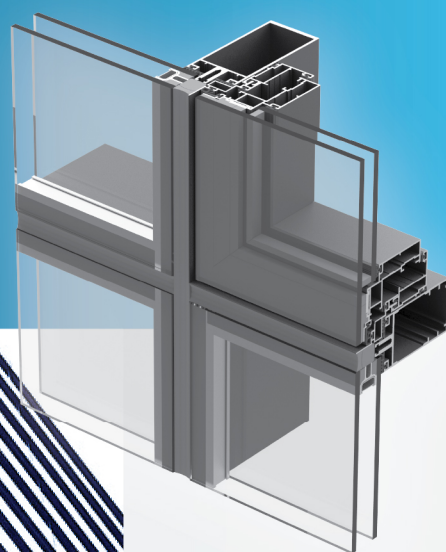




Machines & Aluminium Center
مركز ماكينات ومستلزمات الألومنيوم

PANORAMA 52

Curtain Wall System



PROFILES 1:1

2026
VER. 01

MACHINES AND ALUMINUM CENTER

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 protection.

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

The profiles shown in this catalogue are patented.

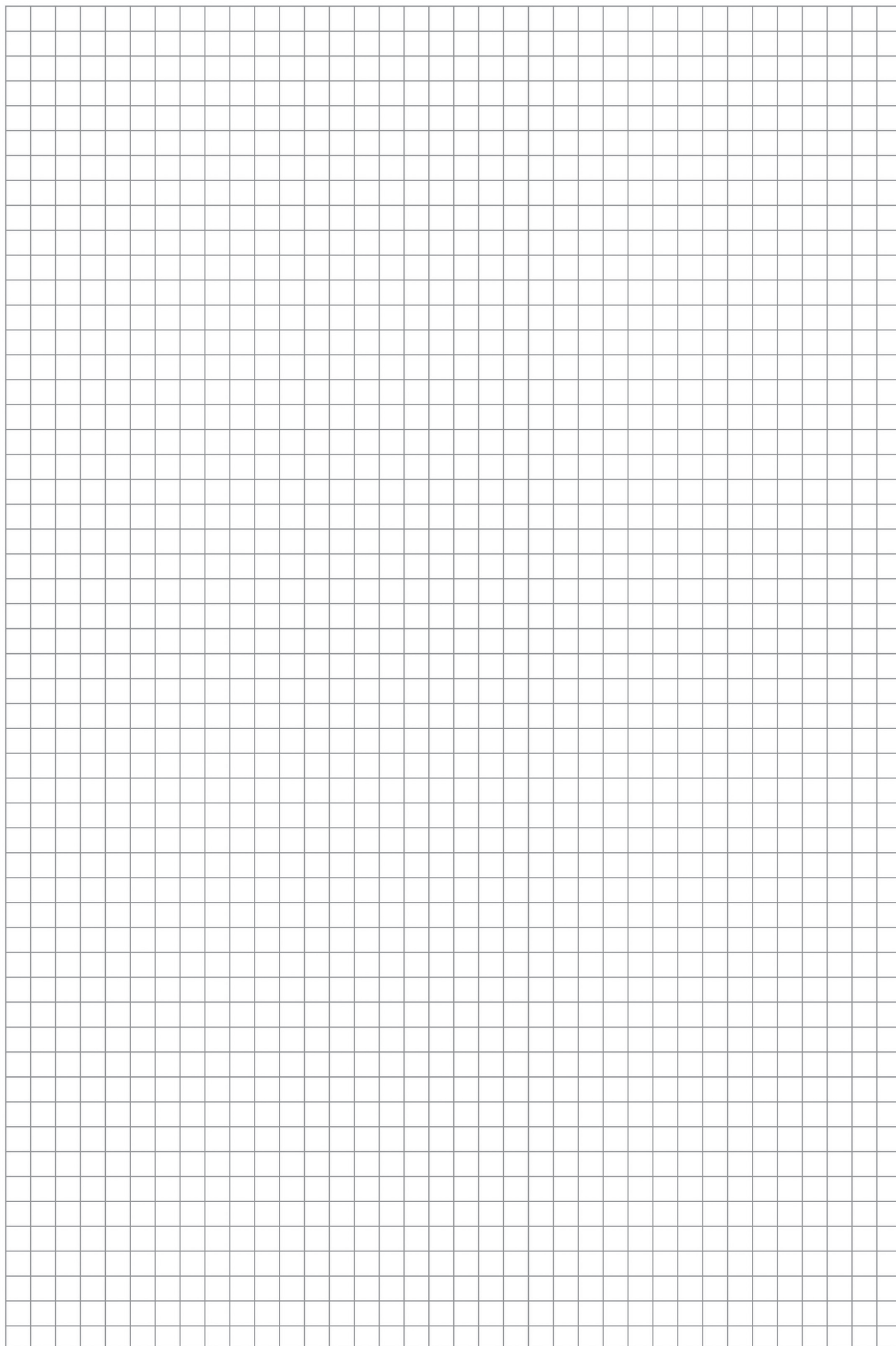
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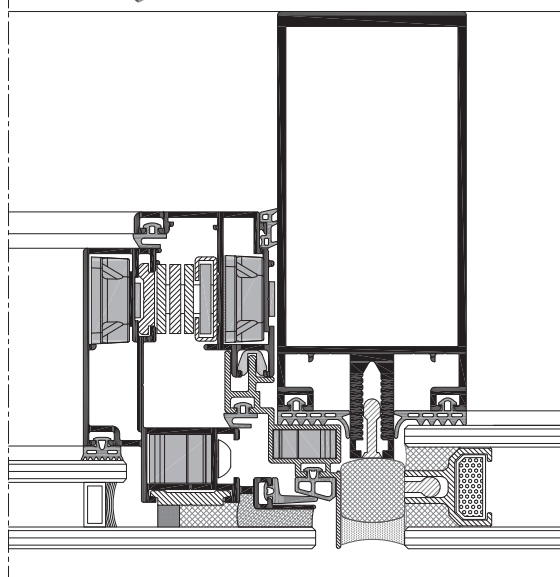
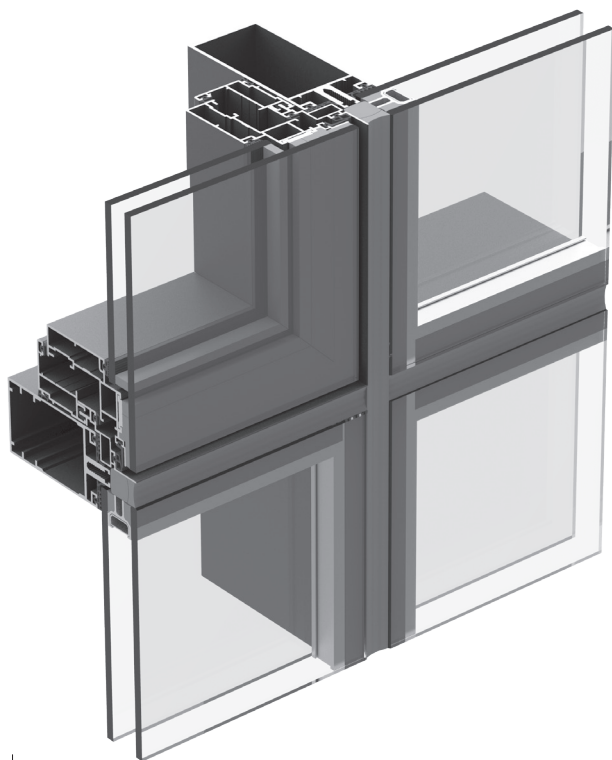
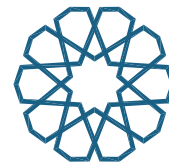
The manufacturer reserves the right to modify the items in this catalog without advanced notice.

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**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/m ² K DIN EN ISO 10077-2

- 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

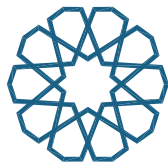
52 mm.

Transom Height

45 mm. to 135 mm.

Max Sash Weight (Top Hung)

130 kg.



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.

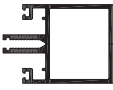
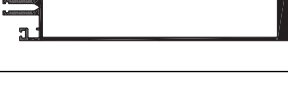
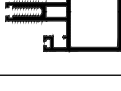
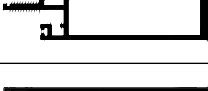
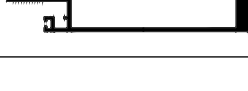
Istituto di Ricerca e Certificazione
per le Costruzioni Sostenibili
via Grandi n° 17, 21017 Samarate (VA)
C.F./P.IVA 05159630960

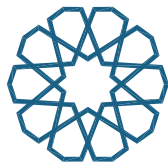
2nd August 2019

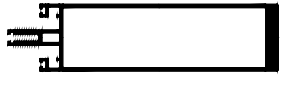
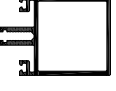
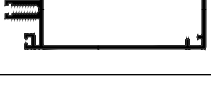
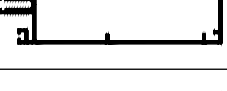
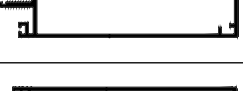
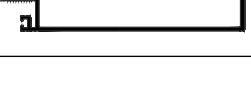
For complete results see the Test Report No. 0322/RP/19 issued on 2nd August 2019.
The results obtained refer exclusively to the samples tested.

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

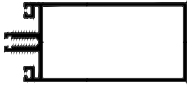
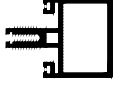
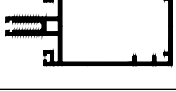
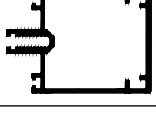
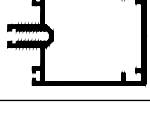
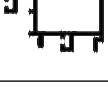
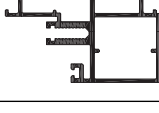


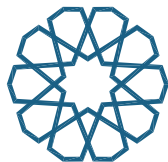
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	30521111	Mullion Profile	2.808	541	182.52	38.52	17
	30521113	Mullion Profile	3.620	591	372.49	49.16	18
	30521116	Mullion Profile	3.969	641	564.74	56.53	18
	30521118	Mullion Profile	4.438	689	839.38	68.31	19
	30521121	Mullion Profile	4.966	739	1159.28	76.40	19
	30521122	Mullion Profile	4.770	746	1110.73	82.42	20
	30521124	Mullion Profile	5.262	796	1522.27	91.67	20
	30521205	Mullion Profile	2.027	445	35.53	20.90	21
	30521208	Mullion Profile	2.333	511	99.68	28.26	21
	30521211	Mullion Profile	2.936	560	213.07	38.65	21
	30521213	Mullion Profile	3.750	611	421.35	49.29	22

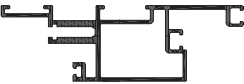
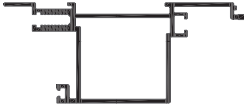
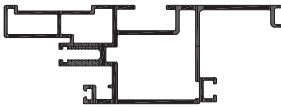
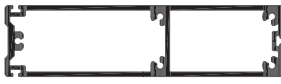
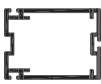
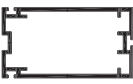


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	30521218	Mullion Profile	4.694	709	918.09	68.43	23
	30521264	Mullion Profile	4.115	637	506.50	54.40	23
	30521401	Transom Profile	0.896	307	1.49	6.59	24
	30521404	Transom Profile	1.433	372	15.79	15.56	24
	30521406	Transom Profile	1.571	403	30.44	18.98	24
	30521408	Transom Profile	1.889	452	73.72	25.70	24
	30521409	Transom Profile	1.982	471	94.81	27.85	25
	30521411	Transom Profile	2.126	501	136.13	31.37	25
	30521412	Transom Profile	2.225	521	166.29	33.53	26
	30521413	Transom Profile	2.676	550	241.13	42.48	26
	30521414	Transom Profile	2.472	572	265.42	39.31	27
	30521415	Transom Profile	2.626	577	282.67	42.42	27

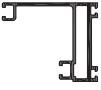


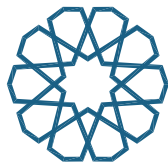
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	30521504	Mullion Profile	1.686	399	24.58	16.68	28
	30521506	Mullion Profile	1.778	429	41.53	19.11	28
	30521508	Transom Profile	2.058	473	92.06	25.83	29
	30521561	Transom Profile	2.215	524	145.54	29.88	29
	30521606	Transom Profile	1.350	350	29.50	16.60	29
	30522206	Mullion Profile	3.024	562	163.83	24.20	30
	30522208	Mullion Profile	3.347	612	275.61	31.31	30
	30523005	Mullion Profile	0.759	256	7.17	2.79	31
	30523013	Mullion Profile	1.846	507	120.76	7.70	31
	30523105	Mullion Profile	1.157	355	14.34	4.61	31
	30523113	Mullion Profile	2.242	607	181.79	9.30	31
	30523604	Mullion Profile	1.673	451	30.56	14.01	32

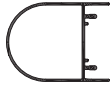
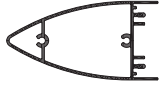


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	30523656	Mullion Profile	2.563	653	124.00	28.32	33
	30524021	Expansion Profile	4.055	508	560.12	50.98	34
	30524105	Expansion Profile	0.919	217	4.37	8.92	34
	30524108	Expansion Profile	1.451	286	30.27	16.74	34
	30524111	Expansion Profile	1.737	333	66.86	21.20	34
	30524113	Expansion Profile	2.078	380	121.60	25.22	35
	30524116	Expansion Profile	2.396	429	207.57	29.95	35
	30524118	Expansion Profile	2.962	477	347.29	37.29	36
	30524121	Expansion Profile	2.968	530	438.20	40.81	36
	30524122	Expansion Profile	3.386	554	596.19	44.94	37
	30524124	Expansion Profile	3.380	602	703.77	48.43	37



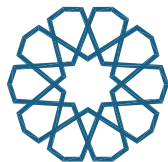
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	30525011	Pressure Plate	0.601	210	0.25	5.35	38
	30525020	Cover Profile	0.477	112	0.02	3.16	38
	30525021	Cover Profile	0.460	146	0.06	3.85	38
	30525061	Pressure Plate	1.100	339	11.95	14.12	38
	30525072	Pressure Plate	0.444	162	0.33	1.93	38
	30525111	Cover Profile	1.150	421	3.90	25.97	38
	30525131	Pressure Plate	1.176	434	1.98	52.21	38
	30525201	Cover Profile	0.128	78	0.01	0.29	38
	30525251	Cover Profile	0.394	199	0.25	5.17	39
	30525253	Cover Profile	0.747	254	2.69	10.09	39

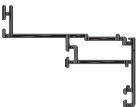
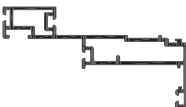
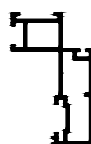
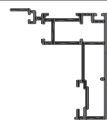
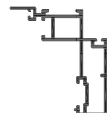
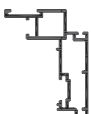
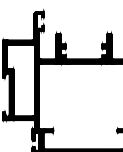


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	30525261	Cover Profile	0.433	216	0.36	5.55	39
	30525271	Cover Profile	0.254	127	0.14	1.34	38
	30525352	Cover Profile	0.696	234	1.20	8.49	39
	30525353	Cover Profile	0.780	254	3.18	10.40	39
	30525363	Cover Profile	0.721	240	2.48	8.48	40
	30525365	Cover Profile	0.815	274	7.81	11.29	40
	30525366	Cover Profile	0.900	301	15.16	14.32	40
	30525510	Cover Profile	1.441	374	46.56	15.57	40
	30525511	Cover Profile	0.439	166	0.35	2.06	38
	30525520	Cover Profile	2.150	542	247.00	25.81	41
	30525914	Insert Profile	1.750	588	155.37	32.32	41
	30526000	Glass Frame Profile	0.116	60	0.05	0.06	42

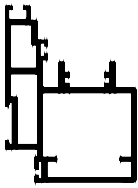
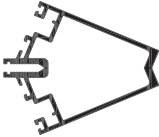
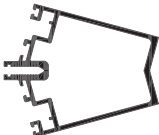
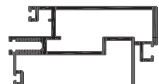


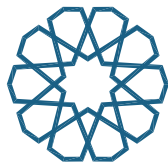
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	30526002	Frame Profile	0.300	132	0.00	0.00	42
	30526004	Frame Profile	0.485	168	0.00	0.00	42
	30526012	Frame Profile	0.377	124	0.00	0.00	42
	30526013	Frame Profile	0.421	132	0.00	0.00	42
	30526023	Frame Profile	0.563	181	0.00	0.00	42
	30526026	Frame Profile	0.663	250	2.74	4.00	42
	30526042	Frame Profile	0.767	236	0.00	0.00	42
	30526101	Frame Profile	0.535	228	0.00	0.00	42
	30526111	Frame Profile	0.656	228	0.00	0.00	42
	30526113	Frame Profile	1.616	445	77.47	9.79	43
	30526120	Insert Profile	1.003	307	24.43	4.42	43
	30526121	Insert Profile	1.113	371	30.87	8.22	43



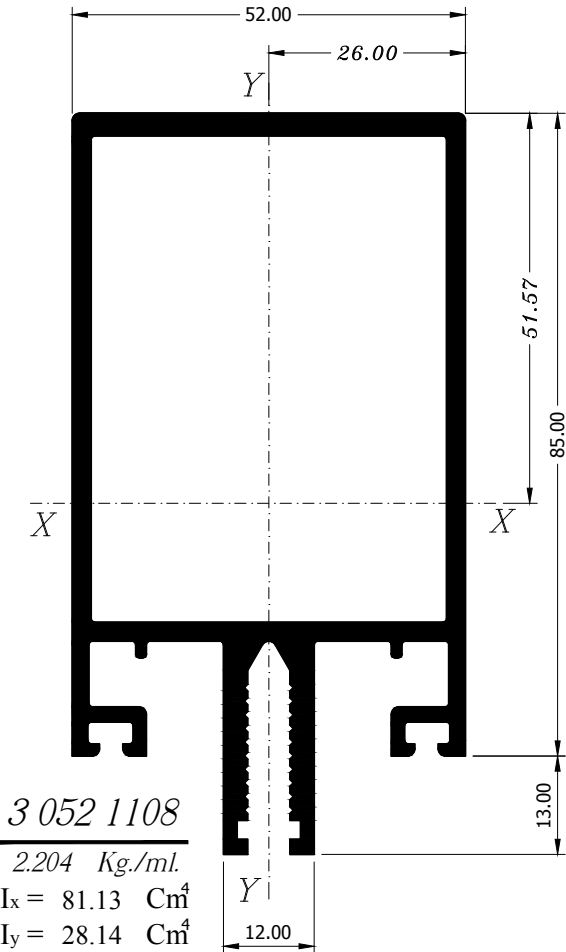
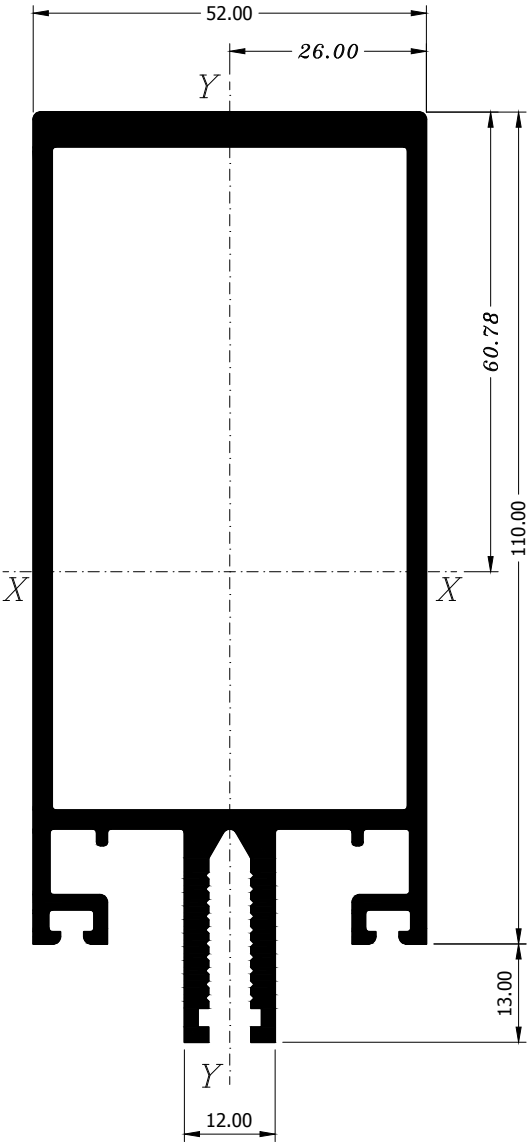
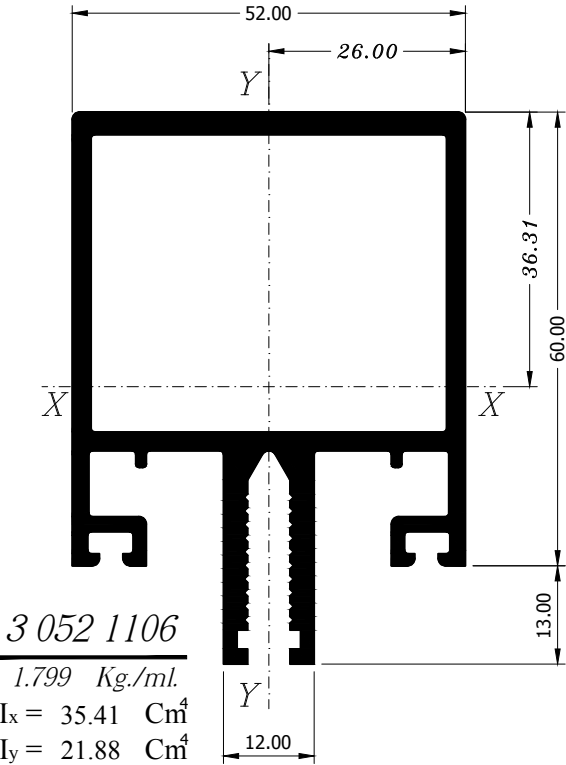
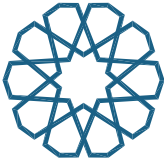
Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					Ix	Iy	
	30526122	Insert Profile	0.826	324	16.58	4.37	43
	30526126	Insert Profile	1.206	400	45.46	6.83	44
	30526215	Leaf Profile	1.128	309	22.02	6.86	44
	30526227	Leaf Profile	1.041	306	18.72	6.06	44
	30526255	Leaf Profile	1.259	374	0.00	0.00	44
	30526265	Leaf Profile	1.162	374	10.72	22.48	45
	30526266	Leaf Profile	1.050	308	19.09	6.18	45
	30526267	Leaf Profile	1.149	372	22.23	10.54	45
	30526286	Leaf Profile	1.222	355	28.37	10.35	45
	30526295	Frame Profile	1.537	349	14.10	16.12	46
	30526296	Leaf Profile	2.125	399	40.39	36.91	46
	30526298	Leaf Profile	1.745	373	22.37	34.65	46

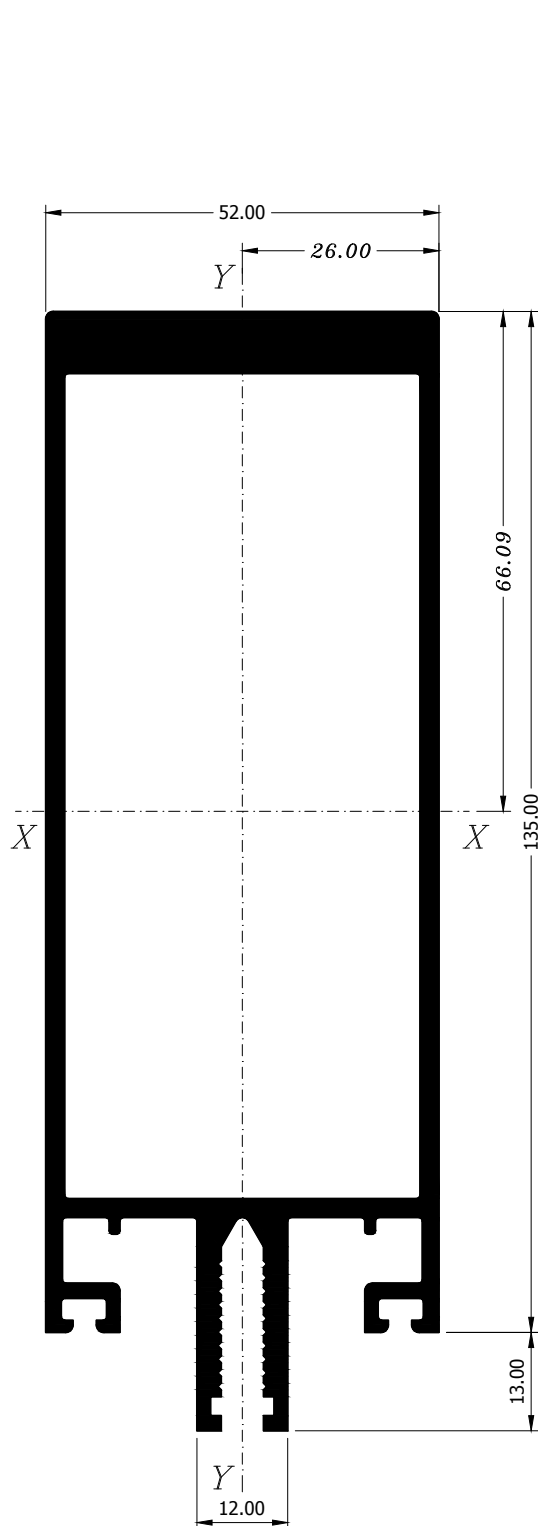
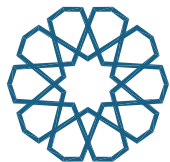


Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					I _x	I _y	
	30526299	Leaf Profile	2.506	454	62.73	48.81	46
	30526313	Leaf Profile	1.025	282	11.55	6.31	47
	30526333	Leaf Profile	1.186	343	19.20	9.43	47
	30526346	Leaf Profile	1.459	410	47.25	10.79	47
	30527123	Mullion Profile	2.602	537	89.60	47.69	48
	30527133	Mullion Profile	2.529	552	100.68	56.33	48
	30528013	Mullion Profile	1.763	488	123.00	3.55	49
	30528208	Mullion Profile	2.103	565	105.35	15.95	50
	30528213	Mullion Profile	2.696	679	240.50	13.14	49
	30529164	Ending Profile	0.545	177	0.00	0.00	50
	30529231	Ending Profile	1.303	576	0.70	111.77	51



Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					I _x	I _y	
	30529232	Insert Profile	1.361	583	0.00	0.00	51
	30529441	Insert Profile	0.384	206	3.82	1.00	50
	30529465	Insert Profile	0.489	210	0.00	0.00	50
	30529466	Insert Profile	0.547	235	3.34	2.44	50
	30529467	Insert Profile	0.587	241	6.10	1.60	50
	30529495	Insert Profile	0.204	126	0.00	0.00	52
	30529496	Insert Profile	0.594	286	0.00	0.00	52
	30529497	Insert Profile	0.298	106	0.85	0.32	52
	30529498	Insert Profile	0.216	113	0.54	0.20	52
	30529510	Corner Profile	0.899	256	8.03	2.23	52
	30529611	Spacer	0.189	85	0.12	0.09	51
	30529612	Spacer	0.208	80	0.20	0.10	51
	30529613	Spacer	0.312	114	0.71	0.44	52
	30529623	Spacer	0.149	75	0.00	0.00	51
	30529711	Insert Profile	0.339	164	0.00	0.00	52



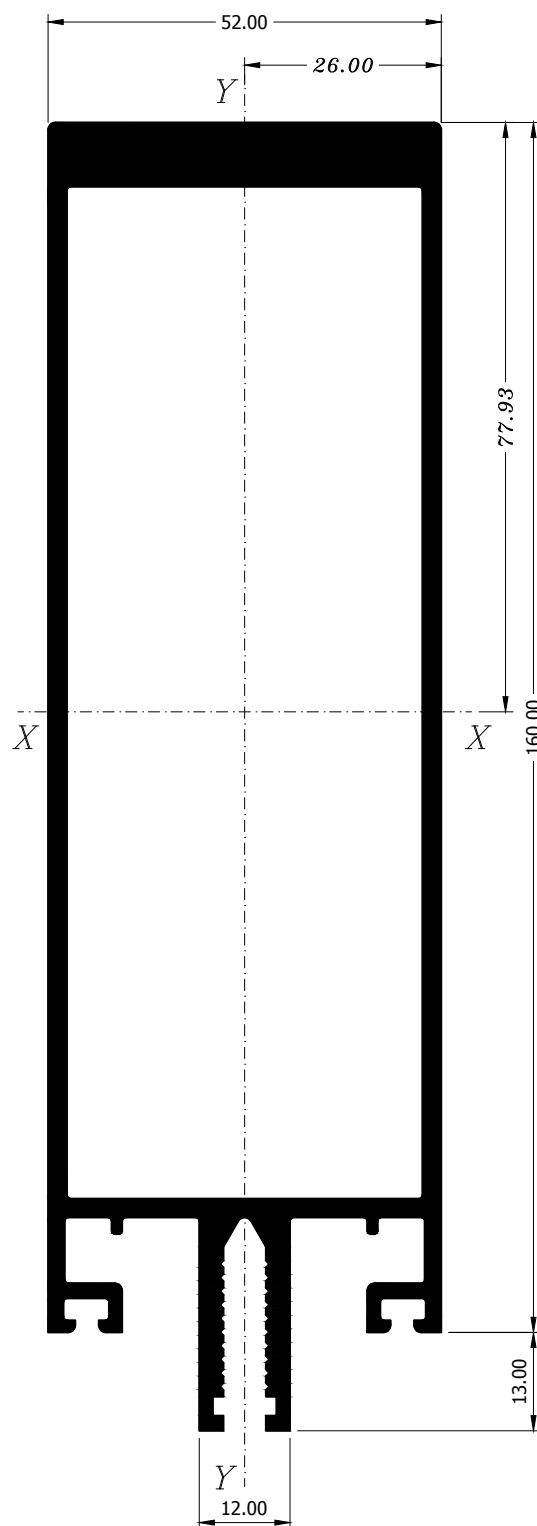


3 052 1113

3.620 Kg./ml.

$I_x = 372.49 \text{ cm}^4$

$I_y = 49.16 \text{ cm}^4$

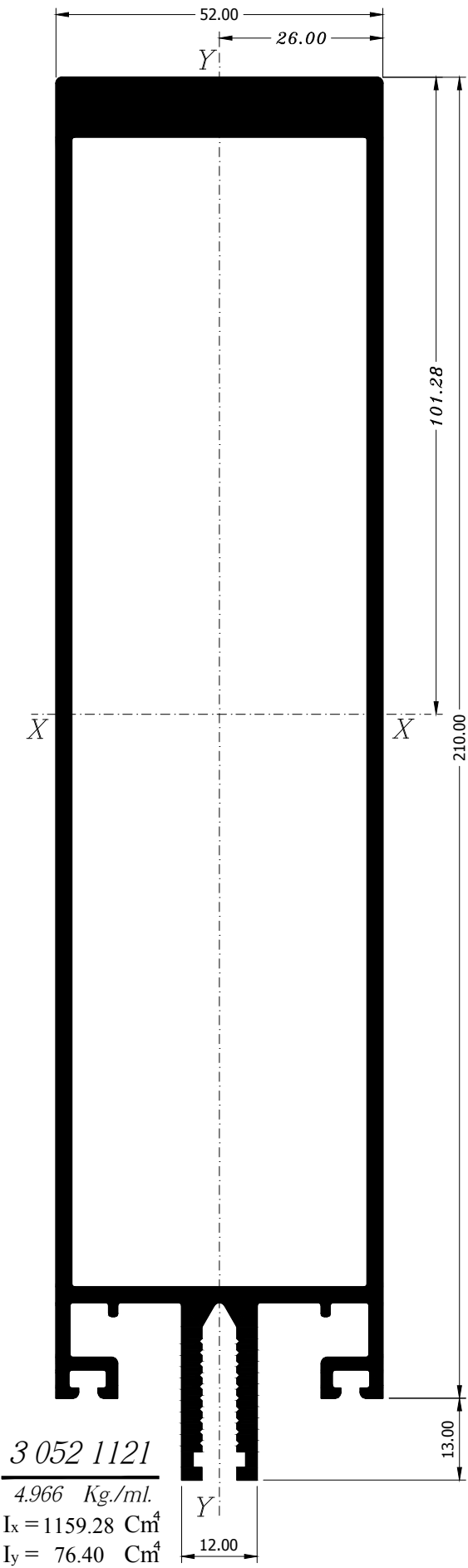
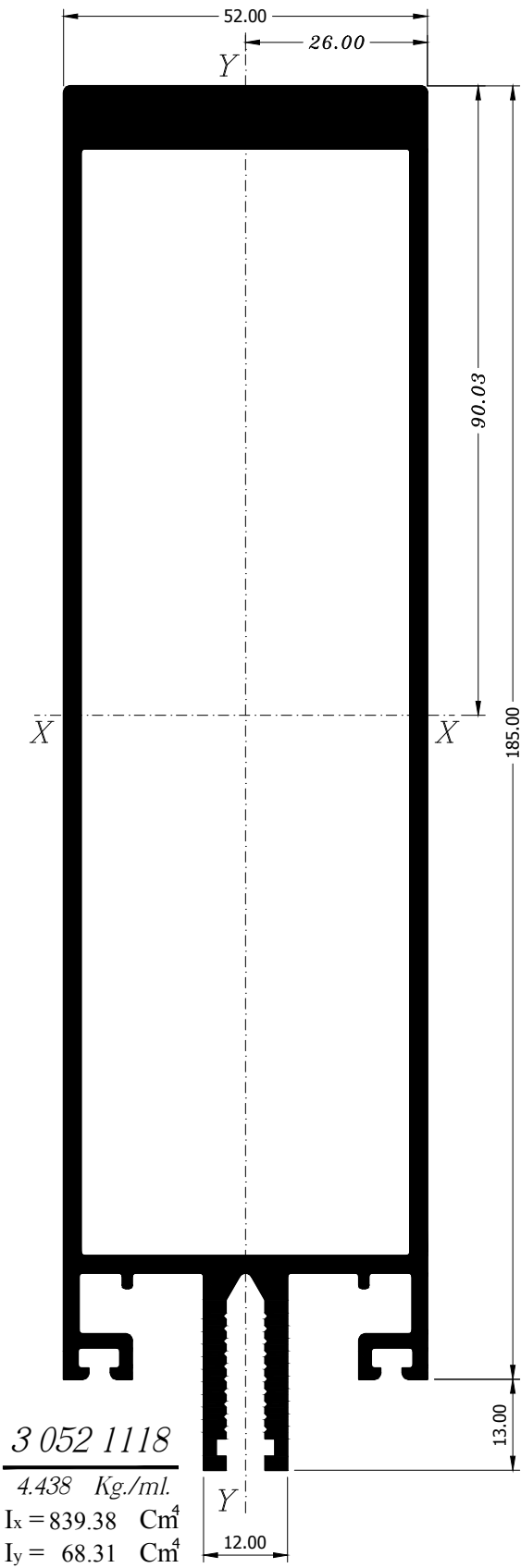
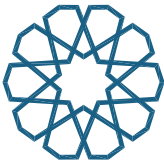


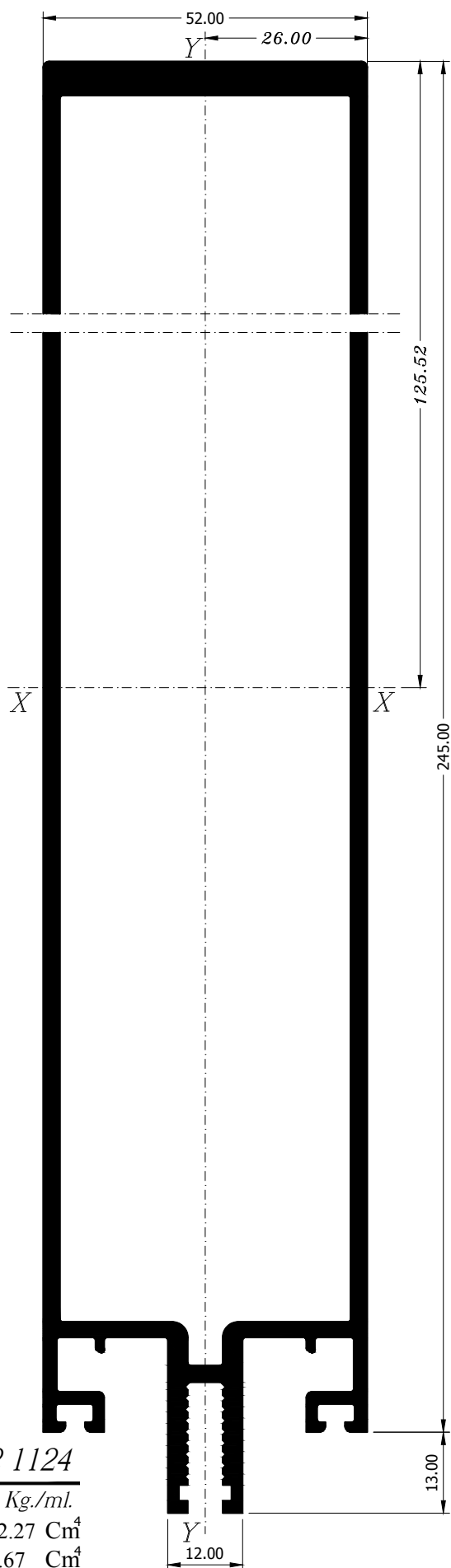
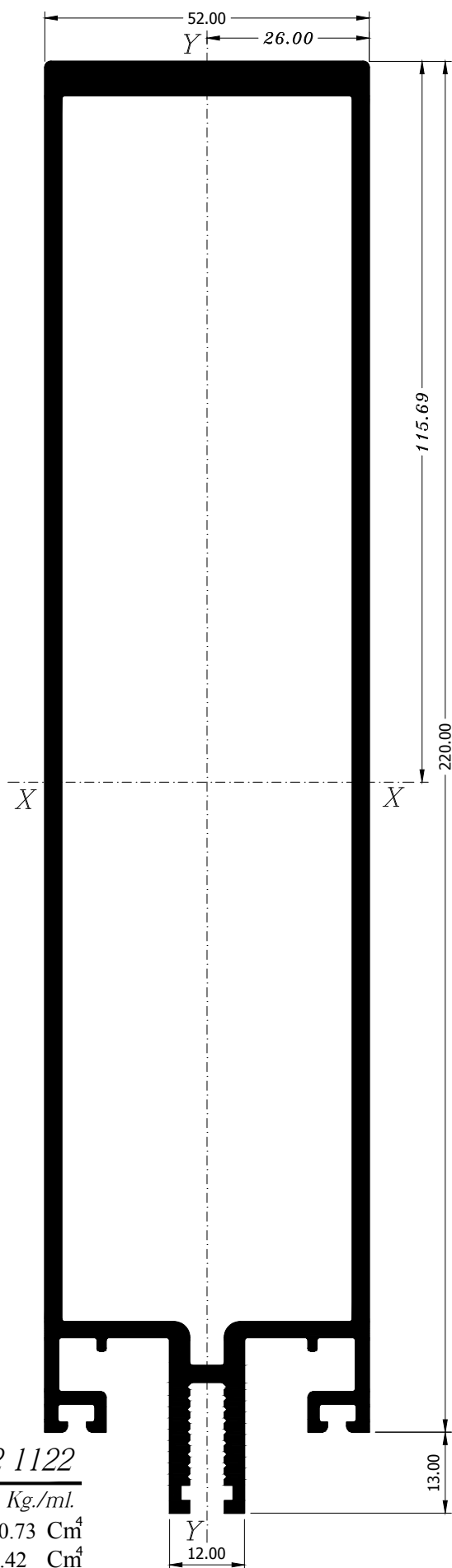
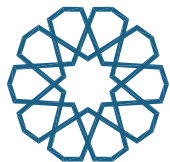
3 052 1116

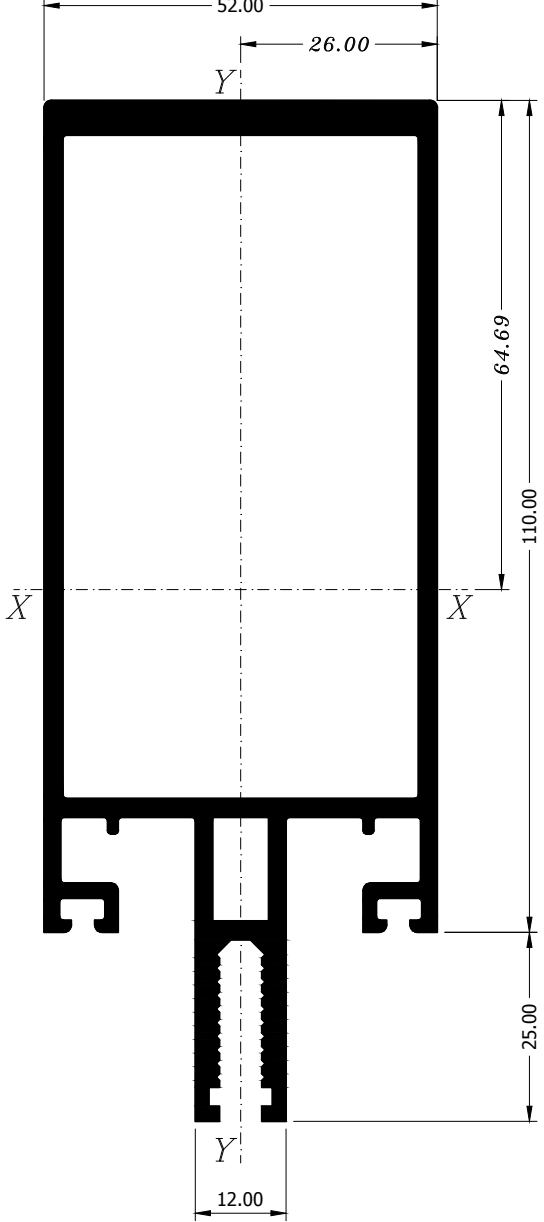
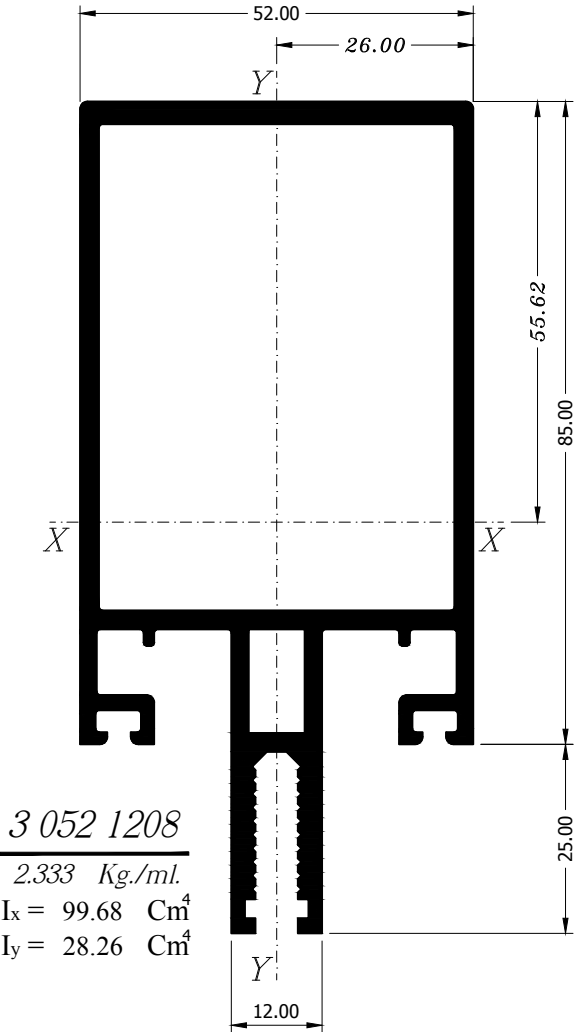
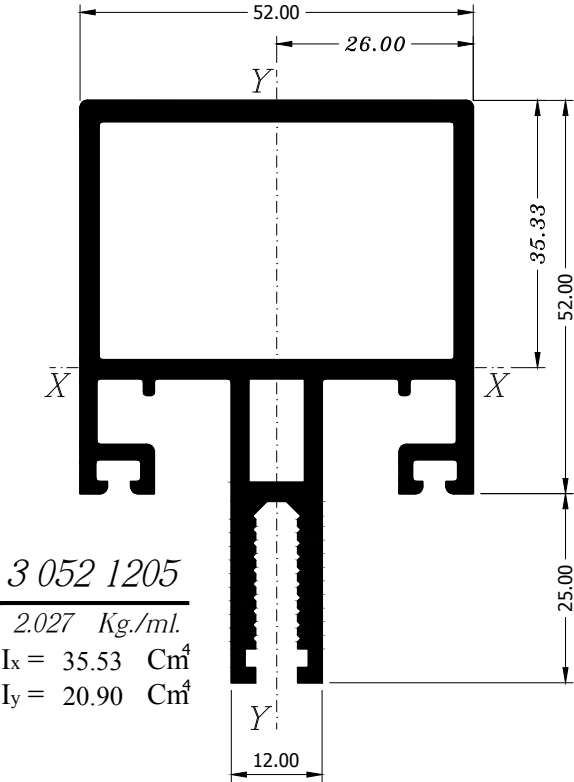
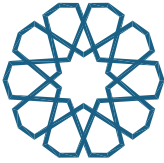
3.969 Kg./ml.

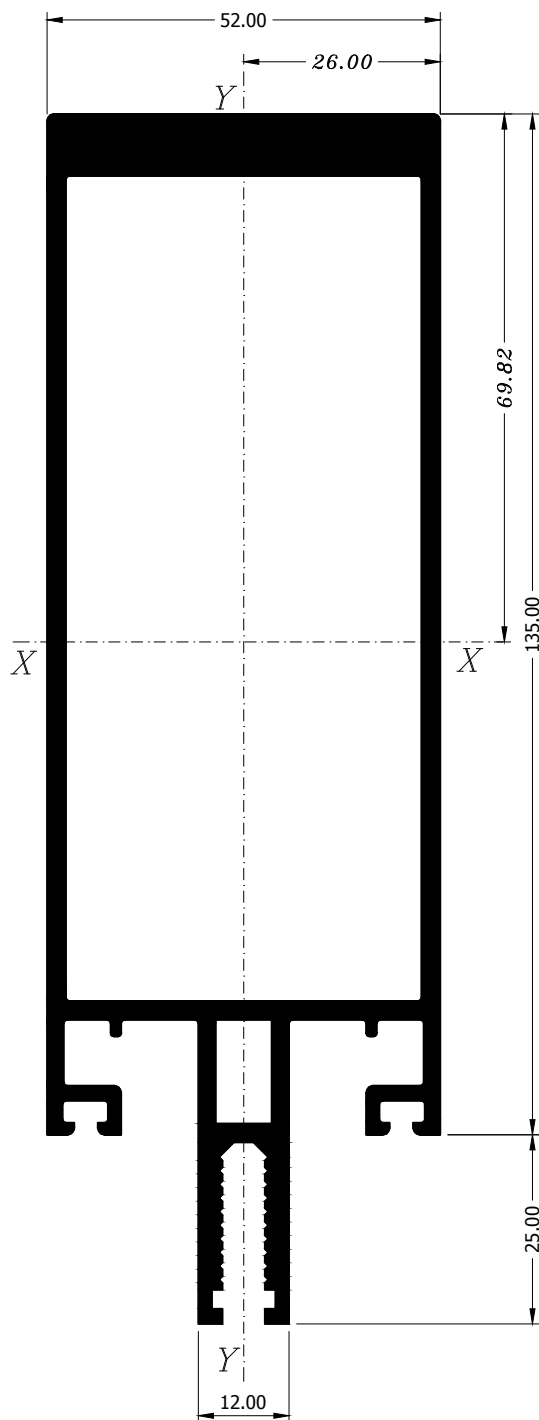
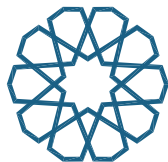
$I_x = 564.74 \text{ cm}^4$

