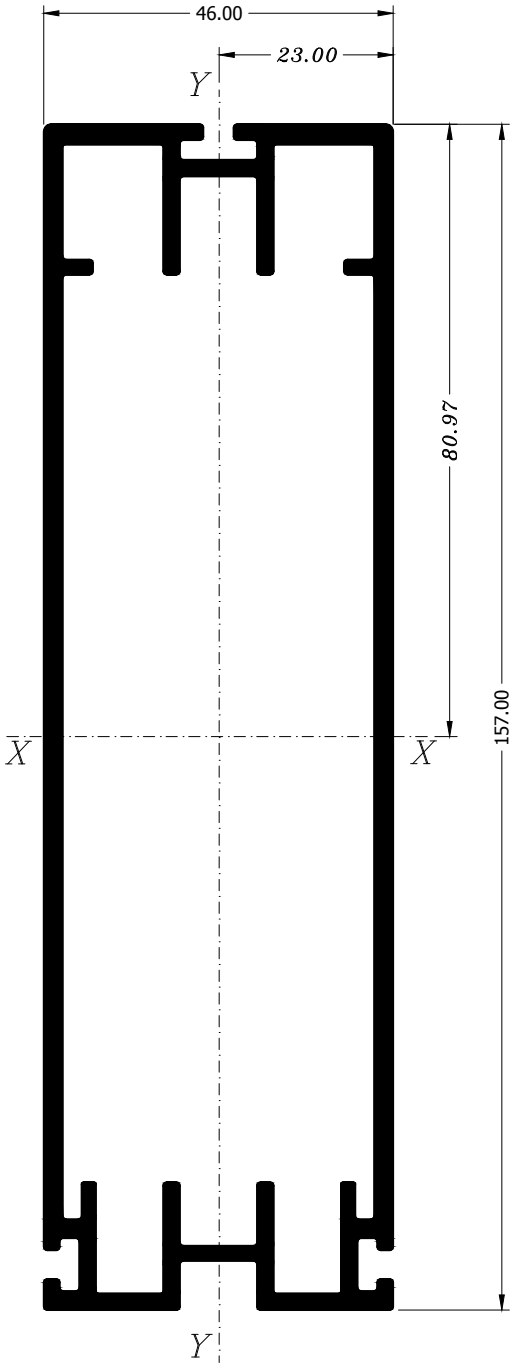
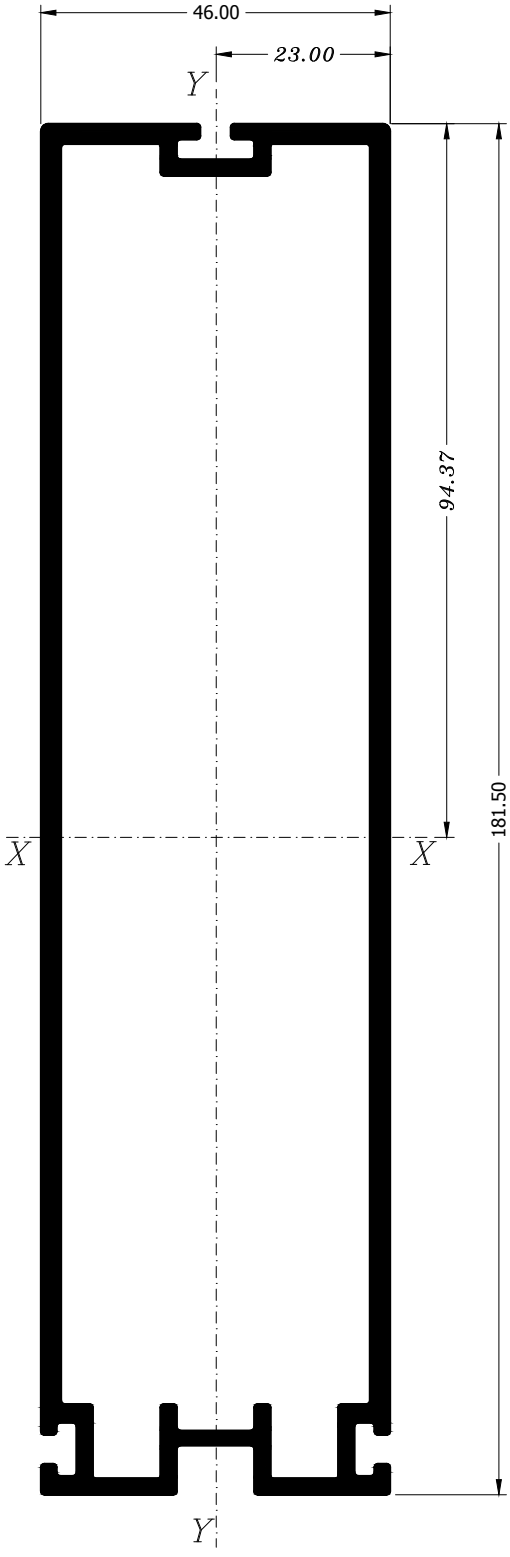


3 052 4118

2.962 Kg./ml.

$I_x = 347.29$ Cm^4

$I_y = 37.29$ Cm^4

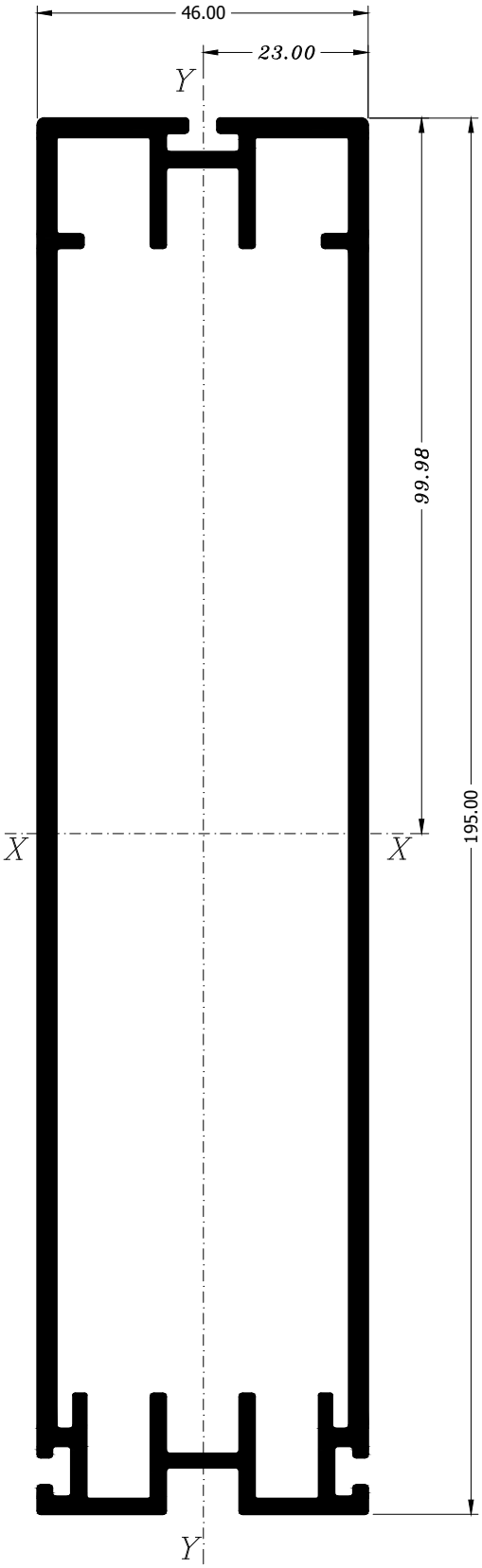


3 052 4121

2.968 Kg./ml.

$I_x = 438.20$ Cm^4

$I_y = 40.81$ Cm^4

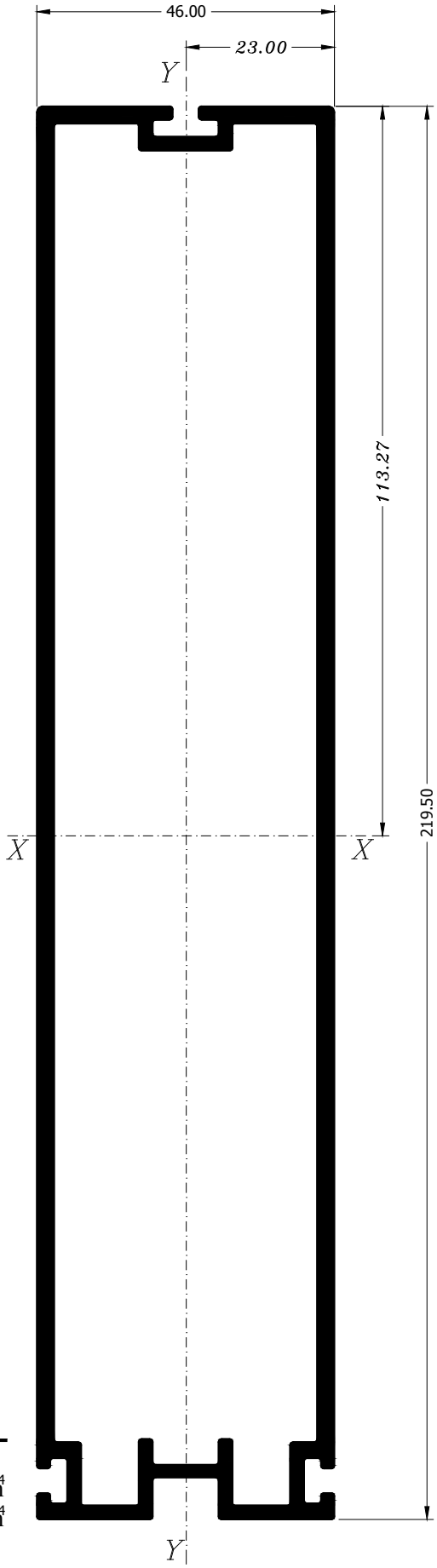


3 052 4122

3.386 Kg./ml.

$I_x = 596.19$ Cm^4

$I_y = 44.94$ Cm^4



3 052 4124

3.380 Kg./ml.

$I_x = 703.77$ Cm^4

$I_y = 48.43$ Cm^4

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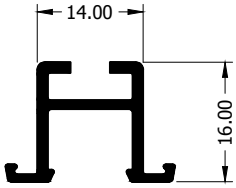
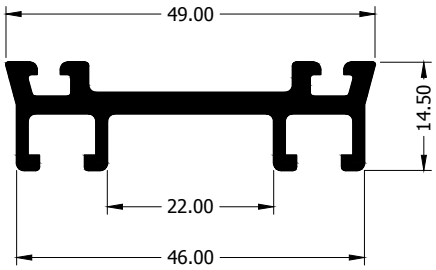


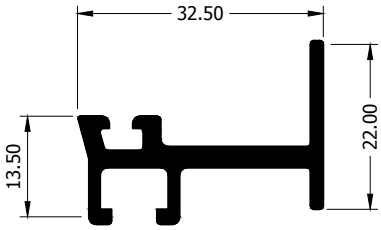
3 052 5001

0.193 Kg./ml.



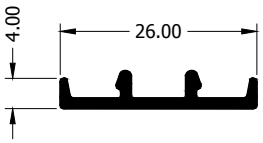
3 052 5011

0.601 Kg./ml.



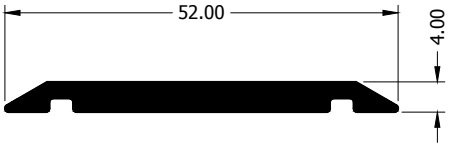
3 052 5072

0.444 Kg./ml.



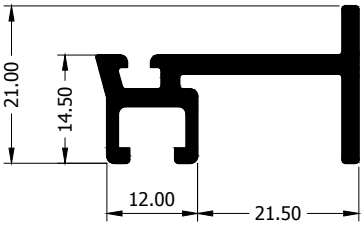
3 052 5201

0.128 Kg./ml.



3 052 5020

0.477 Kg./ml.

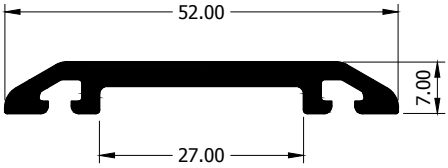


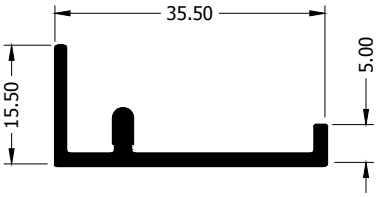
3 052 5511

0.439 Kg./ml.

3 052 5021

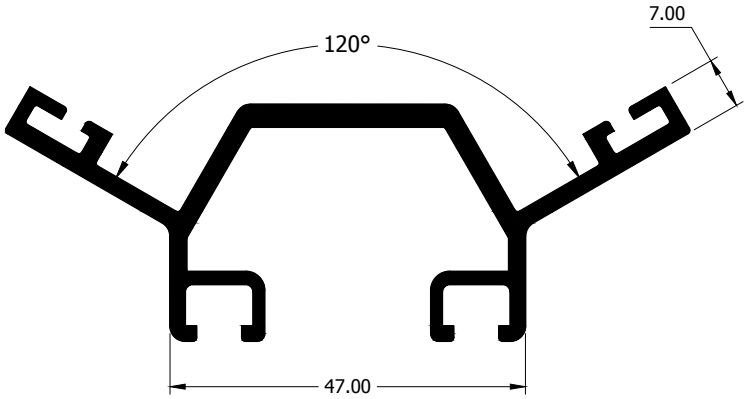
0.460 Kg./ml.





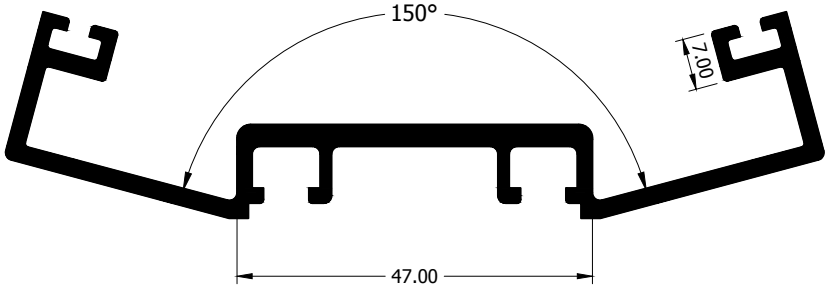
3 052 5271

0.254 Kg./ml.



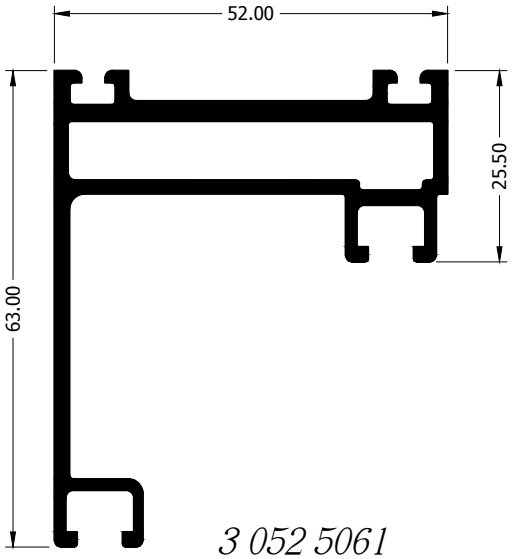
3 052 5111

1.150 Kg./ml.



3 052 5131

1.176 Kg./ml.



3 052 5061

1.100 Kg./ml.

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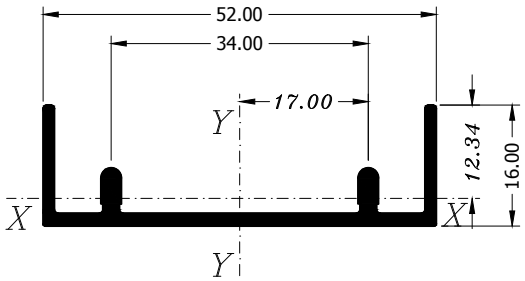
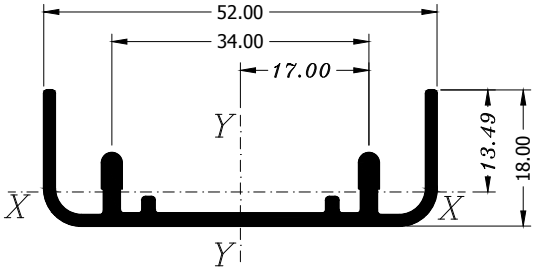


