



HINDALCO
EXTRUSIONS

EXPERTISE IS OUR STRENGTH

BUILDING & CONSTRUCTION
RENUKOOT

Printed Jan. 2018

Major Applications



Casement Windows



Sliding Windows



Doors



Curtain Walls



Expanded Grills



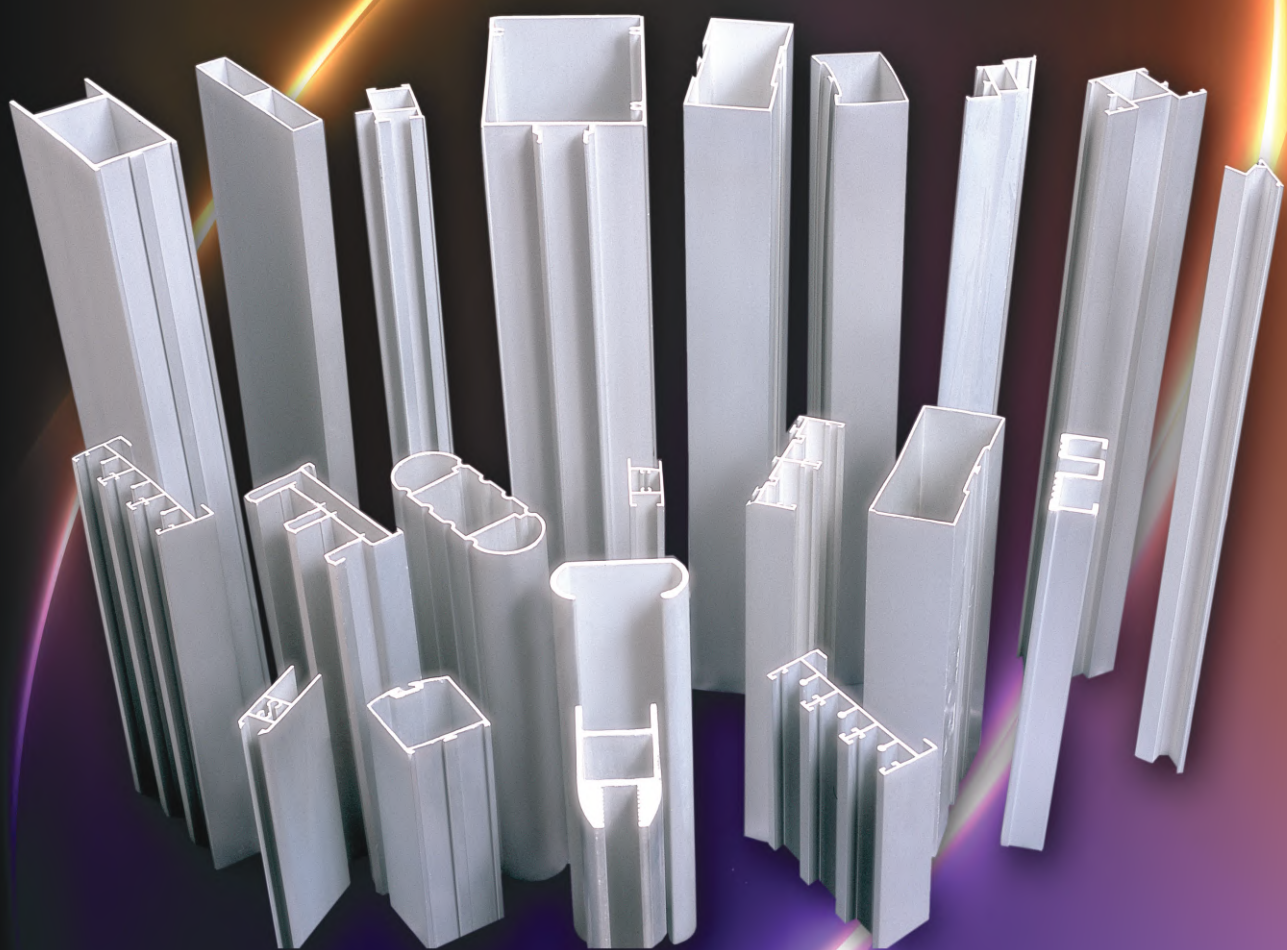
Louvres



Exhibition Displays



Rolling Shutters





VISION

To be a premium metals major, global in size and reach, excelling in everything we do, and creating value for our stakeholders.

MISSION

To relentlessly pursue the creation of superior shareholder value, by exceeding customer expectation profitably, unleashing employee potential, while being a responsible corporate citizen adhering to our values.

VALUES

Integrity: Honesty in every action

Commitment: Deliver on the promise

Passion: Energized action

Seamlessness: Boundaryless in letter and spirit

Speed: One step ahead always



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HINDALCO - An Overview

Hindalco Industries Limited, a USD 18 billion flagship company of the Aditya Birla Group, is a leading producer of aluminium and copper. Hindalco is present across the value chain of Aluminium & Copper. It has global footprint spanning across 13 countries in 5 continents

Aluminium

- Amongst top 5 aluminium majors worldwide.
- World's largest aluminium rolling company.
- Integrated operations - from mines to alumina to metal to value added products
 - ✦ Ingots & redraw rods (wire rods)
 - ✦ Flat Rolled products
 - ✦ Extrusions
 - ✦ Foils

Copper

- World's largest single-location copper smelting capacity.
- Copper mines in Australia.

Hindalco is a leader in Aluminium Extrusions industry in India with two manufacturing facilities. Both the plants are equipped with state of the art equipment, having well established manufacturing processes and quality systems honed over five decades.

Manufacturing Facilities

- ✦ Renukoot, U. P. (North India)
- ✦ Alupuram, Kerala (South India)
- Capacity 60,000 MT per annum
- Expertise in customised alloys including hard alloys
- Catering to wide range of application segments such as Architectural, Electrical, Industrial, Transport, Defence and Consumer Durable.
- Extrusions manufactured from in-house virgin metal
- Quality Certification
 - ✦ ISO 9001-2008
 - ✦ ISO 14001-2004
 - ✦ OHSAS 18001-2007

Press details

Renukoot, U.P.	Alupuram, Kerala
1250 UST, 6"	1250 UST, 6"
1375 UST, 6"	3300 UST, 9"
1800 UST, 8"	
2750 UST, 8"	
2240 UST, 9"	
2400 UST, 9"	
5500 UST, 11.5" / 13.5"	
Conform Machine	
<ul style="list-style-type: none"> • Pressure range : 1250 UST to 5500 UST • Container range : 6" to 13.5" 	

This Catalogue covers the Architectural sections from the range manufactured in the Alupuram plant of Hindalco - India's first Extrusions plant started in the year 1955.

Hindalco Architecturals offer superior appearance, resistance to weathering, easy fabrication and high strength to weight ratio. Also they are versatile, durable and have aesthetic/decorative potential offering unique over other material. Hence Hindalco Architecturals are preferred choice of the architects, designers and builders.



Why Hindalco Architecturals ?

- ✓ Manufactured from high quality billets made from in-house virgin metal.
- ✓ Better control on impurities and superior surface finish lead to excellent anodising.
- ✓ Well-established manufacturing process and heat treatment practices honed over 5 decades of experience.
- ✓ Traceability of material right from metal stage.
- ✓ Comprehensive testing facilities.
- ✓ Available in wide range of shapes and sizes.
- ✓ Hollow sections up to 425mm CCD.
- ✓ Excellent corrosion resistance.
- ✓ Tightest Dimensional Tolerances improve quality of fabrication and minimise rejection.
- ✓ Enables superior design, exacting quality standards, strong, functional, aesthetic & easy to maintain Architectural Systems.
- ✓ Suitable for wide range of finishes to match the cecors. Anodised, Powder coated, Polyvinylidene Fluoride (PVDF) coated, Wood coated etc.

Major Applications

- | | |
|---|-----------------------------------|
| ■ Windows (Sliding & Casement) | ■ Hand Railings/Stairs/Balusters |
| ■ Doors | ■ Wall Facings |
| ■ Partitions/Shop Fronts | ■ Expanded Grills |
| ■ Hardwares (Tower Bolts/Aldrops/Hinges/Door Handles) | ■ Venetian Blinds & Curtain Rails |
| ■ Curtain Wallings/Structural Glazing | ■ Aluminium Form Work |
| ■ False Ceiling | ■ Roofing Structural |
| ■ Northlight Glazing | ■ Mosquito Net |
| ■ Exhibition Display | ■ Louvers & Sun Screens |
| | ■ Rolling Shutters |



Specifications

Chemical Composition

Alloy (ISS)	Equivalent alloy (AA)		Copper		Magnesium		Silicon		Iron	Manganese		Others (Total)	Remarks	
	Old	New	U.S.A.	Min.	Max.	Min.	Max.	Min.	Max.	Max	Min.	Max.		Max
1 C	19000	1100	-	0.10	-	-	-	0.50	0.60	-	0.10	0.10	Aluminium 99.0% Min	
		1200	-	0.05	-	-	-	Si+Fe 1.0	-	0.05	0.10	Aluminium 99.0% Min		
1 B	19500	1050	-	0.05	-	-	-	0.25	0.40	-	0.05	0.10	Aluminium 99.5% Min	
		-	19600	1060	-	0.05	-	-	0.25	0.35	-	0.03	0.10	Aluminium 99.6% Min
		-	19700	1070	-	0.03	-	-	0.20	0.25	-	0.03	0.10	Aluminium 99.7% Min
H 20	65032	-	0.15	0.40	0.70	1.20	0.40	0.80	0.70	0.20	0.80	0.40	**Cr =0.15-0.35 %	
		-	-	6060	-	0.10	0.35	0.60	0.30	0.60	0.1 to 0.3	-	0.10	0.40
		-	-	6061	0.15	0.40	0.80	1.20	0.40	0.80	0.70	-	0.15	0.40
H 9	63400	6063	-	0.10	0.40	0.90	0.30	0.70	0.60	-	0.30	0.40	-	
		6082	-	0.10	0.60	1.20	0.70	1.30	0.50	0.40	1.00	0.30	Chromium upto 0.25	
91E	63401	6101	-	0.05	0.40	0.90	0.30	0.70	0.50	-	0.03	0.10	-	
H 30	64430	6351	-	0.10	0.40	1.20	0.60	1.30	0.60	0.40	1.00	0.30	-	

* Titanium and/or other grain refining elements

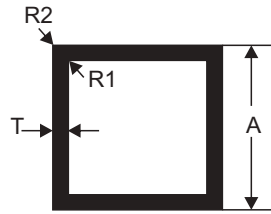
** Either Mn or Cr shall be present

WROUGHT ALLOYS : MECHANICAL PROPERTIES

Non- Heat Treatable Alloys					
Alloy AA Old (ISS) New (ISS)	Temper	Ultimate Tensile Strength Kg/mm ²		0.2% Proof Stress Kg/mm ²	Elongation On 50 mm GL
		Min.	Max.		
1100[1C][19000]	O	-	11.0	-	25
1050[1B][19500]	O	-	10.0	-	25
1060[19600]	O	-	9.5	-	25
1070[19700]	O	-	9.5	-	25
Heat Treatable Alloys					
6060	T4[W]	13.3	-	9.2	20
	T6 [WP]	24.9	-	21.9	12
6063 [H9] [63400]	T4[W]	14.0	-	8.0	14
	T6 [WP]	19.0	-	15.5	7
6061 [H20] [65032]	M or O	-	15.0	-	16
	T4[W]	19.0	-	11.5	14
	T6 [WP]	28.5	-	24.0	7
6351[H30] [64430]	M or O	-	15	-	16
	T4[W]	19.0	-	12.0	14
	T6 [WP]	31.5	-	27.5	7
6101[91E] [63401]	T4[W]	14.0	-	8.0	12
	T6 [WP]	20.5	-	17.0	10

Properties indicated herein are typical properties and are given for information only. However properties of all the profiles in specific alloy shall be as per I.S. Specification.

Square Tube



Sec	A	T	R1	R2	Kg/m
3855	10.00	1.20			0.117
1819	12.70	1.10			0.139
534	12.70	1.25			0.154
168	12.70	1.60			0.192
3242	15.00	2.0			0.281
6811	18.00	2.00	4.00	2.00	0.461
8441	18.42	1.02	0.79		0.190
515	19.05	1.25			0.240
3422	19.05	1.40			0.267
8715	19.05	1.60			0.302
10646	19.05	3.18			0.546
1820	19.10	1.10			0.214
169	19.10	1.60			0.303
7153	20.00	1.70		0.50	0.337
2698	20.00	2.00			0.390
562	20.00	2.50		2.50	0.460
1876	24.00	1.10			0.272
935	24.00	1.50			0.365
642	24.50	1.80			0.440
8747	24.77	1.27		0.79	0.322
6361	25.00	1.80		0.50	0.452
6782	25.00	2.00	1.00	1.00	0.498
2985	25.00	2.00			0.498
5704	25.00	3.00			0.715
580	25.40	1.20			0.315
593	25.40	1.60			0.410
6155	25.40	1.80	0.50	2.50	0.446
513	25.40	2.00			0.505
170	25.40	2.40			0.596
1939	25.40	2.50	0.50	3.00	0.598
5427	25.40	2.55		3.00	0.611
6253	25.40	3.00		0.80	0.726
2464	25.40	3.18			0.765
3328	25.40	3.25			0.780
8507	25.40	3.18	0.91	3.96	0.731
8541	25.40	3.05			0.780
8361	25.40	3.05	0.91	3.96	0.704
8678	25.40	3.18			0.764
8717	25.40	1.27		0.50	0.332
10005	25.40	3.25	3.18	6.43	0.708
10491	25.40	3.25			0.780

Sec	A	T	R1	R2	Kg/m
10905	25.40	1.57		0.90	0.405
11201	25.40	1.57		0.90	0.405
6362	30.00	1.80		0.50	0.549
2634	30.00	2.00			0.607
3041	30.00	3.00			0.878
10492	30.00	3.00			0.877
516	31.75	2.00			0.645
7064	31.75	3.25			1.003
7893	31.75	3.18			0.983
8674	31.75	3.05	3.30	6.35	0.888
938	31.75	3.18	0.38	3.18	0.962
8970	31.75	3.18			0.983
171	31.80	2.40			0.760
5785	32.00	1.50	1.00	1.00	0.496
7109	34.00	3.00		3.00	0.987
3248	35.00	2.00			0.710
8402	36.00	2.00			0.823
937	38.00	1.50			0.593
514	38.10	2.00			0.780
172	38.10	2.40			0.928
2465	38.10	3.18			1.203
3323	38.10	3.25			1.227
8299	38.10	3.18	4.87	7.92	1.118
362	38.10	3.05	4.88	7.92	1.078
395	38.10	4.80	1.50	4.80	1.688
667	38.10	3.04			1.155
8671	38.10	4.75			1.717
8673	38.10	4.78	0.40	4.78	1.672
8676	38.10	3.05	4.95	8.00	1.066
10836	38.10	3.18			1.202
3093	40.00	2.00			0.820
3173	40.00	3.00			1.200
3043	40.00	4.00			1.560
7108	41.50	3.00		3.00	1.231
6711	43.50	3.25	3.00	6.00	1.364
5349	44.45	2.00			0.919
5457	44.50	2.80		0.50	1.265
7142	44.50	3.00	2.00	3.00	1.338
5300	45.00	2.00			0.932
8474	45.00	3.00			1.365
3183	50.00	2.00			1.040



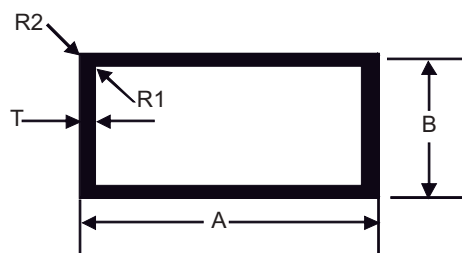
Square Tube

Sec	A	T	R1	R2	Kg/m
7107	50.00	3.00		3.00	1.508
2986	50.00	3.00			1.528
1389	50.00	4.00		6.00	1.910
3044	50.00	4.00			1.994
10497	50.00	3.00			1.528
517	50.80	2.40			1.250
173	50.80	3.10			1.600
3325	50.80	3.25		0.50	1.674
6015	50.80	6.35		0.50	3.058
8505	50.80	6.35	6.35	6.35	3.060
8627	50.80	6.35		0.50	3.059
8300	50.80	3.18		6.47	1.538
363	50.80	4.78	6.35	6.35	2.398
366	50.80	6.35	3.18	9.53	2.878
396	50.80	3.18		0.50	1.648
397	50.80	4.80	6.40	10.20	2.258
665	50.80	4.74	1.57	6.35	2.288
675	50.80	3.05			1.577
8816	50.80	4.74			2.366
10105	50.80	2.36			1.239
10498	50.80	3.25			1.675
10647	50.80	3.18			1.641
11190	50.80	3.18	0.41	0.41	1.639
11202	50.80	3.18	0.50	0.50	1.641

Sec	A	T	R1	R2	Kg/m
11208	50.80	2.36			1.239
6318	55.00	1.80			1.037
3174	60.00	3.00			1.850
3184	60.00	4.00			2.428
2174	61.00	5.50	0.50	2.50	3.290
3807	62.00	4.50	0.50	0.50	2.805
5991	63.50	4.76			3.030
8821	63.50	3.04			1.992
7169	66.00	3.00		2.00	2.039
3185	70.00	4.00			2.860
10839	70.00	5.75			4.002
5972	76.20	3.18		0.80	2.512
8575	76.20	6.35	3.18	9.52	4.621
8940	76.20	6.35			4.807
8942	76.20	4.75	1.60	6.35	3.591
10003	76.20	3.18	0.79	3.18	2.495
3175	80.00	3.00			2.500
4649	80.00	4.00			3.295
4136	80.00	7.00			5.539
6562	80.00	8.00		1.00	6.242
6229	100.00	3.00			3.154
3871	100.00	4.00	5.00	9.00	4.032
3897	101.60	6.35	1.00	1.00	6.560
8679	101.60	6.35	6.35	6.35	6.556



Rectangular Tube



Sec	A	B	T	R1	R2	Kg/m
5515	20.00	9.50	2.00			0.276
3243	20.00	10.00	2.00		0.50	0.281
3244	20.00	15.00	2.00			0.336
6416	25.00	15.00	3.00	1.00	3.00	0.534
3245	25.00	20.00	2.00		0.50	0.444
11109	25.00	40.00	1.20	0.50		0.407
519	25.40	19.05	1.25			0.281
174	25.40	19.10	1.60			0.358
2949	30.00	15.00	2.00			0.444
2699	30.00	20.00	2.00			0.498

Sec	A	B	T	R1	R2	Kg/m
3246	30.00	25.00	2.00			0.550
1592	31.00	20.00	2.00			0.500
993	31.00	20.00	2.50			0.630
1200	31.00	20.00	2.50		3.00	0.607
5786	32.00	25.00	1.50	1.00	1.00	0.439
6950	33.00	20.00	1.20		2.50	0.319
3247	35.00	20.00	2.00			0.550
860	37.00	24.00	1.50			0.460
643	37.00	24.00	2.00			0.615
518	38.10	25.40	2.00			0.644

Rectangular Tube



Sec	A	B	T	R1	R2	Kg/m
175	38.10	25.40	2.40			0.763
6206	38.10	25.40	3.25		0.40	1.003
10493	38.10	25.40	3.25			1.003
5458	40.00	15.00	1.50			0.422
3249	40.00	15.00	2.00			0.550
3644	40.00	20.00	1.50	0.50	0.50	0.463
7152	40.00	20.00	1.80		0.50	0.550
3176	40.00	20.00	2.00			0.606
3250	40.00	20.00	3.00			0.870
5784	40.00	25.00	1.50	1.00	1.00	0.504
3251	40.00	25.00	2.00			0.660
4361	40.00	30.00	2.00			0.715
3252	40.00	30.00	3.00			1.040
2909	40.00	30.00	4.00			1.344
6183	40.20	20.20	2.50			0.750
3774	41.00	20.00	3.00	1.00	0.50	0.897
5788	45.00	20.70	2.00			0.668
5787	45.00	25.00	2.00			0.714
4016	46.00	20.00	3.00	1.00	0.50	0.977
7082	48.00	24.00	1.00			0.379
644	49.30	24.00	2.00			0.740
5908	49.50	44.50	3.50	2.50	6.00	1.583
6951	49.80	20.00	1.20		2.50	0.428
3253	50.00	20.00	2.00			0.714
6636	50.00	20.00	1.60			0.579
3254	50.00	20.00	4.00			1.344
6182	50.00	25.00	2.00			0.769
3177	50.00	30.00	2.00			0.823
2700	50.00	30.00	3.00			1.203
3272	50.00	40.00	2.50			1.150
3255	50.00	40.00	4.00			1.777
7618	50.00	25.00	1.50			0.597
649	50.00	15.00	3.00			0.961
10486	50.00	25.00	3.00			1.121
10495	50.00	30.00	3.00			1.203
936	50.80	25.00	1.50			0.591
7081	50.80	25.40	1.20			0.480
512	50.80	25.40	2.00			0.780
176	50.80	25.40	2.40			0.928
5890	50.80	25.40	3.25			1.227
3324	50.80	25.40	3.25			1.451
8657	50.80	25.40	3.18	3.18	6.35	1.133
8661	50.80	25.40	3.04			1.155
10007	50.80	25.40	3.18			1.203
10148	50.80	25.40	3.18			1.201
10494	50.80	25.40	3.25			1.227

Sec	A	B	T	R1	R2	Kg/m
10496	50.80	38.10	3.25			1.451
11210	50.80	25.40	3.18			1.201
3256	60.00	20.00	2.00			0.823
7259	60.00	25.00	2.00	3.00		0.859
6355	60.00	25.40	2.00	0.50	2.50	0.868
2987	60.00	30.00	2.00			0.932
3257	60.00	30.00	3.00		0.50	1.365
7106	60.00	30.00	3.00		3.00	1.345
2988	60.00	40.00	2.00			1.040
3178	60.00	40.00	2.50			1.280
3258	60.00	40.00	3.00			1.528
3045	60.00	40.00	4.00			1.994
4186	60.00	40.00	5.00		0.60	2.439
8189	60.00	25.00	1.50		3.00	0.651
8469	60.00	50.00	3.00			1.690
2311	62.30	51.00	2.50	0.50	2.00	1.462
7092	63.00	37.00	1.20	1.00		0.637
7091	63.00	37.00	1.50			0.789
1152	63.00	37.00	1.60			0.836
6510	63.00	38.00	3.00			1.544
7203	63.50	24.00	1.10			0.508
621	63.50	38.10	2.00			1.053
731	63.50	38.10	2.40			1.210
177	63.50	38.10	3.10			1.600
601	63.50	50.80	2.40			1.420
10563	63.50	38.10	3.25		0.80	1.674
4470	70.00	14.00	2.50			1.070
6247	70.00	20.00	2.00			0.932
8009	72.00	25.00	1.50		3.00	0.758
242	72.00	25.00	1.40		5.50	0.682
928	75.00	45.00	1.50			0.951
7250	75.00	50.00	5.00		1.00	3.114
8854	75.00	19.00	3.00			1.430
8973	75.00	73.00	3.00			2.308
8974	75.00	56.00	3.00			2.032
1457	76.00	25.00	2.00			1.040
2759	76.00	25.00	3.10			1.592
6125	76.20	25.40	3.25		0.80	1.674
8021	76.20	25.40	3.00			1.554
8664	76.20	25.40	3.04			1.573
8677	76.20	38.10	3.05			1.787
8680	76.20	50.80	3.18			2.076
8807	76.20	50.80	6.35	0.40	4.78	3.881
8817	76.20	50.80	3.04			1.992
8925	76.20	38.10	3.25		0.80	1.897
8873	76.20	50.80	3.18	1.60	4.78	2.032

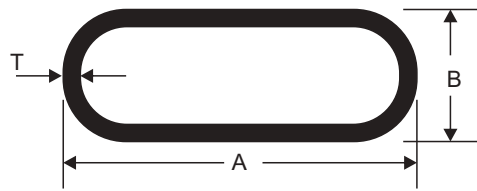


Rectangular Tube

Sec	A	B	T	R1	R2	Kg/m
10499	76.20	25.40	3.25			1.675
10500	76.20	50.80	3.25			2.122
3259	80.00	20.00	2.00		0.50	1.040
7267	80.00	30.00	2.00		0.50	1.148
3260	80.00	30.00	3.00			1.690
1695	80.00	37.00	1.60			0.980
3645	80.00	40.00	2.00	0.50	0.50	1.257
3179	80.00	40.00	3.00			1.850
3096	80.00	40.00	4.00			2.428
3261	80.00	50.00	4.00			2.644
8472	80.00	45.00	3.00			1.934
1096	82.00	37.00	2.00			1.240
178	82.50	38.10	3.20			2.000
732	82.60	38.10	2.40			1.507
3901	90.00	12.00	1.75		0.50	0.934
10441	90.00	12.00	3.00			1.560
10778	90.00	30.00	2.00		0.50	1.257
10779	90.00	15.00	1.50		0.50	0.829
8705	95.00	25.00	1.50			0.926
7202	100.00	24.00	1.50			0.983
2009	100.00	25.00	1.70			1.116
6737	100.00	25.00	2.00			1.311
3646	100.00	40.00	1.70	0.50	0.50	1.260
1763	100.00	40.00	1.85			1.350
2929	100.00	45.00	1.50			1.154
7372	100.00	40.00	1.50			1.113
4301	100.00	50.00	3.50			2.710
4686	100.00	50.00	4.00			3.078
6986	100.00	80.00	4.70	1.00		4.344
8291	100.00	20.00	1.40			0.890
8470	100.00	40.00	4.00			2.861

Sec	A	B	T	R1	R2	Kg/m
8473	100.00	45.00	3.00			2.260
2929	100.00	45.00	1.50			1.153
8703	100.00	25.00	1.50			0.991
10189	100.00	50.00	2.00			1.582
1663	101.60	44.45	2.00			1.530
1229	101.60	44.45	2.60			2.030
800	101.60	44.45	3.18			2.400
2647	101.60	50.80	4.80	2.00	1.00	3.720
7875	101.60	25.40	2.90			1.918
663	101.60	50.80	3.04			2.410
8811	101.60	50.80	6.35			4.807
8814	101.60	50.80	3.17			2.509
8820	101.60	50.80	4.74			3.671
10001	101.60	50.80	6.35	3.18	6.35	4.738
10501	101.60	50.80	3.25			2.569
7306	107.95	31.75	6.37		1.00	4.381
7891	112.00	25.00	2.00			1.440
4394	114.50	57.50	2.00			1.821
10823	120.00	53.00	3.00		6.00	2.716
2008	124.00	48.75	4.00	1.00	2.00	3.578
2365	125.00	25.00	2.00			1.583
2364	125.00	37.00	2.00		0.50	1.712
8190	127.00	44.45	3.18			2.850
7892	135.00	25.00	2.50			2.100
7167	145.00	55.00	3.10			3.256
3941	150.00	25.00	2.00			1.853
7266	150.00	30.00	2.50		0.50	2.371
8852	150.00	44.45	3.18			3.241
11191	152.40	50.80	3.18		0.79	3.389
8471	160.00	40.00	4.00			4.162
8967	225.00	60.00	4.00			6.005

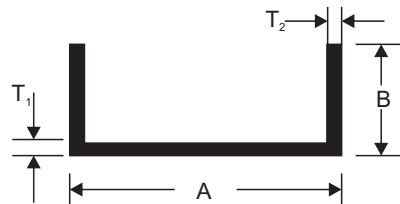
Oval Tube



Sec	A	B	T	Kg/m
4462	10.70	7.50	2.00	0.128
1870	16.64	11.20	3.00	0.290
159	17.50	10.70	1.60	0.188
310	19.30	12.40	2.84	0.337
161	20.30	12.30	1.60	0.214
162	22.30	13.10	1.60	0.235
163	24.20	14.30	1.60	0.257
1938	25.00	19.00	3.25	0.539
164	26.20	15.10	1.60	0.280
1292	26.60	17.10	3.91	0.640
165	28.60	16.50	1.60	0.307

Sec	A	B	T	Kg/m
311	29.70	19.09	4.37	0.799
166	31.40	17.90	1.60	0.339
8775	31.50	15.00	2.40	0.472
8385	32.00	16.00	5.00	0.934
1293	32.40	20.80	4.74	0.946
167	34.95	19.50	1.60	0.381
536	36.21	23.50	5.38	1.161
1120	41.00	31.00	15.50	2.886
7133	45.00	22.50	3.00	0.864
11114	65.00	37.00	18.50	5.721
7517	80.00	25.50	3.00	1.461

Channel



Sec	A	B	T1	T2	R1	R2	Kg/m
635	8.50	9.00	1.25	1.25			0.080
2272	11.00	12.00	2.40	2.40			0.195
1530	11.30	12.70	1.60	1.60			0.145
4550	12.00	9.00	1.80	1.80		0.90	0.127
2217	12.00	10.00	2.00	2.00			0.151
484	13.49	11.11	2.38	2.38			0.199
912	15.00	12.70	1.25	1.25			0.127
7460	16.00	7.50	3.00	2.50			0.190
10810	17.30	20.00	2.00	2.00			0.288
911	19.00	12.00	1.25	1.25			0.137
1094	21.50	12.00	1.25	1.25			0.145
8716	22.25	14.29	1.60	1.60			0.206
3727	23.50	11.80	2.20	1.90			0.238
1604	24.00	12.00	2.64	2.64			0.300
906	24.00	12.00	1.60	1.60			0.193
905	24.00	24.00	1.45	1.45			0.271

Sec	A	B	T1	T2	R1	R2	Kg/m
913	24.70	12.70	1.25	1.25			0.161
10809	24.70	20.00	2.00	2.00			0.328
1628	25.00	19.00	3.00	3.00			0.460
6306	25.00	50.00	1.80	1.80		0.90	0.590
5638	25.30	13.00	1.65	1.65			0.214
118	25.40	12.70	3.20	3.20			0.385
11185	25.40	19.50	3.18	3.18			0.490
2887	30.00	15.00	3.00	3.00			0.439
3068	30.00	20.00	2.00	2.00			0.357
2449	30.00	20.00	3.00	3.00			0.518
4433	30.00	25.00	4.00	4.00			0.780
2523	31.00	12.00	2.75	2.75			0.368
1017	31.50	12.50	3.18	3.18			0.420
693	31.75	25.40	3.18	3.18	4.57		0.650
304	31.75	25.40	4.78	3.18			0.772
10341	35.00	55.00	10.00	9.00	5.00	1.50	3.164



Channel

Sec	A	B	T1	T2	R1	R2	Kg/m
8051	35.06	34.92	3.18	3.18		0.51	0.850
7894	35.30	38.10	1.65	1.65			0.480
120	38.10	19.10	3.20	3.20			0.604
700	38.10	25.40	3.18	3.18			0.700
6248	40.00	10.00	2.00	2.00			0.303
7070	40.00	10.00	3.25	3.25	1.00	1.00	0.469
7071	40.00	16.00	3.25	3.25	1.00	1.00	0.575
2984	40.00	20.00	2.00	2.00			0.411
5752	40.00	20.00	2.50	2.50			0.505
2499	40.00	25.00	4.00	4.00			0.880
7321	40.00	25.00	3.00	3.00	0.50		0.682
3069	40.00	30.00	3.00	3.00			0.764
10703	41.00	55.50	10.00	9.00	11.50	1.50	3.476
8409	42.89	30.00	2.00	1.57			0.469
4311	44.45	25.40	4.40	2.90	0.50	0.50	0.859
302	44.45	25.40	4.78	3.18			0.937
8231	44.45	25.40	4.78	3.18			0.930
123	44.50	25.40	3.20	3.20	4.60		0.795
5517	45.00	25.00	3.00	3.00			0.722
6876	50.00	12.00	3.00	3.00			0.551
4252	50.00	14.00	8.00	5.38	0.50	1.00	1.256
4749	50.00	25.00	3.00	3.00			0.763
3225	50.00	30.00	3.00	3.00			0.845
3884	50.00	42.00	10.00	7.00			2.570
8383	50.00	25.00	2.00	2.00			0.519
3740	50.80	25.40	3.18	3.18	0.50	0.50	0.820
121	50.80	25.40	4.80	4.80			1.195
10104	50.80	25.40	2.36	2.36			0.619
3226	60.00	40.00	3.00	3.00			1.080
4360	60.00	40.00	4.00	4.00			1.430
3072	60.00	40.00	5.00	5.00			1.761
4093	63.00	32.00	6.00	6.00		0.50	1.585
6579	67.00	53.00	2.50	2.50			1.137
2454	72.00	60.00	2.00	2.00			1.010
8088	72.50	75.00	3.00	3.00			1.764
524	75.00	35.00	6.00	6.00	3.00		2.172
3266	75.00	35.00	8.00	8.00	1.50		2.800
2500	75.00	40.00	5.00	5.00			1.963
124	76.20	38.10	4.00	5.60	7.60		1.928
2139	76.20	38.10	6.60	6.60	7.60		2.548
122	76.20	50.80	3.20	3.20			1.490
6202	76.20	50.80	6.35	6.35		0.80	2.839
8306	76.20	38.10	4.77	6.35	7.90	2.00	2.204
8307	76.20	50.80	6.35	7.92	4.77		3.245
8662	76.23	8.10	6.35	6.35	7.92		2.476
8981	76.23	8.10	3.30	5.08	6.35		1.686

Sec	A	B	T1	T2	R1	R2	Kg/m
10309	76.20	35.81	4.32	4.32	6.86	2.54	2.158
10310	76.20	38.05	6.55	4.32	6.86	2.54	2.619
3769	77.00	52.00	9.00	6.00	1.00		3.280
3073	80.00	40.00	4.00	4.00			1.647
4134	80.00	40.00	5.00	6.00			2.033
125	88.90	38.10	6.40	7.90	7.60		2.930
4687	90.00	25.00	1.60	1.60	3.00	1.60	0.601
3765	99.20	49.60	1.60	1.60	1.00	0.50	0.870
3228	100.00	40.00	3.00	3.00		0.50	1.413
2209	100.00	50.00	5.00	5.00			2.565
4790	100.00	63.00	6.00	6.00			3.479
5481	100.00	63.00	6.00	6.00	5.00		3.507
4791	101.60	41.83	6.68	6.68			3.111
6293	101.60	50.80	6.00	6.00			3.108
5874	101.60	50.80	6.35	6.35		1.00	3.275
5990	101.60	50.80	6.35	6.35			3.277
126	101.60	50.80	6.40	7.90	9.14	1.00	3.757
6032	101.60	76.20	9.53	9.53		0.80	6.065
8308	101.60	50.80	6.35	7.92		9.52	3.760
8637	101.60	44.45	6.35	7.14	9.53		3.326
8741	101.60	50.80	4.78	6.35	9.53		3.004
10564	101.60	76.20	9.35	9.35		1.00	6.061
11001	101.60	50.80	5.84	3.81	5.00	3.00	2.554
2128	101.72	50.80	6.35	8.00	9.00		3.771
7658	101.72	50.80	6.35	8.00	9.00	2.00	3.760
4944	102.00	50.00	8.00	8.00	9.00	2.00	4.112
1918	102.00	50.00	8.00	8.00	9.00		4.110
4946	102.00	50.00	12.00	12.00	10.00	1.50	5.897
4575	120.00	38.00	6.00	10.00	10.00	1.00	3.798
2076	120.00	60.00	4.50	4.50	2.00	4.50	2.787
1533	127.00	48.00	8.10	8.10	9.50		4.644
3283	127.00	48.00	12.00	12.00			6.470
8629	127.00	63.50	6.35	9.53	11.10		5.279
10002	127.00	50.80	4.78	7.90	9.53		3.720
8876	127.00	50.80	7.14	8.71	9.53		4.623
10308	127.00	44.45	4.83	4.83	7.37	2.79	3.218
10934	127.00	57.15	6.60	3.81	53.00		3.333
4235	130.00	50.00	7.00	7.00			4.096
1129	140.00	60.00	12.00	12.00		2.00	7.670
2410	150.00	75.00	8.00	8.00			6.130
6990	152.00	64.00	6.30	8.00			5.096
8542	152.00	63.50	6.35	7.92	11.09		5.217
5873	152.40	50.80	6.35	7.93		1.00	4.526
1122	152.40	51.66	8.10	8.10	1.11		5.370
2122	152.40	76.20	6.35	9.52	2.19		6.376
1729	152.40	76.20	12.70	12.70	9.50	0.50	9.720

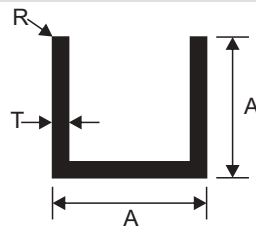
Channel



Sec	A	B	T1	T2	R1	R2	Kg/m
8309	152.40	50.80	7.14	9.52	11.10		5.344
8936	152.40	88.90	9.53	12.70	11.10		9.541
8956	152.40	63.50	6.35	6.35			4.588
10642	152.40	48.77	5.08	5.08	7.62	3.04	4.204
10935	152.40	63.50	7.37	4.32	6.00	3.50	4.385
1919	177.00	76.00	8.00	8.00	11.11		6.904
10936	177.86	9.85	7.37	4.32	6.00	3.50	5.041
1575	178.00	58.40	10.09	10.09			7.508

Sec	A	B	T1	T2	R1	R2	Kg/m
11274	200.00	10.00	0.00	15.00		1.00	15.037
1651	203.00	65.00	11.85	11.85	1.00	1.00	9.930
2714	203.00	90.00	17.70	17.70	17.70		17.046
8957	220.00	100.00	6.00	6.00			6.633
10399	225.00	110.00	20.00	20.00	3.00		21.930
10079	254.00	92.07	13.18	13.18	14.29		14.944
11271	275.00	110.00	10.00	10.00		1.00	12.870
10645	304.80	75.18	7.62	7.11	9.65	4.31	11.023

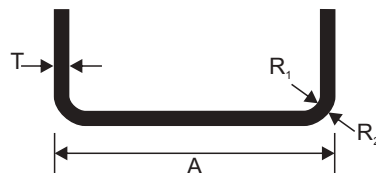
Channels Equal Base and Flange



Sec	A	T	R	Kg/m
2623	6.00	1.50		0.060
1822	9.52	0.85		0.062
1755	9.52	1.00		0.073
343	9.52	1.60		0.109
532	9.52	1.25		0.088
1823	12.70	0.85		0.084
544	12.70	1.25	0.20	0.119
382	12.70	1.59	0.20	0.150
2865	15.00	1.00		0.116
3262	15.00	2.00		0.233
3321	19.05	3.18		0.437
3067	20.00	1.50		0.231
2982	20.00	2.00		0.303

Sec	A	T	R	Kg/m
3263	20.00	3.00		0.439
2983	25.00	2.00		0.384
3322	25.40	3.18		0.601
3083	30.00	3.00		0.682
6133	38.10	2.75	0.40	0.810
3224	40.00	3.00		0.926
2276	40.00	4.00		1.209
2277	40.00	5.00		1.480
3180	50.00	5.00		1.890
10195	50.80	3.17		1.253
8403	63.50	4.76		2.333
2408	100.00	5.00		3.915

Channels Equal Base and Flange with CR

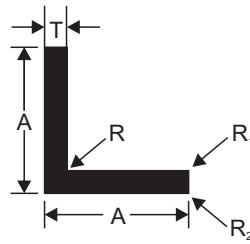


Sec	A	B	T	R1	R2	Kg/m
7819	25.00	20.00	3.00	2.00	2.00	0.474
1937	25.30	25.00	3.00	3.00	6.00	0.576
7952	88.90	28.58	3.00	2.00	5.00	1.113
7944	89.00	8.00	3.00	0.00	2.00	0.799
80201	20.65	12.70	2.35	0.75	3.00	0.900

Sec	A	B	T	R1	R2	Kg/m
11110	127.00	57.15	3.81	7.62	0.79	3.286
7925	136.00	37.00	2.50	0.50	0.50	1.388
11111	152.00	63.50	4.32	7.62	0.79	4.211
11112	177.80	69.85	4.32	7.62	0.79	4.762
64551	25.00	60.00	10.00	10.00	5.00	6.182



Equal Leg Angles



Sec	A	T	R	R1	R2	Kg/m
2271	12.00	0.90				0.056
3531	12.00	1.20				0.074
527	12.70	1.25				0.081
383	12.70	1.59		0.20	0.20	0.102
271	12.70	1.60				0.103
103	12.70	3.20	0.80			0.193
2110	15.00	2.00				0.151
2111	15.00	3.00				0.218
8197	15.00	2.00	0.40			0.151
4616	15.50	1.50				0.119
6446	15.87	3.18		0.40	0.40	0.245
1675	17.40	1.00				0.091
631	18.00	1.20				0.112
2862	19.00	1.10				0.110
2721	19.05	1.00				0.100
526	19.05	1.25				0.124
198	19.05	3.18	0.79			0.301
3316	19.05	3.18				0.300
3231	20.00	3.00				0.300
2132	20.00	4.00				0.388
8198	20.00	1.50	0.40			0.156
191	20.64	1.98				0.216
1674	22.22	1.00				0.117
630	24.00	1.25				0.152
5357	25.00	1.50	2.50	1.50		0.198
1931	25.00	1.50				0.196
4688	25.00	2.00	3.00	2.00		0.261
2690	25.00	2.00				0.260
3746	25.00	2.50	0.50			0.322
3032	25.00	3.00				0.381
6163	25.00	4.00		0.40	0.40	0.498
2863	25.40	1.00				0.134
543	25.40	1.25				0.167
270	25.40	1.60				0.231
104	25.40	3.20	0.80			0.413
101	25.40	3.20				0.412
6205	25.40	6.35		0.80	0.80	0.763
8543	25.40	3.18	3.18			0.415
8547	25.40	3.18				0.409
8714	25.40	1.60				0.213

Sec	A	T	R	R1	R2	Kg/m
10927	25.40	3.18	3.18	2.38		0.409
891	30.00	2.00	1.34			0.313
3527	30.00	1.50				0.237
1339	30.00	2.50				0.388
2633	30.00	3.00				0.463
3234	30.00	5.00				0.745
2555	30.00	6.00	7.50	3.00		0.900
2860	31.50	2.50				0.409
5984	37.75	1.60		0.40	0.40	0.268
305	31.75	3.18	5.08			0.536
3353	31.75	3.18				0.520
1054	31.75	6.35	4.78	3.18		0.991
5856	31.80	2.00				0.333
5855	31.80	3.00				0.492
6299	32.00	5.00				0.799
3235	35.00	3.00				0.544
3616	35.00	4.00				0.715
3057	35.00	5.00				0.880
2292	38.00	1.50				0.303
3349	38.00	3.00				0.597
2144	38.00	3.18	0.50			0.623
5436	38.00	4.00				0.779
3364	38.00	6.00				1.138
8600	38.00	2.50				0.497
102	38.10	1.60				0.323
7245	38.10	2.50	0.50	0.50	0.50	0.498
694	38.10	3.18	5.33			0.639
3310	38.10	3.18				0.628
105	38.10	3.20	0.80			0.639
3317	38.10	4.76				0.921
293	38.10	4.78	5.33			0.940
3318	38.10	6.35				1.202
8233	38.10	4.78	5.33			0.940
8476	38.10	4.76	4.76			0.934
8572	38.10	3.18	3.18			0.634
8574	38.10	6.35	6.35			1.224
8635	38.10	3.18		0.50	0.50	0.628
8980	38.10	3.18	4.78	3.18		0.630

Equal Leg Angles

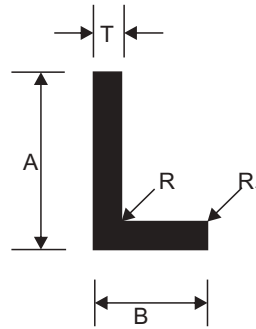


Sec	A	T	R	R1	R2	Kg/m
10171	38.10	4.78	4.78	3.18		0.926
10172	38.10	6.35	4.78	3.18		1.203
3528	40.00	1.50				0.319
2691	40.00	2.00				0.422
2692	40.00	3.00				0.625
2980	40.00	4.00				0.823
1761	40.00	5.00				1.015
985	40.00	6.00				1.198
7954	40.00	3.75				0.774
8605	40.00	5.50				1.109
10044	40.00	2.00				0.422
10238	40.00	4.00		0.60	0.60	0.822
106	44.40	6.40	5.90			1.450
1035	44.45	6.35	4.76	3.18		1.410
3058	50.00	2.00				0.531
2693	50.00	3.00			0.50	0.788
2694	50.00	4.00			0.50	1.040
1338	50.00	4.50				1.160
1745	50.00	5.00				1.287
3309	50.00	6.00				1.527
8604	50.00	5.50				1.407
10333	50.00	6.00	0.00			1.527
3355	50.80	4.76				1.250
5561	50.80	1.60				0.433
2839	50.80	2.00				0.539
2617	50.80	3.15				0.839
107	50.80	4.80	6.10			1.280
759	50.80	6.35	6.10			1.660
3297	50.80	6.35				1.638
8301	50.80	4.77	4.77			1.264
8302	50.80	6.35	6.35			1.662
8477	50.80	3.18	3.18			0.853
8630	50.80	6.34		0.50	0.50	1.638
8632	50.80	3.18		0.50	0.50	0.846
8818	50.80	4.77				1.250
8935	50.80	4.76	6.35	3.18		1.260
8969	50.80	6.35	6.35	3.18		1.650
10173	50.80	3.18	6.35	3.18		0.859
10919	50.80	9.53	6.35	3.18		2.389
11184	50.80	1.57	0.30			0.318
11257	50.80	4.50				1.184
11276	50.80	9.53	0.80			2.376
3181	60.00	3.00				0.951
3617	60.00	4.00				1.257
3033	60.00	6.00				1.853

Sec	A	T	R	R1	R2	Kg/m
2213	60.00	8.00				2.410
108	63.50	6.40	0.80			2.092
4240	63.50	6.40	4.76			2.104
8573	63.50	6.35	6.35			2.098
11275	63.50	9.53	0.80			3.032
2861	65.00	5.00				1.693
3529	65.00	6.00				2.016
5399	75.00	6.00	6.00			2.340
10149	75.00	4.00				1.581
6012	75.00	3.18		0.50	0.50	1.285
6028	76.20	6.35		0.80	0.80	2.511
109	76.20	6.40	7.60			2.560
6013	76.20	9.53		0.80	0.80	3.688
6014	76.20	12.70		0.80	0.80	4.806
8304	76.20	6.35	6.35			2.536
8636	76.20	9.52	9.53	0.50	0.50	3.741
10106	76.20	6.35	7.94	6.35		2.503
10176	76.20	9.53	7.94	6.35		3.679
10643	76.20	9.53	7.92	6.35		3.677
10855	76.20	4.76				1.903
10920	76.20	4.76	7.95	6.35		1.904
10921	76.20	9.53	7.95	9.53		3.621
11182	76.20	4.78	4.78			1.922
11107	76.40	3.00				1.217
5813	80.00	5.00				2.100
2893	80.00	6.00				2.504
2981	80.00	8.00			0.50	3.295
10587	80.00	8.00			1.00	3.292
110	88.90	6.40	8.30			3.010
2524	95.00	3.00				1.520
5400	100.00	6.00				3.153
2940	100.00	10.00				5.149
5790	101.60	6.35				3.387
5853	101.60	6.35				3.387
111	101.60	9.50	9.10			5.030
7269	101.60	9.52	9.14	3.00	1.00	5.033
5854	101.60	12.70				6.555
8305	101.60	6.35	6.35			3.410
8875	101.60	9.53	9.53	0.38		5.054
10175	101.60	6.35	9.53	6.35		3.393
10924	101.60	9.53	9.53	6.35		5.007
11183	101.60	3.18	0.79			1.719
4429	120.00	10.00				6.232
3849	150.00	10.00				7.860
10170	150.00	5.00				3.996



Unequal Leg Angles



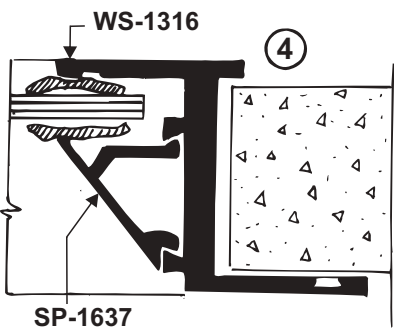
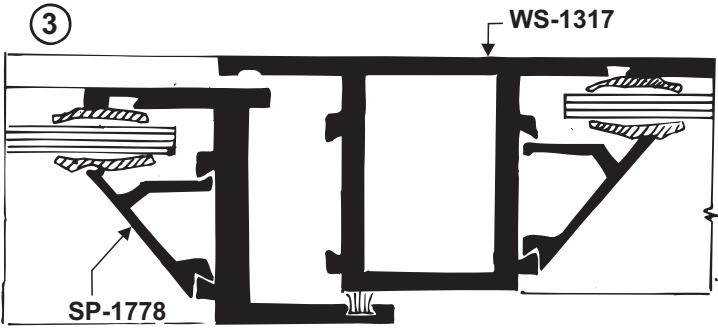
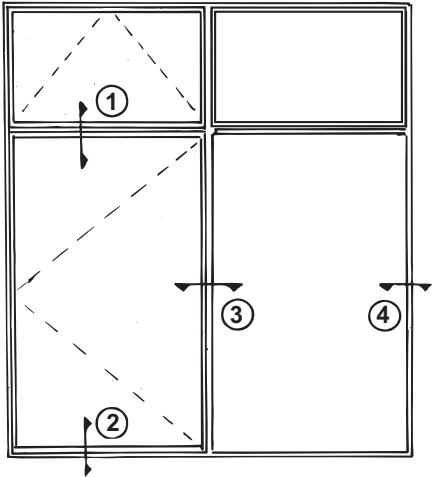
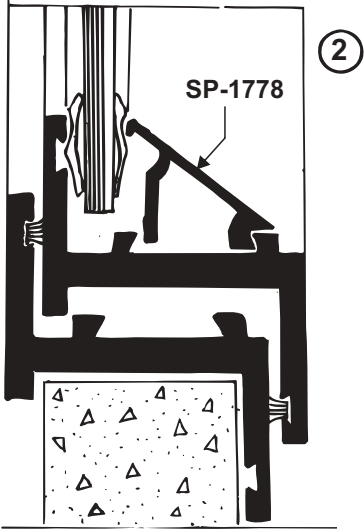
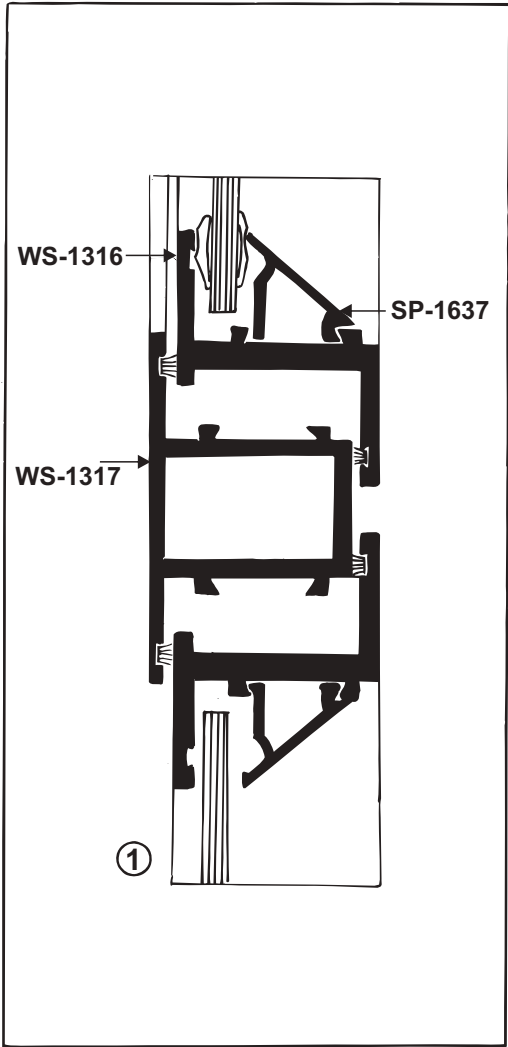
Sec	A	B	T	R	R1	Kg/m	Sec	A	B	T	R	R1	Kg/m
4706	15.00	10.00	2.00			0.124	3236	40.00	30.00	3.00			0.544
2259	18.00	12.00	0.90			0.073	2941	40.00	30.00	4.00			0.715
547	18.35	12.00	1.40			0.109	10844	43.50	83.50	10.50	9.10	5.25	3.283
525	19.05	12.70	1.25			0.103	6058	44.00	22.00	2.00			0.346
2112	20.00	10.00	2.00			0.151	6234	45.00	25.00	5.00	5.08		0.895
5994	25.00	8.60	2.00			0.171	2898	45.00	30.00	3.00			0.585
6705	25.00	9.60	2.00			0.176	2942	50.00	25.00	2.00			0.395
3232	25.00	15.00	2.00			0.205	3035	50.00	20.00	2.00			0.368
2895	25.00	20.00	2.00			0.232	5868	50.00	25.00	1.60			0.318
1182	25.00	21.00	3.00			0.349	3172	50.00	25.00	3.00			0.584
11106	25.00	19.00	3.00			0.332	3238	50.00	25.00	3.00			0.585
192	25.40	15.68	3.18			0.327	2114	50.00	25.00	4.00			0.768
112	25.40	20.60	3.20			0.371	6434	50.00	25.00	5.00			0.948
193	25.40	20.64	1.98			0.234	3239	50.00	30.00	2.00			0.422
2113	30.00	15.00	3.00			0.340	2989	50.00	30.00	3.00			0.626
2695	30.00	20.00	2.00			0.260	3240	50.00	30.00	4.00			0.823
3060	30.00	20.00	3.00			0.380	4403	50.00	30.00	5.00			1.016
194	30.18	9.93	1.98			0.203	6436	50.00	40.00	3.00			0.707
1749	31.75	19.05	3.18			0.410	3241	50.00	40.00	4.00			0.932
1498	33.50	25.00	3.20			0.478	6243	50.80	22.22	3.18			0.601
4401	35.00	25.00	1.60			0.252	5989	50.80	25.40	3.18			0.629
1092	37.00	18.00	1.25			0.180	1071	50.80	38.10	4.78	5.84		1.108
1153	37.00	24.00	1.25			0.202	2317	50.80	38.10	6.35			1.415
2867	38.00	25.00	3.00			0.487	8546	50.80	25.40	3.18			0.628
3350	38.00	25.00	3.00			0.490	10644	50.80	38.10	6.35	9.55	6.35	1.426
8601	38.00	24.00	2.40			0.386	2943	60.00	20.00	3.00			0.625
691	38.10	25.40	4.74			0.755	3618	60.00	20.00	2.00			0.422
3383	38.10	12.70	3.18			0.409	3417	60.00	30.00	4.00			0.932
113	38.10	25.40	3.20			0.523	2189	60.00	30.00	6.00			1.360
8659	38.10	25.40	3.18			0.519	3619	60.00	40.00	2.00		0.50	0.531
2896	40.00	20.00	2.00			0.314	2696	60.00	40.00	3.00			0.788
3034	40.00	20.00	3.00			0.462	2275	60.00	40.00	4.00			1.037
3082	40.00	20.00	4.00			0.607	6433	60.00	40.00	5.00			1.286
3061	40.00	25.00	3.00			0.503	10045	60.00	40.00	3.00			0.787
2897	40.00	30.00	2.00			0.660	115	63.50	38.10	4.80	6.10		1.280
3062	40.00	30.00	2.00			0.368	3444	63.50	38.10	8.00	6.35	3.18	2.040

Unequal Leg Angles



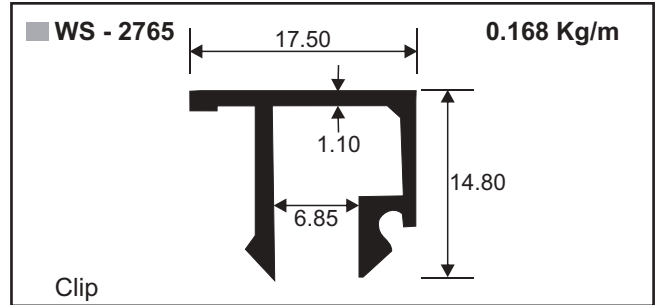
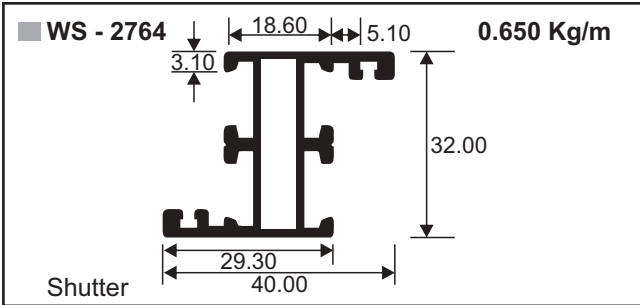
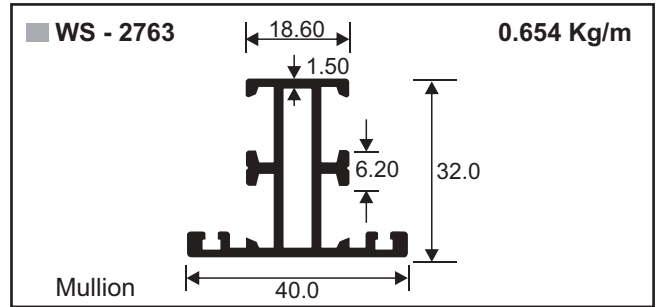
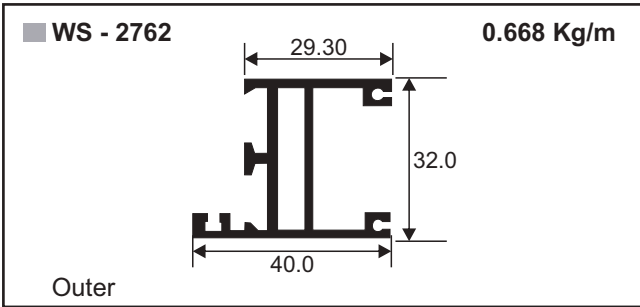
Sec	A	B	T	R	R1	Kg/m
306	63.50	50.80	4.78	6.60		1.444
114	63.50	50.80	6.40			1.870
978	63.50	50.80	8.00			2.300
1571	63.50	50.80	8.00	6.40	3.20	2.300
7896	63.50	44.45	4.77	4.77	3.18	1.340
1085	65.00	50.00	8.00			2.310
8121	65.00	40.00	2.50	4.76		0.676
2413	75.00	50.00	5.00			1.620
3352	75.00	50.00	6.00			1.930
5971	76.20	25.40	3.18		0.80	0.845
6208	76.20	38.10	3.18		0.40	0.957
4620	76.20	50.80	6.35			2.075
6027	76.20	50.80	3.18		0.50	1.066
116	76.20	50.80	6.40	6.10		2.110
8303	76.20	50.80	6.35	6.35		2.099
8631	76.20	50.80	3.18	0.50		1.064
8634	76.20	50.80	4.76	4.78	0.50	1.590
10918	76.20	50.80	6.35	7.95	4.78	2.086
10925	76.20	50.80	9.53	7.93	4.78	3.043
3620	80.00	20.00	2.00		0.50	0.531
2944	80.00	30.00	3.00			0.869
2697	80.00	40.00	3.00			0.951
3621	80.00	40.00	4.00		0.50	1.257
2899	80.00	40.00	6.00			1.853
6298	80.00	60.00	8.00			2.861
8692	80.00	50.00	8.00	0.80		2.643
8937	152.40	101.60	9.53	9.53		6.365

Sec	A	B	T	R	R1	Kg/m
10237	80.00	50.00	6.00		0.60	2.015
3606	88.90	31.75	3.18	2.40	0.80	1.016
117	88.90	76.20	6.40	8.30		2.790
6699	95.00	25.00	3.00			0.950
2900	100.00	30.00	3.00			1.032
3036	100.00	50.00	5.00			1.964
3848	100.00	80.00	10.00	0.50		4.610
8693	100.00	64.00	8.00	0.80		3.380
3311	101.60	25.40	3.18			1.067
3319	101.60	50.80	6.35			2.513
7097	101.60	76.20	9.52	9.10	1.00	4.386
3320	101.60	76.20	6.35			2.949
7270	101.60	76.20	9.52	8.38	3.18	4.368
8633	101.60	76.20	6.35	6.35	0.50	2.973
8819	101.60	50.80	3.17			1.281
10856	101.60	76.20	9.52			4.339
10922	101.60	76.20	6.35	9.53	6.35	2.957
10926	101.60	76.20	9.53	6.35	4.78	4.342
4776	115.00	76.00	12.30	14.00	2.00	6.059
5701	120.00	70.00	5.00	5.00	2.00	2.497
6653	120.00	90.00	10.00	2.00	1.00	5.419
2077	120.00	100.00	4.50	2.00	2.00	2.620
1926	125.00	100.00	6.50	8.00		3.872
8878	127.00	76.20	6.35	6.35	0.38	3.410
10923	127.00	76.20	6.35	9.53	6.35	3.394
10236	150.00	75.00	8.00		0.80	4.702