$I_y = 56.53 \text{ cm}^4$







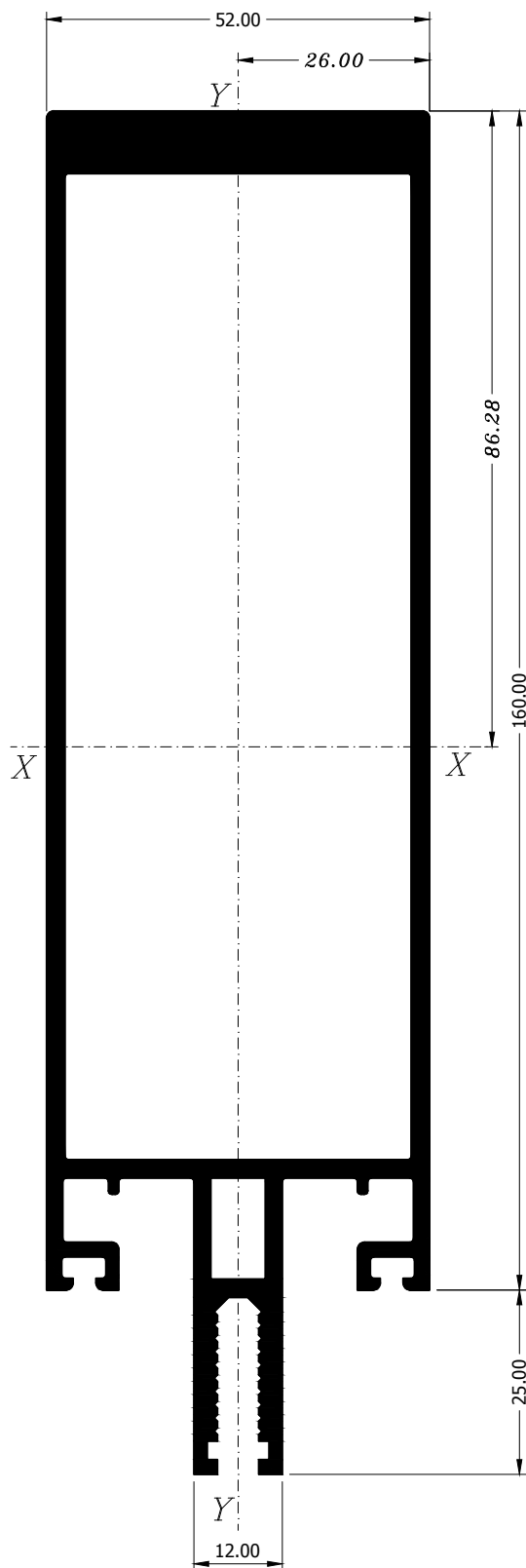


3 052 1213

3.750 Kg./ml.

$I_x = 421.35 \text{ Cm}^4$

$I_y = 49.29 \text{ Cm}^4$

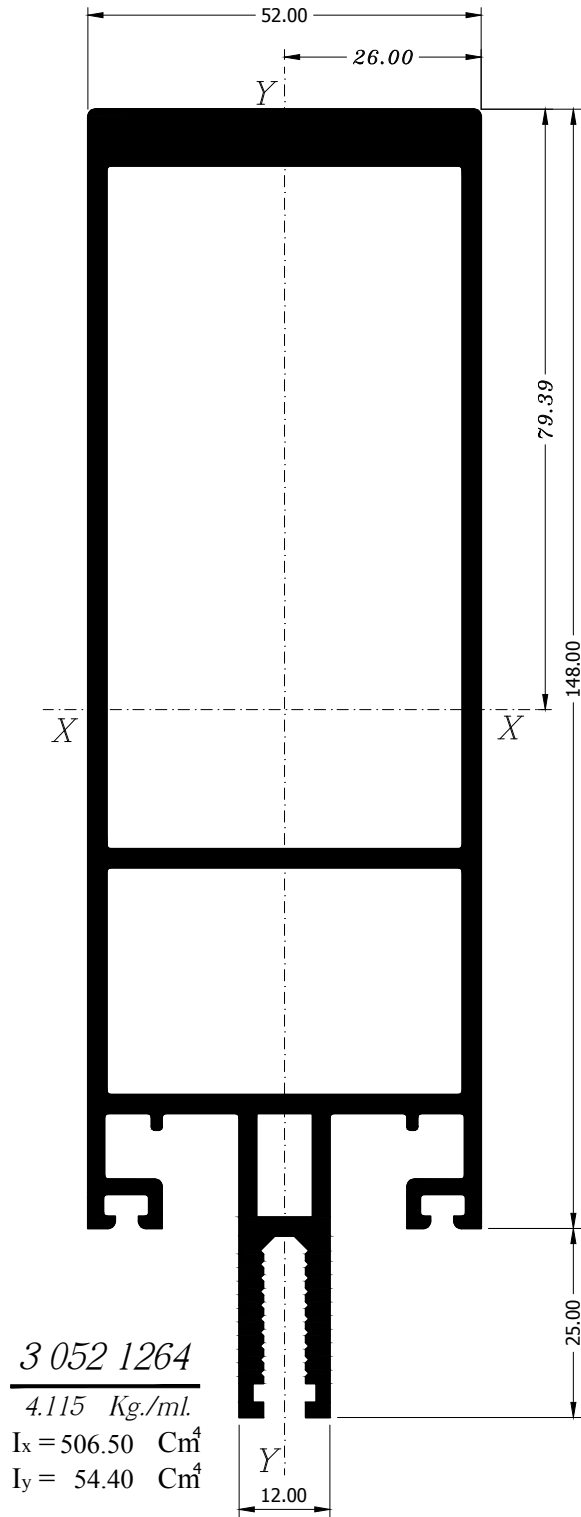
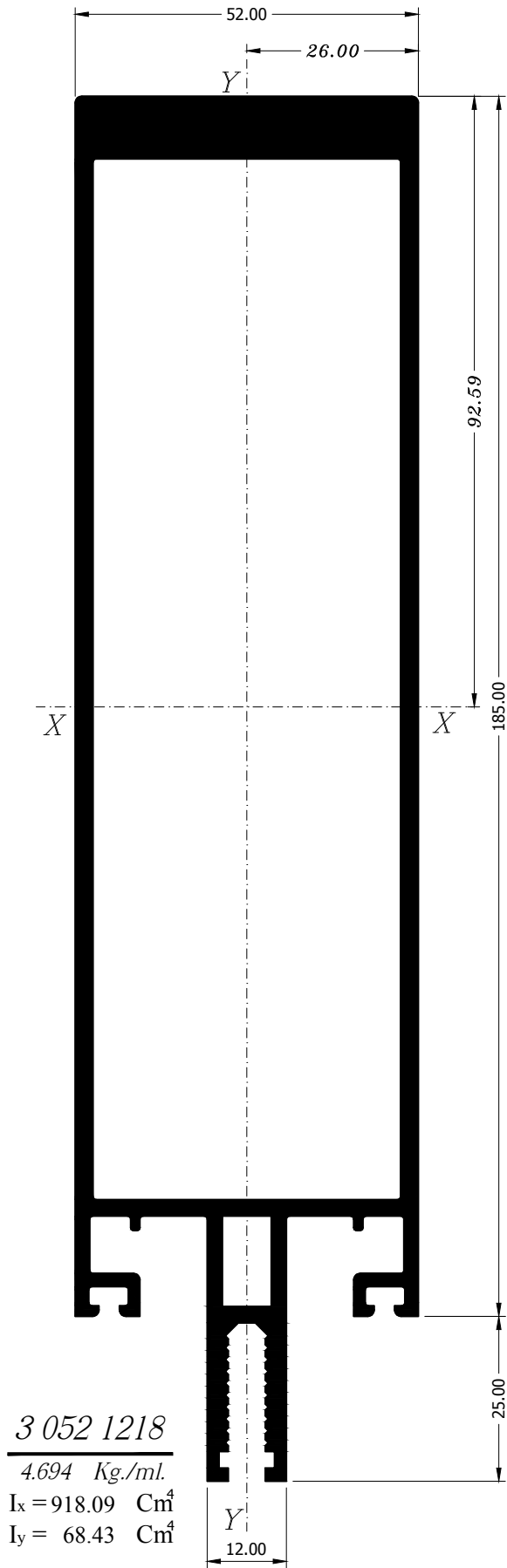
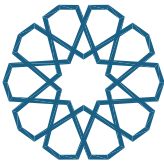


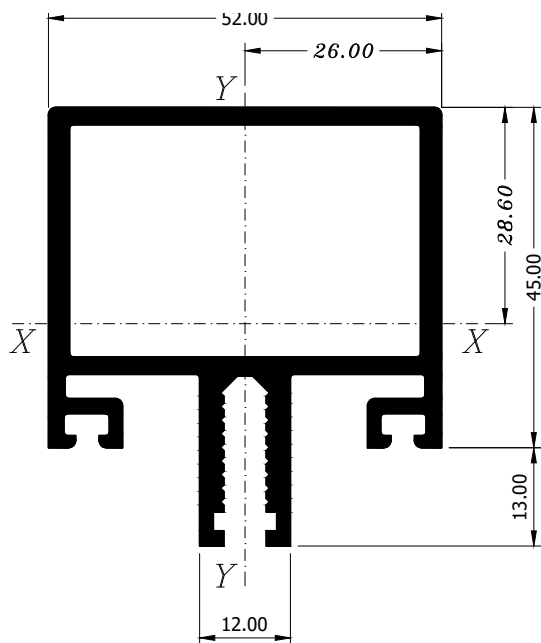
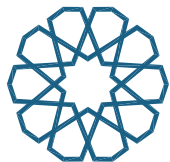
3 052 1216

4.098 Kg./ml.

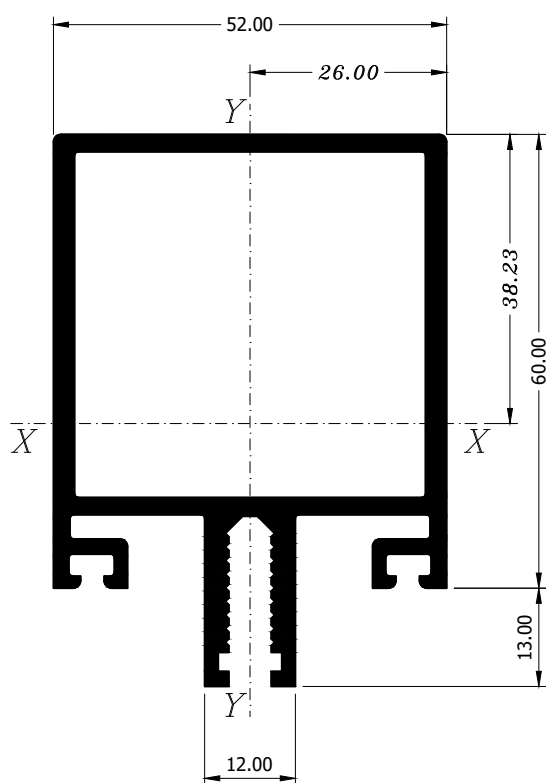
$I_x = 627.80 \text{ Cm}^4$

$I_y = 56.66 \text{ Cm}^4$

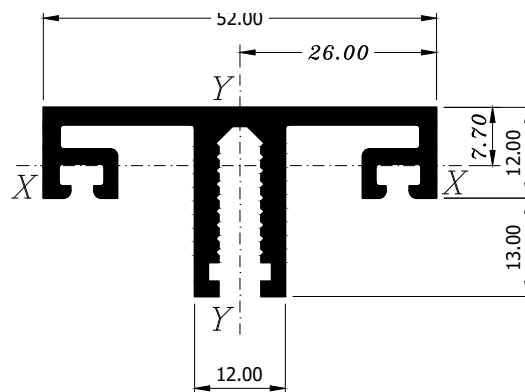




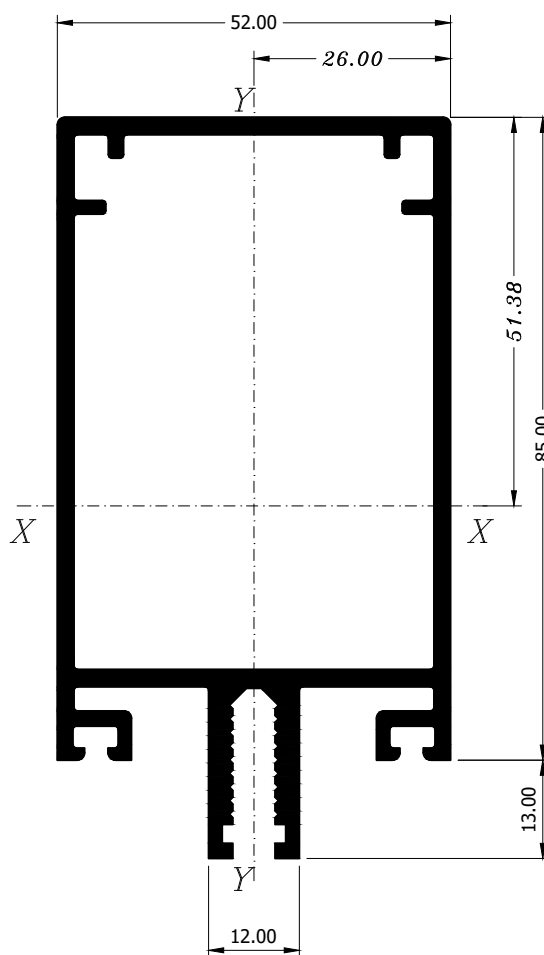
3 052 1401
1.433 Kg./ml.
 $I_x = 15.79 \text{ Cm}^4$
 $I_y = 15.56 \text{ Cm}^4$



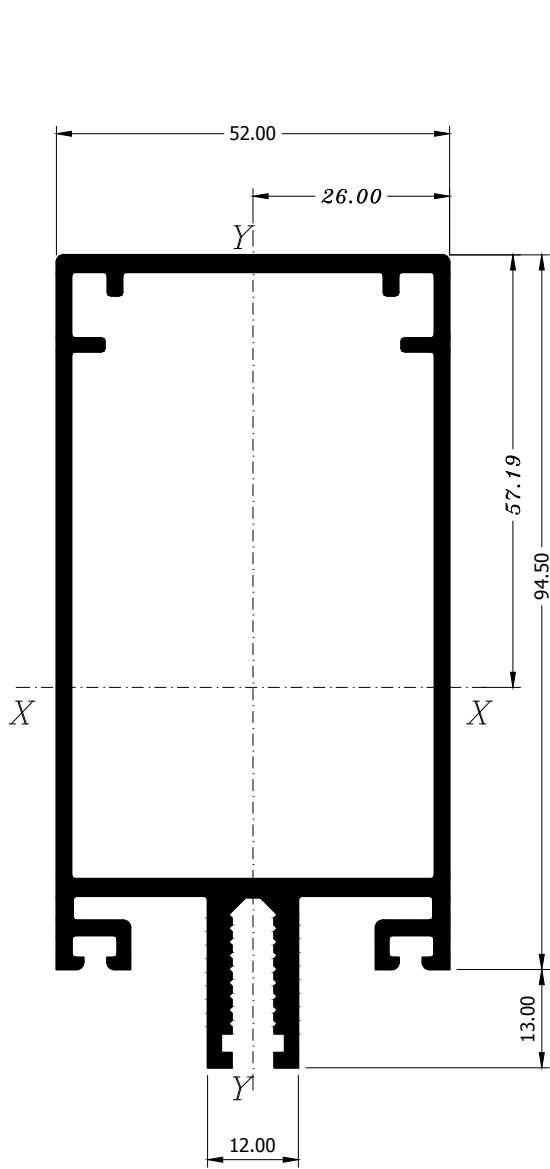
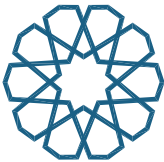
3 052 1406
1.571 Kg./ml.
 $I_x = 31.41 \text{ Cm}^4$
 $I_y = 19.59 \text{ Cm}^4$



3 052 1401
0.896 Kg./ml.
 $I_x = 1.49 \text{ Cm}^4$
 $I_y = 6.59 \text{ Cm}^4$

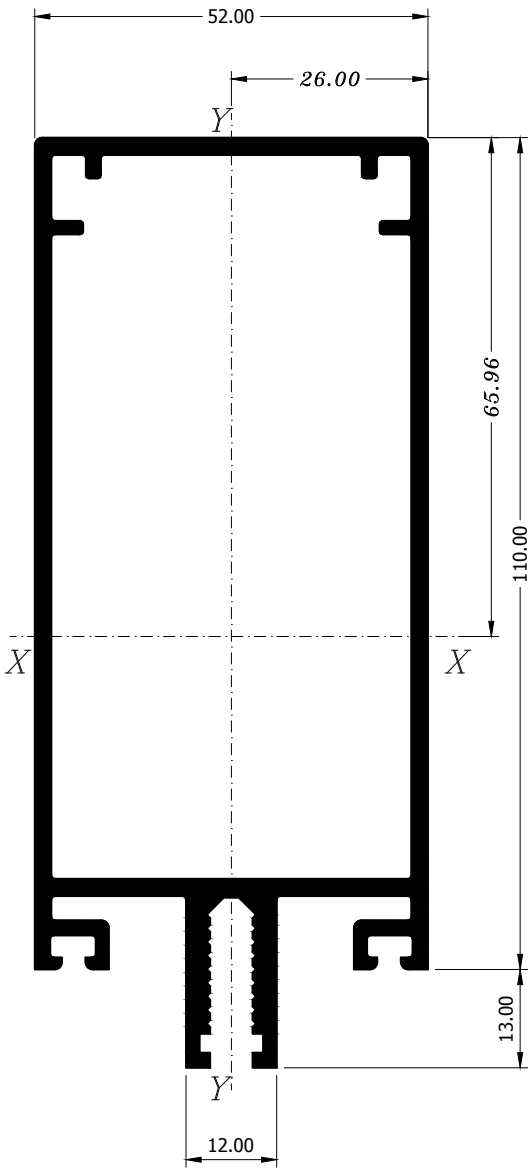


3 052 1408
1.889 Kg./ml.
 $I_x = 73.72 \text{ Cm}^4$
 $I_y = 25.70 \text{ Cm}^4$



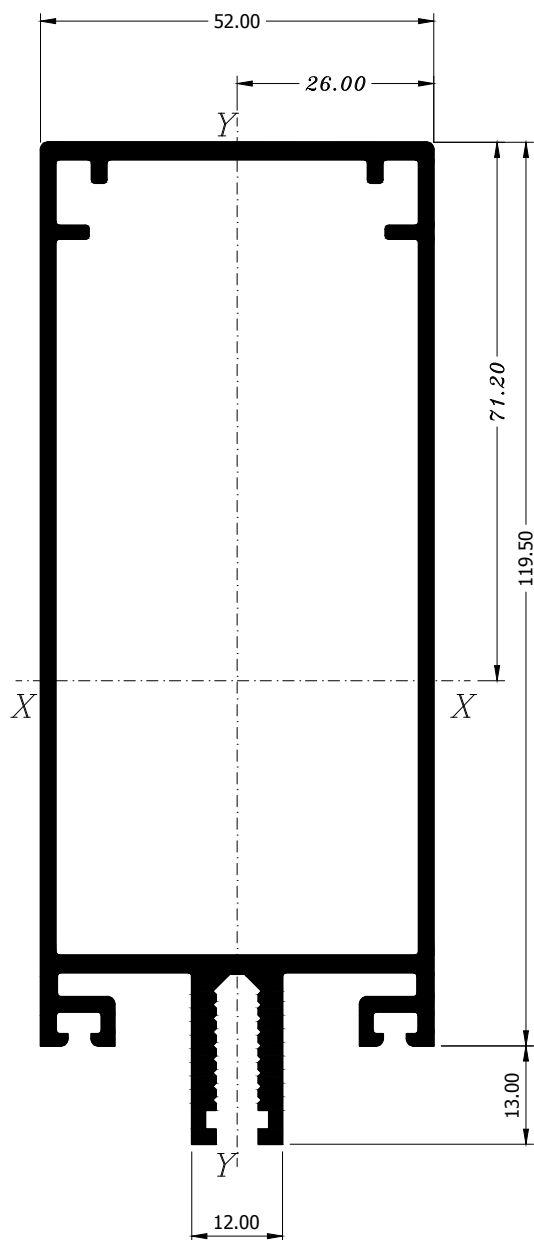
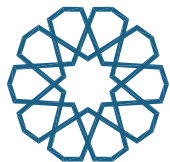
3 052 1409

1.982 Kg./ml.
 $I_x = 94.81 \text{ Cm}^4$
 $I_y = 27.85 \text{ Cm}^4$



3 052 1411

2.126 Kg./ml.
 $I_x = 136.13 \text{ Cm}^4$
 $I_y = 31.37 \text{ Cm}^4$

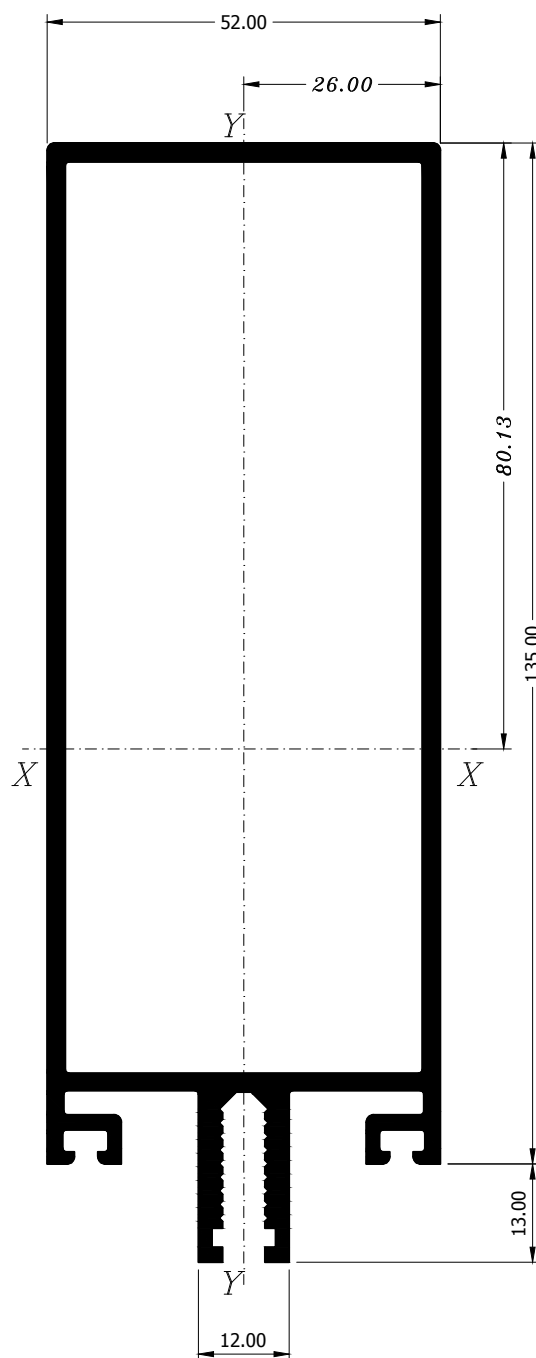


3 052 1412

2.225 Kg./ml.

$I_x = 166.29 \text{ Cm}^4$

$I_y = 33.53 \text{ Cm}^4$

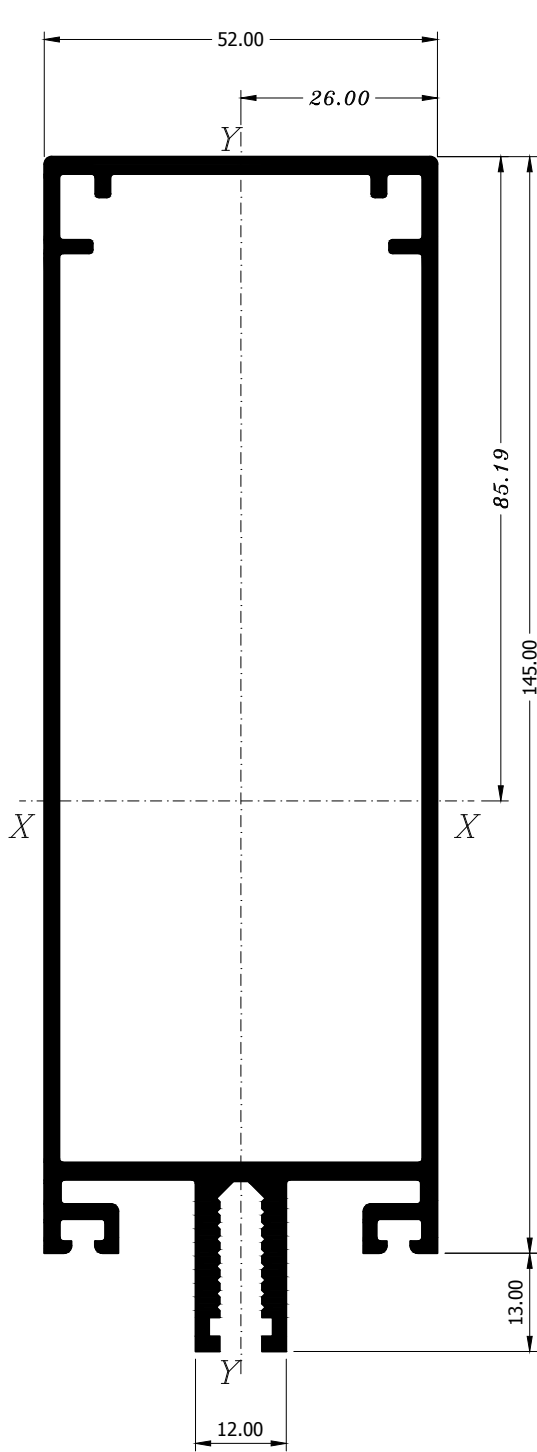
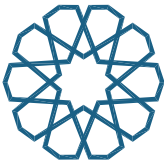


3 052 1413

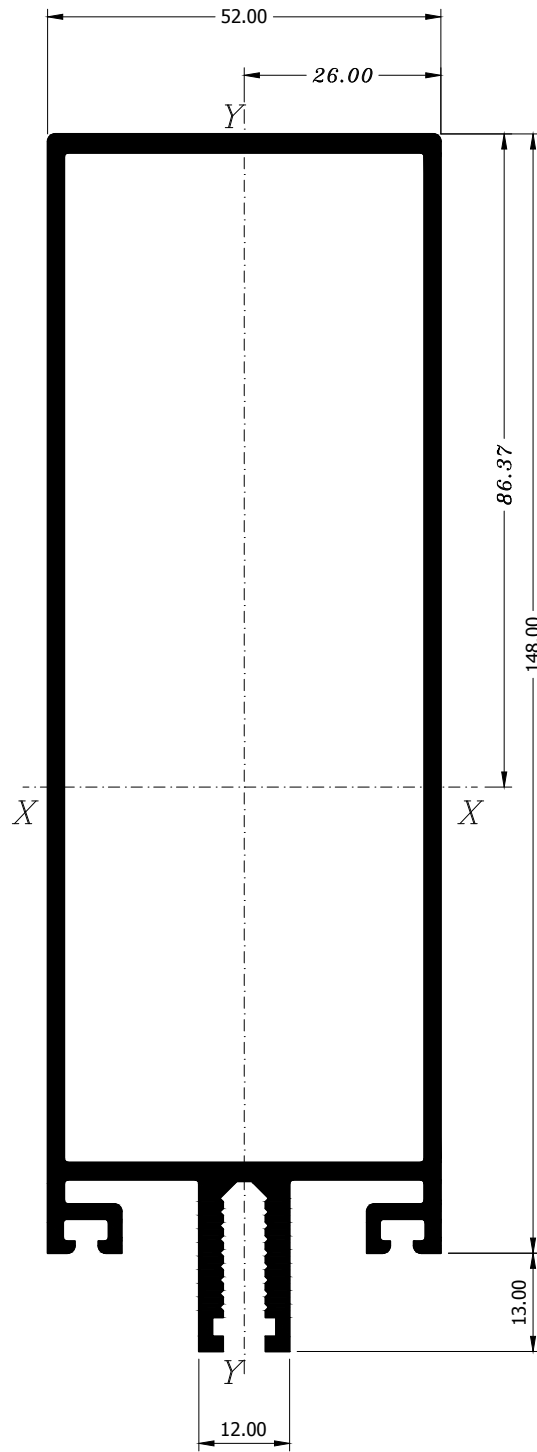
2.676 Kg./ml.