3 052 5251

0.394 Kg./ml.

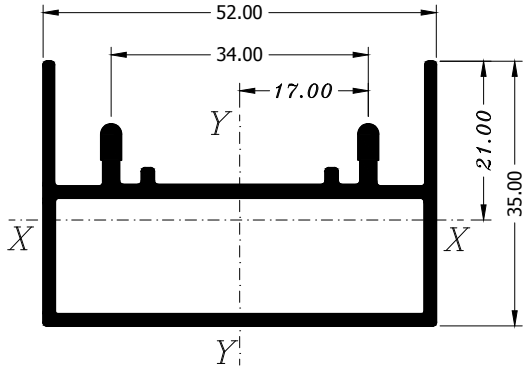
I_x = 0.25 Cm^4
I_y = 5.17 Cm^4



3 052 5261

0.433 Kg./ml.

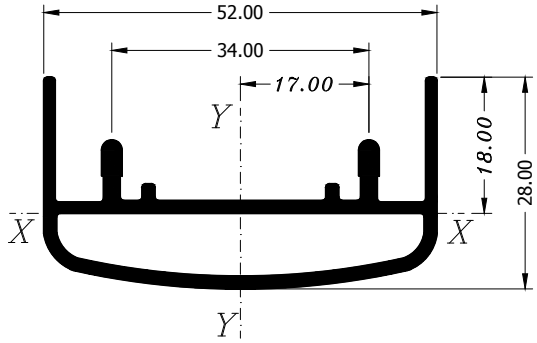
I_x = 0.36 Cm^4
I_y = 5.55 Cm^4



3 052 5253

0.747 Kg./ml.

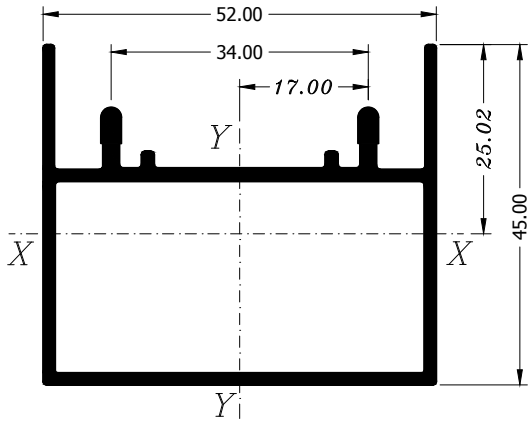
I_x = 2.69 Cm^4
I_y = 10.09 Cm^4



3 052 5352

0.696 Kg./ml.

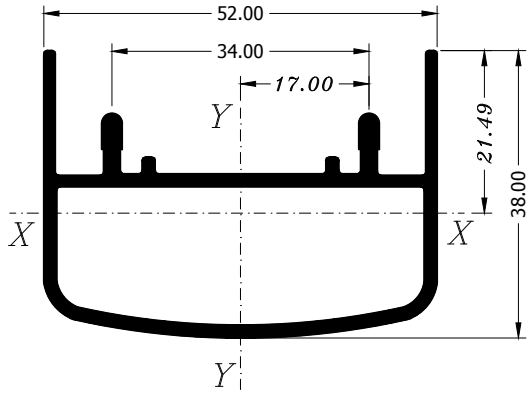
I_x = 1.20 Cm^4
I_y = 8.49 Cm^4



3 052 5254

0.820 Kg./ml.

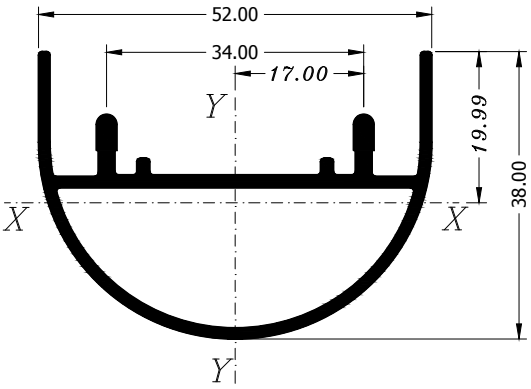
I_x = 5.75 Cm^4
I_y = 11.89 Cm^4



3 052 5353

0.780 Kg./ml.

I_x = 3.18 Cm^4
I_y = 10.40 Cm^4

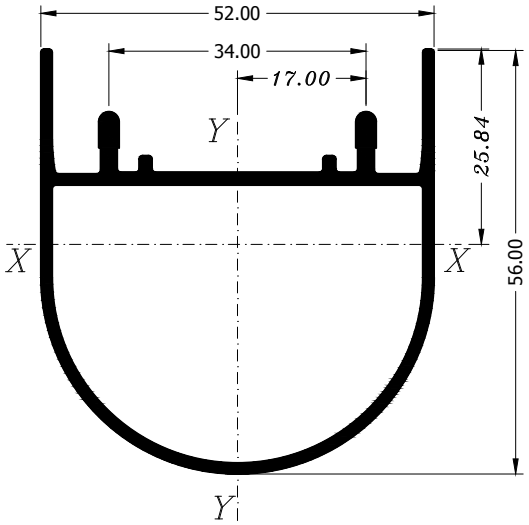


3 052 5363

0.721 Kg./ml.

I_x = 2.48 Cm^4

I_y = 8.48 Cm^4

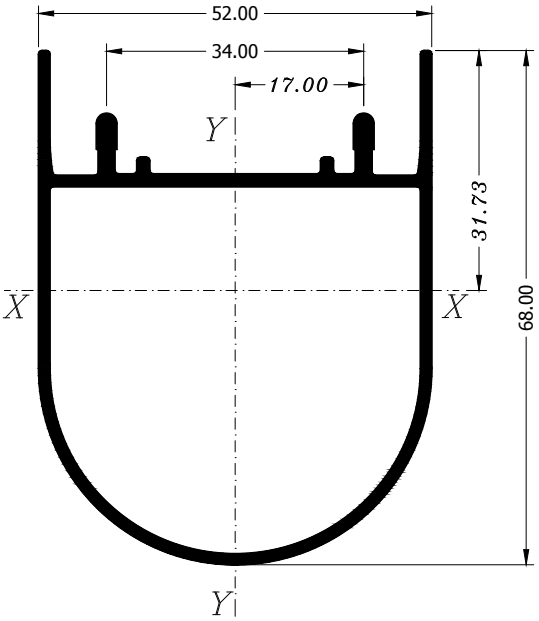


3 052 5365

0.815 Kg./ml.

I_x = 7.81 Cm^4

I_y = 11.29 Cm^4

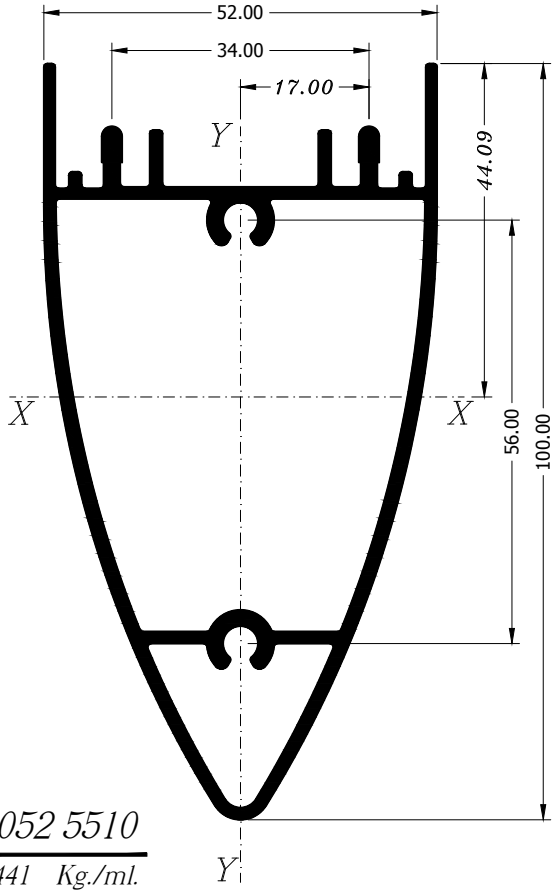


3 052 5366

0.900 Kg./ml.

I_x = 15.16 Cm^4

I_y = 14.32 Cm^4

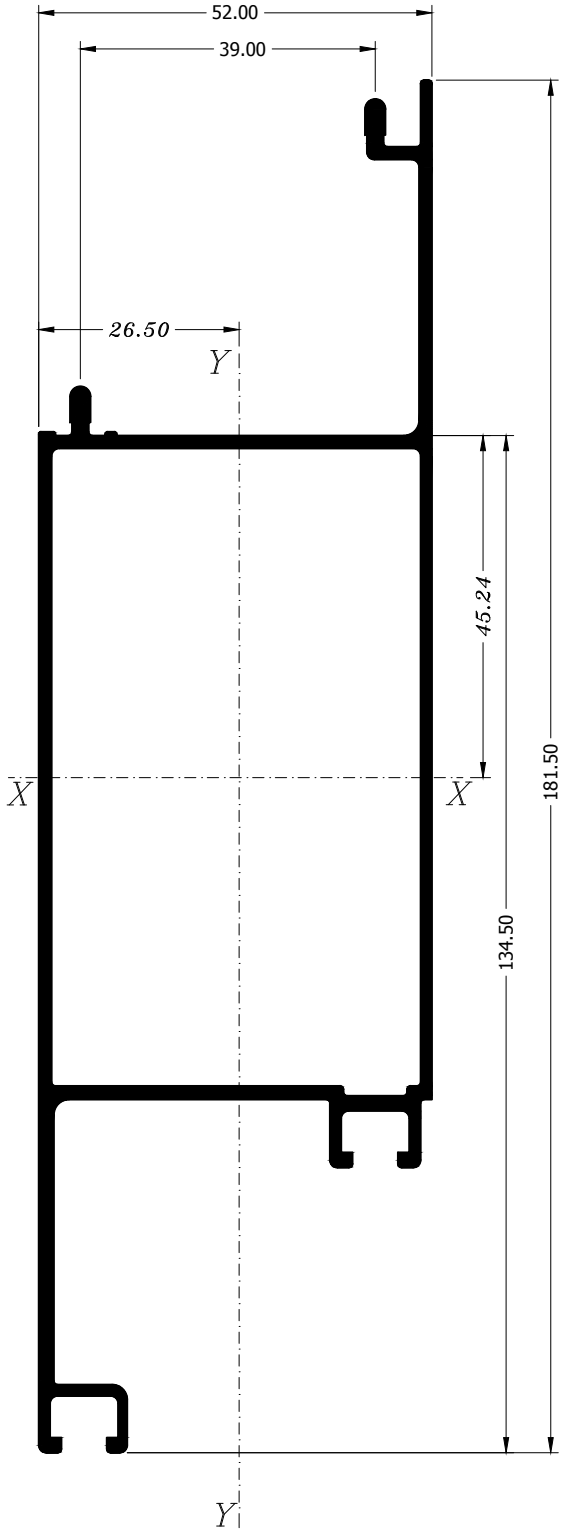


3 052 5510

1.441 Kg./ml.

I_x = 46.56 Cm^4

I_y = 15.57 Cm^4

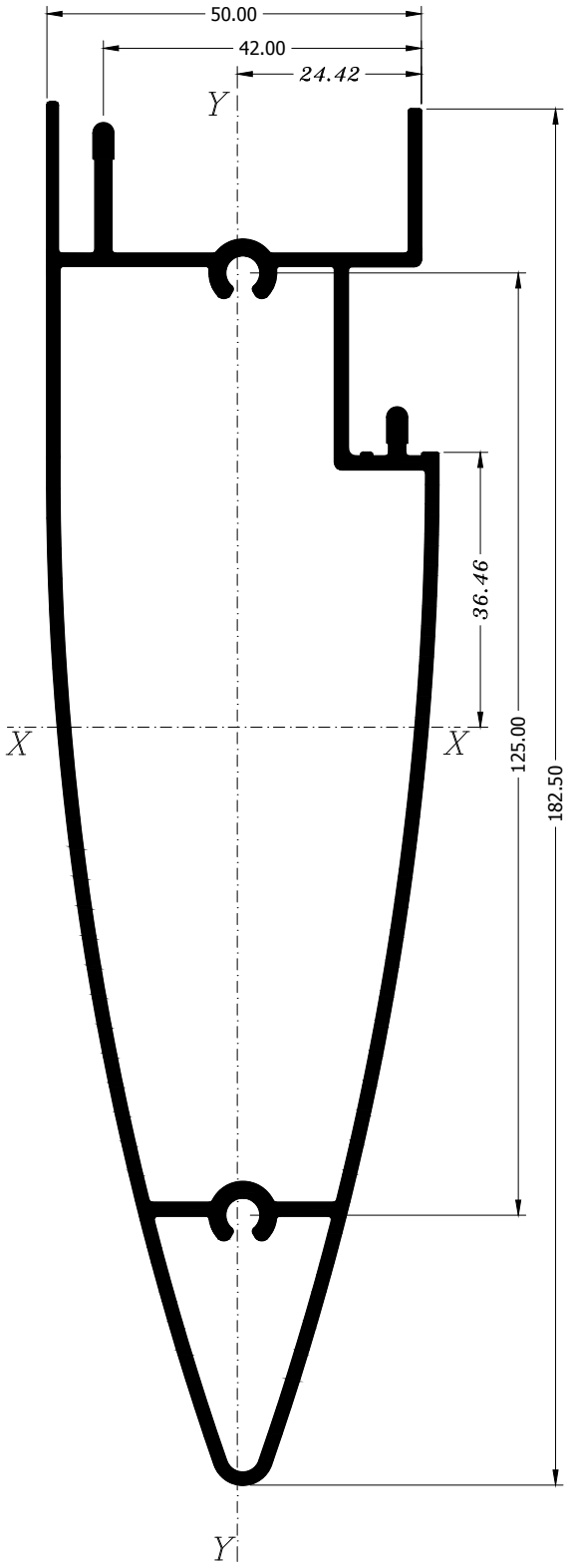


3 052 5914

1.750 Kg./ml.

$I_x = 155.37$ Cm^4

$I_y = 32.32$ Cm^4



3 052 5520

2.150 Kg./ml.

$I_x = 247.00$ Cm^4

$I_y = 25.81$ Cm^4

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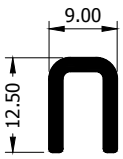

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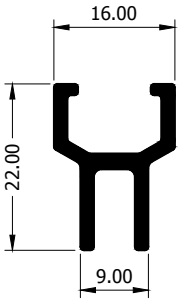
0.116 Kg./ml.



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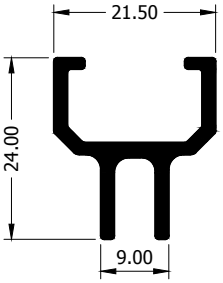
0.251 Kg./ml.



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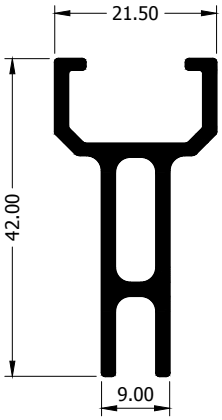
0.300 Kg./ml.



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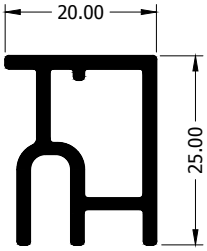
0.485 Kg./ml.



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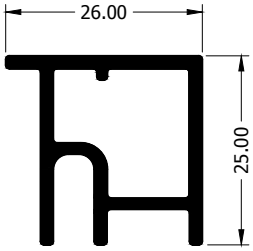
0.377 Kg./ml.



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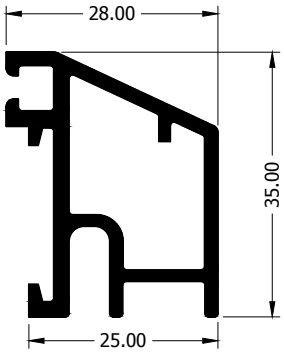
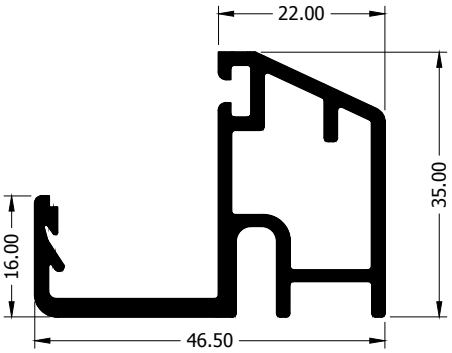


3 052 6023
0.563 Kg./ml.



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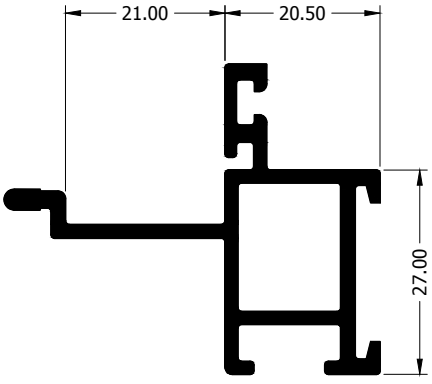
0.767 Kg./ml.



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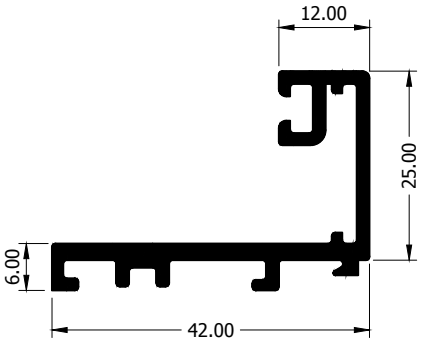

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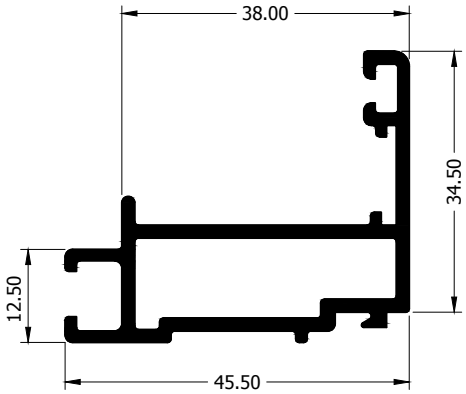

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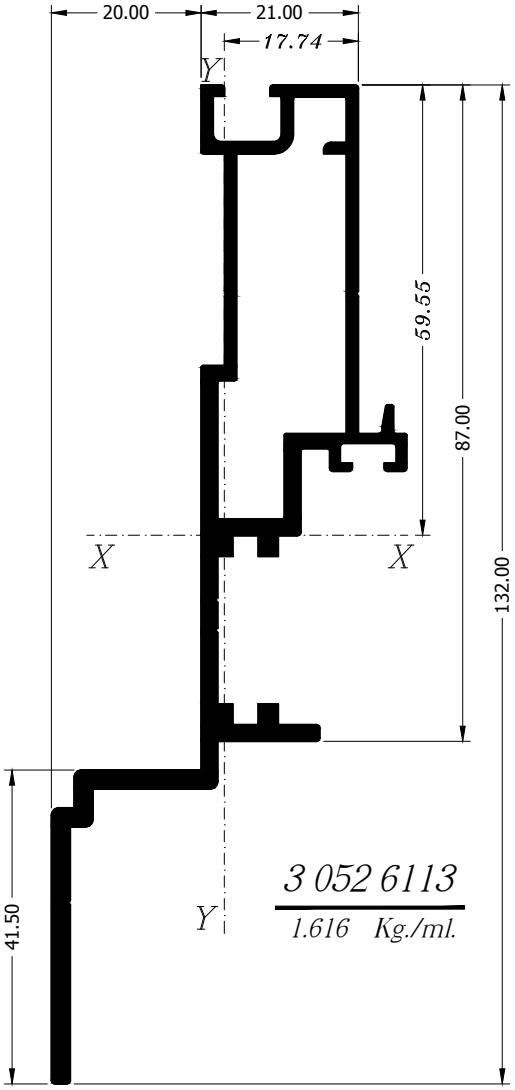

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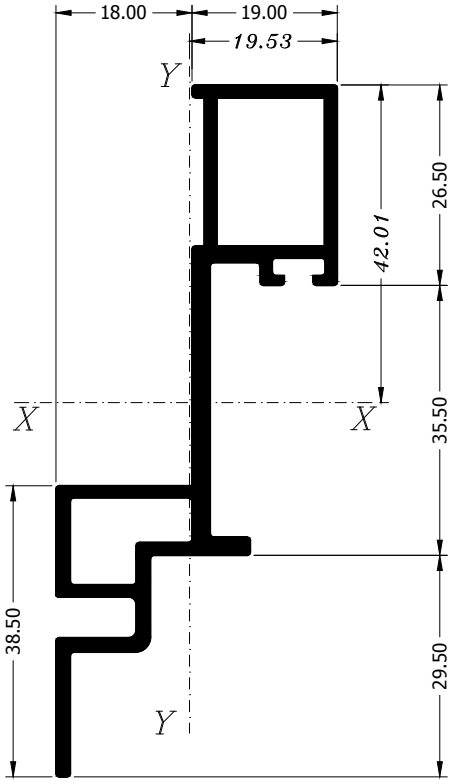

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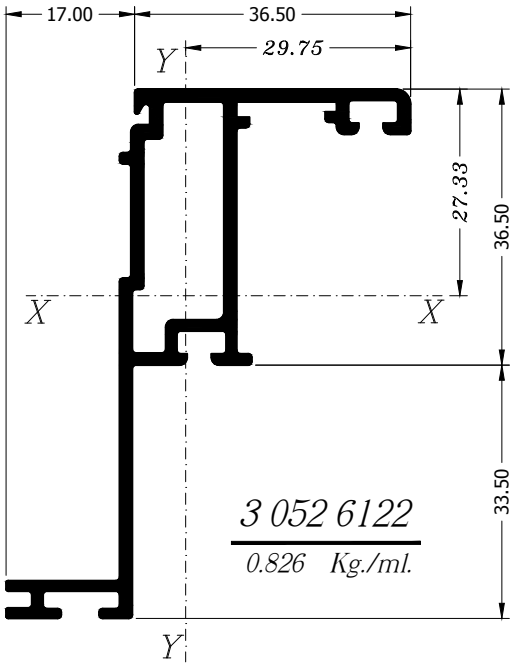

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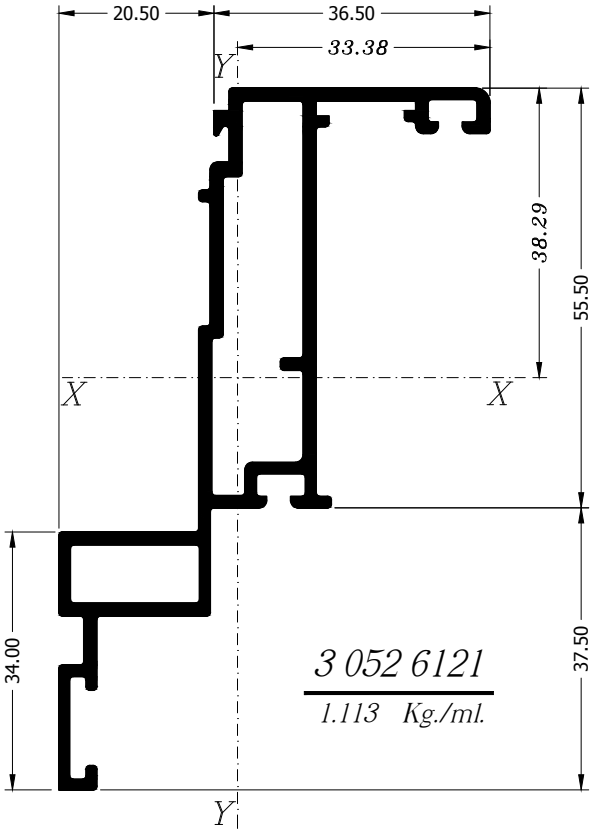

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1.113 Kg./ml.

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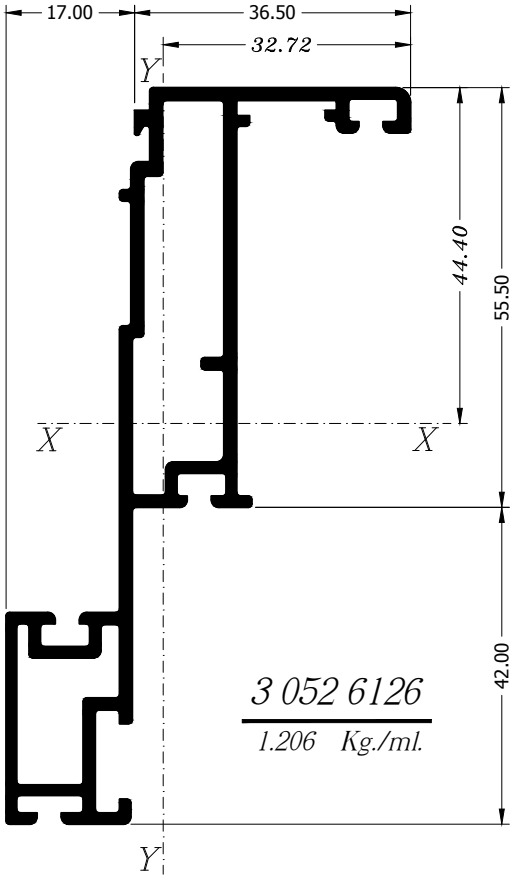

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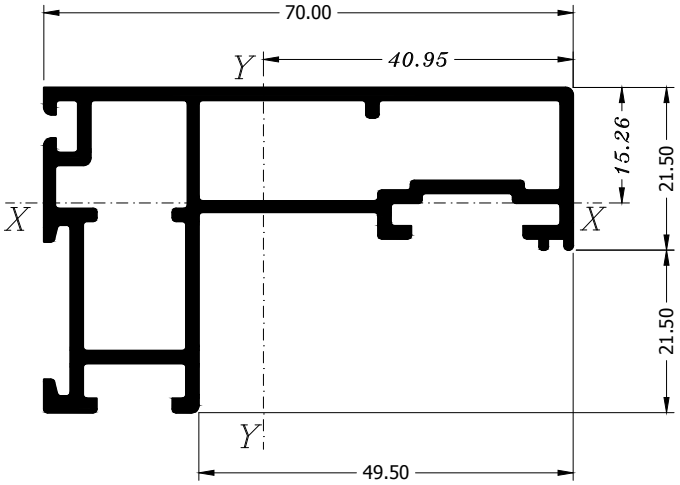

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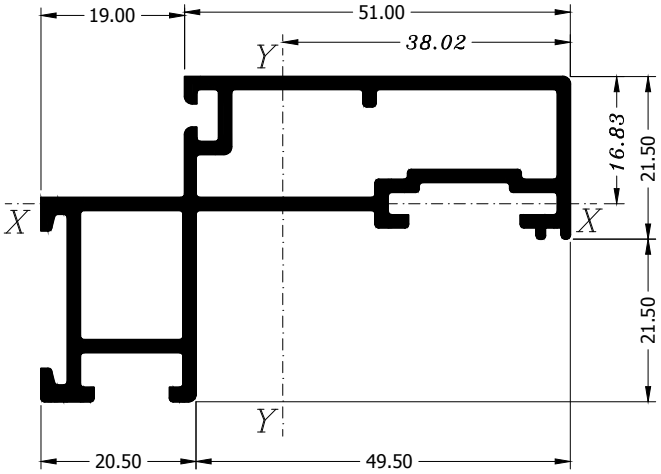

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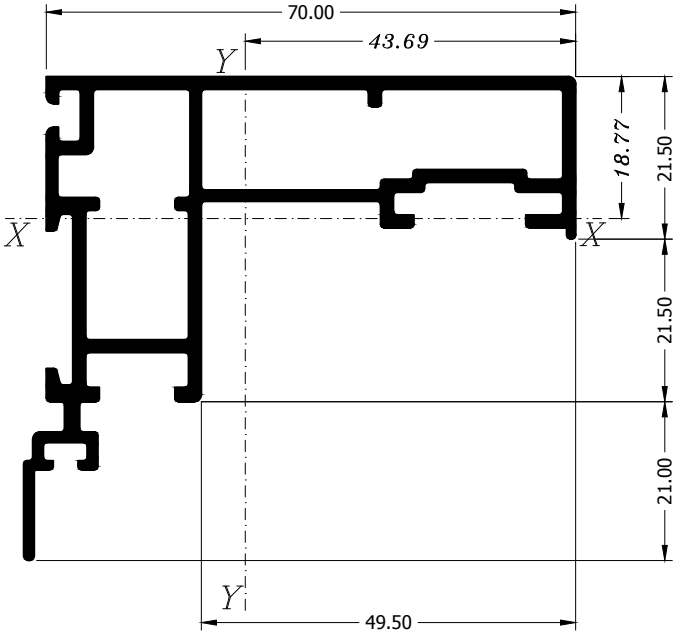

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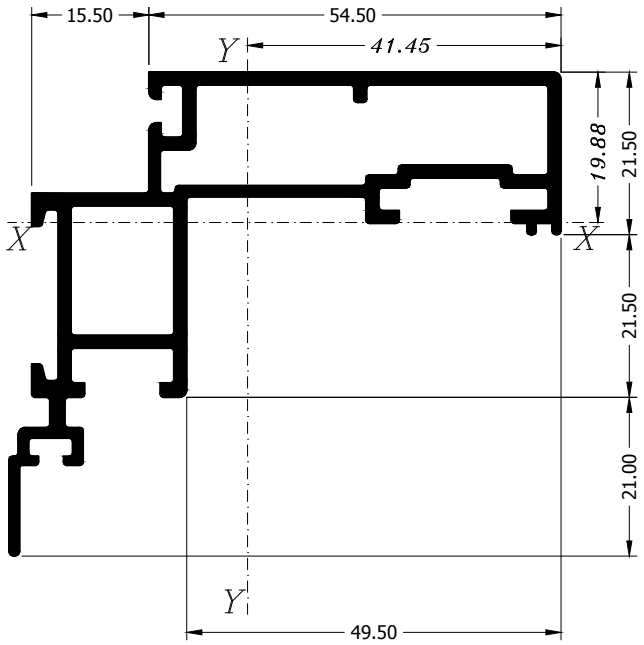

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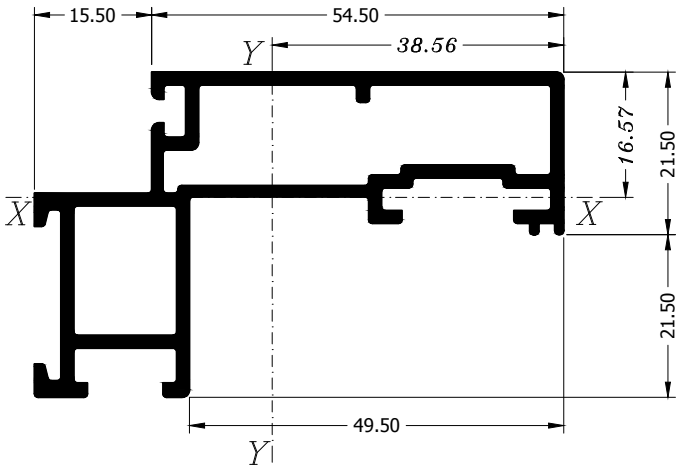

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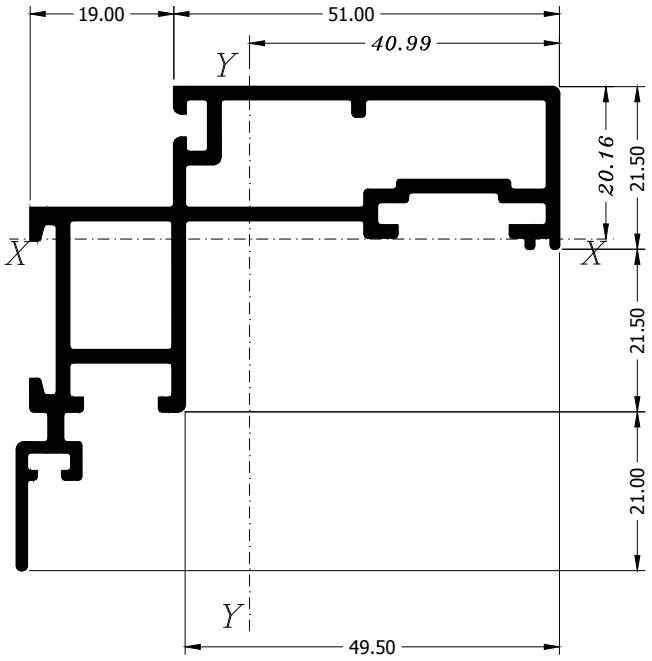

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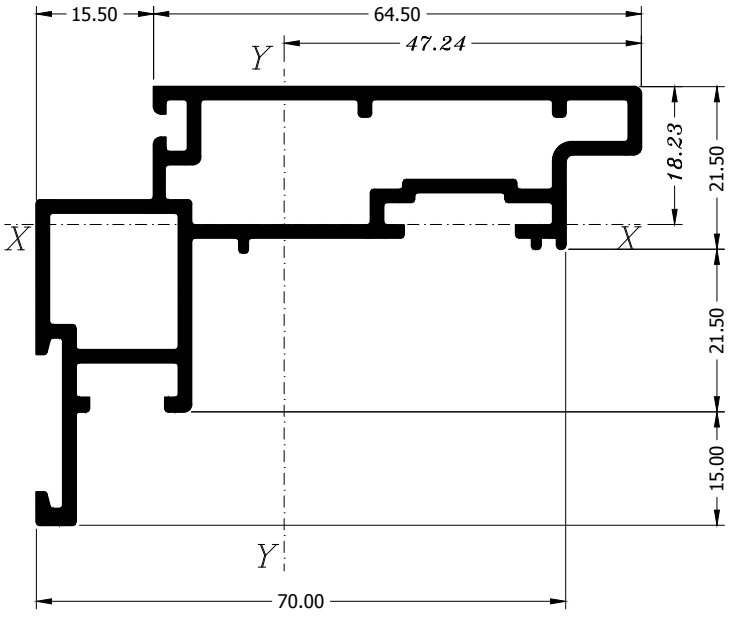

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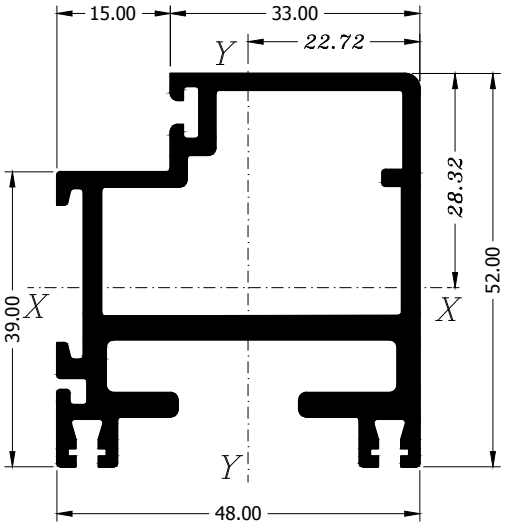