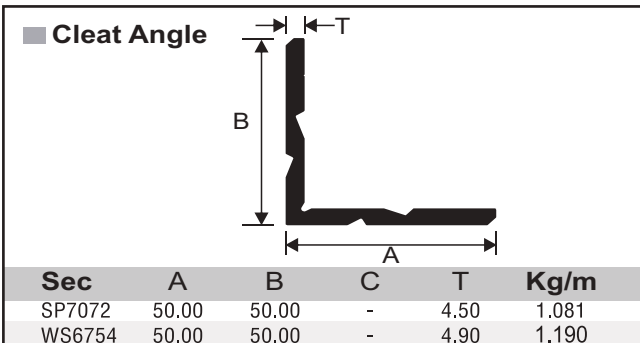
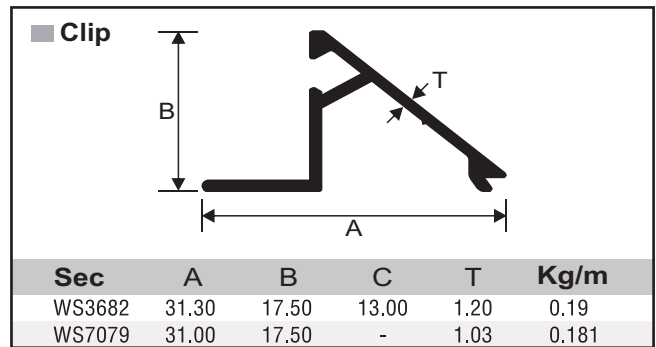
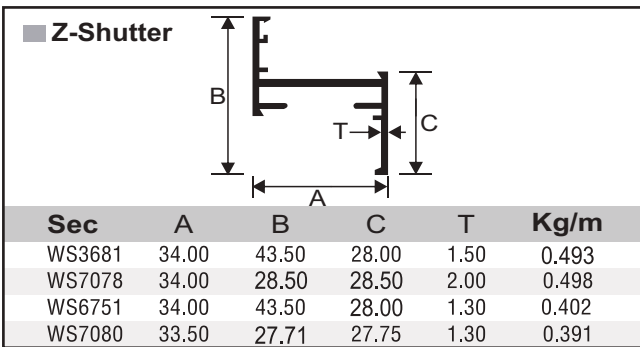
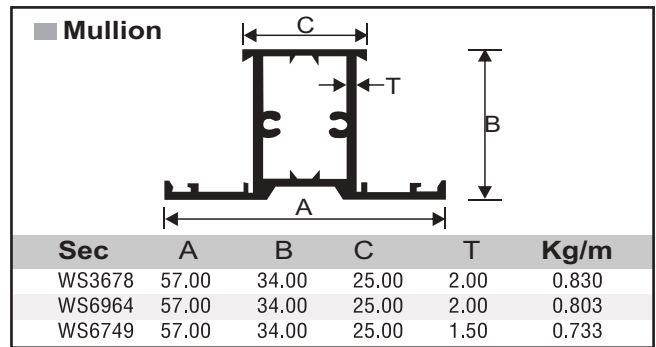
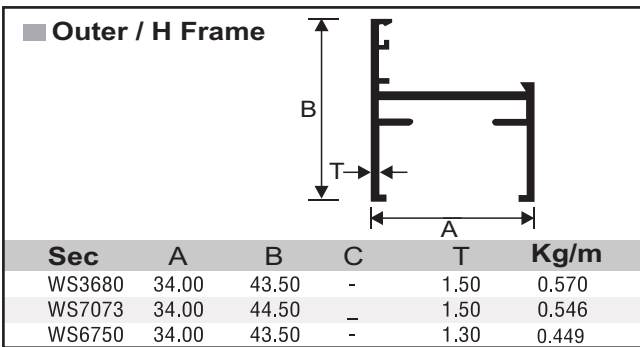




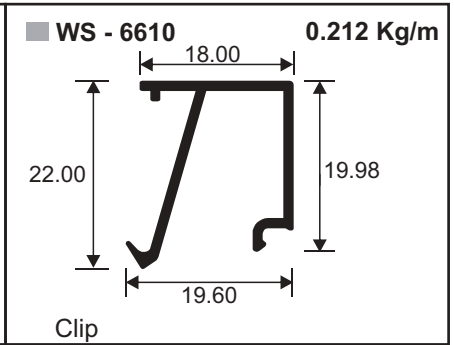
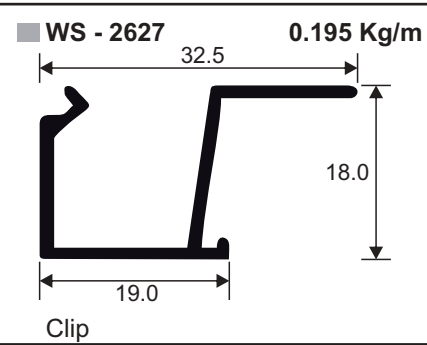
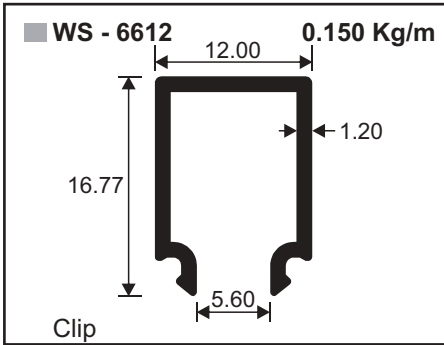
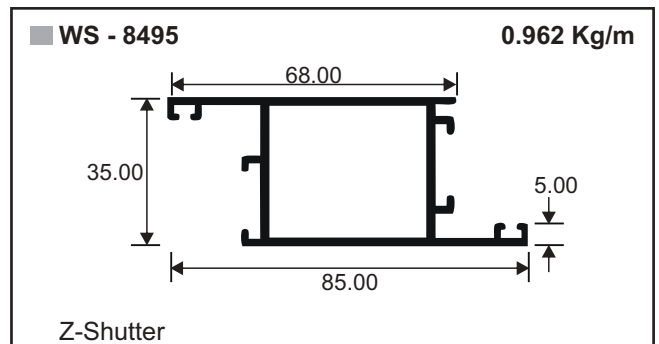
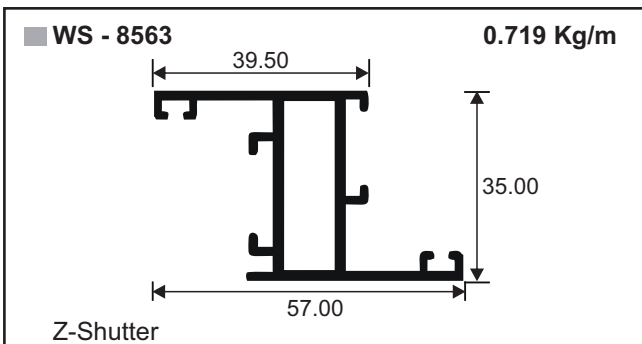
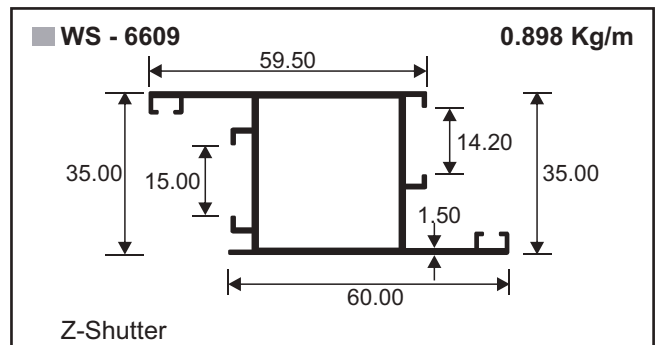
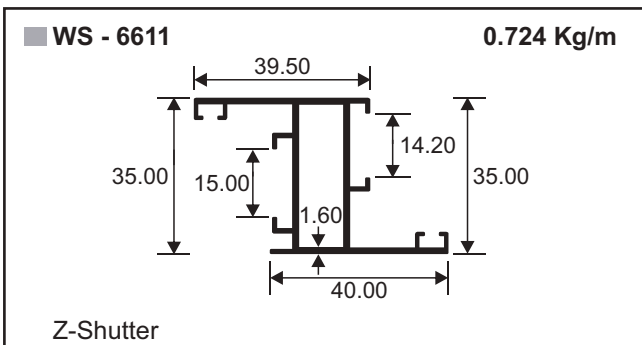
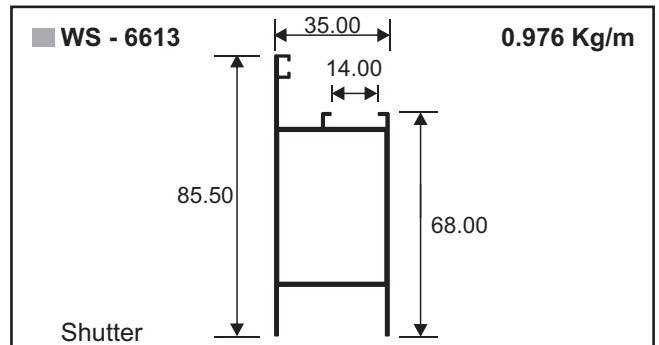
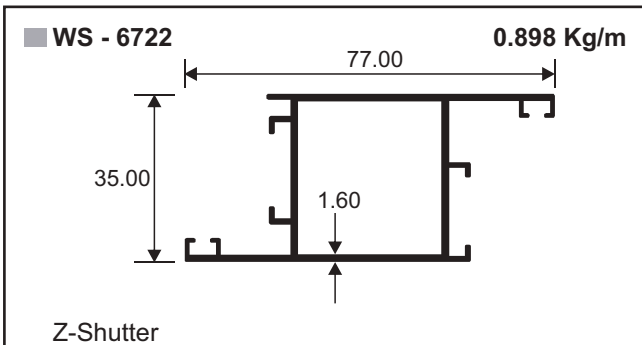
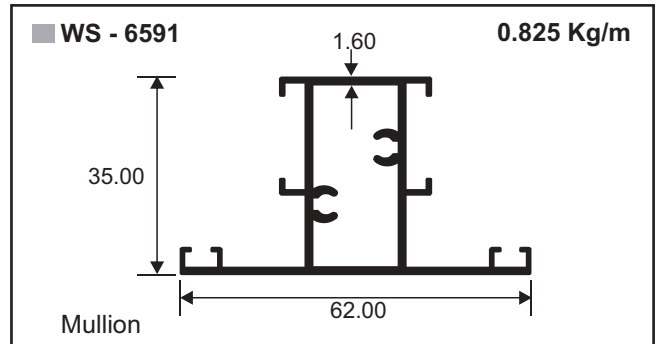
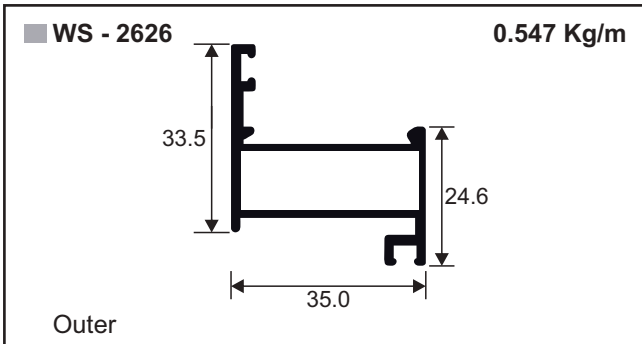
Casement Window 32mm Series



Casement Window 34mm Series



Casement Window 35mm Series





Casement Window 40mm Series

■ **Outer / H Frame**

Sec	A	B	C	T	Kg/m
WS6752	40.00	41.00	23.00	1.25	0.522

■ **WS - 3679** 0.64 Kg/m

Outer Half

■ **Mullion**

Sec	A	B	C	T	Kg/m
SP3570	63.00	40.00	27.00	1.50	0.892
WS6787	63.00	40.00	27.00	1.50	0.817

■ **Z-Shutter**

Sec	A	B	C	T	Kg/m
SP3574	42.60	46.00	29.00	1.50	0.700
WS6753	42.60	46.00	29.00	1.25	0.628

■ **Cleat Angle**

Sec	A	B	C	T	Kg/m
SP7072	50.00	50.00	-	4.50	1.081
WS6754	50.00	50.00	-	4.90	1.190

■ **WS - 2991** 0.368 Kg/m

Clip

■ **SP - 3571** 0.168 Kg/m

Clip

■ **SP - 3572** 0.140 Kg/m

Clip-DGU

■ **WS - 8007** 0.746 Kg/m

Mullion

■ **WS - 8008** 0.682 Kg/m

Outer

Casement Window 40mm Series Double Shutter



Outer

Sec	A	B	C	T	Kg/m
WS6186	124.50	39.75	49.00	2.25	1.463
WS6184	124.50	39.75	49.00	1.60	1.082
WS6105	95.00	39.75	35.00	1.40	0.850

Mullion

Sec	A	B	C	T	Kg/m
WS6185	124.50	58.70	49.00	1.70	1.662
WS6106	95.00	60.00	35.00	1.40	1.389

Z-Shutter

Sec	A	B	C	T	Kg/m
SP3574	42.60	46.00	29.00	1.50	0.700
WS6753	42.60	46.00	29.00	1.25	0.628

Cleat Angle

Sec	A	B	C	T	Kg/m
SP7072	50.00	50.00	-	4.50	1.081
WS6754	50.00	50.00	-	4.90	1.190

WS - 2991 **0.368 Kg/m**

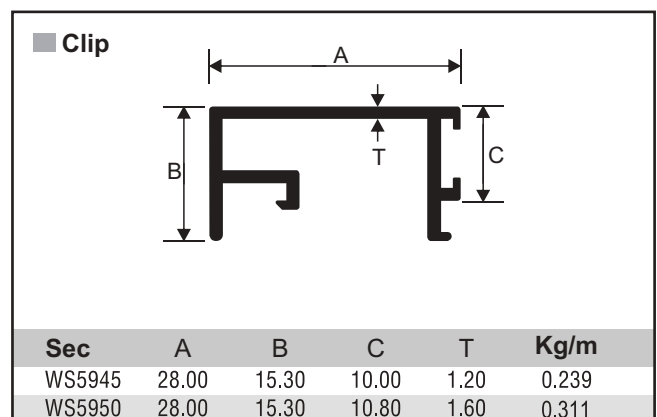
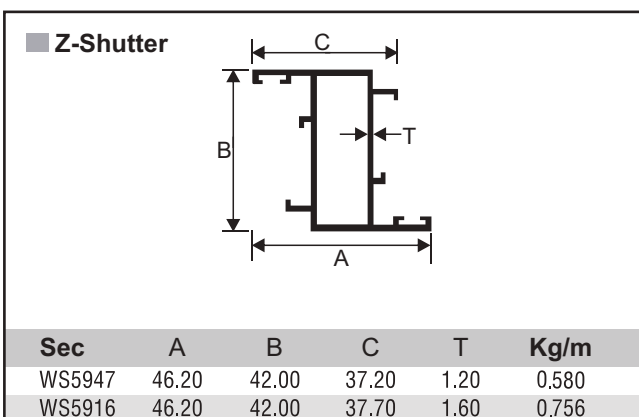
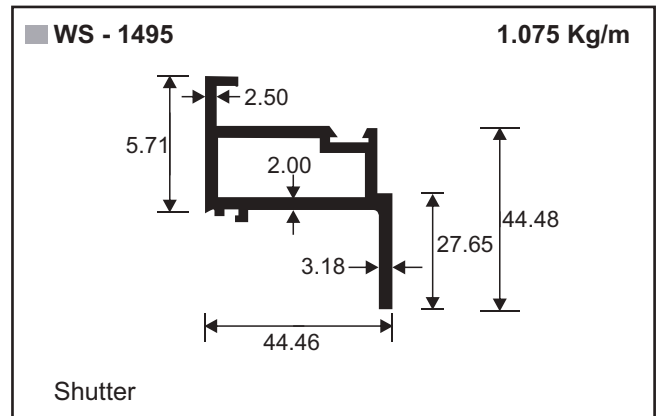
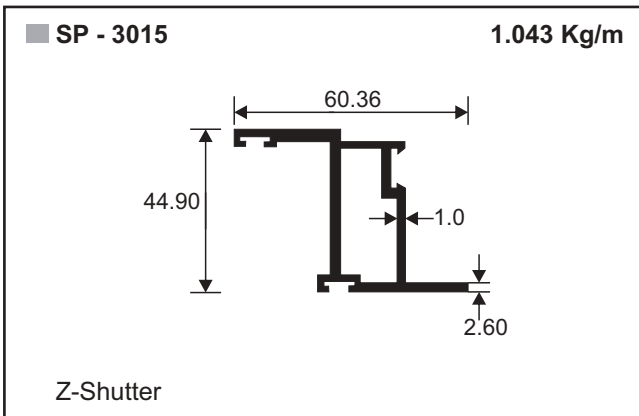
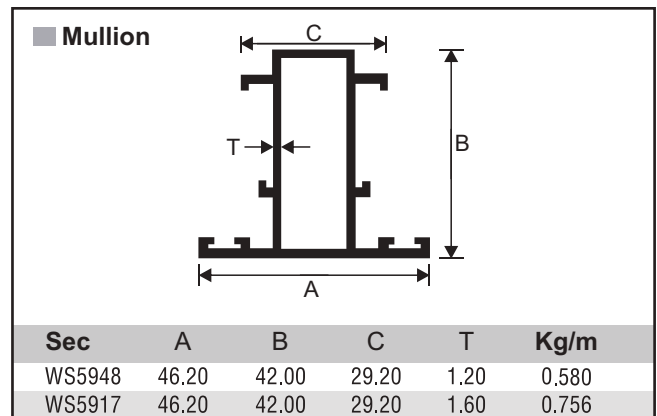
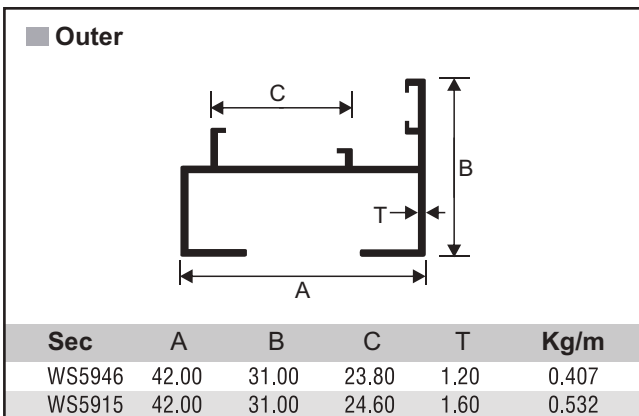
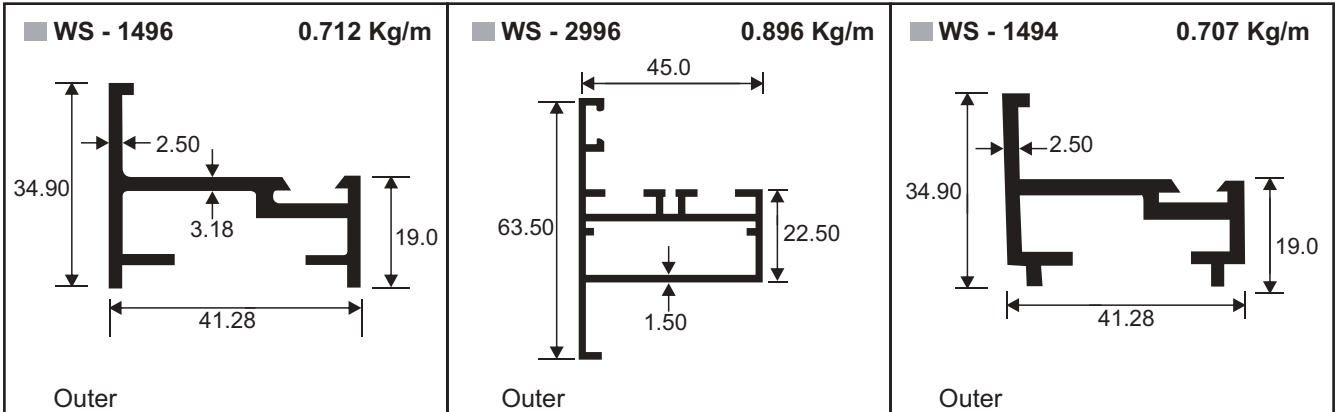
Clip

SP - 3571 **0.168 Kg/m**

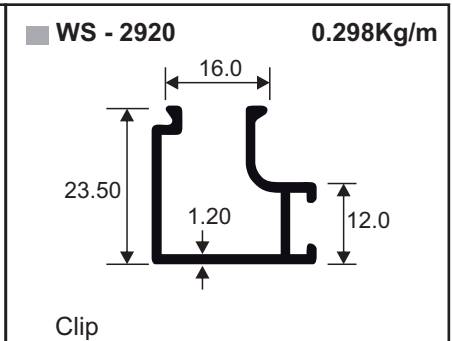
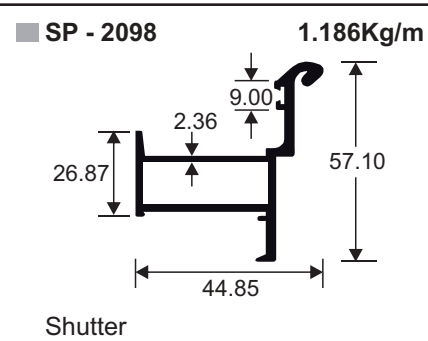
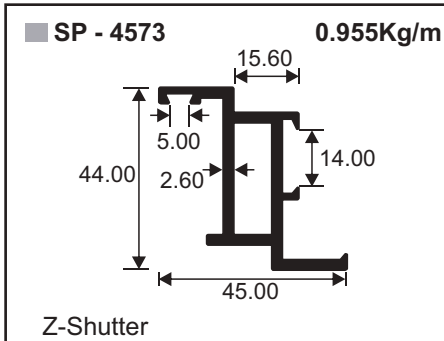
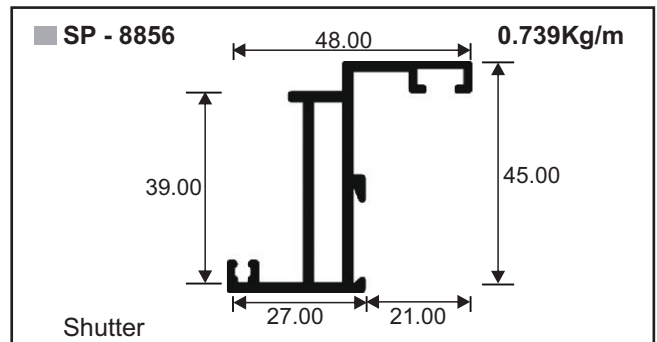
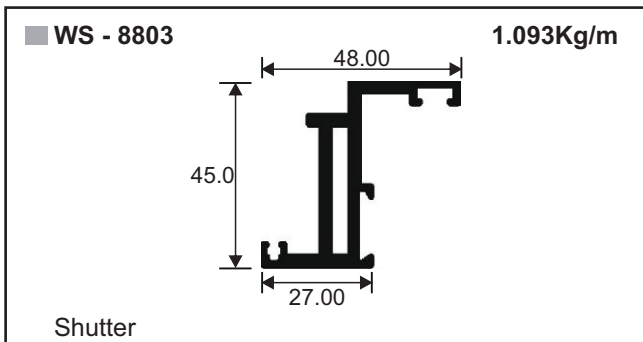
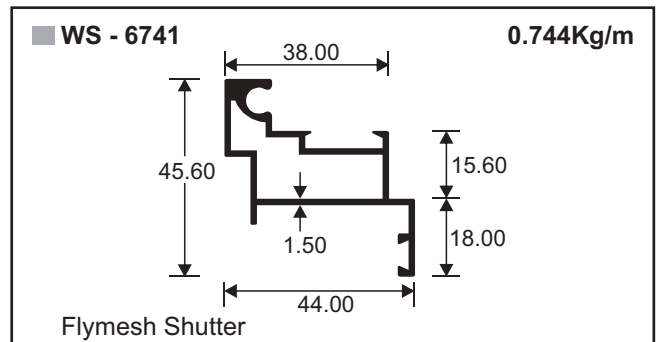
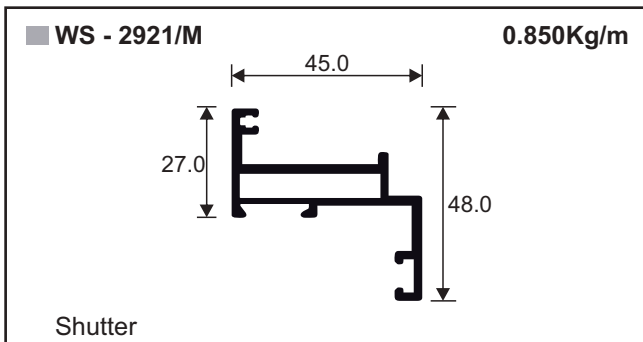
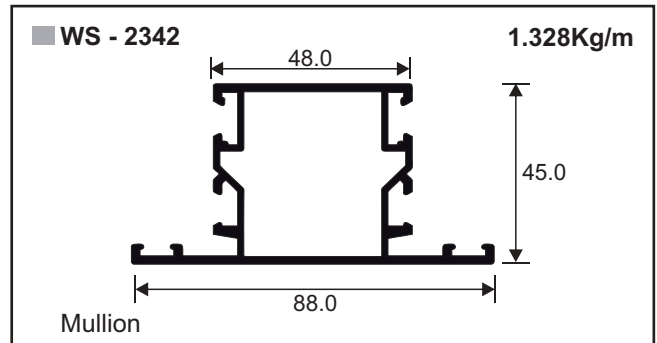
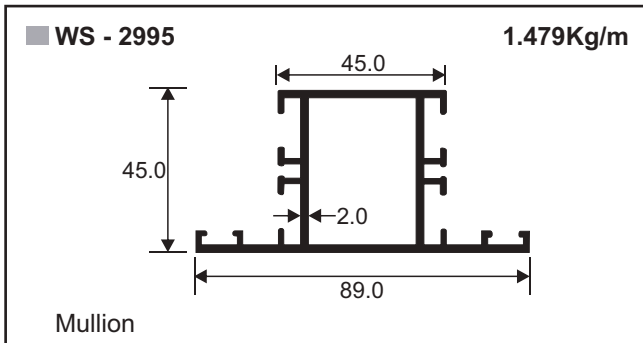
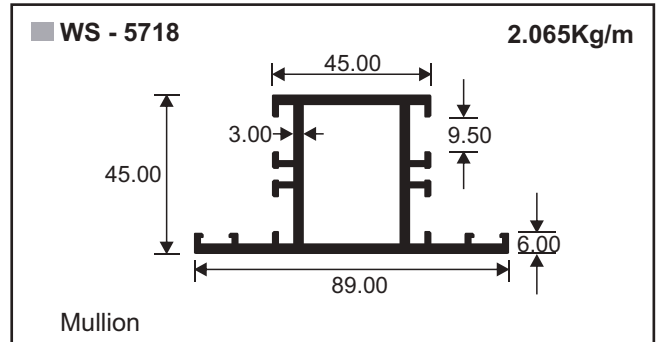
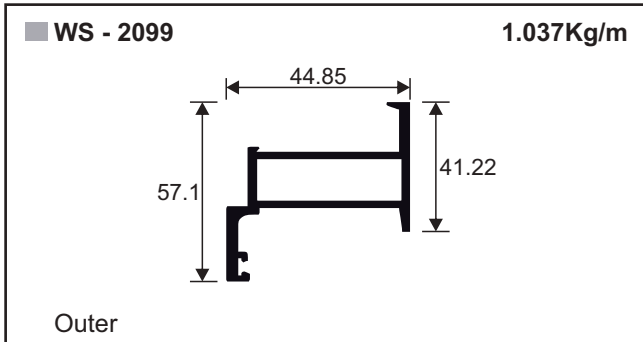
Clip



Casement Window 42mm Series

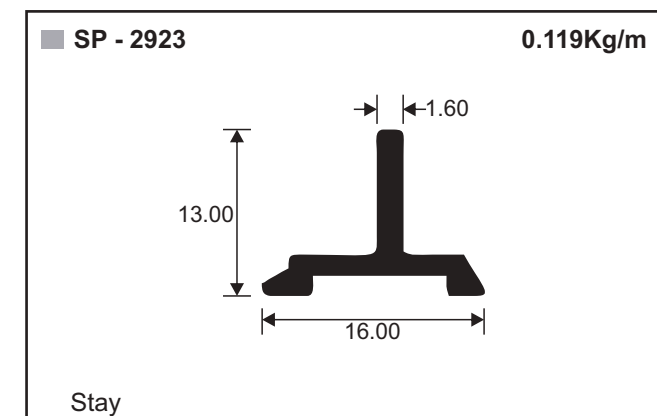
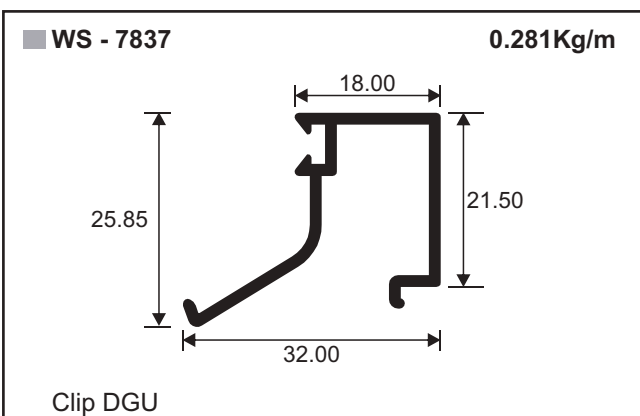
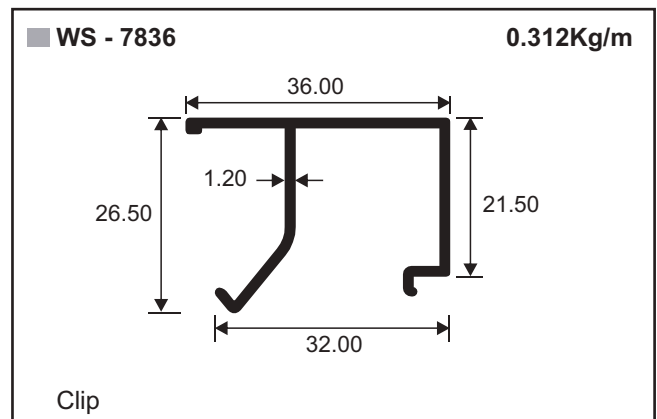
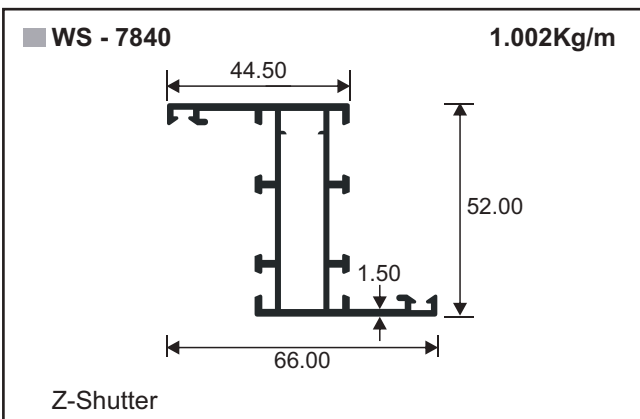
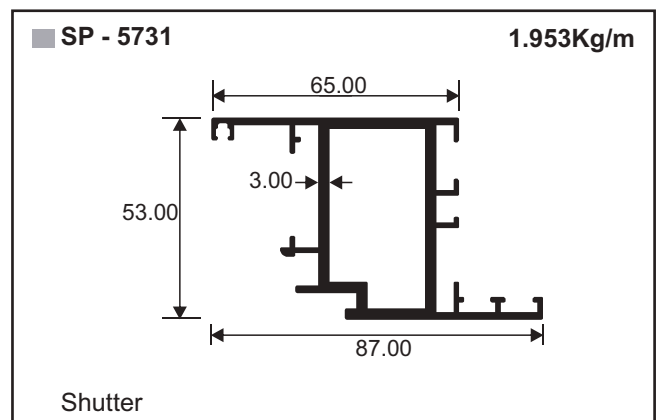
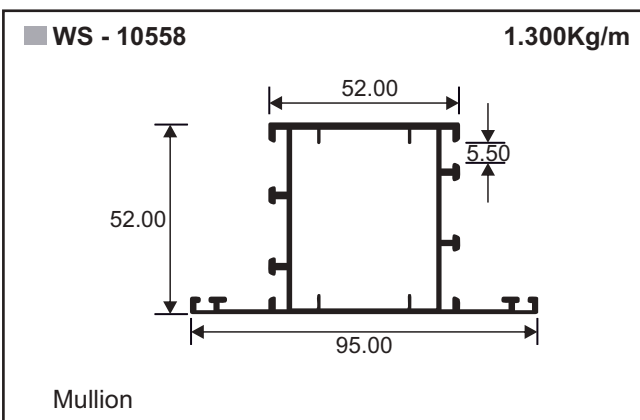
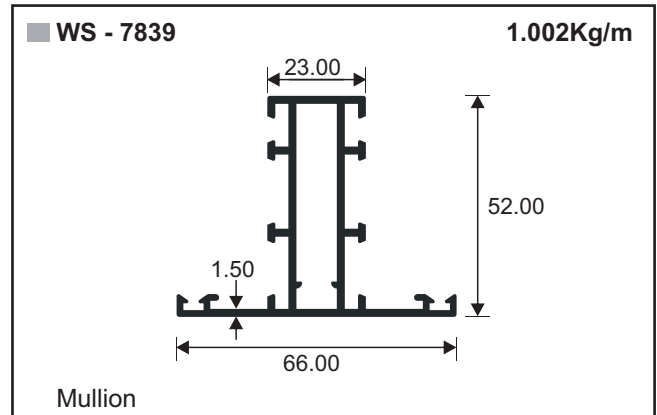
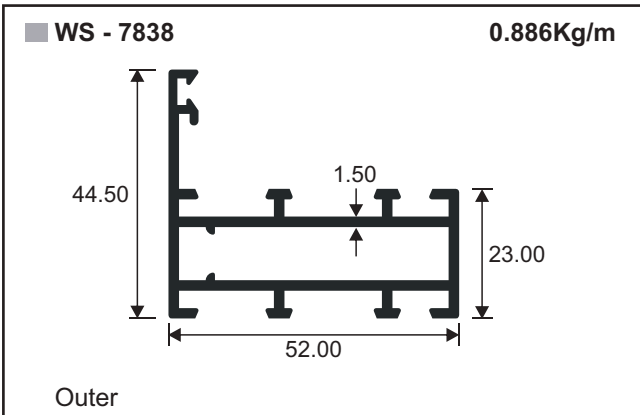


Casement Window 45mm Series





Casement Window 52mm Series



Casement Window 70mm Series



Outer

Sec	A	B	C	T	Kg/m
WS2917	70.00	41.00	20.00	2.00	0.990
WS6735	70.00	41.00	20.00	2.60	1.439

WS - 5707 **0.771Kg/m**

Outer

WS-8855 **1.160Kg/m**

Outer

Mullion

Sec	A	B	C	T	Kg/m
WS2918	70.00	62.00	20.00	2.00	1.381
WS6736	70.00	62.00	20.00	2.60	1.837

WS - 8857 **1.249Kg/m**

Mullion

WS - 5708 **1.169Kg/m**

Mullion

WS - 10168 **1.587Kg/m**

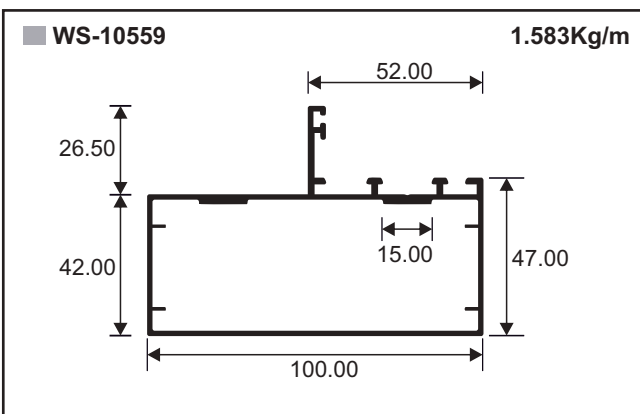
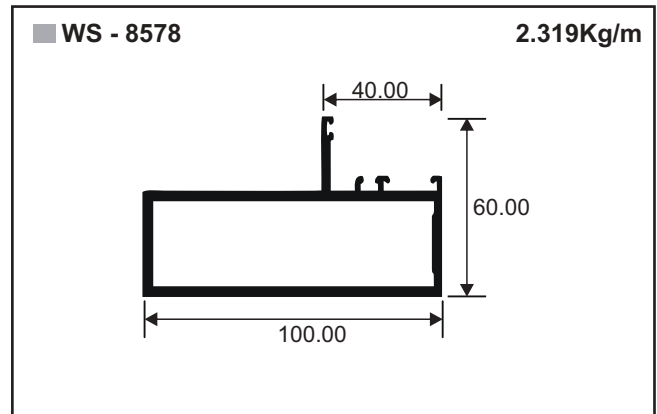
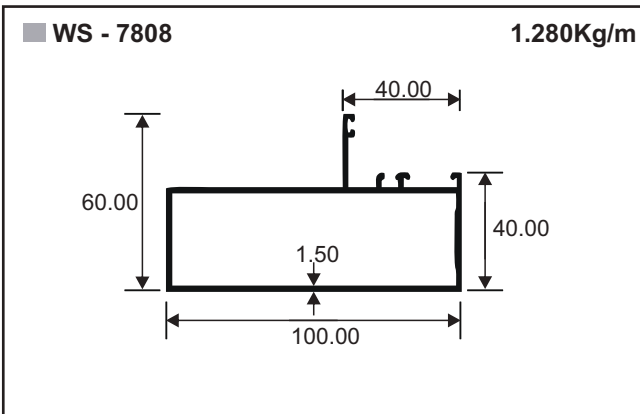
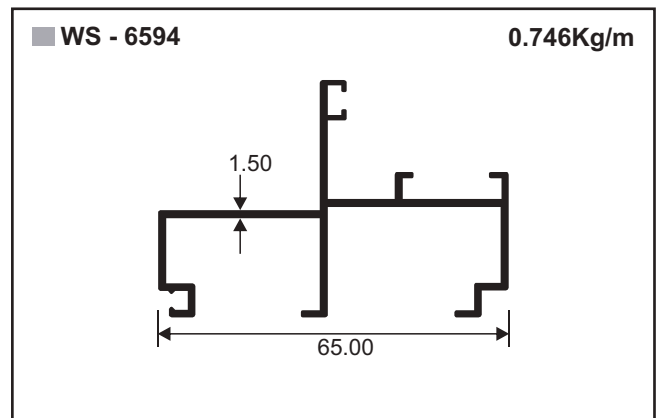
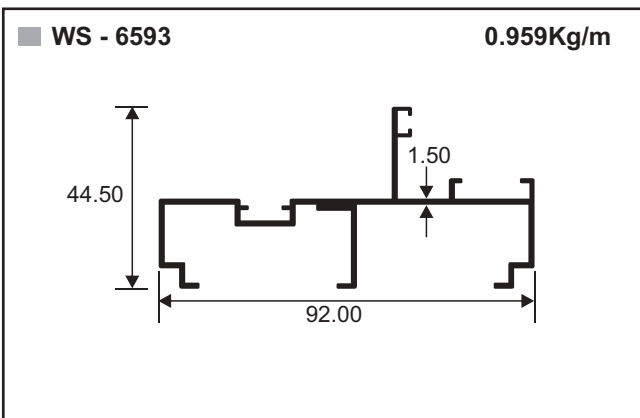
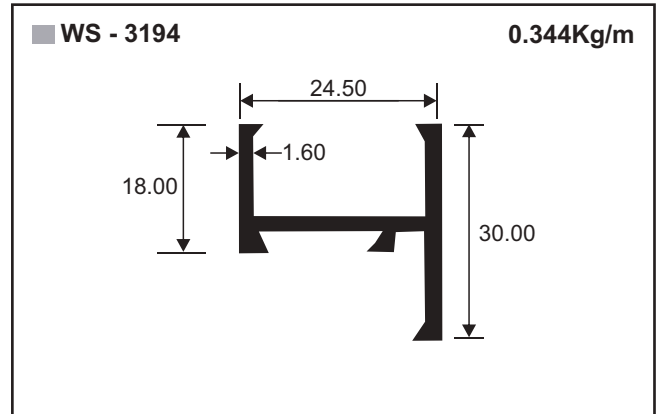
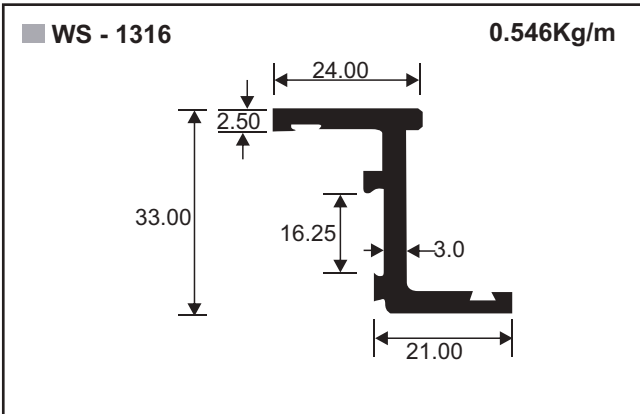
Z-Shutter

WS - 5706 **0.385Kg/m**

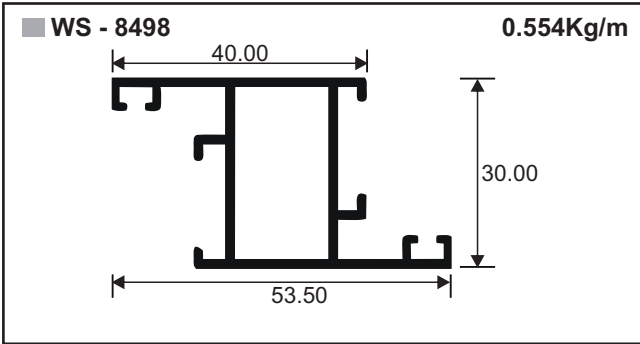
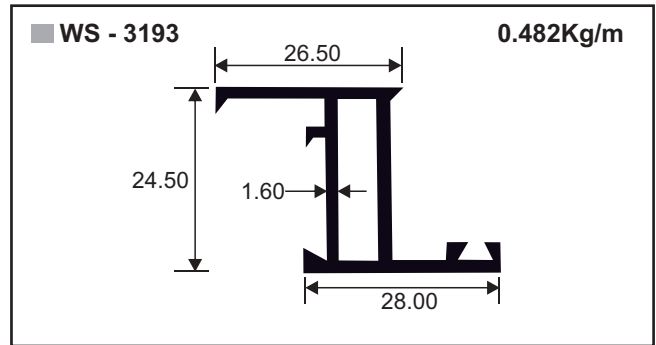
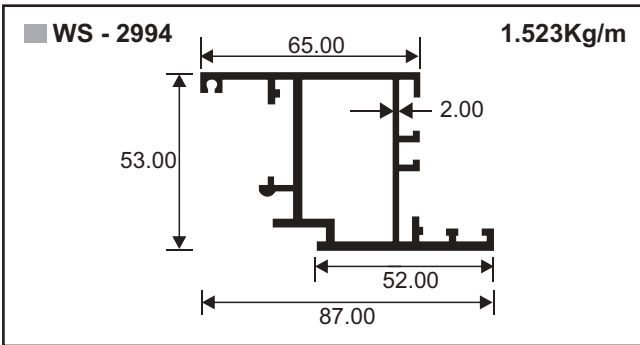
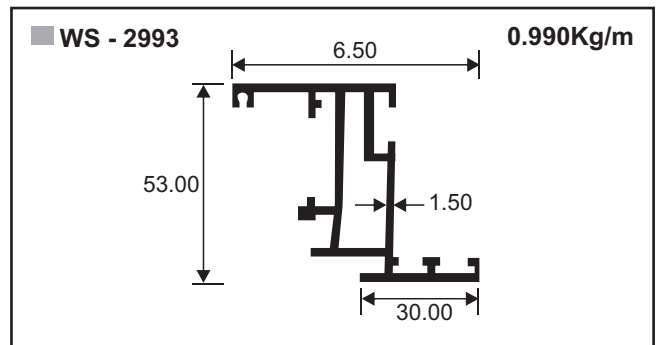
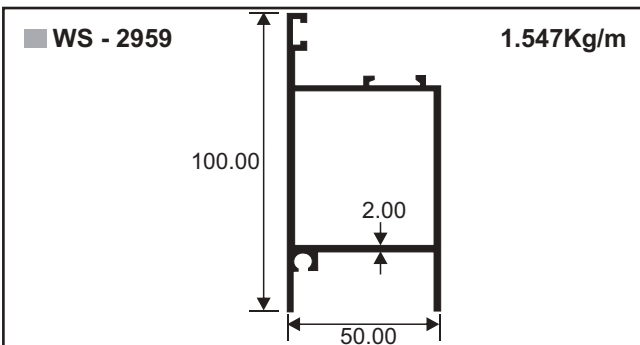
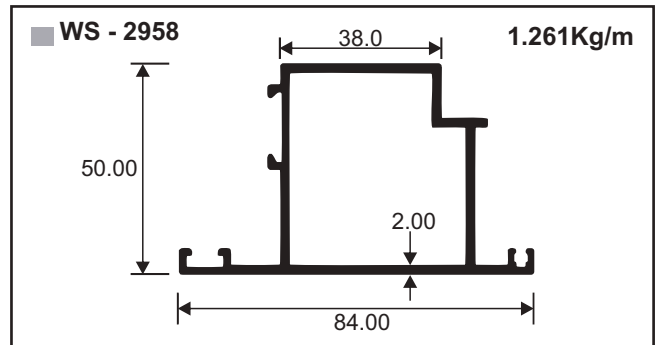
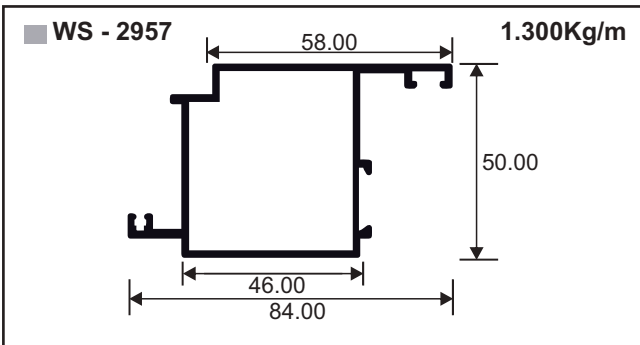
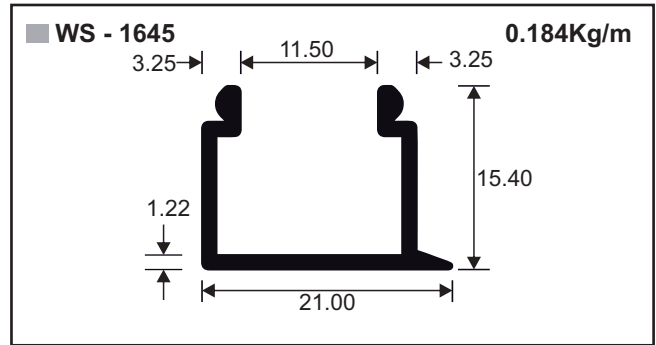
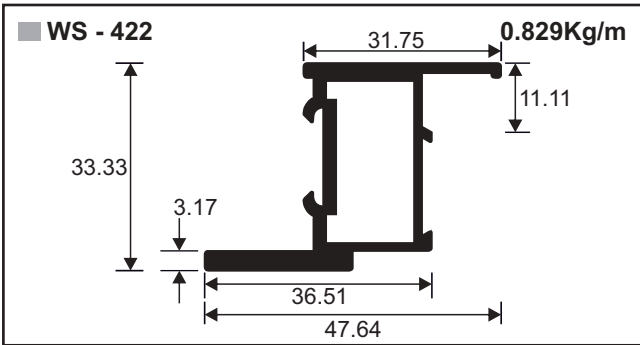
Clip



Casement Window Outer

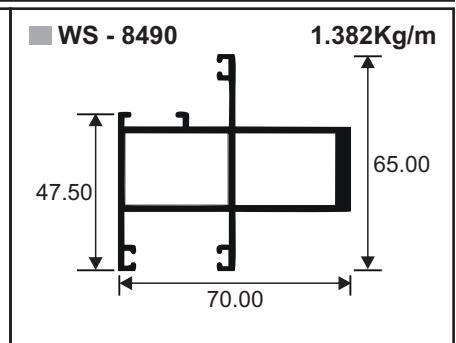
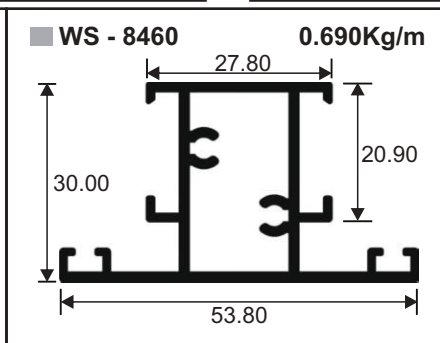
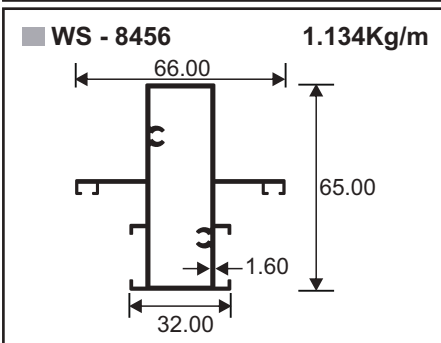
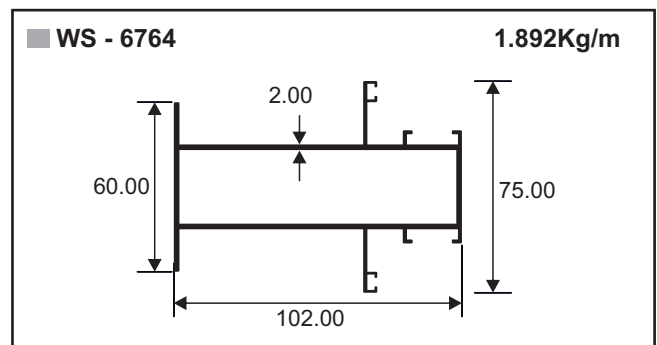
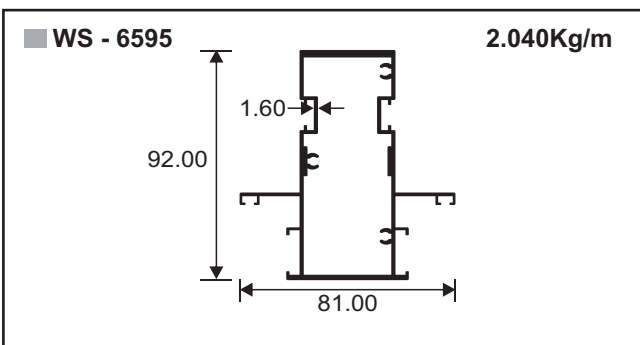
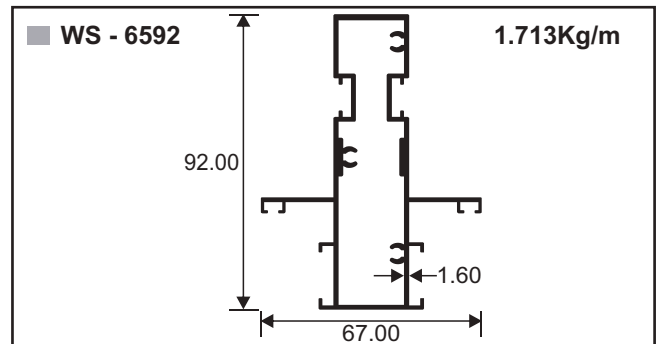
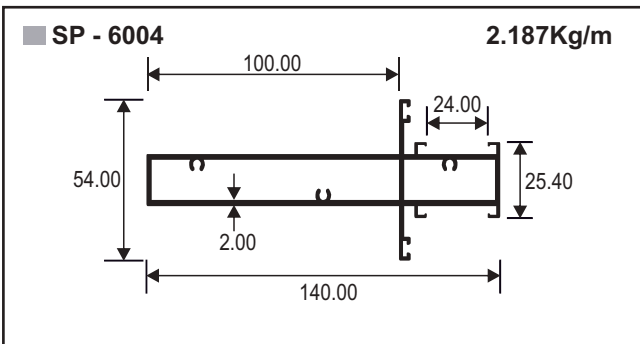
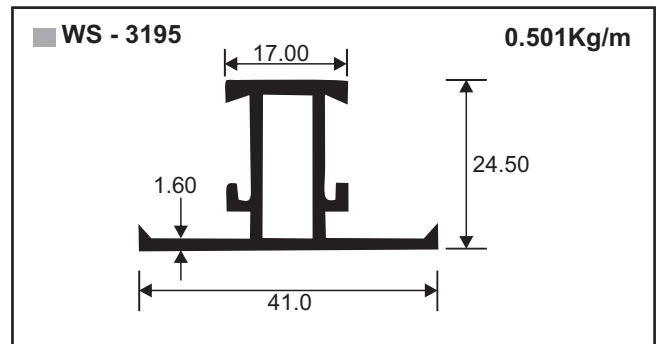
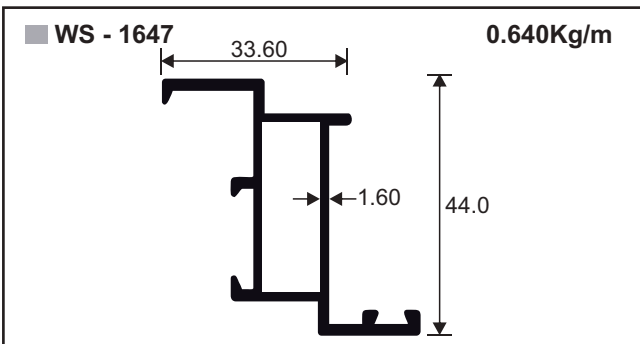
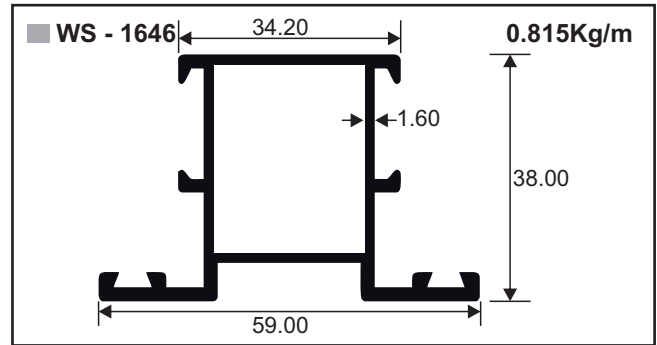
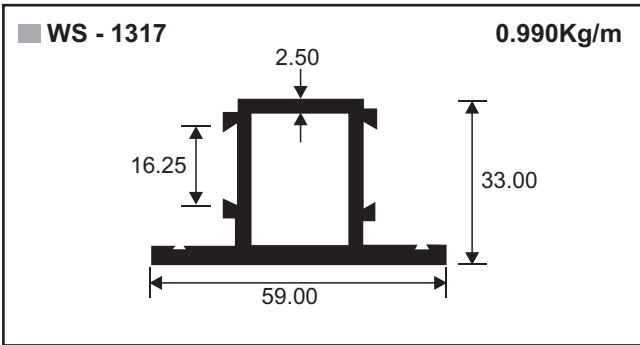


Casement Window Shutter

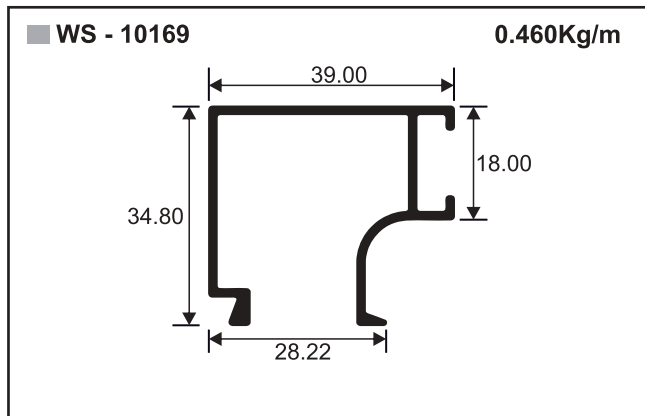
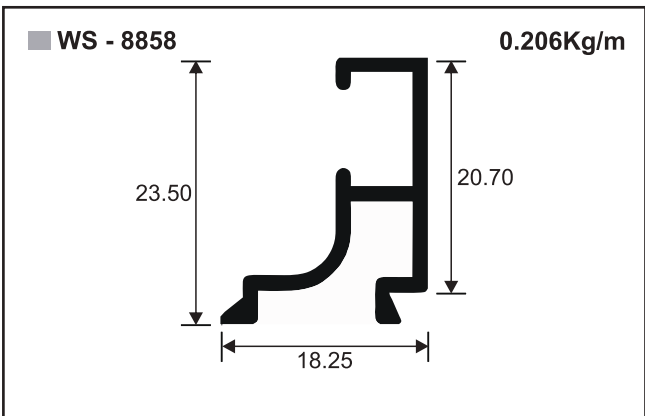
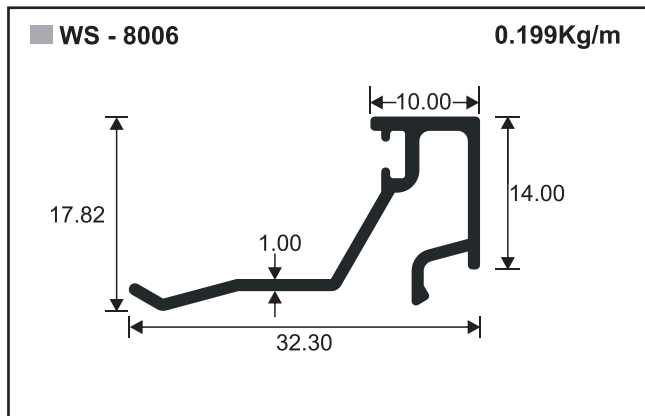
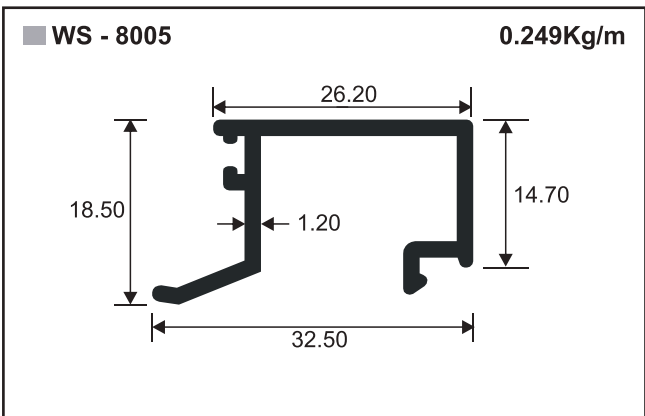
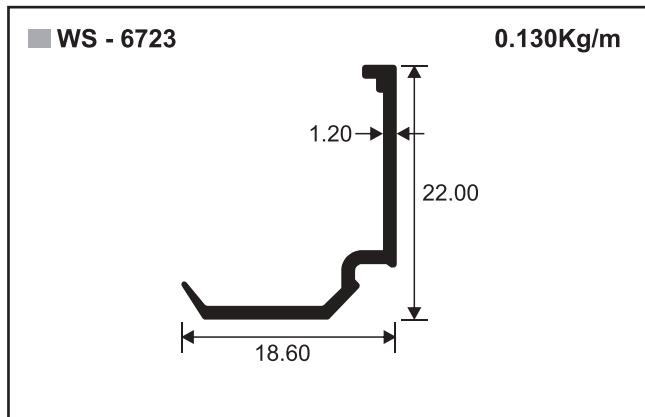
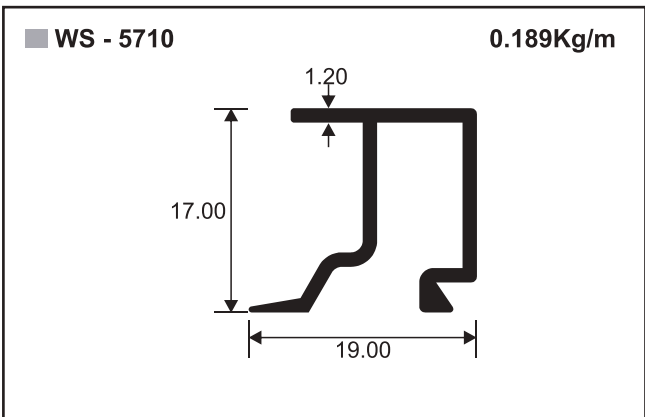
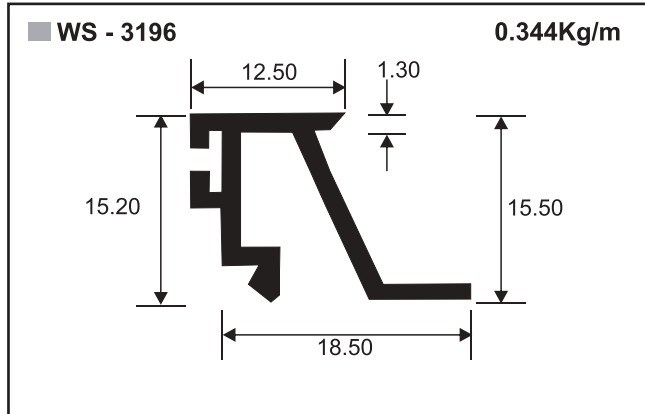
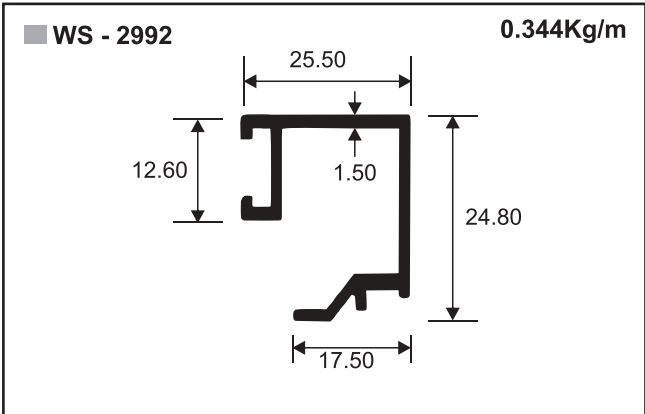