$I_x = 241.13 \text{ Cm}^4$

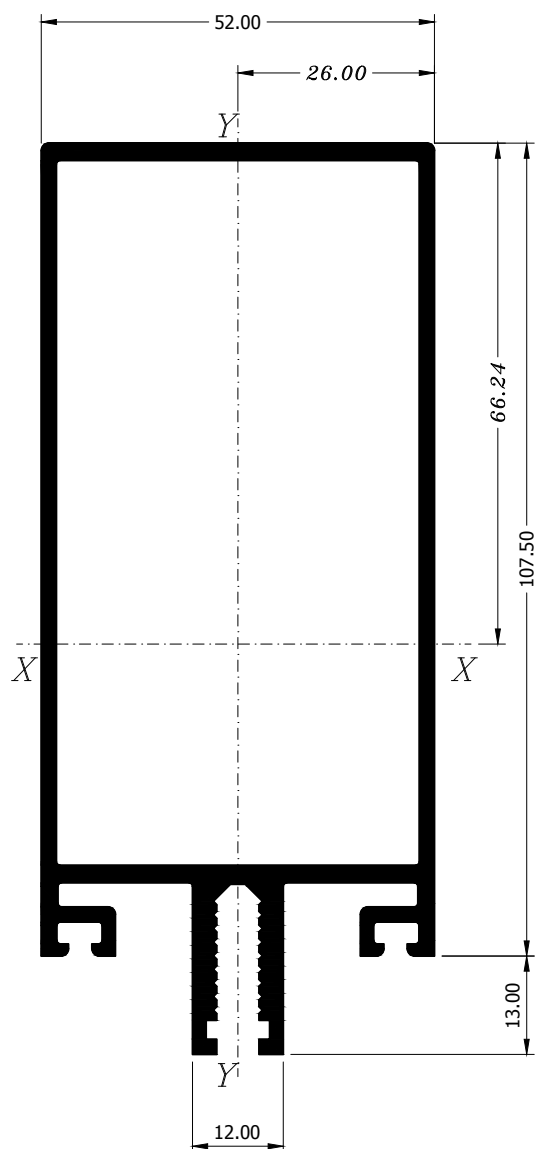
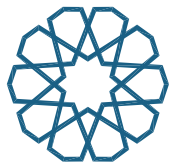
$I_y = 42.48 \text{ Cm}^4$



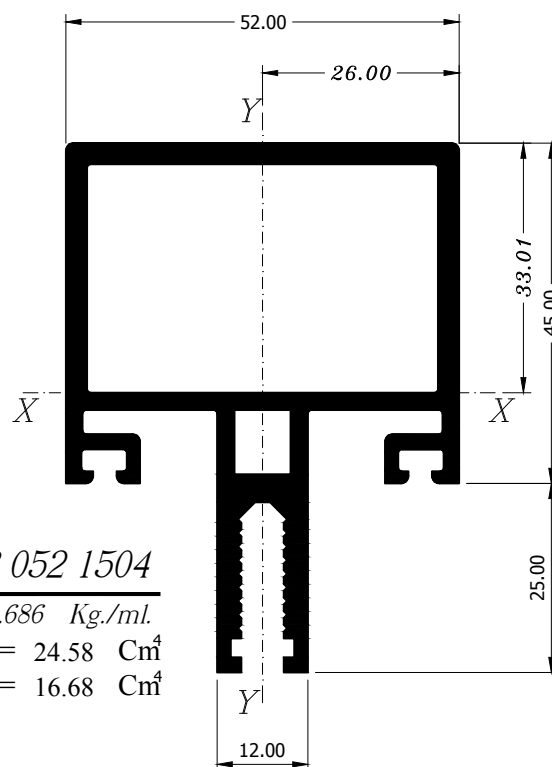
3 052 1414
2.472 Kg./ml.
 $I_x = 265.42 \text{ Cm}^4$
 $I_y = 39.31 \text{ Cm}^4$



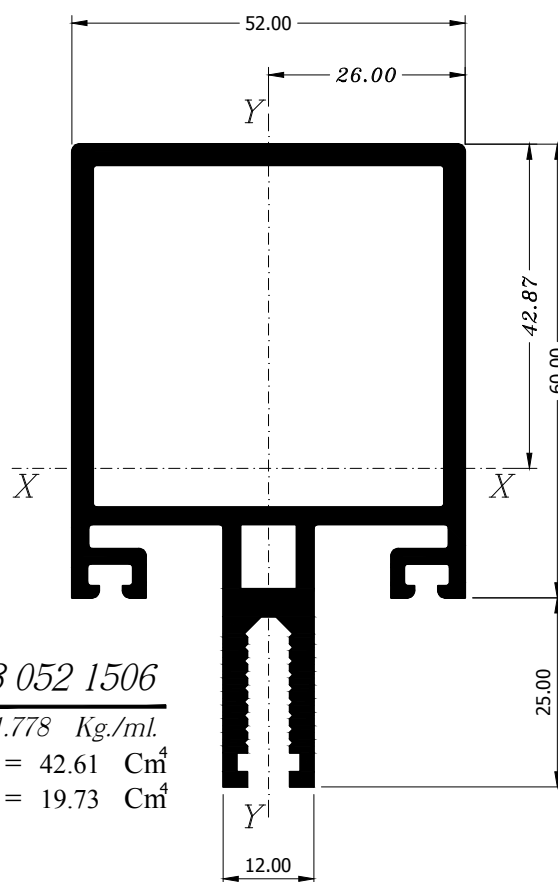
3 052 1415
2.626 Kg./ml.
 $I_x = 42.42 \text{ Cm}^4$
 $I_y = 46.82 \text{ Cm}^4$



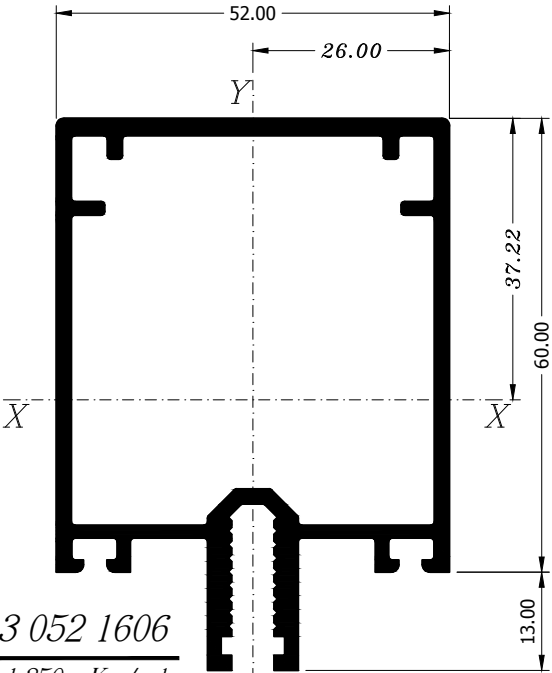
3 052 1461
2.035 Kg./ml.
 $I_x = 121.02 \text{ Cm}^4$
 $I_y = 29.74 \text{ Cm}^4$



3 052 1504
1.686 Kg./ml.
 $I_x = 24.58 \text{ Cm}^4$
 $I_y = 16.68 \text{ Cm}^4$



3 052 1506
1.778 Kg./ml.
 $I_x = 42.61 \text{ Cm}^4$
 $I_y = 19.73 \text{ Cm}^4$

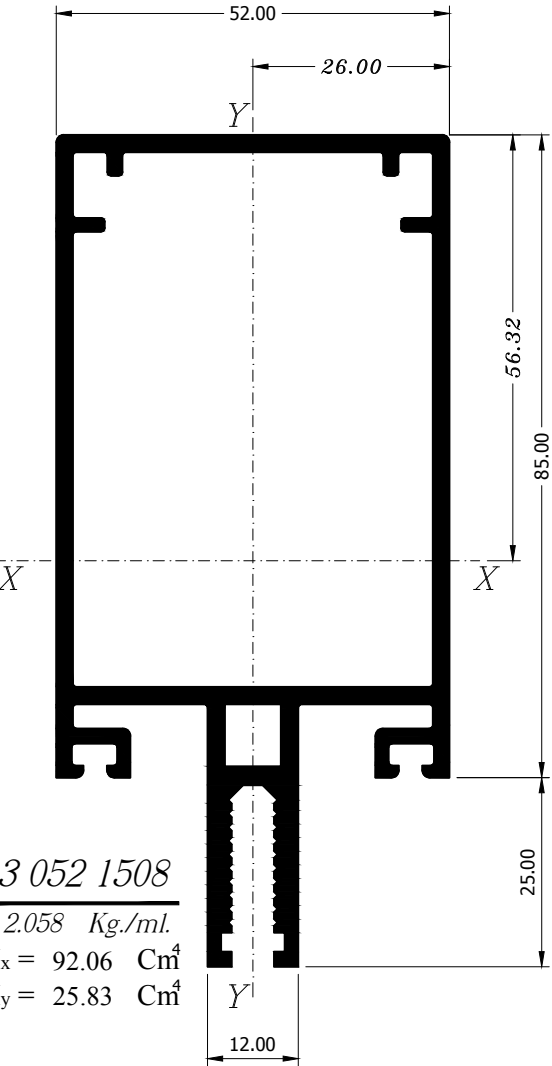


3 052 1606

1.350 Kg./ml.

$I_x = 29.50 \text{ Cm}^4$

$I_y = 16.60 \text{ Cm}^4$

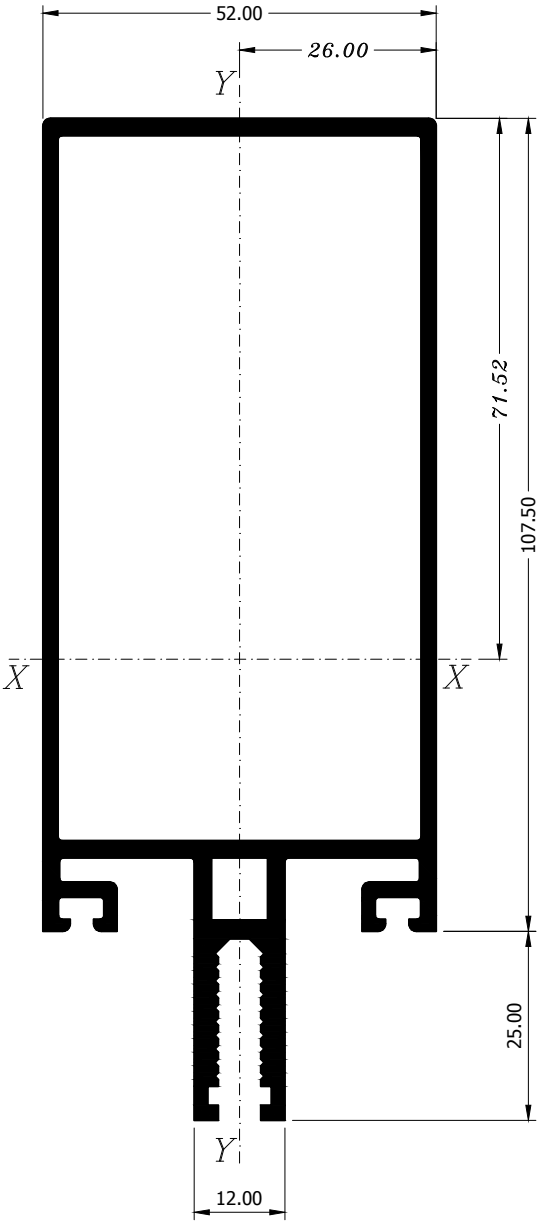


3 052 1508

2.058 Kg./ml.

$I_x = 92.06 \text{ Cm}^4$

$I_y = 25.83 \text{ Cm}^4$

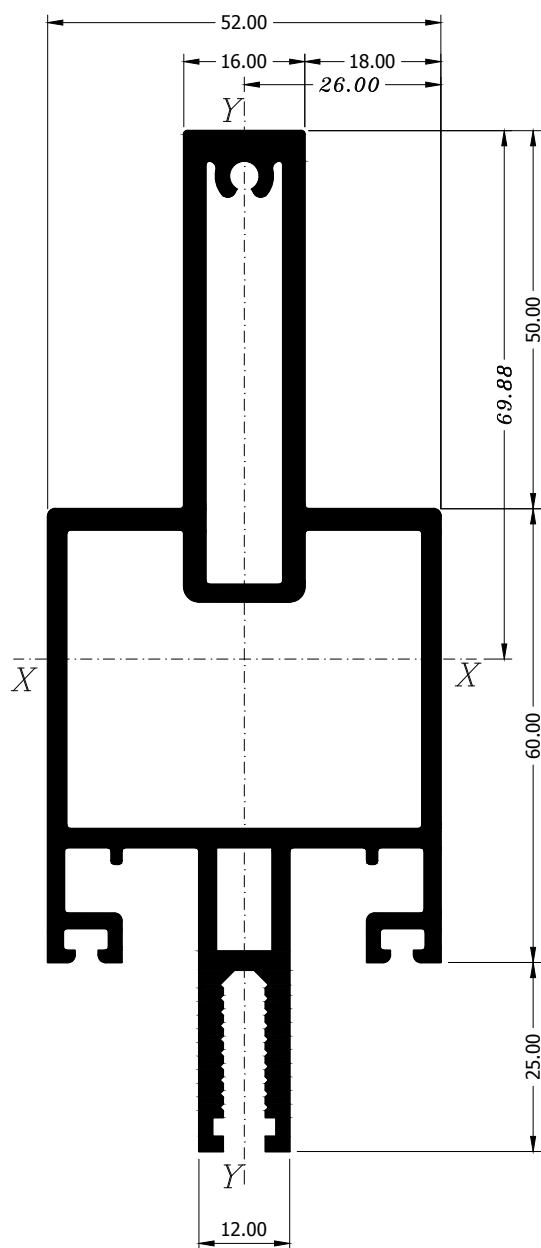
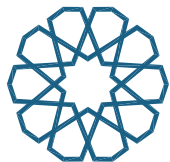


3 052 1561

2.215 Kg./ml.

$I_x = 145.53 \text{ Cm}^4$

$I_y = 29.87 \text{ Cm}^4$

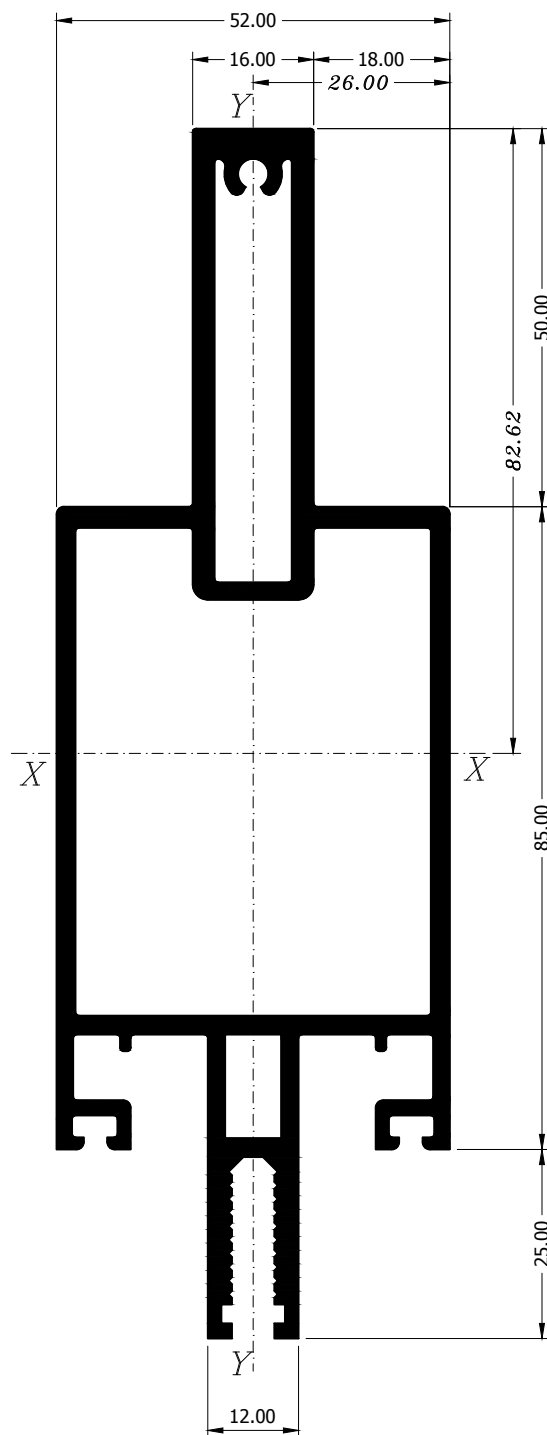


3 052 2206

3.024 Kg./ml.

$I_x = 163.83 \text{ Cm}^4$

$I_y = 24.20 \text{ Cm}^4$

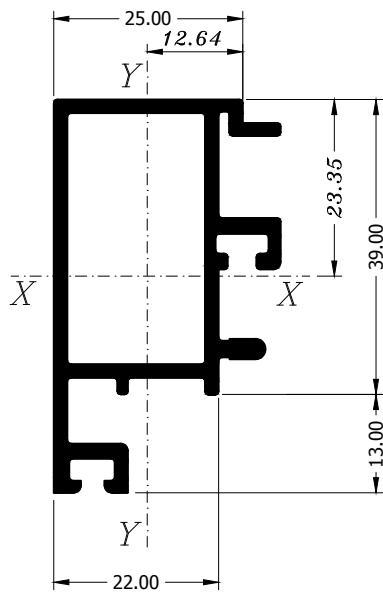


3 052 2208

3.347 Kg./ml.

$I_x = 275.61 \text{ Cm}^4$

$I_y = 31.31 \text{ Cm}^4$

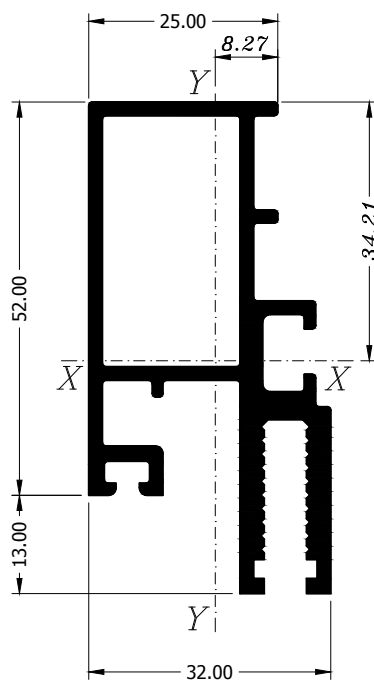


3 052 3005

0.759 Kg./ml.

$I_x = 7.17 \text{ Cm}^4$

$I_y = 2.79 \text{ Cm}^4$

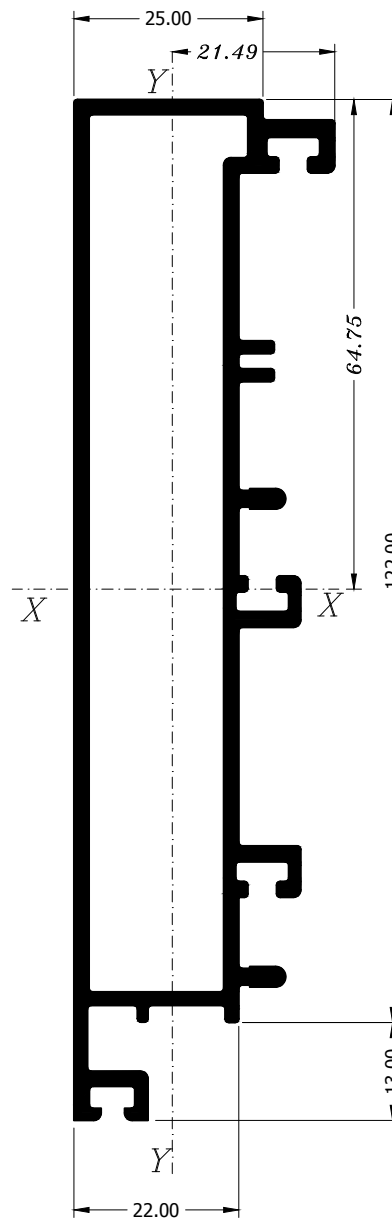


3 052 3105

1.157 Kg./ml.

$I_x = 14.34 \text{ Cm}^4$

$I_y = 4.61 \text{ Cm}^4$

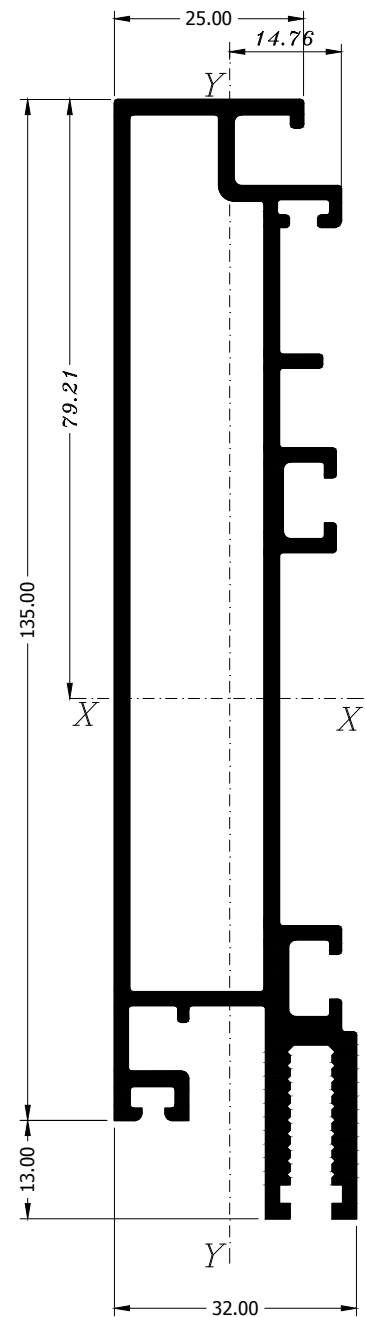


3 052 3013

1.846 Kg./ml.

$I_x = 120.76 \text{ Cm}^4$

$I_y = 7.70 \text{ Cm}^4$

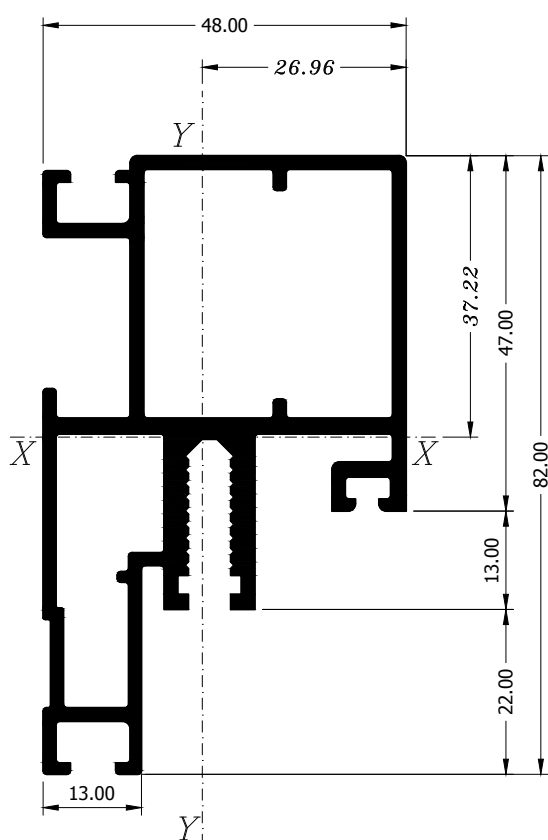
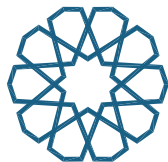