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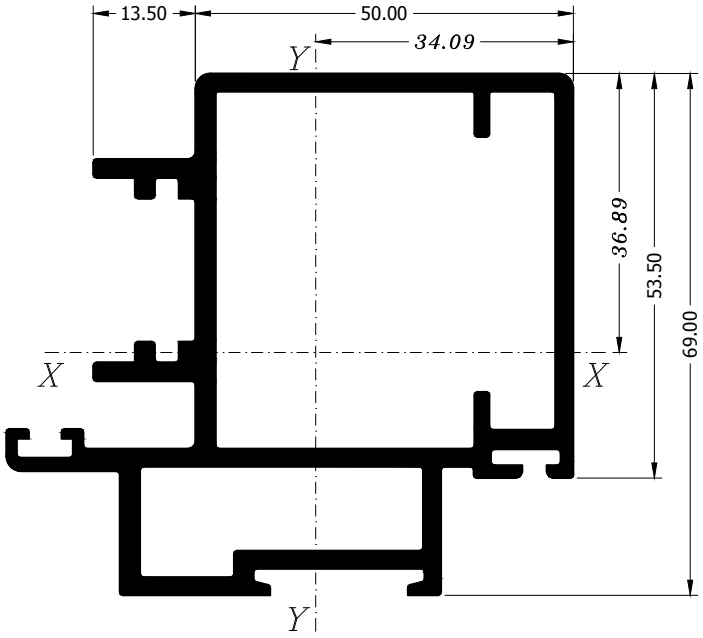

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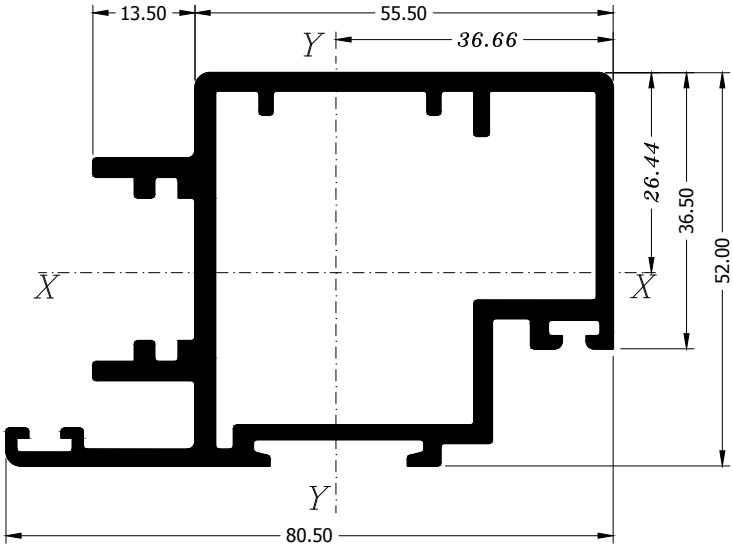

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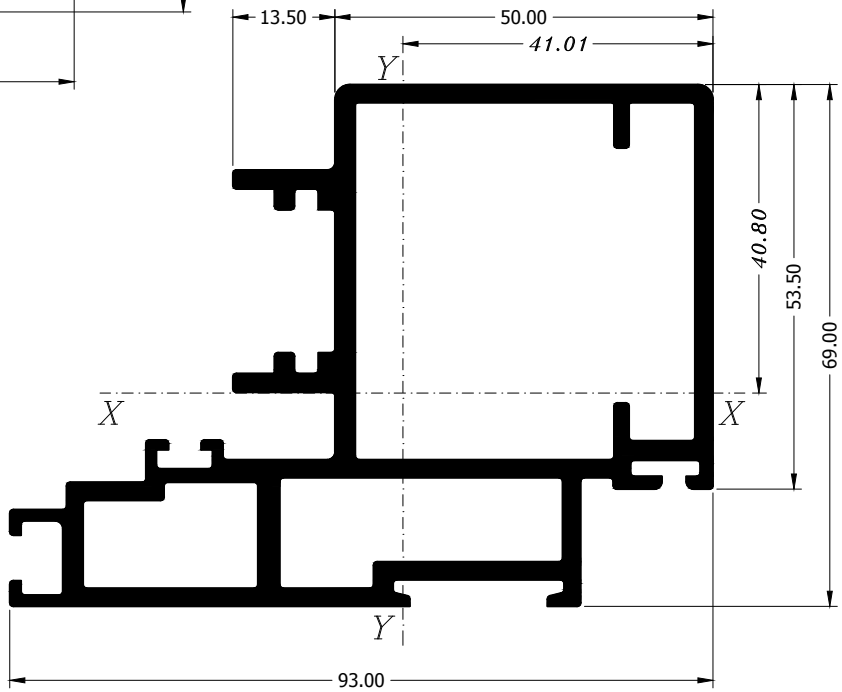

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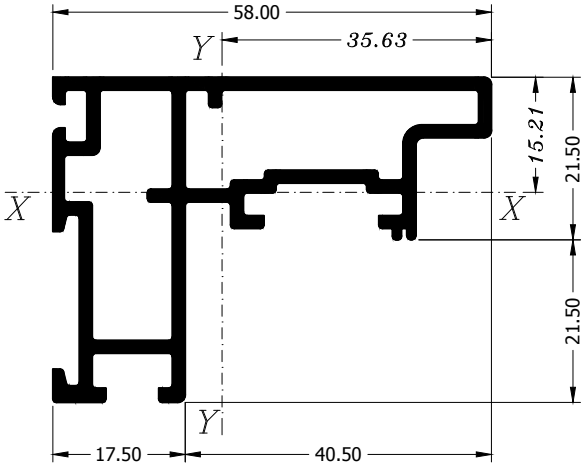

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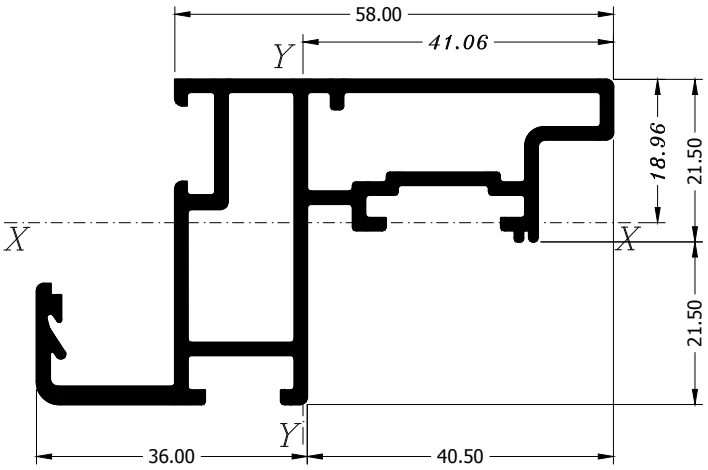
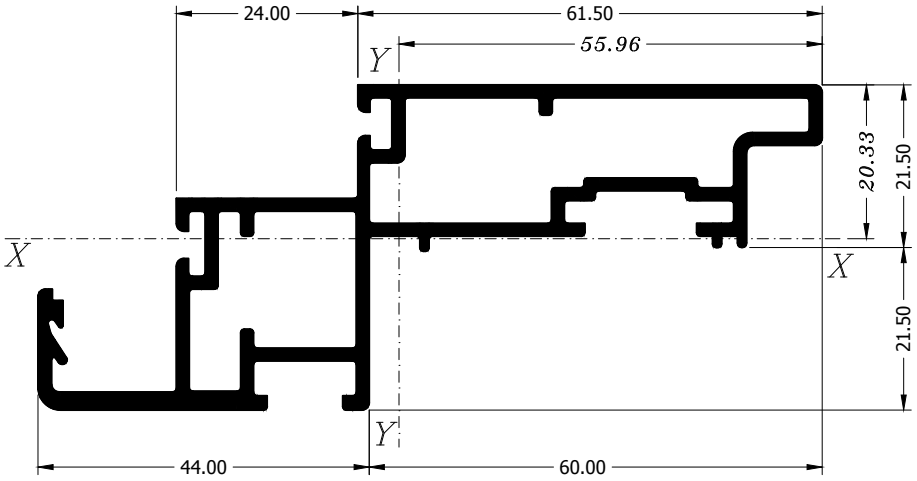


3 052 6346

1.459 Kg./ml.

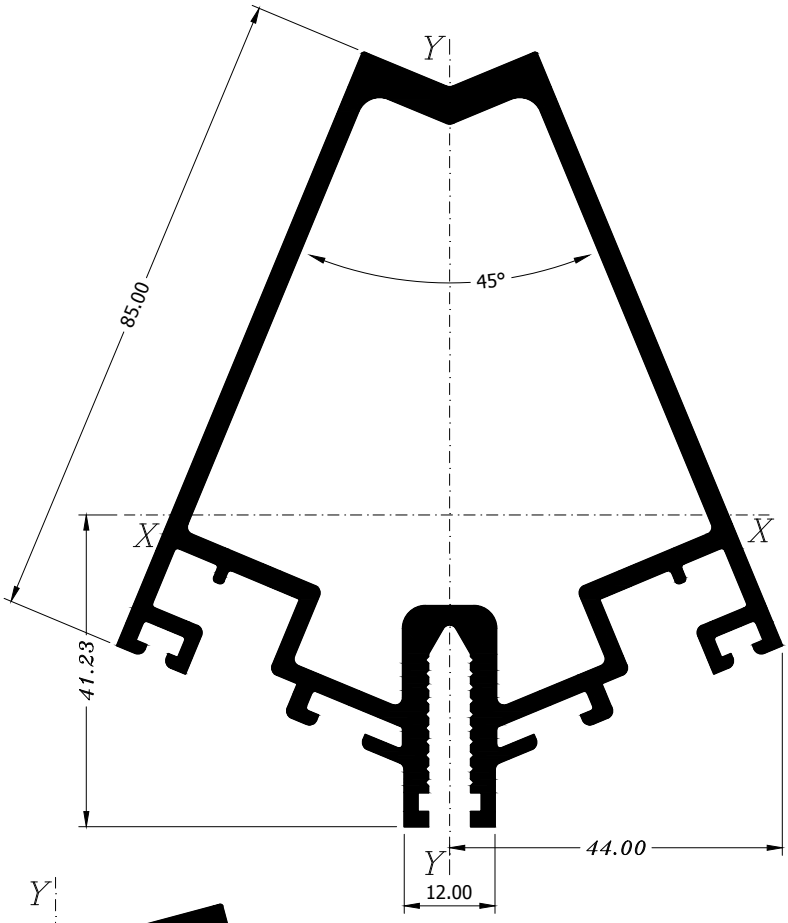


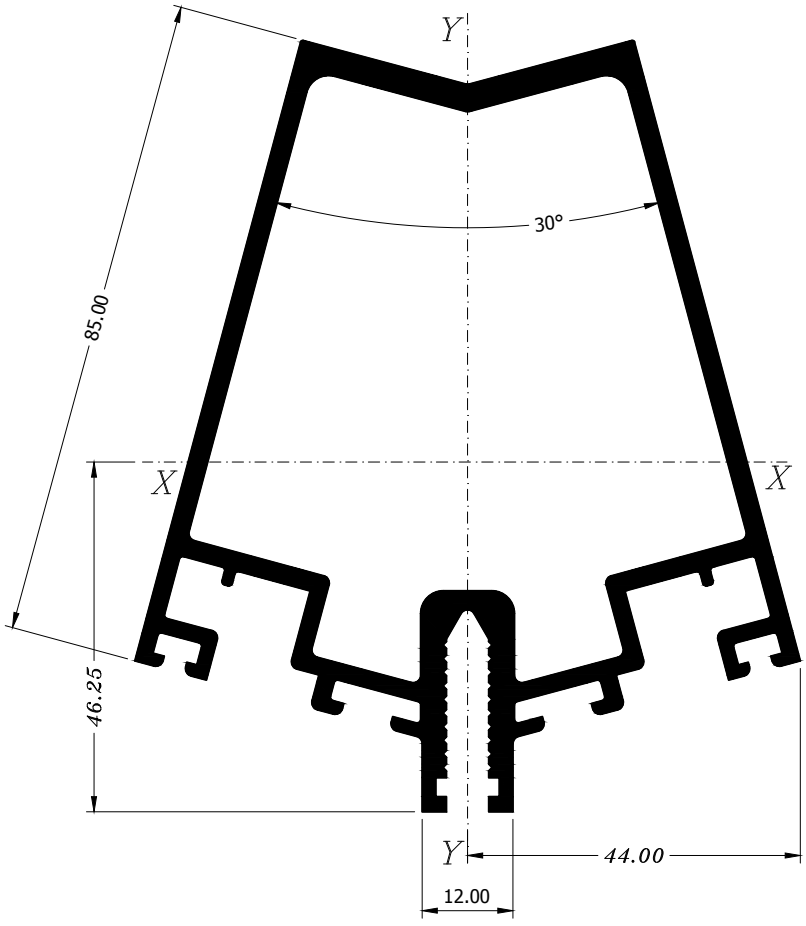
3 052 7123

2.602 Kg./ml.

I_x = 89.60 Cm^4

I_y = 47.69 Cm^4



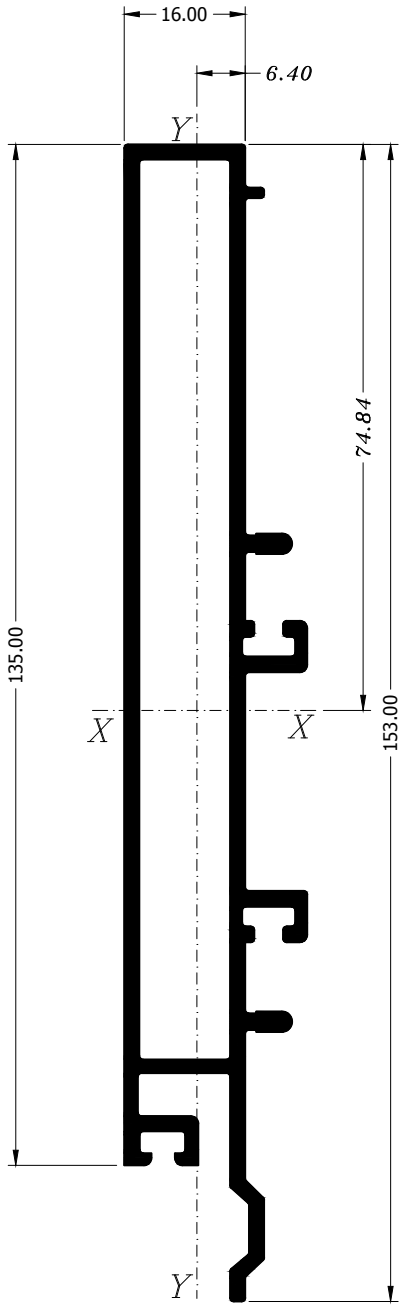


3 052 7133

2.529 Kg./ml.

I_x = 100.68 Cm^4

I_y = 56.33 Cm^4

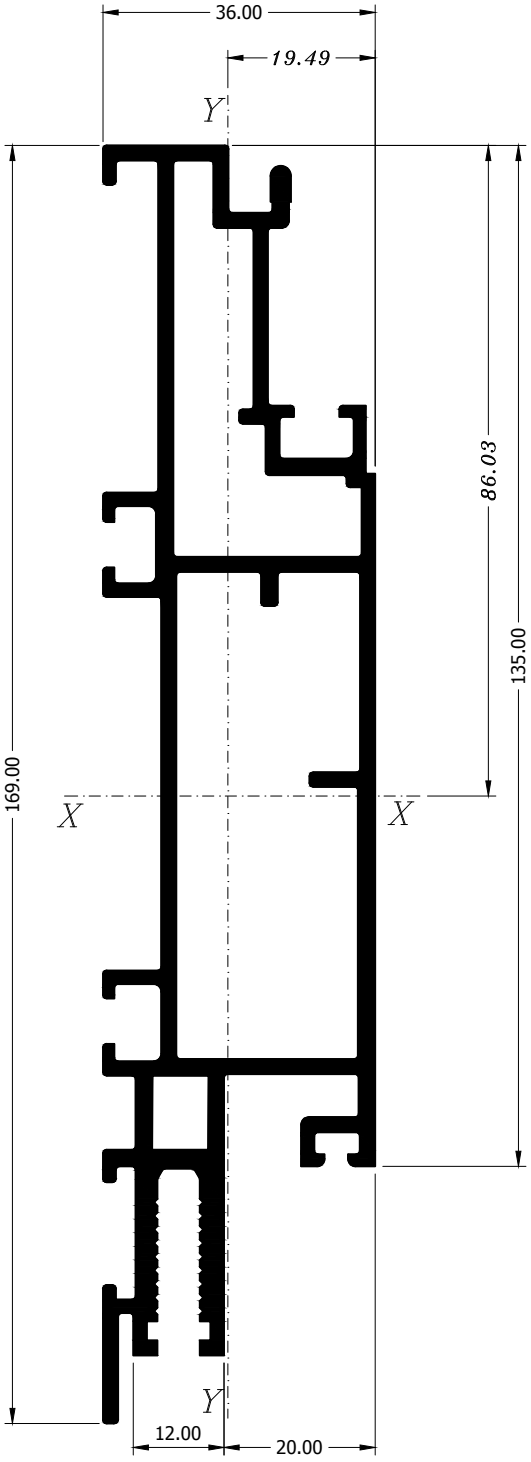


3 052 8013

1.763 Kg./ml.

$I_x = 123.00$ Cm^4

$I_y = 3.55$ Cm^4



3 052 8213

2.696 Kg./ml.

$I_x = 240.49$ Cm^4

$I_y = 13.14$ Cm^4

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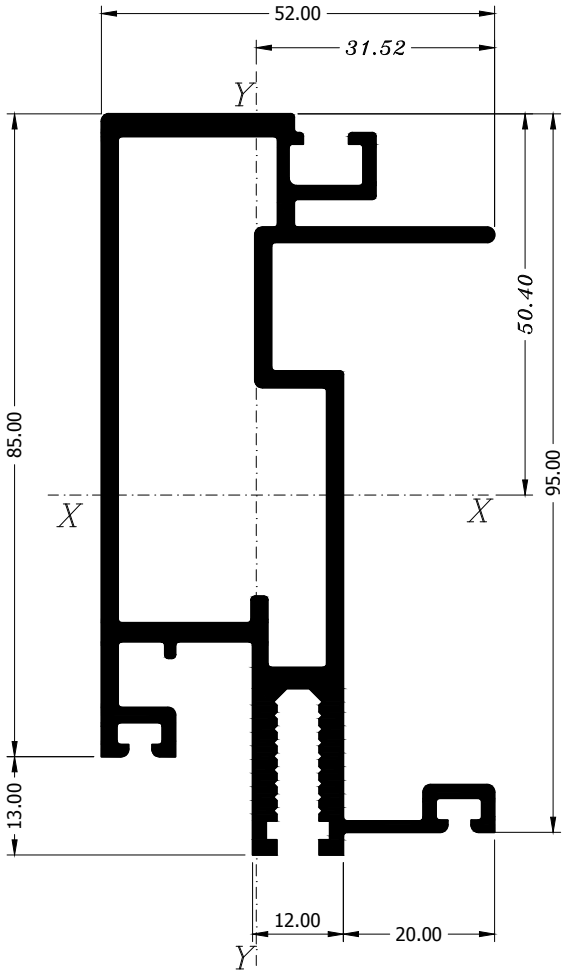
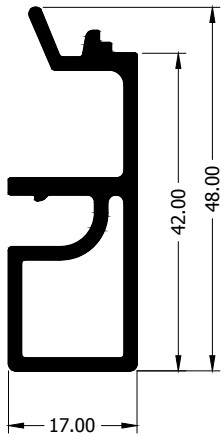


3 052 8208

2.103 Kg./ml.

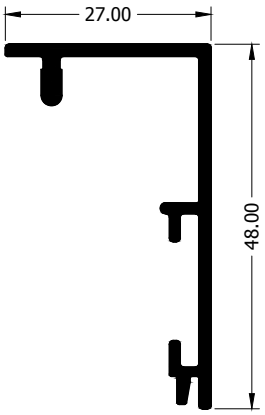
$I_x = 105.35$ Cm^4

$I_y = 15.95$ Cm^4



3 052 9164

0.545 Kg./ml.



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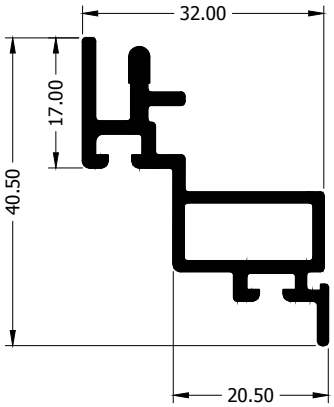

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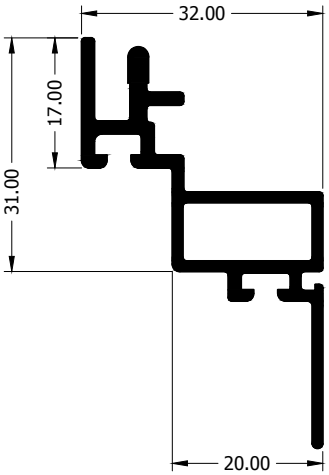

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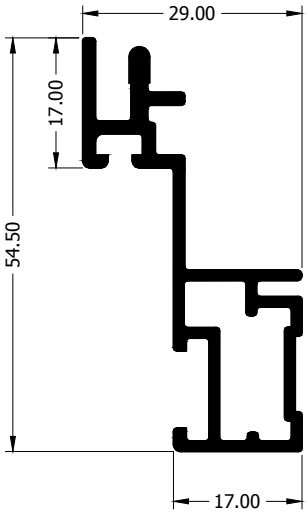
0.547 Kg./ml.



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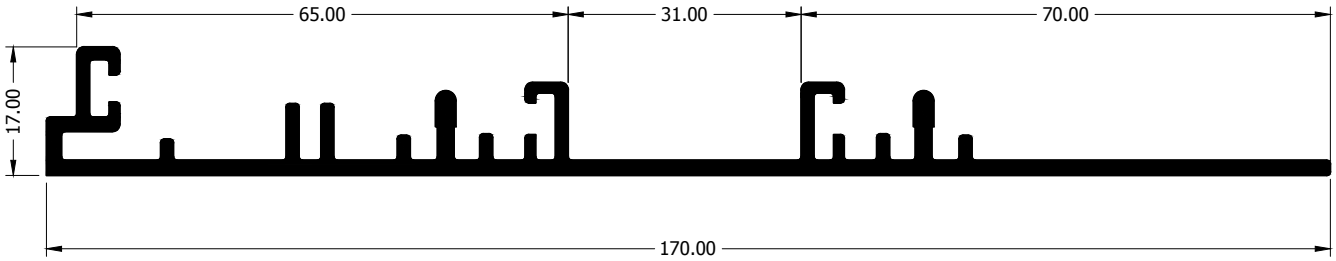

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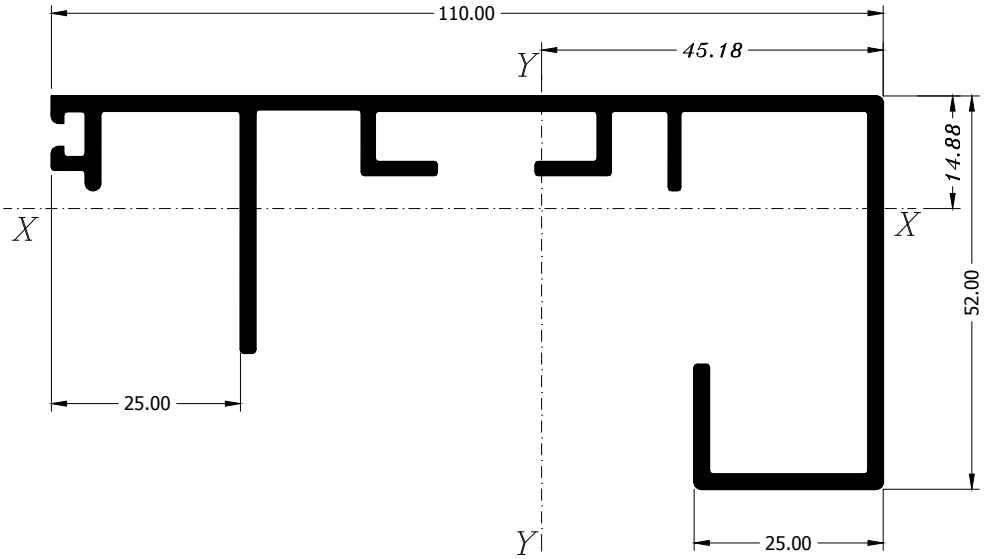
1.303 Kg./ml.



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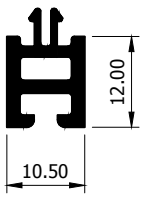
1.361 Kg./ml.