Casement Window Mullion

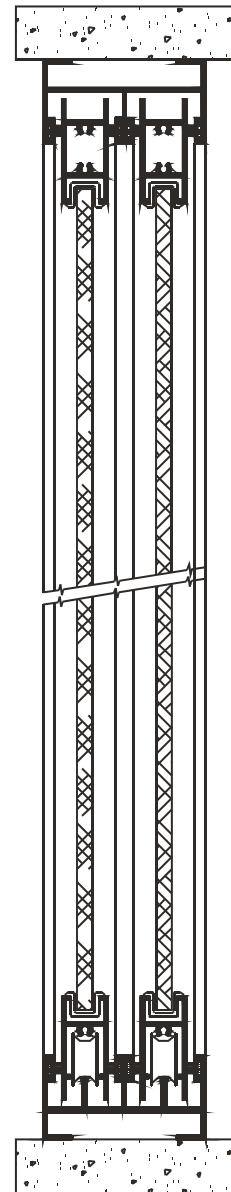
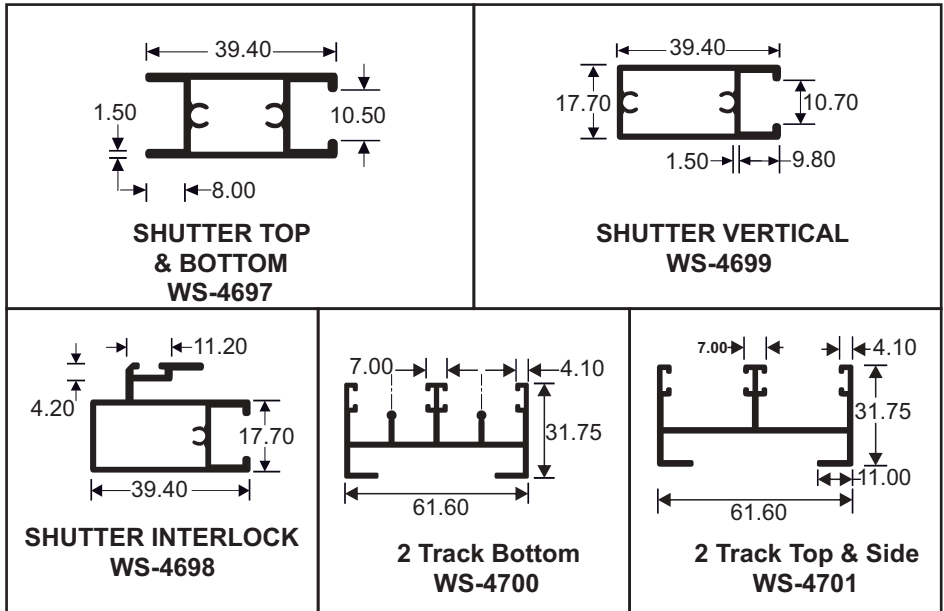


Casement Window Clip

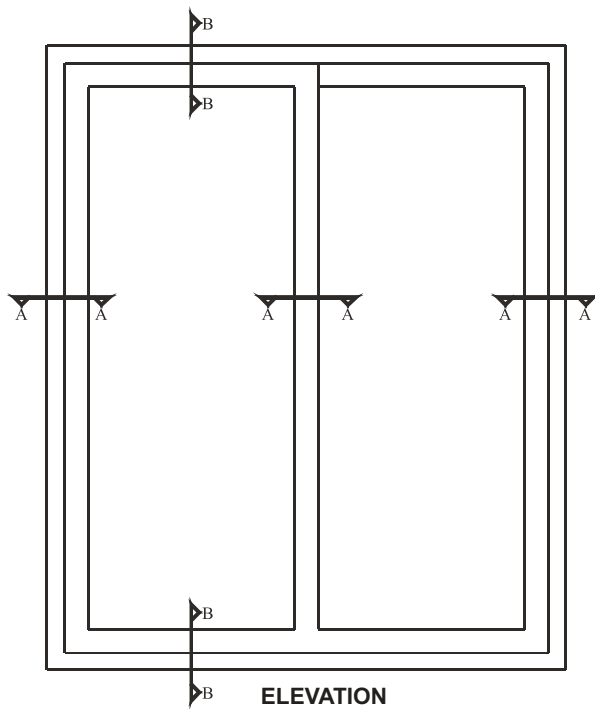




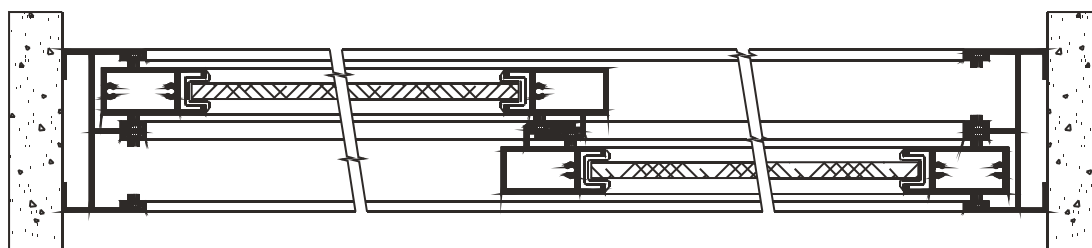
EXTRUDED PROFILES



SECTION-BB



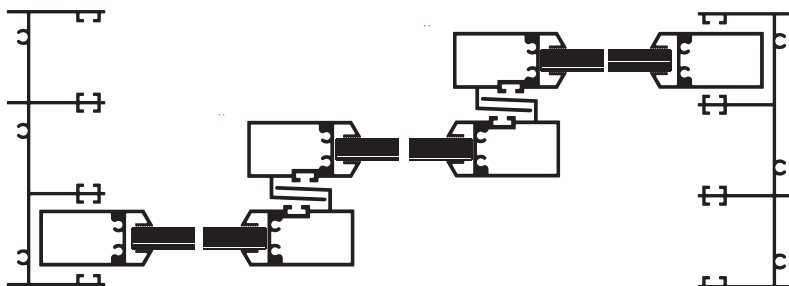
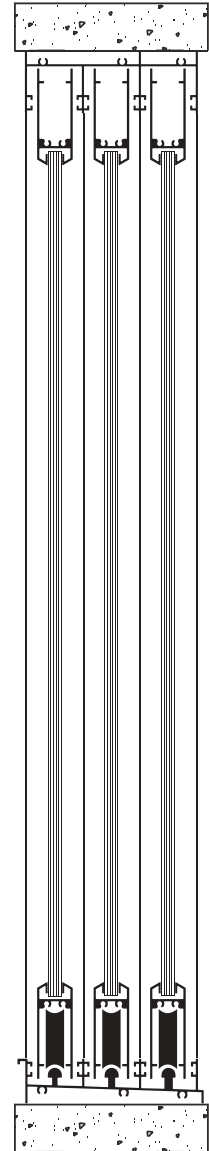
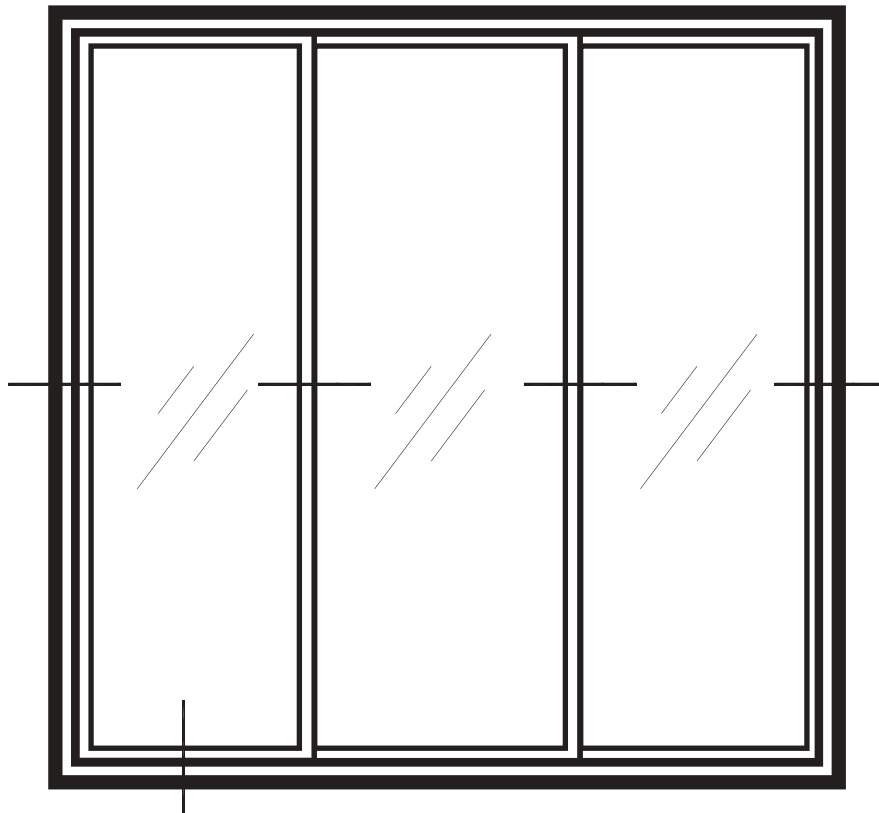
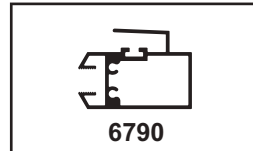
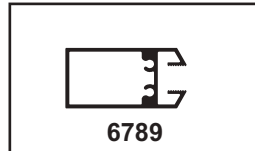
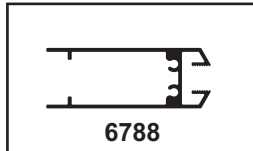
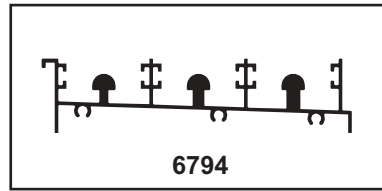
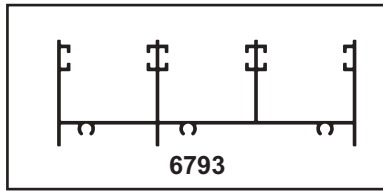
PREFERRED SIZES
 4'-0" (W) X 5'-0" (H)
 5'-0" (W) X 5'-0" (H)
 6'-0" (W) X 5'-0" (H)



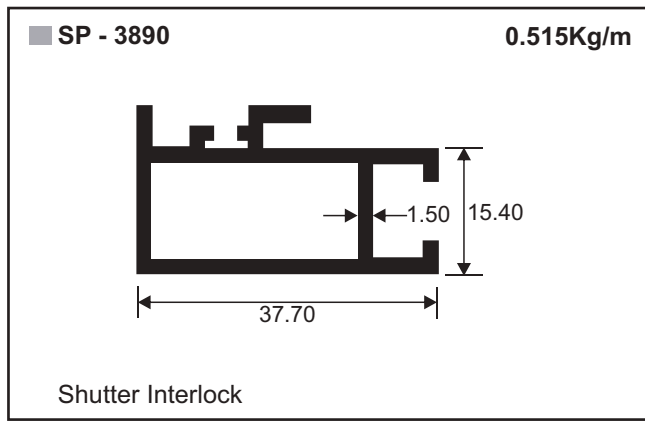
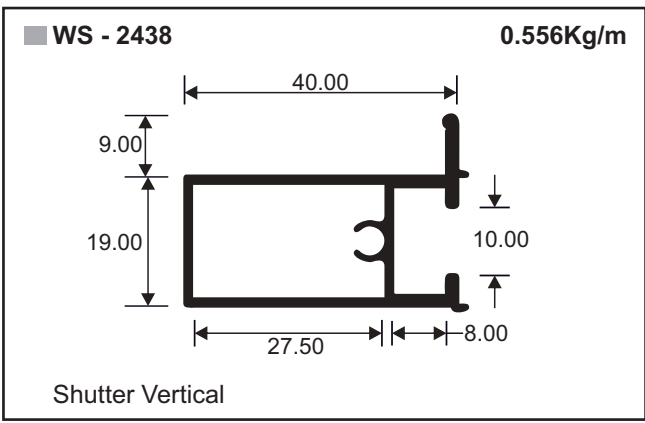
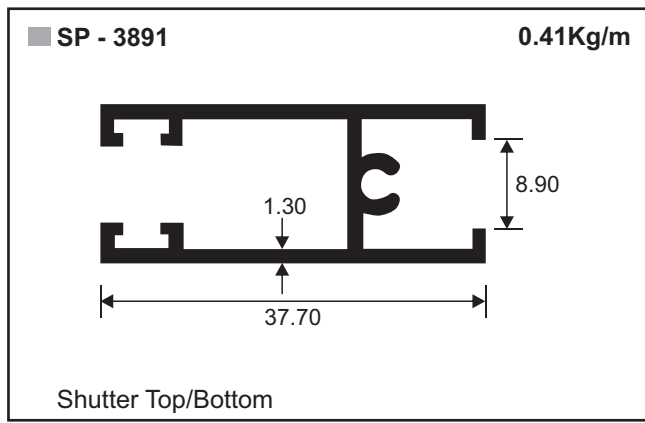
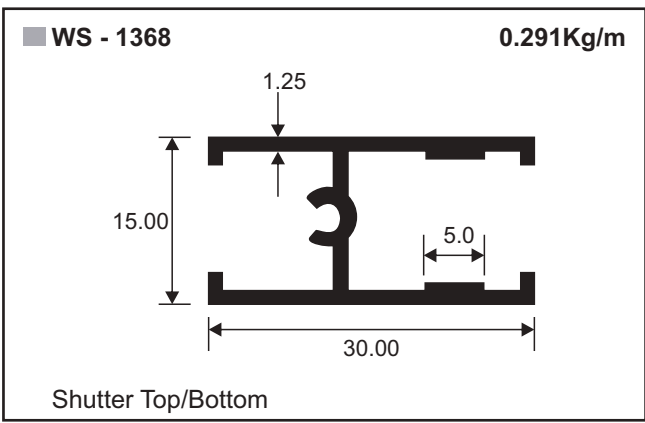
SECTION-AA



Sliding Window Assembly



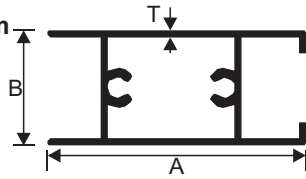
Sliding Window 15mm Series





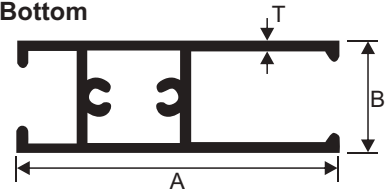
Sliding Window 18mm Series

Shutter Top/Bottom



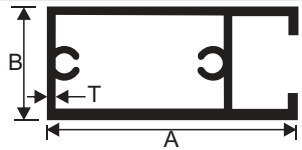
Sec	A	B	T	Kg/m
7054	39.40	17.70	1.10	0.404
2494	39.40	17.70	1.20	0.434
7331	39.40	17.70	2.00	0.667

Shutter Top/Bottom



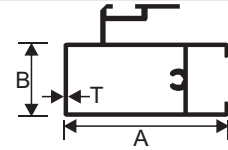
Sec	A	B	T	Kg/m
4902	52.00	18.00	1.30	0.567
5933	52.00	18.00	1.40	0.612

Shutter Vertical



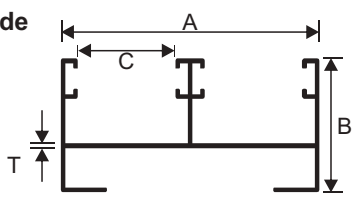
Sec	A	B	T	Kg/m
7056	39.40	17.70	1.10	0.404
2496	39.40	17.70	1.20	0.431
4699	39.40	17.70	1.50	0.518
7333	39.40	17.70	2.00	0.678

Shutter Interlock



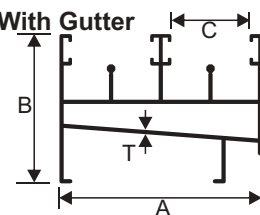
Sec	A	B	T	Kg/m
7055	39.40	17.70	1.10	0.468
2495	39.40	17.70	1.20	0.510
4698	39.40	17.70	1.50	0.601
7332	39.40	17.70	2.00	0.797

2 Track Top / Side



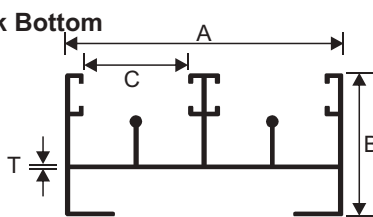
Sec	A	B	C	T	Kg/m
7058	61.60	31.75	23.20	1.10	0.584
2498	61.60	31.75	23.20	1.20	0.632

2 Track Bottom With Gutter



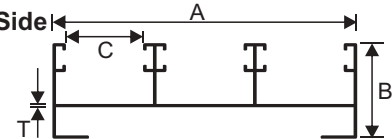
Sec	A	B	C	T	Kg/m
7371	61.85	45.50	23.85	1.20	0.960
7551	61.85	45.50	23.85	1.30	1.019

2 Track Bottom



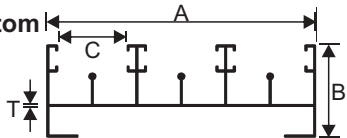
Sec	A	B	C	T	Kg/m
7057	61.60	31.75	23.20	1.10	0.666
2497	61.60	31.75	23.20	1.20	0.718

3 Track Top / Side



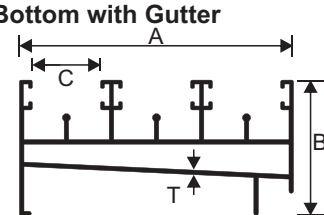
Sec	A	B	C	T	Kg/m
7060	91.80	31.75	23.20	1.10	0.784
2544	91.80	31.75	23.20	1.20	0.848
4703	91.80	31.75	23.20	1.50	0.983
7335	91.80	31.75	23.20	2.00	1.200

3 Track Bottom



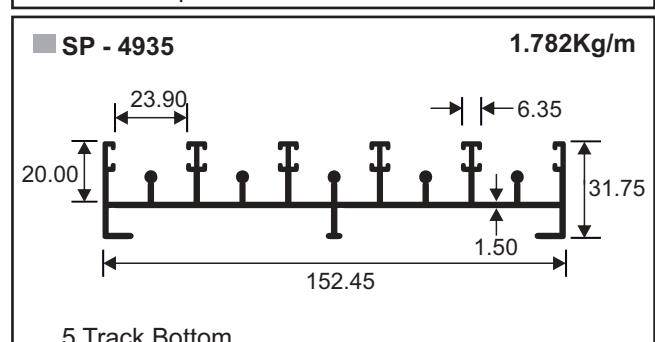
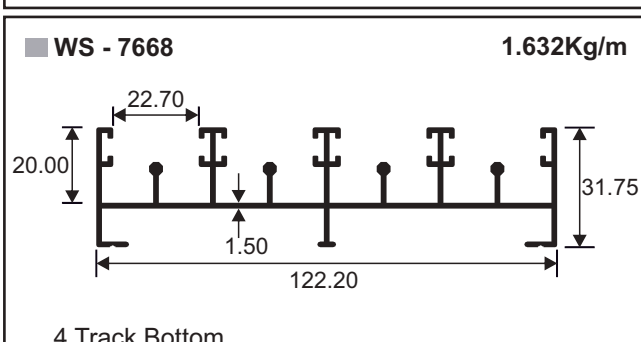
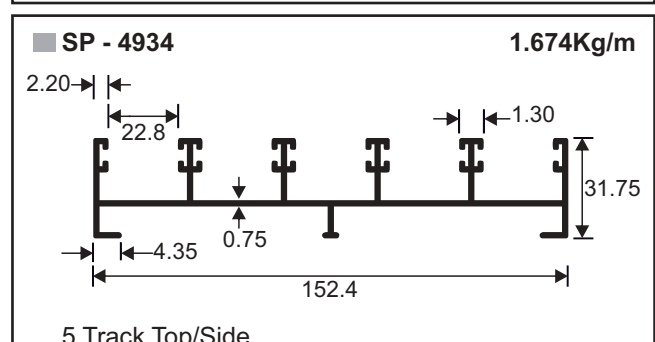
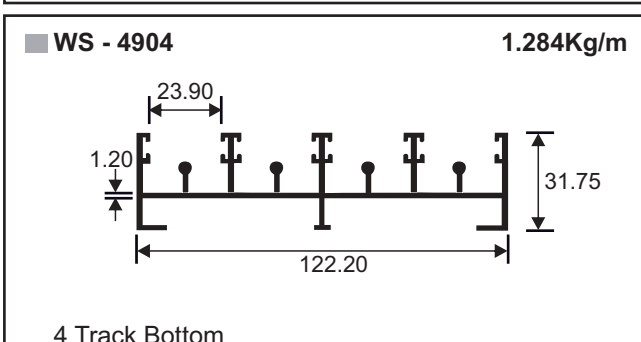
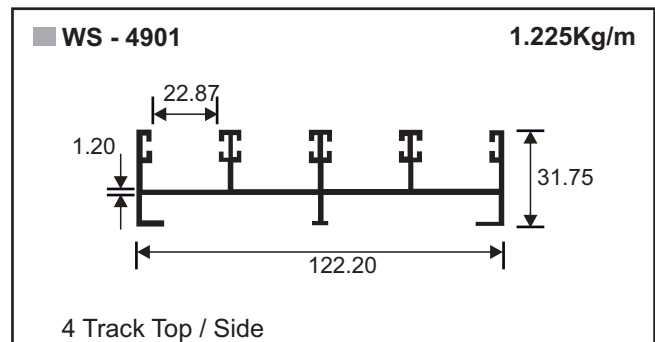
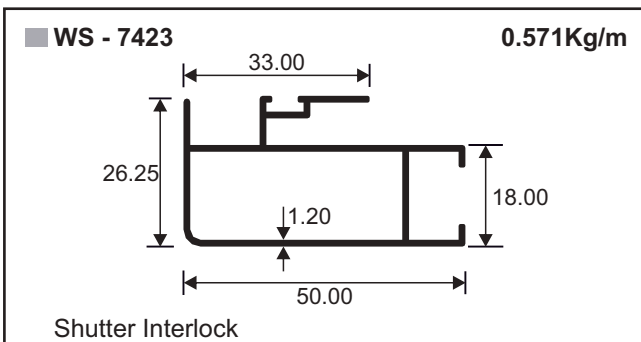
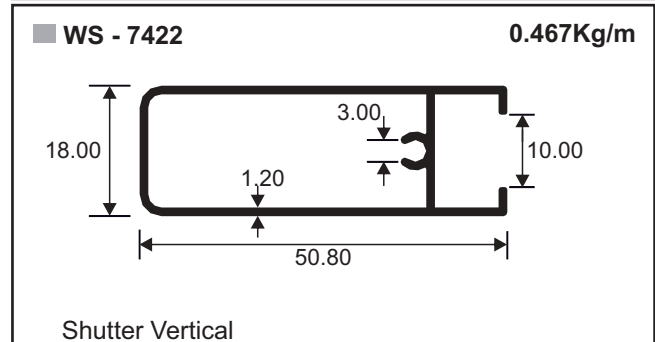
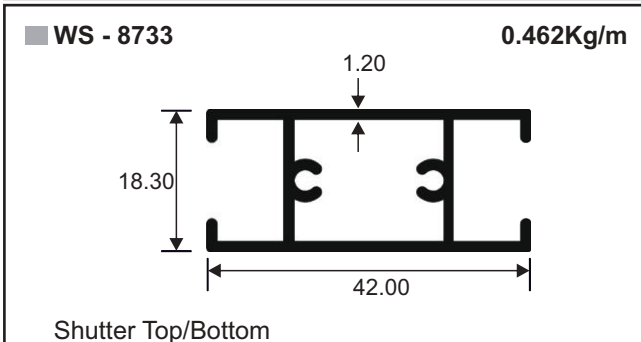
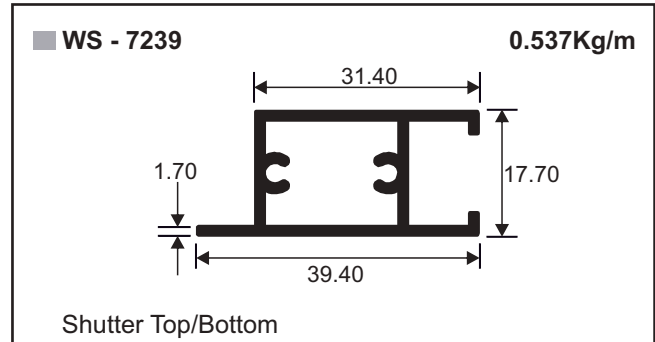
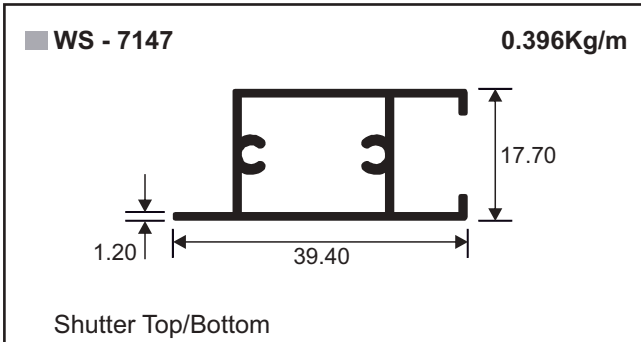
Sec	A	B	C	T	Kg/m
7059	91.80	31.75	23.20	1.10	0.905
2543	91.80	31.75	23.20	1.20	0.980
4702	91.80	31.75	23.20	1.50	1.125
7334	91.80	31.75	23.20	2.00	1.366

3 Track Bottom with Gutter



Sec	A	B	C	T	Kg/m
7370	92.00	45.50	22.95	1.30	1.416
7550	92.00	45.50	22.95	1.50	1.571

Sliding Window 18mm Series Misc.





Sliding Window 20mm Series

Shutter Top/Bottom

Sec	A	B	T	Kg/m
6770	41.00	20.00	1.20	0.383
6220	41.00	20.00	1.20	0.380
6968	41.00	20.00	1.50	0.472
1471	41.00	20.00	1.60	0.500

Shutter Top/Bottom

Sec	A	B	T	Kg/m
6965	41.00	20.00	1.20	0.460
2437	50.00	19.50	1.50	0.627

Shutter Vertical

Sec	A	B	T	Kg/m
6776	38.0	20.0	1.2	0.398
6222	38.0	20.0	1.5	0.495
1472	38.0	20.0	1.6	0.510

Shutter Interlock

Sec	A	B	T	Kg/m
6775	38.00	20.00	1.20	0.489
6221	38.00	20.00	1.50	0.614
1473	38.00	20.00	1.60	0.610

2 Track Top/Side

Sec	A	B	C	T	Kg/m
6783	61.75	29.50	29.07	1.20	0.640
4042	61.75	29.50	29.00	1.50	0.737
7077	61.98	29.70	24.25	1.25	0.687
6219	61.98	29.70	24.25	1.50	0.785

2 Track Bottom

Sec	A	B	C	T	Kg/m
4648	62.00	29.50	24.20	1.20	0.759
6215	61.98	29.70	25.75	1.50	0.882
7995	61.98	29.70	26.34	1.50	0.896

3 Track Bottom

Sec	A	B	C	T	Kg/m
6772	92.00	29.50	23.99	1.20	1.006
4041	92.00	29.50	29.00	1.25	1.157
6231	92.36	29.70	24.24	1.60	1.239

3 Track Top / Side

Sec	A	B	C	T	Kg/m
6771	92.00	29.50	23.99	1.20	0.876
4040	92.00	29.50	29.00	1.50	1.006
6232	92.36	29.70	24.24	1.60	1.071

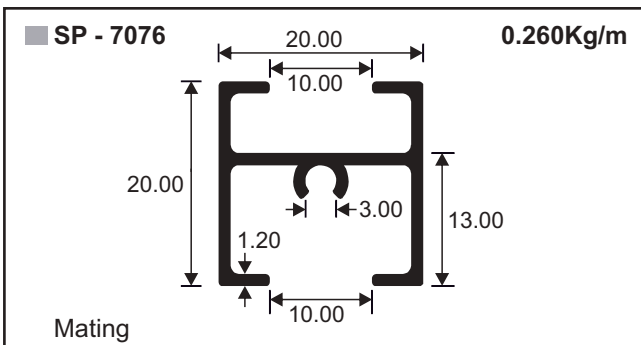
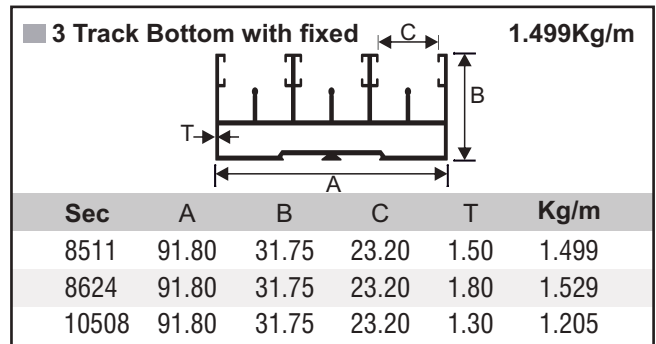
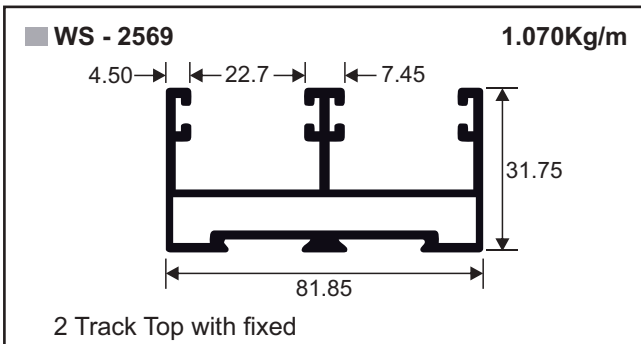
4 Track Top / Side

Sec	A	B	C	T	Kg/m
6773	123.00	29.70	24.25	1.20	1.138
3691	123.00	29.70	24.25	1.50	1.300

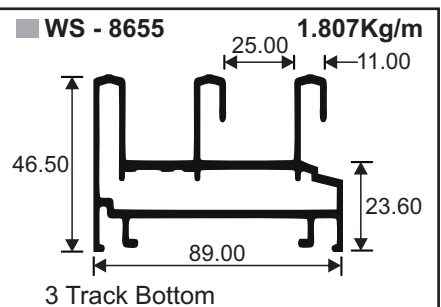
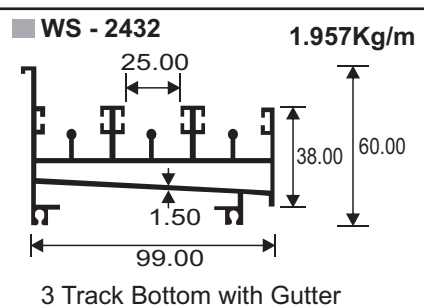
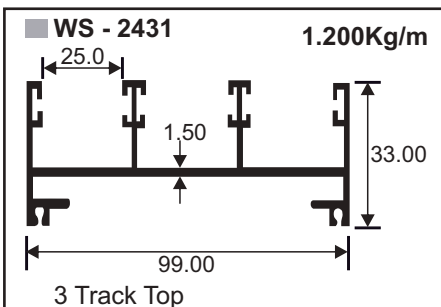
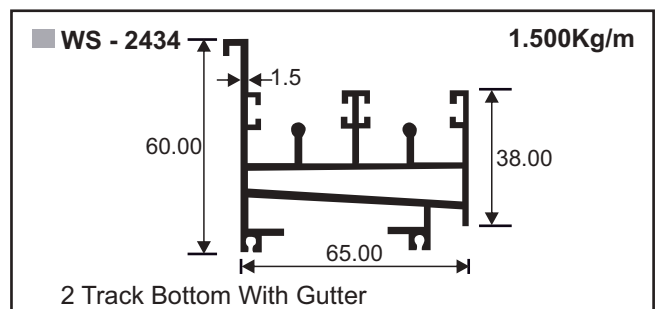
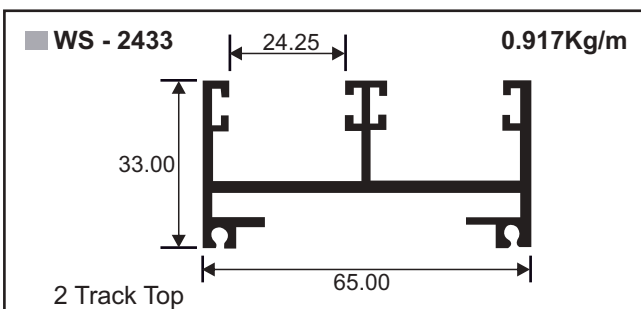
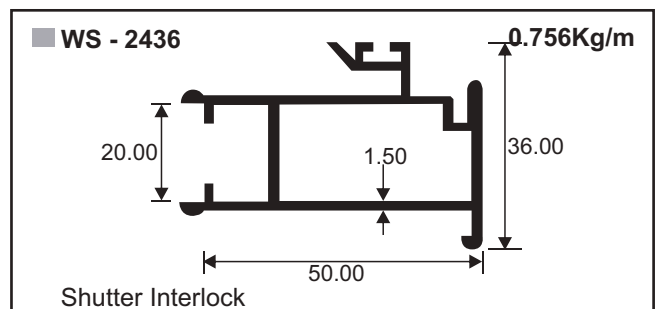
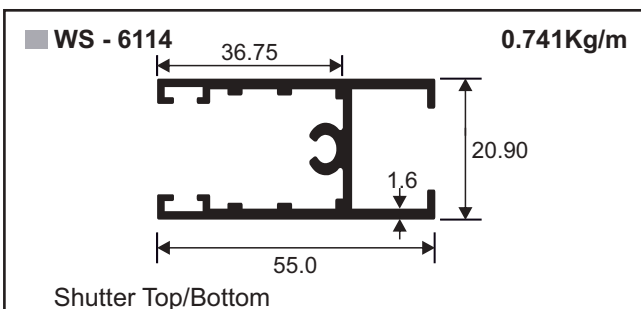
4 Track Bottom

Sec	A	B	C	T	Kg/m
6774	123.00	29.70	24.25	1.20	1.303
3692	123.00	29.70	24.25	1.50	1.474

Sliding Window 20mm Series



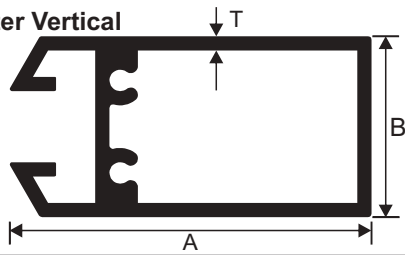
Sliding Window 20mm Series Misc.





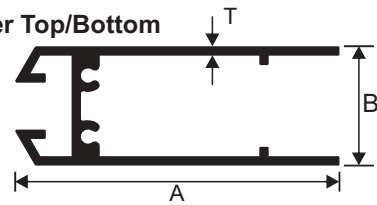
Sliding Window 25mm Series I

■ Shutter Vertical



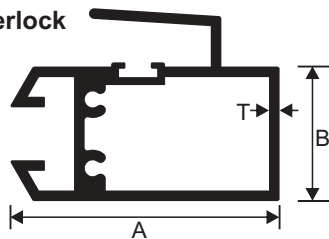
Sec	A	B	T	Kg/m
8355	50.00	25.00	1.20	0.579
5929	50.80	25.40	2.00	0.964
7535	50.80	25.40	2.00	1.014

■ Shutter Top/Bottom



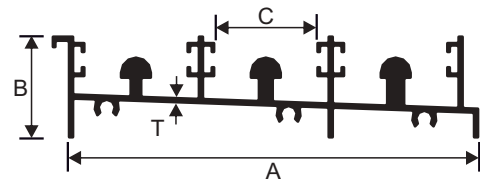
Sec	A	B	T	Kg/m
8354	60.00	25.00	1.20	0.646
5942	64.00	25.00	1.80	0.940
5930	69.00	25.40	2.00	1.067
7532	69.00	25.40	2.00	1.119

■ Shutter Interlock



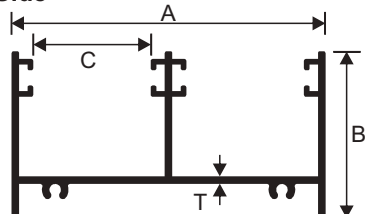
Sec	A	B	T	Kg/m
8356	50.00	25.00	1.20	0.637
5925	50.80	25.40	2.00	1.159
7536	50.80	25.40	2.00	1.228

■ 3 Track Bottom



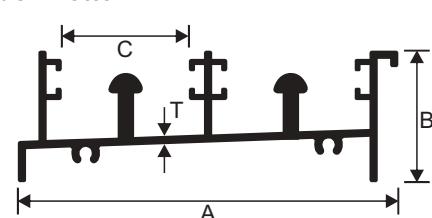
Sec	A	B	C	T	Kg/m
5931	132.90	32.00	31.00	2.00	1.93
7533	128.00	32.00	38.40	2.00	2.504
6794	128.00	32.00	39.15	1.63	2.246

■ 2 Track Top/Side



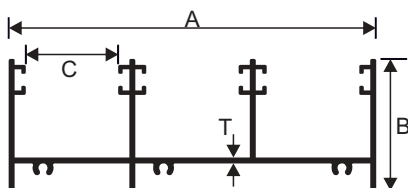
Sec	A	B	C	T	Kg/m
5927	82.80	44.00	31.00	2.00	1.336
6791	82.80	44.00	31.00	1.50	1.083
8017	82.80	44.00	38.40	2.00	1.361

■ 2 Track Bottom



Sec	A	B	C	T	Kg/m
5926	92.60	32.00	31.00	2.00	1.391
6792	92.60	32.00	39.15	1.63	1.558
8015	92.60	32.00	38.40	2.00	1.709

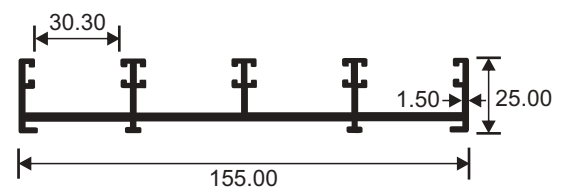
■ 3 Track Top / Side



Sec	A	B	C	T	Kg/m
5928	123.20	44.00	31.00	2.00	1.909
7534	123.20	44.00	38.40	2.00	1.954

■ WS - 5934

1.597Kg/m



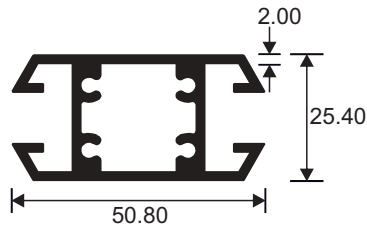
4 Track Top

Sliding Window 25mm Series I



■ WS - 5939

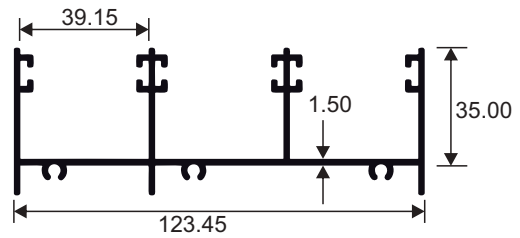
1.145Kg/m



Shutter

■ WS - 6793

1.552Kg/m

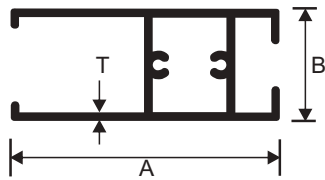


Shutter

Sliding Window 25mm Series II

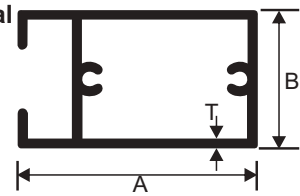


■ Shutter Top/Bottom



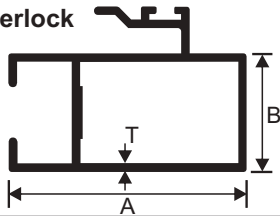
Sec	A	B	T	Kg/m
5921	60.00	25.00	1.25	0.678
5941	60.00	25.00	1.45	0.783

■ Shutter Vertical



Sec	A	B	T	Kg/m
5940	43.00	25.00	1.30	0.557
5918	43.00	25.00	1.70	0.714
5924	50.00	25.00	1.20	0.593
8523	50.00	25.00	1.50	0.701

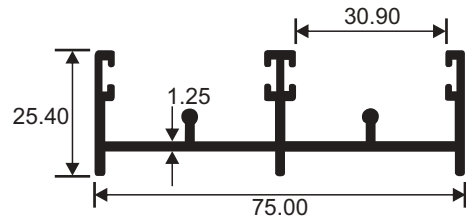
■ Shutter Interlock



Sec	A	B	T	Kg/m
7157	43.00	25.00	1.30	0.640
5949	43.00	25.00	1.70	0.797
5932	50.00	25.00	1.30	0.689
8524	50.00	25.00	1.50	0.814

■ WS - 5919

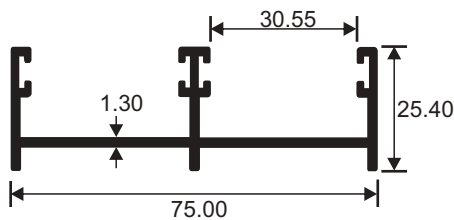
0.667Kg/m



2 Track Bottom

■ WS - 5920

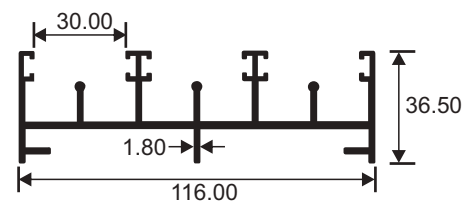
0.724Kg/m



2 Track Top / Side

■ WS - 5922

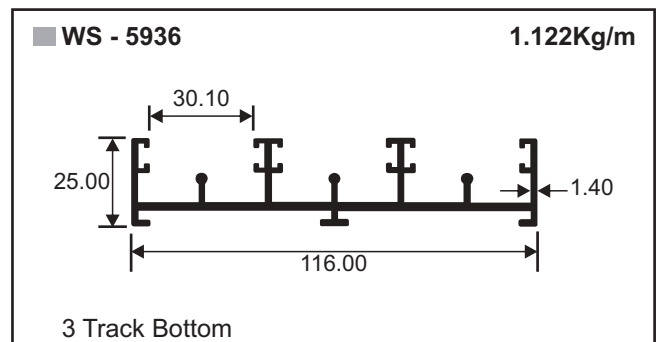
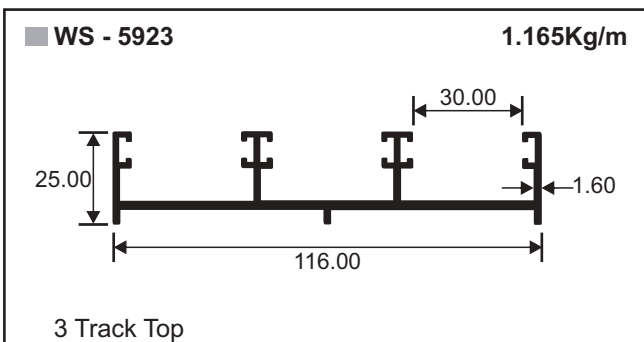
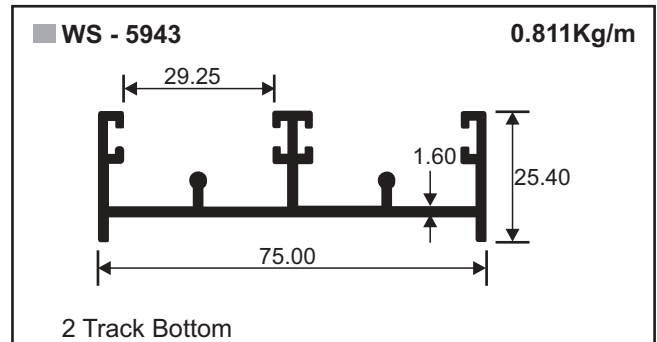
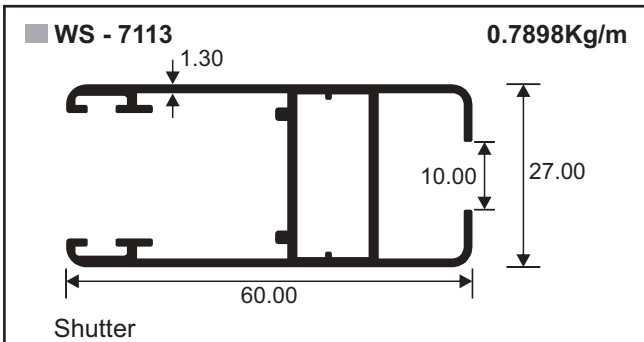
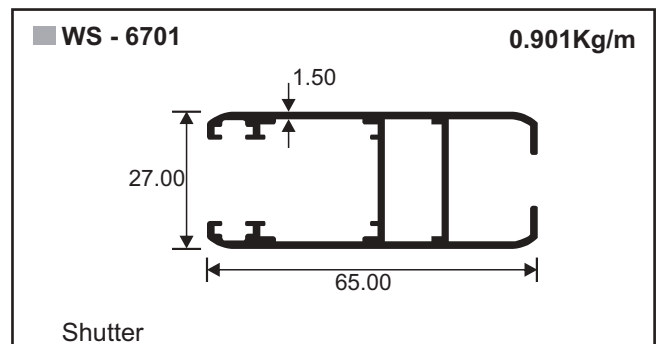
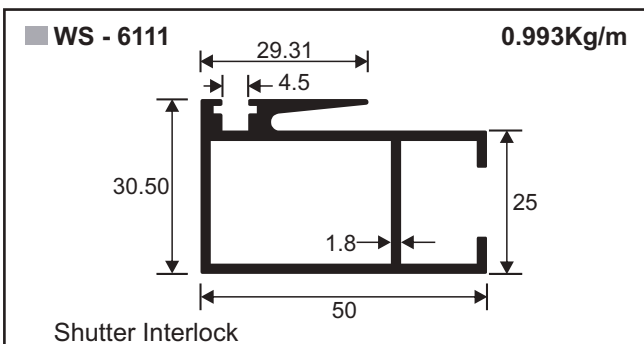
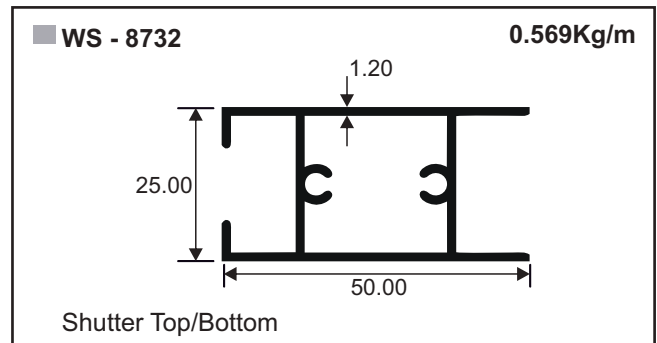
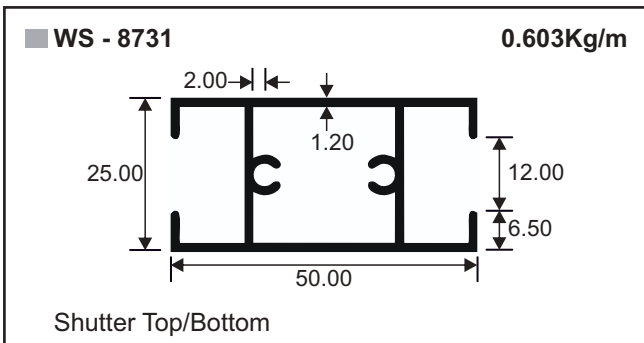
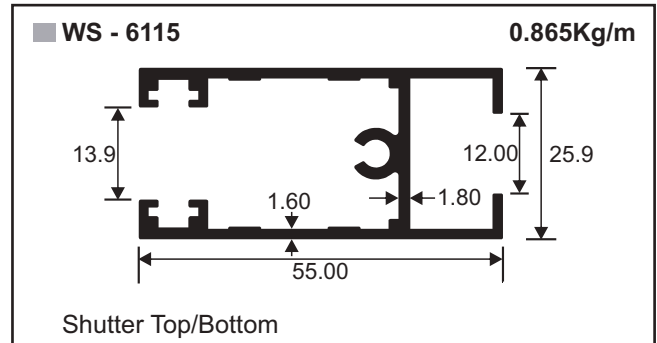
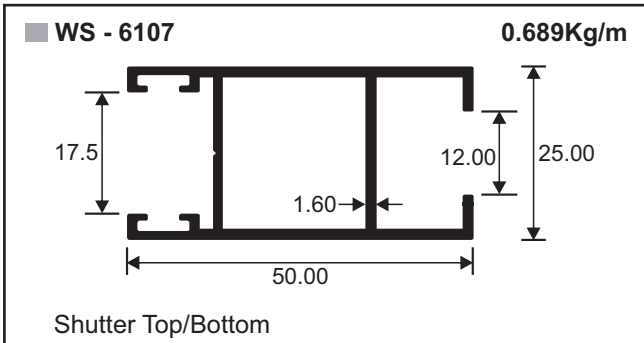
1.673Kg/m



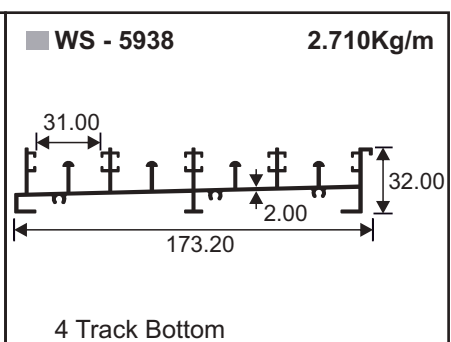
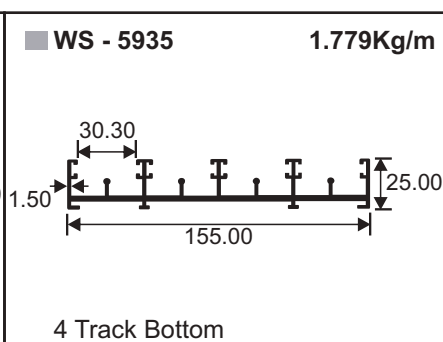
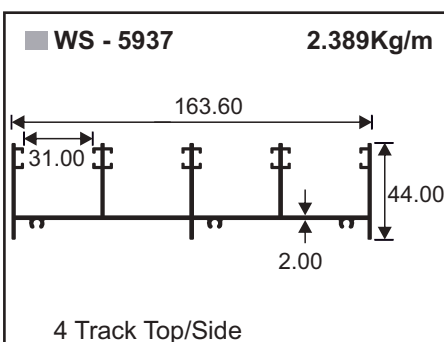
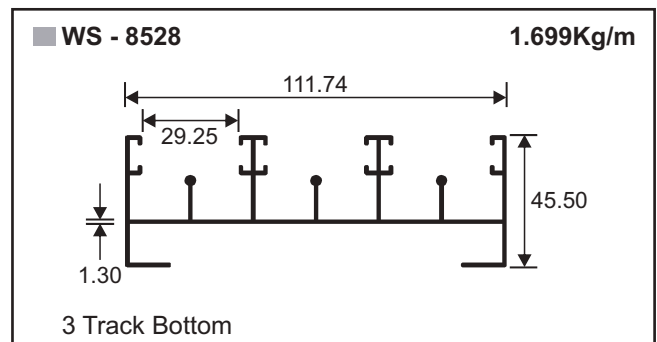
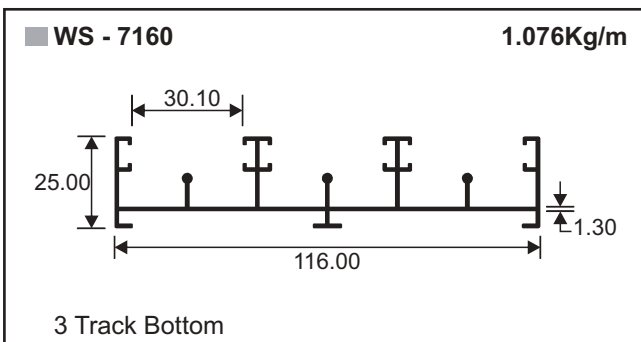
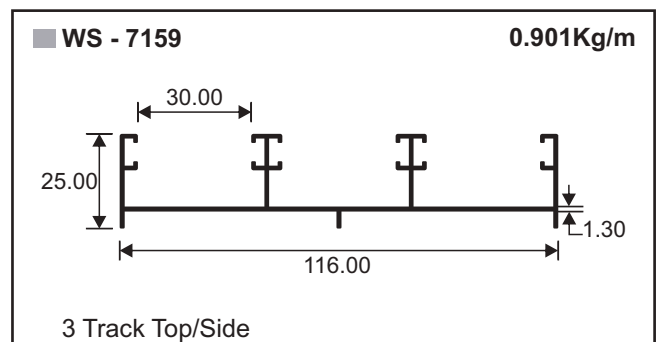
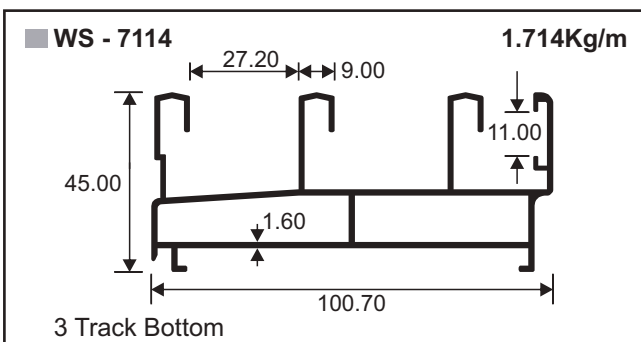
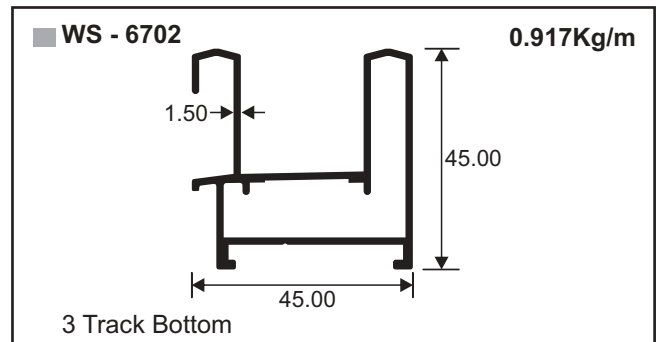
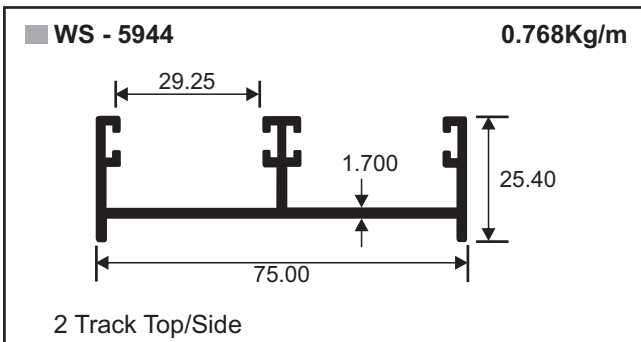
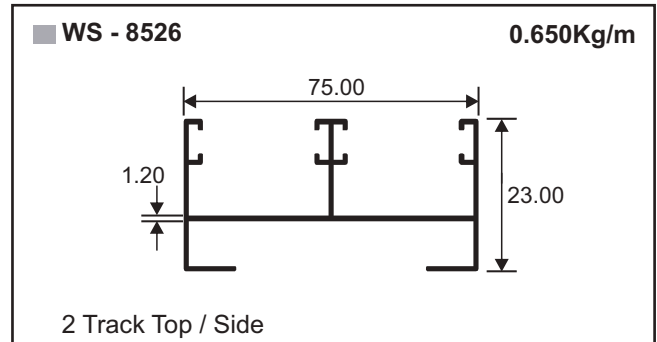
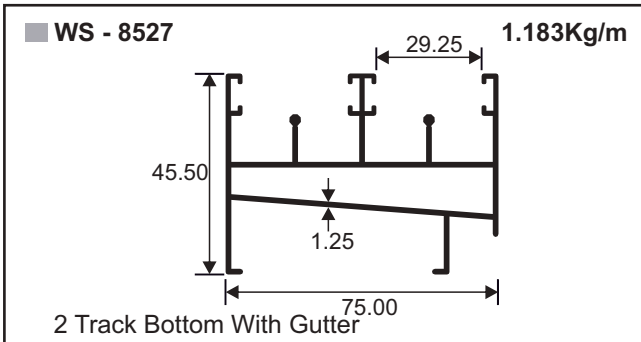
3 Track Bottom