3 052 3113

2.242 Kg./ml.

$I_x = 181.79 \text{ Cm}^4$

$I_y = 9.30 \text{ Cm}^4$

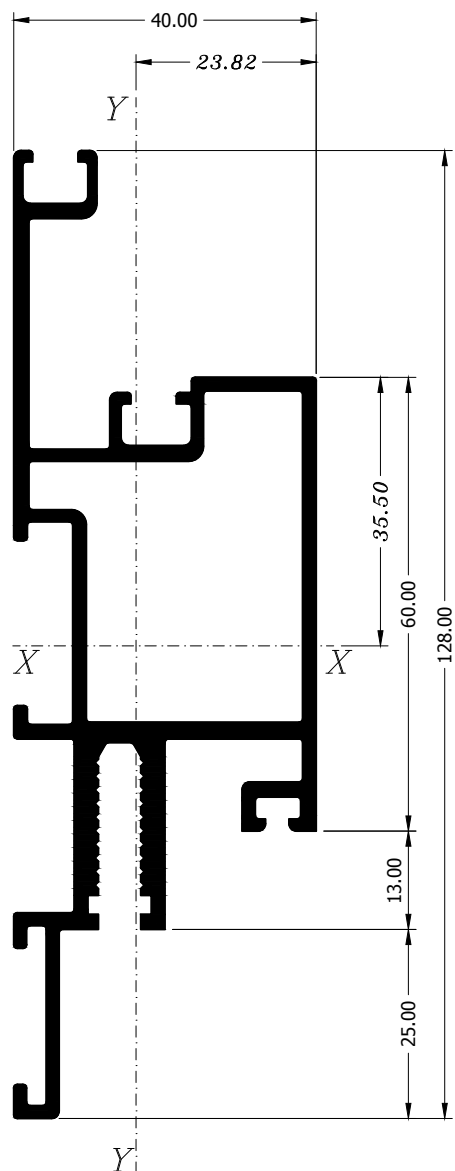


3 052 3604

1.673 Kg./ml.

$I_x = 30.56 \text{ Cm}^4$

$I_y = 14.01 \text{ Cm}^4$

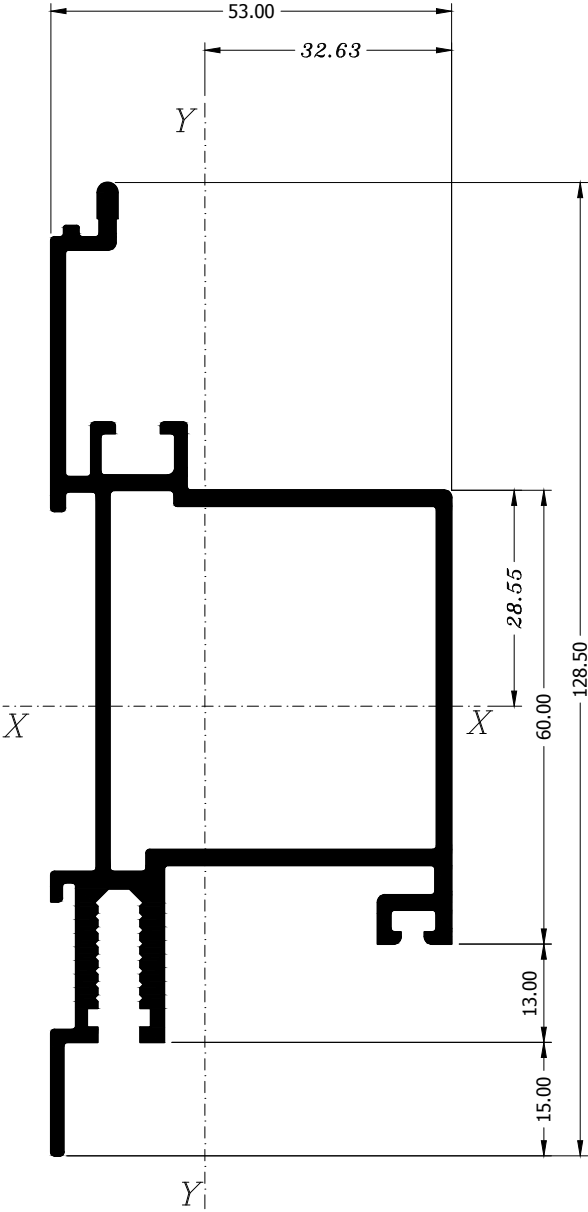
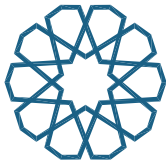


3 052 3606

1.805 Kg./ml.

$I_x = 62.89 \text{ Cm}^4$

$I_y = 11.51 \text{ Cm}^4$

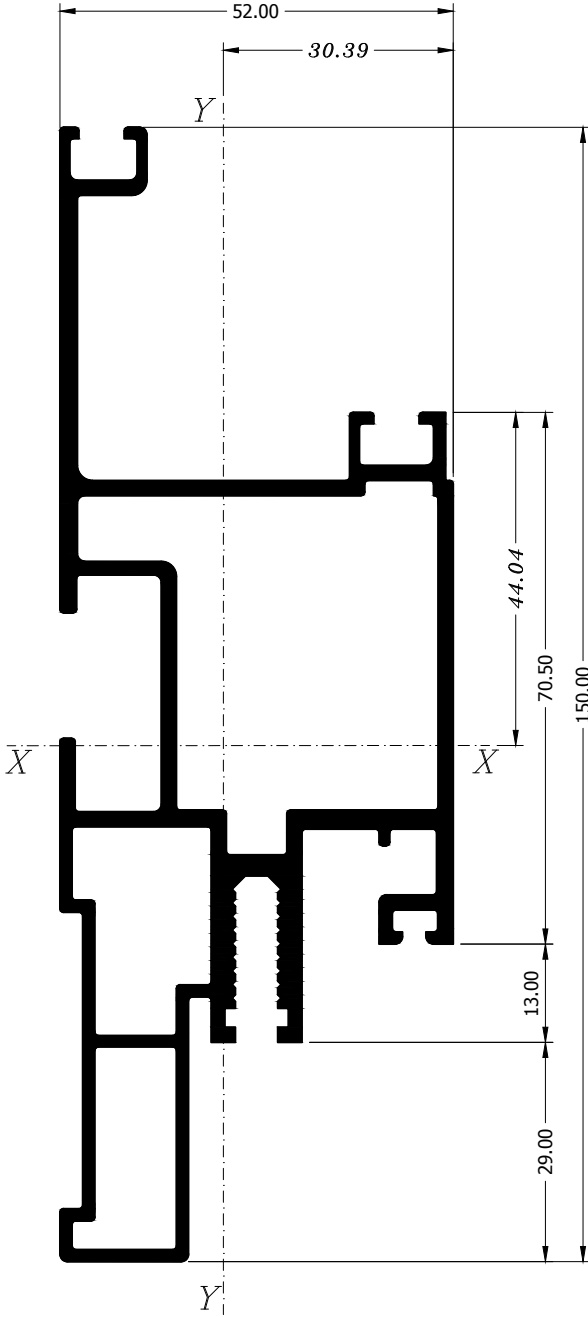


3 052 3646

1.728 Kg./ml.

$I_x = 64.13 \text{ Cm}^4$

$I_y = 23.52 \text{ Cm}^4$

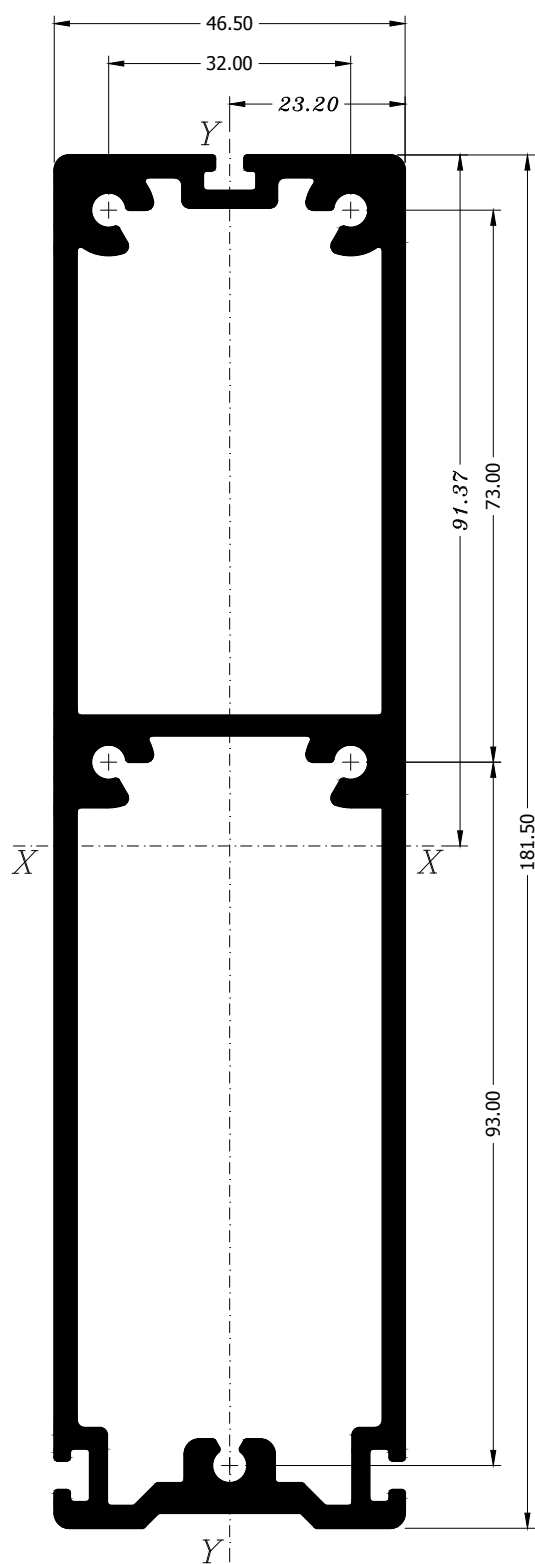
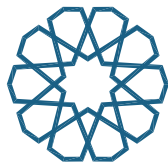


3 052 3656

2.563 Kg./ml.

$I_x = 124.00 \text{ Cm}^4$

$I_y = 28.32 \text{ Cm}^4$



3 052 4021

4.055 Kg./ml.

$I_x = 560.12 \text{ Cm}^4$

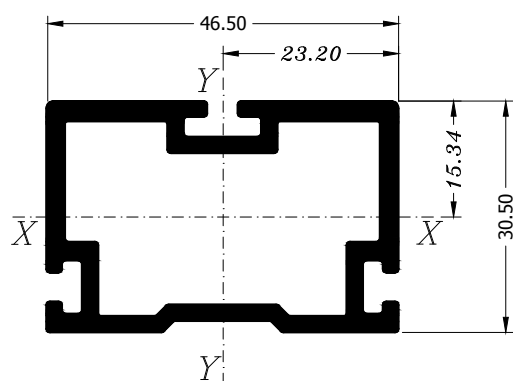
$I_y = 50.98 \text{ Cm}^4$

3 052 4105

0.919 Kg./ml.

$I_x = 4.37 \text{ Cm}^4$

$I_y = 8.92 \text{ Cm}^4$

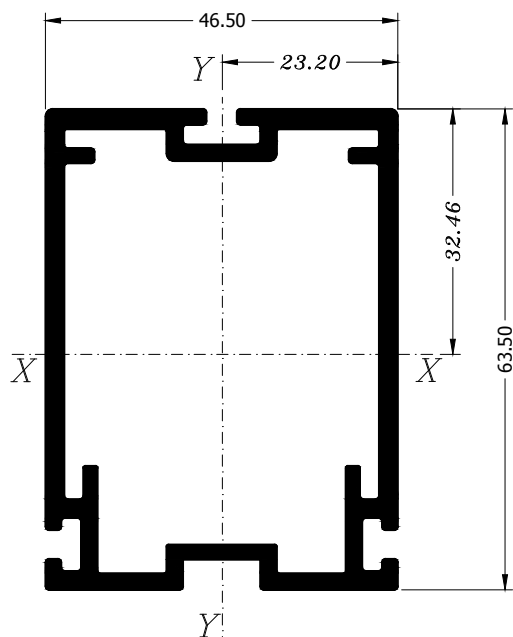


3 052 4108

1.451 Kg./ml.

$I_x = 30.27 \text{ Cm}^4$

$I_y = 16.74 \text{ Cm}^4$

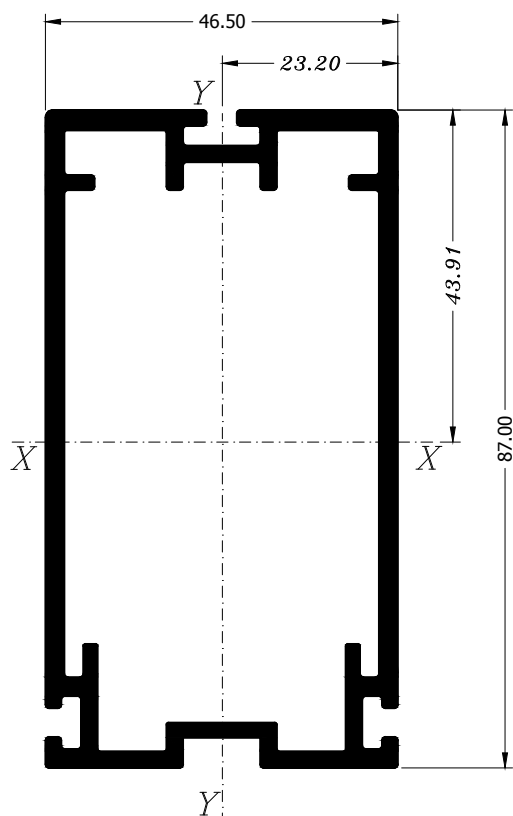


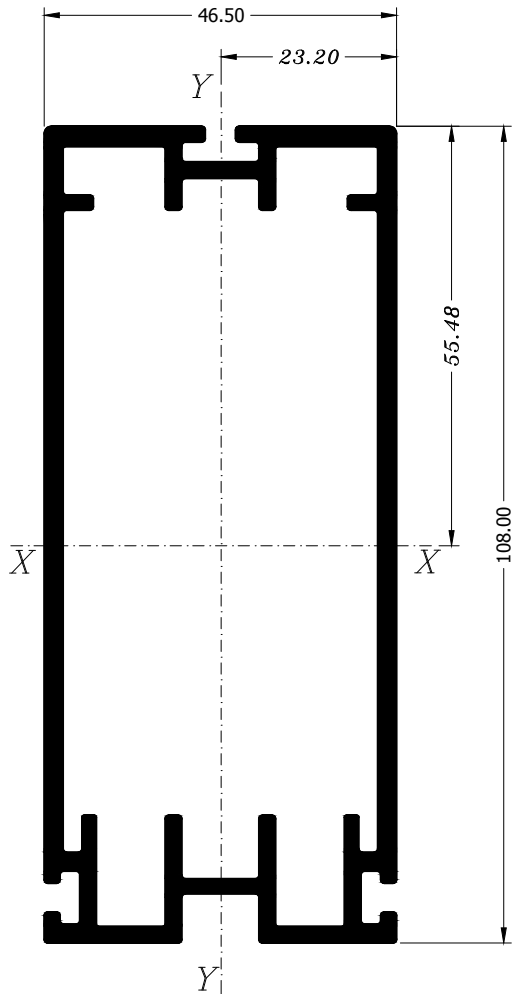
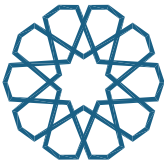
3 052 4111

1.737 Kg./ml.

$I_x = 66.86 \text{ Cm}^4$

$I_y = 21.20 \text{ Cm}^4$



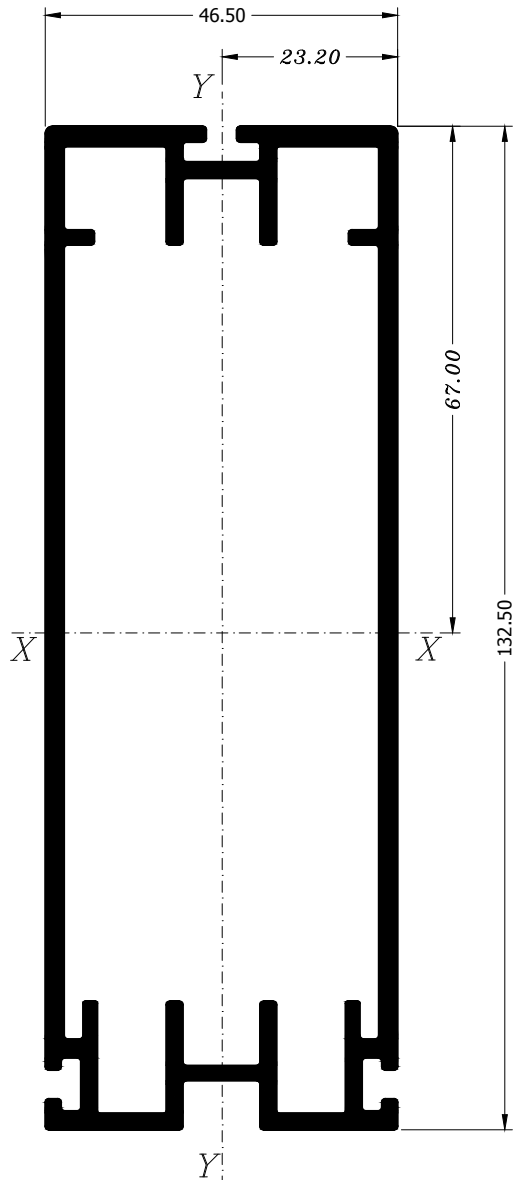


3 052 4113

2.078 Kg./ml.

$I_x = 121.60 \text{ Cm}^4$

$I_y = 25.22 \text{ Cm}^4$

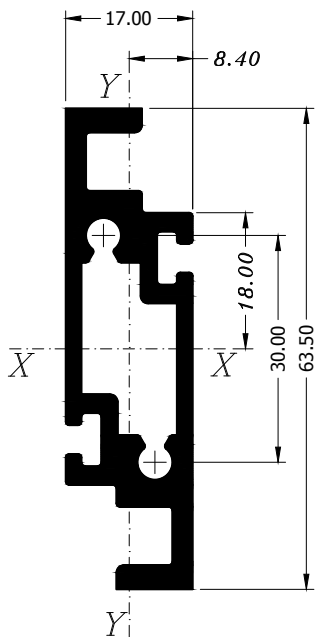


3 052 4116

2.396 Kg./ml.

$I_x = 207.57 \text{ Cm}^4$

$I_y = 29.95 \text{ Cm}^4$

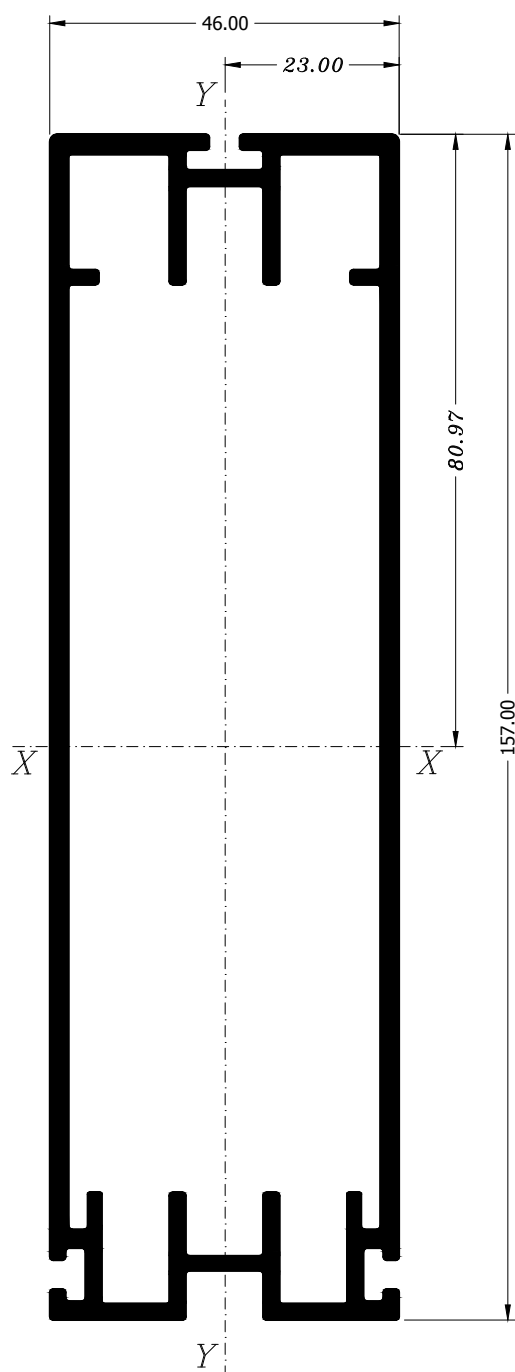
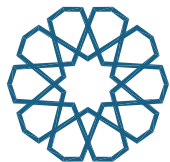


3 052 4708

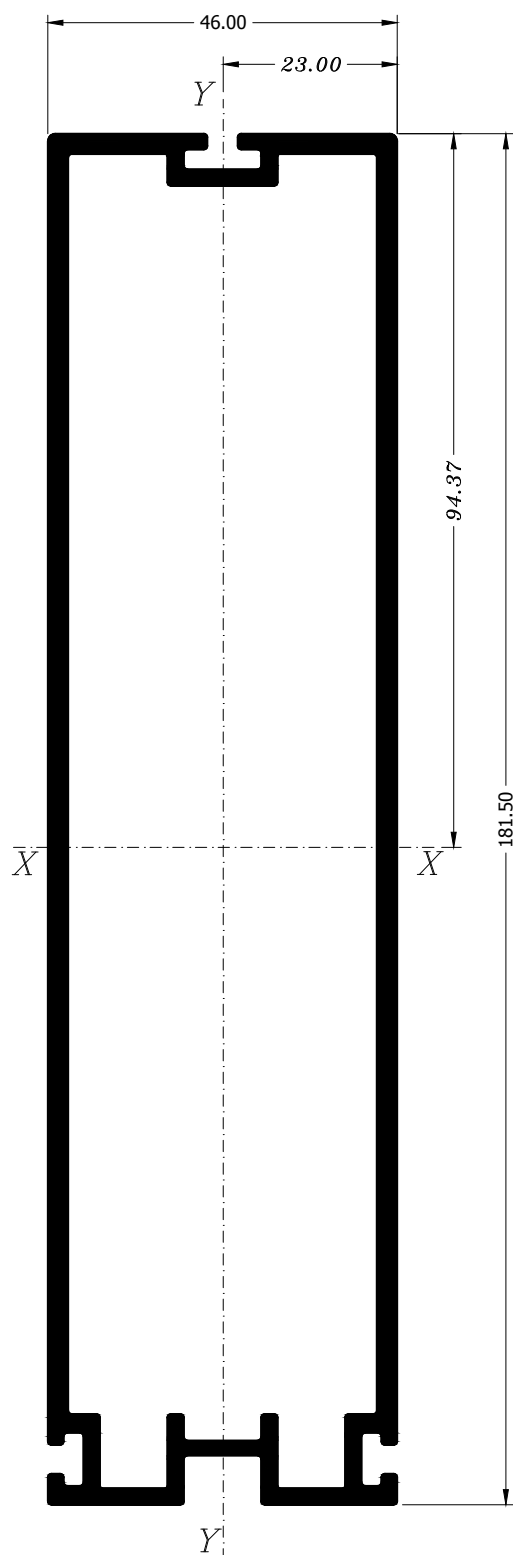
1.009 Kg./ml.