I_x = 64.67 Cm^4

I_y = 15.63 Cm^4



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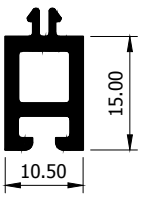

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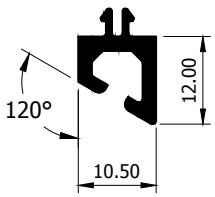

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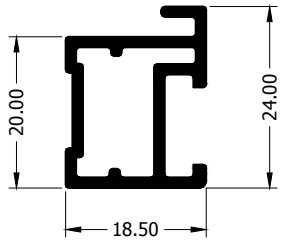

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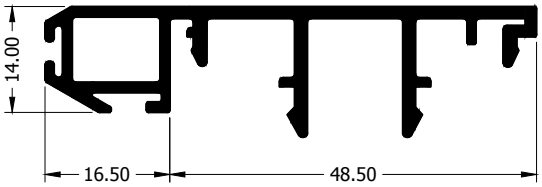

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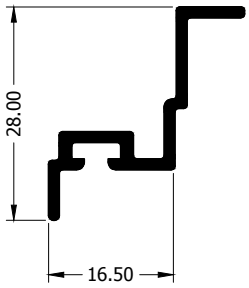

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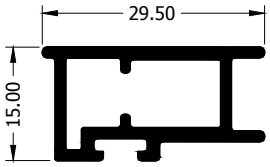

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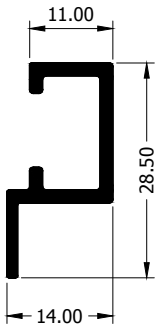

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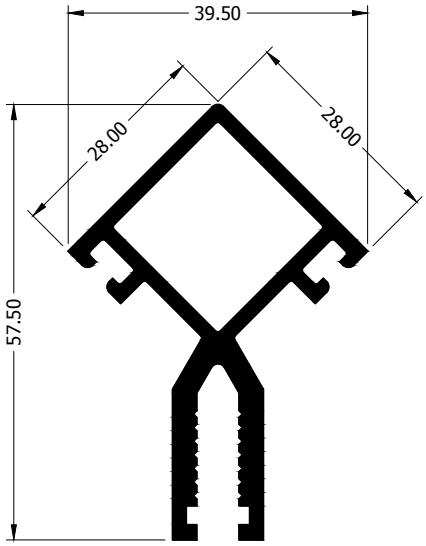

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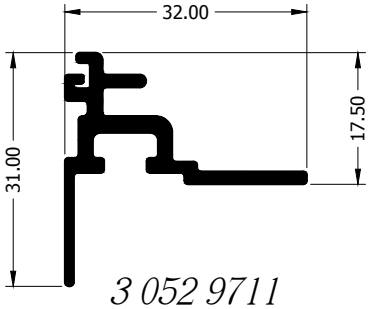

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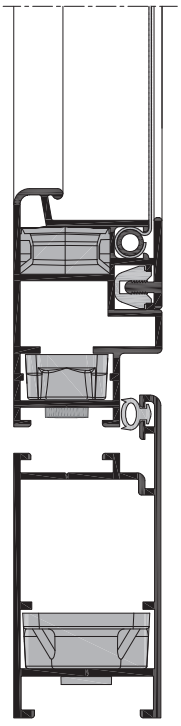
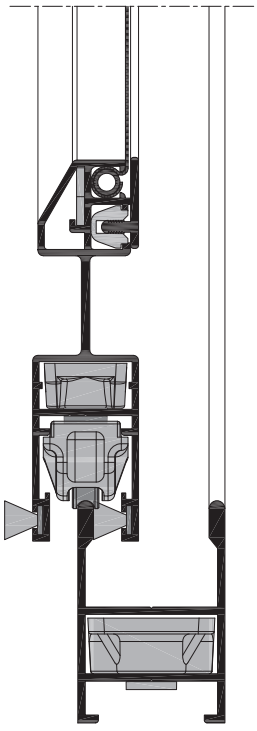




KITO 20

Fly-Screen System

- Complete fly screen solution to keep out insects, available in fixed, hinged and sliding opening.
- Compatible with most of our hinged, sliding and louvers systems.
- Can be assembled and installed independently or integrated with our systems.
- Innovative cover for fly screen gasket connection.
- Frame and sash with profiles at 45°.

Technical Characteristics

Frame Depth

28 mm.

Frame Height

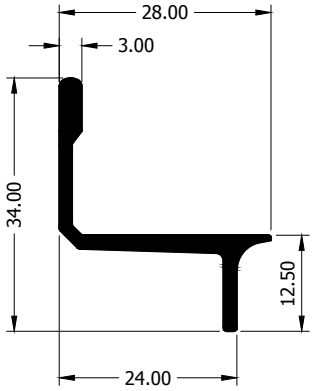
42 mm. to 61 mm.

Sash Depth

14 mm. to 28 mm.

Sash Height

35 mm. to 72 mm.



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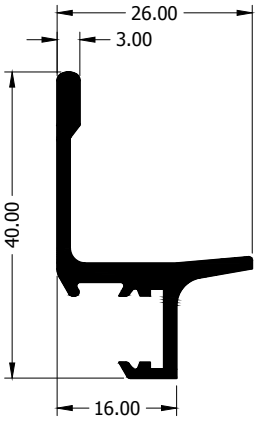

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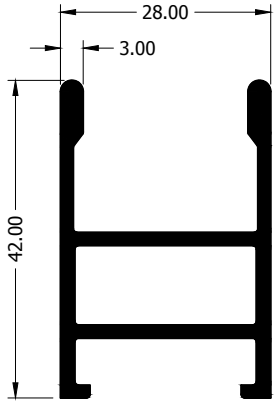

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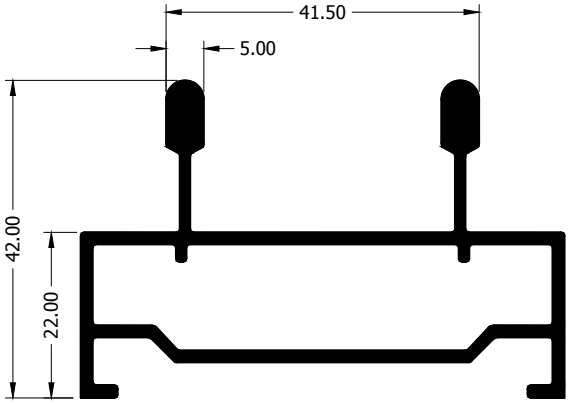

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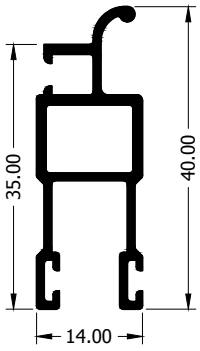

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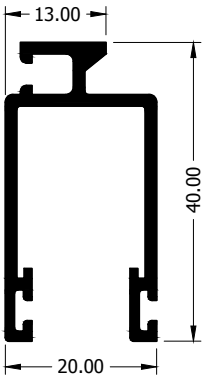

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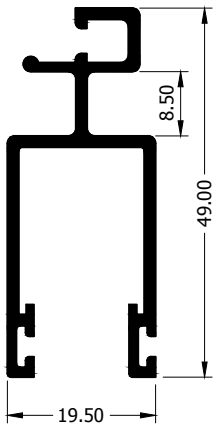

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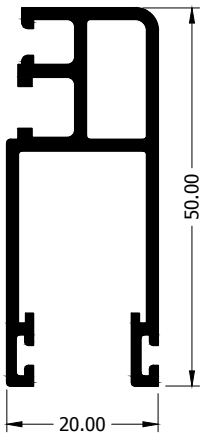

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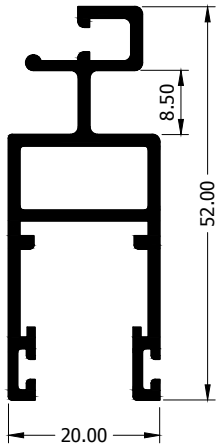

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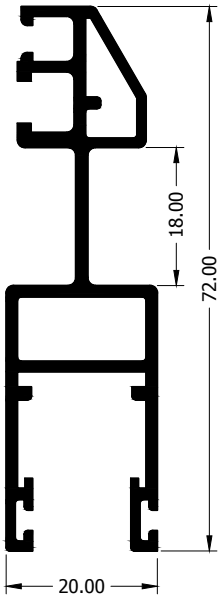

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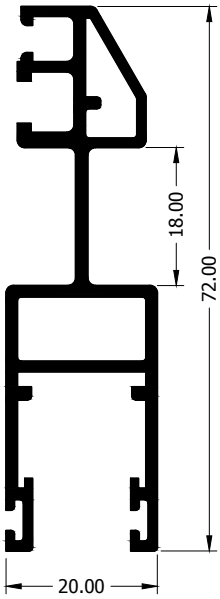

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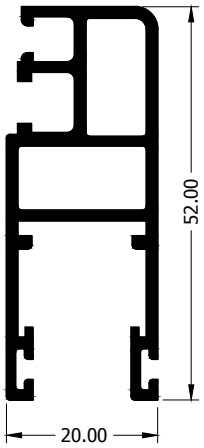

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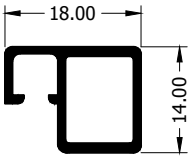

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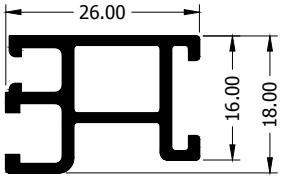

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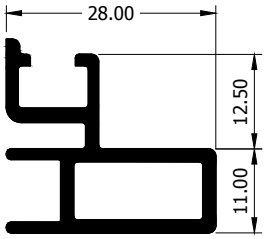

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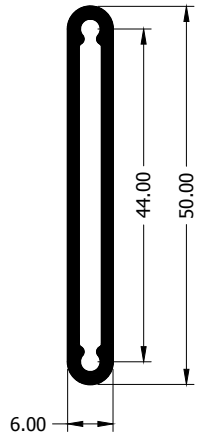

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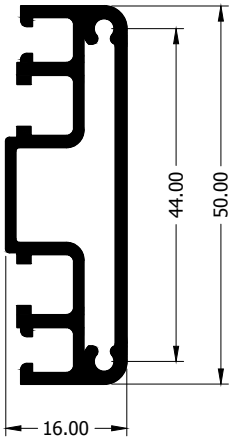

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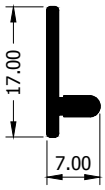

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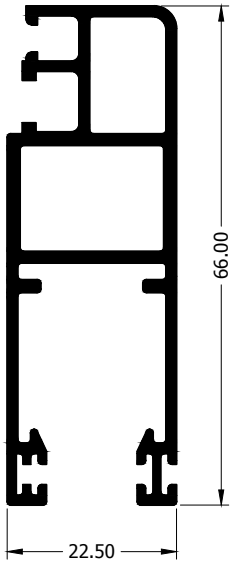

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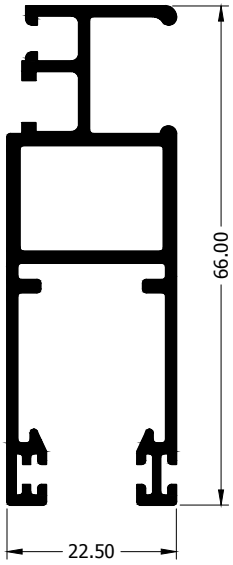

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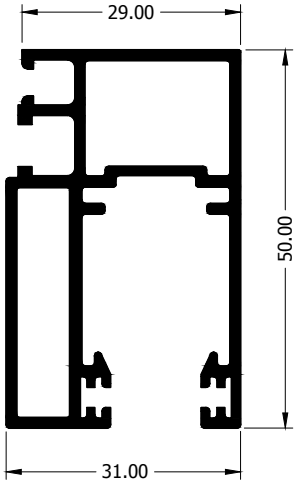

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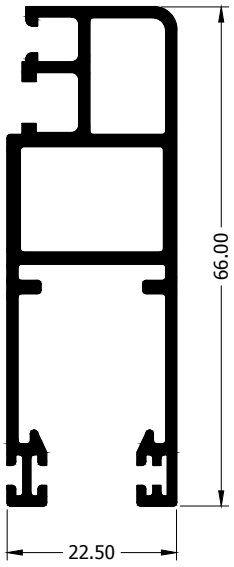

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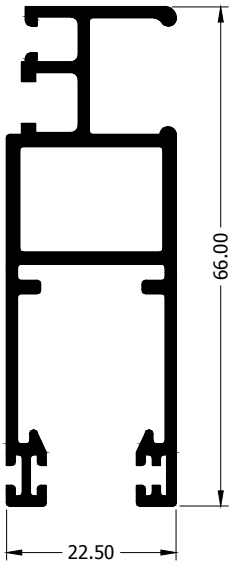

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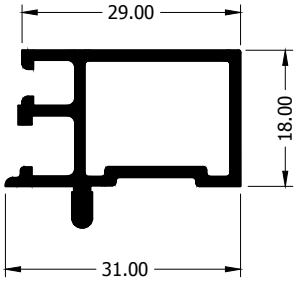

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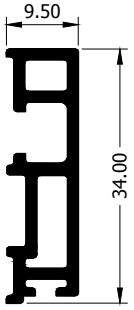

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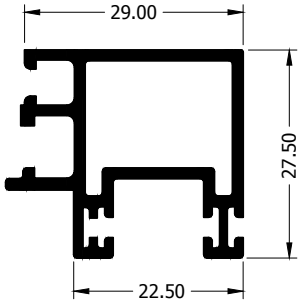

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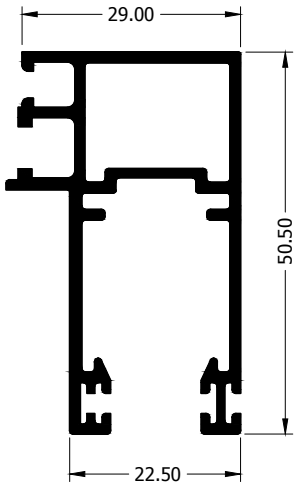

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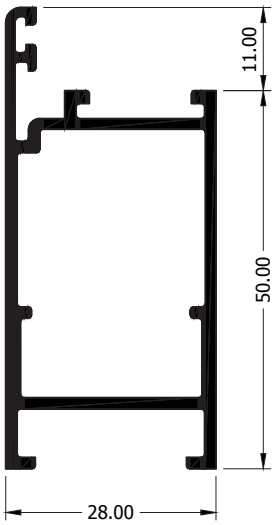

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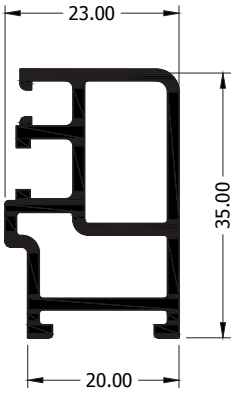

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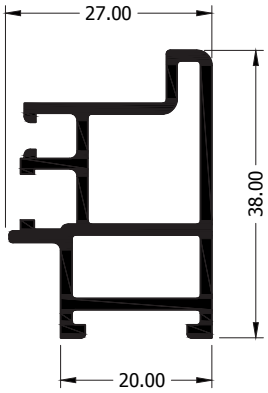

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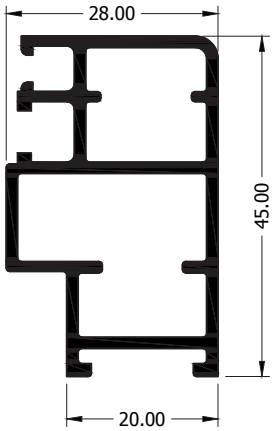

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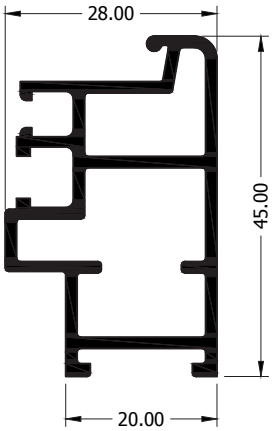

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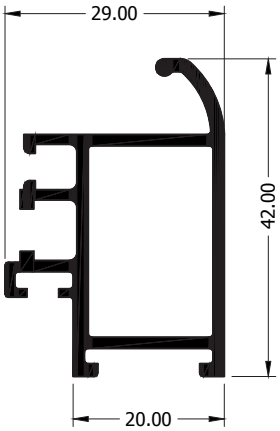

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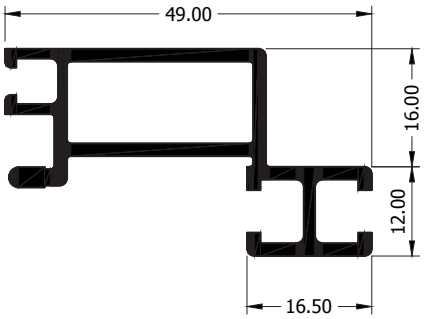

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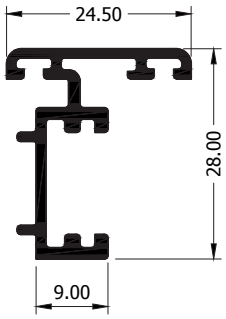

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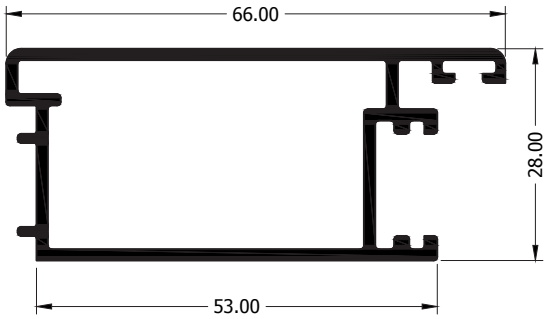

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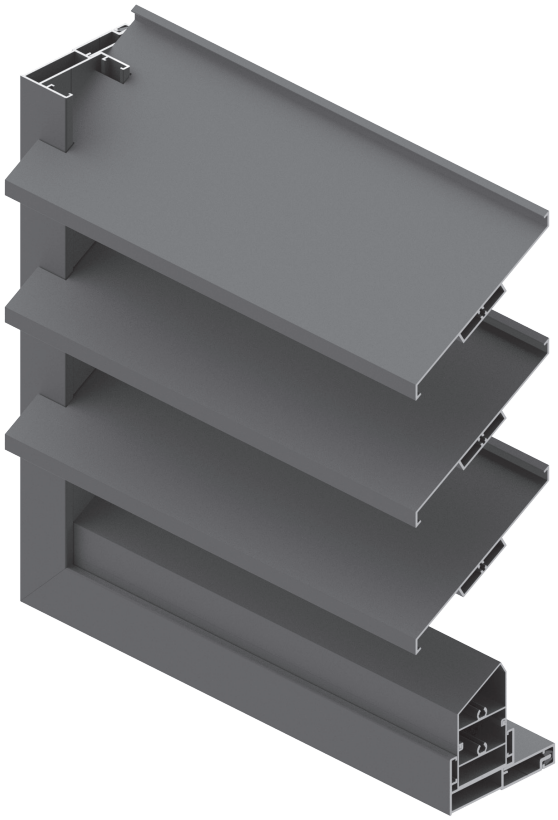
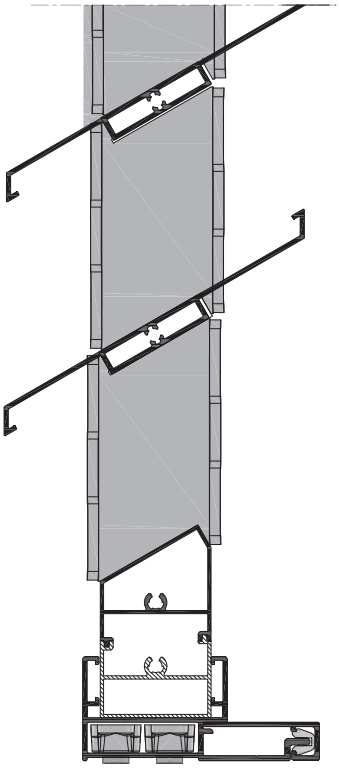




ACACIA 50

Shading System

- Designed to provide effective natural ventilation solution and create a healthier indoor climate.
- Can be applied in different ways such as natural ventilation, sun shading and simple Fixed-Sliding-Hinged-Folding shutters systems.
- Several types of slats/blades are available vary in shapes, sizes and Installation methods.
- Provides effective protection against unwanted visitors.
- Compatible with most of our systems.

Technical Characteristics

Main Profile Depth

42 mm. to 125 mm.

Main Profile Height

21 mm. to 80 mm.

Slat Depth

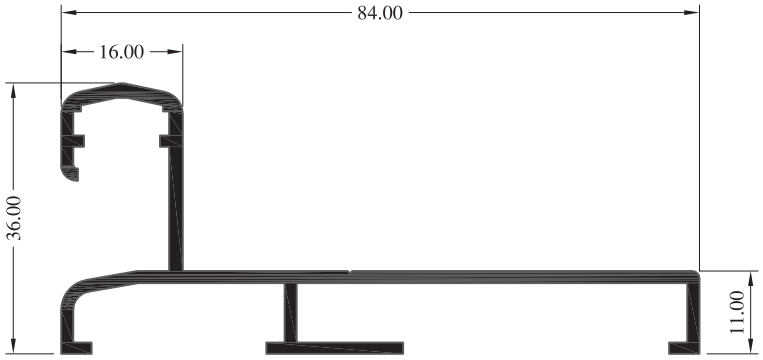
60 mm. to 200 mm.

Slat Height

20 mm. to 40 mm.

Degree Obtained

30 - 45 - 60 -90



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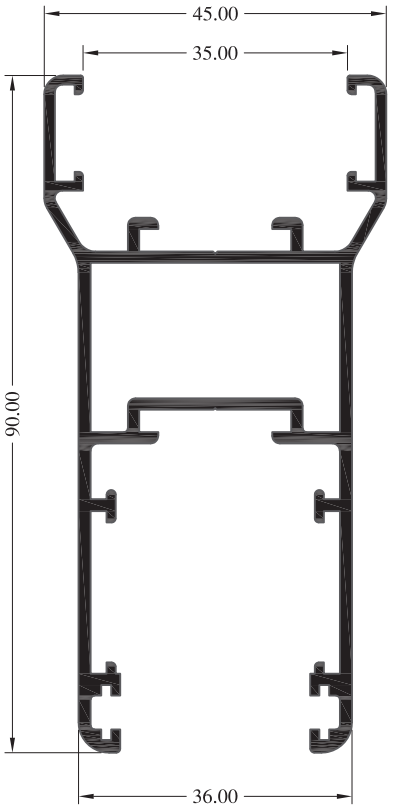

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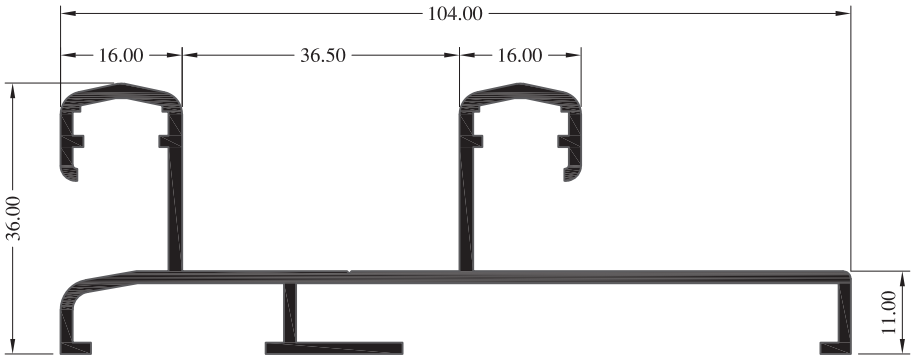

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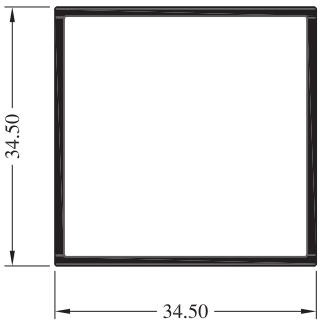

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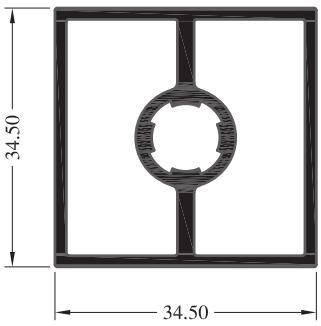

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Profile Old No.	C 5011	C 5012	C 5042	C 5064	C 5069

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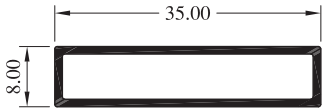

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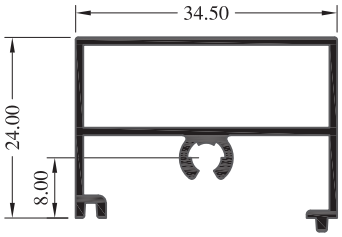

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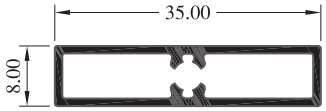

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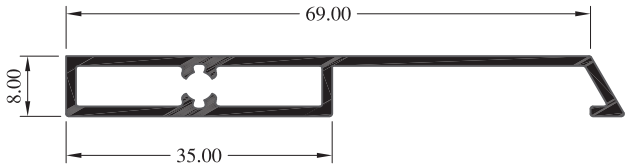

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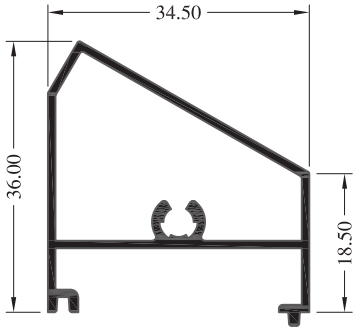