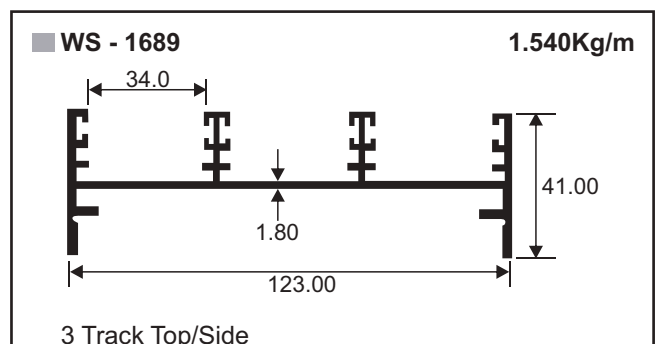
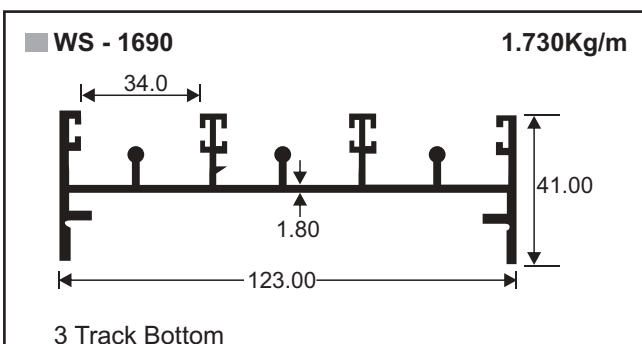
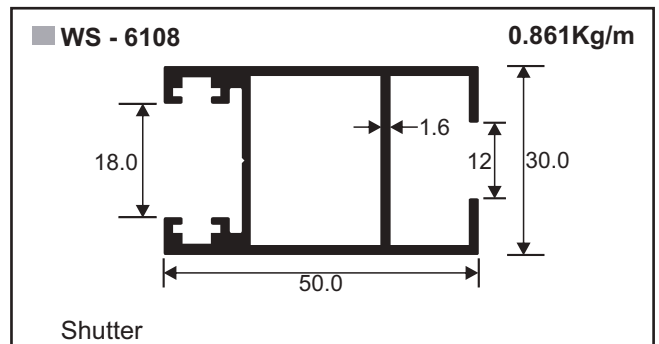
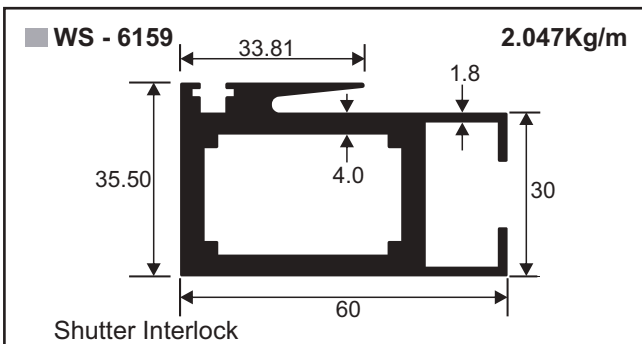
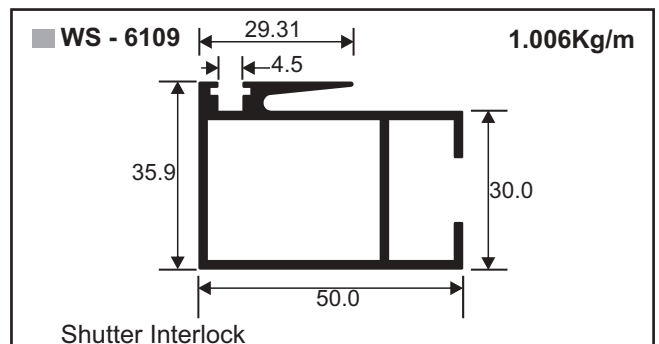
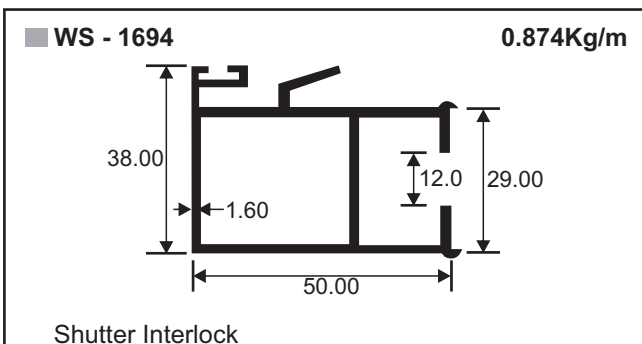
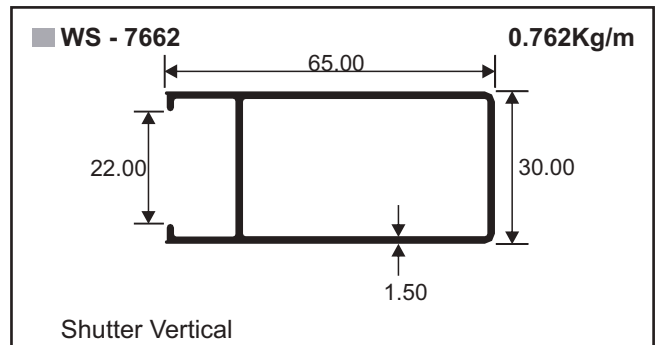
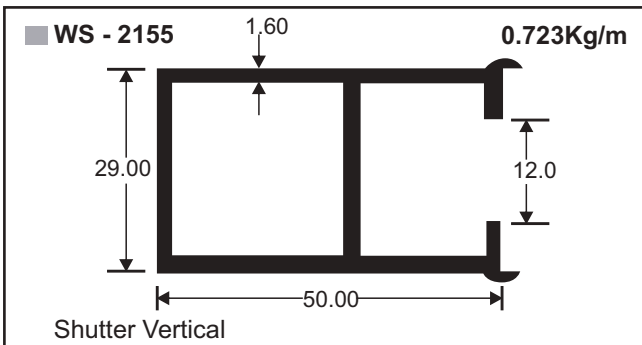
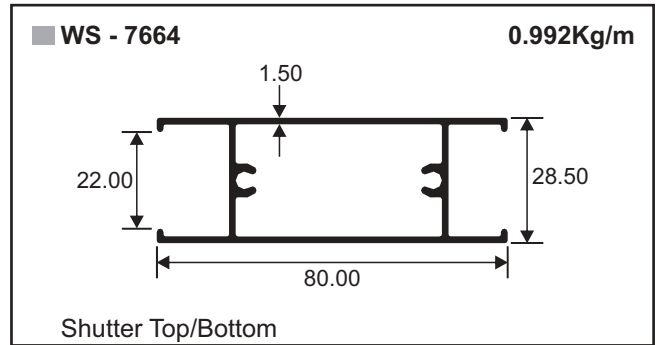
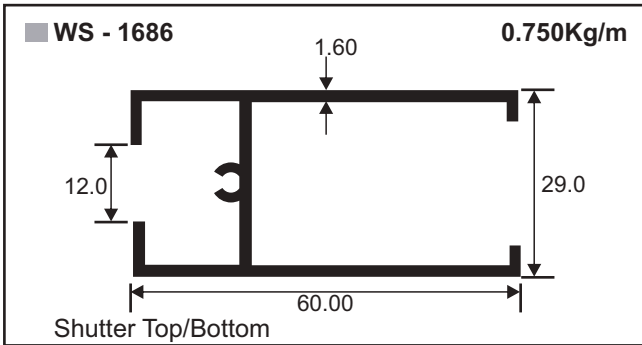
Sliding Window 25mm Series II



Sliding Window 25mm Series II



Sliding Window 30mm Series

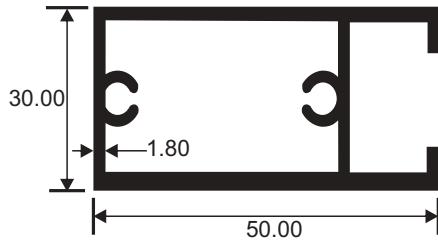




Sliding Window 30mm Series

■ WS - 8522

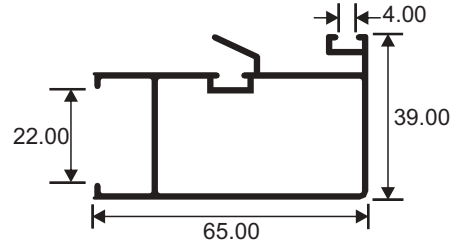
0.814Kg/m



Shutter Vertical

■ WS - 7663

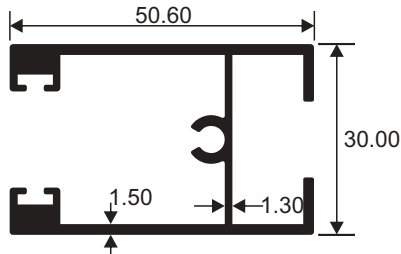
0.961Kg/m



Shutter Interlock

■ WS - 8489

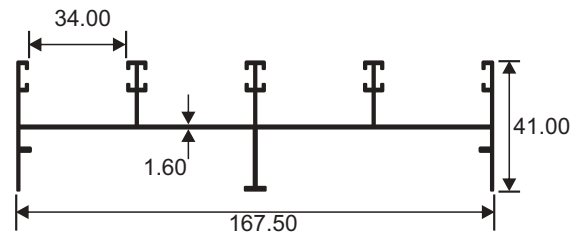
0.696Kg/m



Shutter

■ WS - 7665

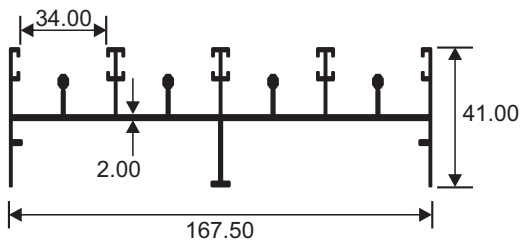
1.746Kg/m



4 Track Top/Side

■ WS - 7666

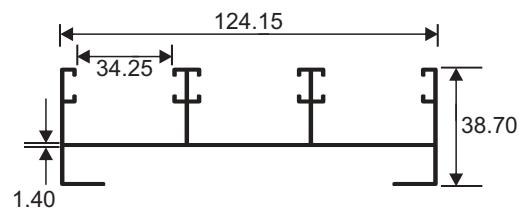
2.298Kg/m



4 Track Bottom

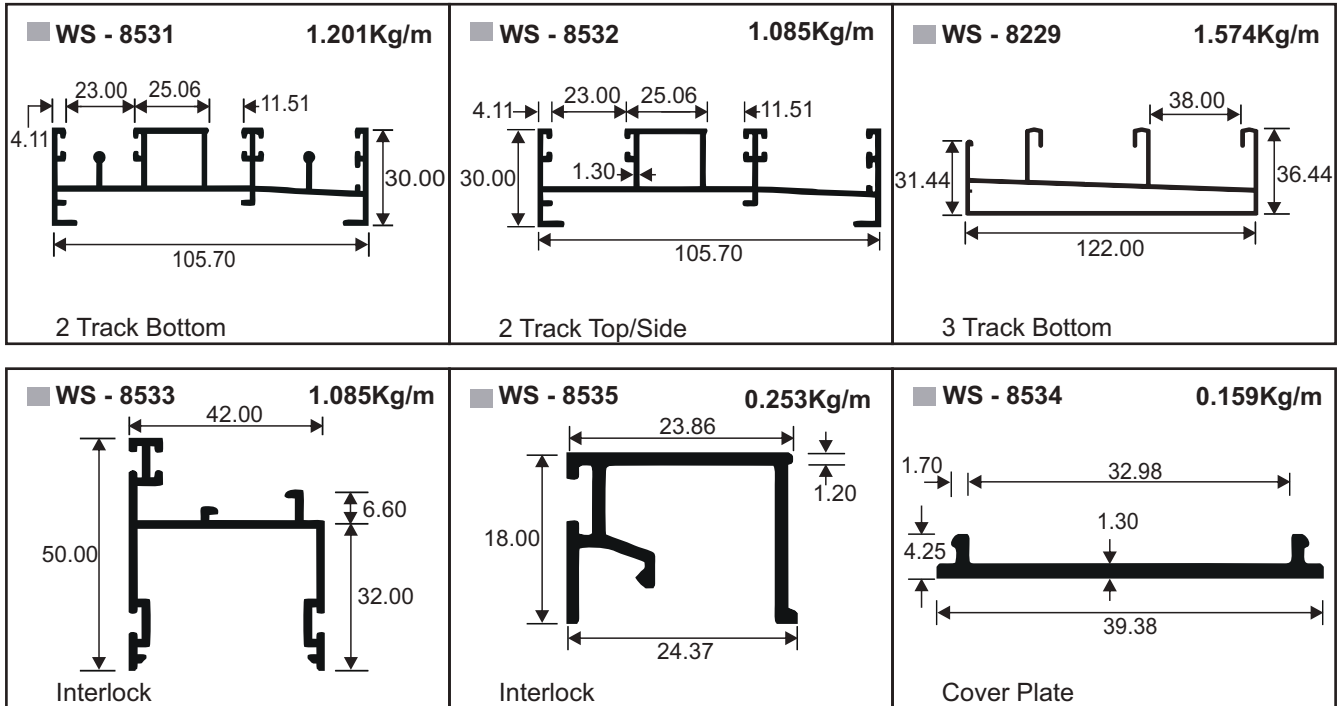
■ WS - 8530

1.206Kg/m

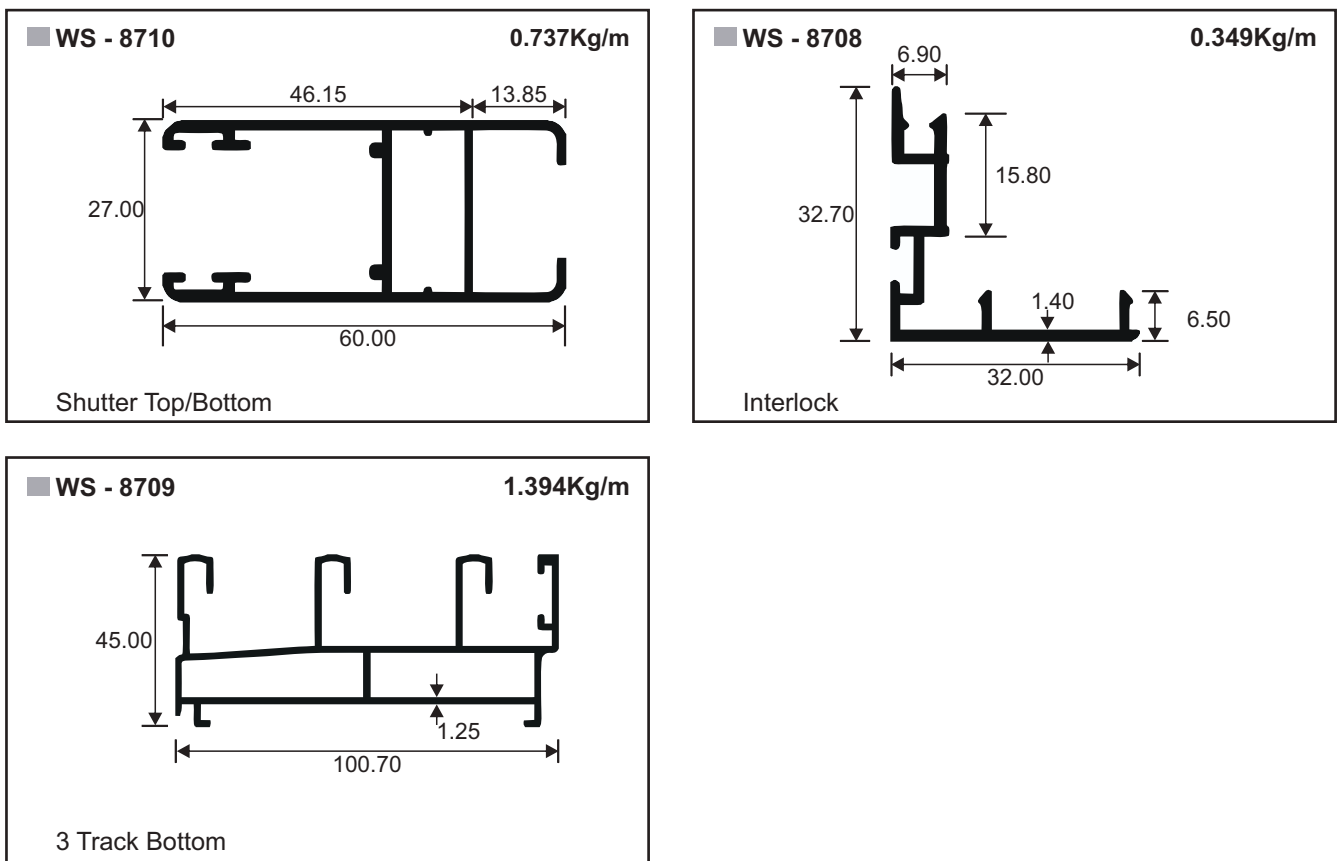


3 Track Top / Side

Sliding Window Series A



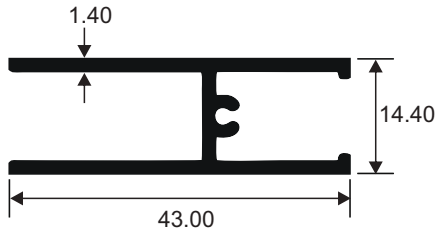
Sliding Window Series B





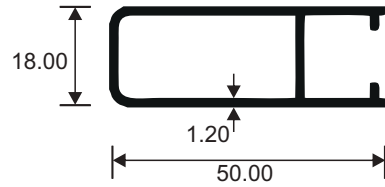
Sliding Window Series C

■ WS - 8700 0.396Kg/m



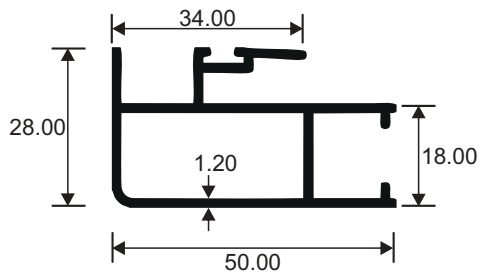
Shutter Top/Bottom

■ WS-8698 0.437Kg/m



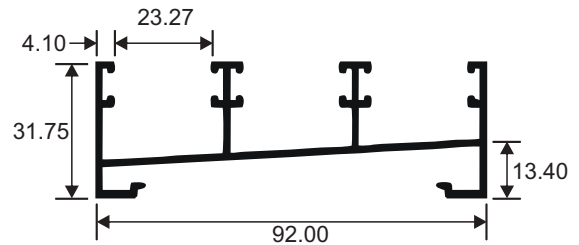
Shutter Vertical

■ WS - 8699 0.584Kg/m



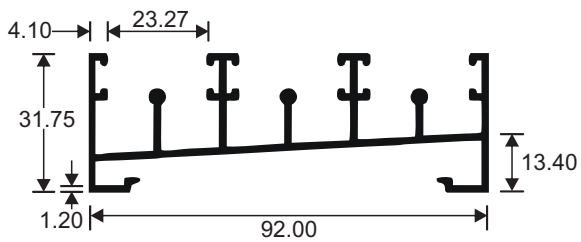
Shutter Interlock

■ WS - 8701 0.869Kg/m



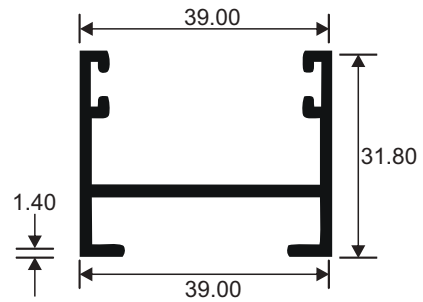
3 Track Top/Side

■ WS - 8702 1.038Kg/m



3 Track Bottom

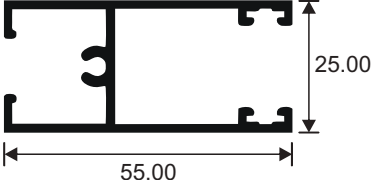
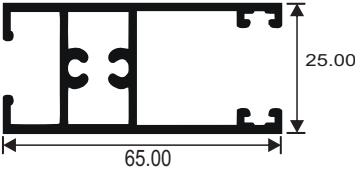
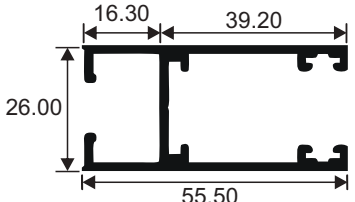
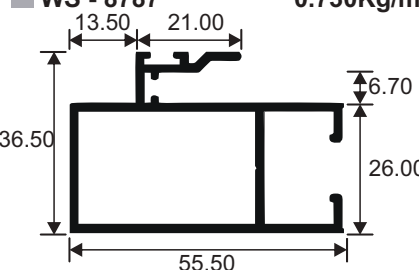
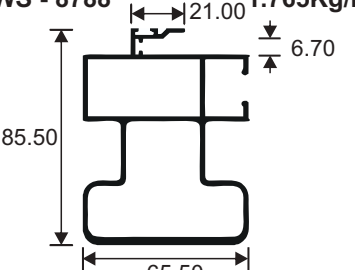
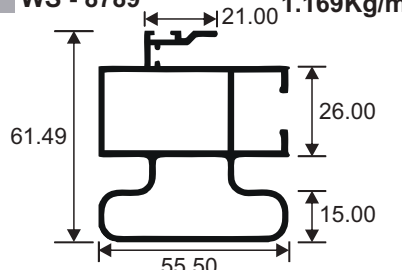
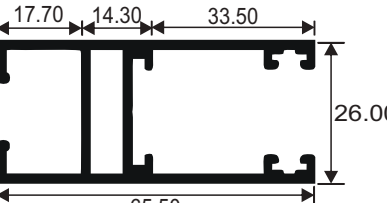
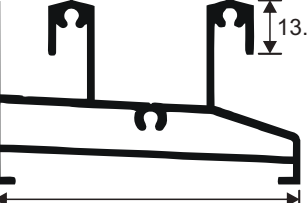
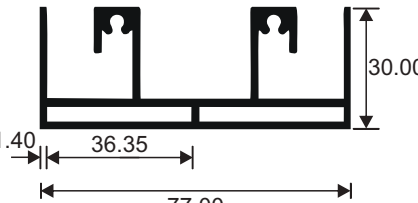
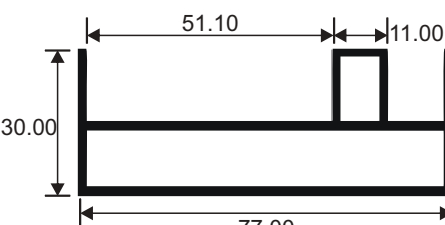
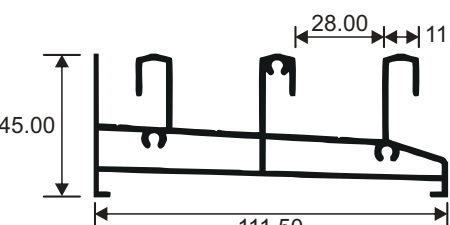
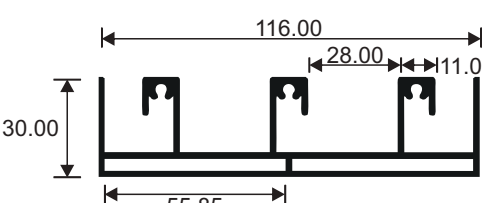
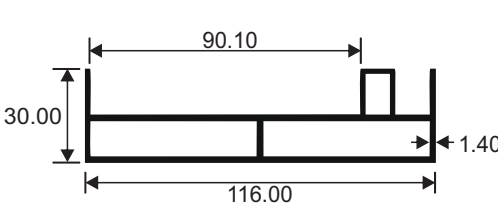
■ WS - 8704 0.473Kg/m



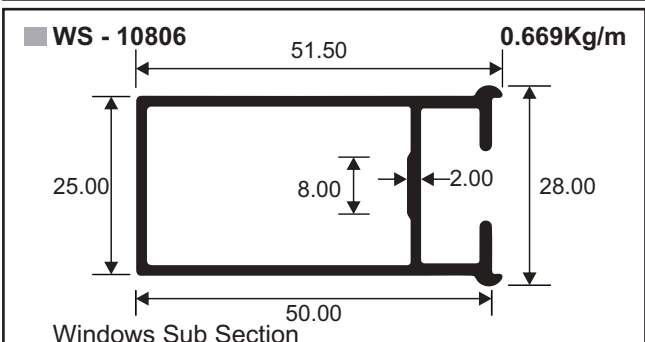
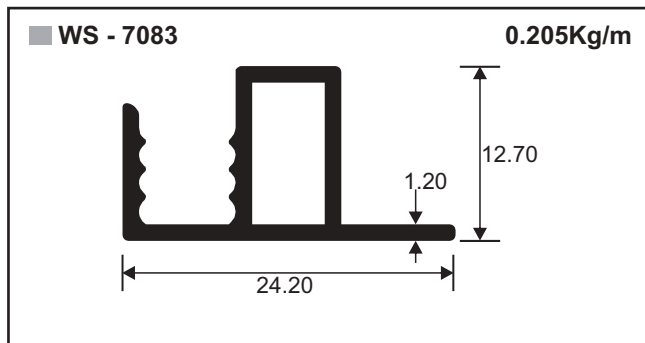
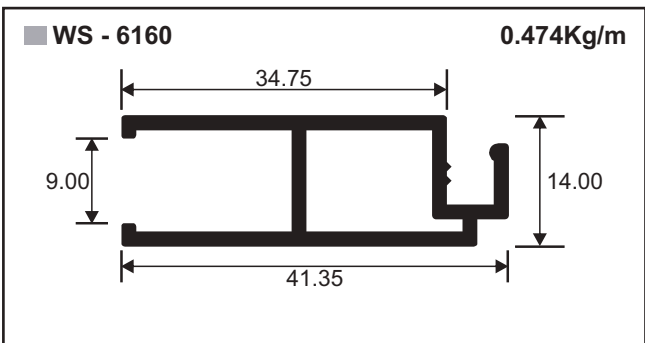
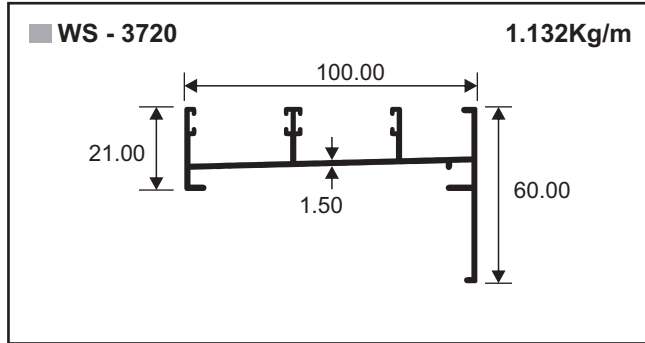
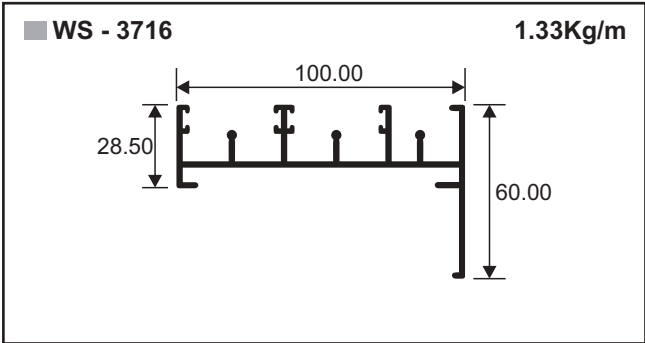
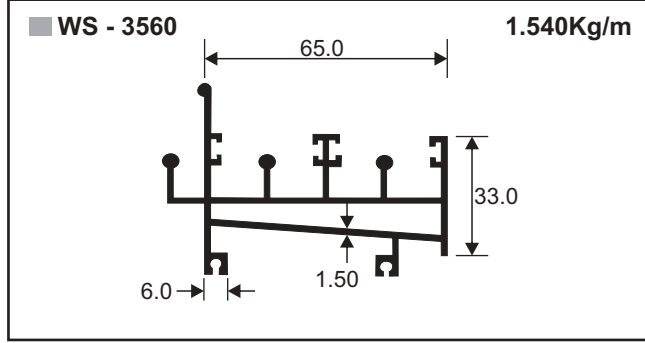
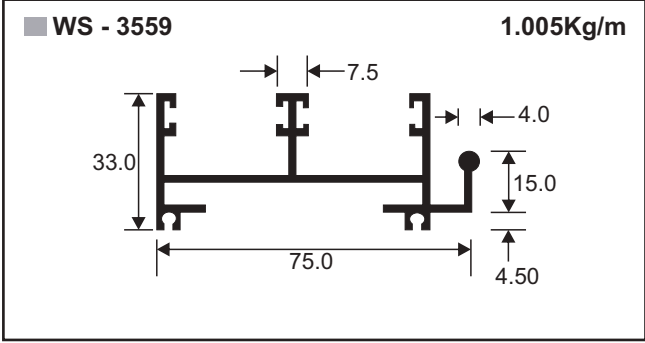
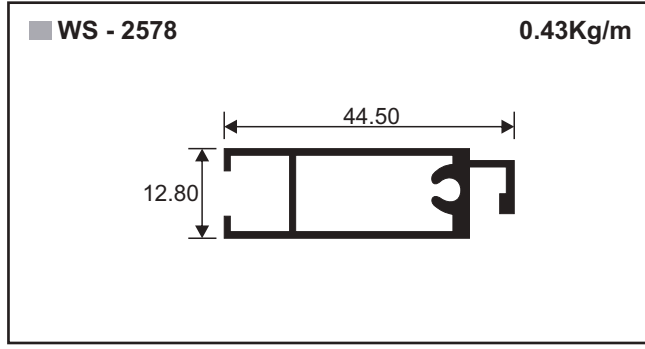
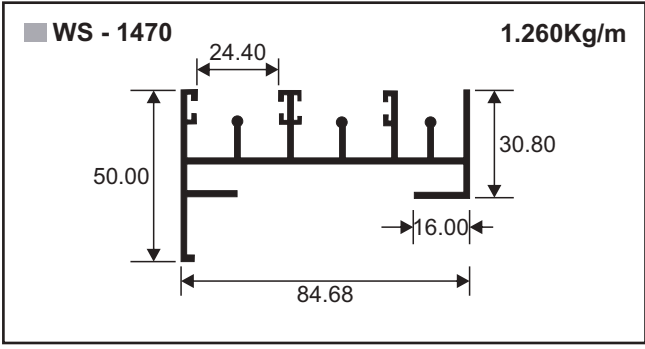
H Middle Section



Sliding Window Series D

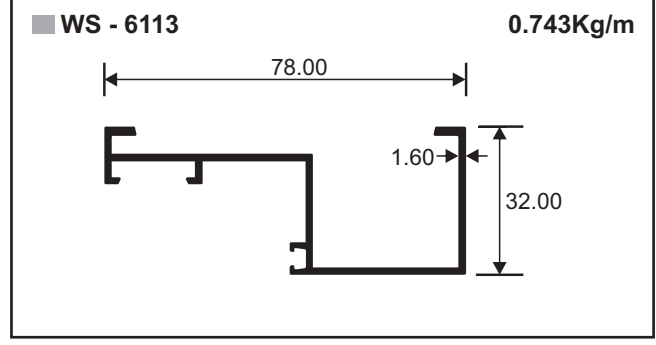
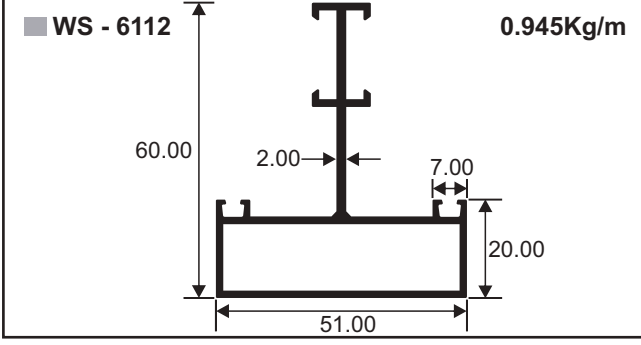
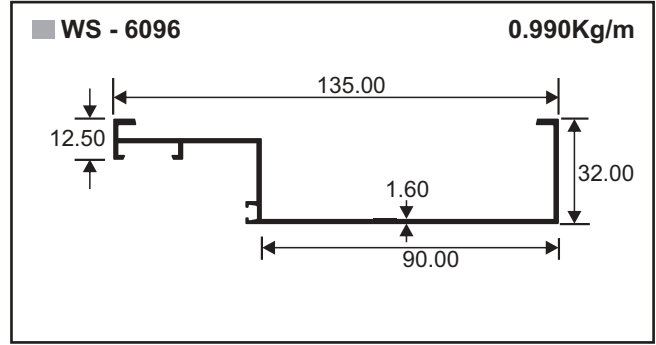
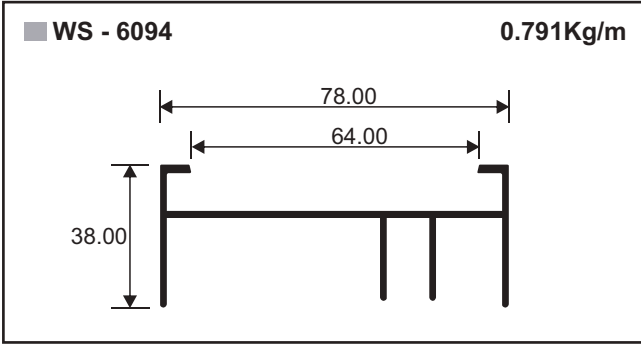
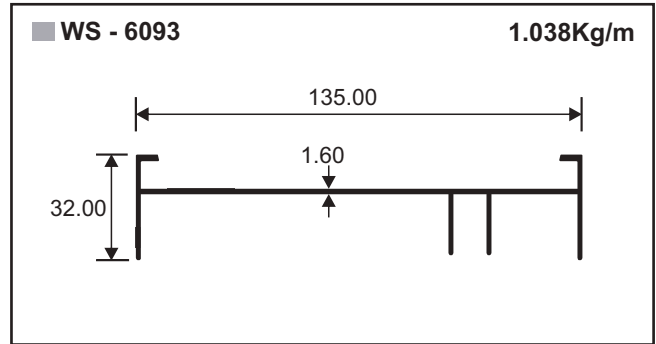
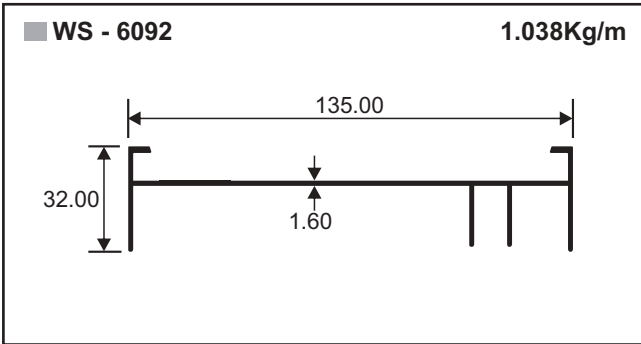
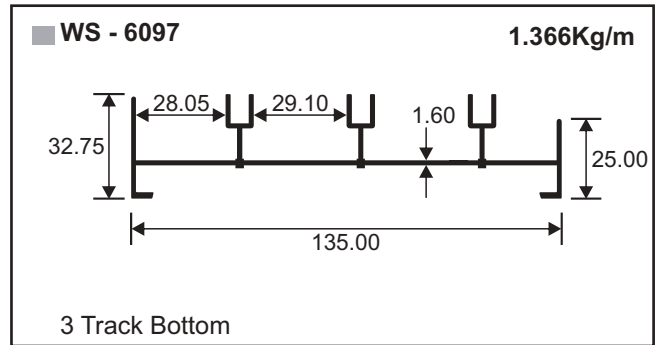
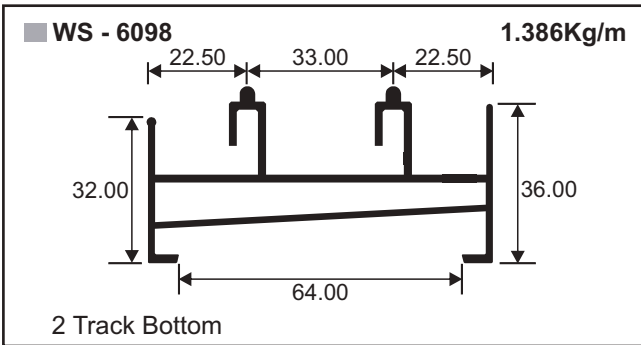
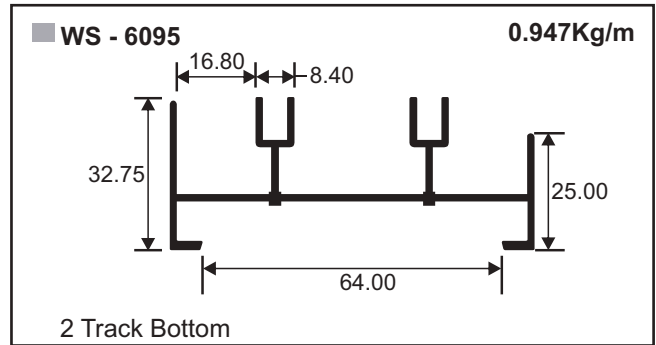
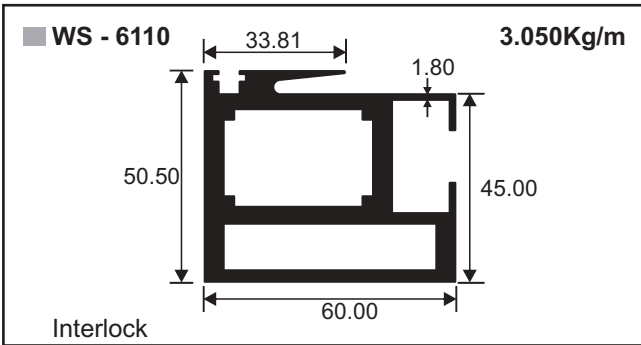
<p>■ WS - 8783 0.608Kg/m</p>  <p>Shutter Top/Bottom</p>	<p>■ WS - 8784 0.837Kg/m</p>  <p>Shutter Top/Bottom</p>	<p>■ WS - 8786 0.676Kg/m</p>  <p>Shutter Top/Bottom</p>
<p>■ WS - 8787 0.730Kg/m</p>  <p>Shutter Interlock</p>	<p>■ WS - 8788 1.765Kg/m</p>  <p>Shutter Interlock Big</p>	<p>■ WS - 8789 1.169Kg/m</p>  <p>Shutter Interlock Big</p>
<p>■ WS - 8785 0.862Kg/m</p>  <p>Shutter</p>	<p>■ WS - 8780 1.248Kg/m</p>  <p>2 Track Bottom</p>	<p>■ WS - 8781 1.251Kg/m</p>  <p>2 Track Top</p>
<p>■ WS - 8782 0.957Kg/m</p>  <p>2 Track Side</p>	<p>■ WS - 8777 1.738Kg/m</p>  <p>3 Track Bottom</p>	
<p>■ WS - 8778 1.767Kg/m</p>  <p>3 Track Top</p>	<p>■ WS - 8779 1.323Kg/m</p>  <p>3 Track Side</p>	

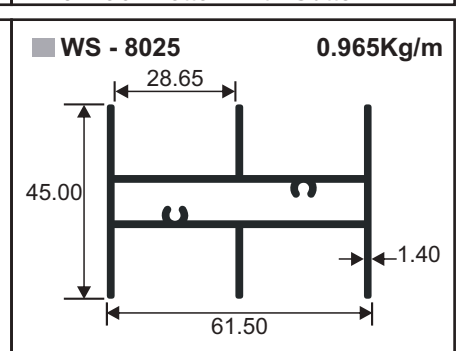
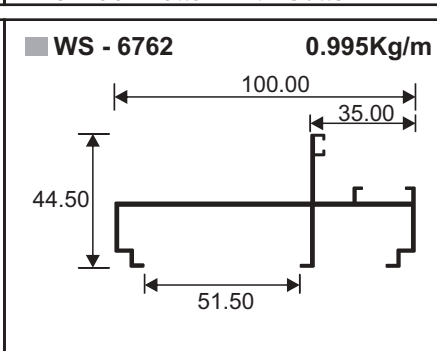
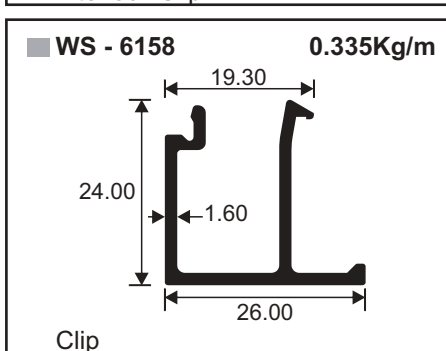
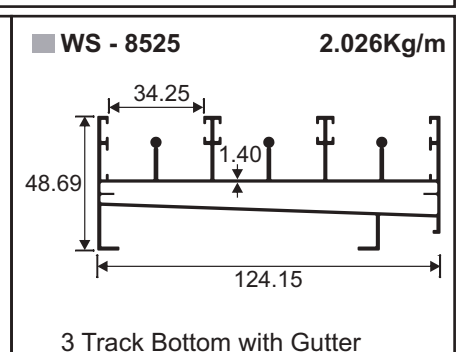
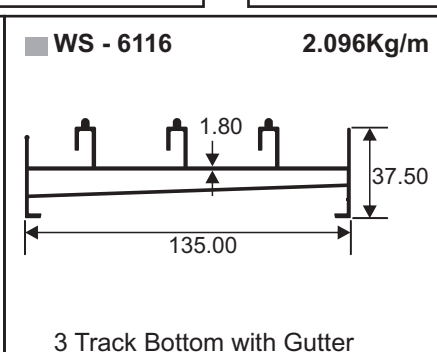
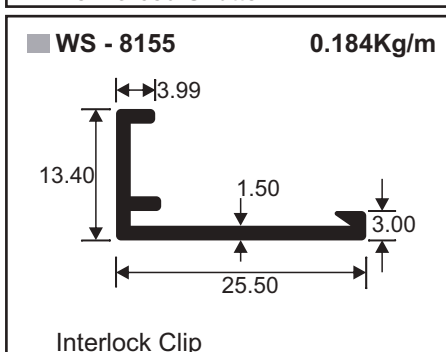
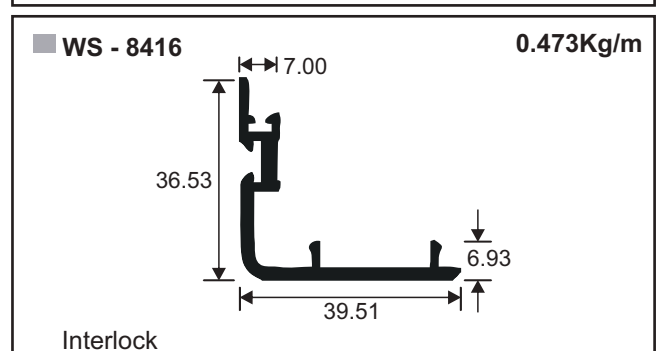
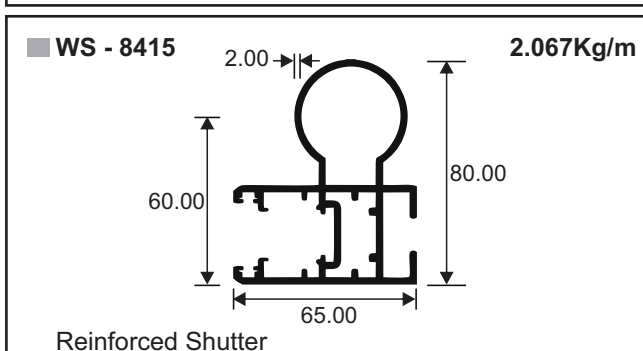
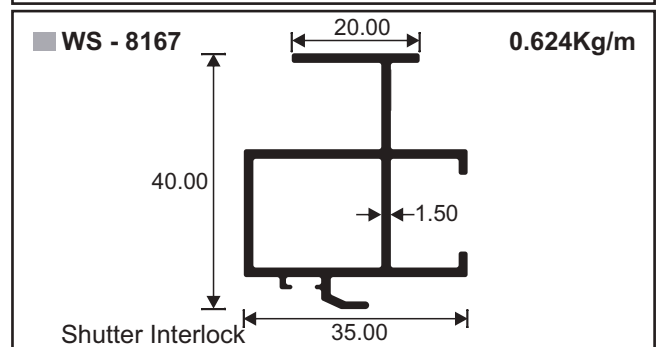
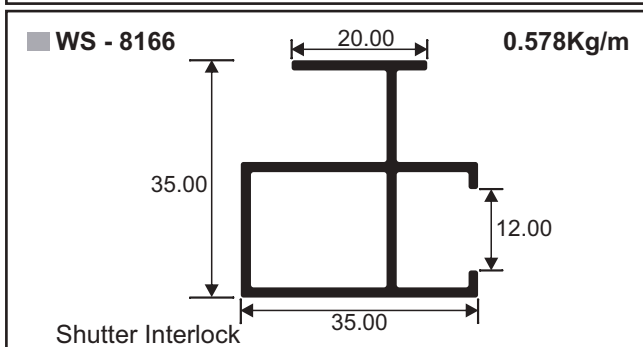
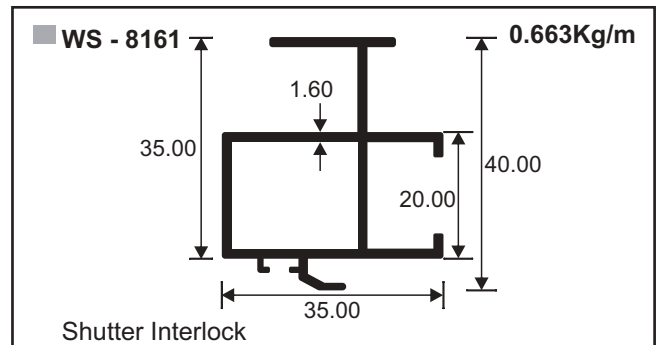
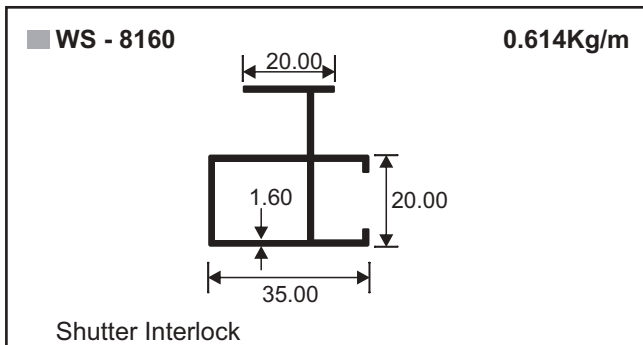
Sliding Window Fly Mesh Track





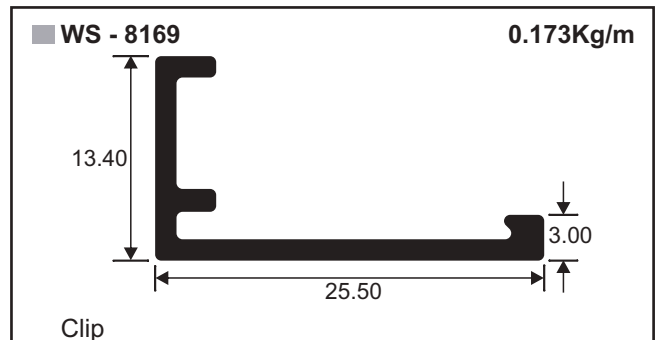
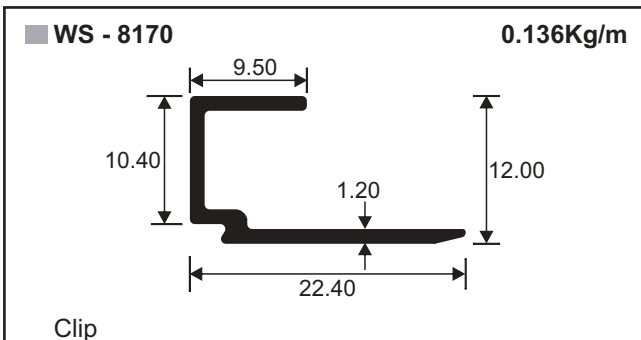
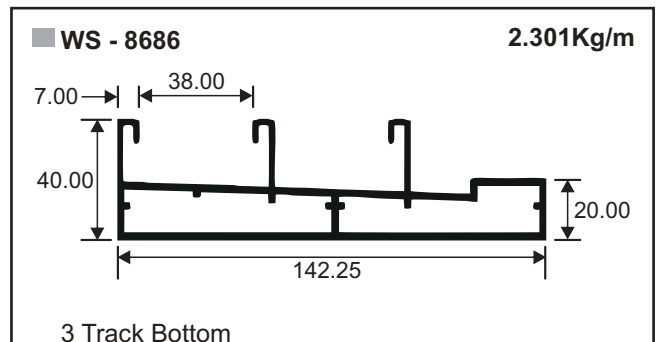
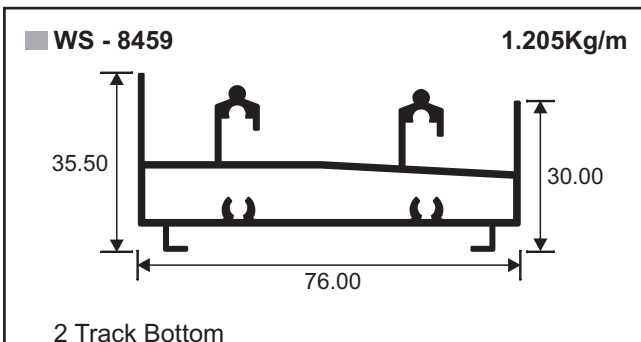
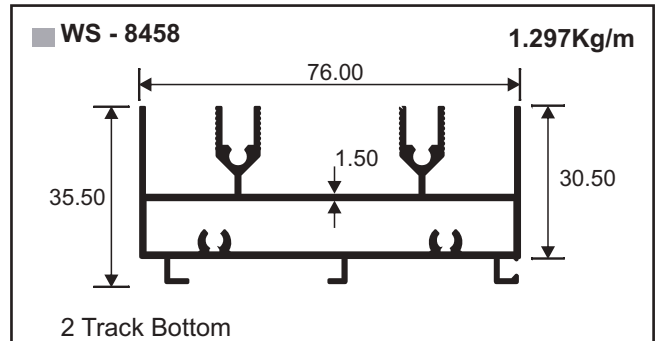
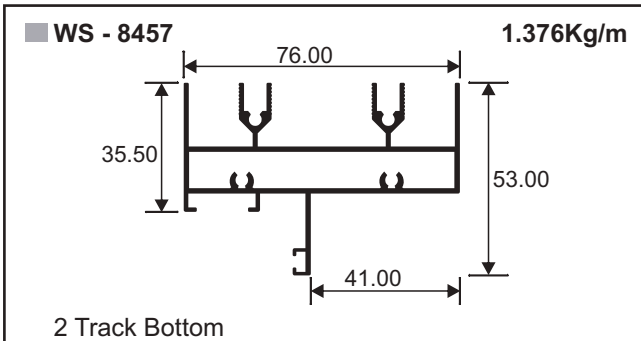
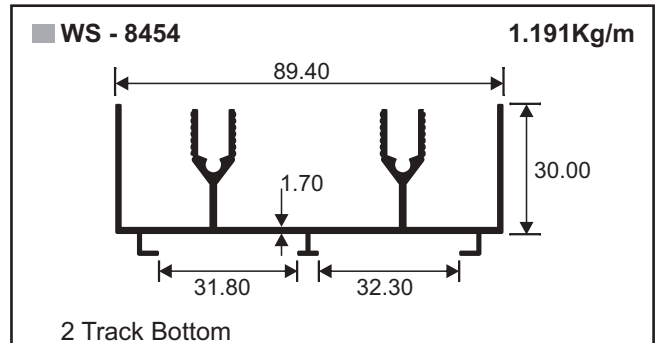
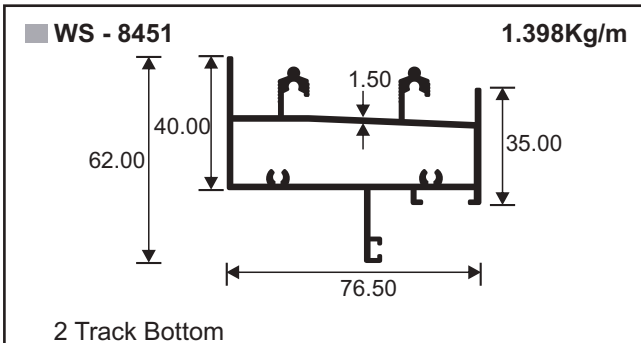
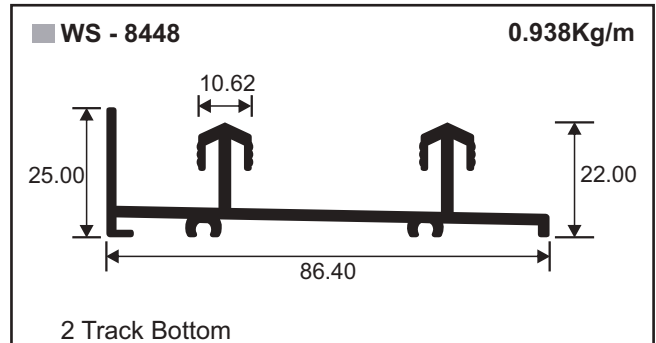
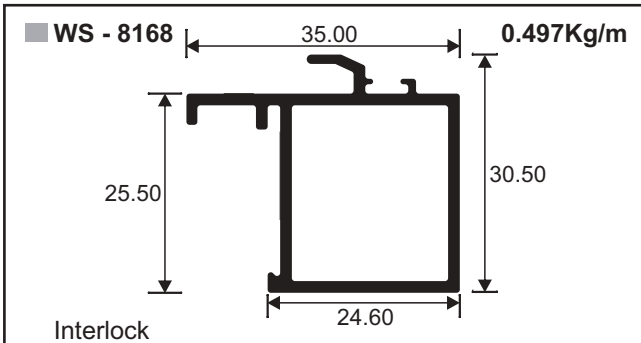
Sliding Window Misc.



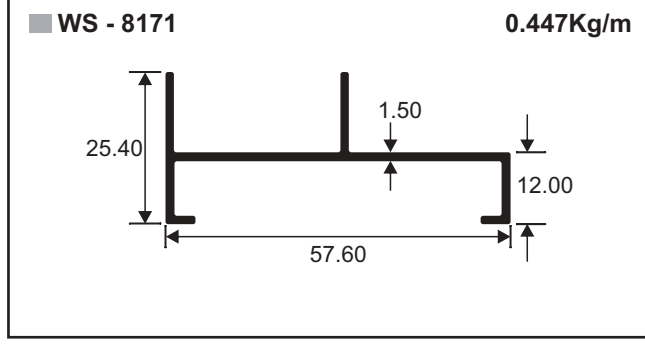
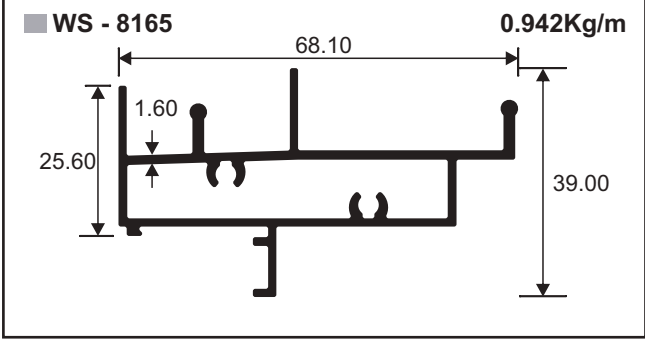
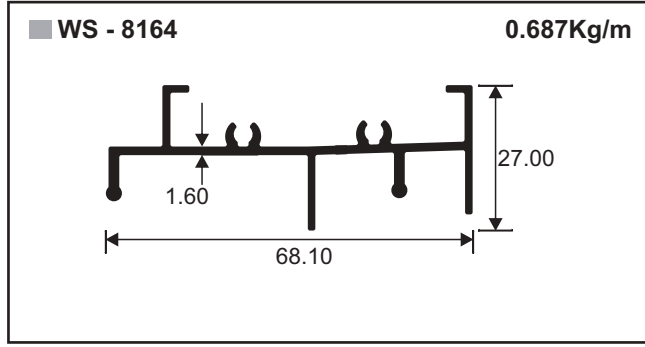
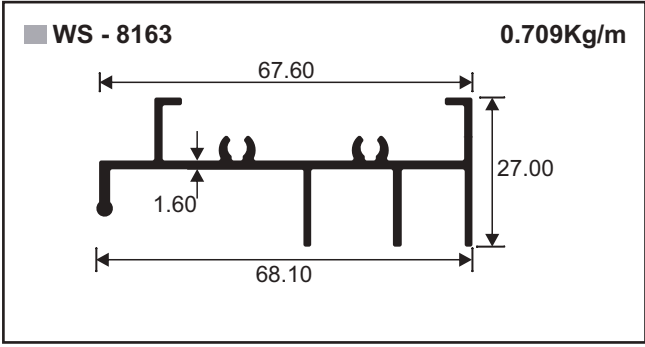
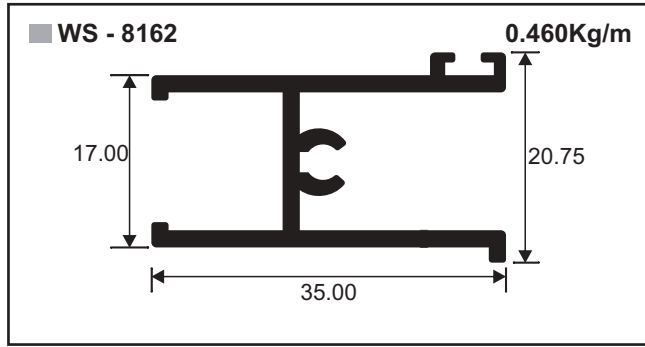
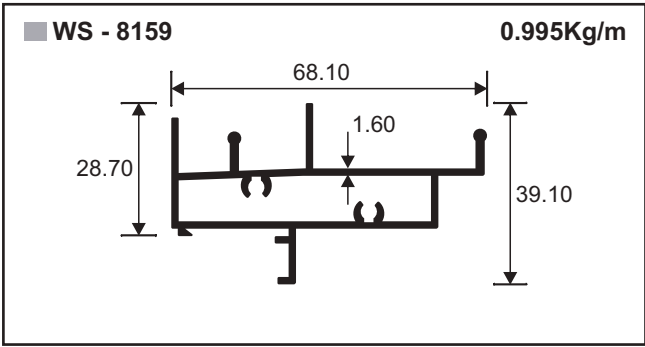
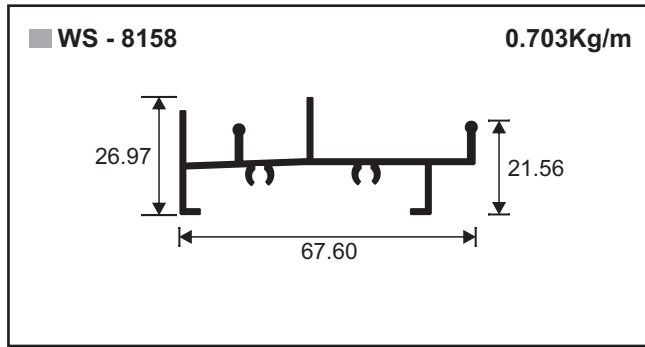
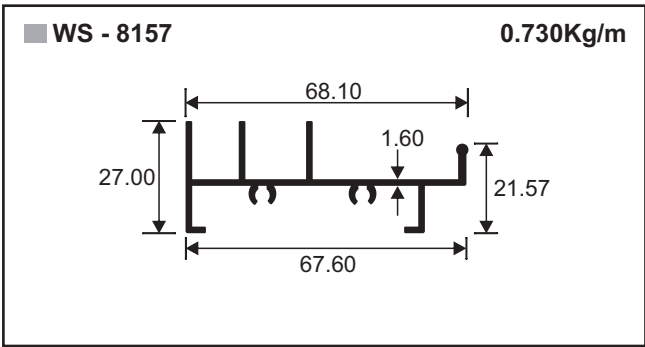
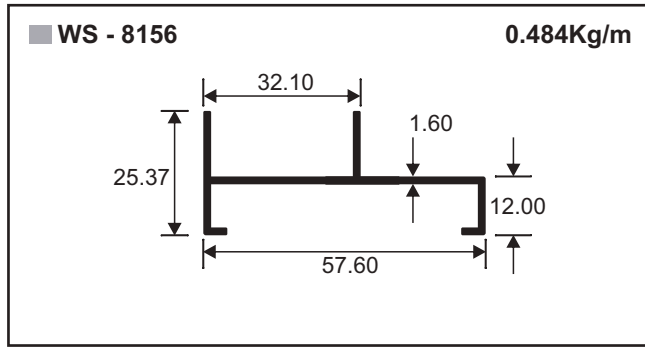
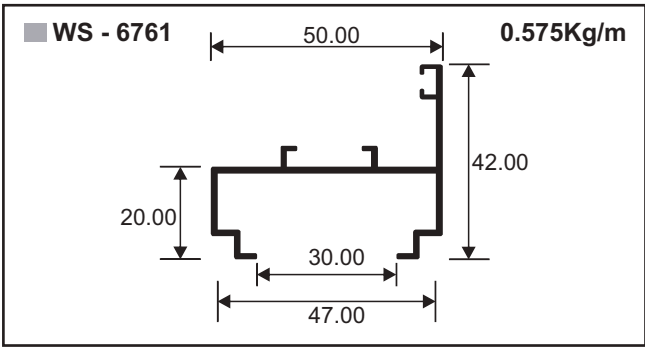




Sliding Window Misc.