$I_x = 12.65 \text{ Cm}^4$

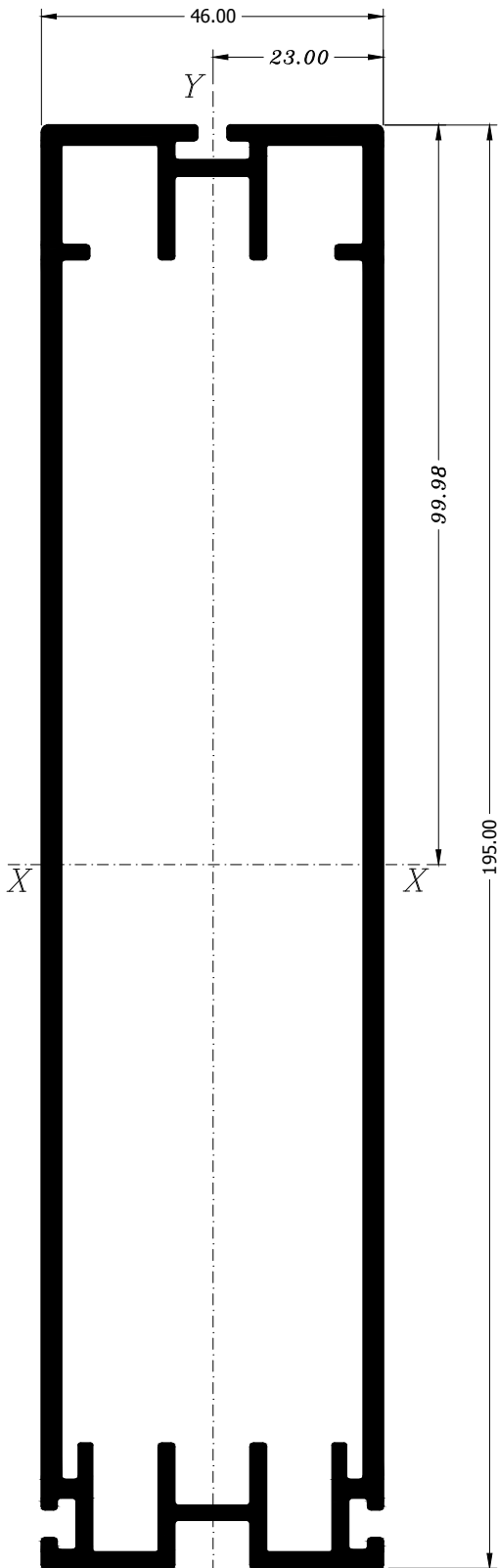
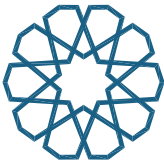
$I_y = 1.20 \text{ Cm}^4$



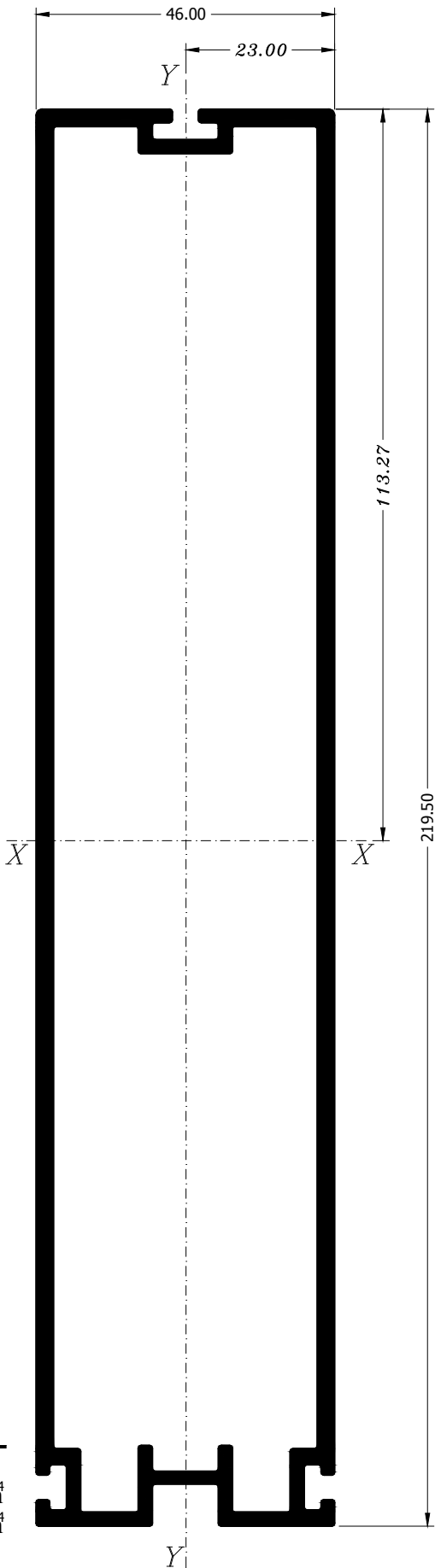
3 052 4118
2.962 Kg./ml.
 $I_x = 347.29 \text{ Cm}^4$
 $I_y = 37.29 \text{ Cm}^4$



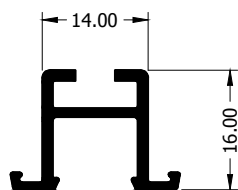
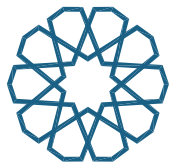
3 052 4121
2.968 Kg./ml.
 $I_x = 438.20 \text{ Cm}^4$
 $I_y = 40.81 \text{ Cm}^4$



3 052 4122
3.386 Kg./ml.
 $I_x = 596.19 \text{ Cm}^4$
 $I_y = 44.94 \text{ Cm}^4$

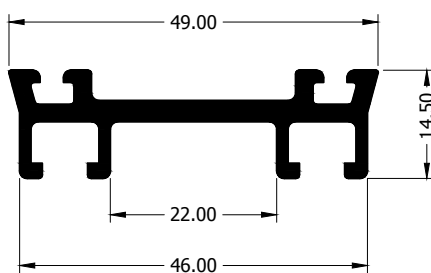


3 052 4124
3.380 Kg./ml.
 $I_x = 703.77 \text{ Cm}^4$
 $I_y = 48.43 \text{ Cm}^4$



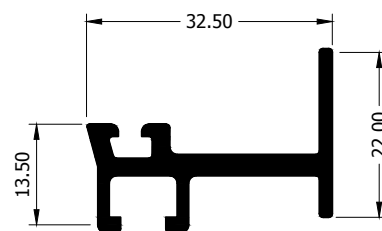
3 052 5001

0.193 Kg./ml.



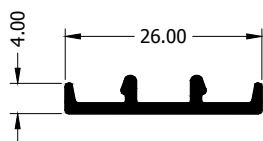
3 052 5011

0.601 Kg./ml.



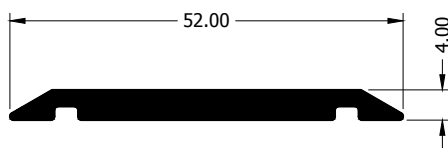
3 052 5072

0.444 Kg./ml.



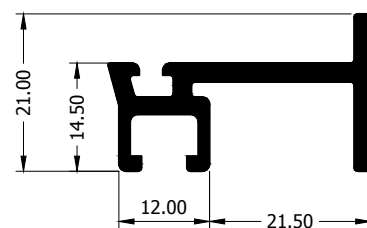
3 052 5201

0.128 Kg./ml.



3 052 5020

0.477 Kg./ml.

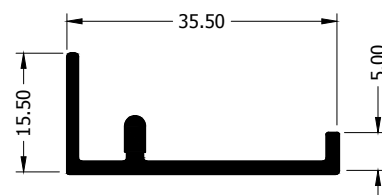
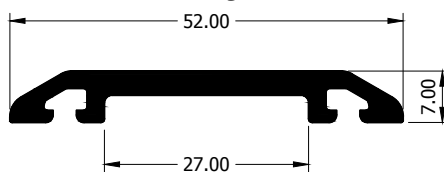


3 052 5511

0.439 Kg./ml.

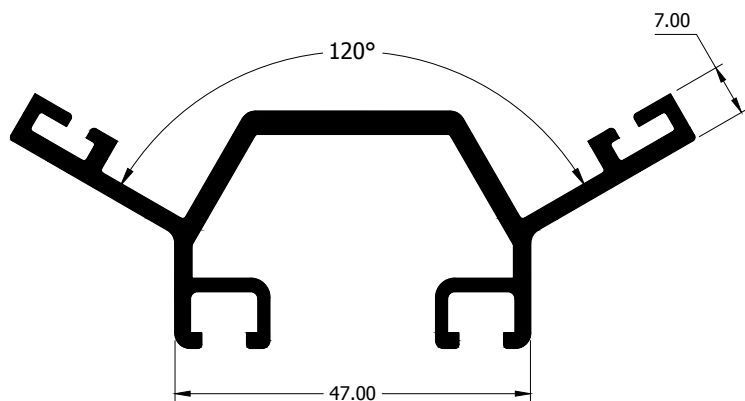
3 052 5021

0.460 Kg./ml.



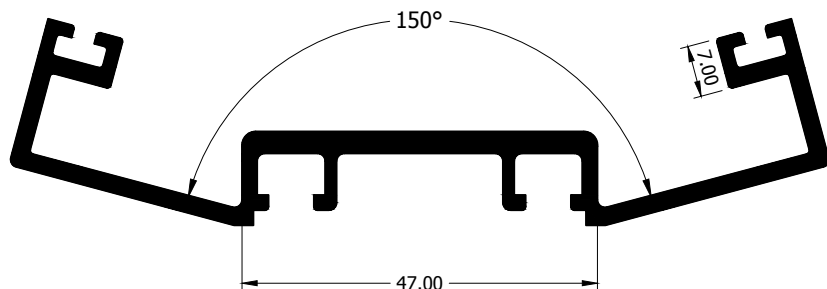
3 052 5271

0.254 Kg./ml.



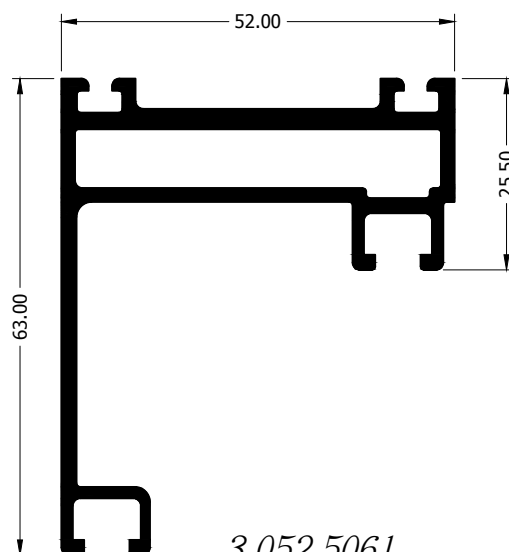
3 052 5111

1.150 Kg./ml.



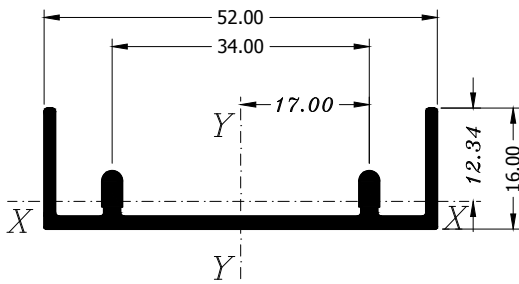
3 052 5131

1.176 Kg./ml.



3 052 5061

1.100 Kg./ml.

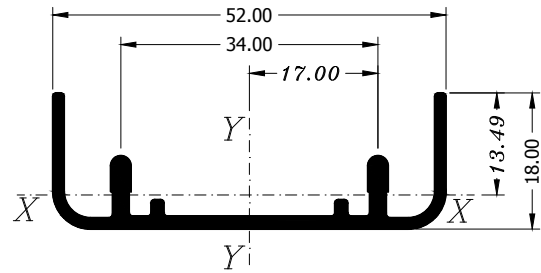


3 052 5251

0.394 Kg./ml.

$I_x = 0.25 \text{ Cm}^4$

$I_y = 5.17 \text{ Cm}^4$

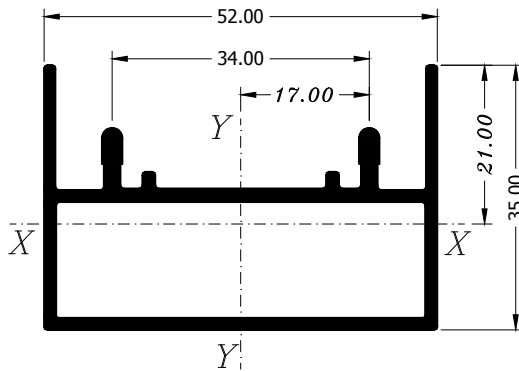


3 052 5261

0.433 Kg./ml.

$I_x = 0.36 \text{ Cm}^4$

$I_y = 5.55 \text{ Cm}^4$

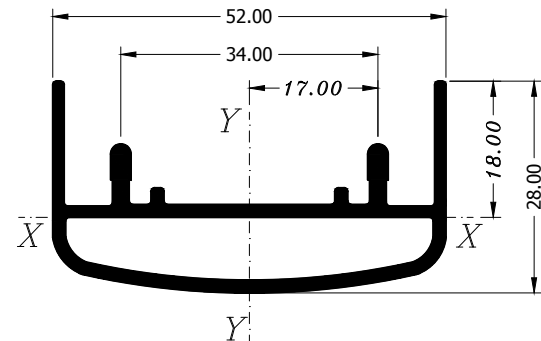


3 052 5253

0.747 Kg./ml.

$I_x = 2.69 \text{ Cm}^4$

$I_y = 10.09 \text{ Cm}^4$

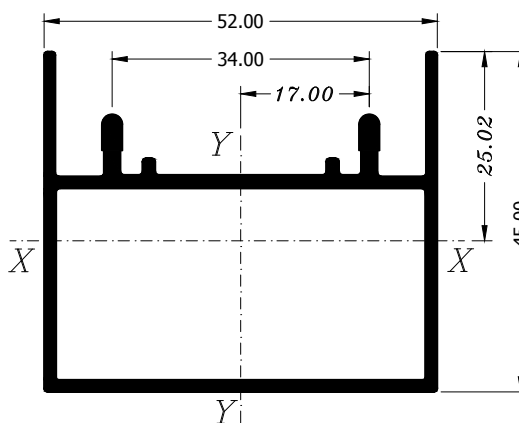


3 052 5352

0.696 Kg./ml.

$I_x = 1.20 \text{ Cm}^4$

$I_y = 8.49 \text{ Cm}^4$

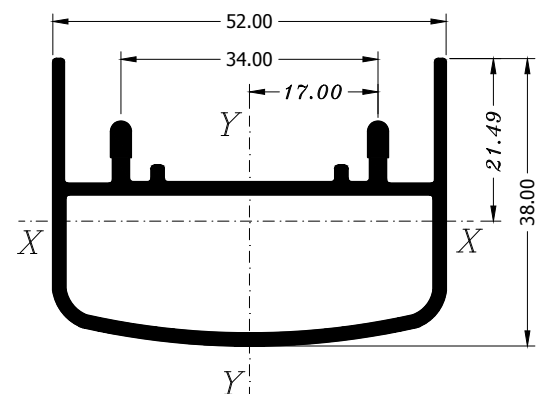


3 052 5254

0.820 Kg./ml.

$I_x = 5.75 \text{ Cm}^4$

$I_y = 11.89 \text{ Cm}^4$

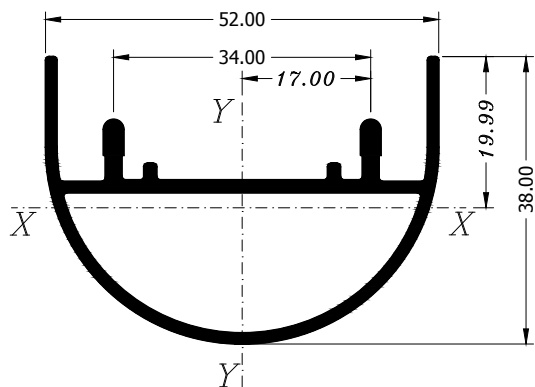
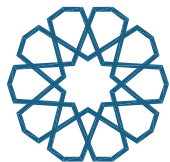


3 052 5353

0.780 Kg./ml.

$I_x = 3.18 \text{ Cm}^4$

$I_y = 10.40 \text{ Cm}^4$

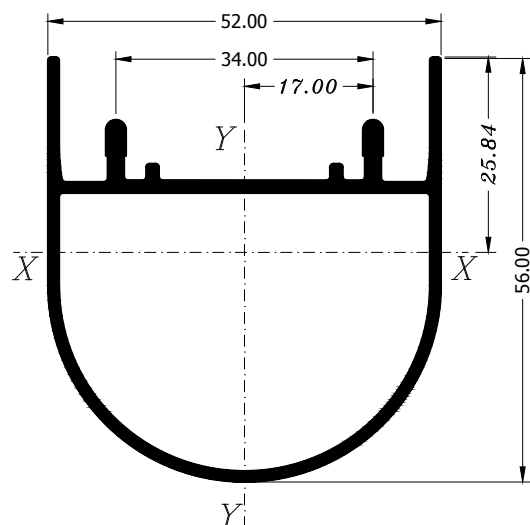


3 052 5363

0.721 Kg./ml.

$I_x = 2.48 \text{ Cm}^4$

$I_y = 8.48 \text{ Cm}^4$

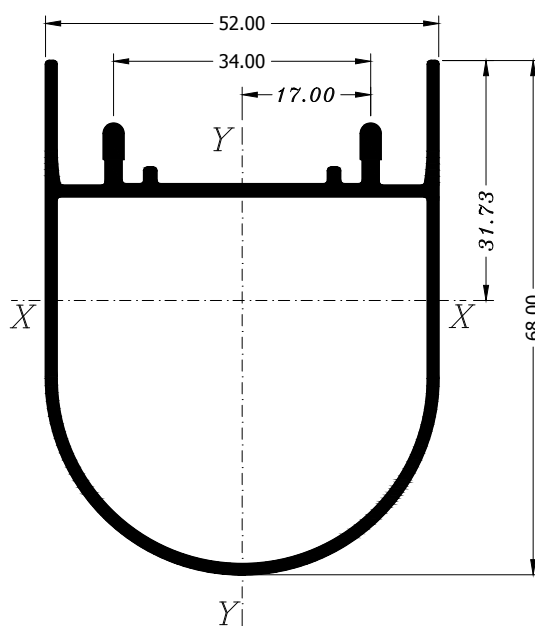


3 052 5365

0.815 Kg./ml.

$I_x = 7.81 \text{ Cm}^4$

$I_y = 11.29 \text{ Cm}^4$

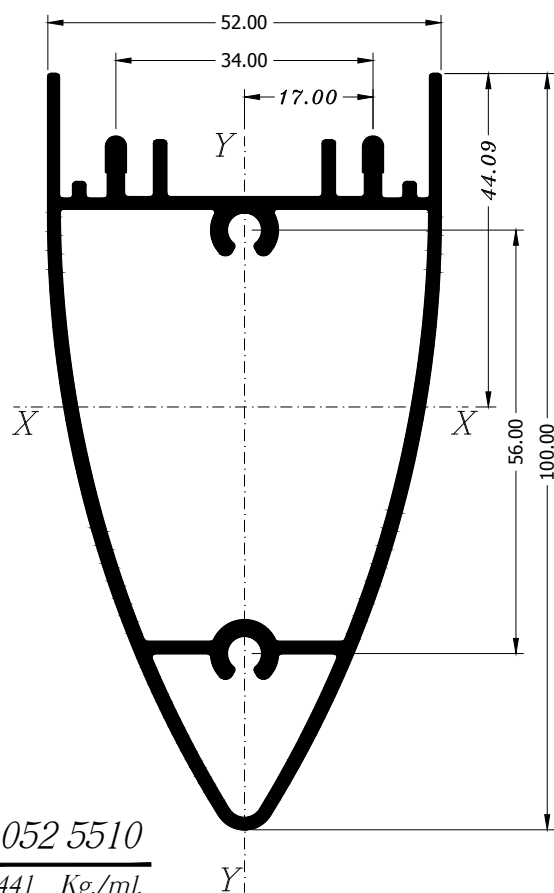


3 052 5366

0.900 Kg./ml.

$I_x = 15.16 \text{ Cm}^4$

$I_y = 14.32 \text{ Cm}^4$

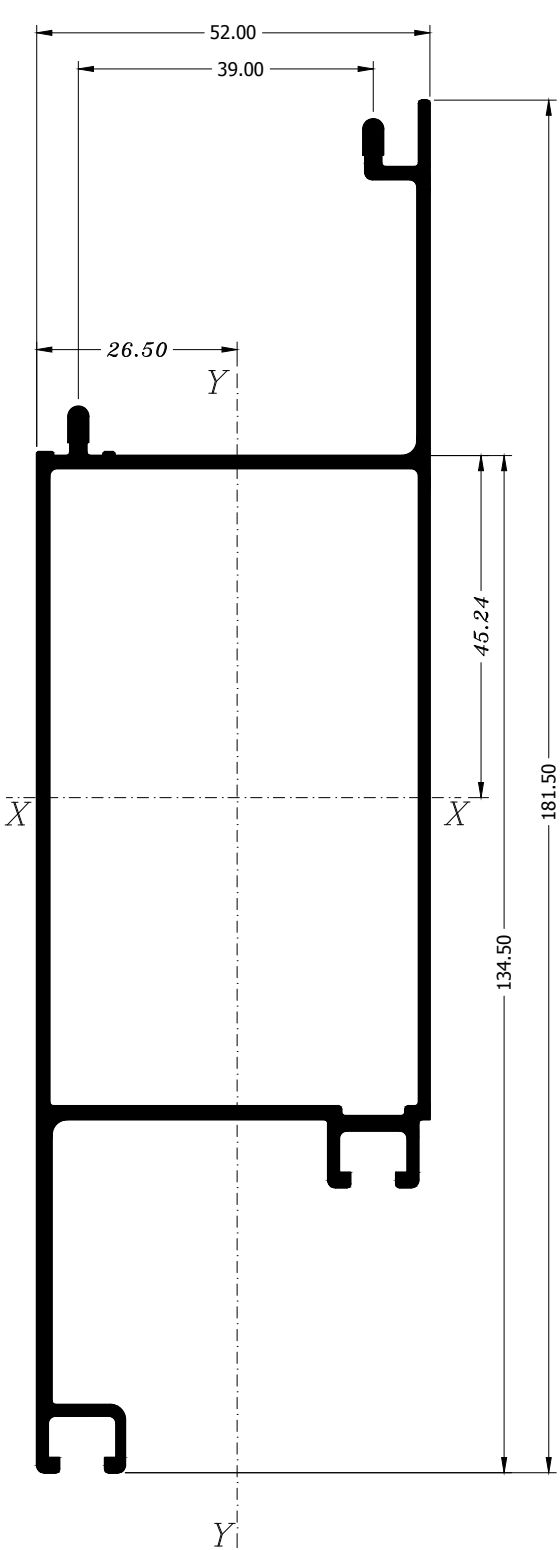
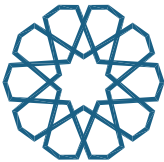


3 052 5510

1.441 Kg./ml.

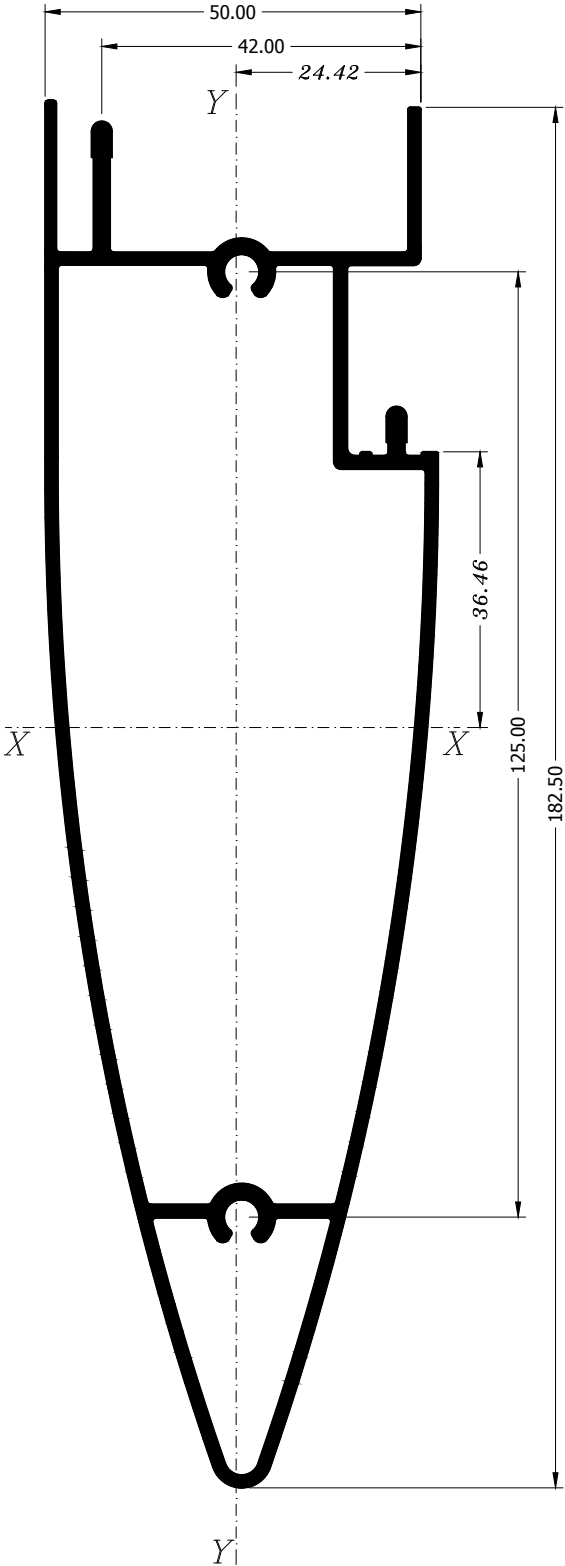
$I_x = 46.56 \text{ Cm}^4$

$I_y = 15.57 \text{ Cm}^4$



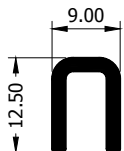
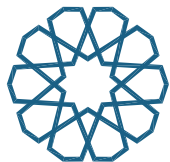
3 052 5914

1.750 Kg./ml.
 $I_x = 155.37 \text{ Cm}^4$
 $I_y = 32.32 \text{ Cm}^4$

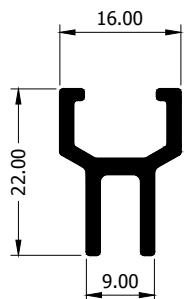


3 052 5520

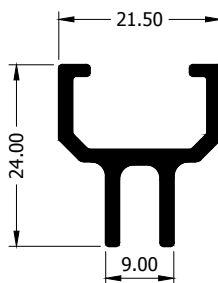
2.150 Kg./ml.
 $I_x = 247.00 \text{ Cm}^4$
 $I_y = 25.81 \text{ Cm}^4$



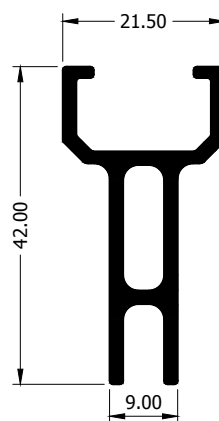
3 052 6000
0.116 Kg./ml.