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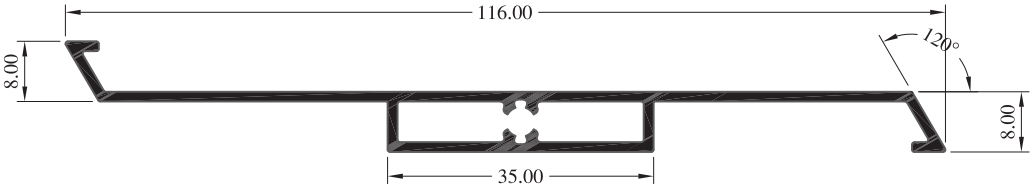

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Profile Old No.	C 5059	C 5057	C 5067	C 5087	C 5082

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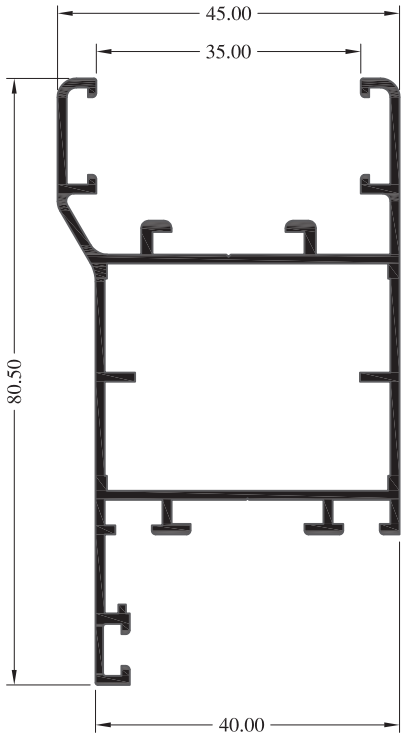

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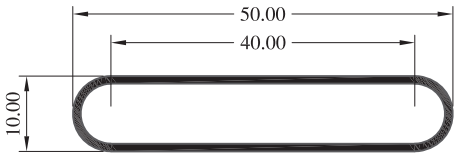

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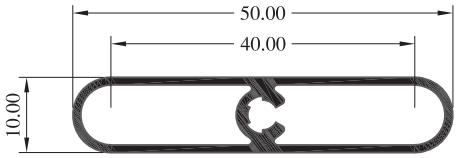

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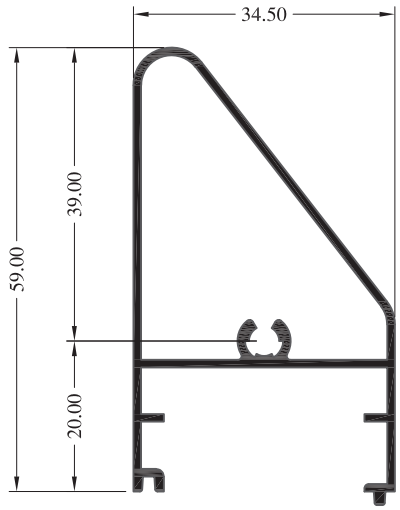

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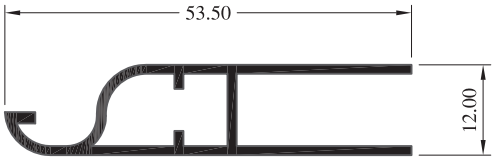

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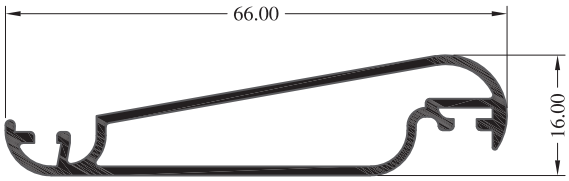

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Profile Old No.	C 5025	C 5061	C 5062	C 5058	C 5068	C 5052

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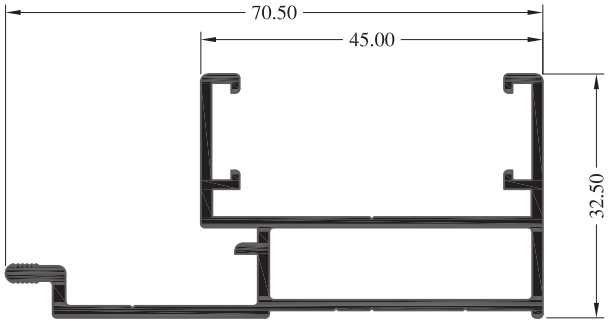

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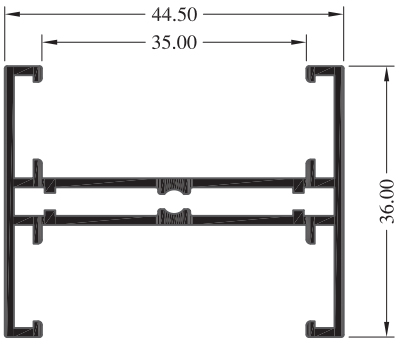

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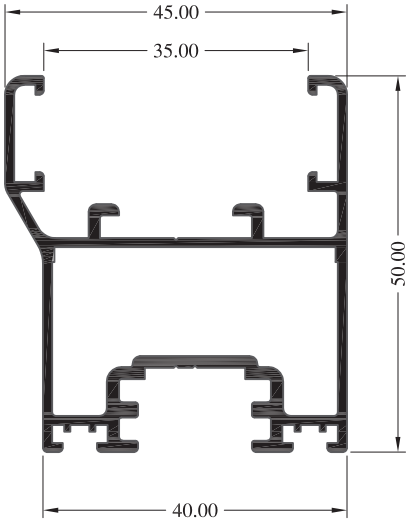

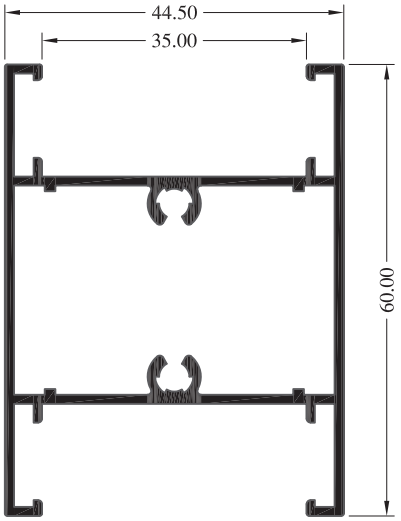

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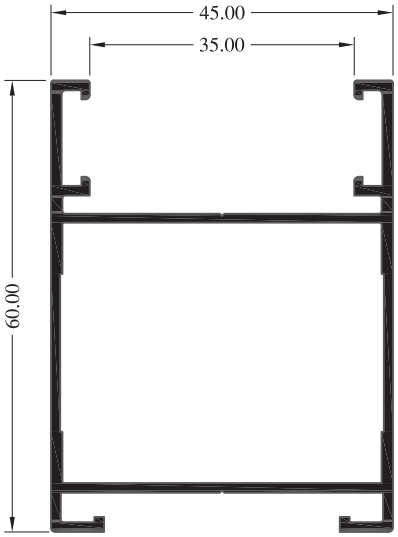

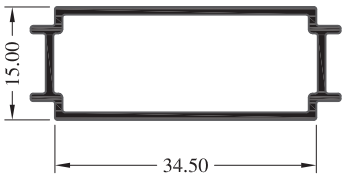

5 135 9310

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Profile No.	5 135 4538	5 135 5220	5135 7439	5 135 7460	5 135 9310
Profile Old No.	C 5091	C 5051	C 5096	C 5007	C 5003

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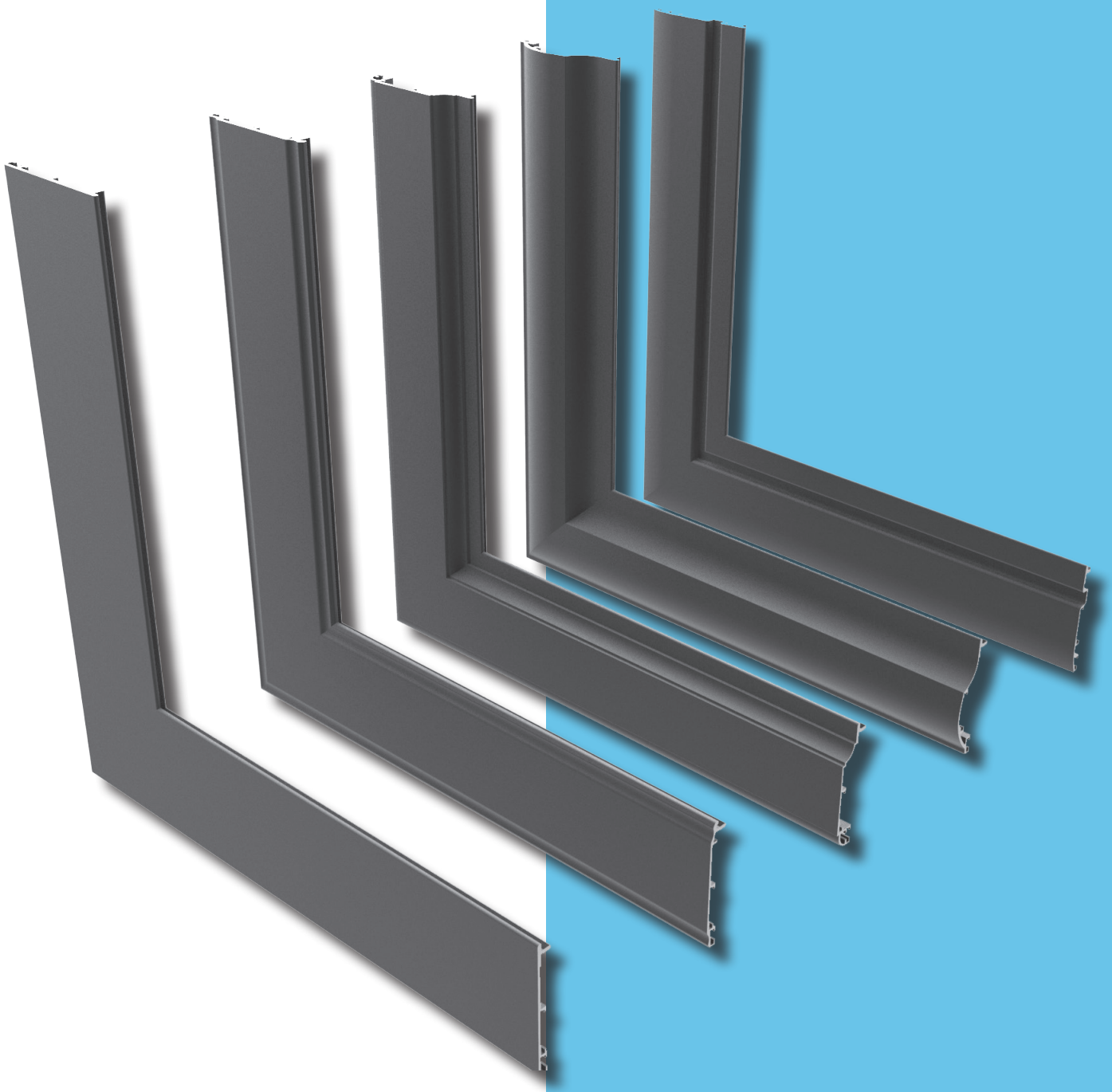
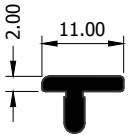
COMMON
PROFILES



GENERAL
CATALOGUE



9 001 1100

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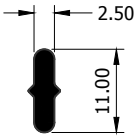

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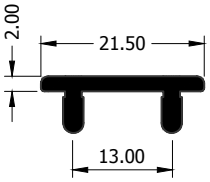

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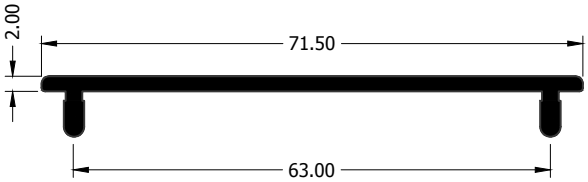

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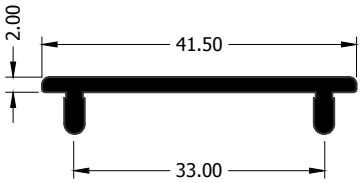

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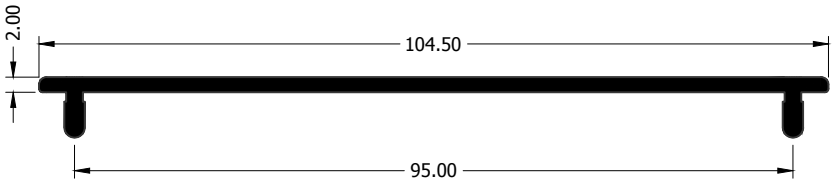

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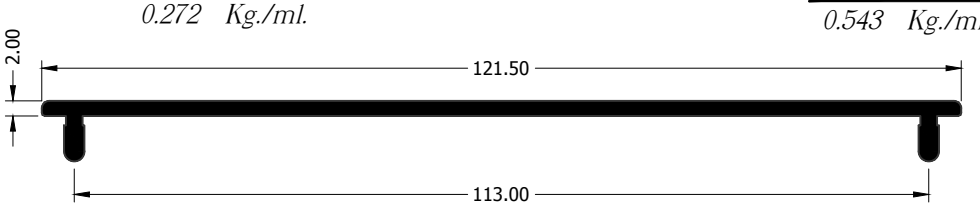

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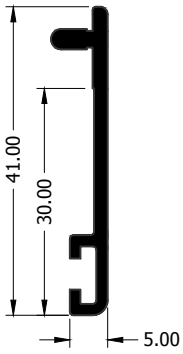

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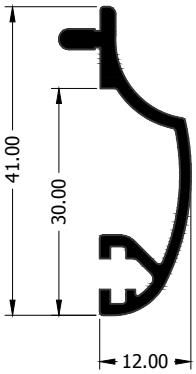

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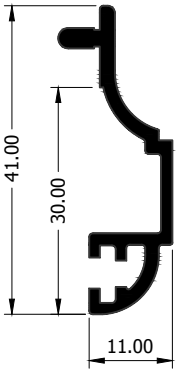

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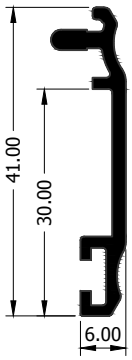

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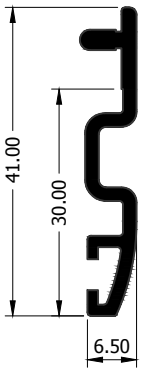

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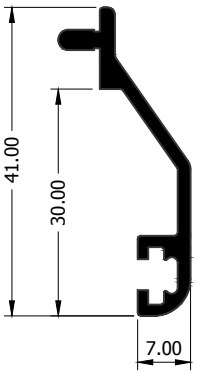

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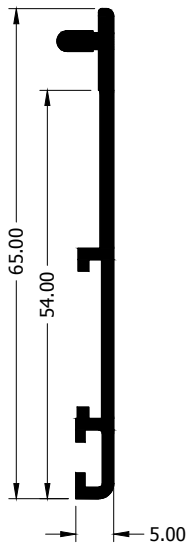

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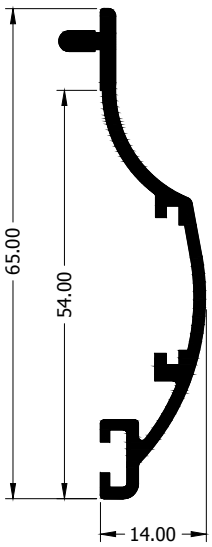

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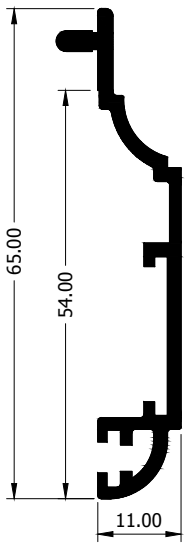

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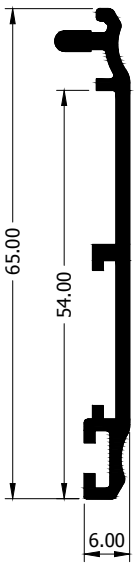

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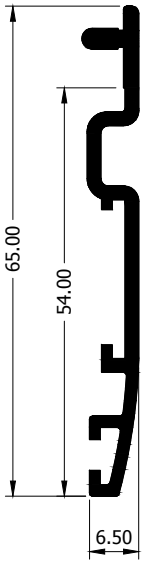

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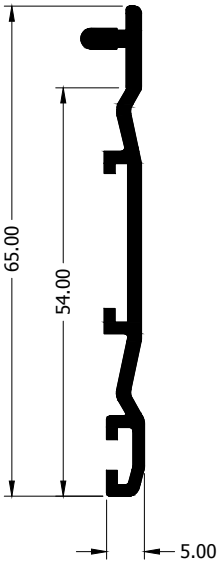

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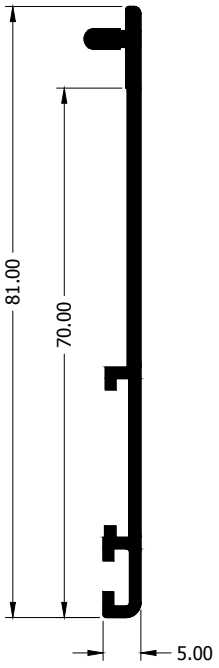

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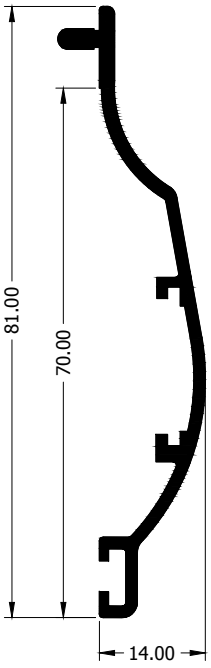

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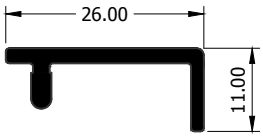

9 003 1110

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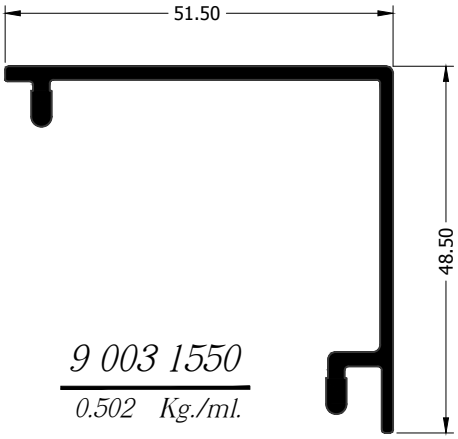

9 003 1550

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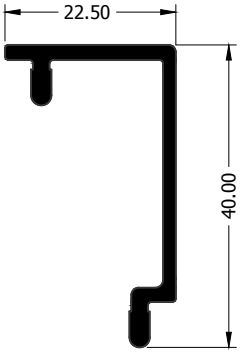

9 003 1230

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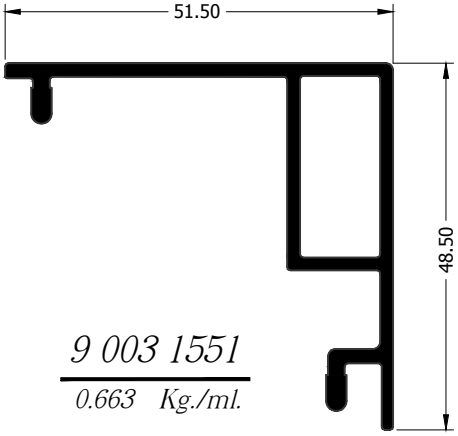

9 003 1551

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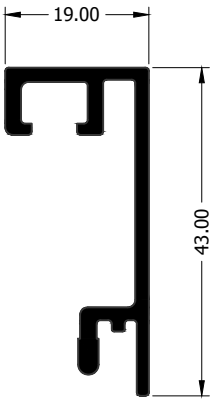

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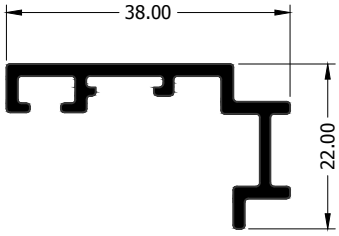

9 003 2320

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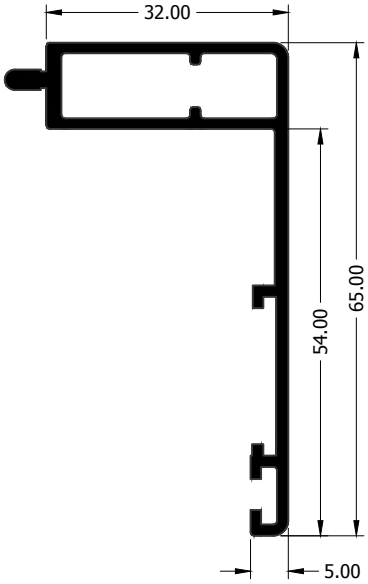

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0.578 Kg./ml.

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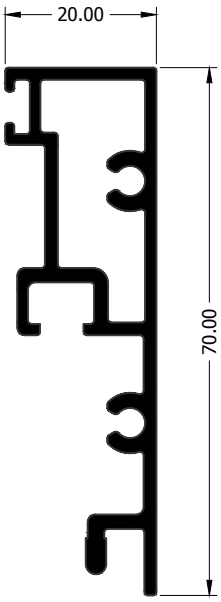
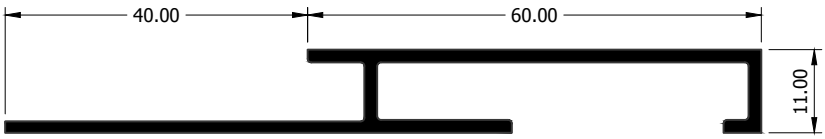


9 005 1100
0.767 Kg./ml.



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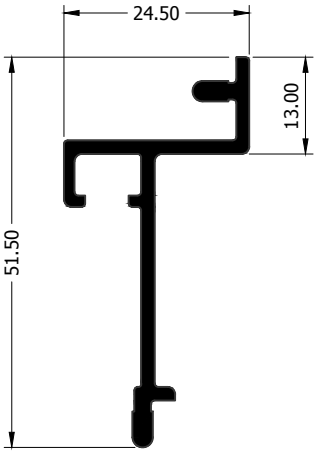

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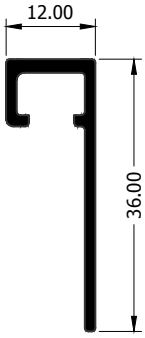

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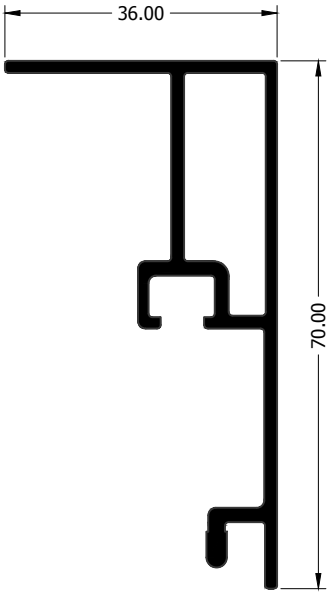

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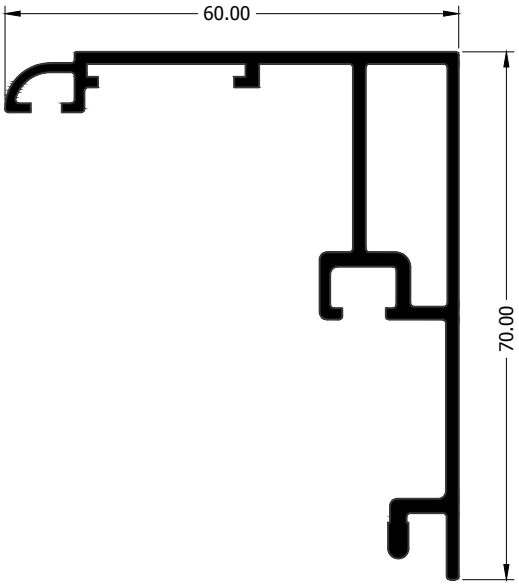

9 005 1403
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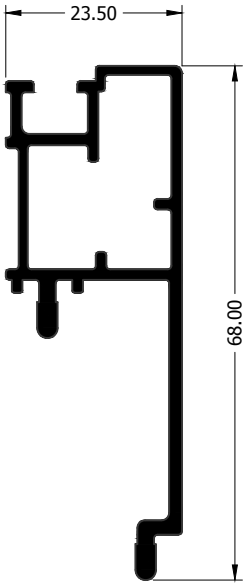

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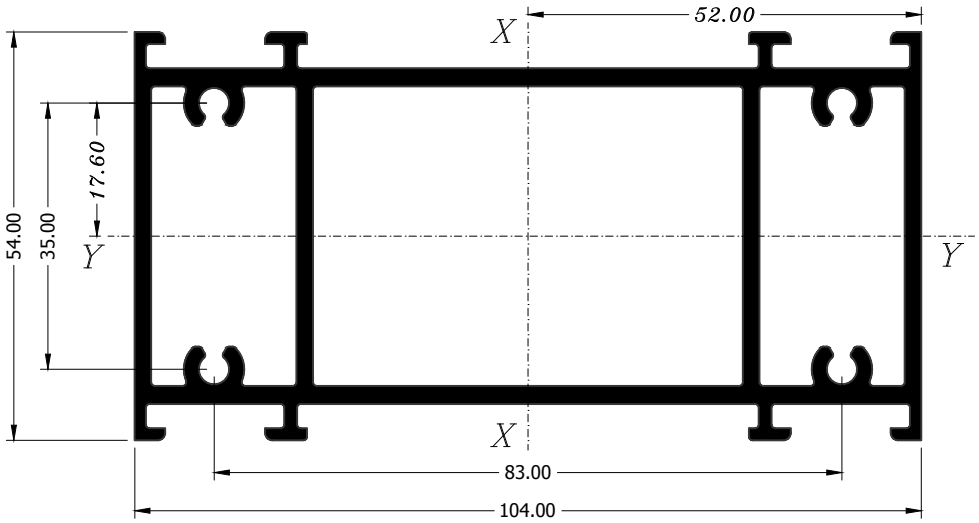
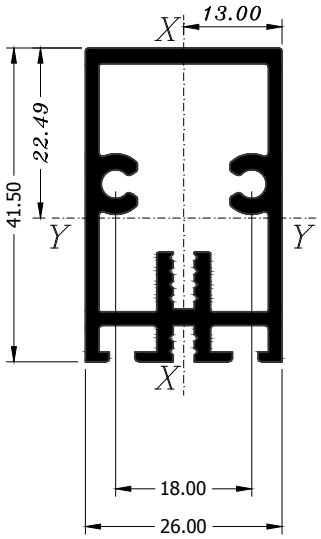


9 008 5100
2.345 Kg./ml.