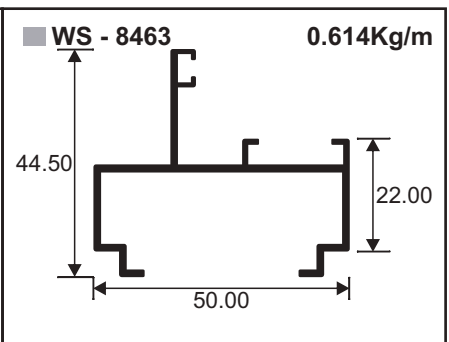
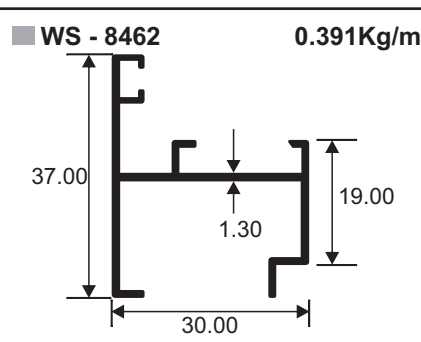
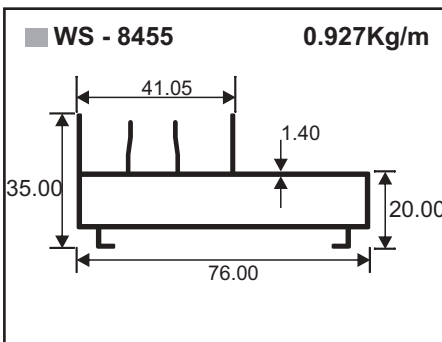
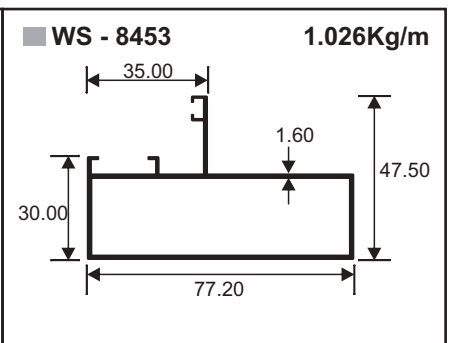
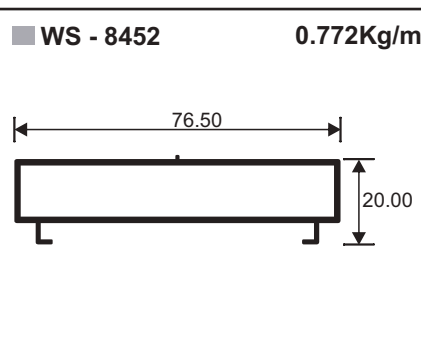
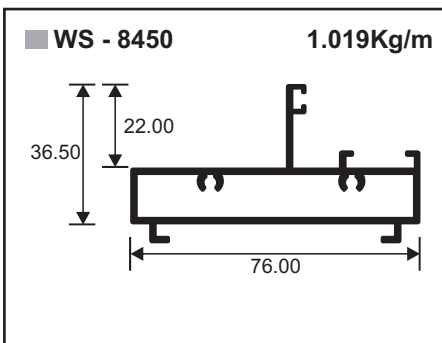
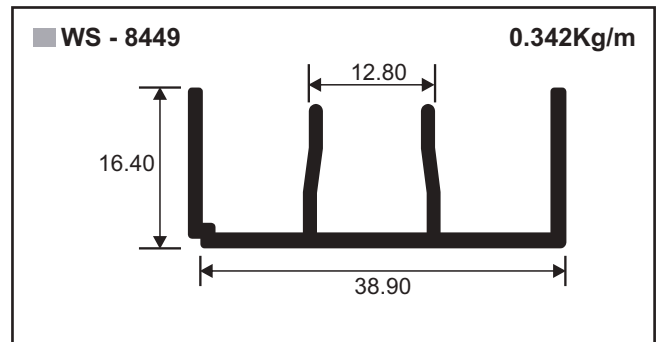
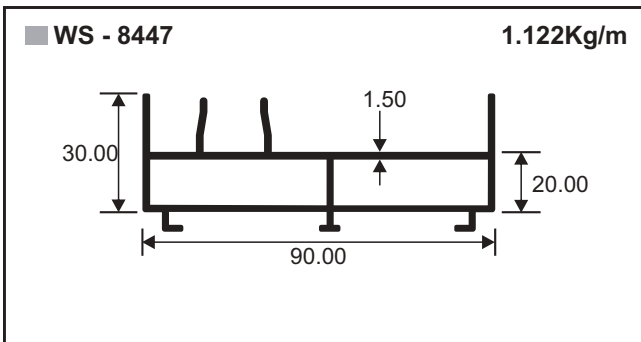
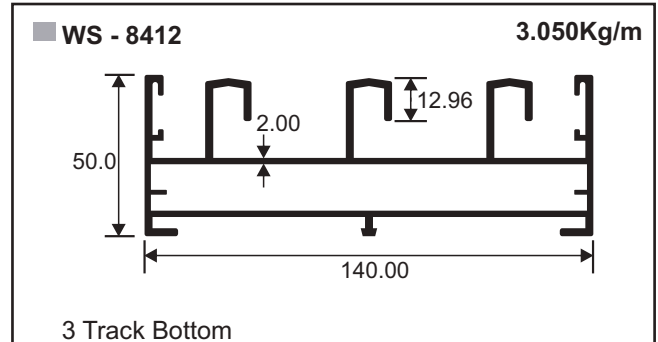
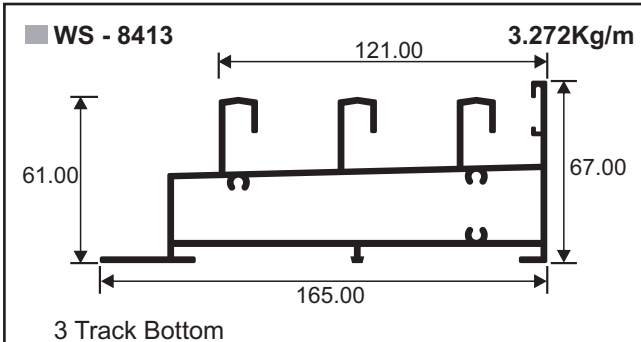
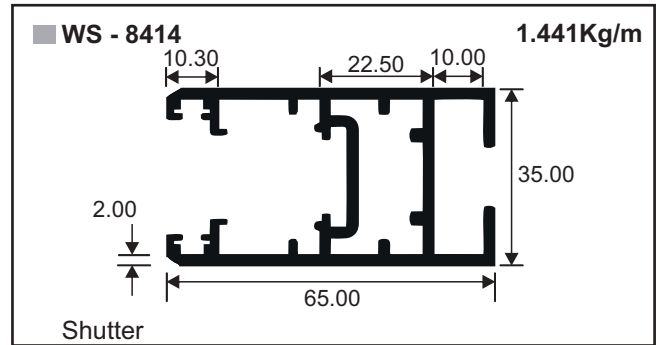
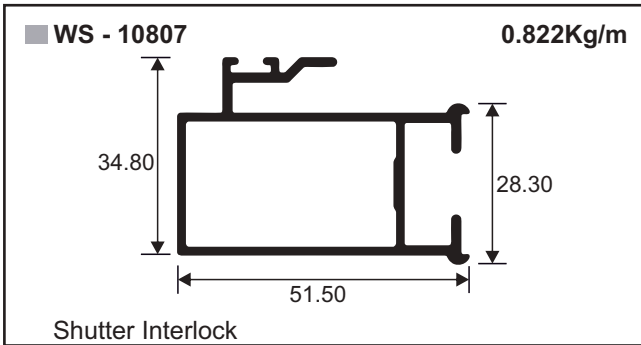


Sliding Window Misc.

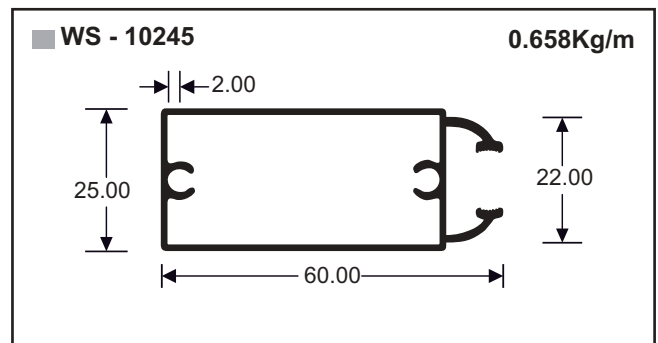
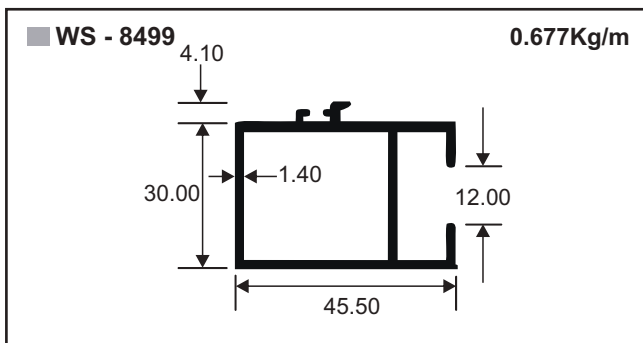
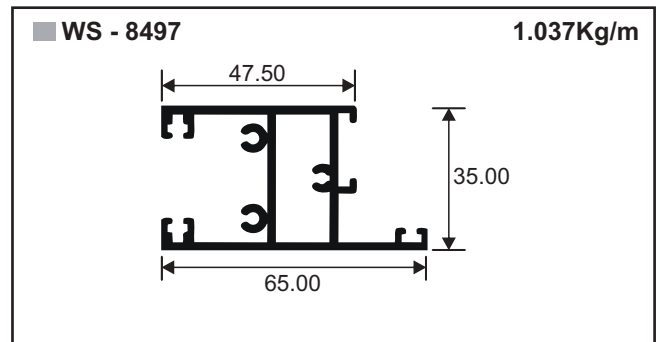
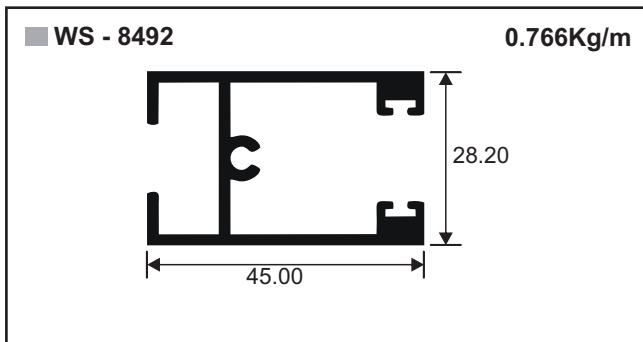
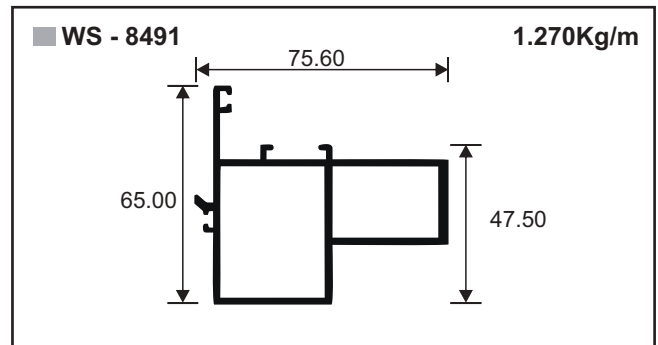
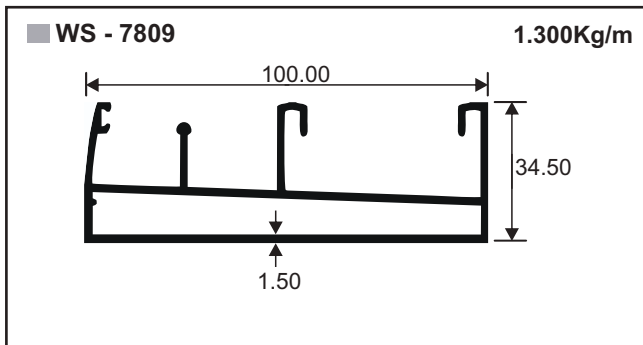




Sliding Window Misc.

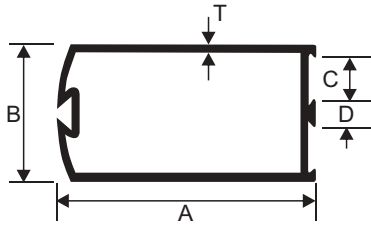


Sliding Window Misc.



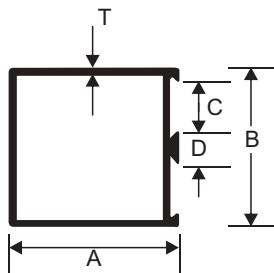


Doors Vertical



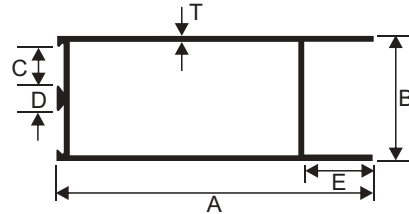
Sec	A	B	C	D	T	Kg/m
SP4874	47.50	44.50	14.82	8.50	1.50	0.892
SP2203	47.50	44.50	14.82	8.50	2.00	1.116
SP1774	47.50	44.50	14.82	8.50	2.50	1.300
WS7089	50.00	44.50	15.05	8.00	1.40	0.768
WS7087	50.00	44.50	15.05	8.00	1.80	0.950
WS6225	50.00	44.50	15.05	8.00	2.50	1.260
WS4979	85.00	44.50	14.82	8.50	1.50	1.129
WS2638	85.00	44.45	14.82	8.50	2.00	1.676
SP5286	85.00	44.50	14.82	8.50	2.00	1.460
SP1771	85.00	44.50	14.82	8.50	3.00	2.117
WS7877	47.00	44.50	15.05	8.00	3.20	1.507

Door Centre



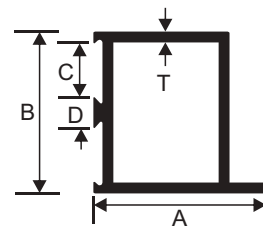
Sec	A	B	C	D	T	Kg/m
WS4980	47.62	44.45	14.82	8.50	1.50	0.784
WS2640	47.62	44.45	14.82	8.50	2.00	1.000
WS2319	47.62	44.45	14.82	8.50	3.00	1.382
WS7088	50.00	44.50	15.05	8.00	1.80	0.930
WS4982	83.50	44.45	14.82	8.50	1.50	1.075
WS2637	83.50	44.45	14.82	8.50	2.00	1.385
SP3622	83.50	44.45	14.82	8.50	3.00	2.024
WS7876	47.50	45.00	15.05	8.50	2.50	1.224

Doors Bottom



Sec	A	B	C	D	E	T	Kg/m
SP4875	47.50	44.50	14.82	8.50	10.00	1.00	0.783
SP2204	47.50	44.50	14.82	8.50	10.00	2.00	1.000
SP1775	47.50	44.50	14.82	8.50	10.00	2.75	1.400
WS7086	50.00	44.50	15.05	8.00	9.50	1.50	0.792
WS6224	50.00	44.50	15.05	8.00	9.50	2.50	1.301
SP4841	62.30	50.00	14.90	8.00	18.00	2.50	1.473
WS7235	85.00	44.50	14.82	8.50	10.15	1.50	1.088
WS7236	85.00	44.50	14.82	8.50	10.15	2.00	1.386
WS7383	95.50	45.00	14.82	8.50	25.00	1.30	1.095
WS7085	100.00	44.50	15.05	8.00	25.00	1.85	1.510
WS6755	100.00	44.50	15.05	8.00	25.00	1.90	1.490
WS6227	100.00	44.50	15.05	8.00	25.00	2.50	1.979
SP4873	114.00	44.50	14.82	8.50	25.00	1.50	1.324
SP2202	114.00	44.50	14.82	8.50	25.00	2.00	1.721
SP1772	114.00	44.50	14.82	8.50	25.00	3.00	2.590
WS2639	114.30	44.45	14.82	8.50	10.15	2.00	1.726
SP5283	114.50	44.50	14.82	8.50	10.15	3.00	2.524
SP3413	150.00	44.45	14.86	8.50	25.00	2.50	2.703
WS5834	150.00	44.45	14.82	8.50	25.00	3.00	3.103
WS7723	150.00	44.46	19.05	8.00	25.00	3.18	3.451
WS7879	101.00	44.50	15.05	8.00	38.50	3.20	2.450
WS8064	85.00	44.50	17.50	8.50	10.15	3.00	2.047

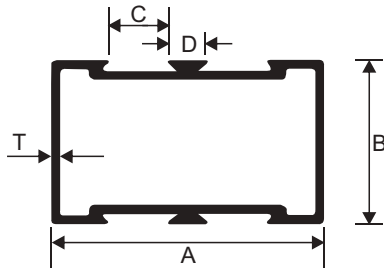
Doors Top



Sec	A	B	C	D	T	Kg/m
WS5810	47.50	44.50	14.82	8.50	1.50	0.743
WS7336	47.50	44.50	14.82	8.50	2.00	0.953
WS5809	47.50	44.50	14.82	8.50	3.00	1.357

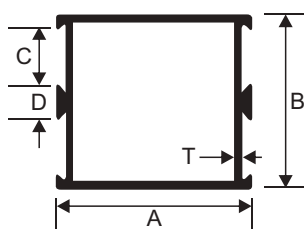


Doors Partition-Double



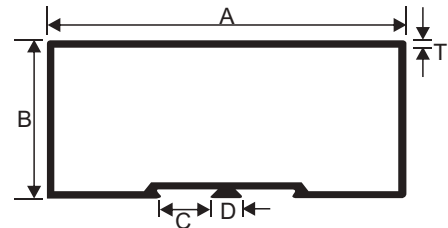
Sec	A	B	C	D	T	Kg/m
WS7384	50.50	25.50	14.82	8.50	1.10	0.570
SP4839	50.00	30.60	14.90	8.00	2.50	1.186
SP2590	61.85	31.75	14.75	8.00	1.80	1.030
SP6218	61.90	36.50	15.05	8.00	1.20	0.768
SP6223	62.50	37.10	15.05	8.00	1.50	0.929
SP6963	63.50	38.10	15.05	8.00	1.15	0.724
SP5284	63.50	38.00	14.82	8.50	1.35	0.900
SP4570	63.50	38.00	14.82	8.50	1.50	0.978
SP2205	63.50	38.00	14.82	8.50	2.00	1.234
SP729	63.50	38.00	14.75	8.00	3.00	1.673
WS7350	63.50	38.00	14.75	8.00	2.50	1.429
SP2246	82.50	38.00	14.82	8.50	2.40	1.660
SP4872	101.60	44.50	14.82	8.50	1.50	1.324
SP2201	101.60	44.50	14.82	8.50	2.00	1.652
SP4320	101.60	44.50	14.82	8.50	2.50	2.073
SP1770	101.60	44.50	14.82	8.50	3.00	2.440
SP8768	123.00	44.50	14.82	8.50	2.50	2.782

Partition-Middle



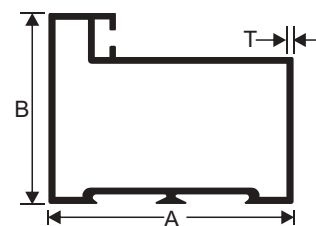
Sec	A	B	C	D	T	Kg/m
SP4981	49.91	44.45	14.82	8.50	1.50	0.863
SP5288	49.91	44.45	14.82	8.50	2.00	1.086
SP2320	49.91	44.45	14.82	8.50	2.75	1.479
WS4608	50.12	44.45	14.82	8.50	2.00	1.088
SP4983	86.70	44.45	14.82	8.50	1.50	1.162
SP5289	86.70	44.45	14.82	8.50	2.00	1.485
WS7090	50.00	44.50	15.05	8.50	1.50	0.852
WS6228	50.00	45.00	15.05	8.50	2.50	1.295
WS6226	100.00	45.45	15.05	8.00	2.00	1.595
WS5833	150.00	44.45	14.82	8.50	3.00	3.143
WS8065	86.70	44.45	14.82	8.50	3.00	2.114

Partition-Single



Sec	A	B	C	D	T	Kg/m
WS7382	48.00	24.00	14.82	8.50	1.10	0.481
WS6216	61.90	36.50	15.05	8.00	1.20	0.698
WS6961	63.50	38.10	15.05	8.00	1.15	0.692
WS6217	62.50	37.10	15.05	8.00	1.50	0.858
SP5285	63.50	38.00	14.82	8.50	1.35	0.812
SP4571	63.50	38.00	14.82	8.50	1.50	0.890
SP2206	63.50	38.00	14.82	8.50	2.00	1.121
WS7351	63.50	38.00	14.75	8.00	2.50	1.368
SP730	63.50	38.00	14.75	8.00	3.00	1.550
WS7146	82.50	38.00	14.82	8.50	1.60	1.107
SP4871	101.60	44.50	14.82	8.50	1.50	1.244
SP2200	101.60	44.50	14.82	8.50	2.00	1.600
SP4319	101.60	44.50	14.82	8.50	2.50	1.992
SP1769	101.60	44.5	14.82	8.50	3.00	2.360
WS7342	150.00	44.45	14.82	8.50	2.00	2.152
WS 8581	125.00	44.50	14.82	8.50	4.00	3.582
SP 8619	92.00	32.00	14.82	8.50	1.30	0.919
WS8767	123.00	44.50	14.82	8.50	3.00	2.740
WS8864	101.60	44.50	14.82	5.00	3.18	2.486
WS8911	101.60	20.00	14.82	5.00	4.00	2.546

Door Frame

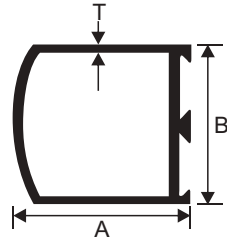


Sec	A	B	T	Kg/m
SP6280	63.50	49.50	1.80	1.186
SP10803	62.30	50.00	2.50	1.479

Door Partition



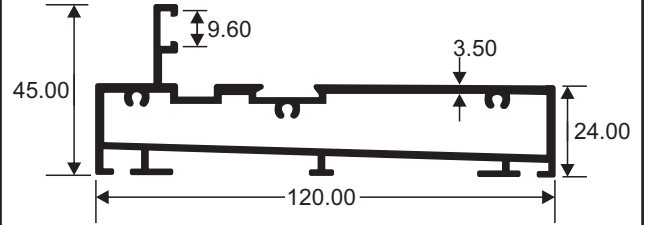
Door Vertical Plain



Sec	A	B	T	Kg/m
SP1773	47.50	44.50	2.50	1.175
WS7084	50.00	44.50	2.50	1.201
SP4838	62.30	50.00	2.50	1.479

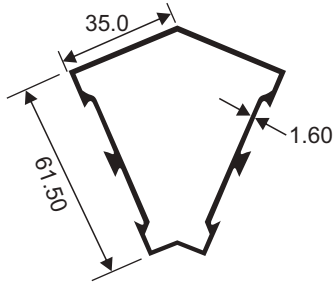
WS - 3401

1.817 Kg/m



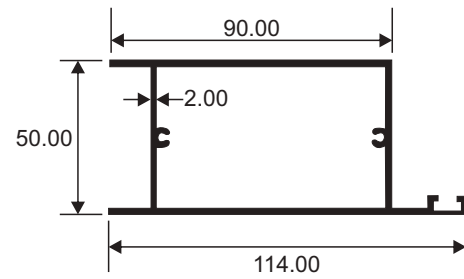
WS - 3451

1.027 Kg/m



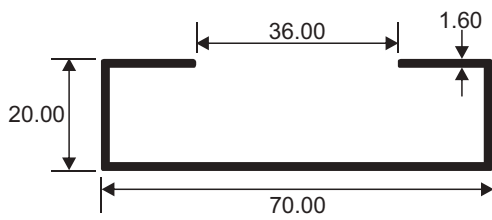
WS - 4037

1.730 Kg/m



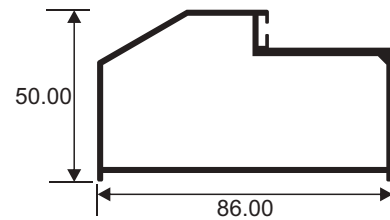
WS - 5705

0.595 Kg/m



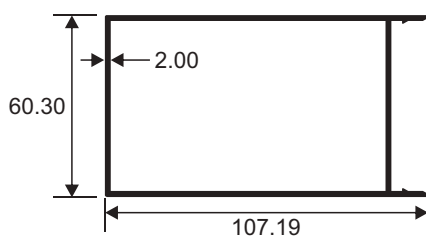
SP - 5824

1.326 Kg/m



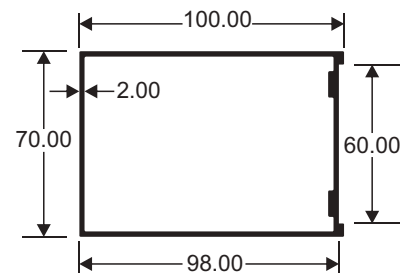
SP - 5832

1.772 Kg/m



SP - 6760

1.940 Kg/m

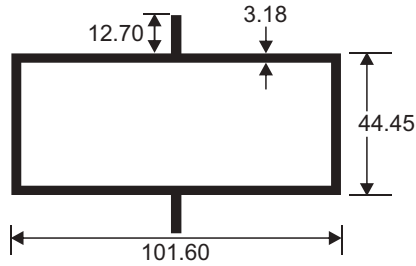




Door Partition

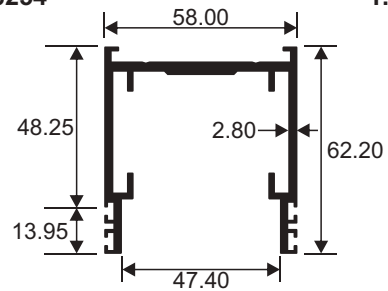
■ WS - 801

2.616 Kg/m



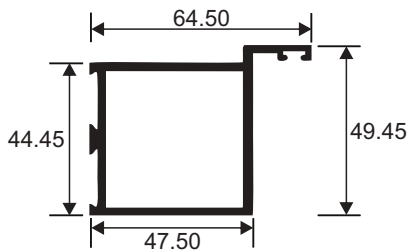
■ WS - 6254

1.704 Kg/m



■ WS - 8620

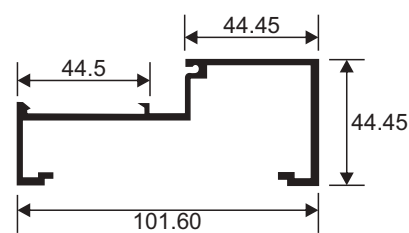
1.176 Kg/m



Door Frame

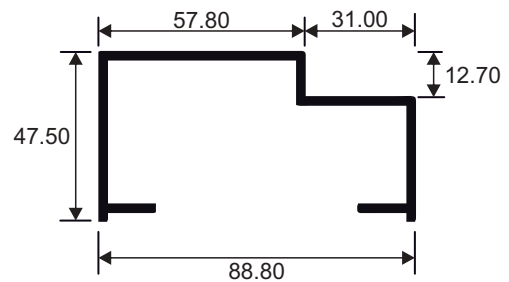
■ WS - 1352

1.37 Kg/m



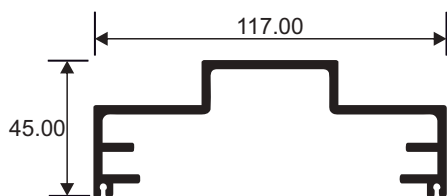
■ WS - 1692

1.210 Kg/m



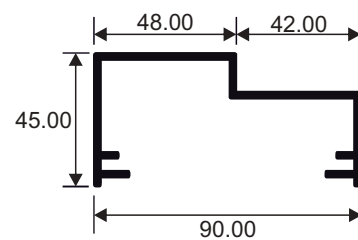
■ SP - 2441

1.718 Kg/m



■ WS - 2577

1.315 Kg/m



Door Frame



■ **SP - 2607** 3.113 Kg/m

■ **SP - 2670** 2.96 Kg/m

Sec	A	B	C	T	Kg/m
SP3860	135.0	62.0	45.0	2.50	1.86
SP3866	135.0	66.0	67.0	2.50	1.91

Sec	A	B	C	T	Kg/m
SP3867	135.0	74.00	67.0	2.50	2.764
SP3868	135.0	70.00	67.0	2.50	2.71

Sec	A	B	C	T	Kg/m
SP4047	165.00	43.00	70.00	2.40	1.778
SP6623	112.00	46.00	76.00	2.00	1.254
SP6740	112.00	46.00	44.00	1.70	1.071
SP7889	135.00	32.00	45.00	2.50	1.682

Sec	A	B	C	T	Kg/m
SP2773	112.00	20.25	40.00	2.00	0.806
SP6739	112.00	20.25	40.60	1.70	0.689
SP7890	135.00	20.25	45.00	2.00	0.925

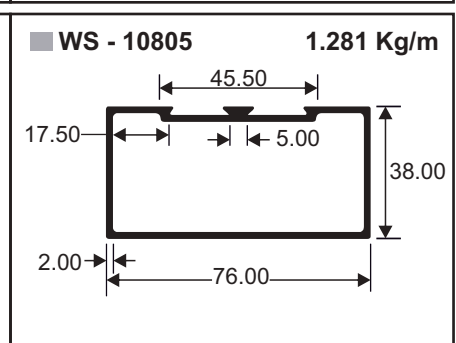
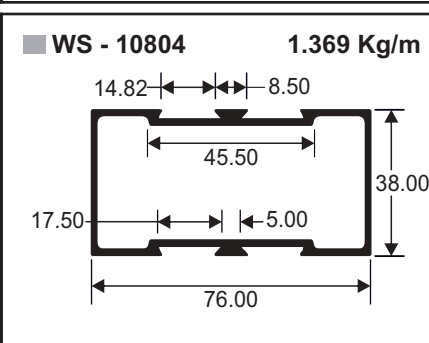
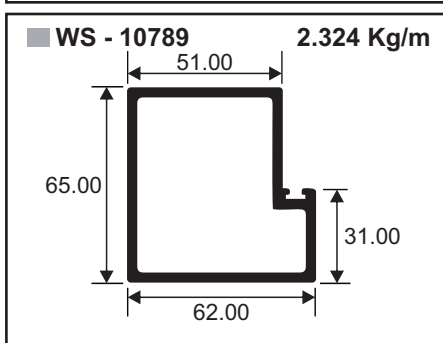
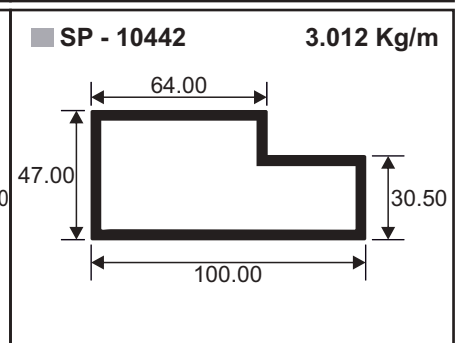
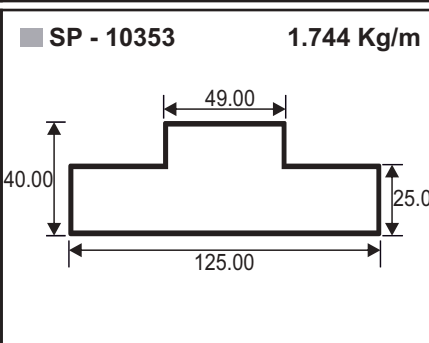
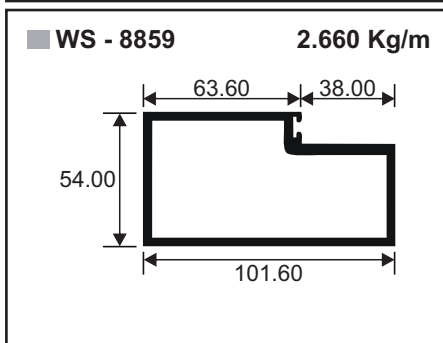
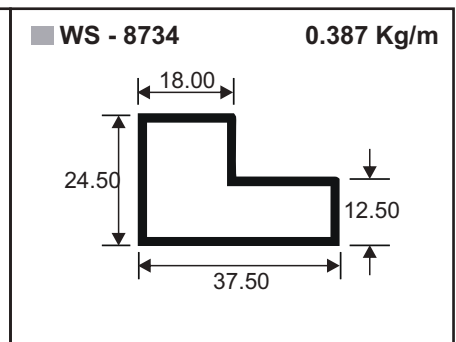
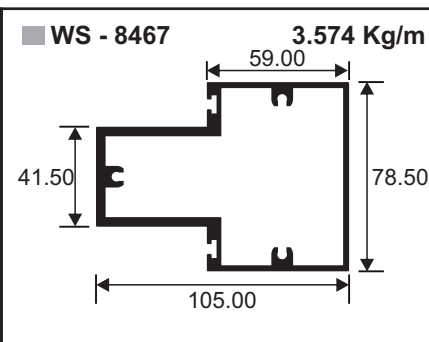
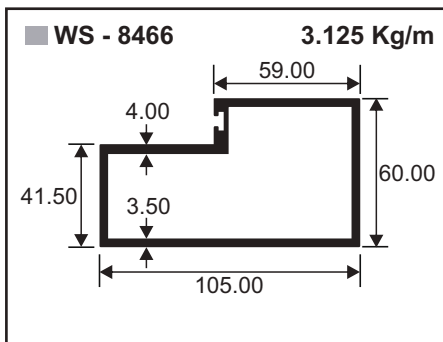
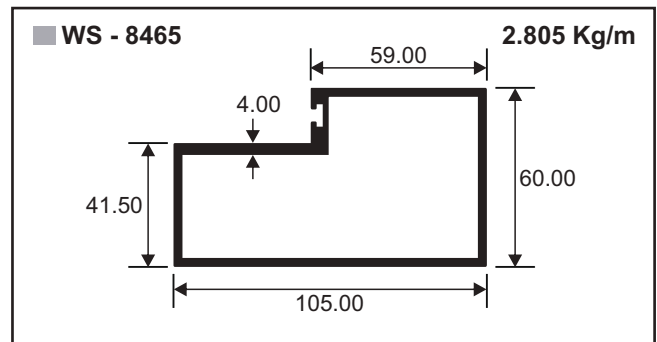
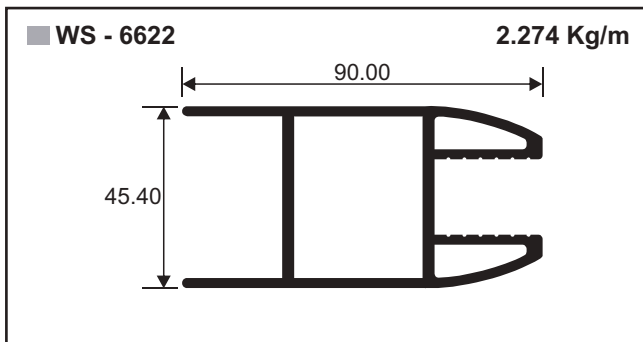
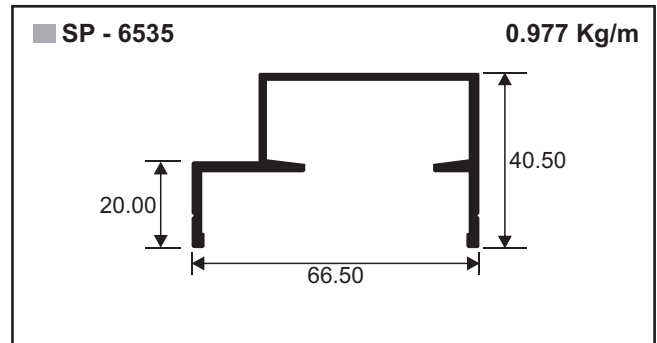
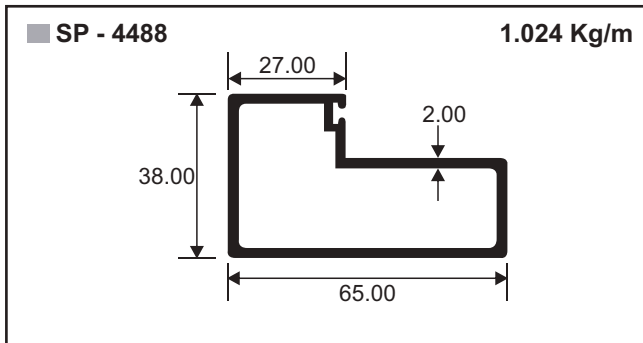
Sec	A	B	C	T	Kg/m
SP4481	105.00	47.00	63.50	4.00	3.121
SP4491	105.00	60.00	63.50	4.00	3.403
SP7537	105.00	47.00	63.50	2.00	1.604
SP10290	44.50	37.20	19.50	1.20	0.515
SP10352	100.00	40.00	62.00	2.00	1.474

■ **WS - 4046** 1.161 Kg/m

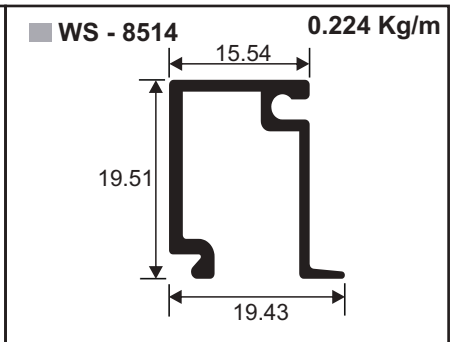
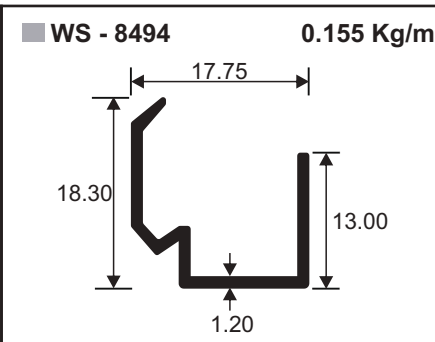
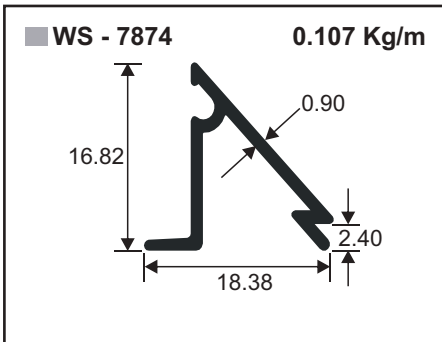
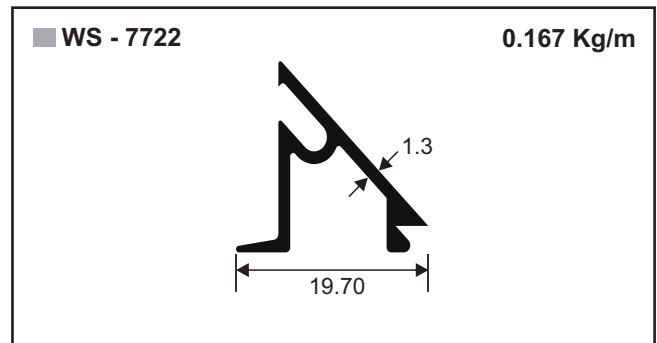
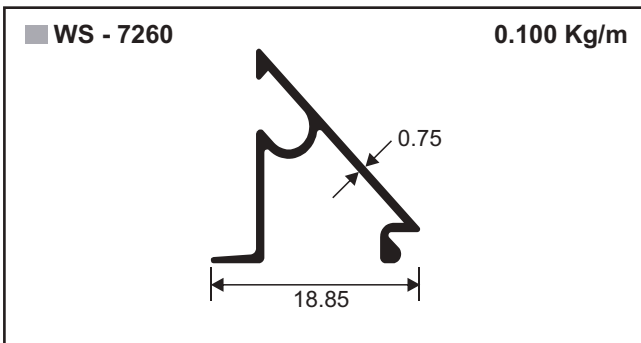
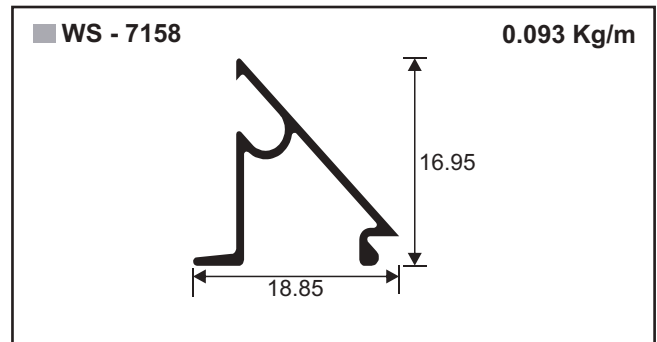
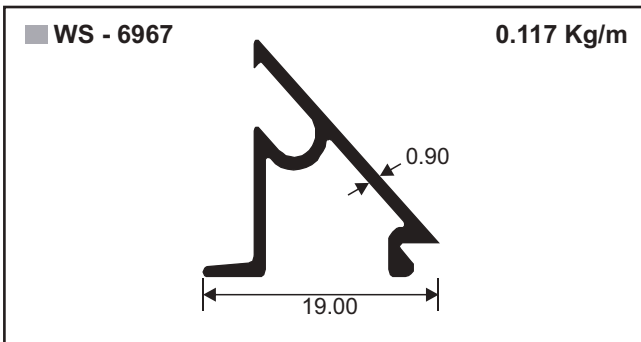
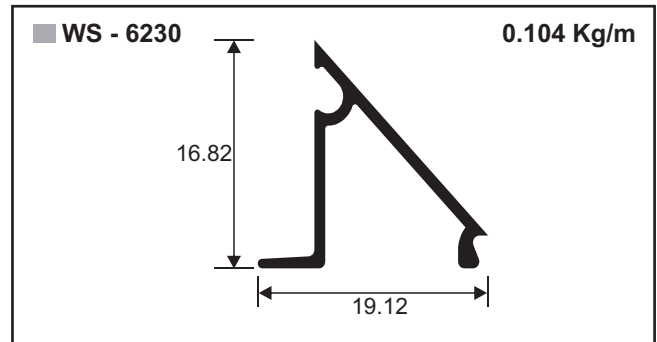
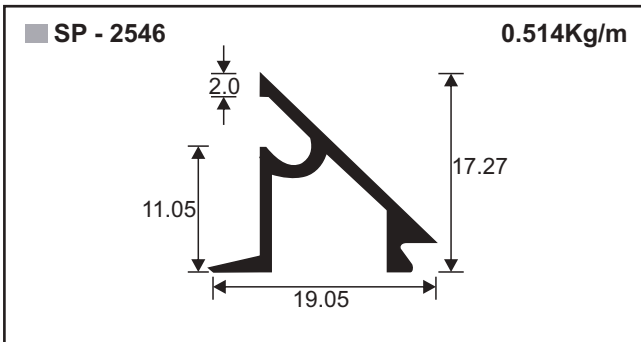
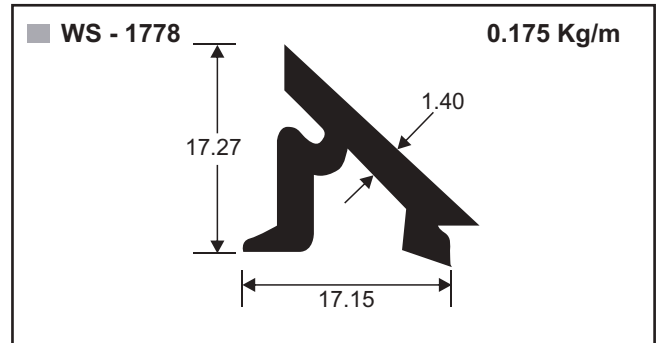
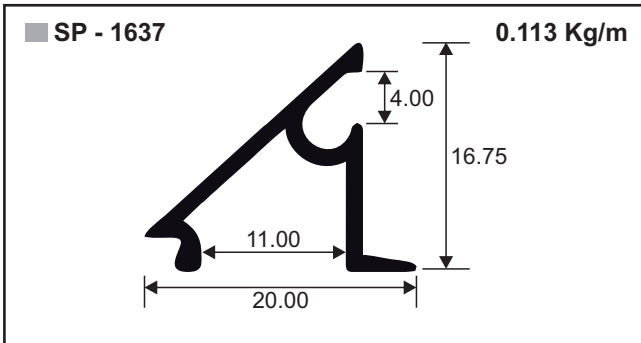
■ **SP - 4343** 1.925 Kg/m

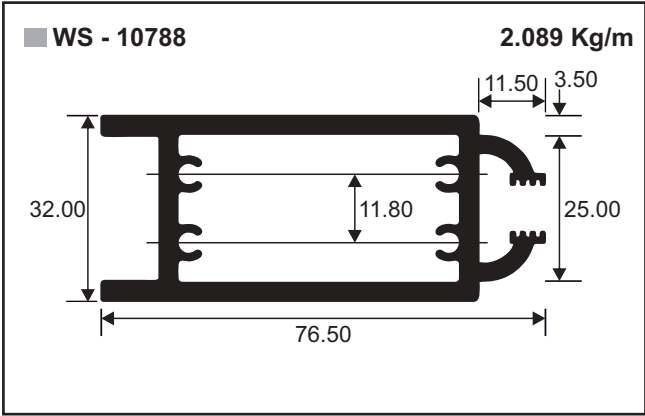
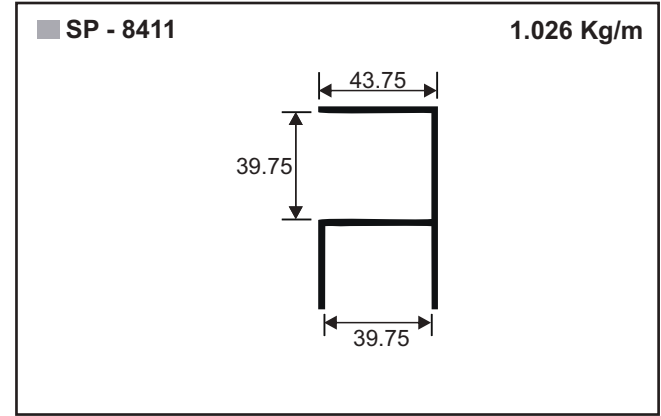
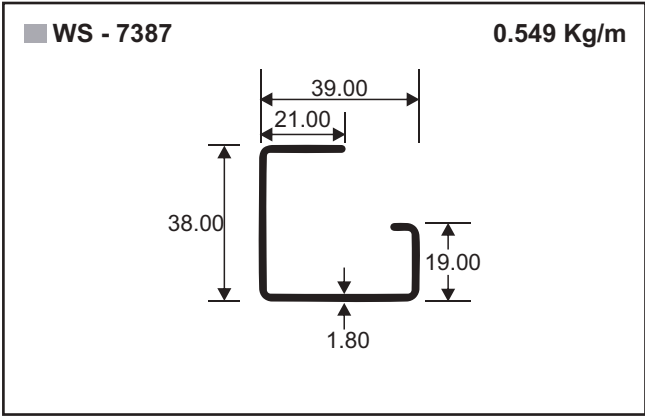
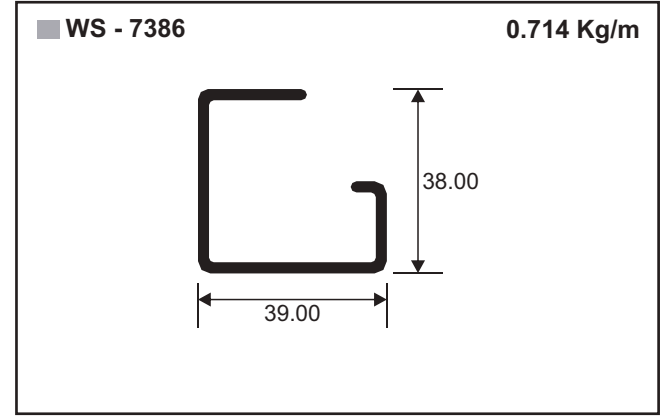
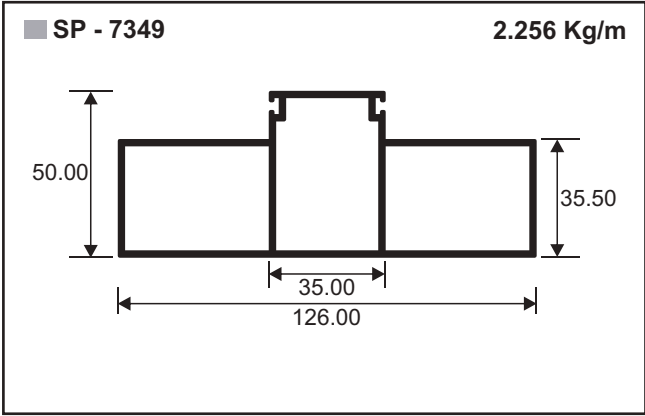
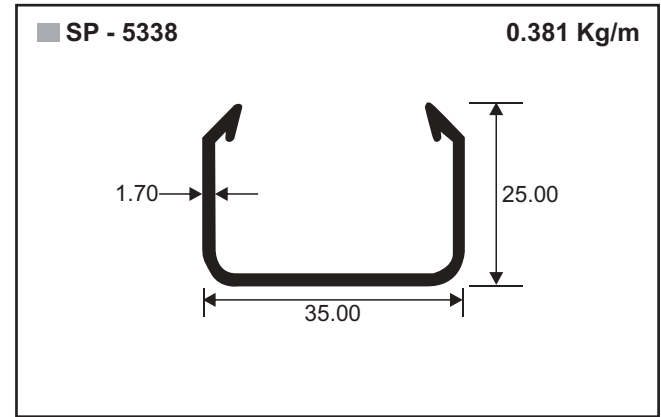
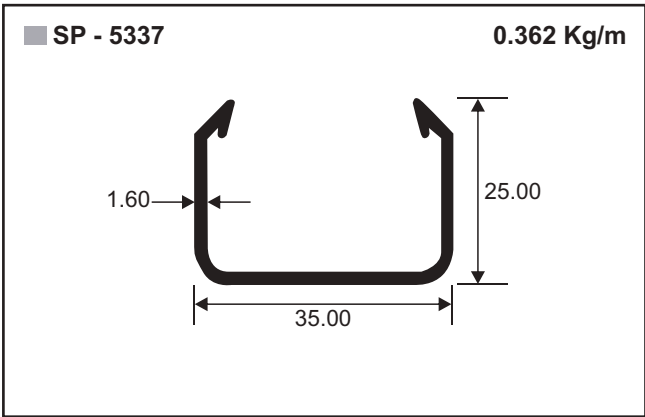


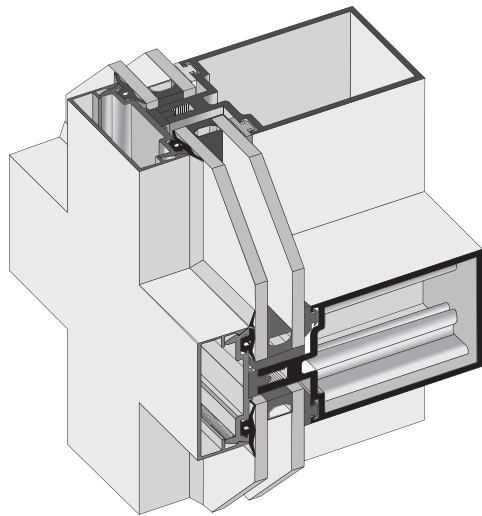
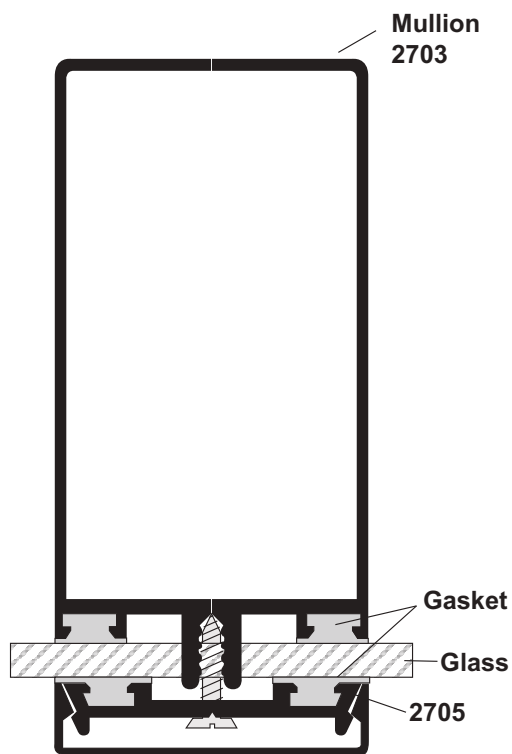
Door Frame



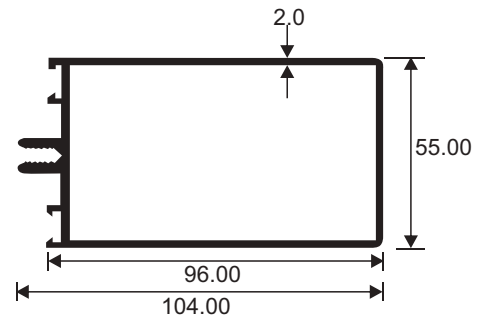
Door Clip







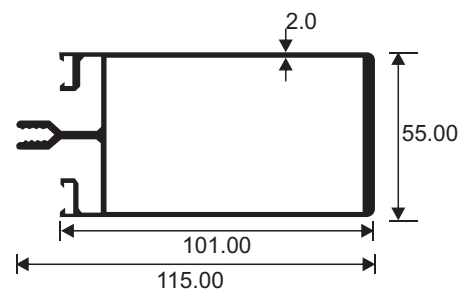
■ SP - 2703 1.83Kg/m



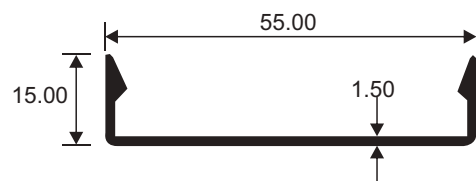
■ SP - 2705 0.528Kg/m

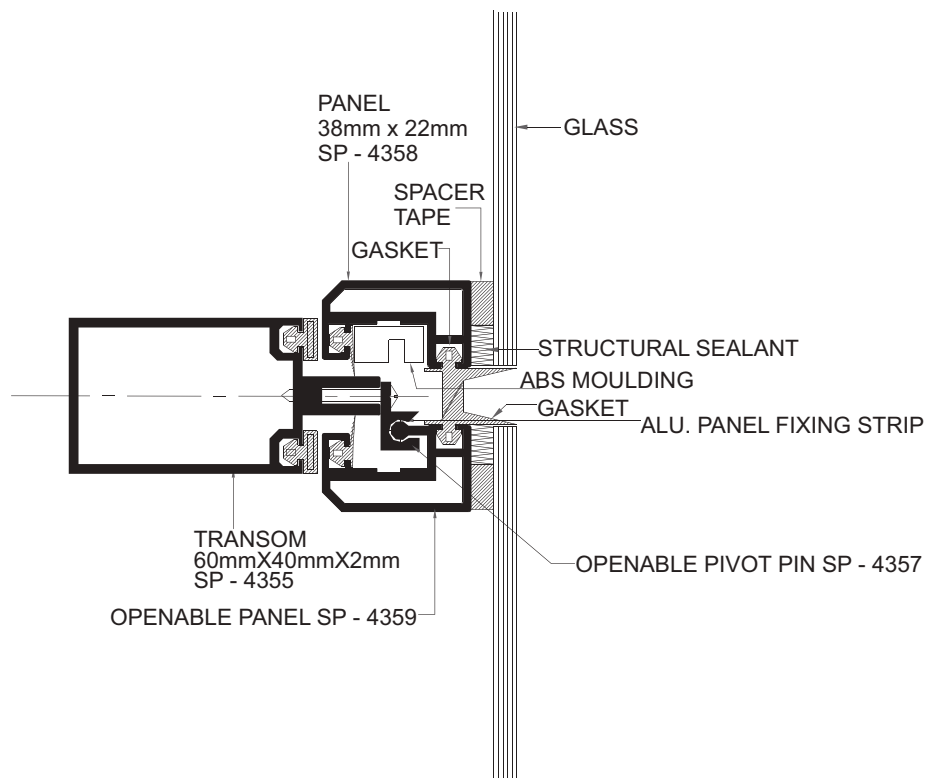
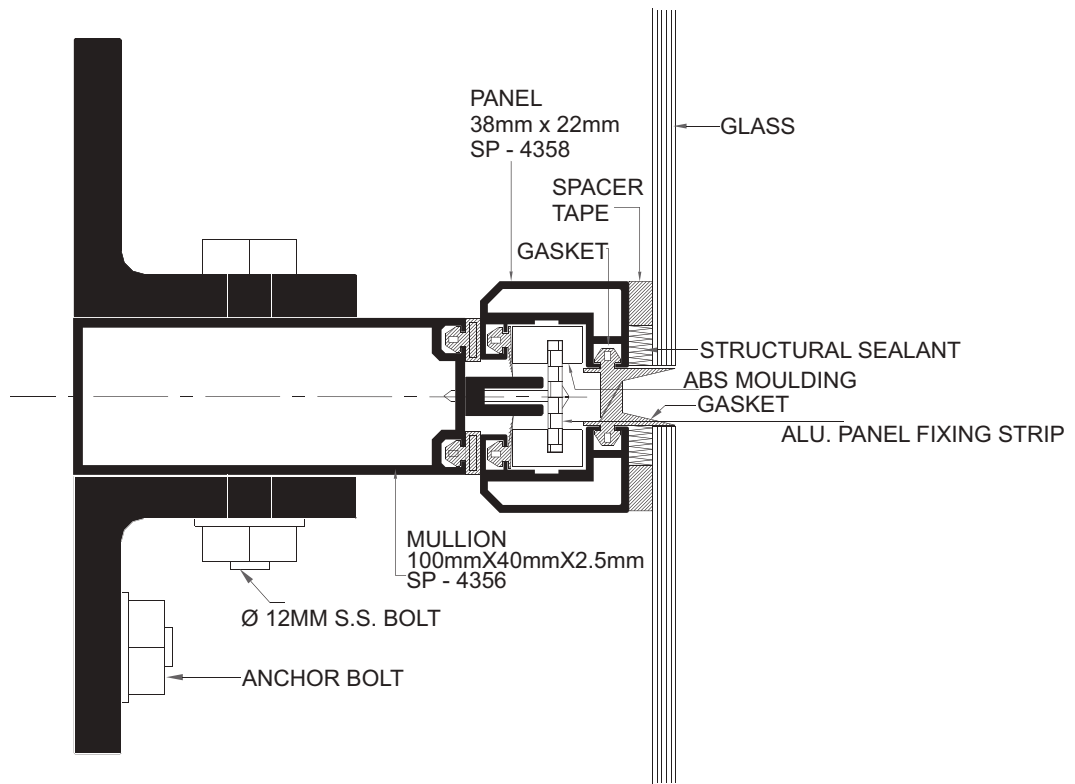