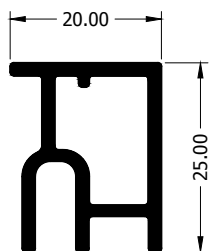
3 052 6001
0.251 Kg./ml.



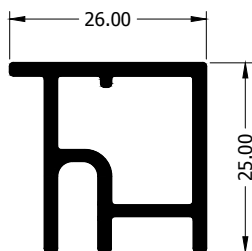
3 052 6002
0.300 Kg./ml.



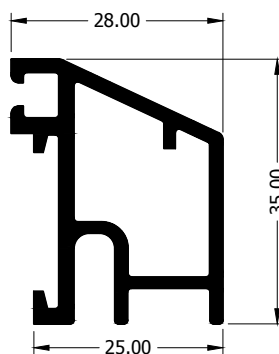
3 052 6004
0.485 Kg./ml.



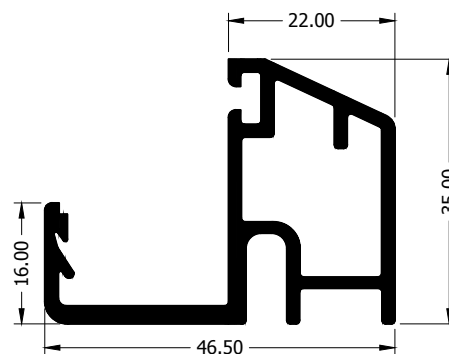
3 052 6012
0.377 Kg./ml.



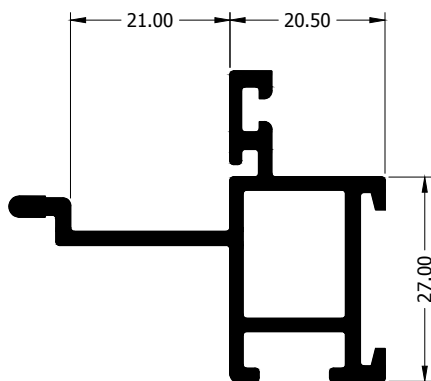
3 052 6013
0.421 Kg./ml.



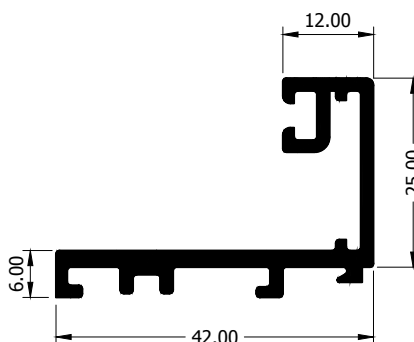
3 052 6023
0.563 Kg./ml.



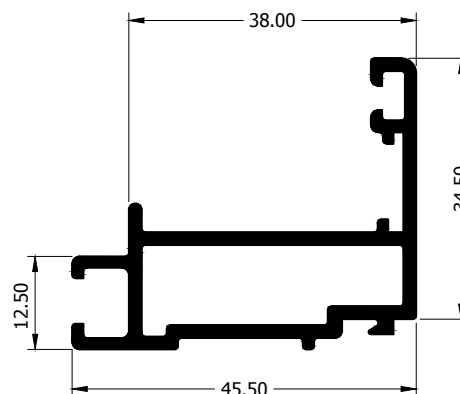
3 052 6042
0.767 Kg./ml.



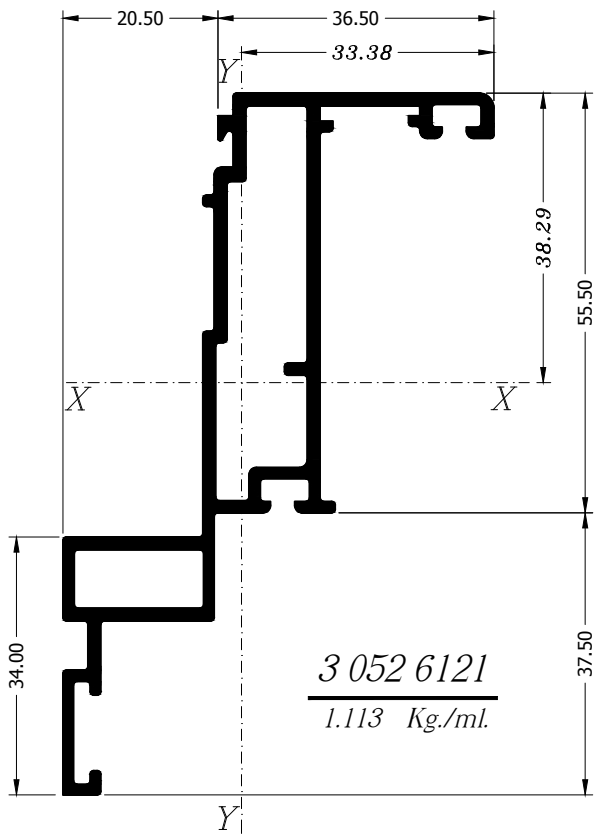
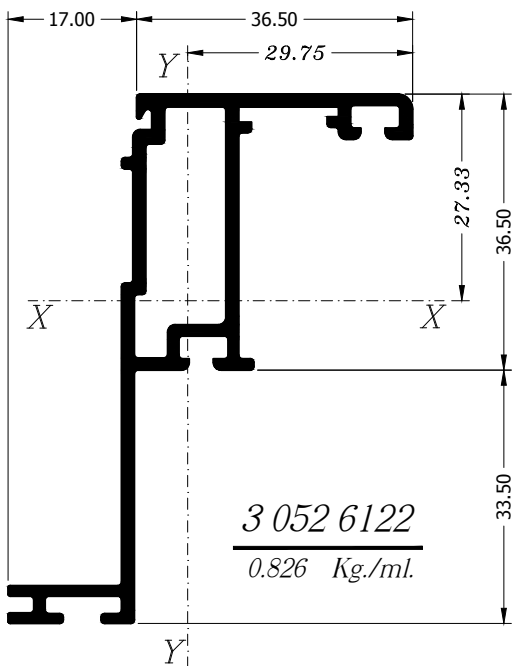
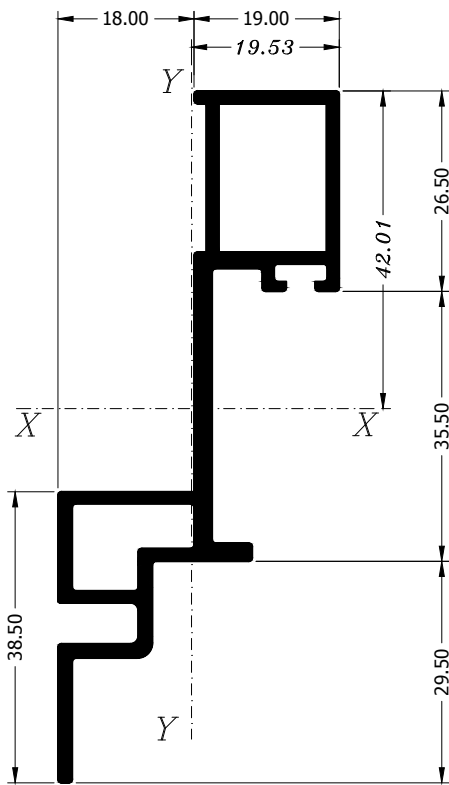
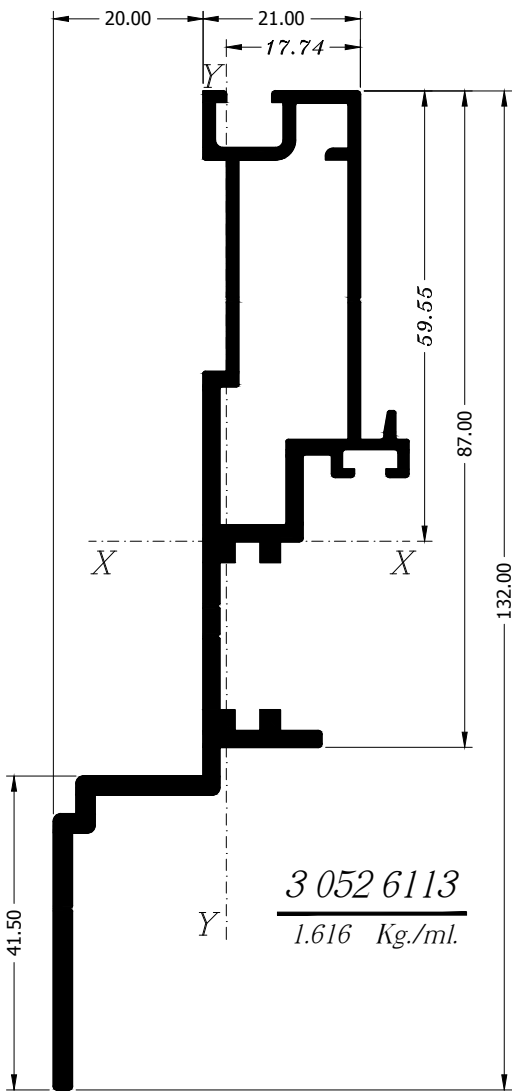
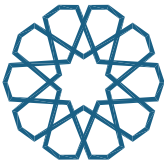
3 052 6026
0.663 Kg./ml.

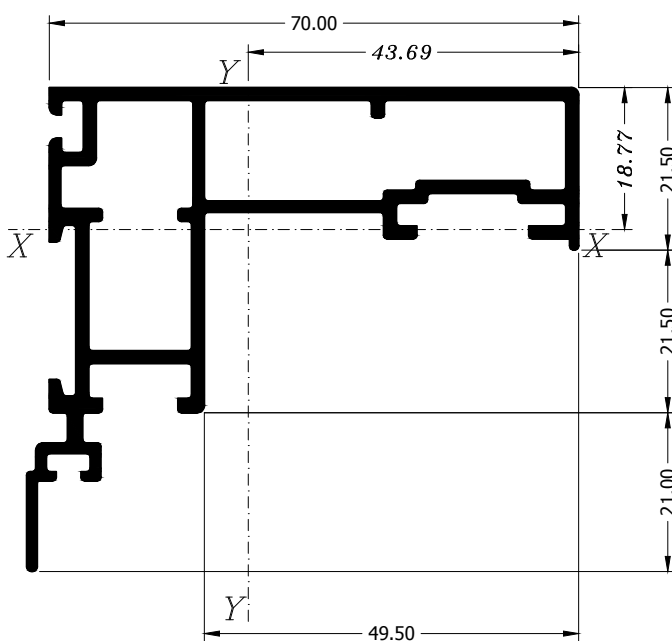
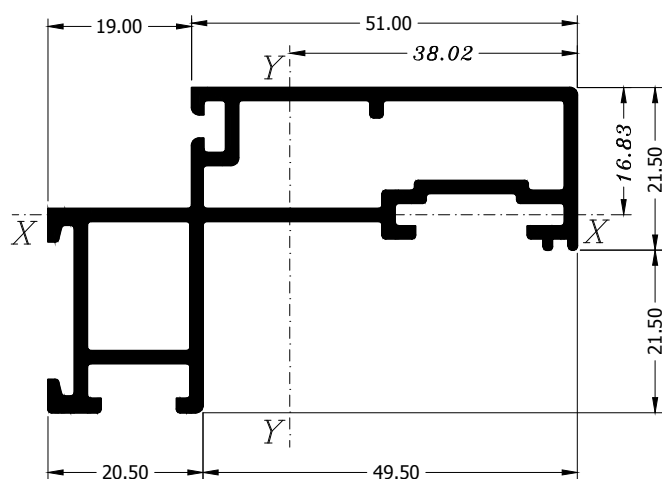
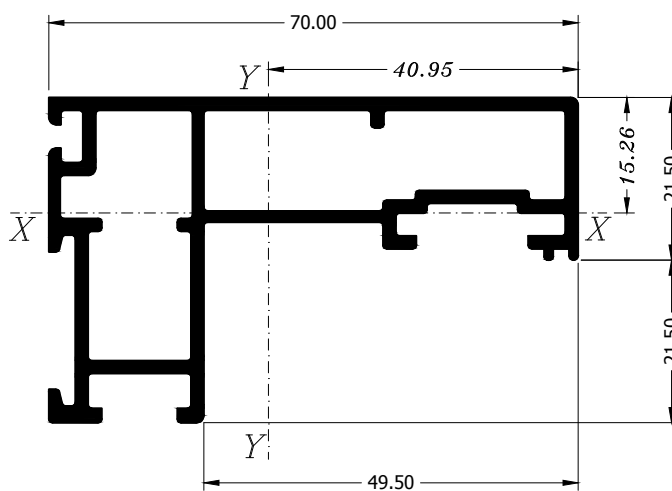
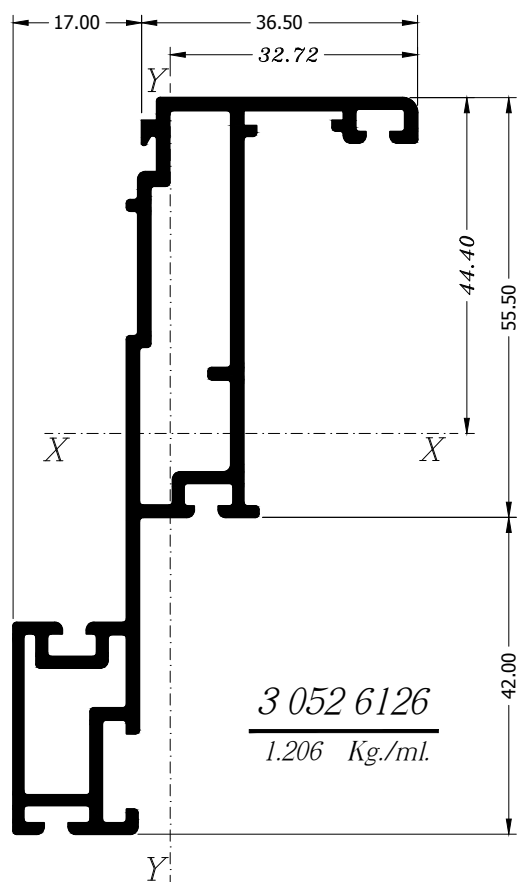
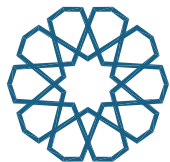


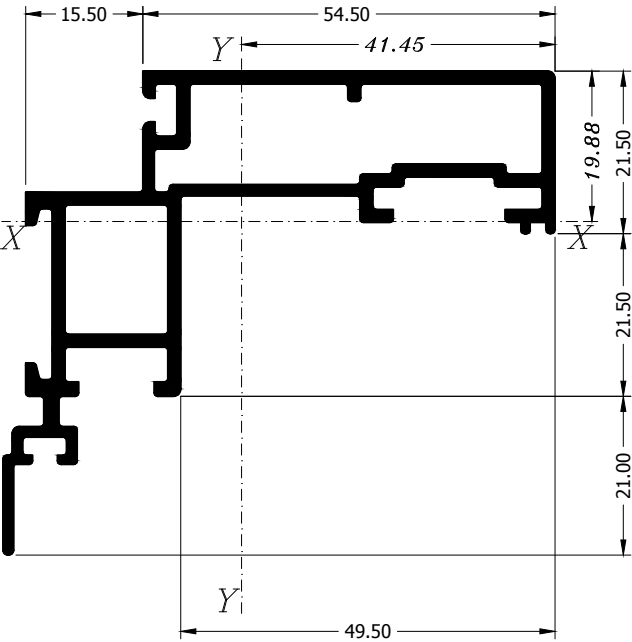
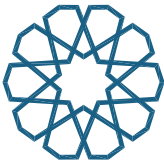
3 052 6101
0.535 Kg./ml.



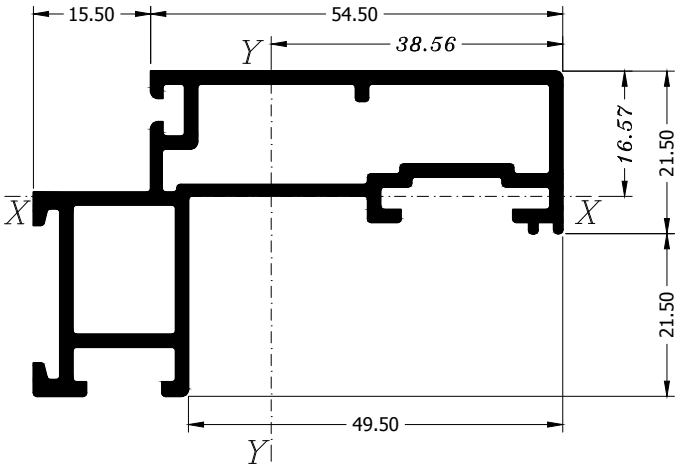
3 052 6111
0.656 Kg./ml.



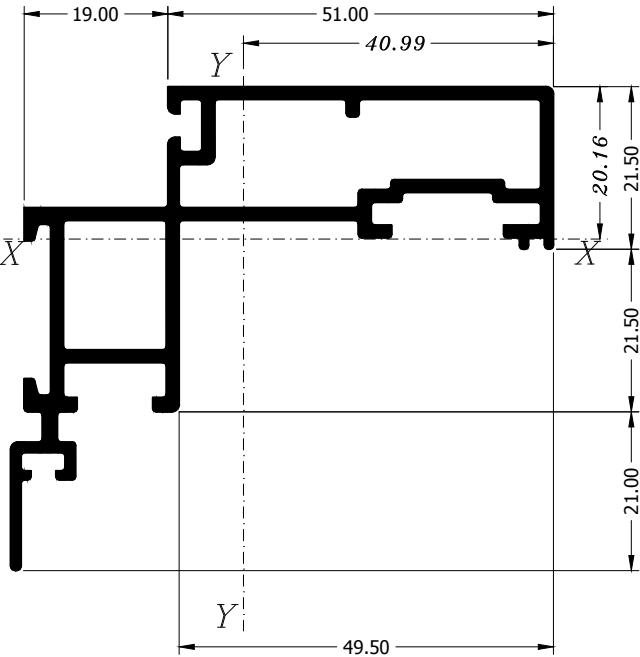




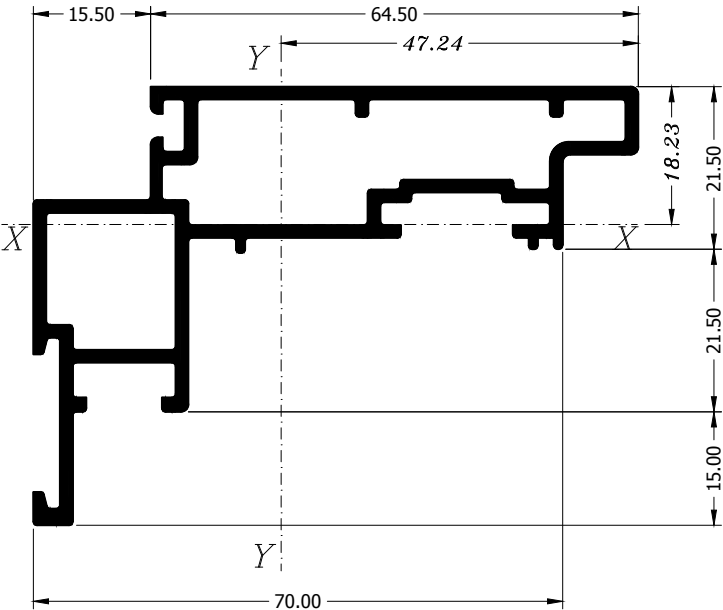
3 052 6265
1.162 Kg./ml.



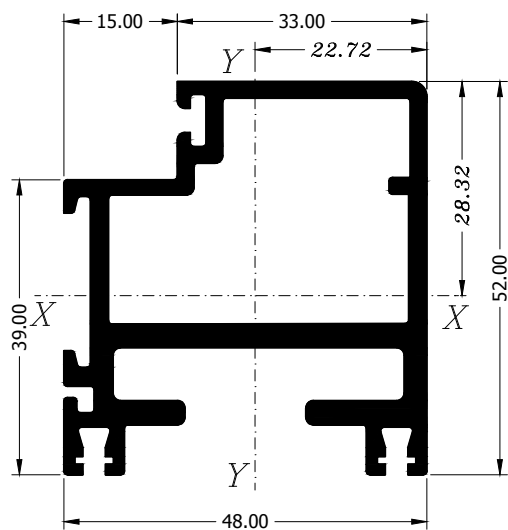
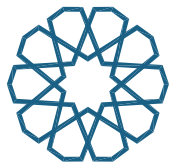
3 052 6266
1.050 Kg./ml.



3 052 6267
1.149 Kg./ml.

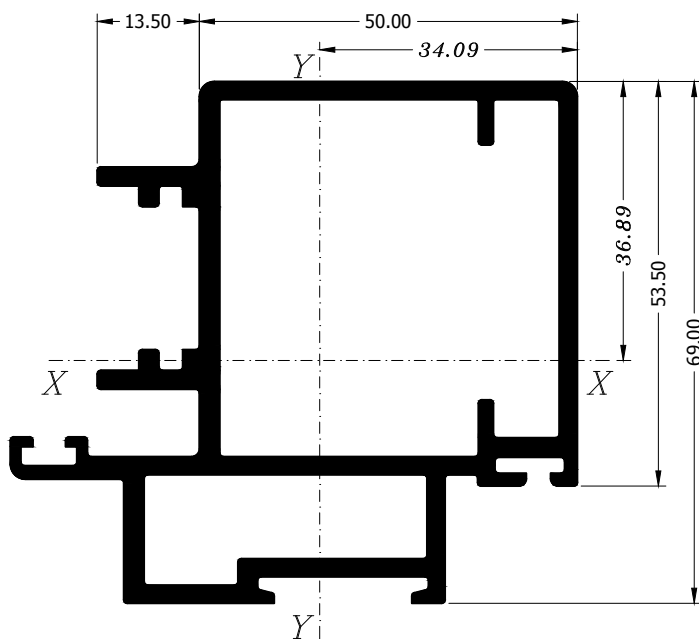


3 052 6286
1.222 Kg./ml.