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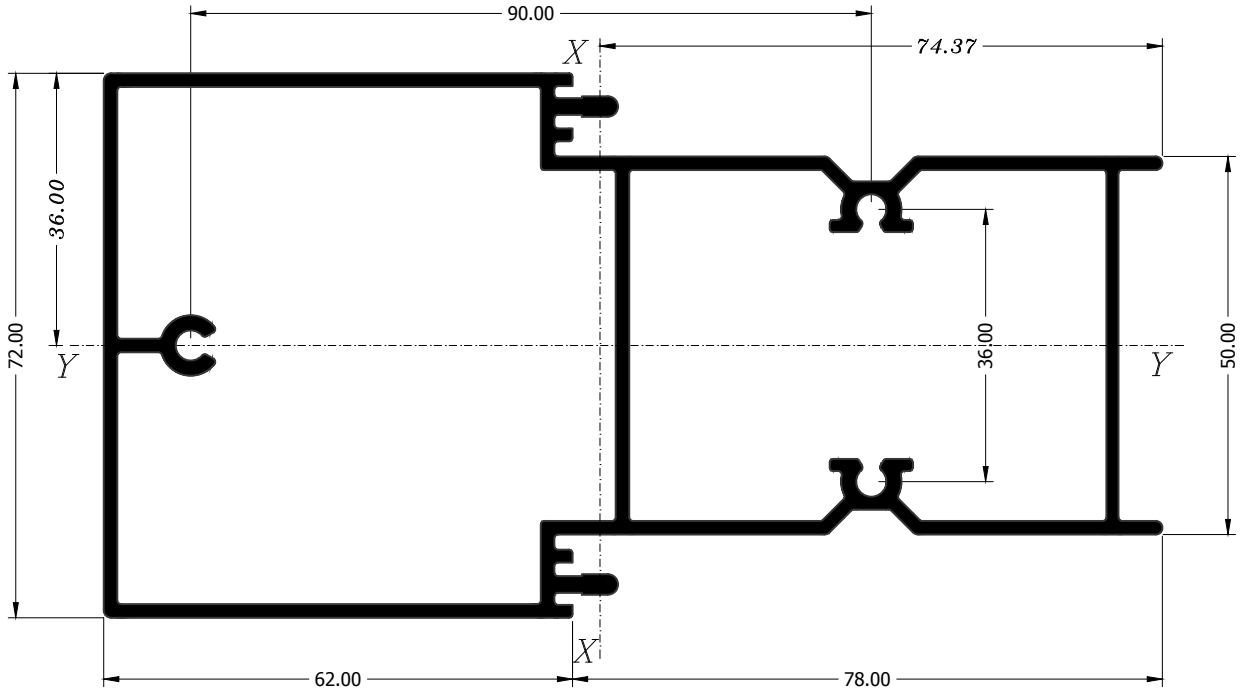
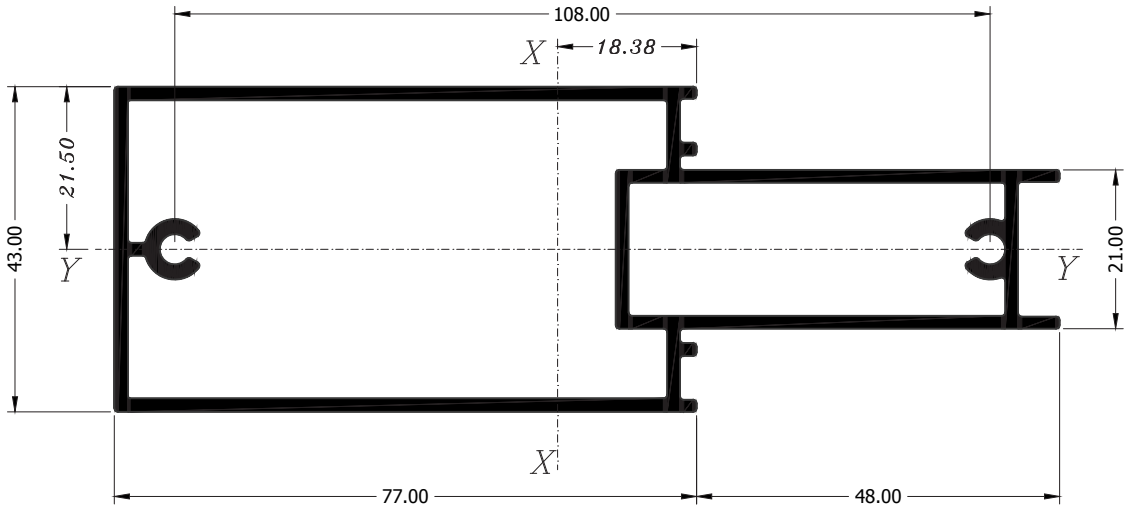
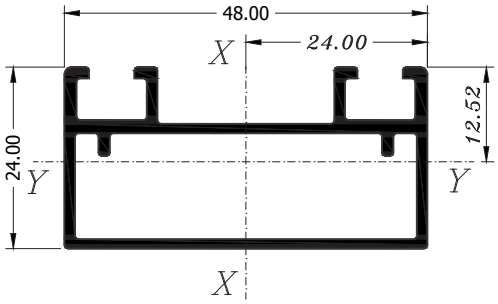
0.817 Kg./ml.



9 008 5140
2.389 Kg./ml.



9 008 5312
1.638 Kg./ml.



9 008 5525
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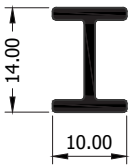

9 009 3011
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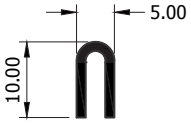

**9 009 9280*
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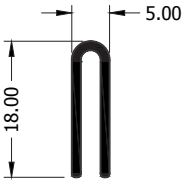

**9 009 9290*
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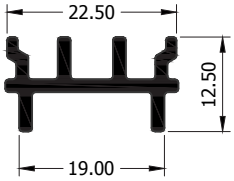
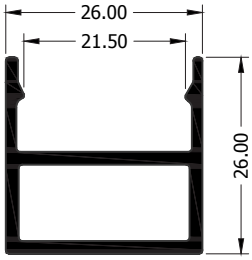
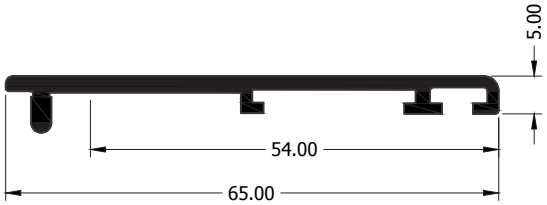


9 009 5001
0.228 Kg./ml.



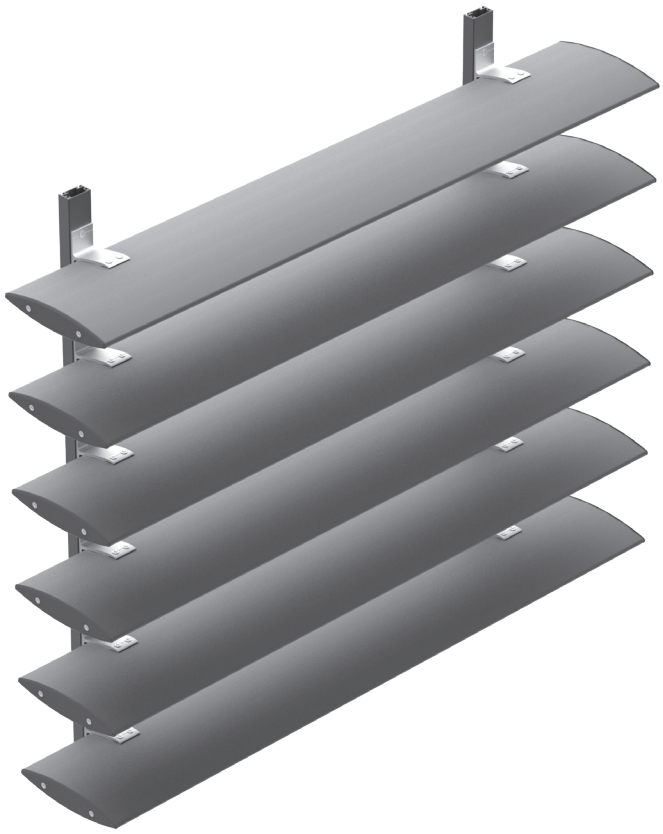
9 009 5226
0.386 Kg./ml.



***8 001 1500*
0.421 Kg./ml.

*Stainless steel Profile

**This profile is specially produced for rolling machines



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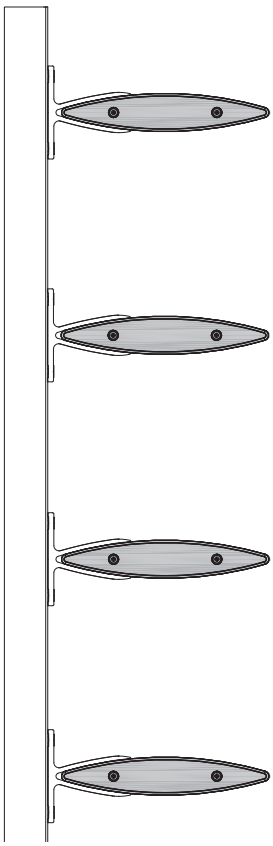
Shading System

- A complete system for solar control shading system by adapting the blades length with different angles and its intervals.
- Wide range of blades with different types, shapes and dimensions, can be positioned horizontal, vertical or inclined at different inclinations and at different blade pitches.
- Available in sliding panels cassettes, in which the blades have been screwed between vertical end cap plates.



Technical Characteristics

Main Profile Depth

42 mm. to 125 mm.

Main Profile Height

21 mm. to 80 mm.

Slat Depth

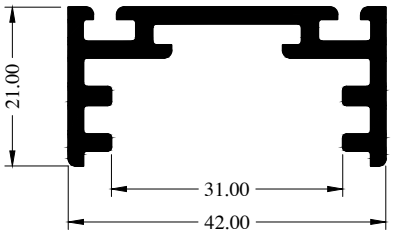
60 mm. to 200 mm.

Slat Height

20 mm. to 40 mm.

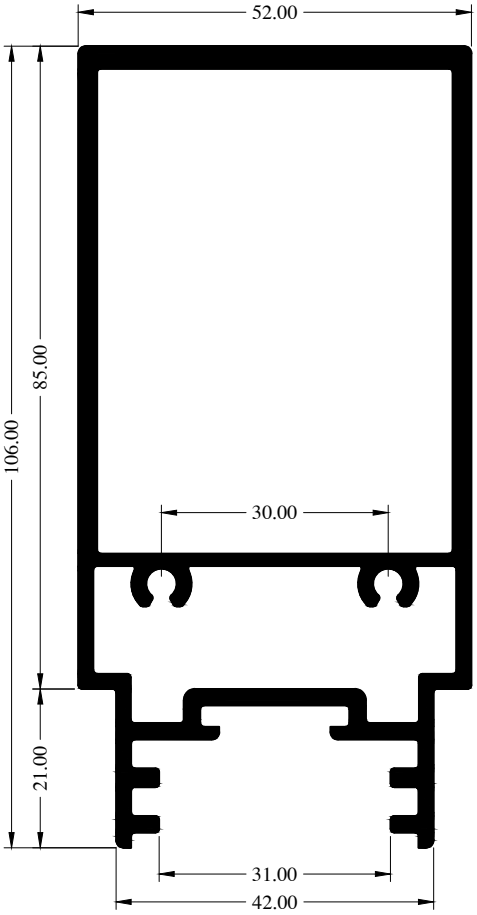
Degree Obtained

30 - 45 - 60 - 90



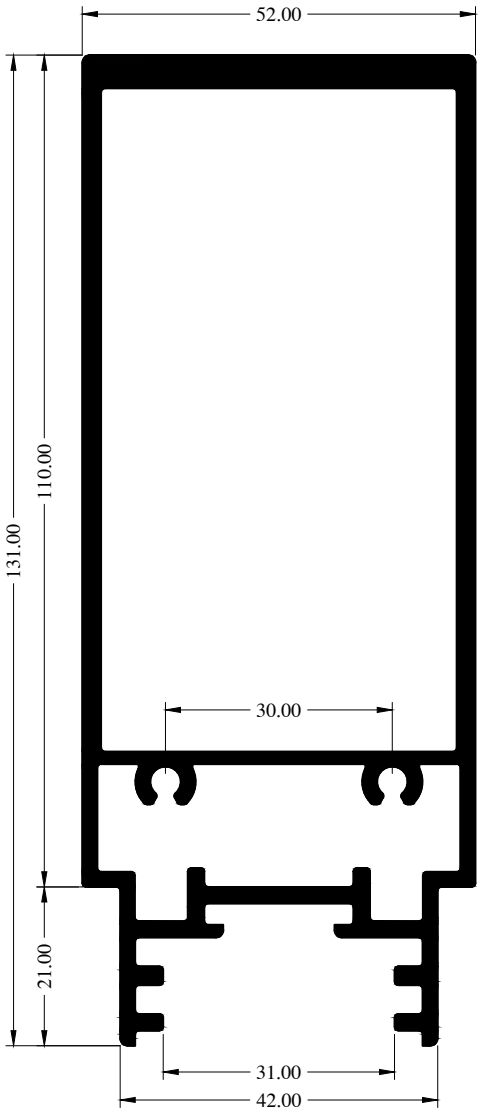
5 242 1100

0.583 Kg./ml.



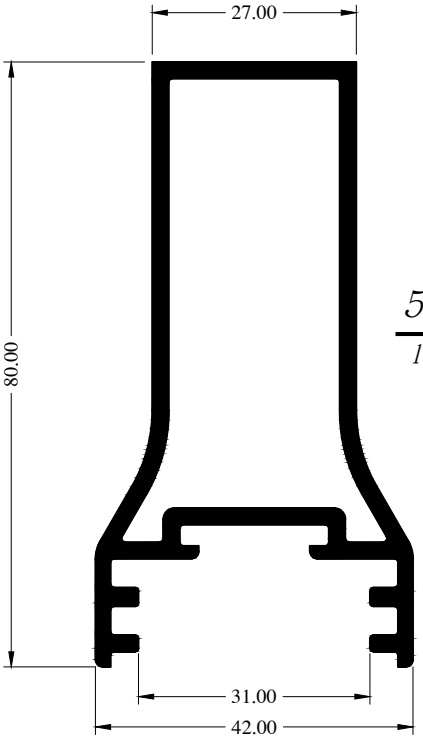
5 242 1108

2.133 Kg./ml.



5 242 1111

2.785 Kg./ml.



5 242 1606

1.413 Kg./ml.

Profile No.	5 242 1100	5 242 1108	5 242 1111	5 242 1606
Profile Old No.	C 4211	C 4218	C 4219	C 4216

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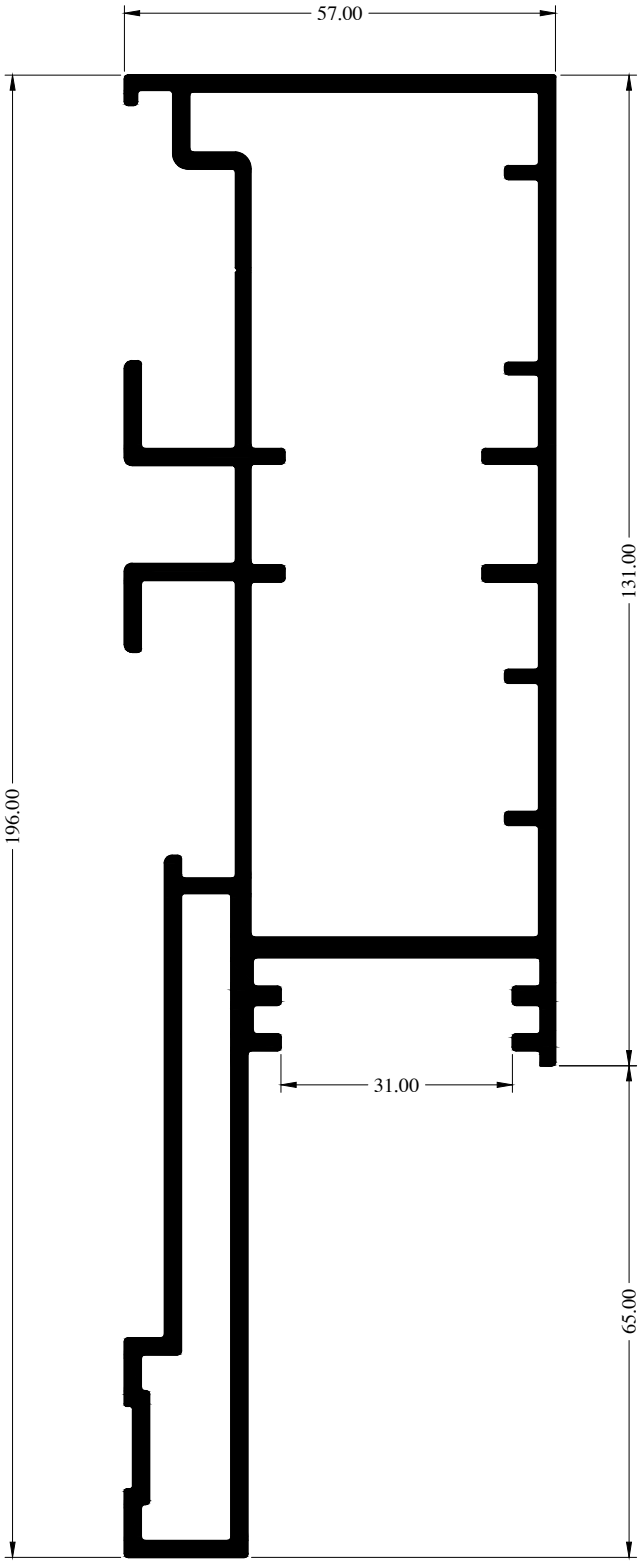
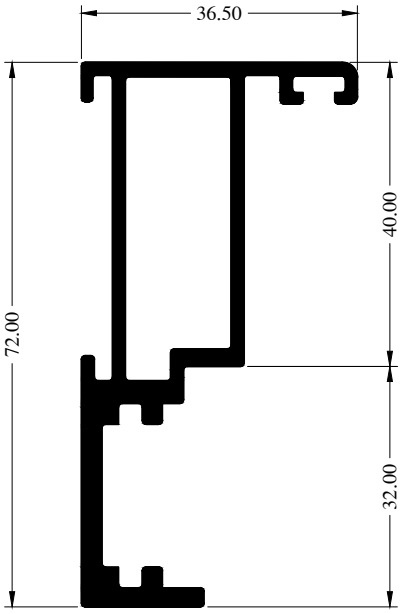


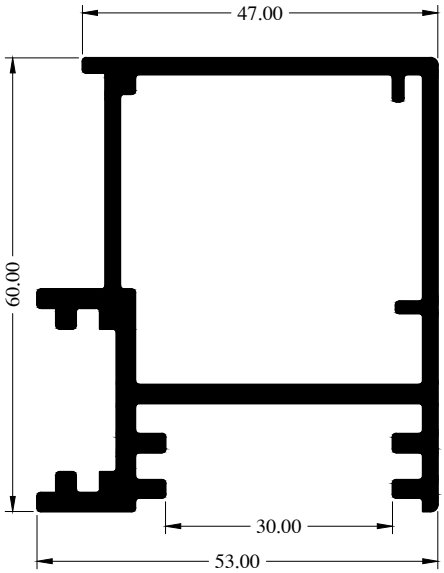
5 242 1211

3.528 Kg./ml.



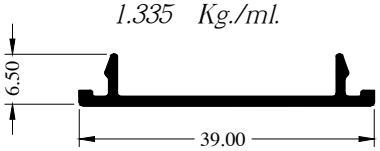
5 242 6170

0.985 Kg./ml.



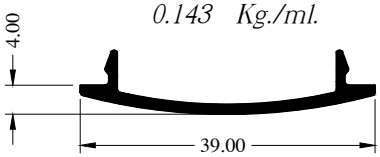
5 242 7170

1.335 Kg./ml.



5 242 9120

0.143 Kg./ml.



5 242 9121

0.142 Kg./ml.

Profile No.	5 242 1211	5 242 6170	5 242 7170	5 242 9120	5 242 9121
Profile Old No.	C 4209	C 4221	C 4226	C 4231	C 4232

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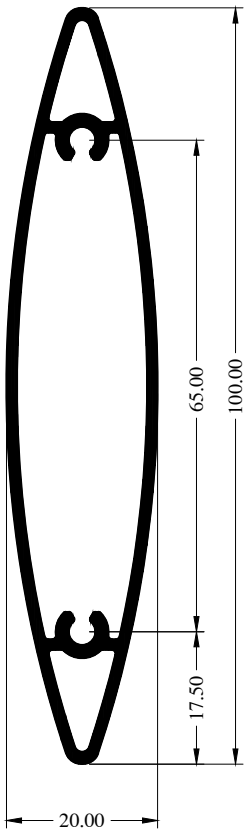
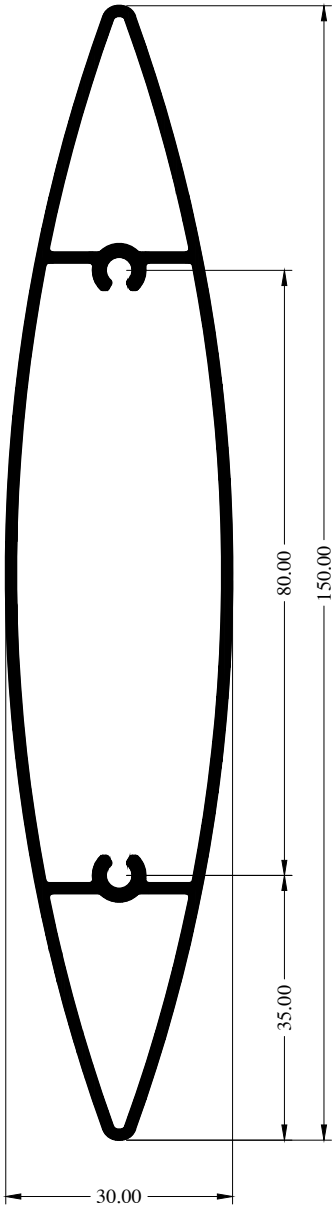


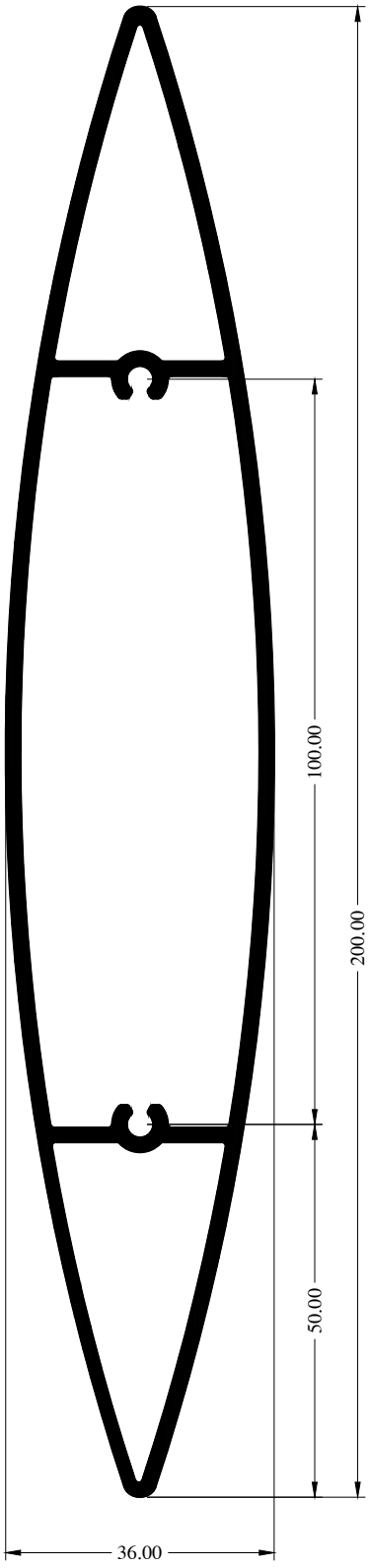
5 242 2110

0.772 Kg./ml.



5 242 2115

1.269 Kg./ml.



5 242 2120

2.303 Kg./ml.

Profile No.	5 242 2110	5 242 2115	5 242 2120
Profile Old No.	C 4241	C 4243	C 4245