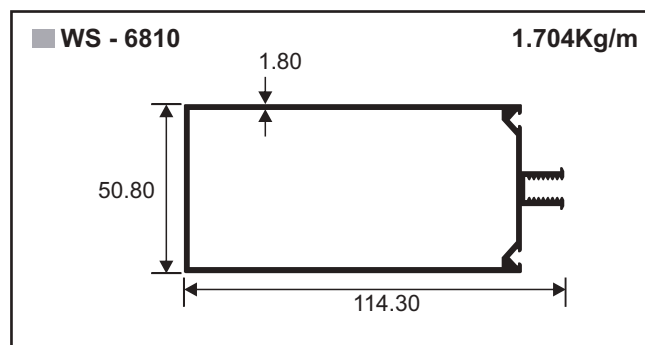
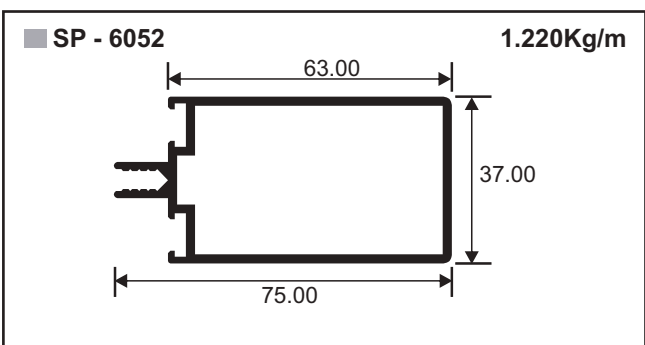
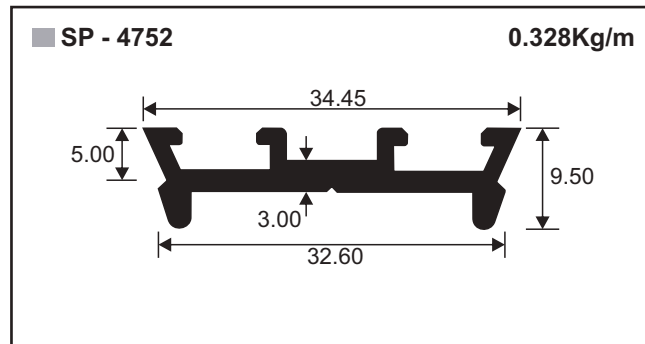
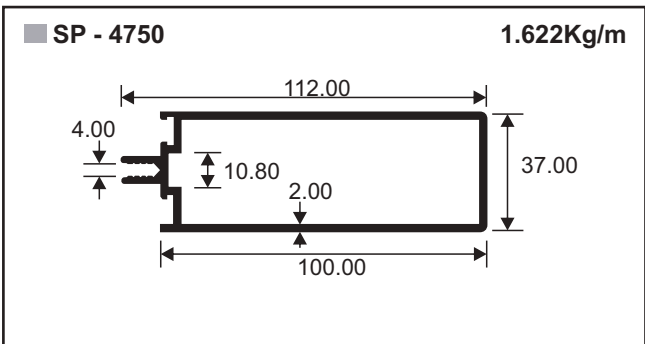
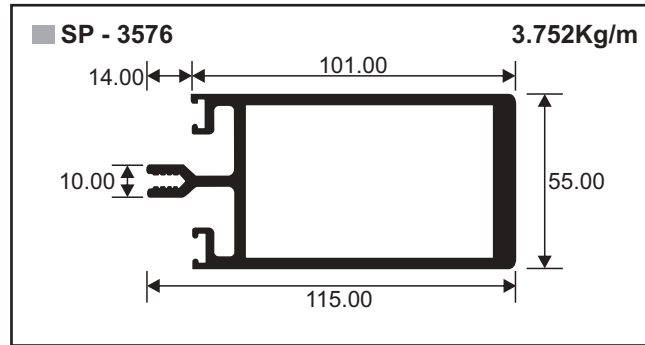
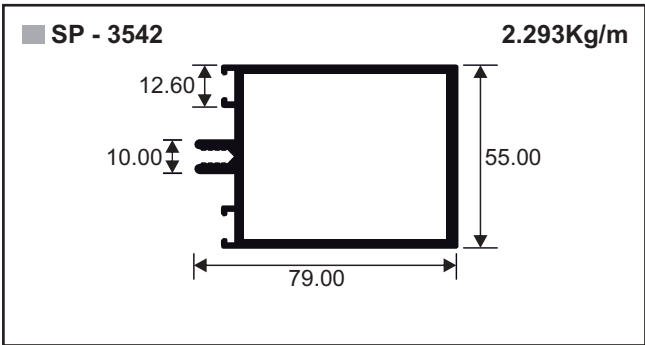
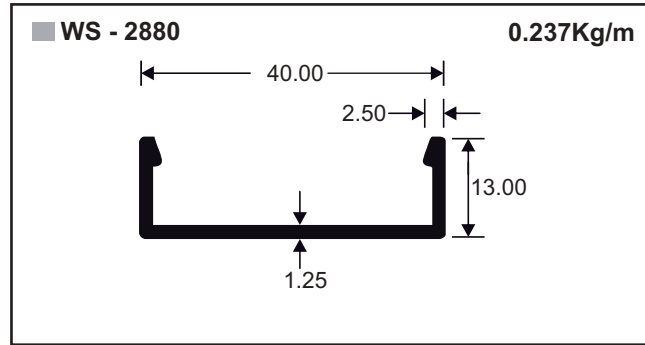
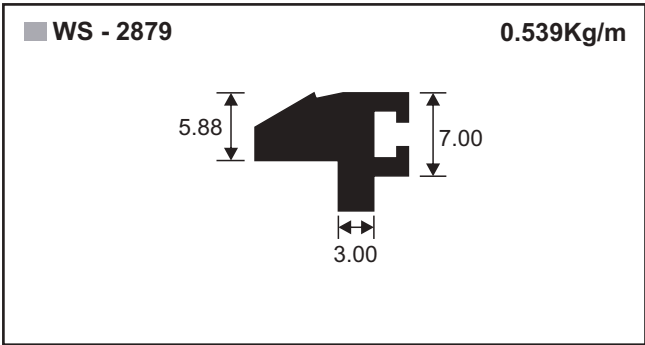
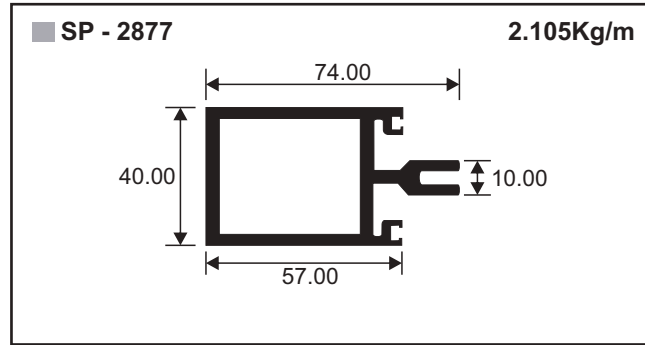
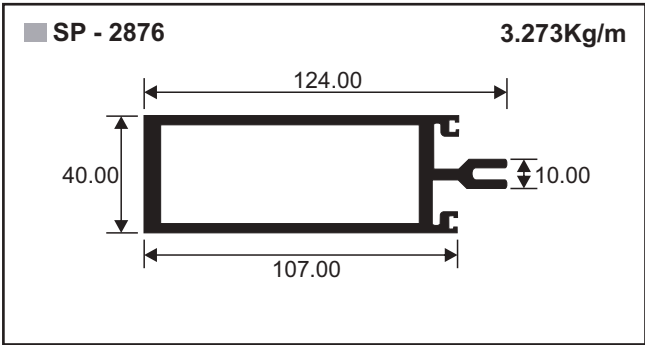
■ SP - 2707 2.466Kg/m

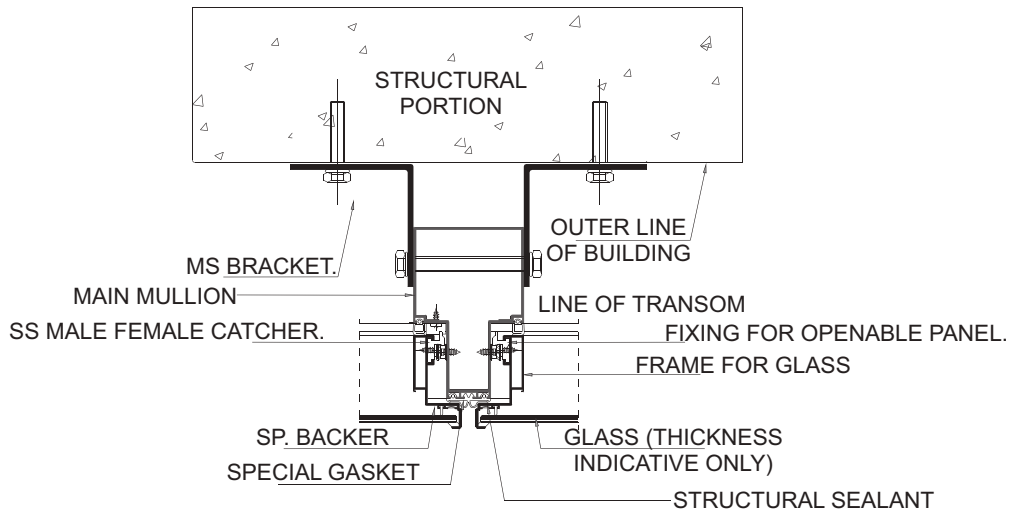


■ SP-2706 0.338Kg/m

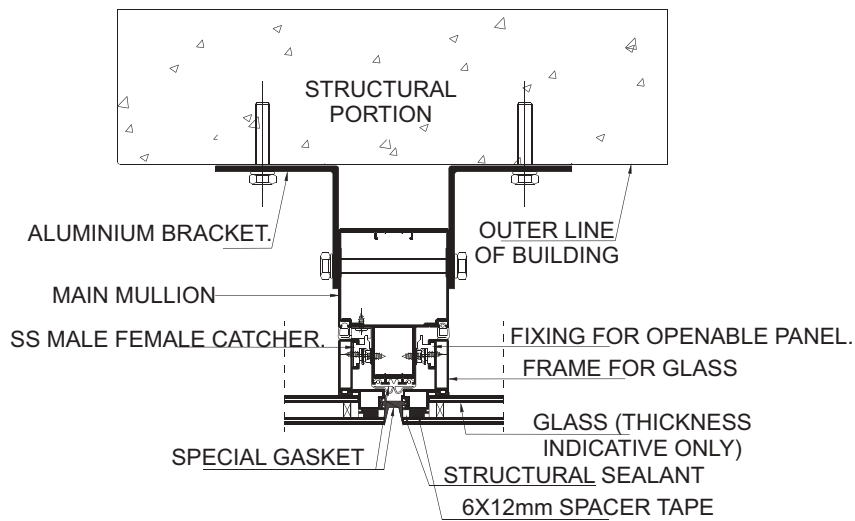




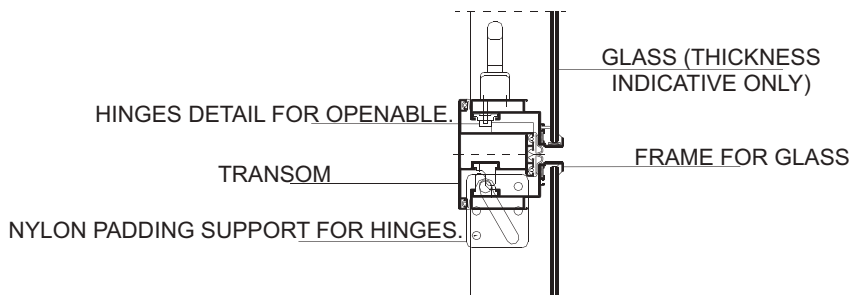




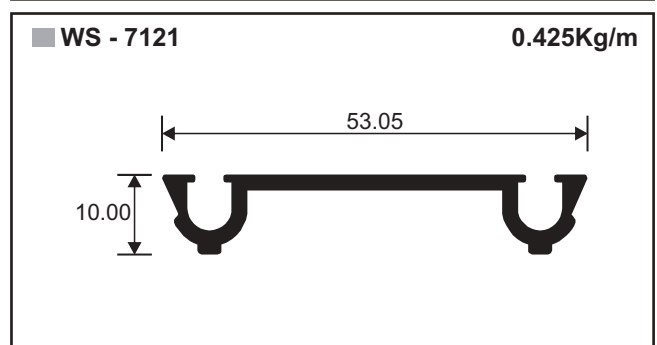
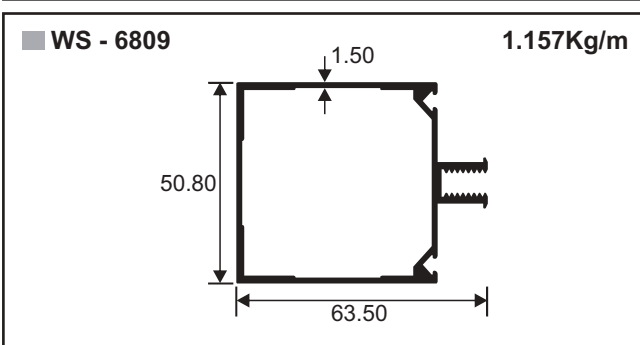
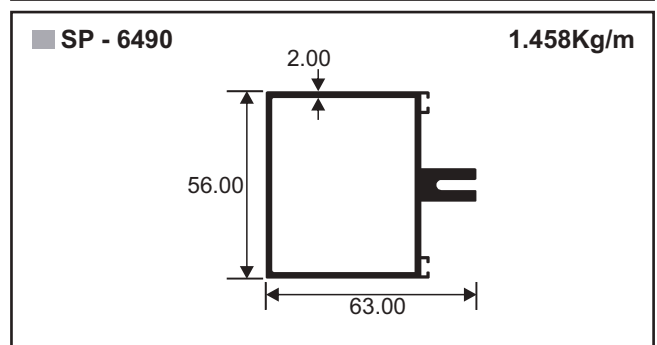
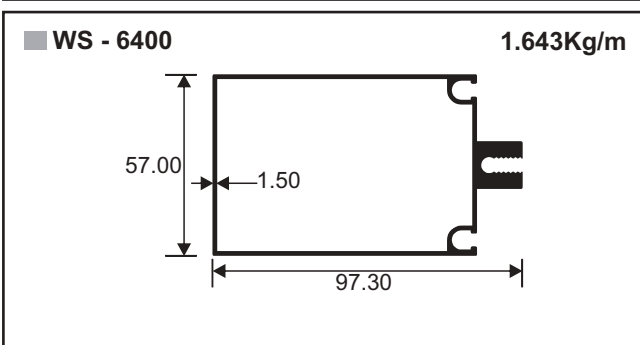
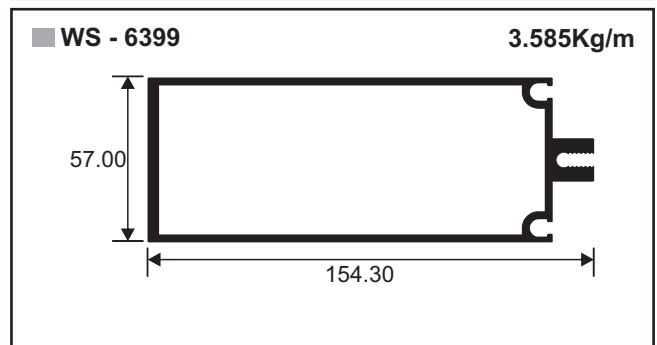
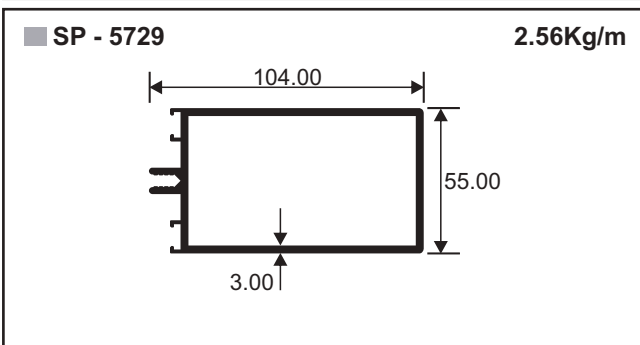
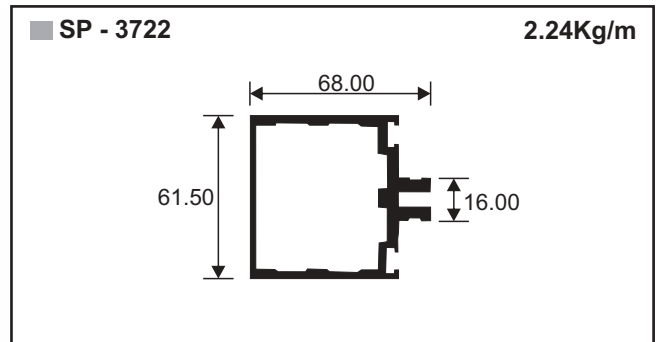
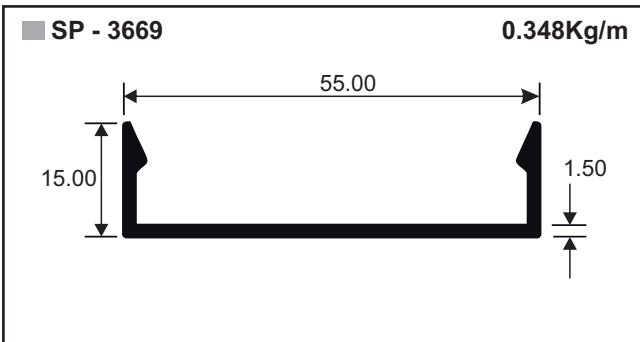
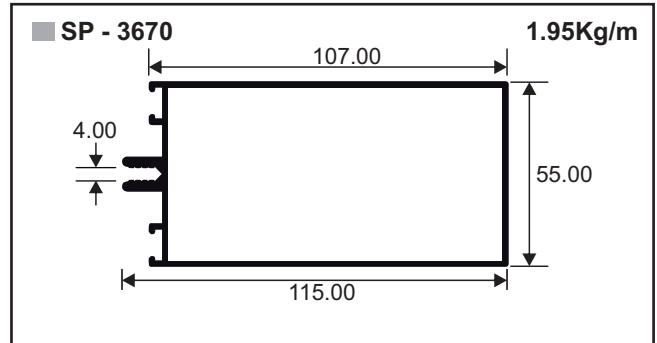
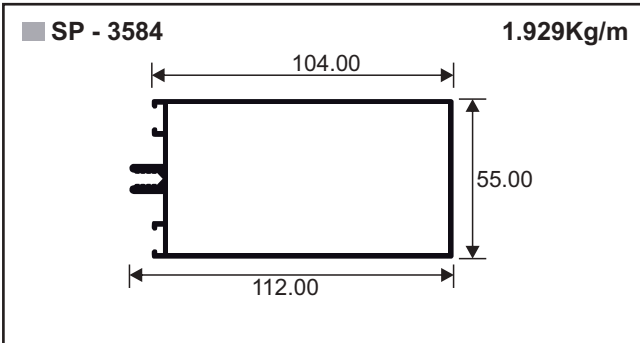
MAIN MULLION DETAIL

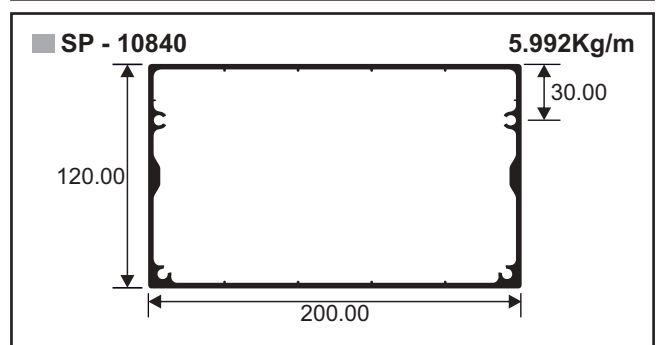
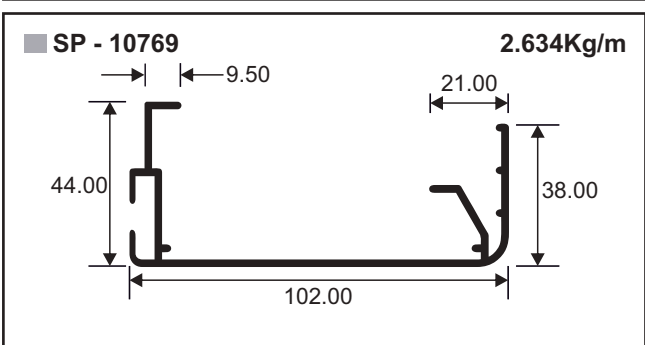
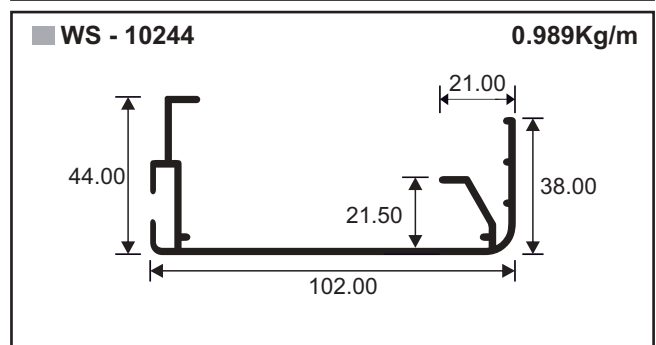
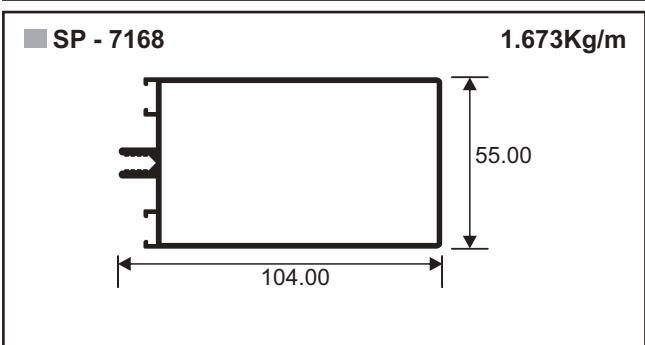
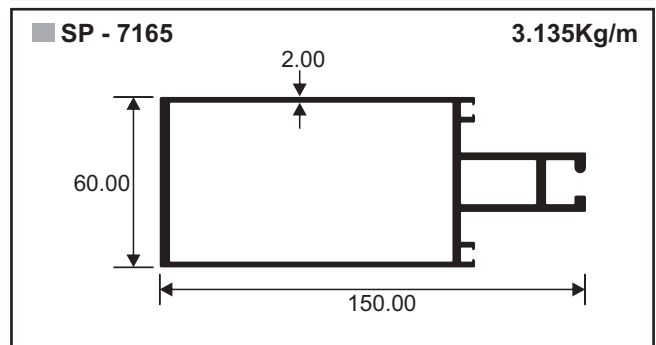
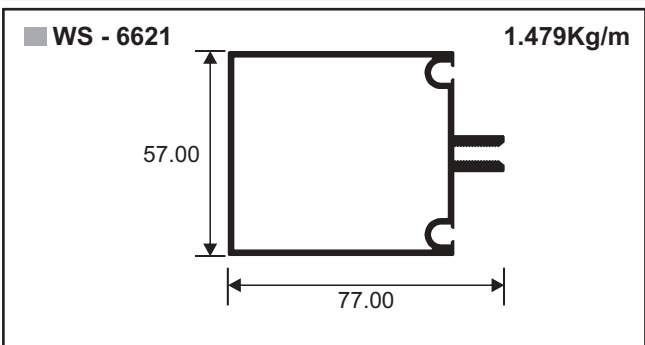
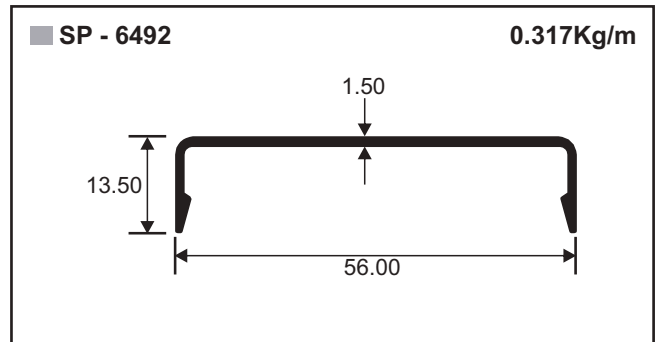
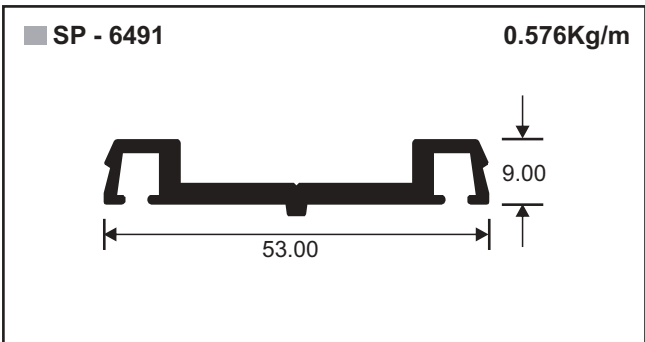
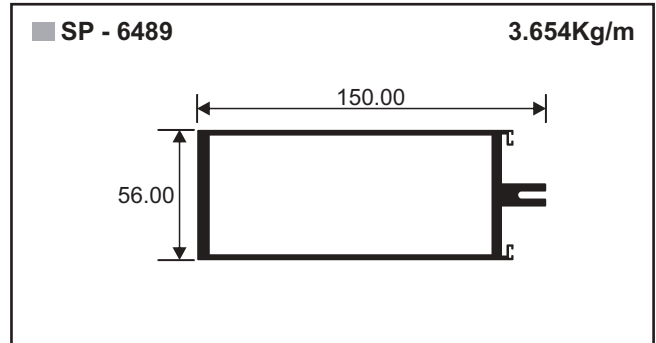
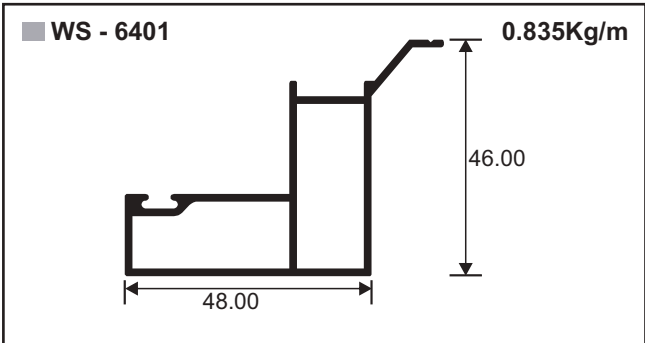


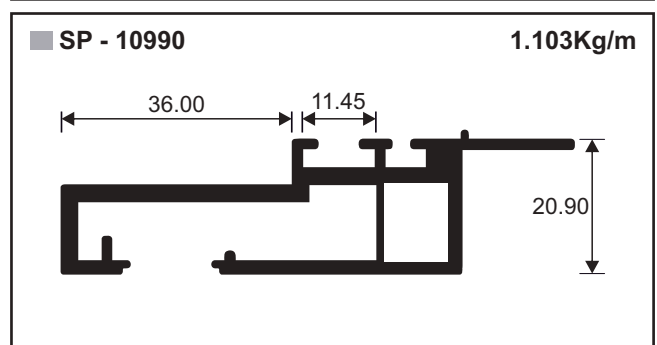
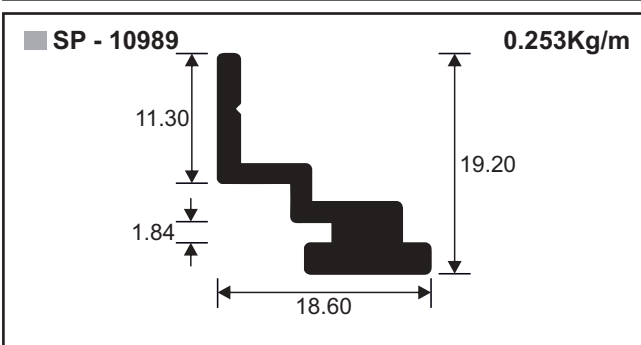
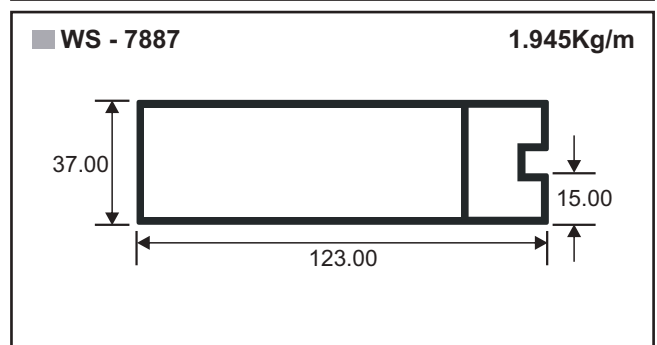
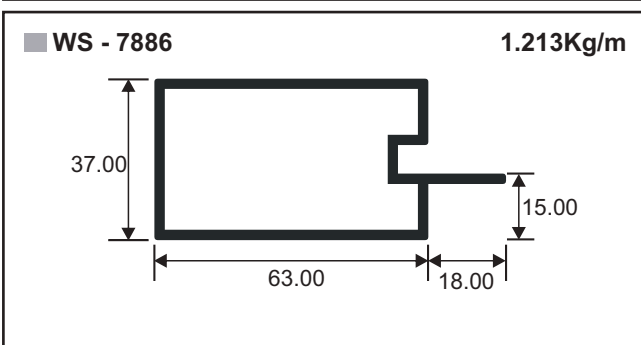
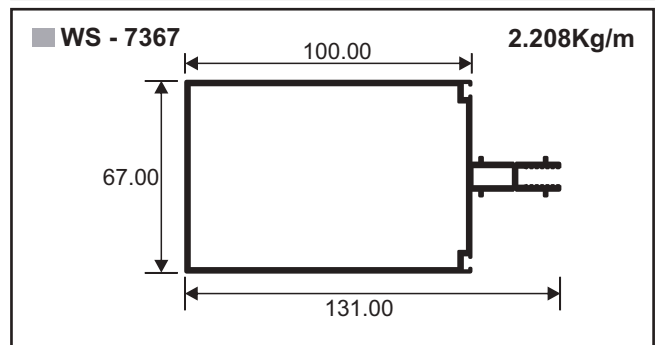
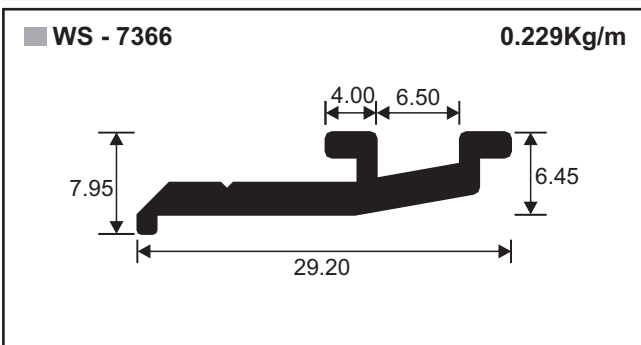
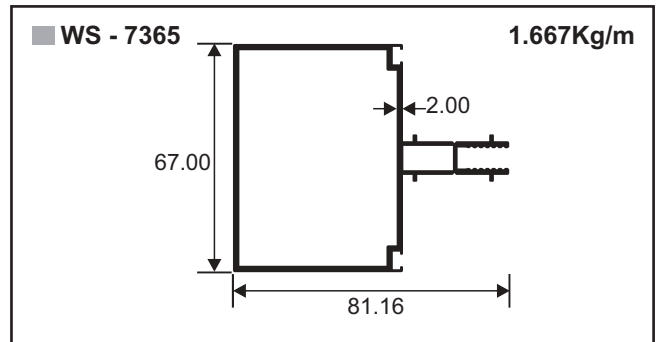
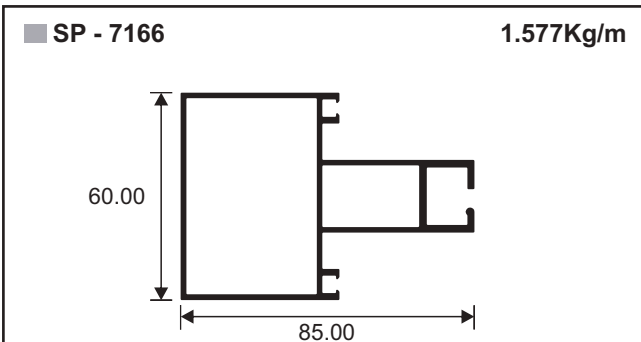
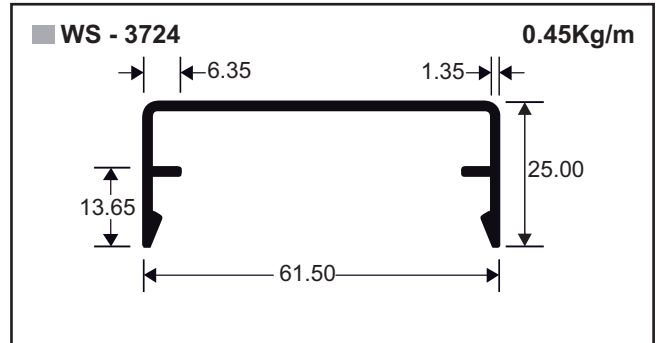
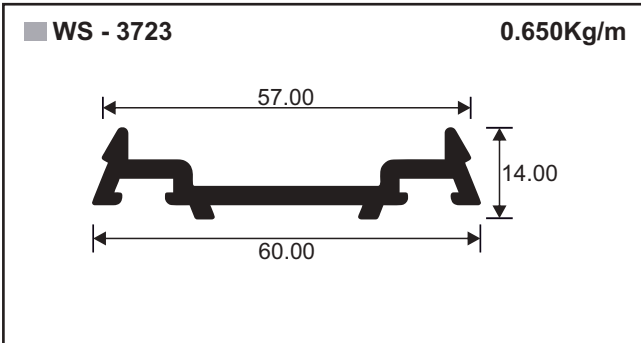
MAIN MULLION DETAIL

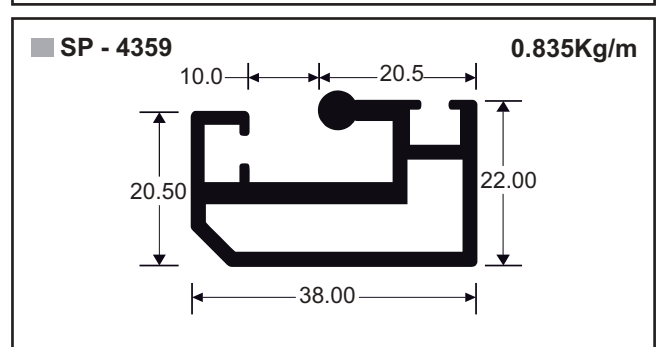
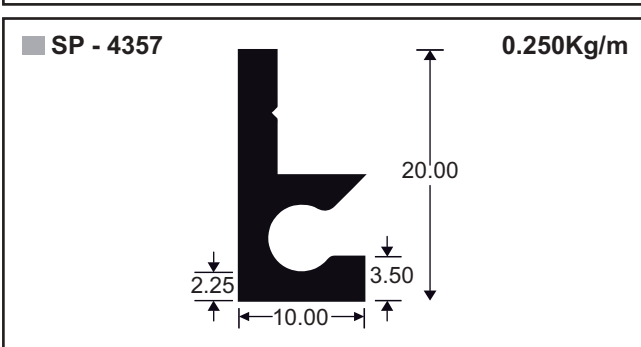
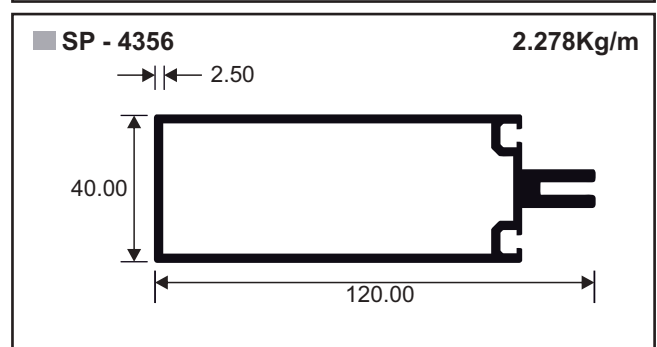
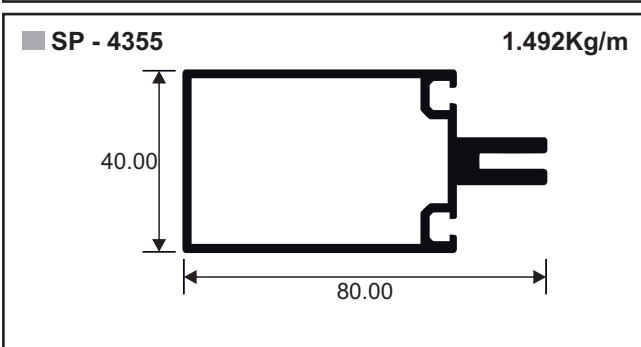
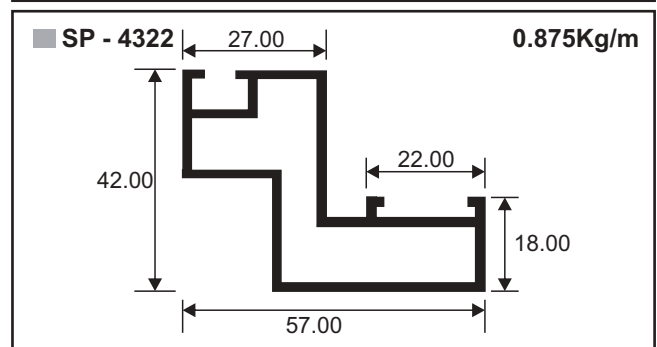
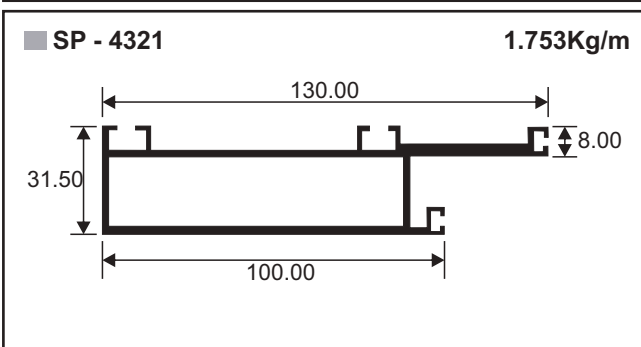
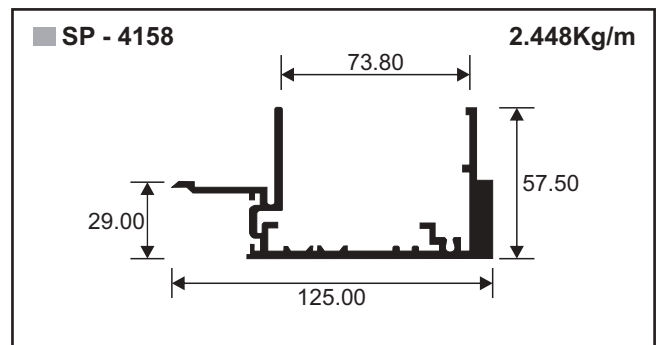
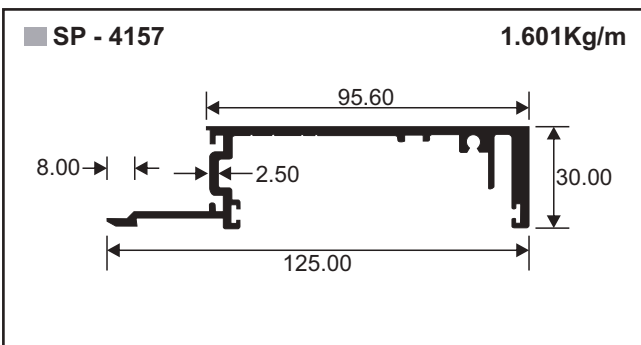
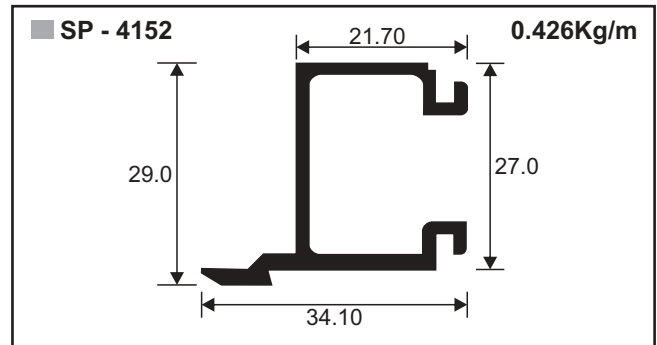
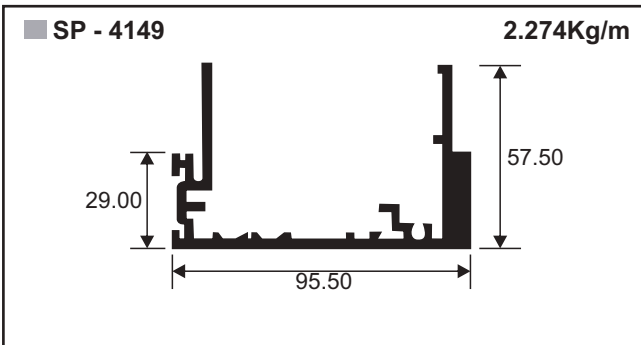


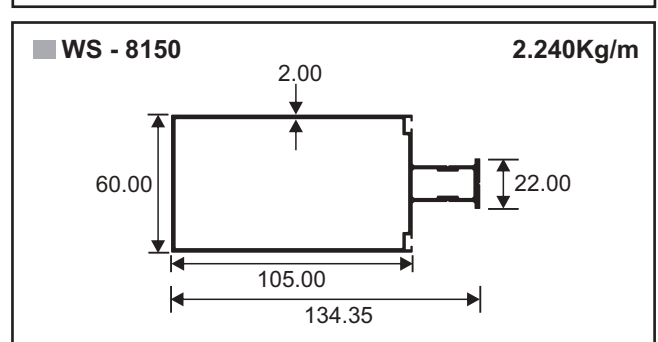
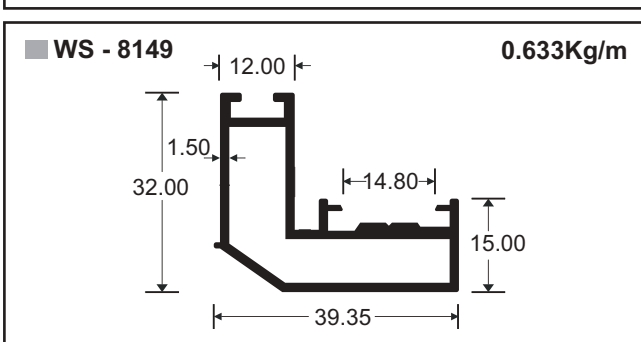
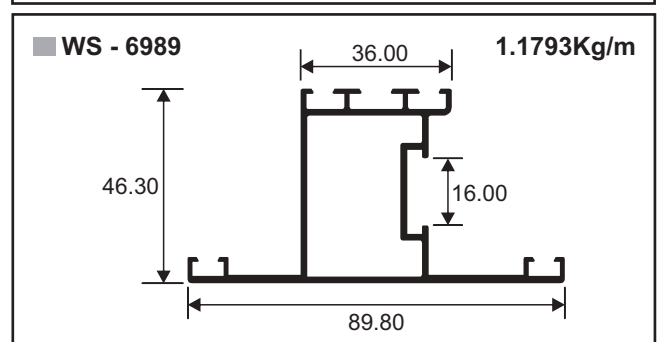
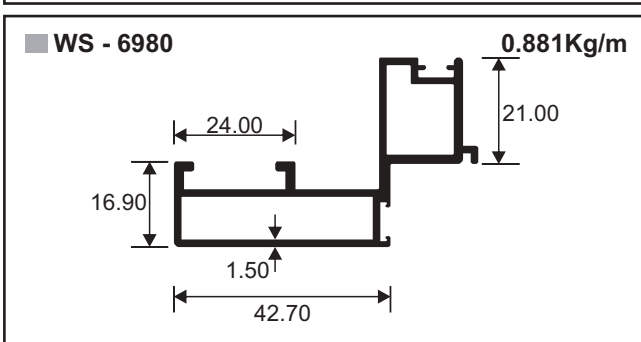
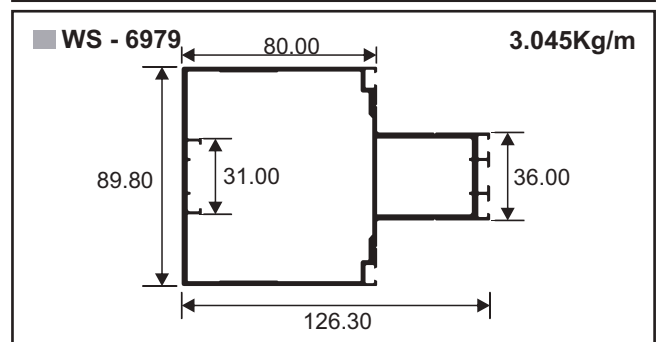
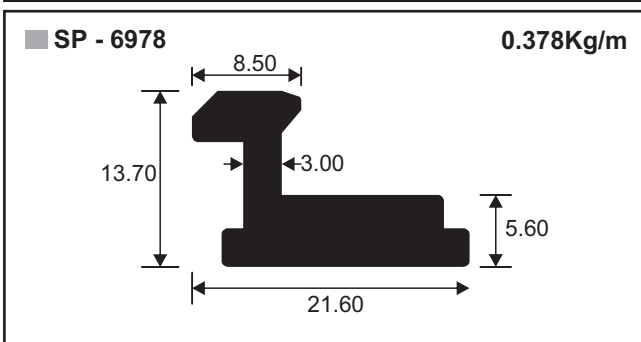
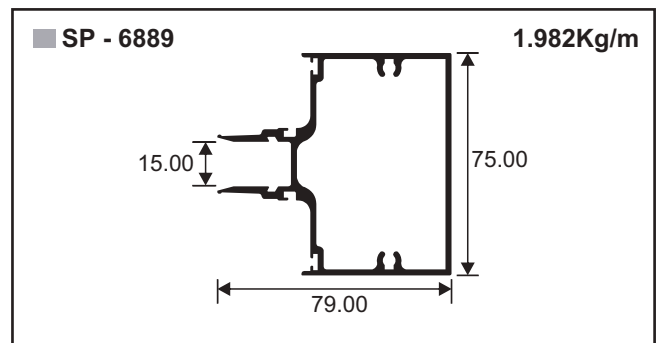
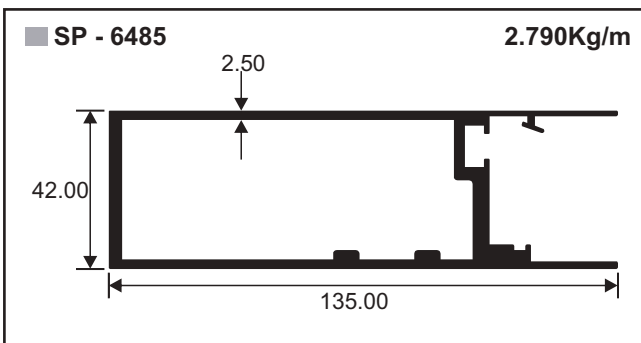
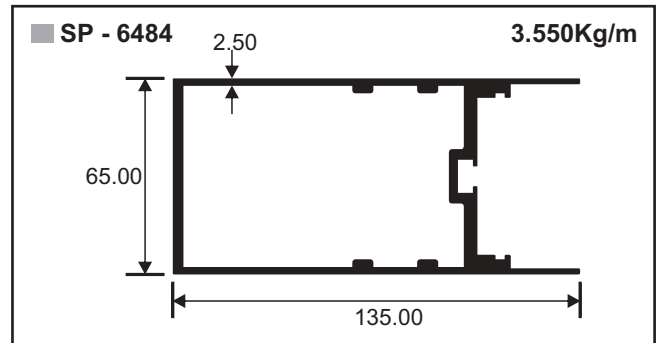
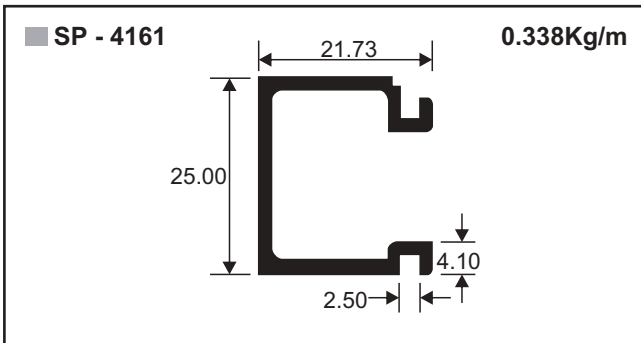
MAIN TRANSOM DETAIL

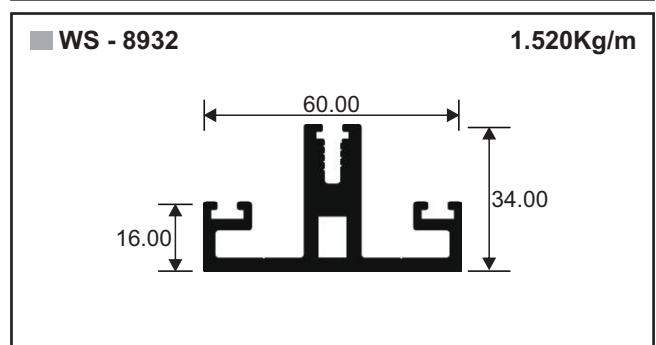
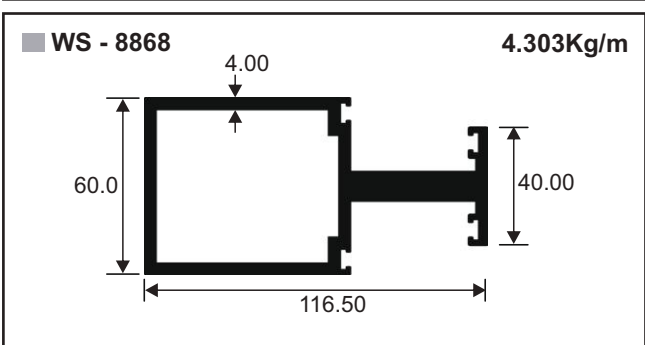
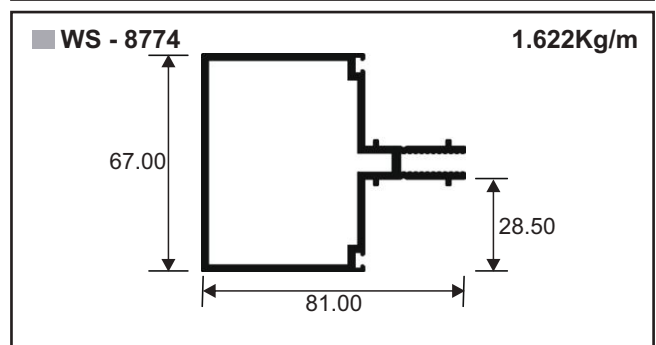
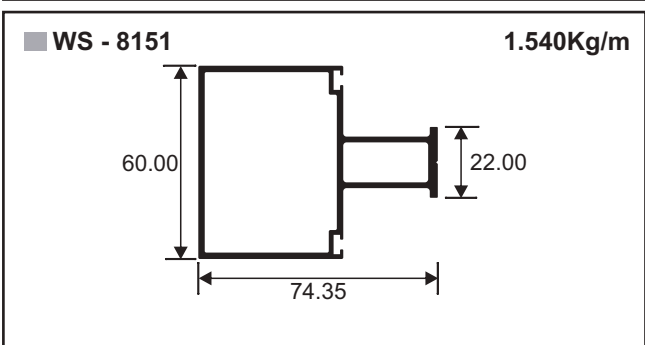
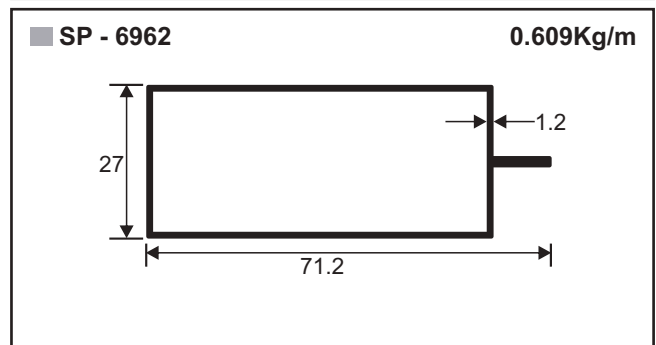
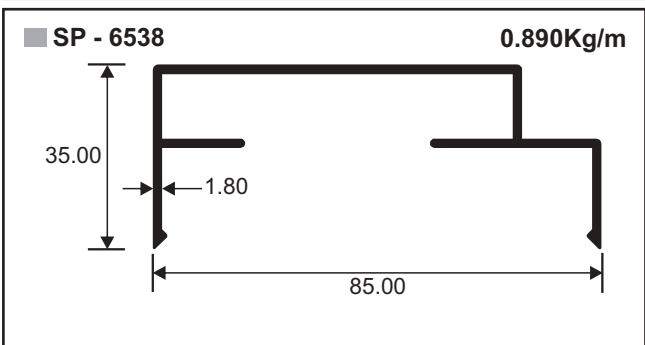
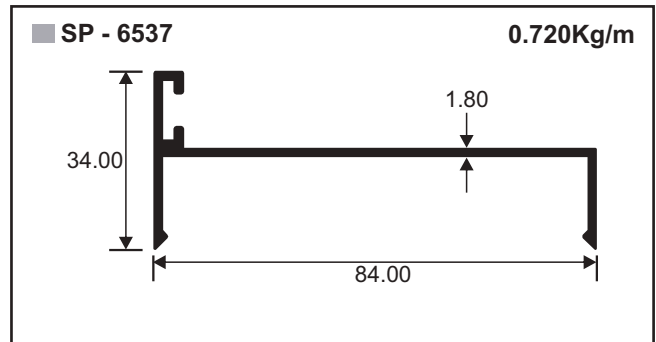
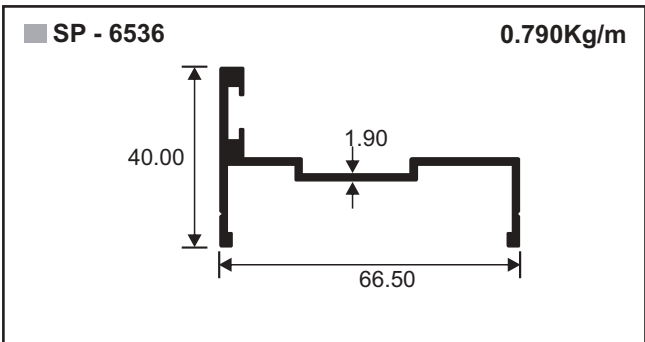
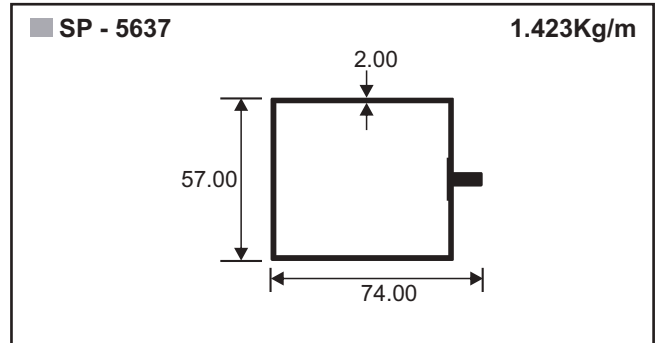
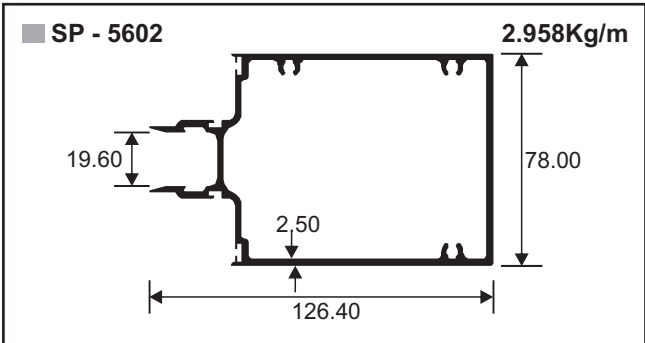


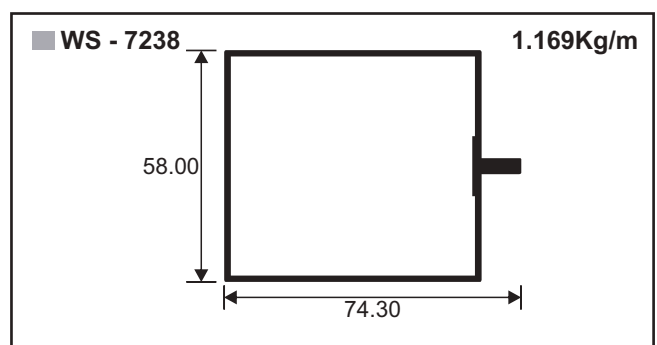
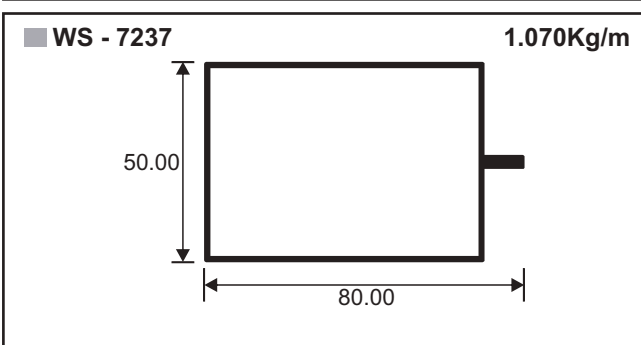
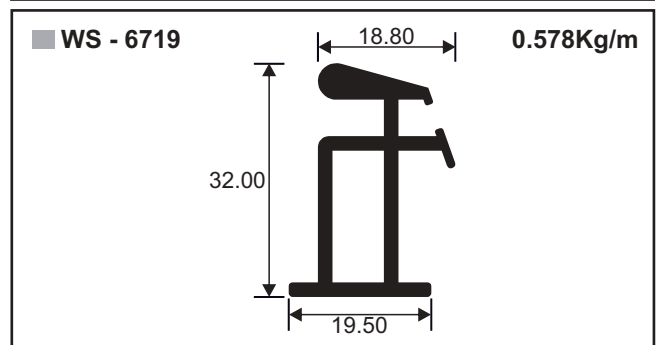
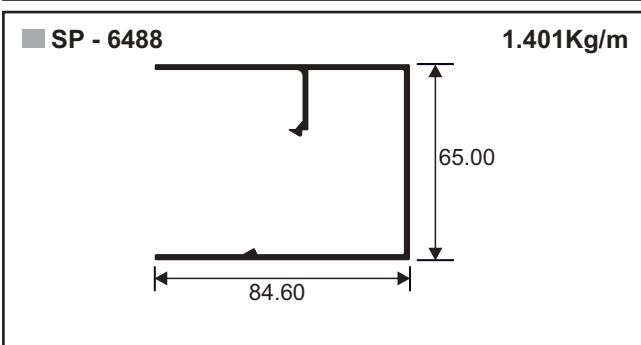
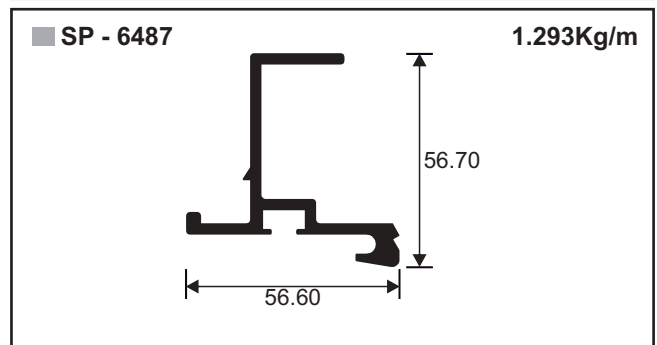
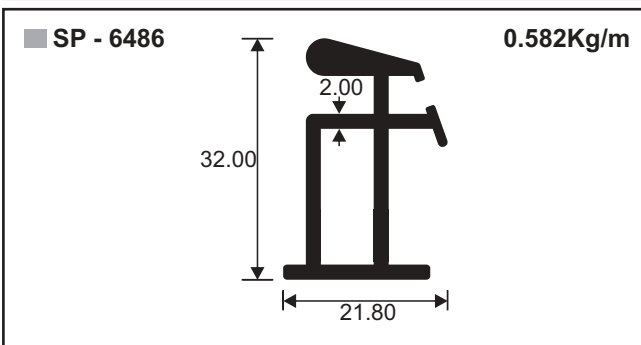
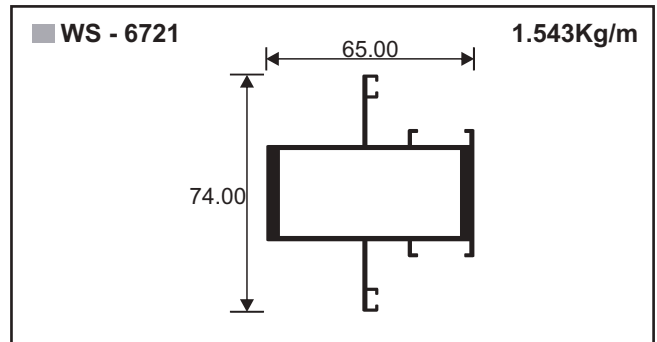
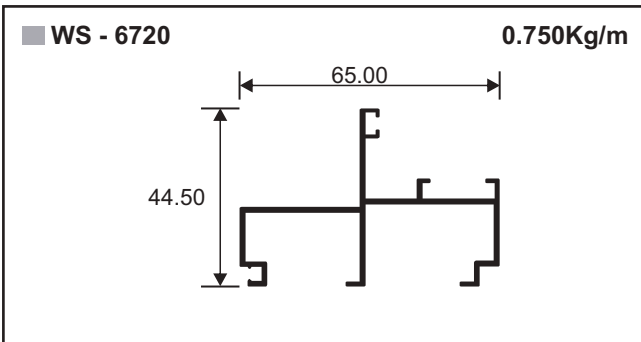
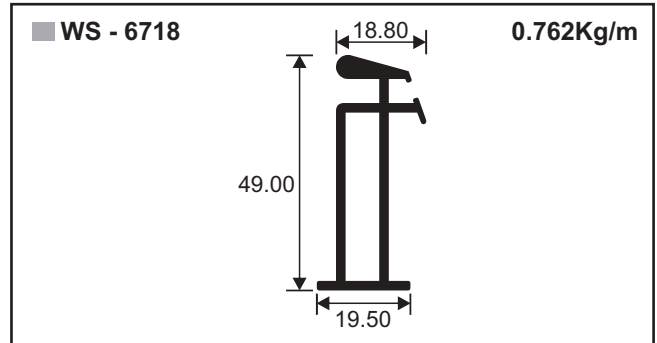
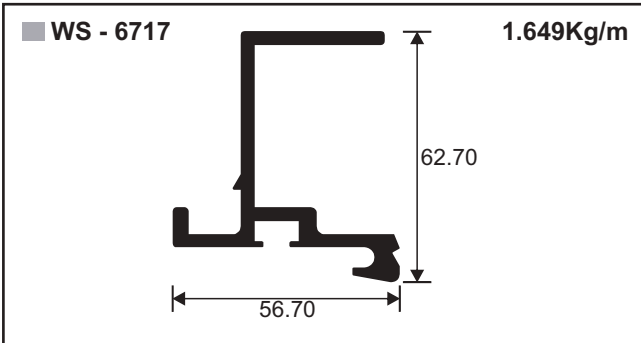