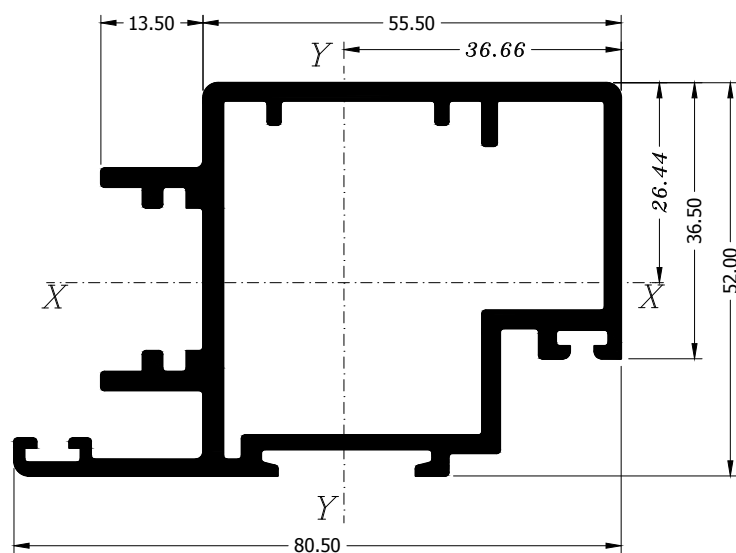
3 052 6295

1.537 Kg./ml.



3 052 6296

2.125 Kg./ml.

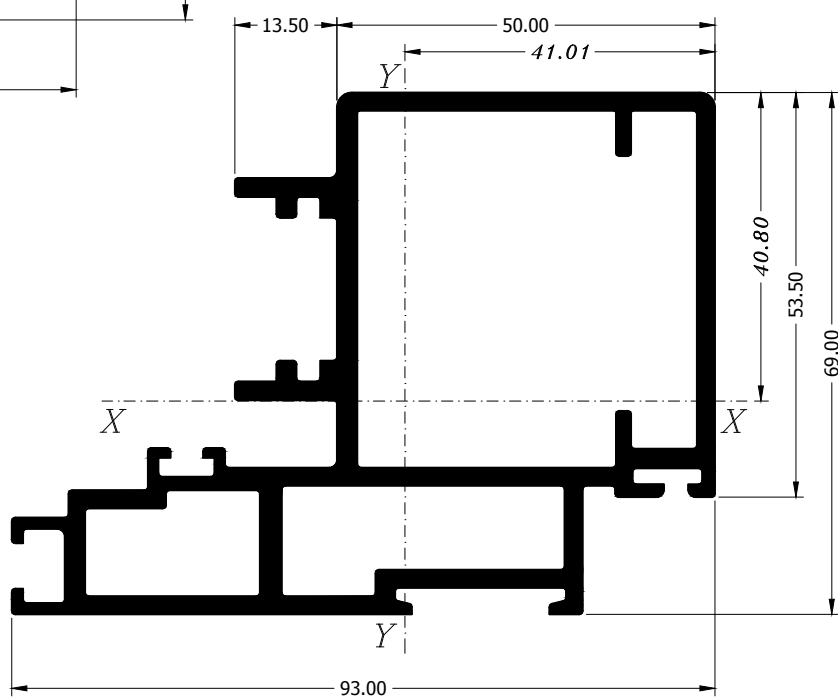


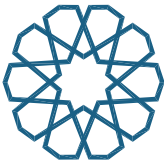
3 052 6298

1.745 Kg./ml.

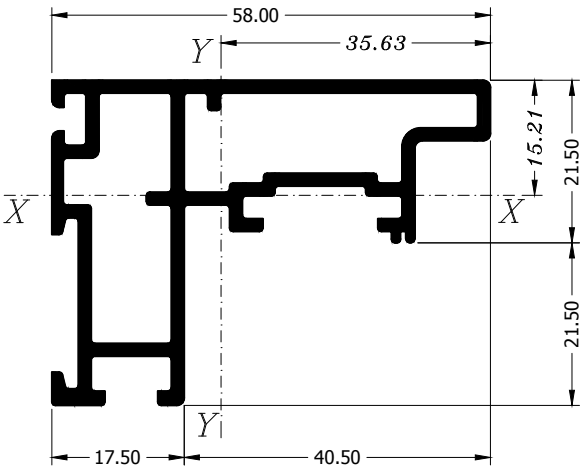
3 052 6299

2.505 Kg./ml.

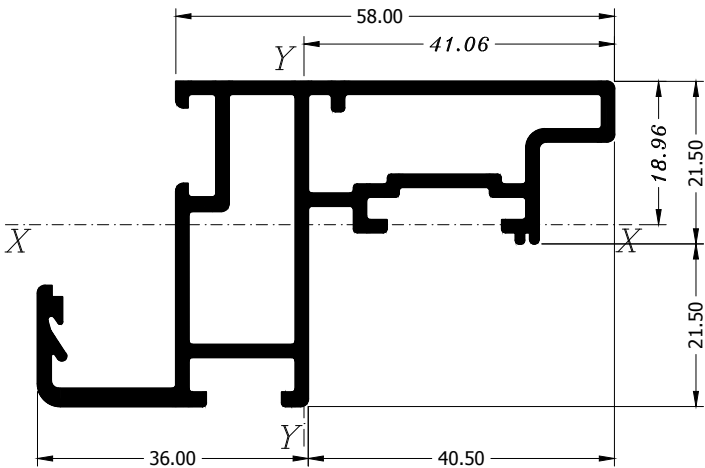




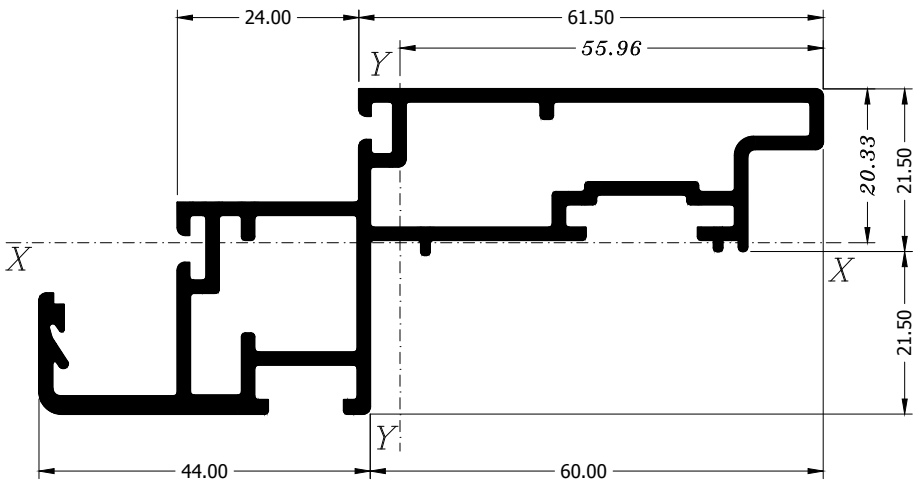
3 052 6313
1.025 Kg./ml.

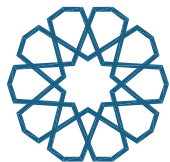


3 052 6333
1.186 Kg./ml.



3 052 6346
1.459 Kg./ml.



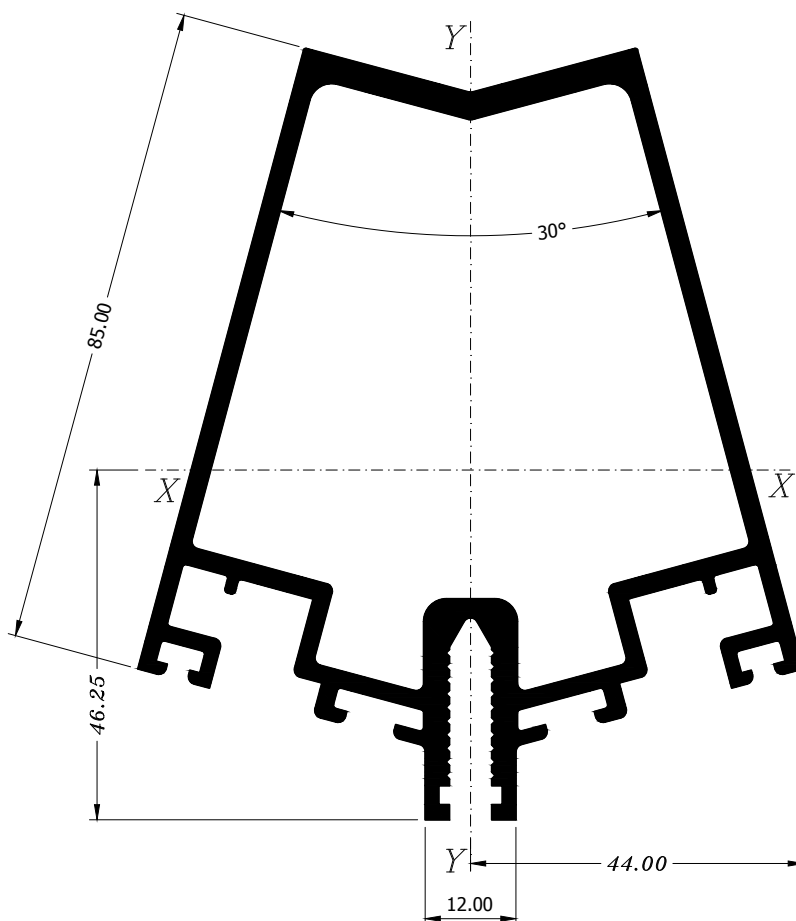
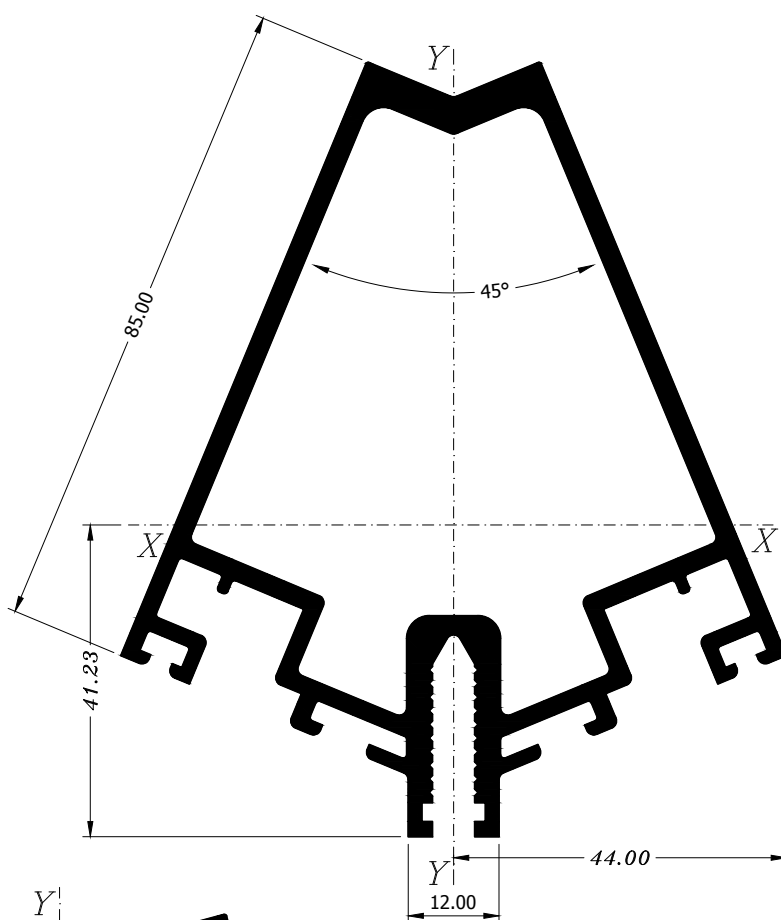


3 052 7123

2.602 Kg./ml.

$I_x = 89.60 \text{ Cm}^4$

$I_y = 47.69 \text{ Cm}^4$

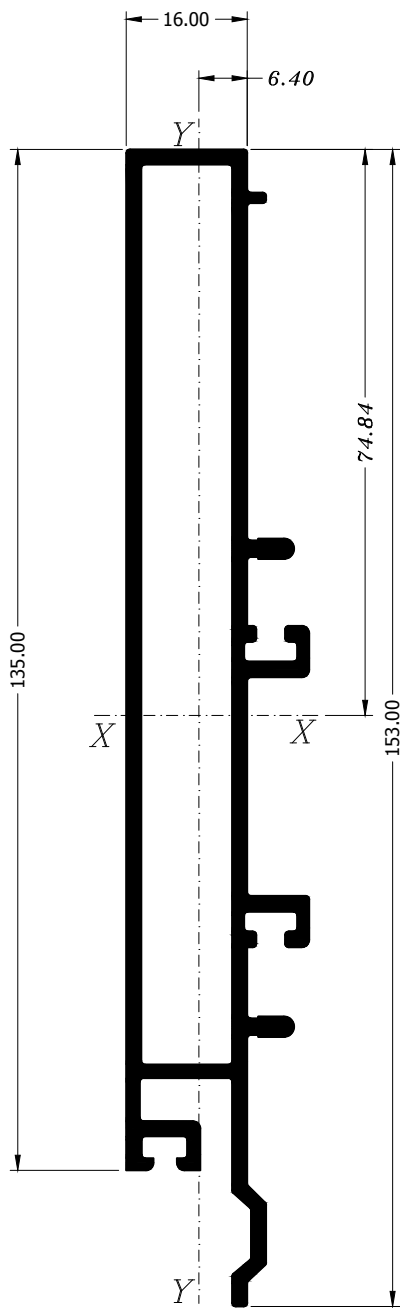
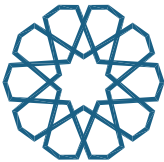


3 052 7133

2.529 Kg./ml.

$I_x = 100.68 \text{ Cm}^4$

$I_y = 56.33 \text{ Cm}^4$

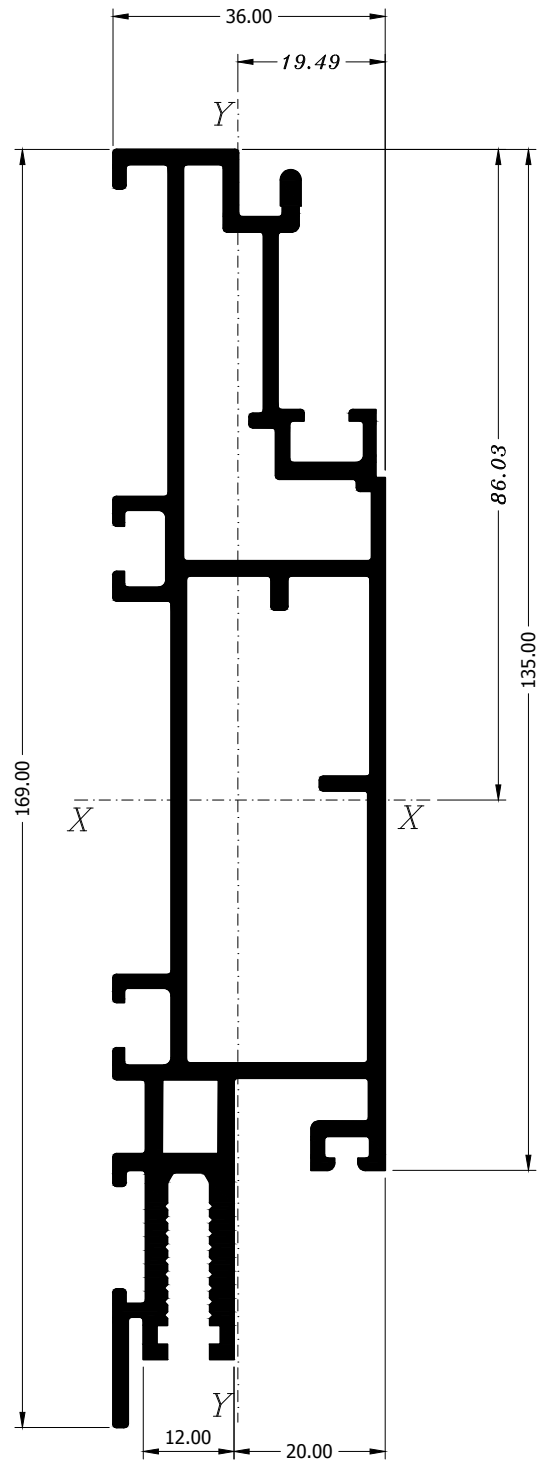


3 052 8013

1.763 Kg./ml.

$I_x = 123.00 \text{ Cm}^4$

$I_y = 3.55 \text{ Cm}^4$

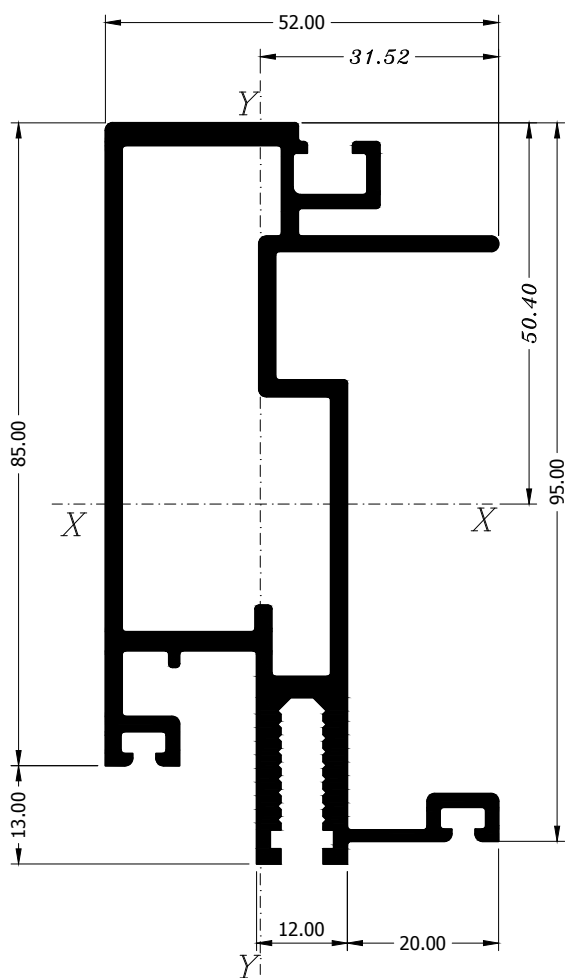
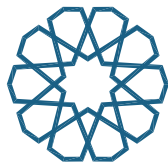


3 052 8213

2.696 Kg./ml.

$I_x = 240.49 \text{ Cm}^4$

$I_y = 13.14 \text{ Cm}^4$

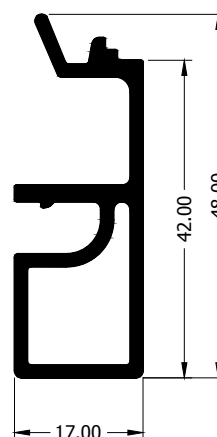


3 052 8208

2.103 Kg./ml.

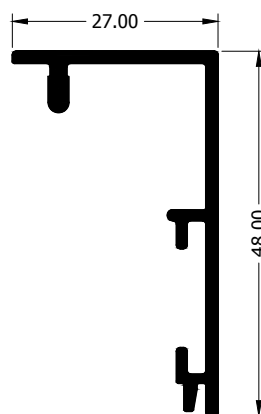
$I_x = 105.35 \text{ Cm}^4$

$I_y = 15.95 \text{ Cm}^4$



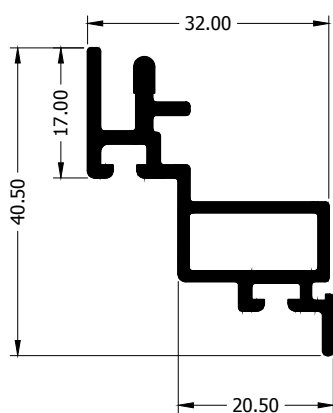
3 052 9164

0.545 Kg./ml.



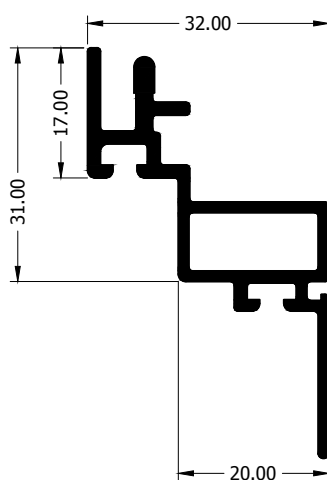
3 052 9441

0.384 Kg./ml.



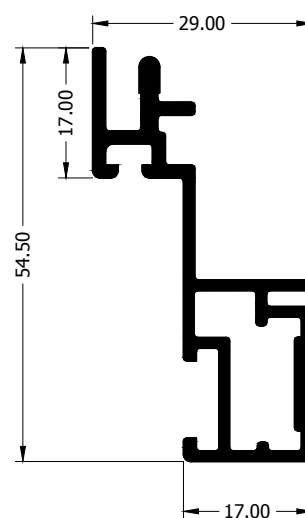
3 052 9465

0.489 Kg./ml.



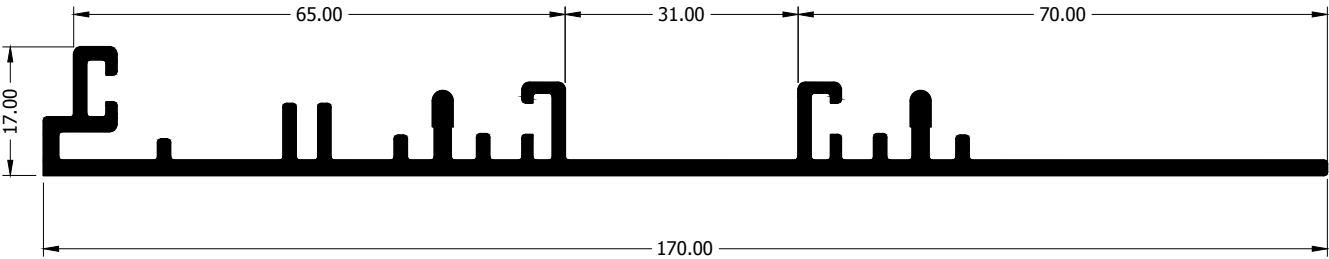
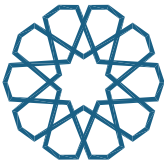
3 052 9466

0.547 Kg./ml.

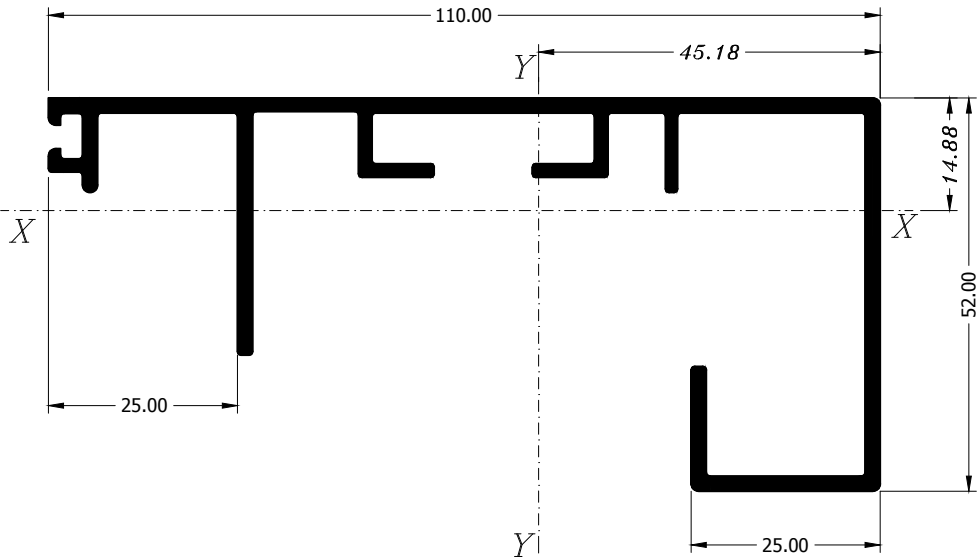


3 052 9467

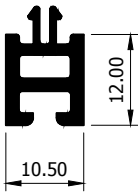
0.587 Kg./ml.



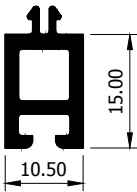
3 052 9231
1.303 Kg./ml.



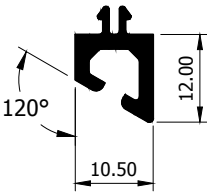
3 052 9232
1.361 Kg./ml.
 $I_x = 64.67 \text{ Cm}^4$
 $I_y = 15.63 \text{ Cm}^4$



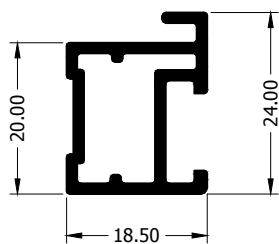
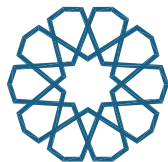
3 052 9611
0.189 Kg./ml.



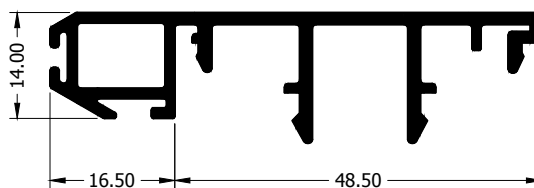
3 052 9612
0.208 Kg./ml.



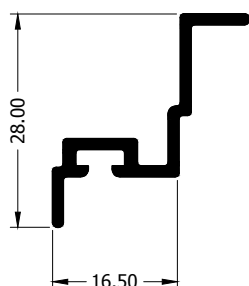
3 052 9623
0.149 Kg./ml.



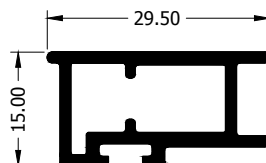
3 052 9613
0.312 Kg./ml.



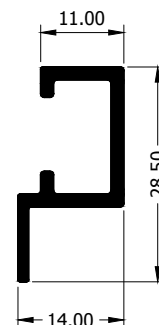
3 052 9496
0.594 Kg./ml.



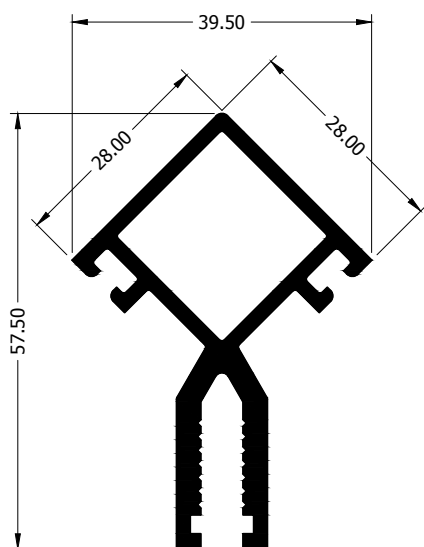
3 052 9495
0.204 Kg./ml.



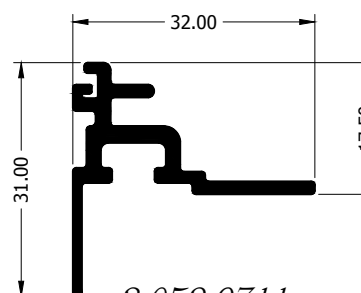
3 052 9497
0.298 Kg./ml.



3 052 9498
0.216 Kg./ml.



3 052 9510
0.899 Kg./ml.



3 052 9711
0.339 Kg./ml.

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