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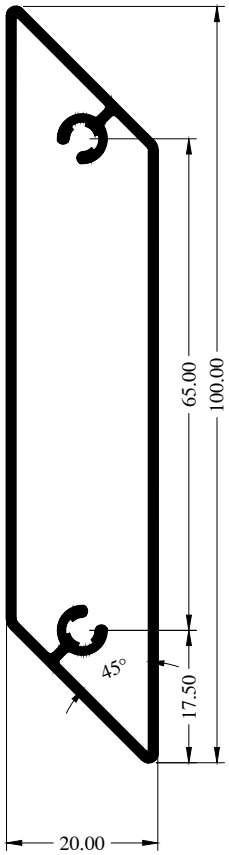
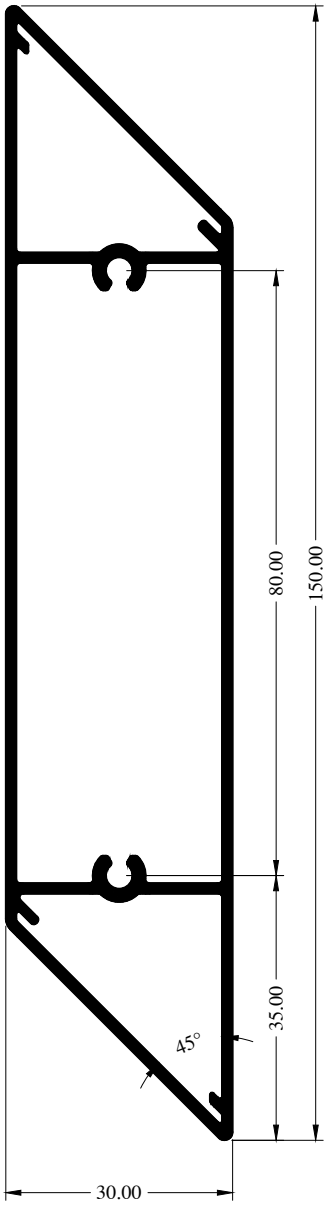


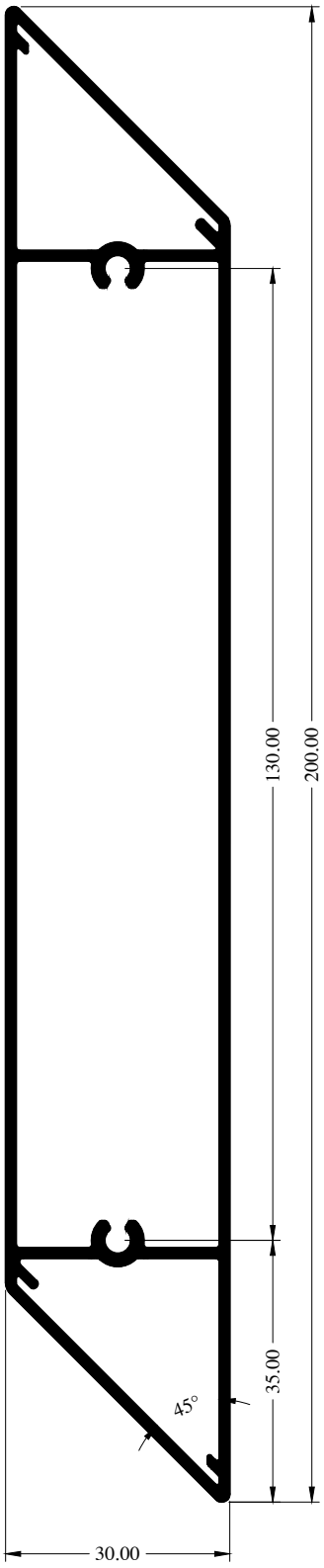
5 242 2210

0.799 Kg./ml.



5 242 2215

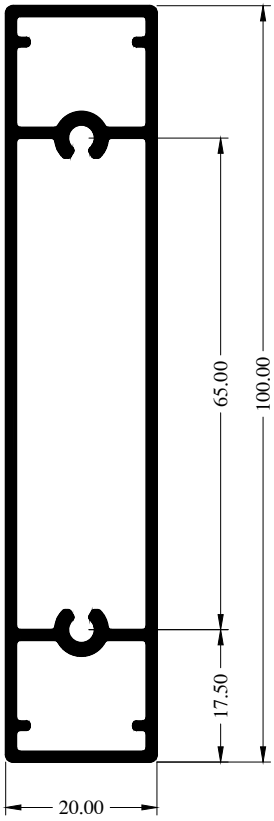
1.307 Kg./ml.

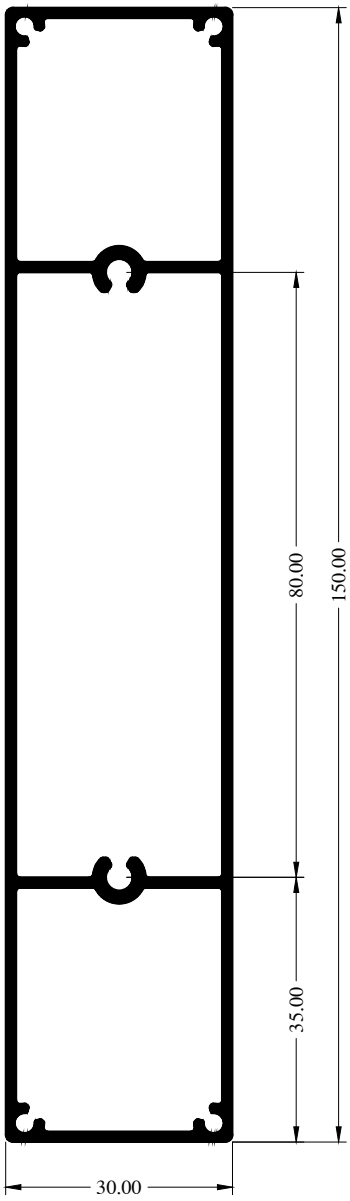


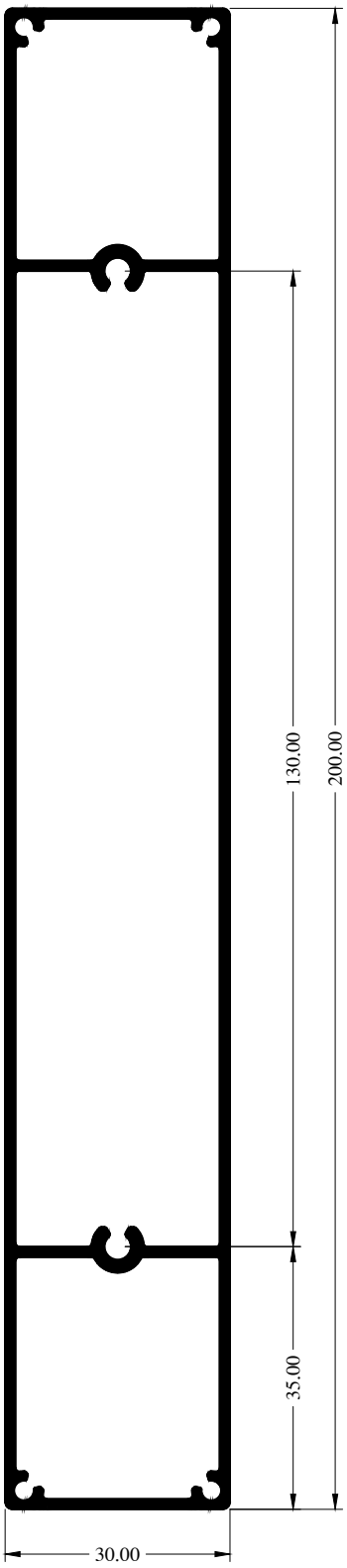
5 242 2220

1.631 Kg./ml.

Profile No.	*5 242 2210*	*5 242 2215*
Profile Old No.	*C 4246*	*C 4248*







5 242 2310
0.933 Kg./ml.

5 242 2315
1.431 Kg./ml.

5 242 2320
1.757 Kg./ml.

Profile No.	*5 242 2310*	*5 242 2315*
Profile Old No.	*C 4247*	*C 4249*

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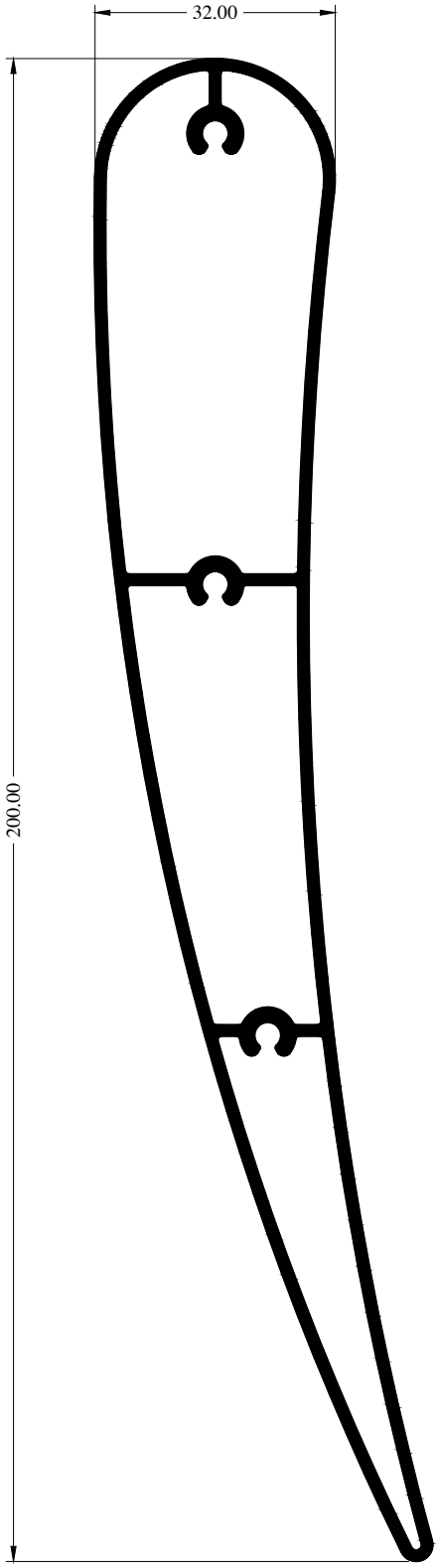
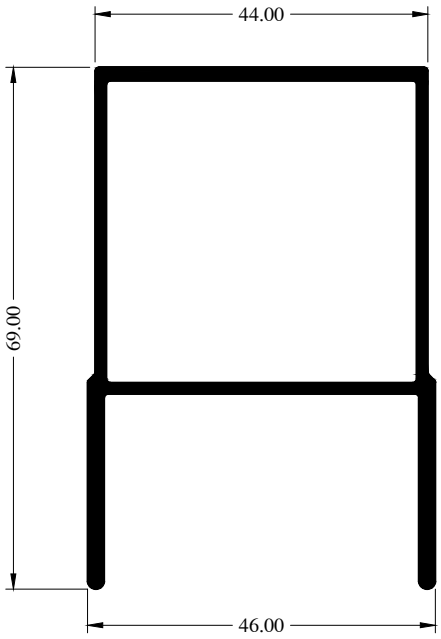


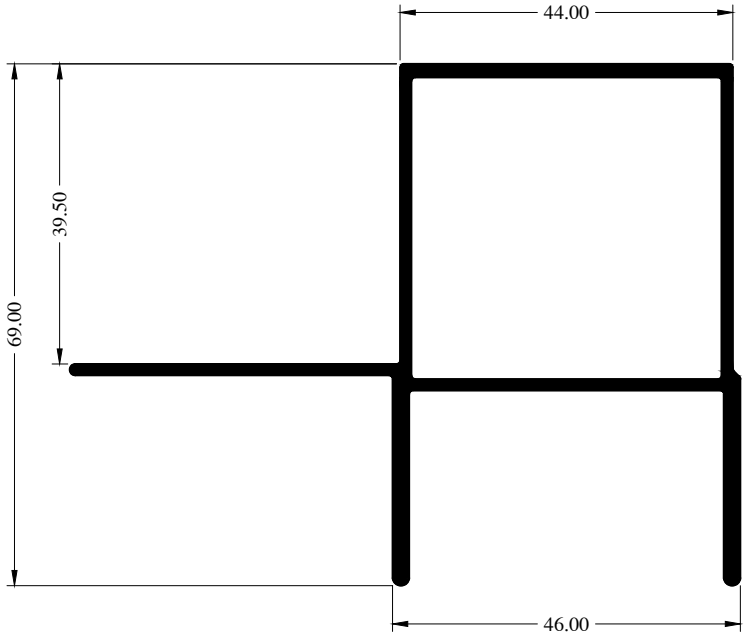
5 242 2620

1.789 Kg./ml.



5 242 2770

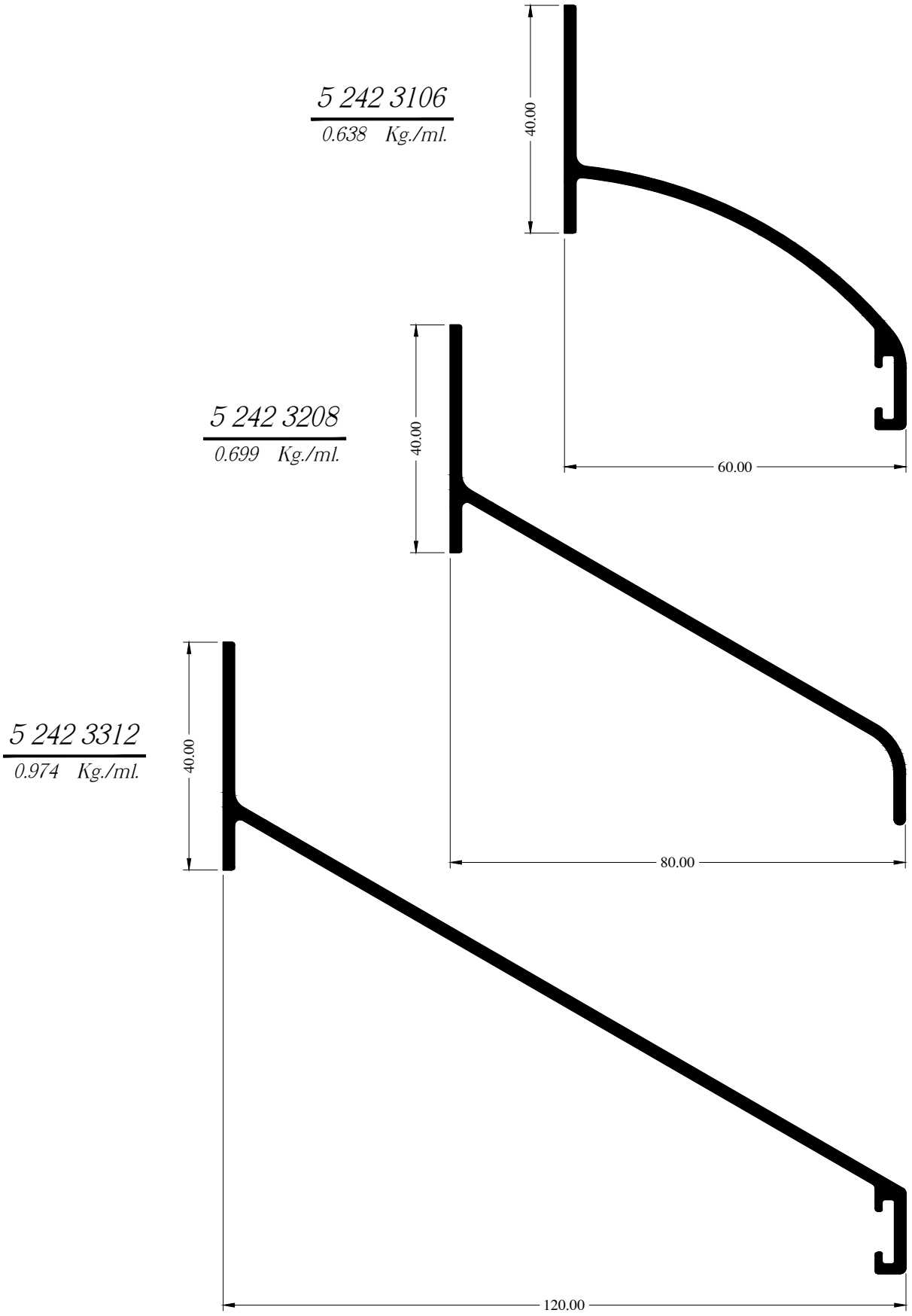
0.882 Kg./ml.



5 242 2771

1.034 Kg./ml.

Profile No.	5 242 2620	5 242 2770	5 242 2771
Profile Old No.	C 4267	C 4278	C 4279



Profile No.	5 242 3106	5 242 3208	5 242 3312
Profile Old No.	C 4260	C 4262	C 4264

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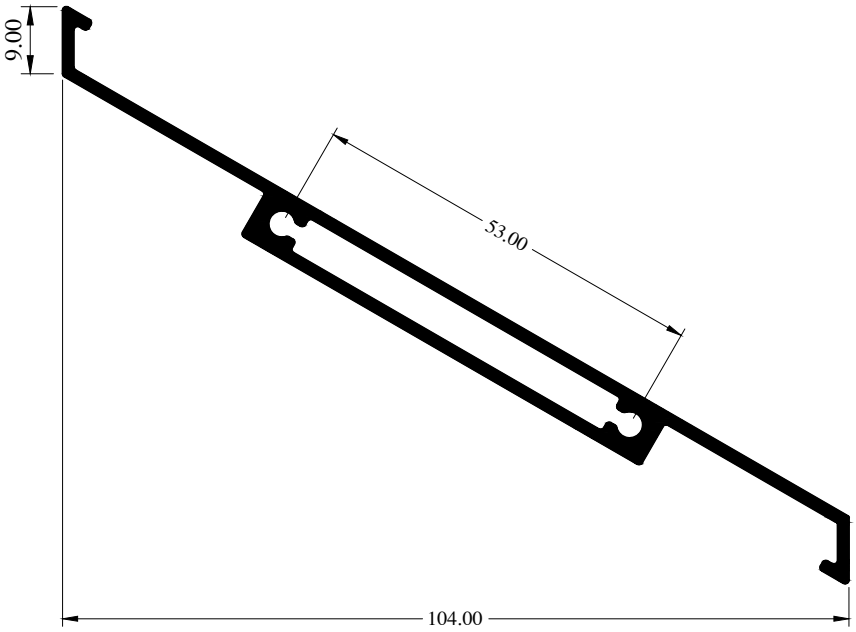

5 242 3710

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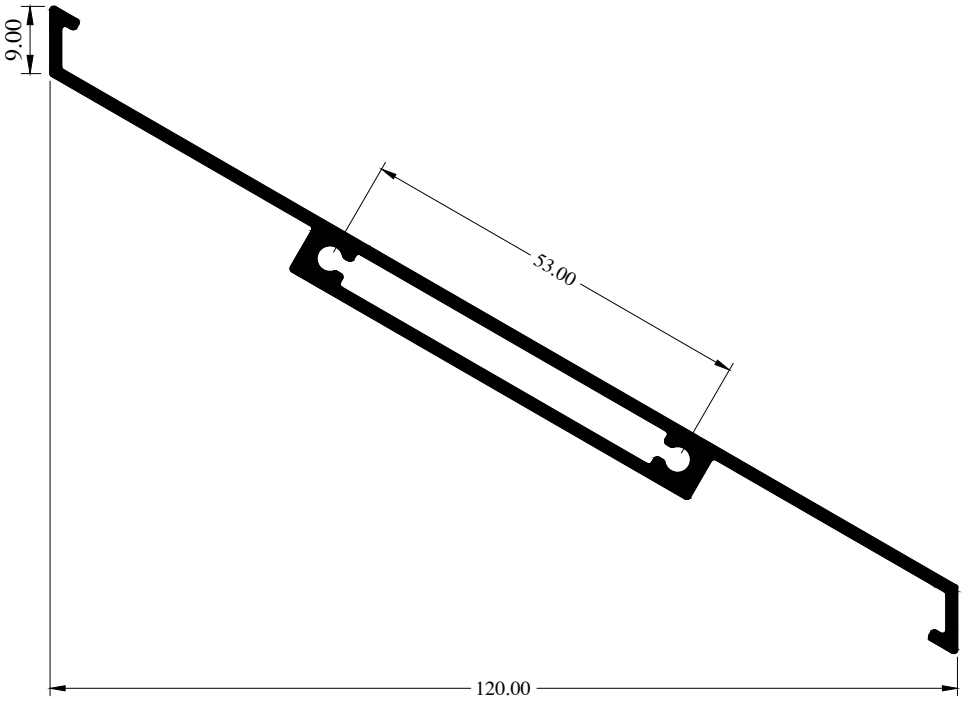
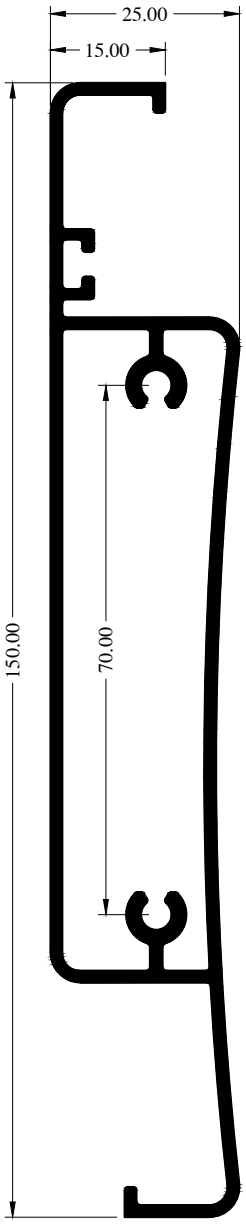


5 242 3712

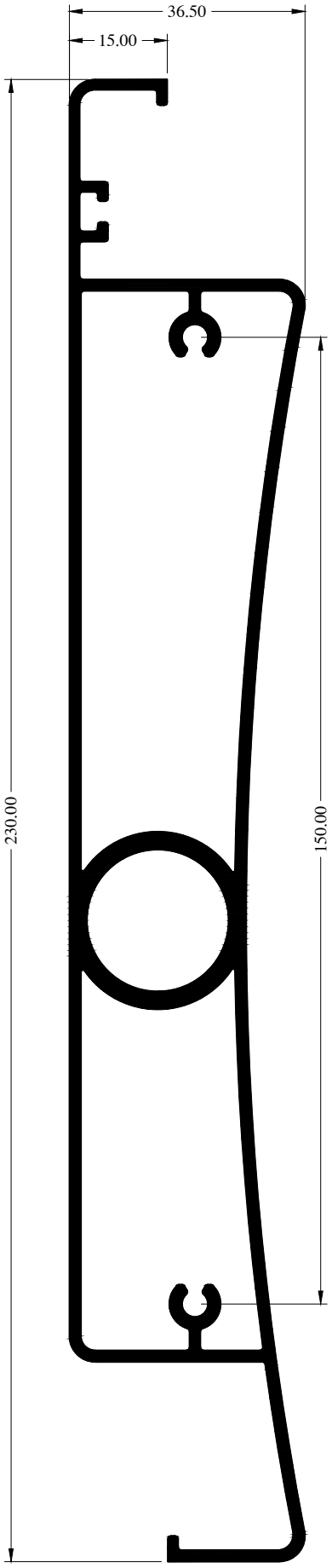
0.872 Kg./ml.