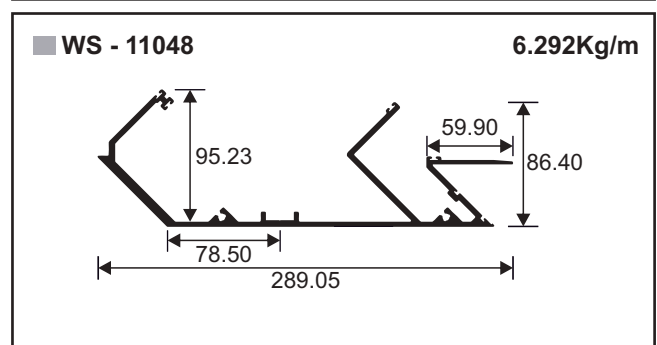
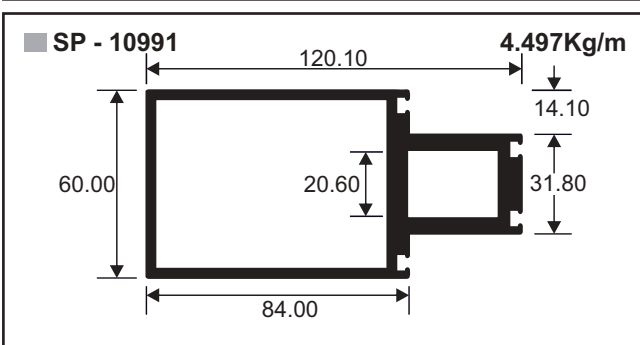
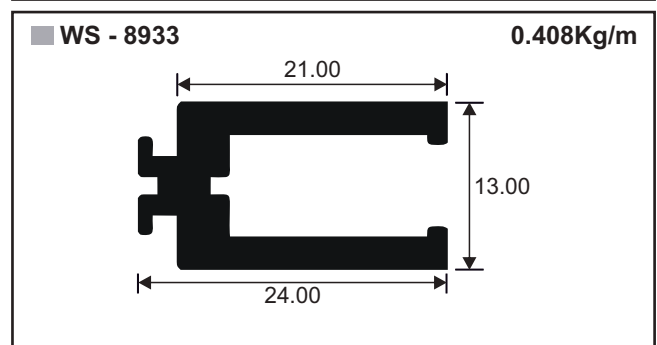
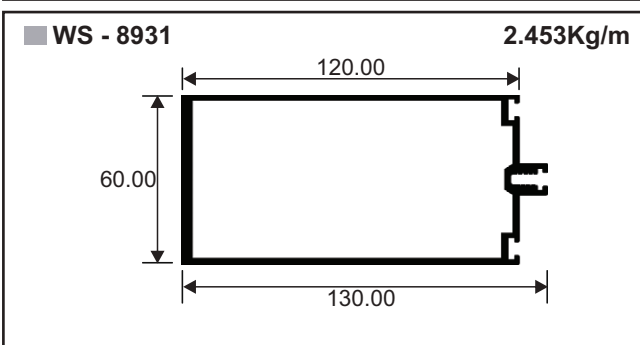
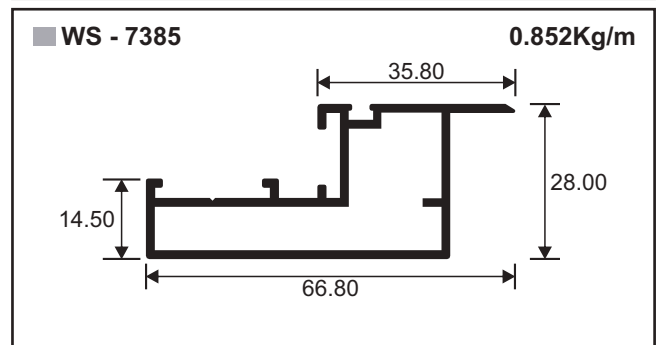
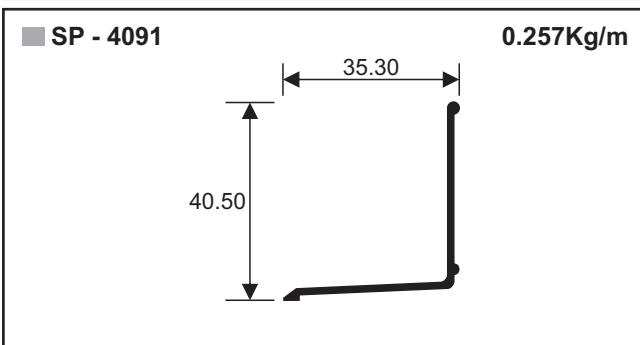
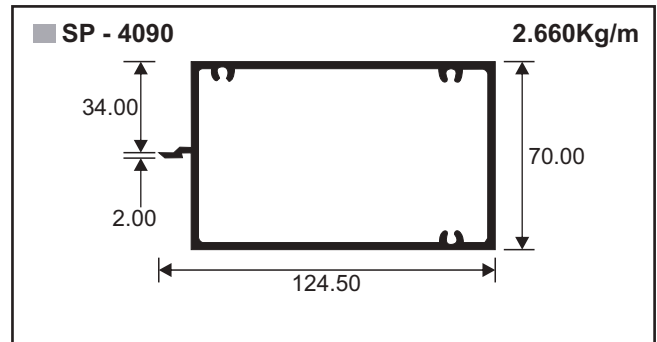
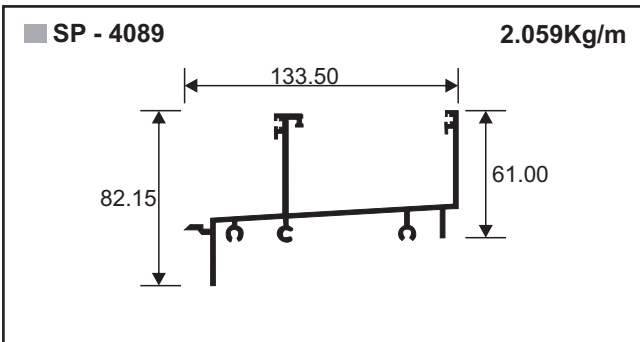
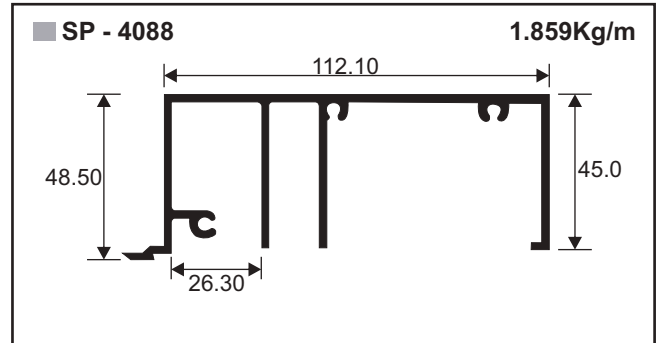
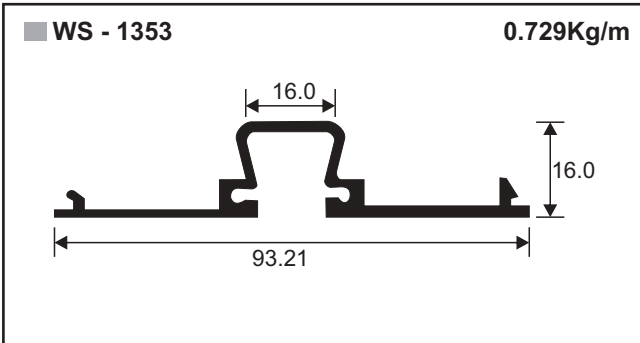


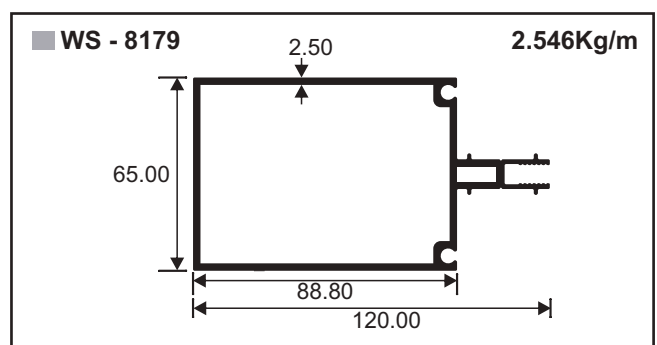
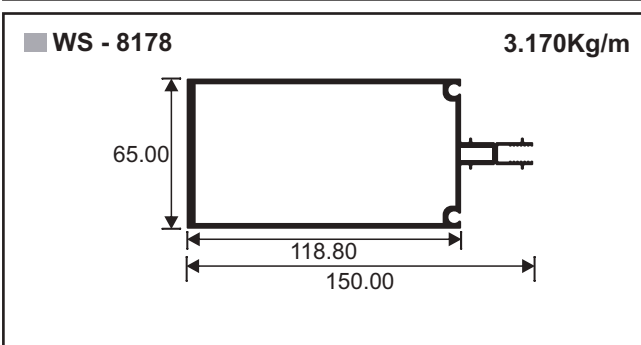
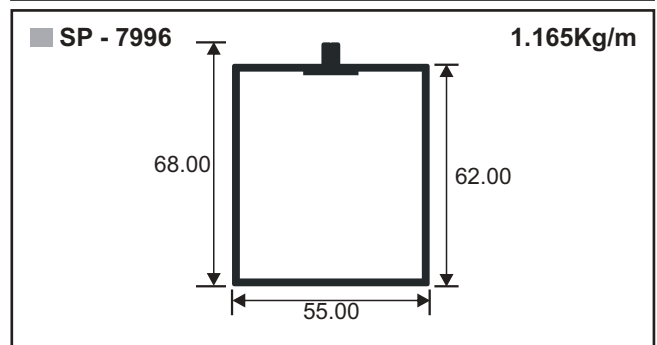
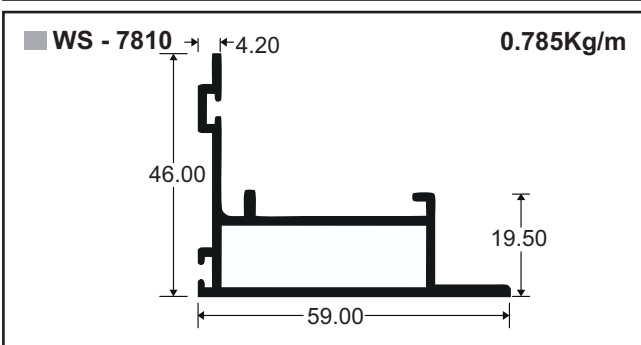
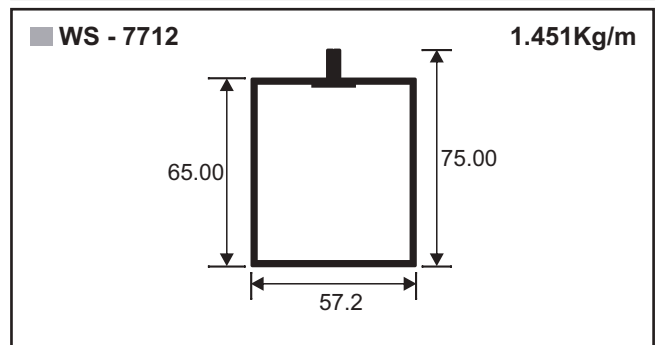
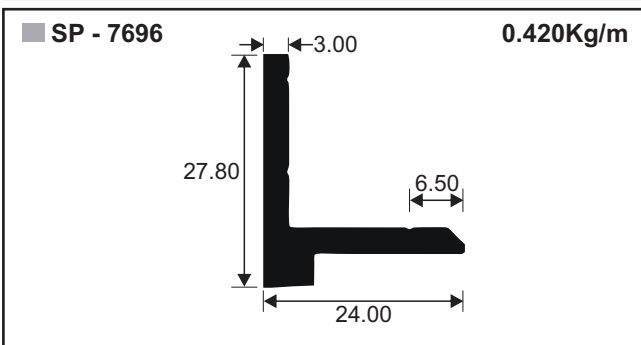
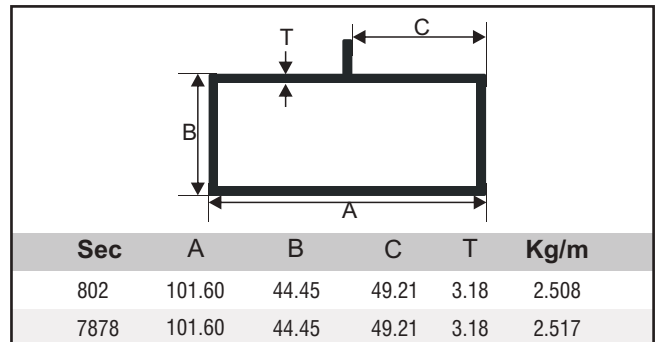
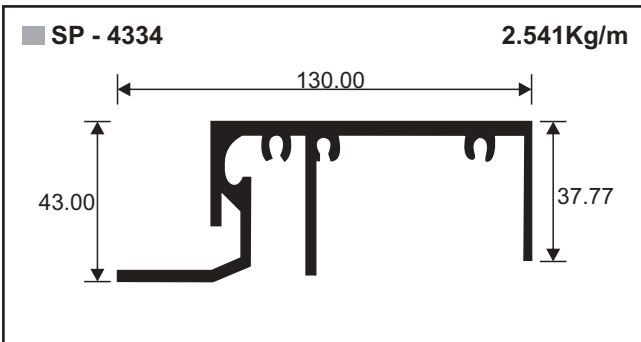
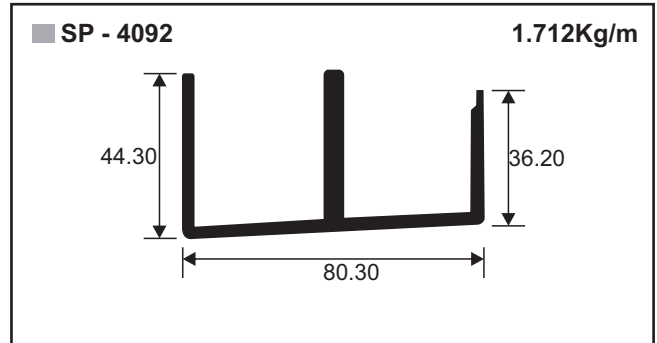
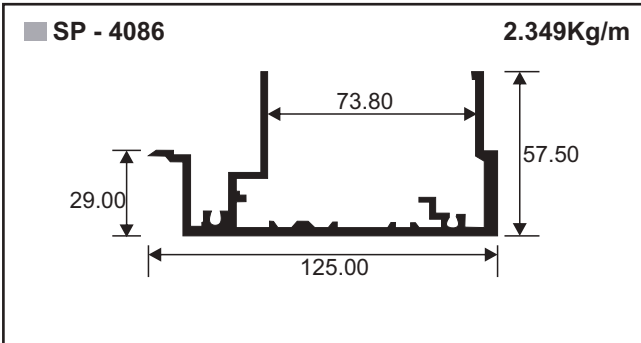


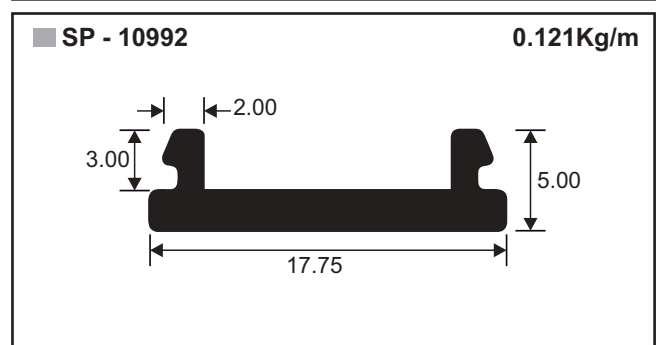
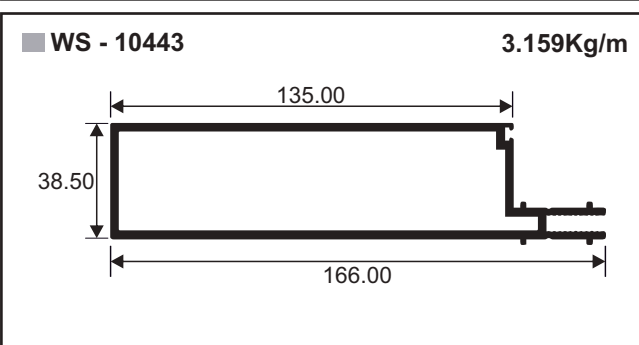
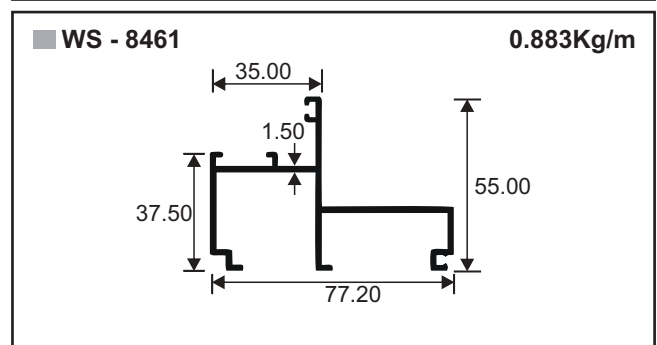
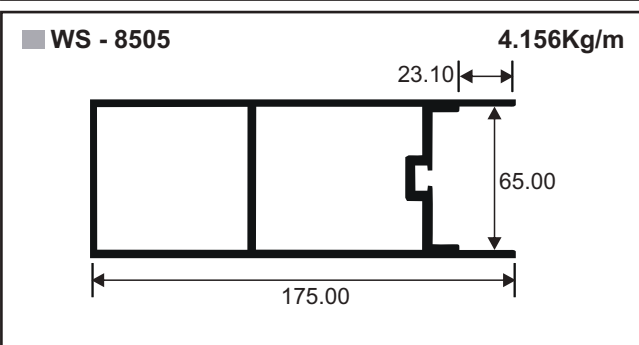
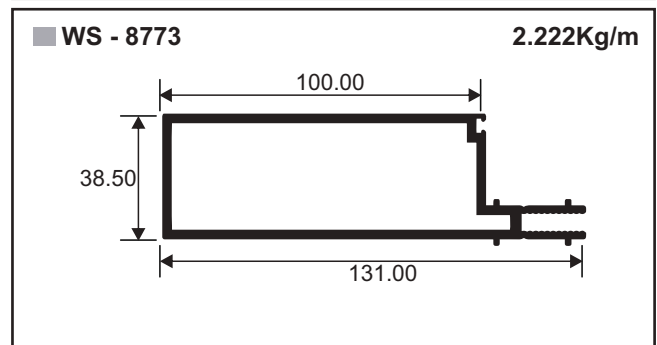
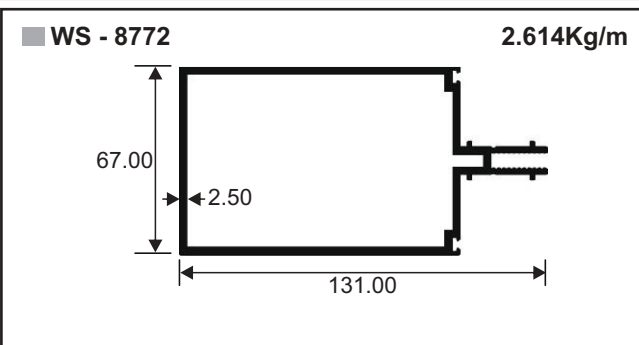
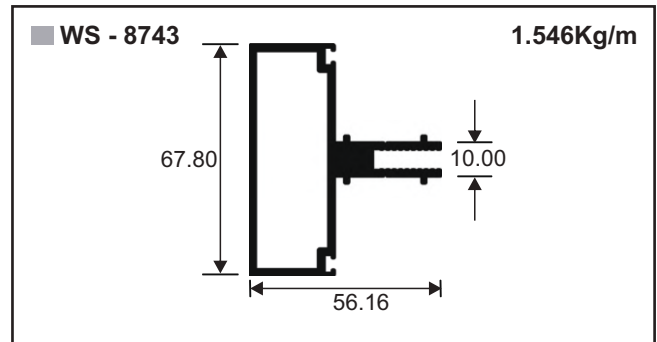
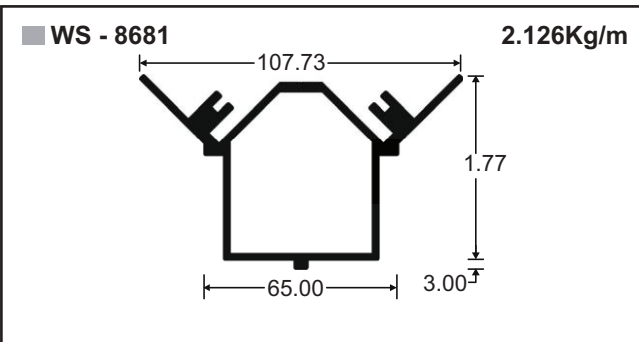
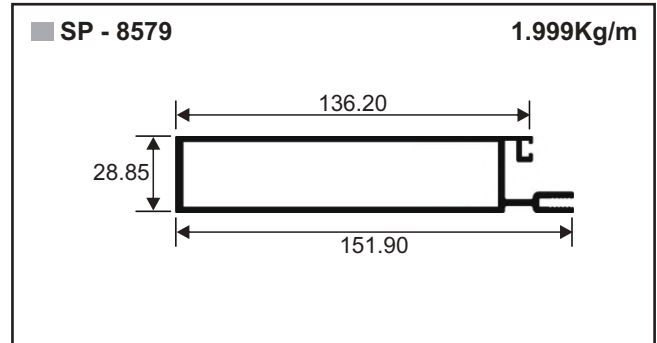
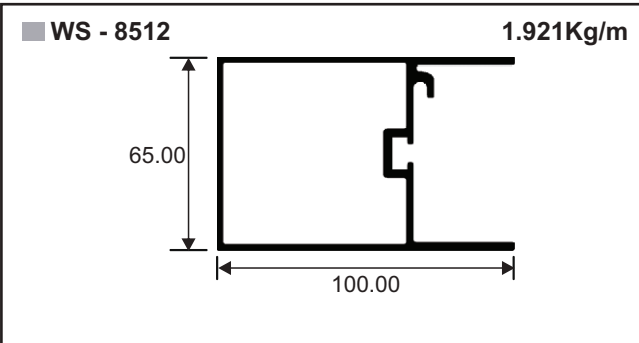


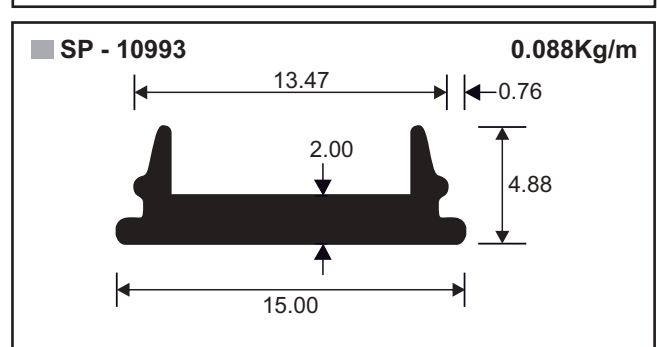
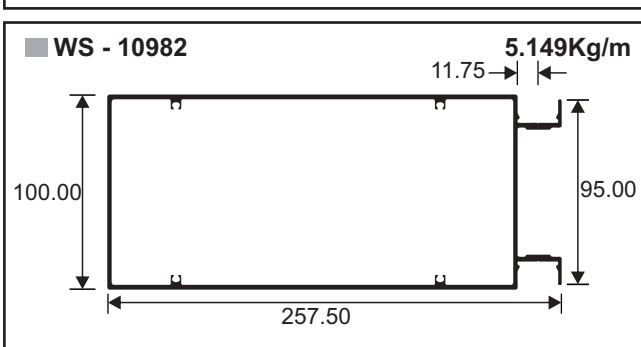
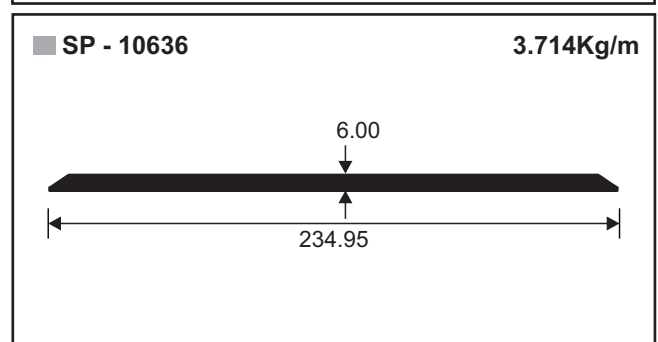
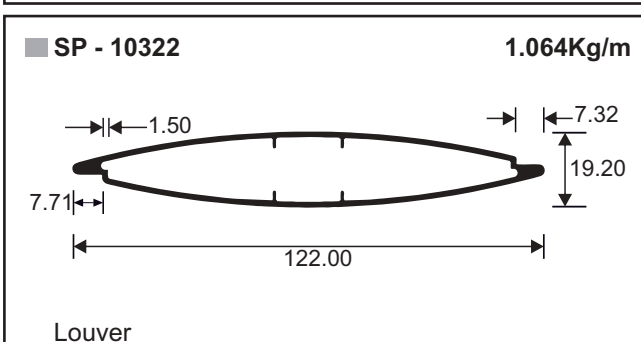
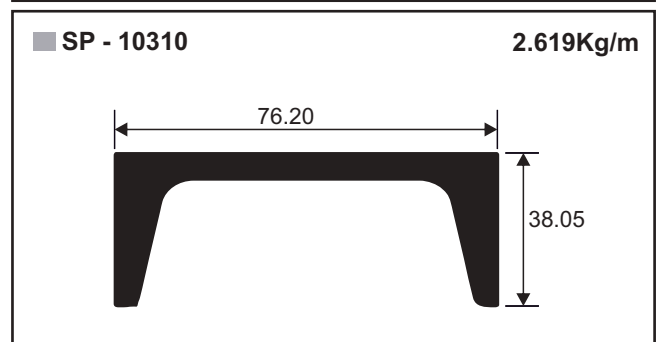
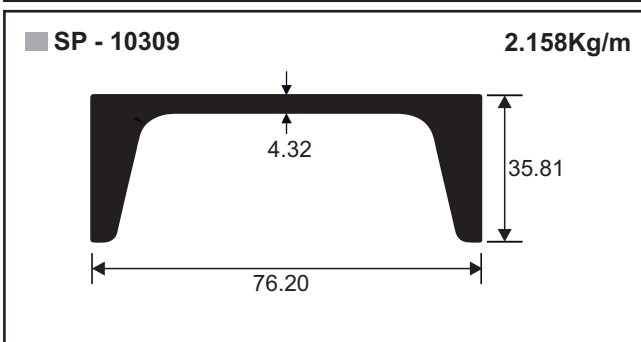
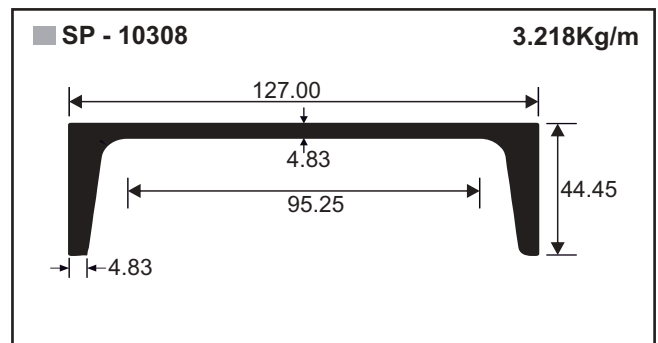
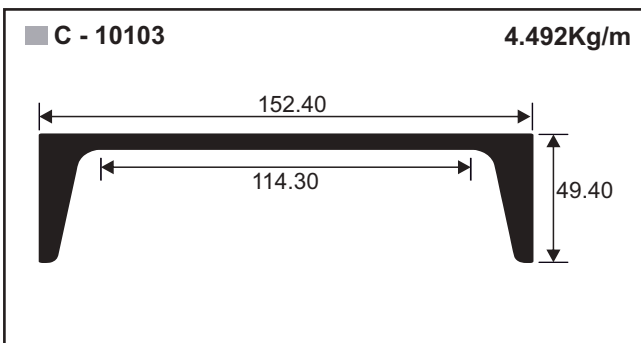
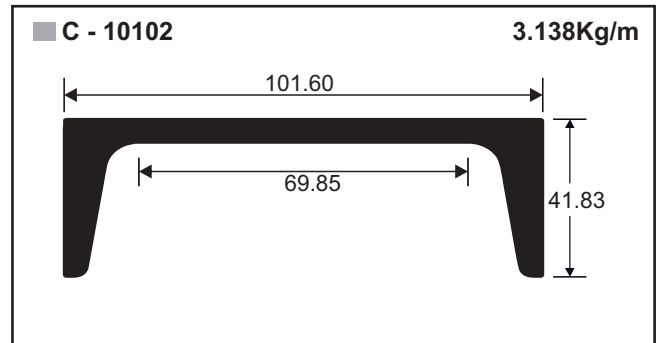
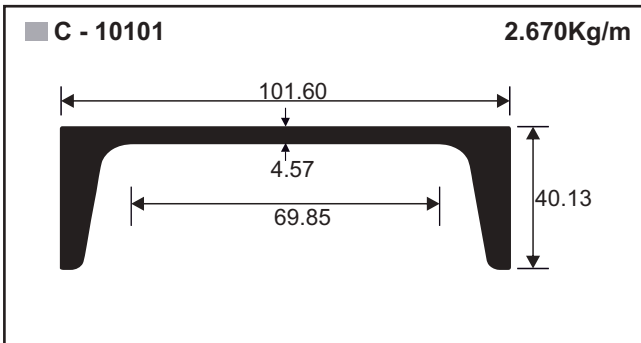


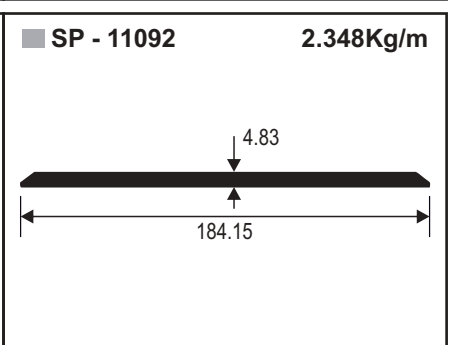
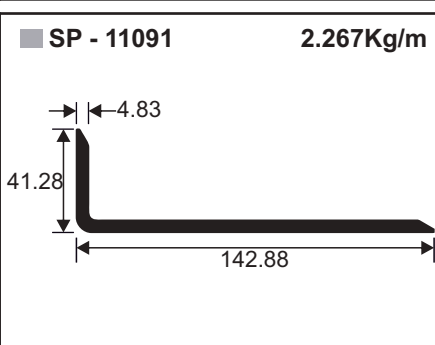
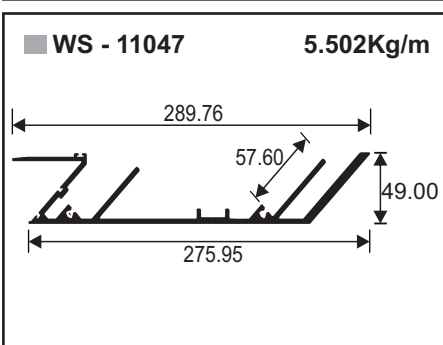
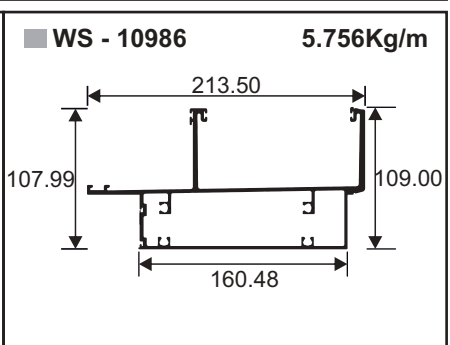
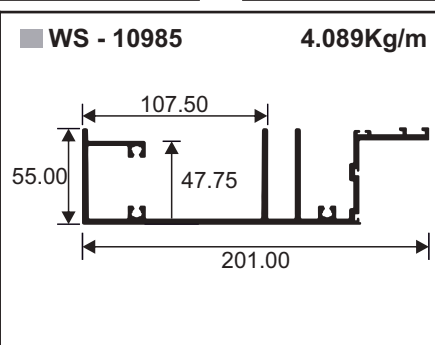
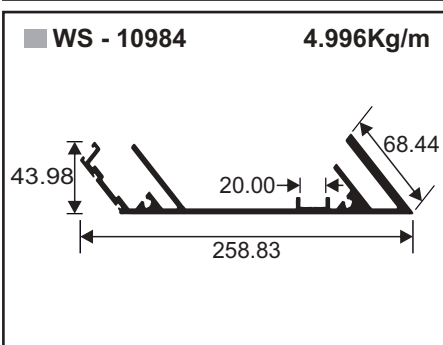
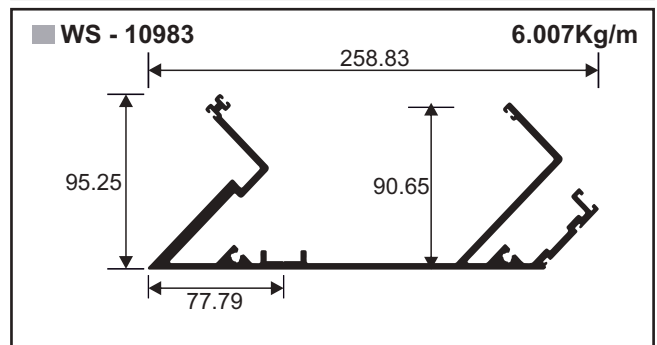
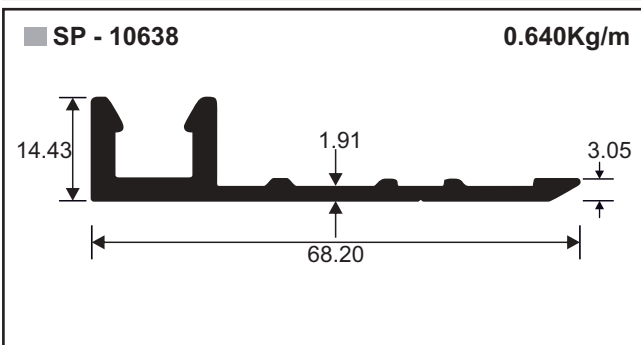
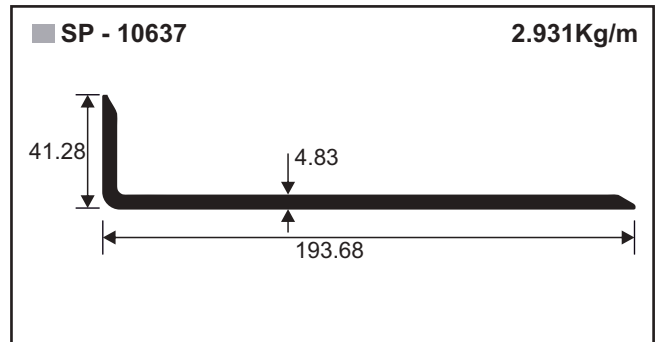
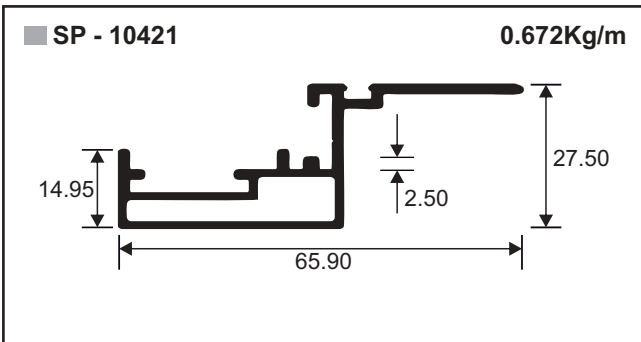
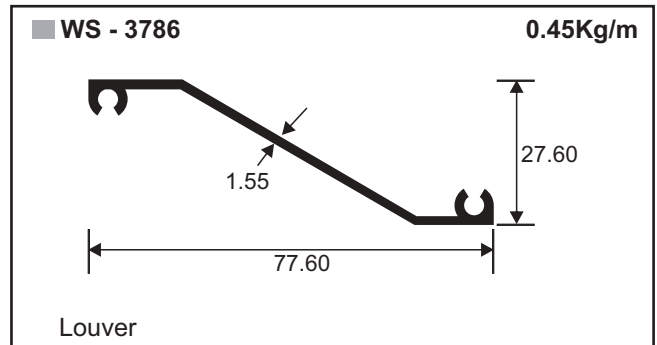
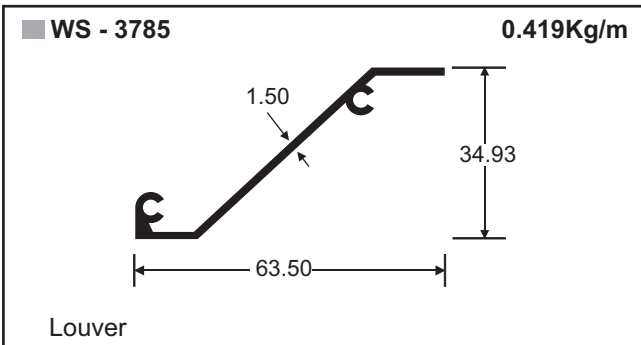


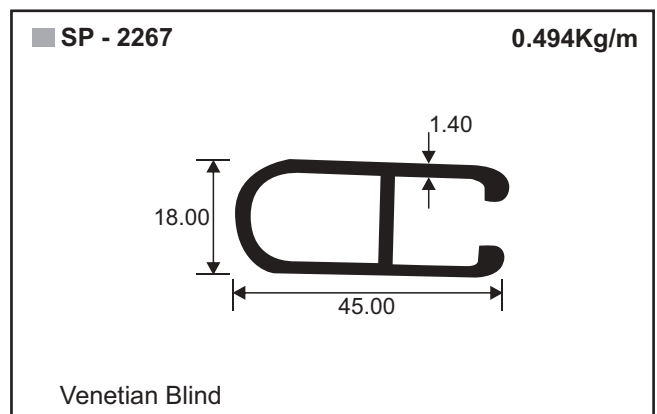
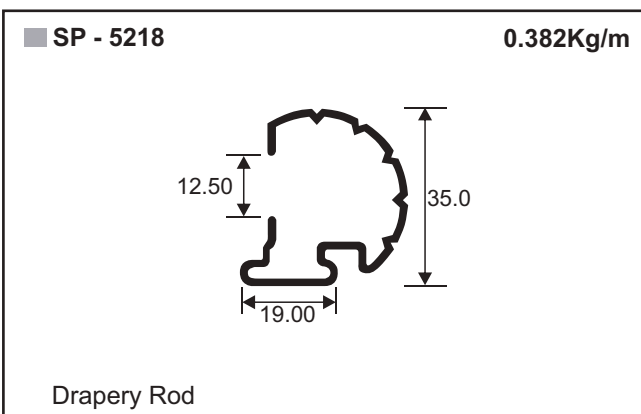
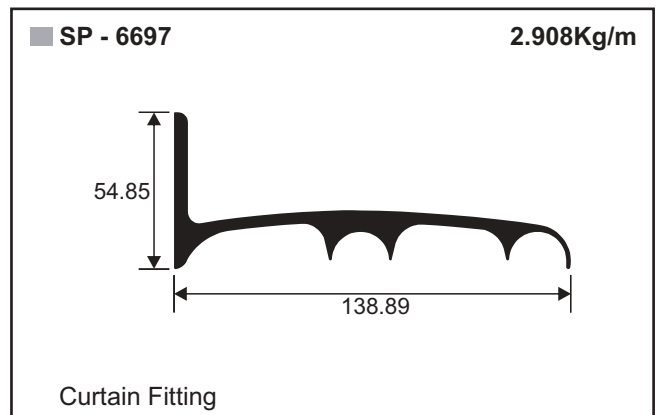
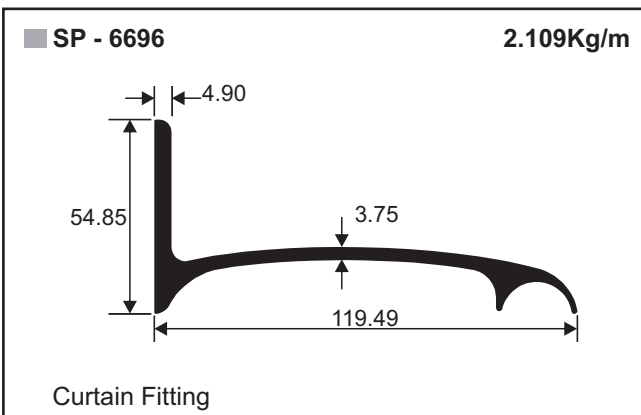
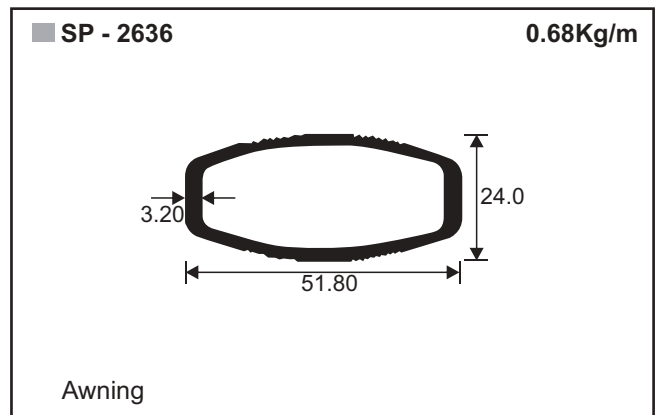
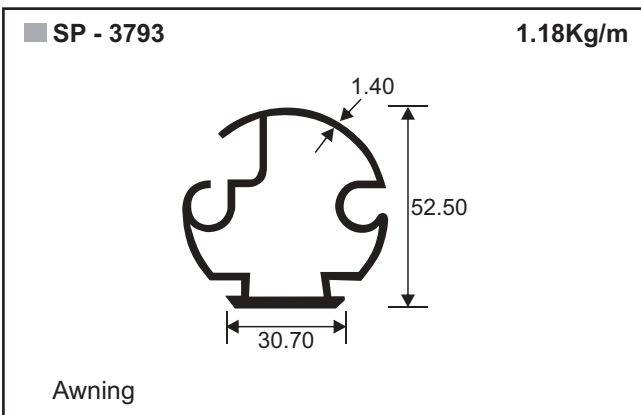
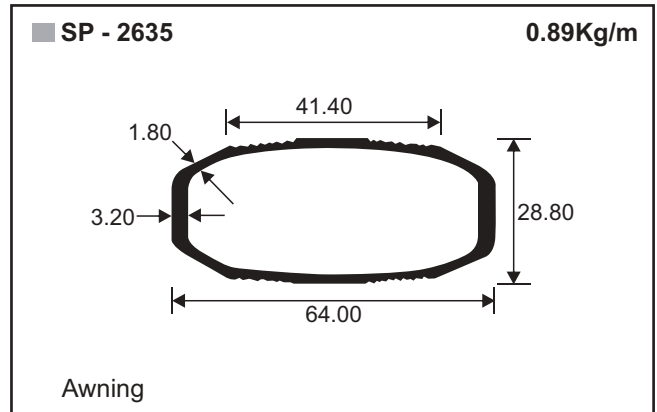
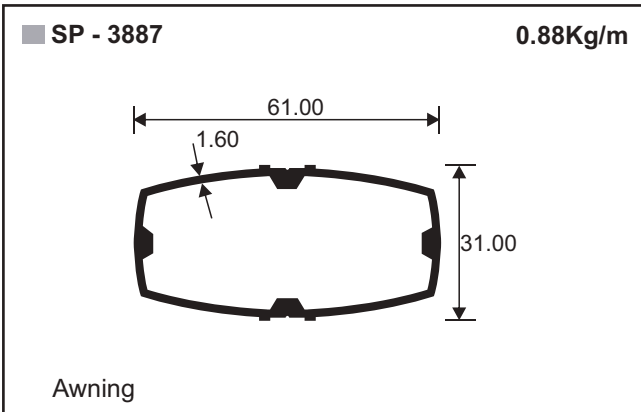






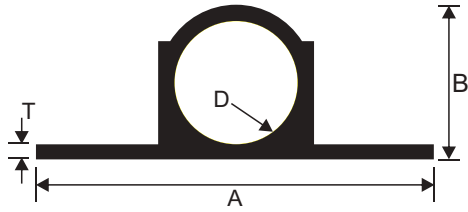




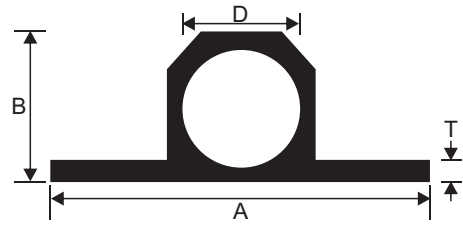




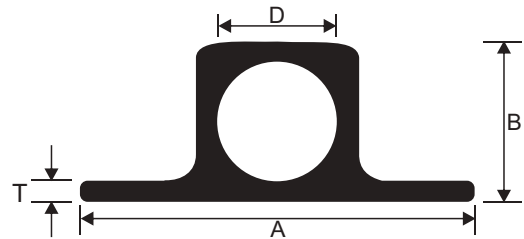
Hardware Tower Bolt



Sec	A	B	D	T	Kg/m
TB348	25.52	10.66	8.25	1.52	0.213
TB6768	31.50	13.60	11.20	1.40	0.255
TB7102	31.60	12.90	10.90	1.50	0.234
TB1276	31.76	12.70	10.30	1.20	0.234
TB260	31.76	12.60	10.10	1.30	0.260
TB3778	31.80	13.50	10.80	1.50	0.280
TB3779	31.80	13.80	11.00	1.50	0.184
TB5306	31.80	12.60	10.20	1.50	0.243
TB5307	31.80	12.80	10.20	1.60	0.259
TB1482	32.00	12.20	11.00	1.60	0.306
TB2153	35.00	14.20	11.00	1.60	0.350
TB3541	37.80	17.00	12.80	2.20	0.483
TB6769	38.00	16.00	12.40	1.80	0.409
TB3776	38.00	17.10	12.70	2.20	0.495
TB1559	38.00	17.60	12.80	2.40	0.540
TB1286	44.45	17.06	13.26	1.90	0.508
TB8422	31.75	12.30	10.30	1.60	0.230
TB8423	31.75	13.55	11.15	1.20	0.240
TB8424	31.80	13.40	10.80	1.45	0.266
TB8425	31.80	13.60	11.00	1.50	0.273
TB8426	43.00	15.75	13.25	1.90	0.398
TB8427	37.40	15.80	12.60	1.70	0.384
TB8433	25.52	10.65	8.25	1.35	0.197



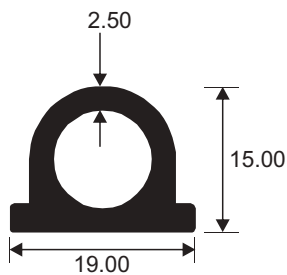
Sec	A	B	D	T	Kg/m
TB3123	31.00	12.40	10.00	1.10	0.223
TB3124	31.80	12.40	10.00	1.20	0.247
TB4459	32.00	12.50	10.10	1.20	0.261
TB3122	32.00	13.50	10.80	1.60	0.283
TB3126	38.00	16.00	12.80	1.85	0.398
TB3125	38.00	16.50	12.80	2.20	0.454
TB4460	44.00	16.00	13.00	2.30	0.487



Sec	A	B	D	T	Kg/m
TB5630	28.00	11.50	8.50	1.50	0.271
TB7496	31.60	12.90	10.70	1.30	0.272
TB8428	37.00	15.15	12.75	1.80	0.382
TB8434	31.00	12.40	10.40	1.20	0.246

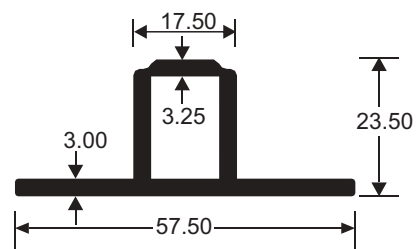
■ TB - 6987

0.363Kg/m

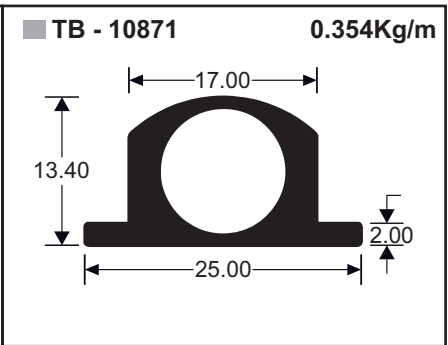
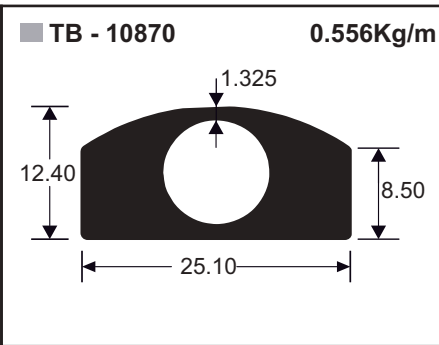
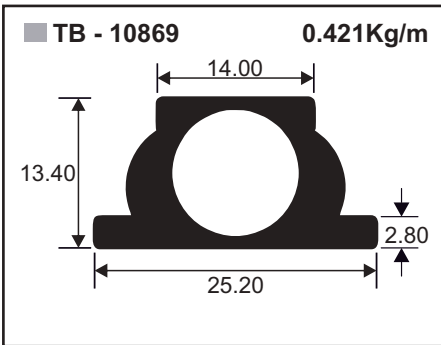
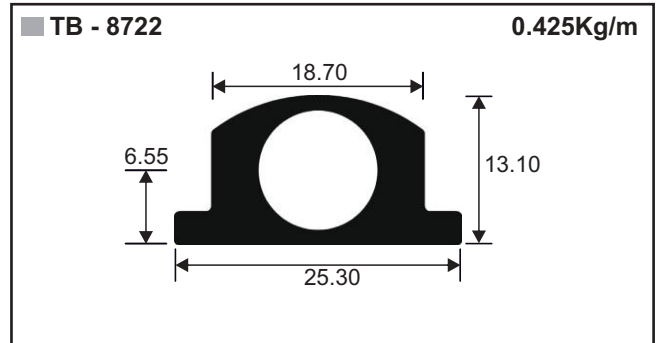
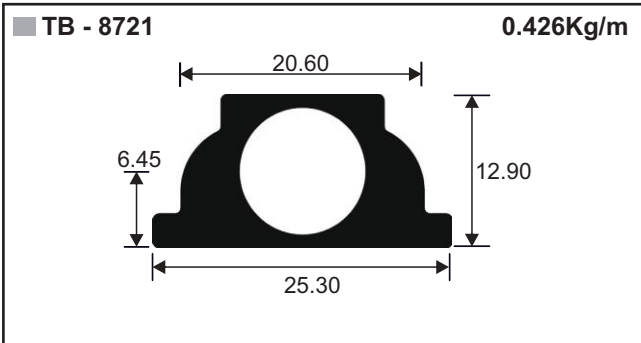


■ TB - 7522

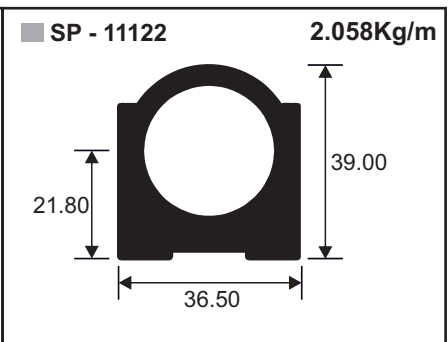
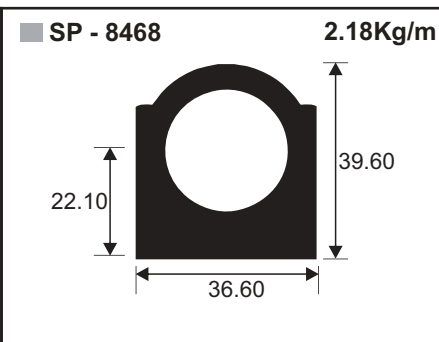
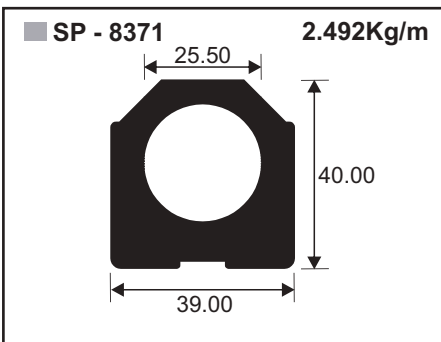
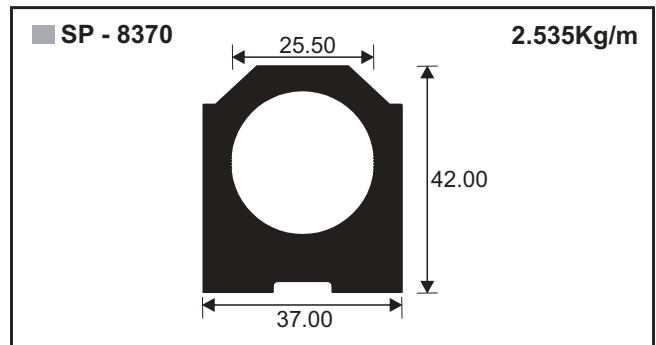
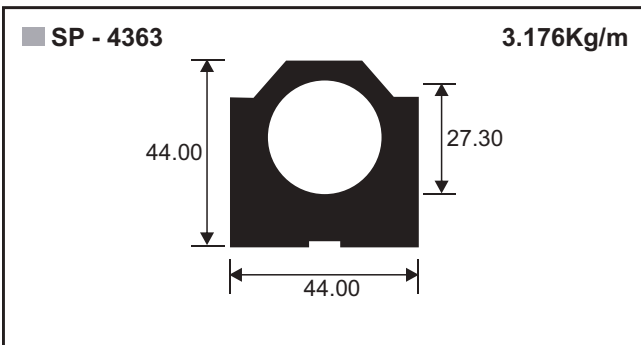
0.863Kg/m