Profile No.	5 242 3710	5 242 3712
Profile Old No.	C 4273	C 4274



5 242 4115

1.365 Kg./ml.



5 242 5223

2.642 Kg./ml.

Profile No.	5 242 4115	5 242 5223
Profile Old No.	C 4266	C 4269

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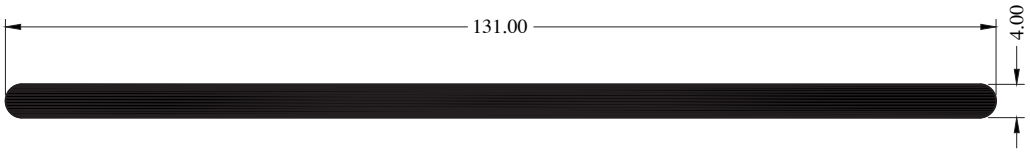
5 242 9910

1.411 Kg./ml.



5 242 7610

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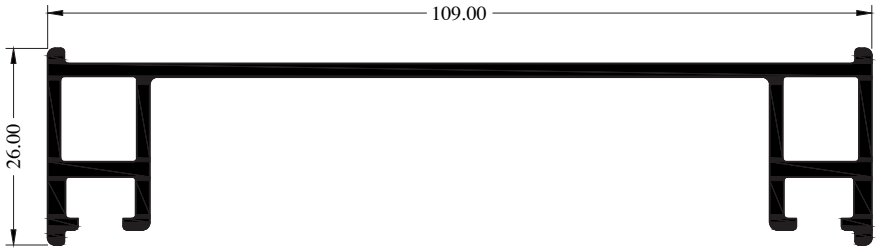
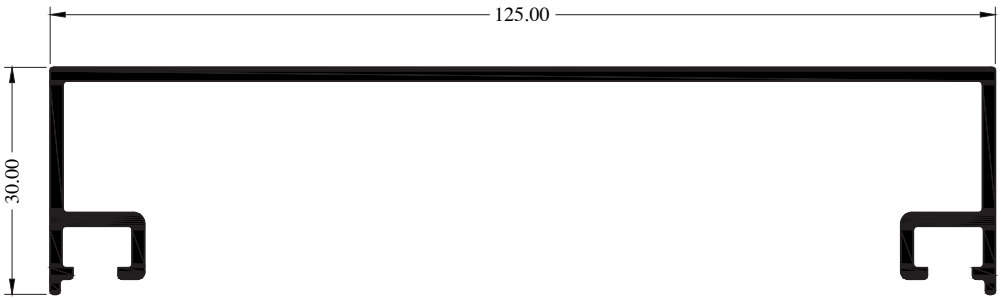


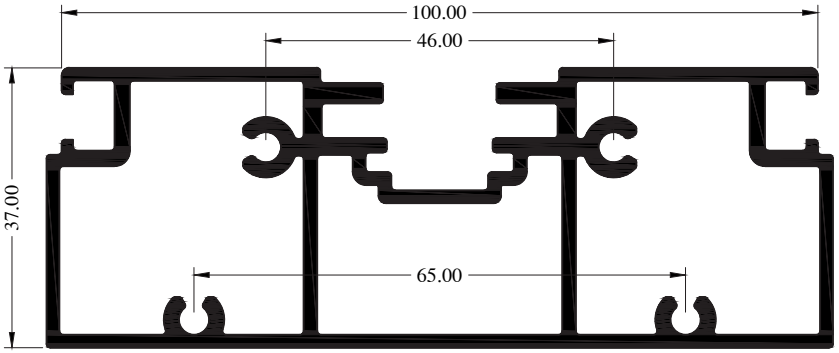
5 242 7612

0.869 Kg./ml.



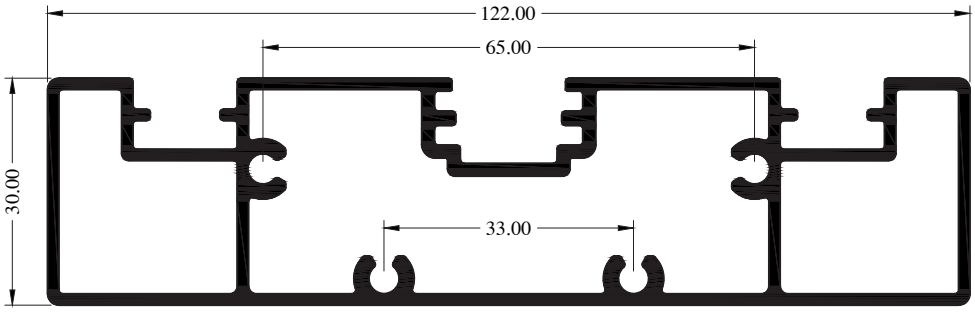
5 242 7710

1.919 Kg./ml.



5 242 7712

1.636 Kg./ml.



Profile No.	5 242 7610	5 242 7612	5 242 7710	5 242 7712	5 242 9910
Profile Old No.	C 4297	C 4295	C 4292	C 4290	C 4291

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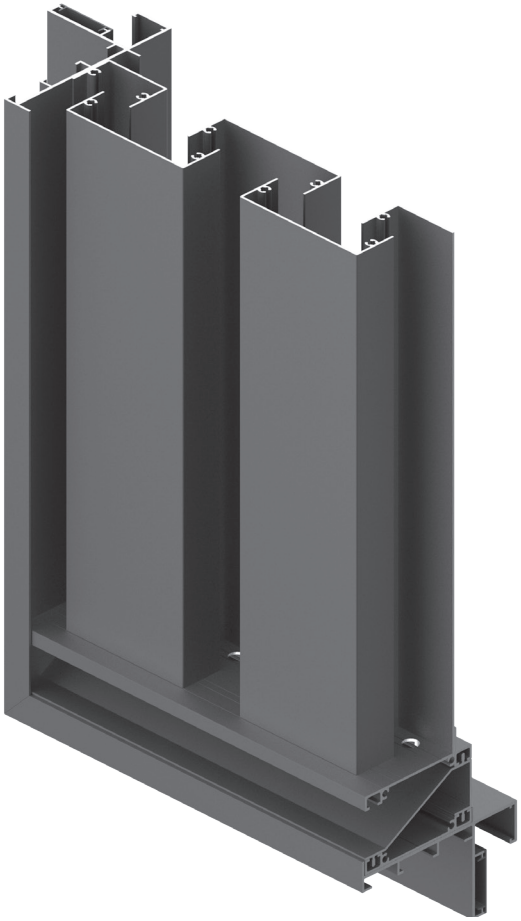
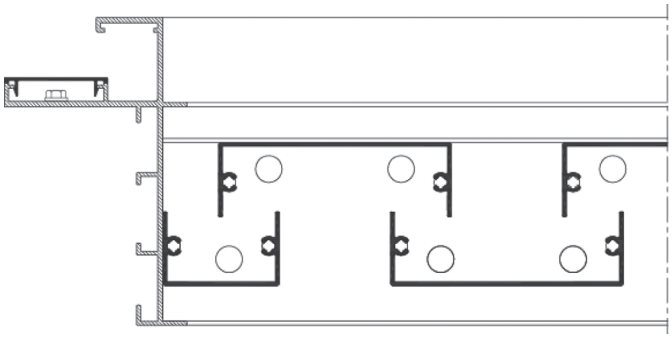




RAMAK 88

Sand Trap Louvre

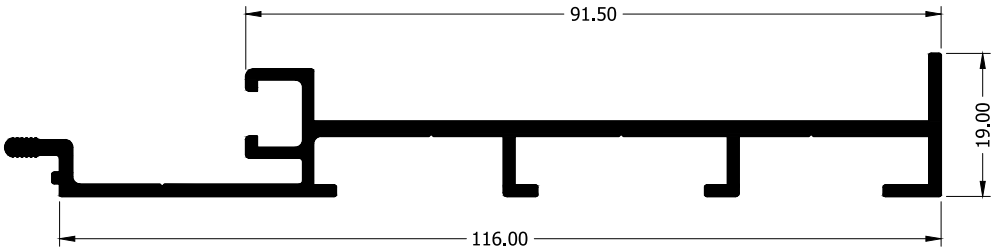
- Pre-filtration Media for airborne sand, allow air to pass through it while keeping out unwanted elements such as sand, water, and dirt.
- Architectural (STATIC) ventilation device integrated in the building envelope.
- Suitable for both industrial and commercial ventilation applications.
- Self-cleaning base through which the filtered sand is drained out easily.
- Symmetric louvre when the multiple is even or odd.
- Concealed assembly screws.

Technical Characteristics

Dimension Frame
56 mm. to 124 mm.
Dimension Blade
44 mm. to 88 mm.
Blade Pitch - Blade 60
85 mm.
Blade Pitch - Blade 88
130 mm.
Blade Type
Vertical blade
Max Dimensions
2000 mm. X 1300 mm.
Physical Free Area
32%
Airflow
EN 13030
Filtration Efficiency
EN 13181

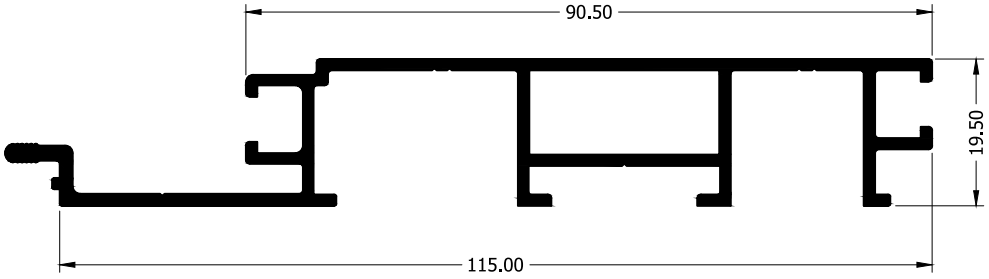
OPTIONS:

- Bird Screen, Fly screen (mesh size on request)
- Anti-dust filter cassette.



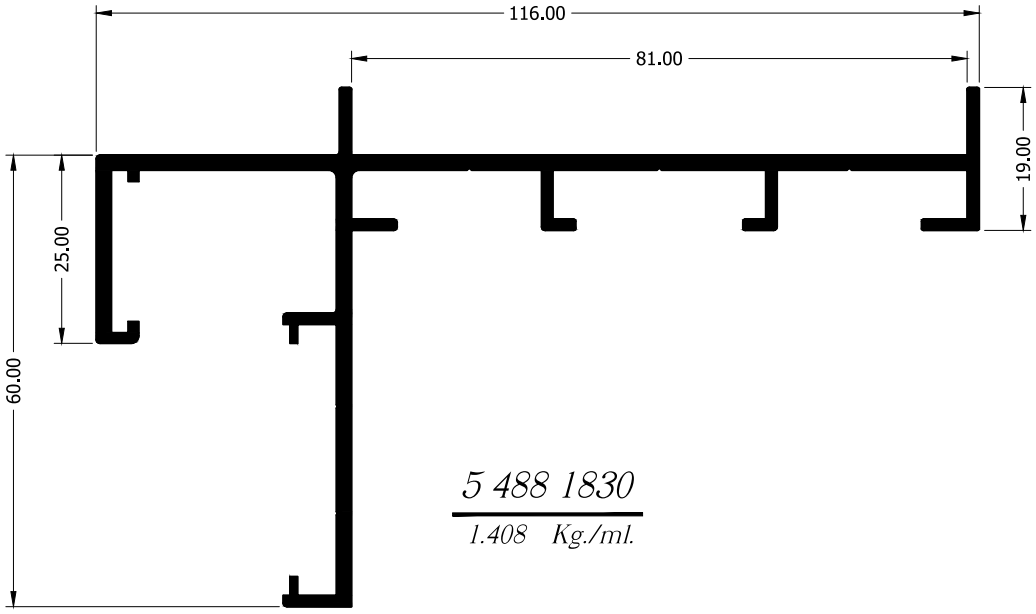
5 488 1510

0.988 Kg./ml.



5 488 1520

1.088 Kg./ml.



5 488 1830

1.408 Kg./ml.

Profile No.	5 488 1510	5 488 1520	5 488 1830
Profile Old No.	RM 8803	RM 8805	RM 8815

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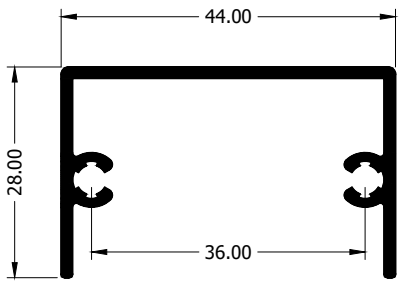
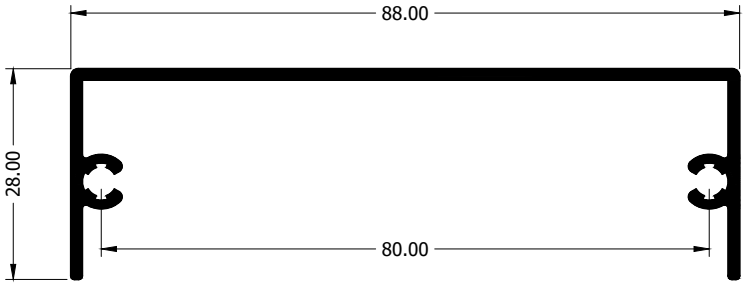


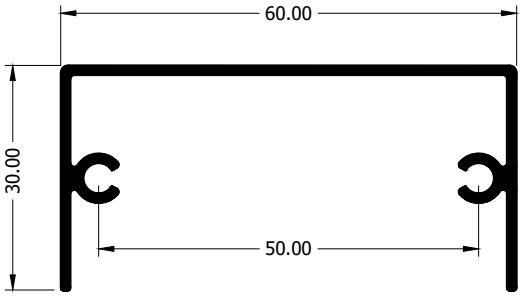
5 488 4841

0.482 Kg./ml.



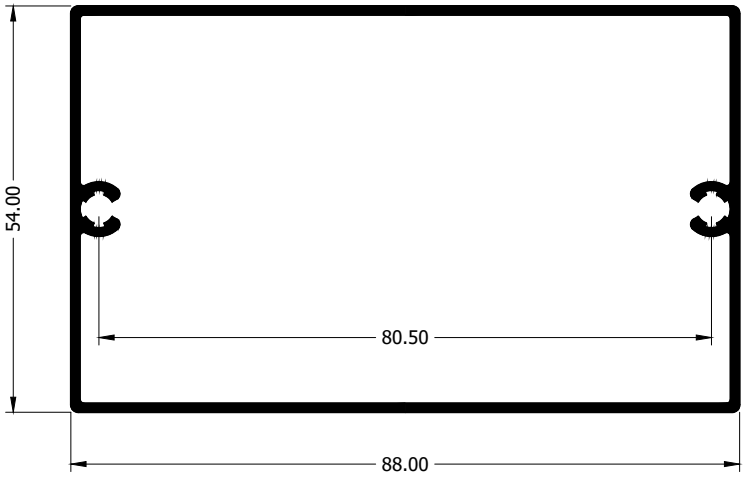
5 488 4881

0.660 Kg./ml.



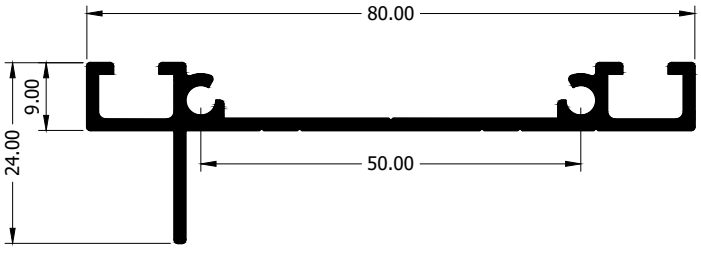
5 488 4861

0.517 Kg./ml.



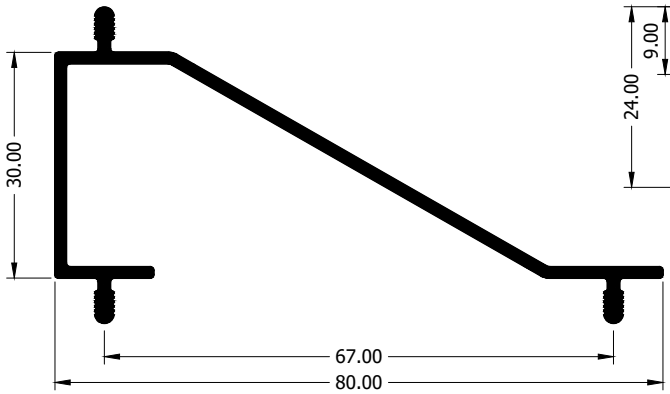
5 488 3985

0.997 Kg./ml.



5 488 3181

0.614 Kg./ml.



5 488 3280

0.615 Kg./ml.

Profile No.	5 488 3181	5 488 3280	5 488 3985	5 488 4841	5 488 4861	5 488 4881
Profile Old No.	RM 8858	RM 8898	RM 8854	RM 8844	RM 8846	RM 8848

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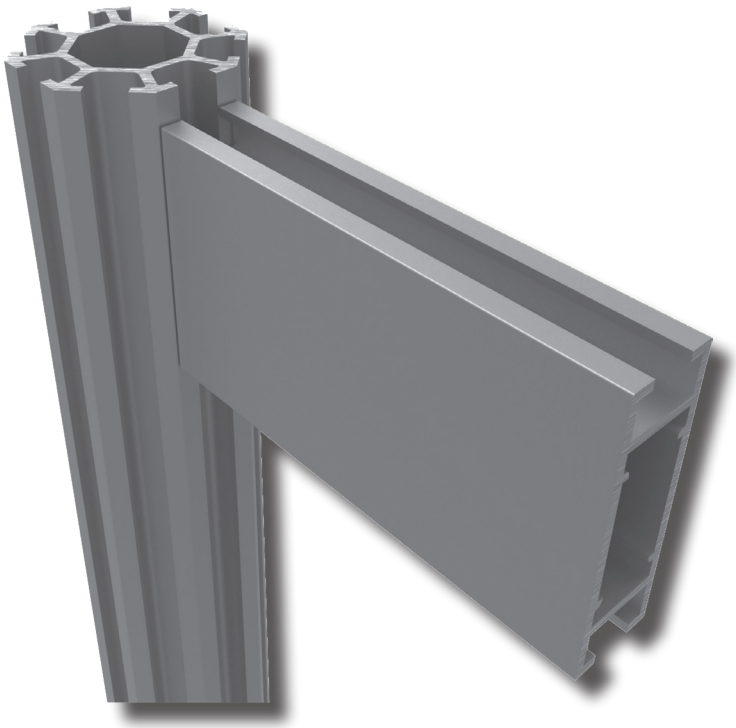


EXPO 44

Partition System

- Octagon Profiles type became the standard for exhibition systems worldwide.
- EXPO 44 system shows its full potential especially for exhibition builders.
- Developed with its integrated accessories to offer maximum of creative freedom.
- Ideally suited for smaller exhibition stands, displays and the retail sector.

Technical Characteristics

Dimensions Octagon

44 mm.

Dimensions Transom

18 mm.

Transom Height Minimum

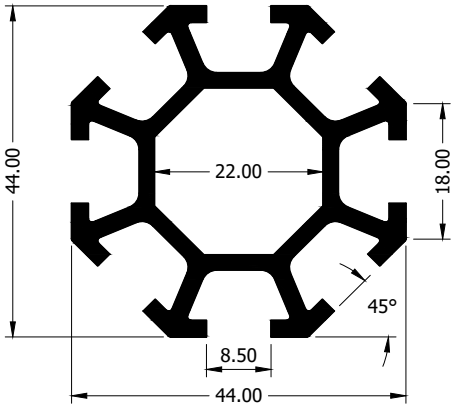
40 mm.

Transom Height Maximum

175 mm.

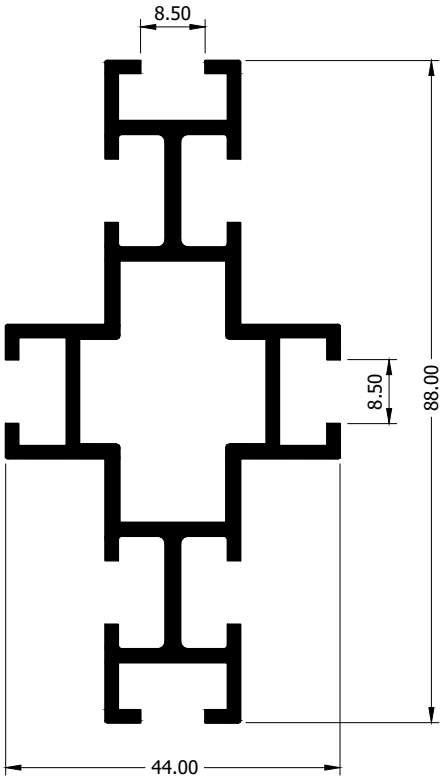
OPTIONS:

- Special lengths, special colors are available
- Special profiles, with corresponding special accessories.
- Cutting and finishing services.



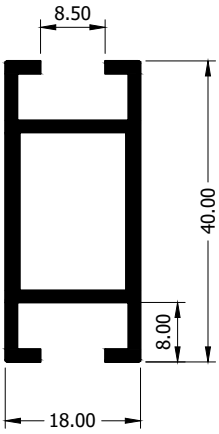
7 144 1448

1.216 Kg./ml.



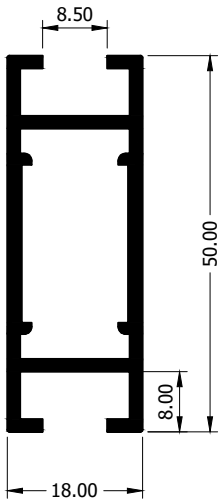
7 144 1488

1.486 Kg./ml.



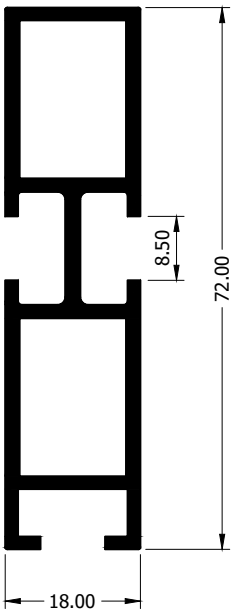
7 144 3242

0.562 Kg./ml.



7 144 3252

0.692 Kg./ml.



7 144 3273

1.015 Kg./ml.

Profile No.	7 144 1448	7 144 1488	7 144 3242	7 144 3252	7 144 3273
Profile Old No.	EX 1808	EX 1804	EX 1840	EX 1850	EX 1873

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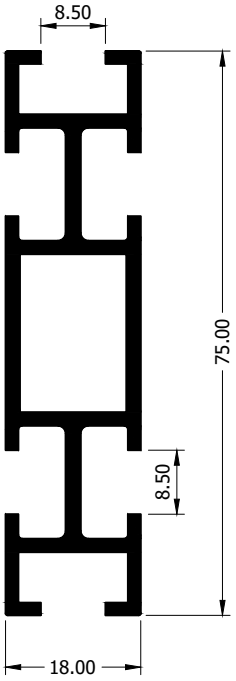
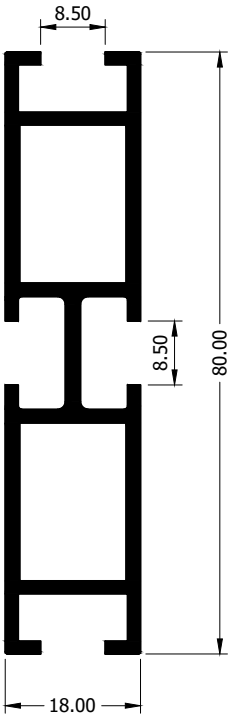


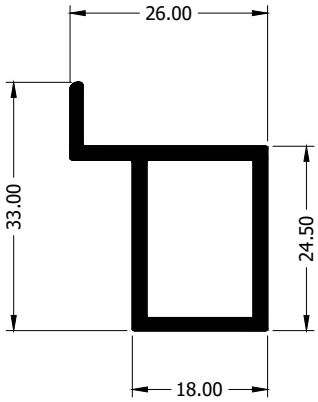
7 144 3276

1.056 Kg./ml.



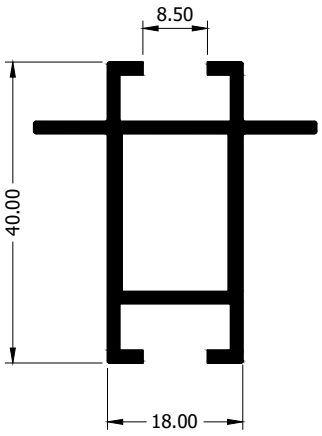
7 144 3284

1.112 Kg./ml.



7 144 5220

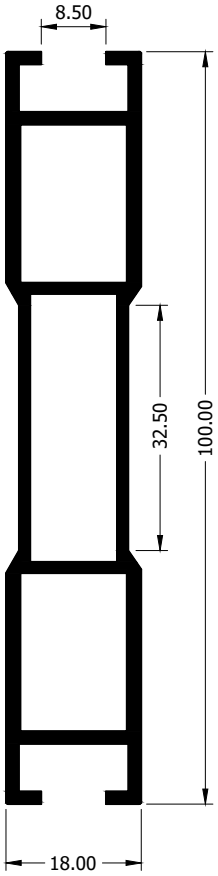
0.414 Kg./ml.



7 144 5242

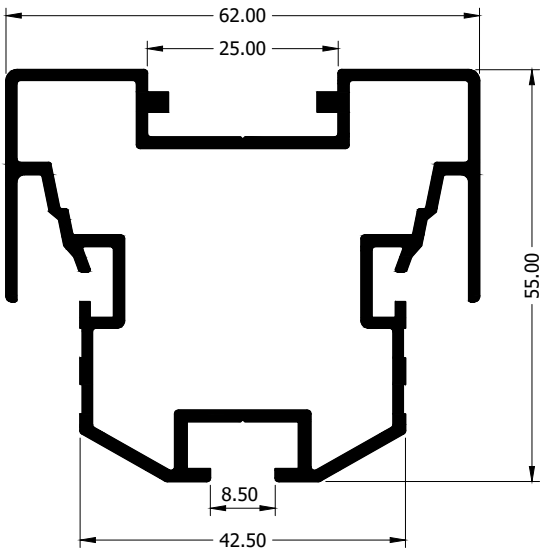
0.626 Kg./ml.

Profile No.	7 144 3276	7 144 3284	7 144 5220	7 144 5242
Profile Old No.	EX 1875	EX 1880	EX 1891	EX 1842



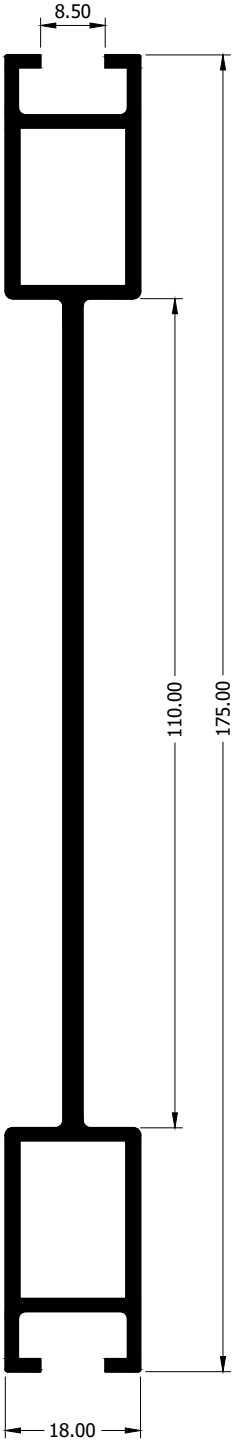
7 144 6212

1.235 Kg./ml.



7 144 7211

1.283 Kg./ml.



7 144 6272

1.736 Kg./ml.

Profile No.	7 144 6212	7 144 6272	7 144 7211
Profile Old No.	EX 1810	EX 1817	EX 1896

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