Hardware Tower Bolt

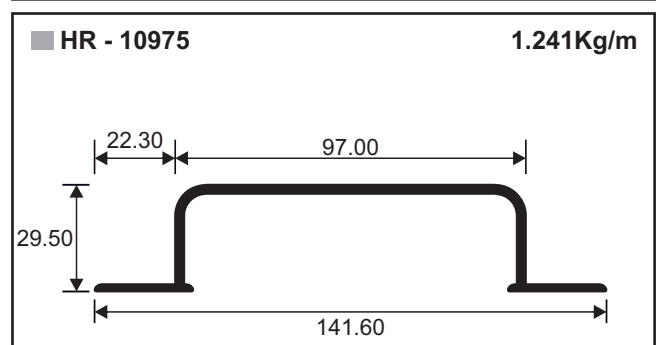
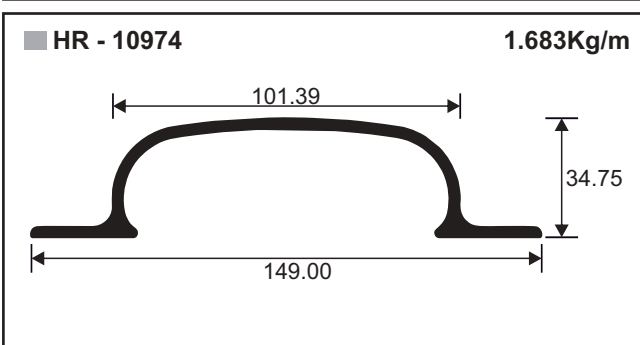
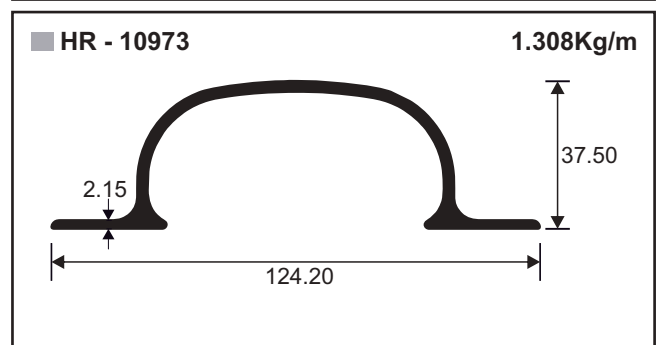
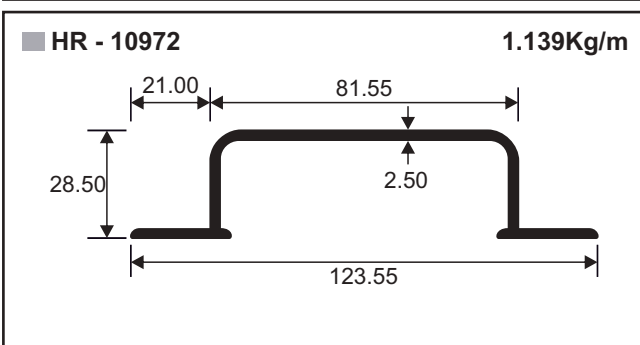
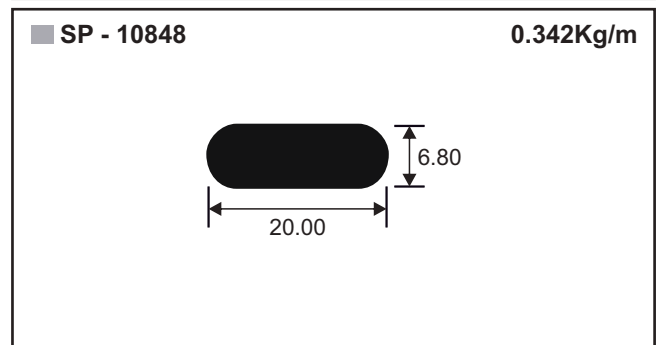
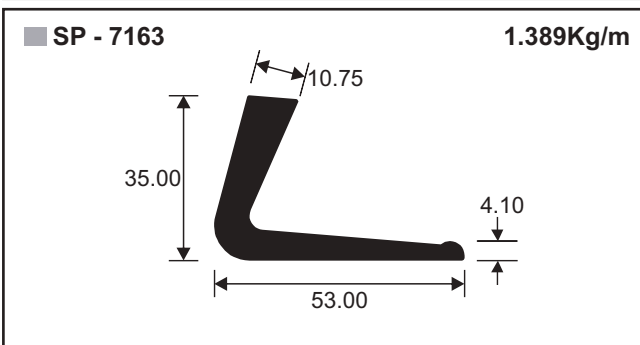
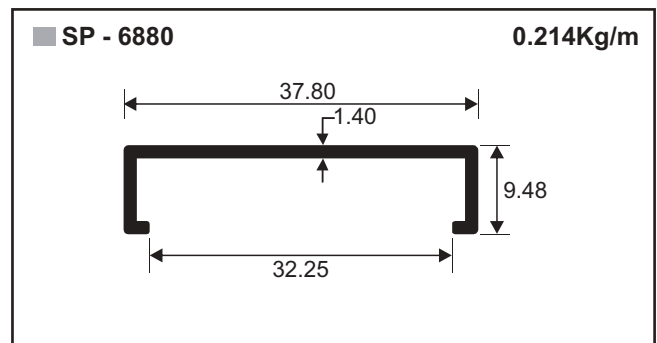
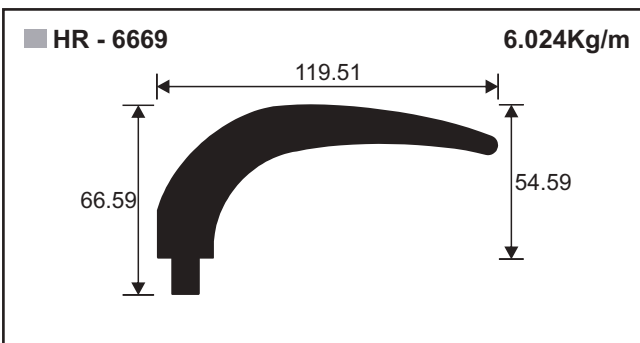
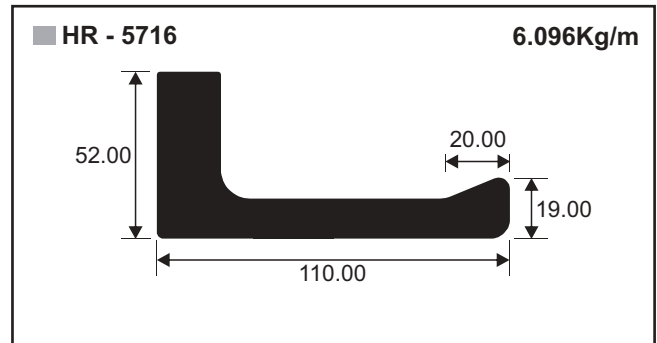
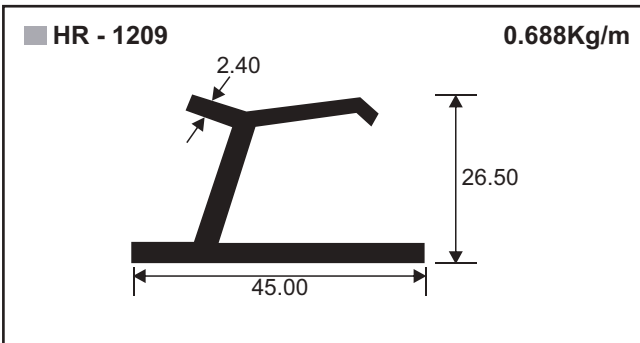


Hardware Door Closure

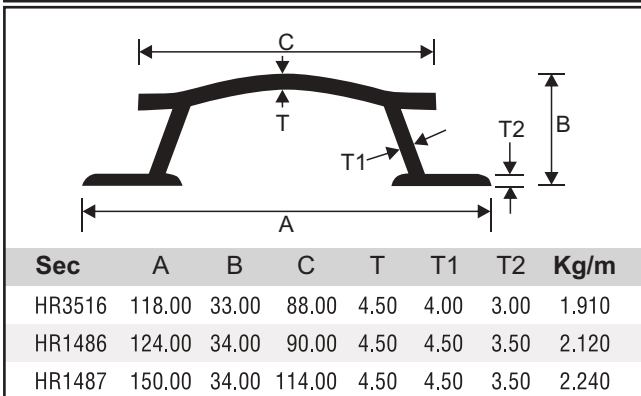
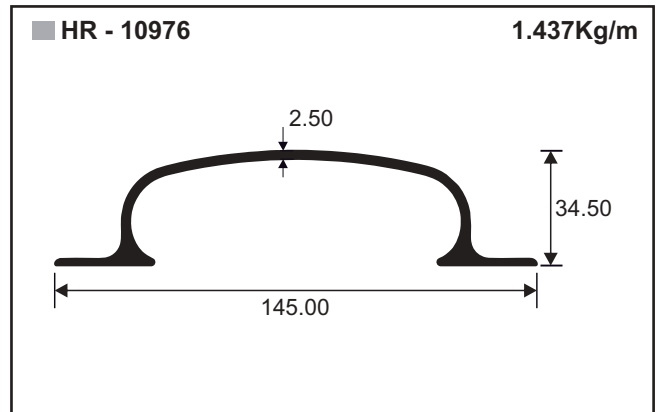
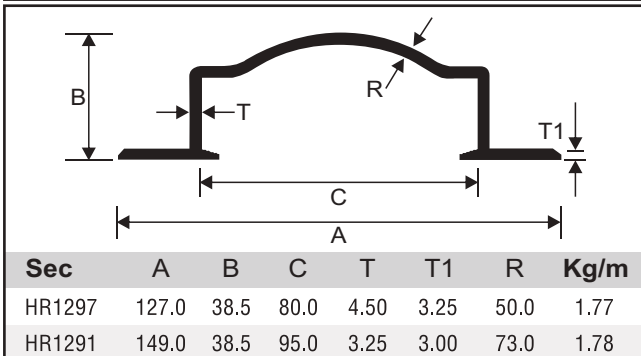
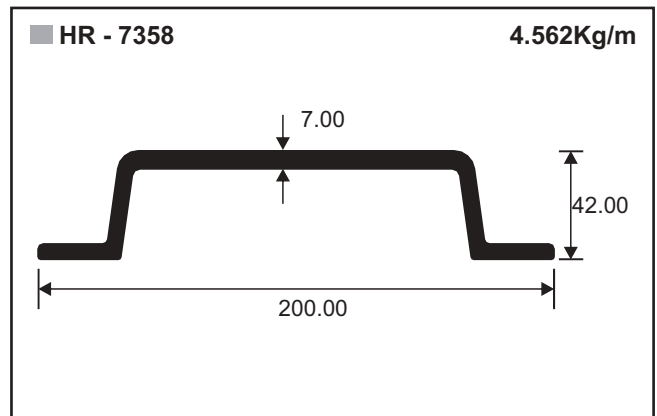
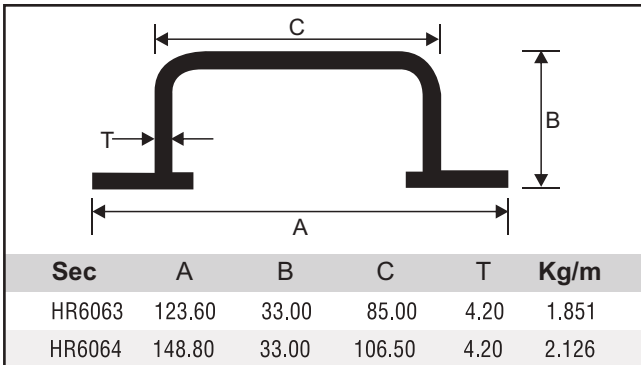
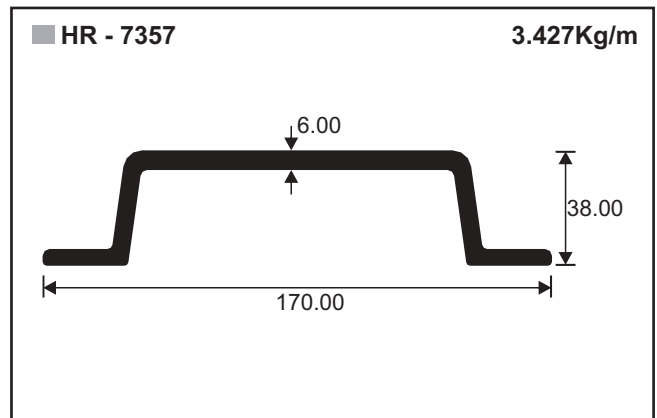
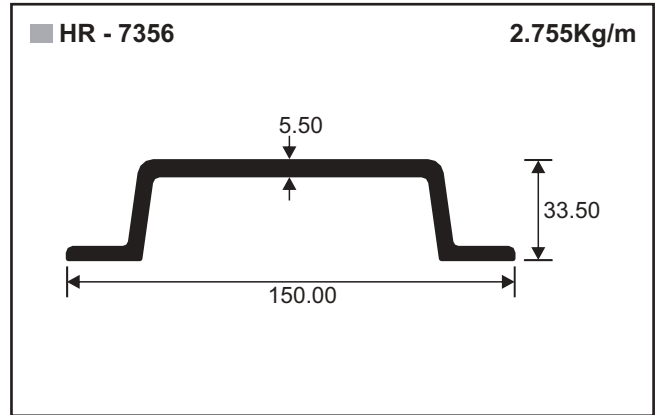
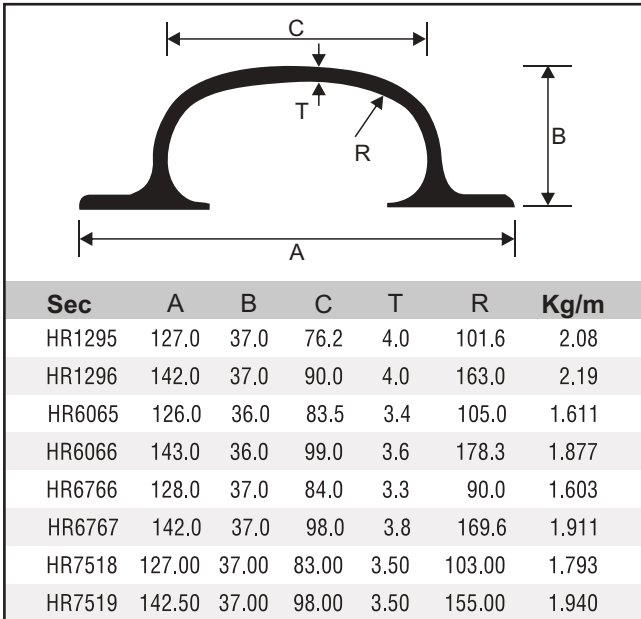




Hardware Handle

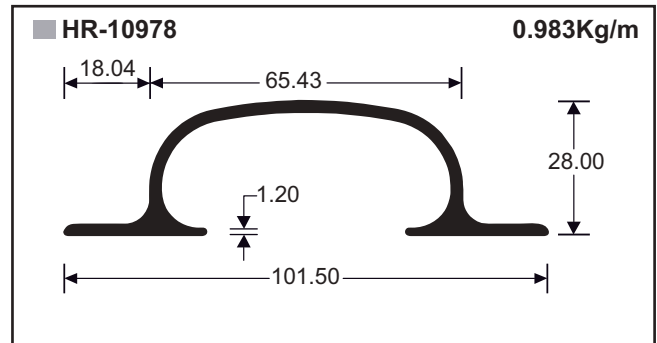
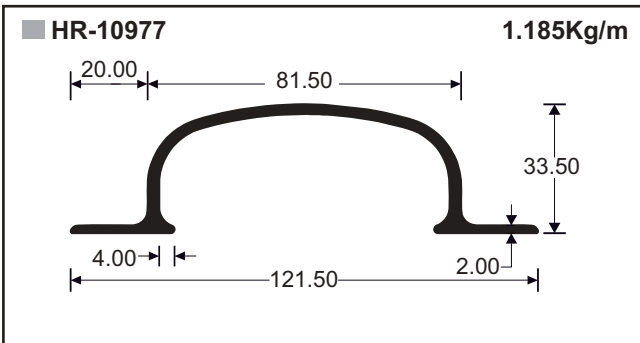


Hardware Handle

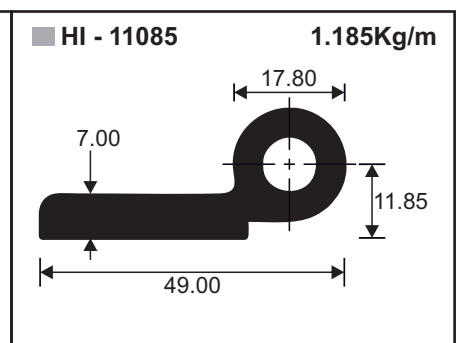
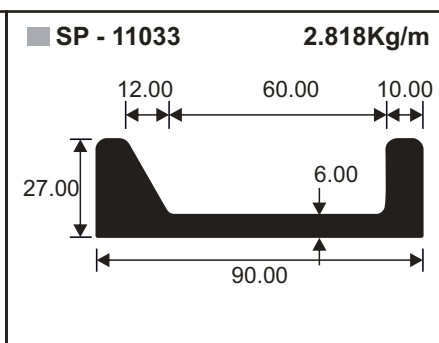
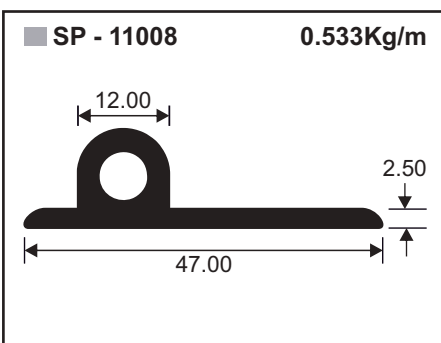
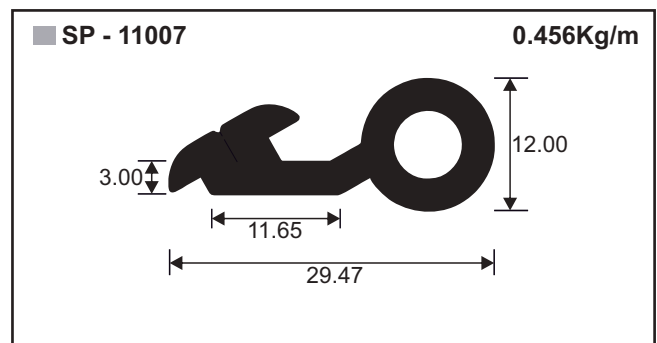
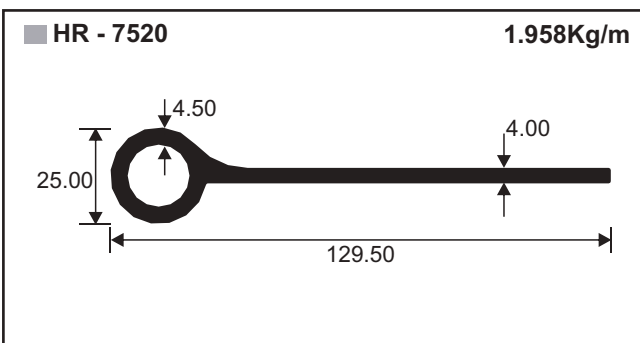
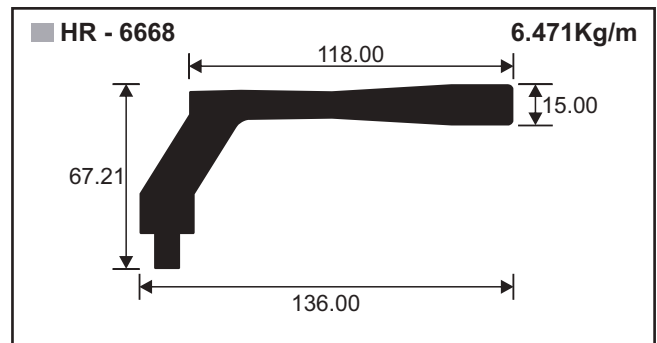
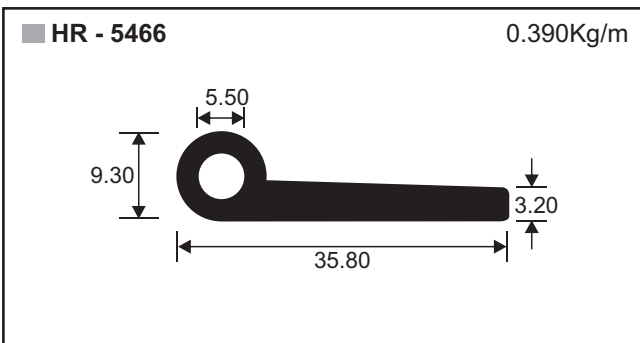




Hardware Handle



Hardware Aldrop & Hinges





Sec	A	B	D	T	R	Kg/m
HI3649	25.00	7.00	3.50	2.00	0.00	0.186
HI3390	25.40	6.35	3.50	3.00	0.00	0.243
HI3648	35.00	9.00	4.75	2.00	0.50	0.280
HI-7817	36.00	9.00	5.50	3.00	0.00	0.339

Sec	A	B	T	Kg/m
HI325	25.40	6.35	3.18	0.256
HI326	27.79	7.95	3.96	0.397

Sec	A	B	D	R	R1	T	Kg/m
SP1479	102.00	20.35	13.35	15.0	1.0	3.50	1.31
SP1484	125.00	23.00	15.00	35.0	2.0	3.50	1.68
HI7103	132.50	20.50	12.25	38.0	1.0	4.00	1.988
SP991	133.77	25.77	16.25	35.0	2.0	4.10	2.13
HI8429	129.50	24.95	16.35	18.0		3.75	1.859
HI8430	132.50	24.55	16.45	38.0	1.0	3.80	1.911

Sec	A	B	T	T1	R	Kg/m
HI478	37.30	11.00	3.20	5.00	5.00	0.579

Sec	A	B	T	T1	Kg/m
HI1107	38.88	11.11	3.57	4.76	0.590

Sec	A	B	D	T	T1	Kg/m
HI1020	36.51	9.52	5.00	3.15	4.00	0.419
HI2296	37.25	11.00	5.30	4.00	4.80	0.526
HI3520	37.25	11.00	5.00	4.00	4.80	0.536
HI889	44.60	12.70	6.40	3.96	5.00	0.660

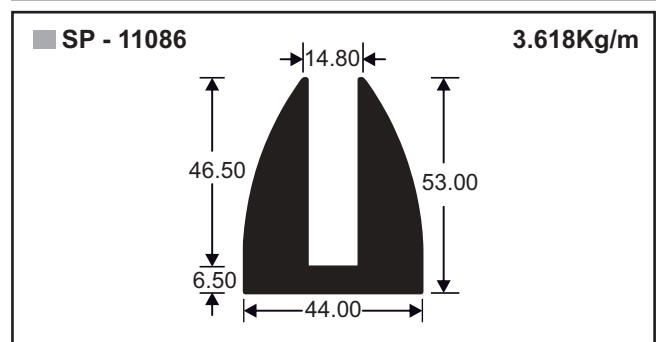
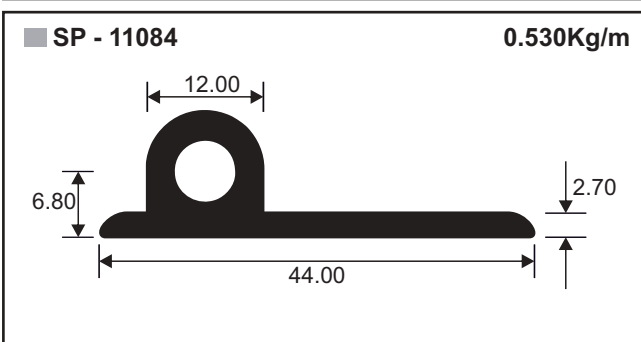
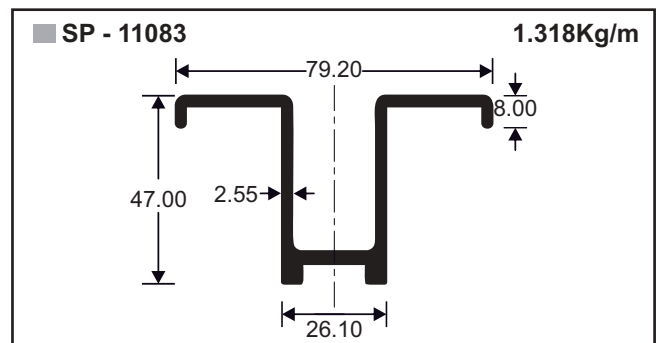
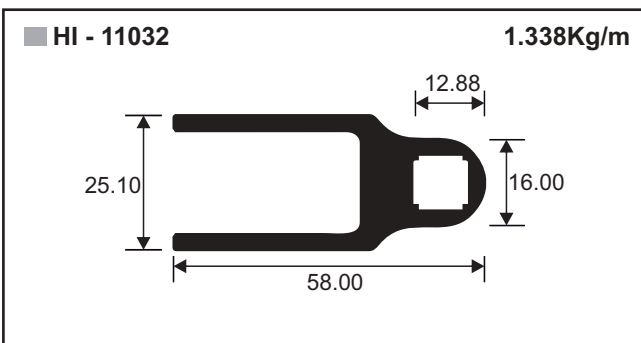
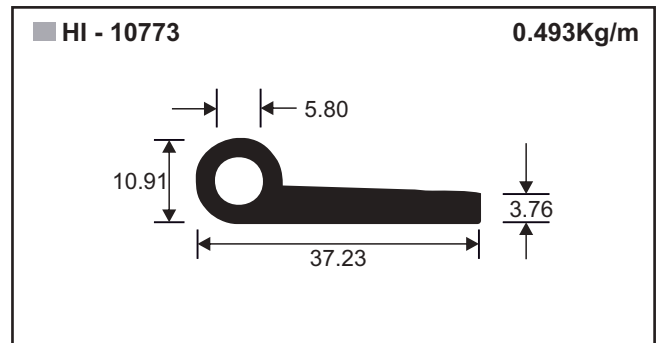
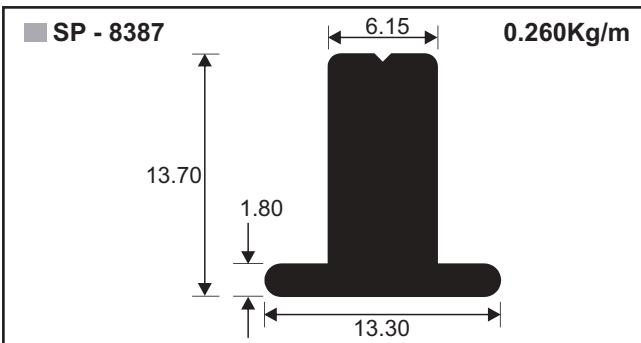
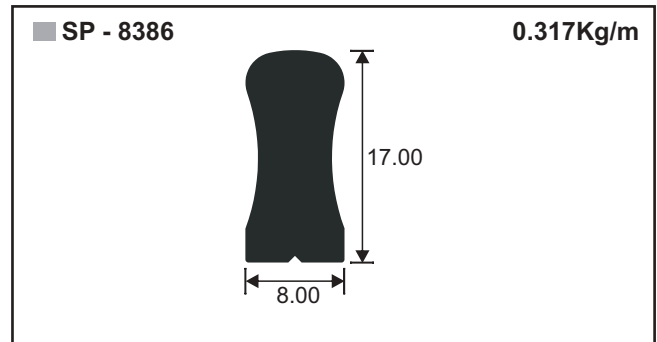
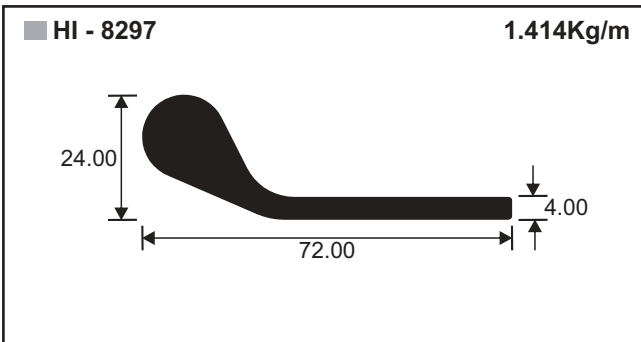
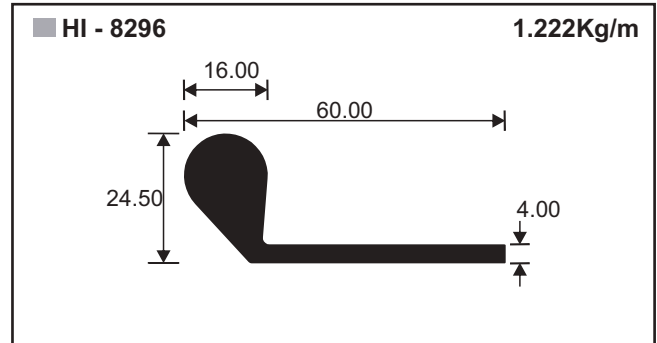
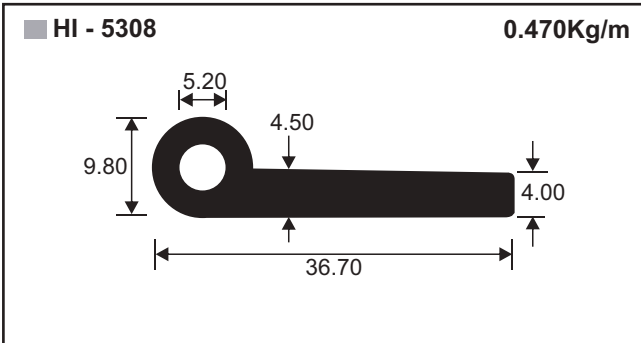
■ **SP - 10829** **0.841Kg/m**

■ **HI - 10846** **0.970Kg/m**

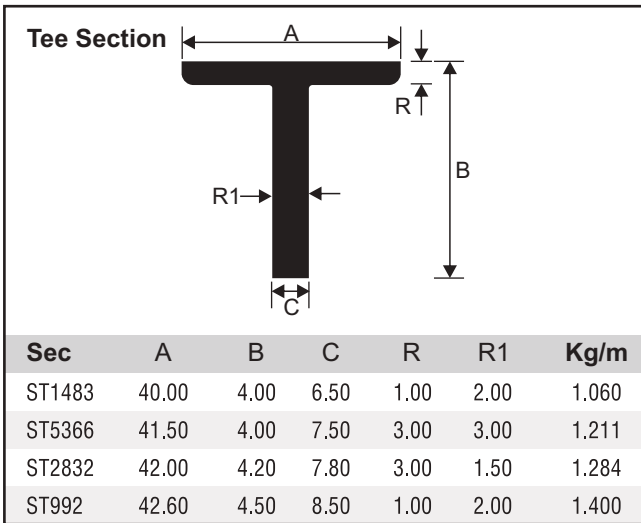
■ **HI - 10847** **0.824Kg/m**



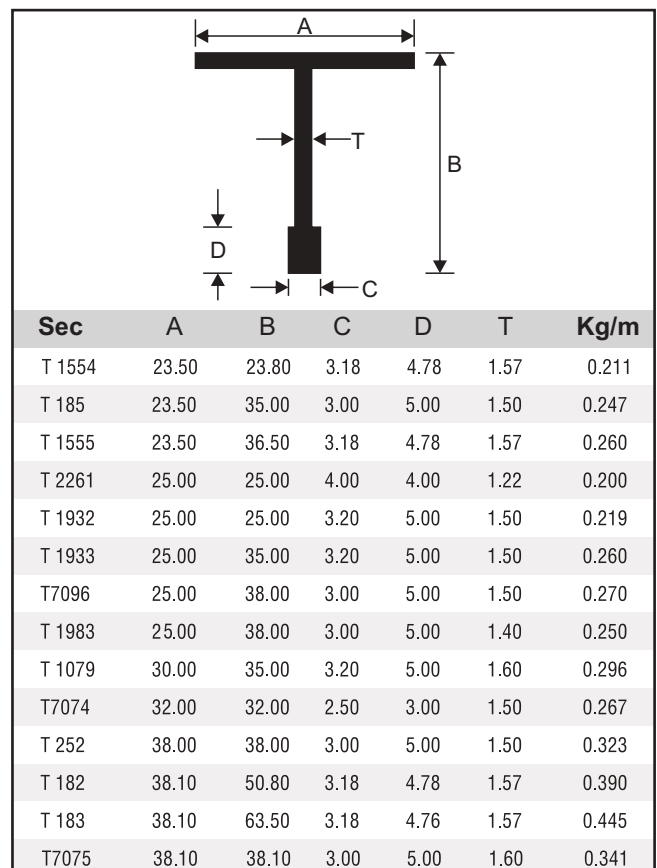
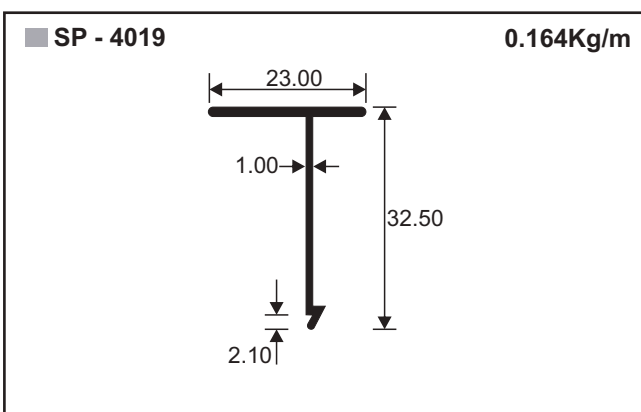
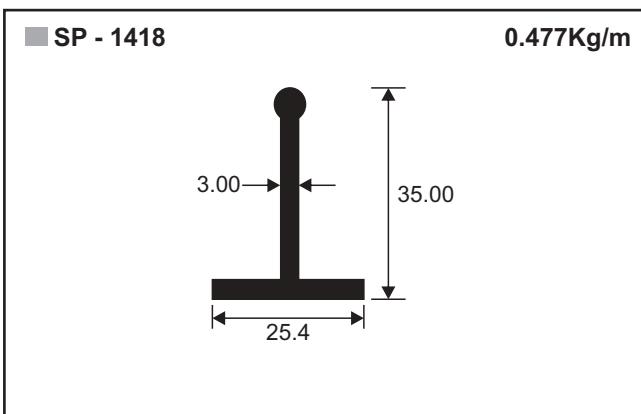
Hardware Aldrop & Hinges



Hardware Aldrop & Hinges



False Ceiling

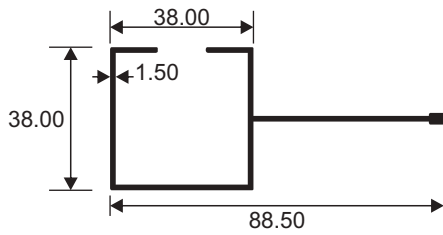




False Ceiling

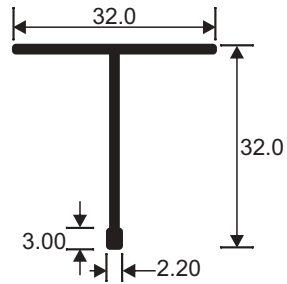
■ SP - 6002

0.764Kg/m



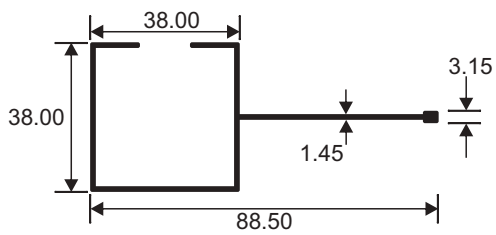
■ T - 7683

0.211Kg/m



■ SP - 8203

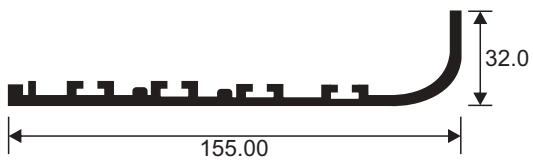
0.739Kg/m



Sign & Display

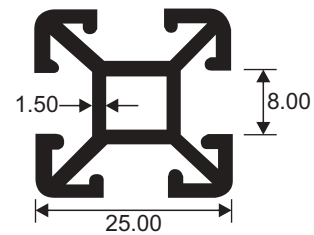
■ SP - 1247

1.92Kg/m



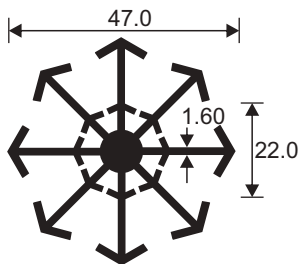
■ WS - 1738

0.603Kg/m



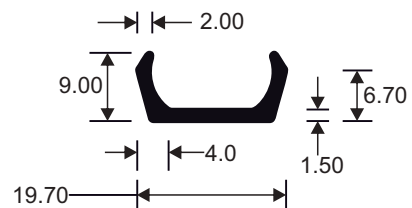
■ SP - 2249

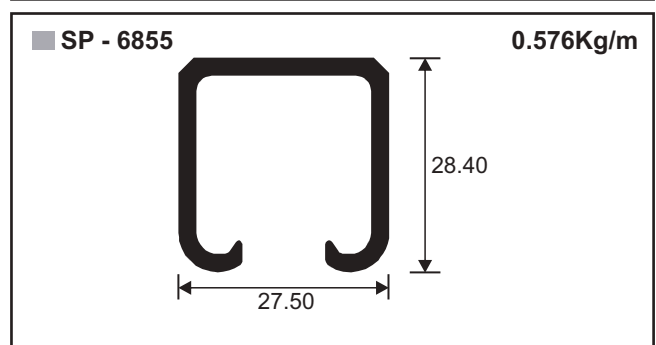
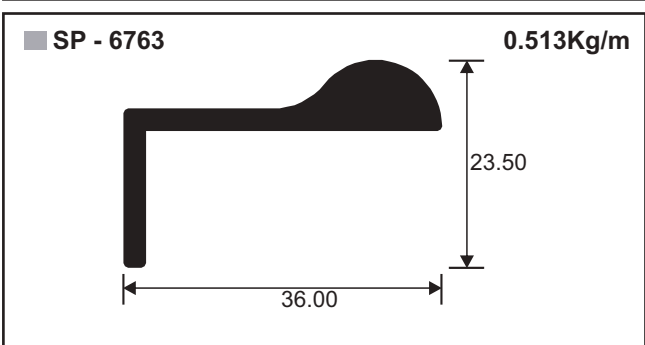
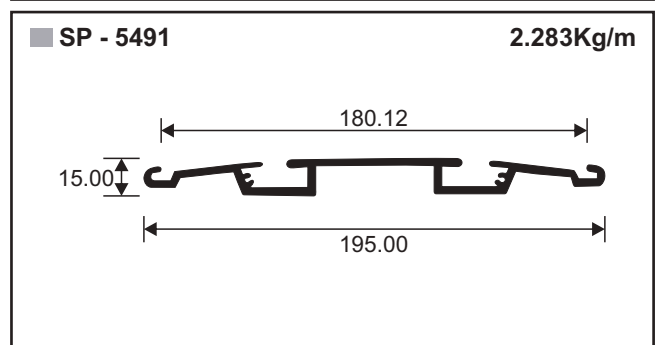
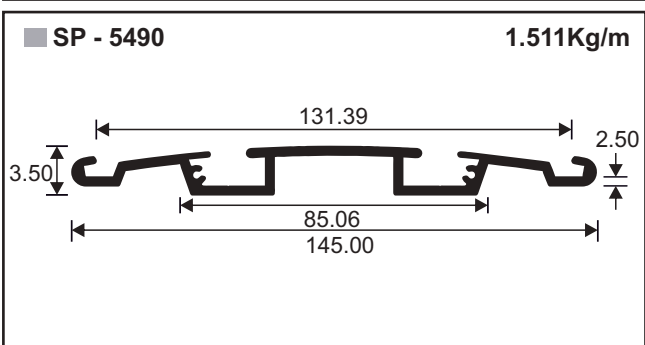
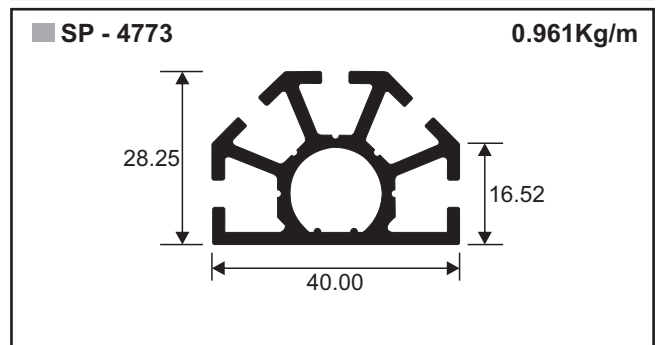
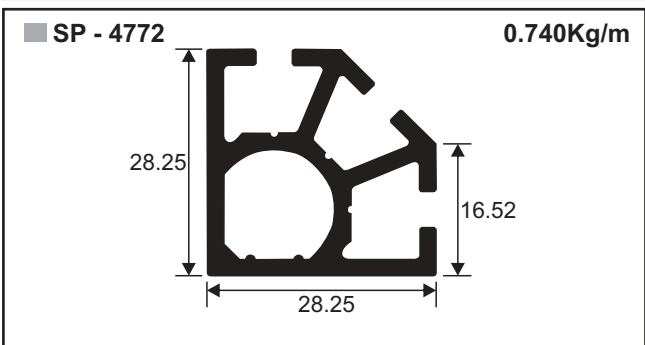
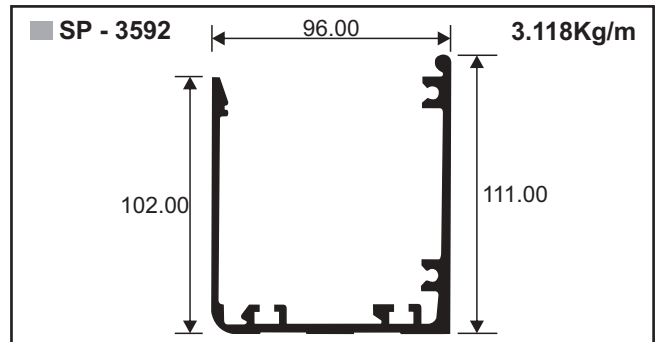
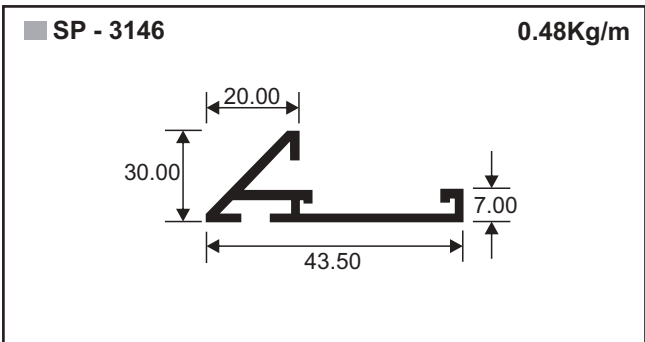
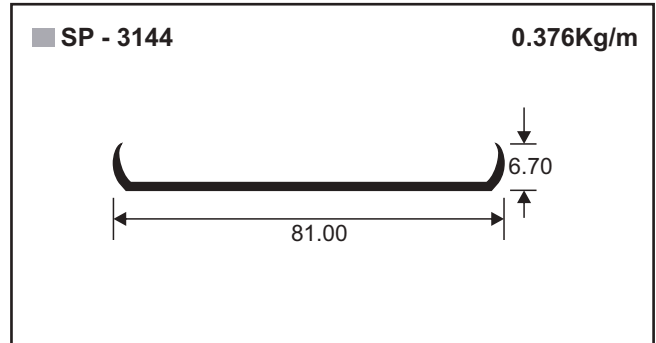
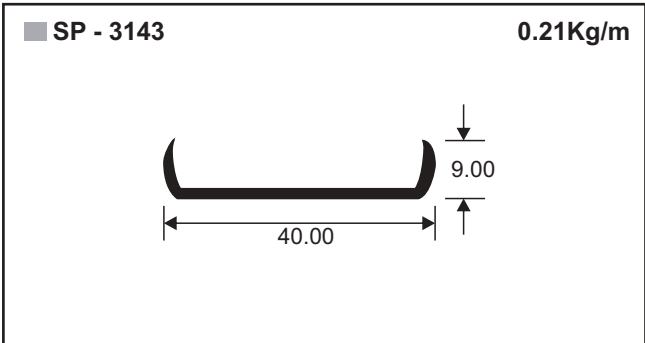
1.188Kg/m

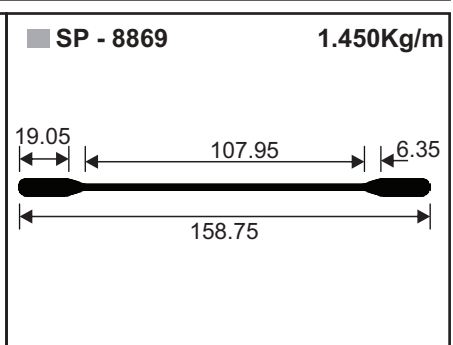
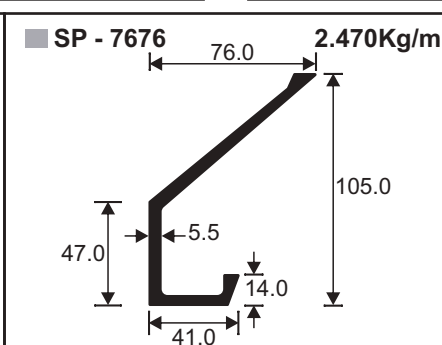
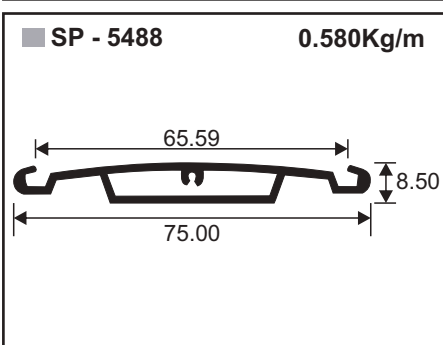
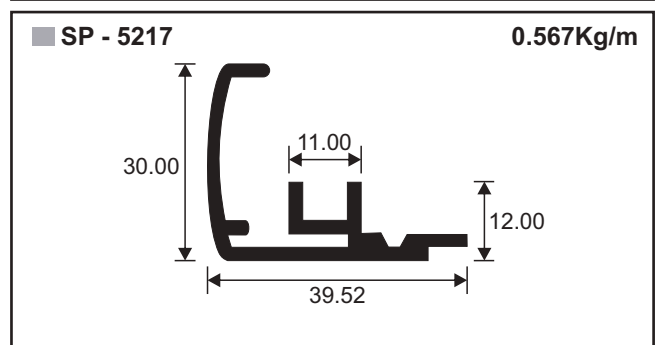
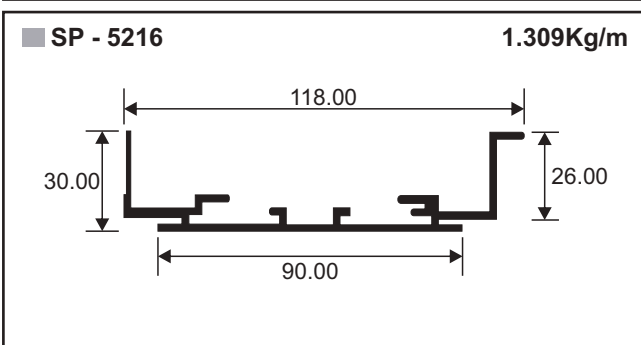
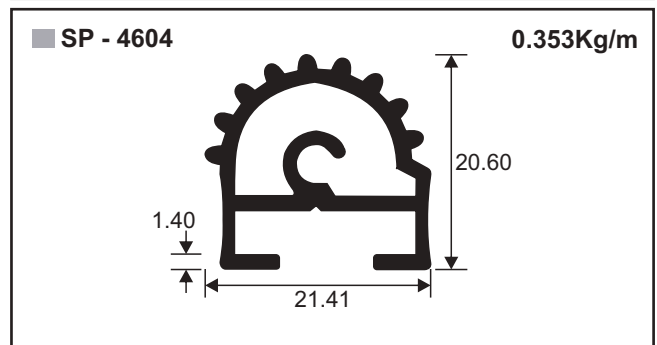
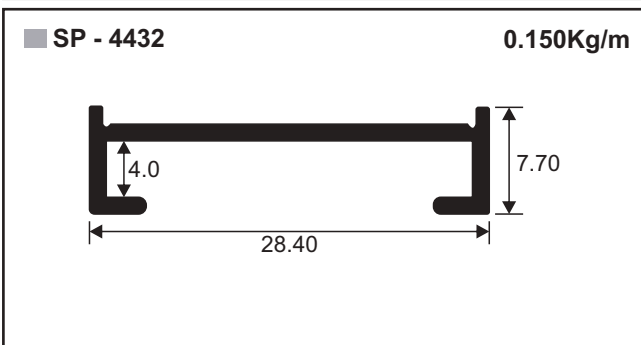
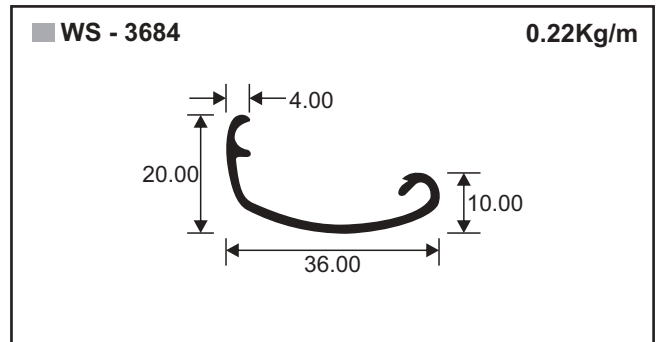
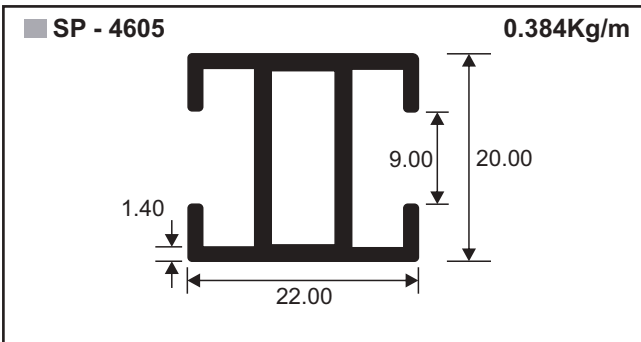
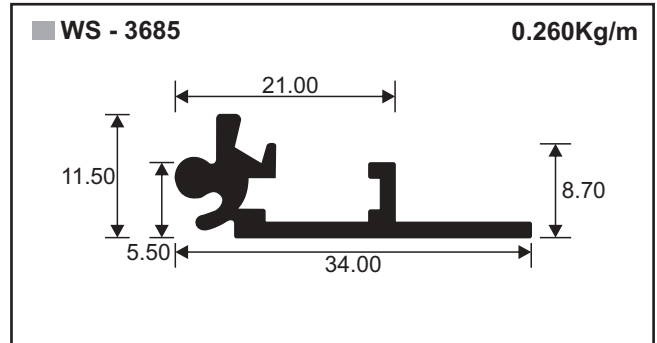
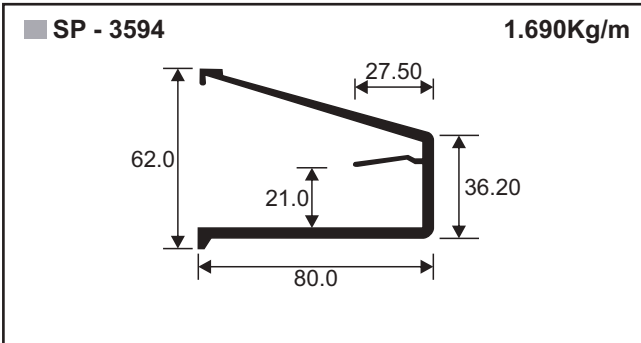


■ SP - 3142

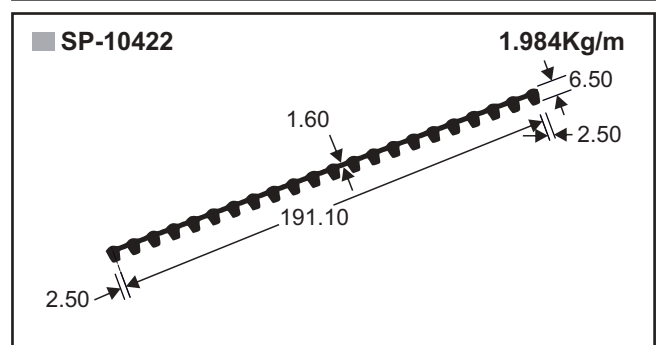
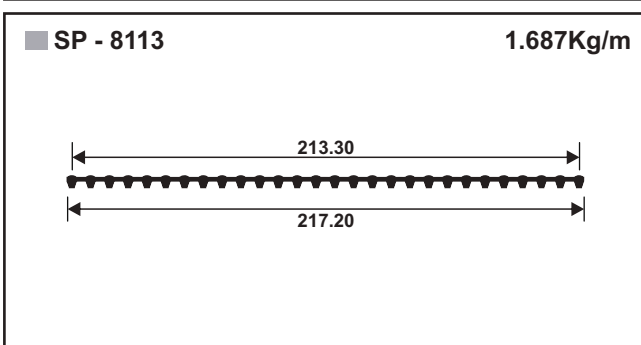
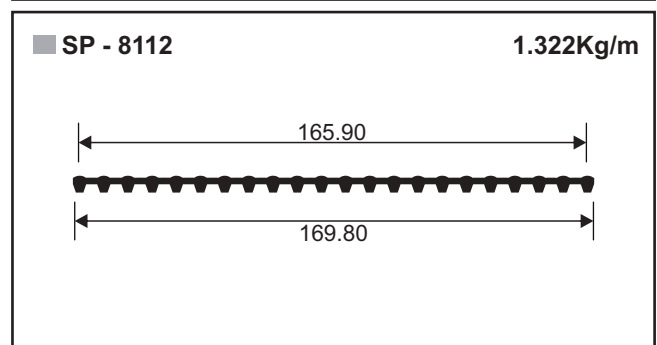
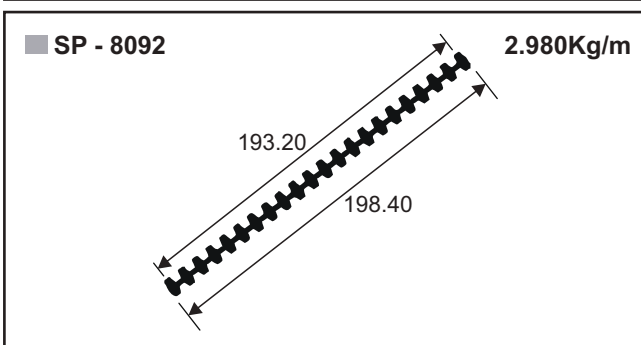
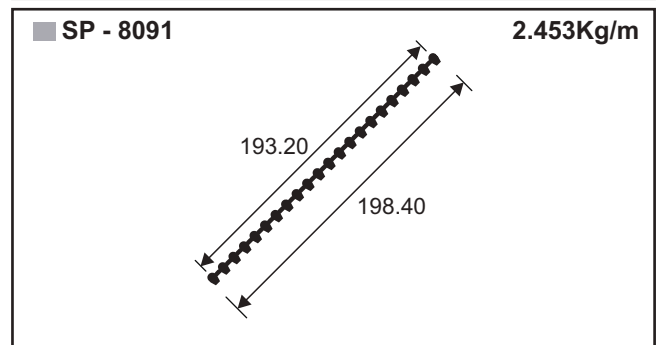
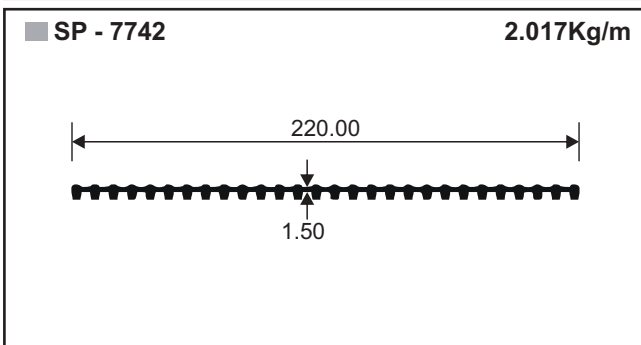
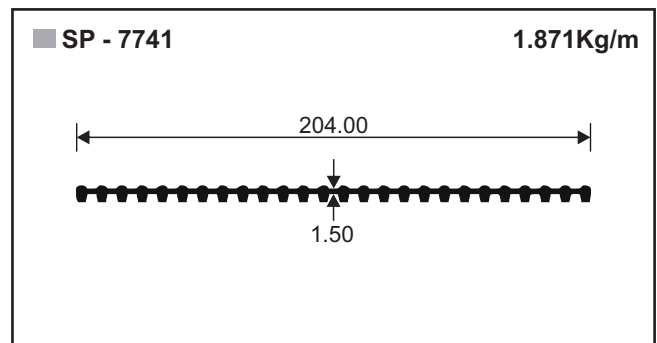
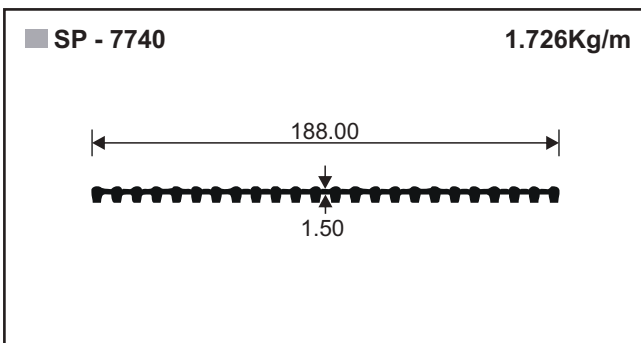
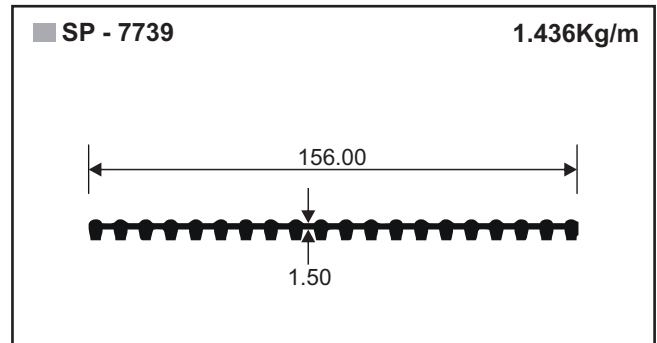
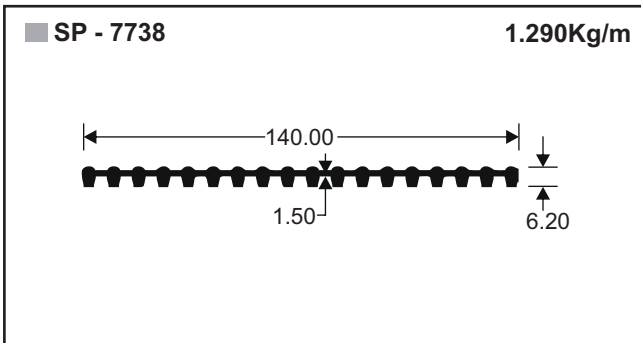
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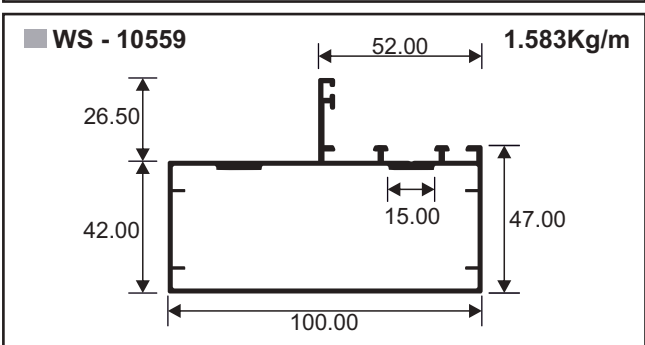
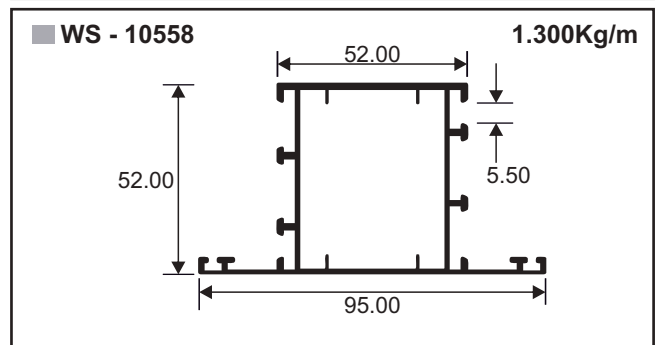
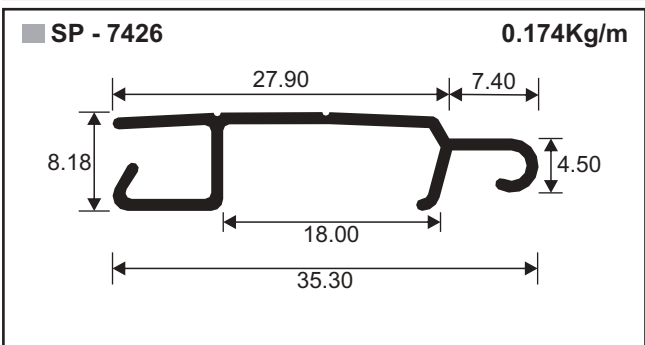
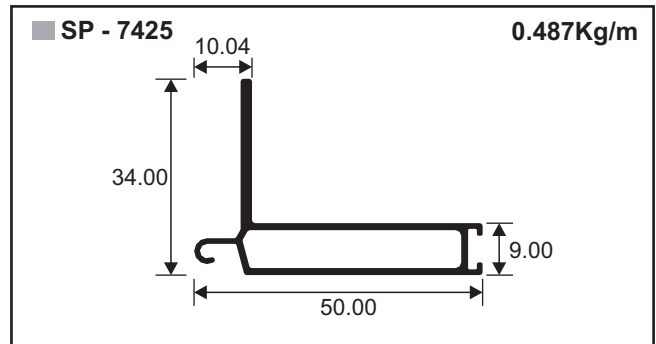
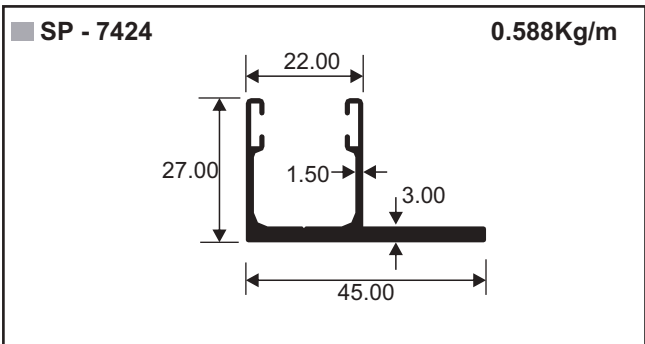
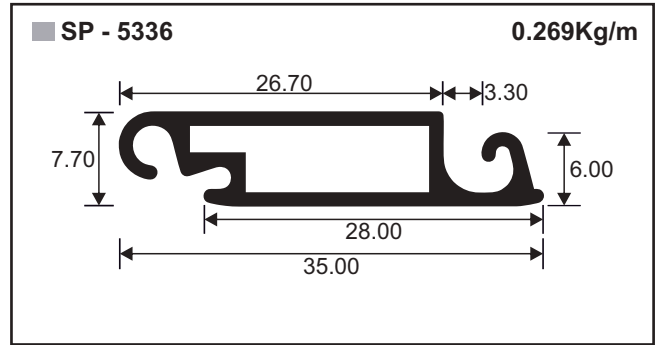
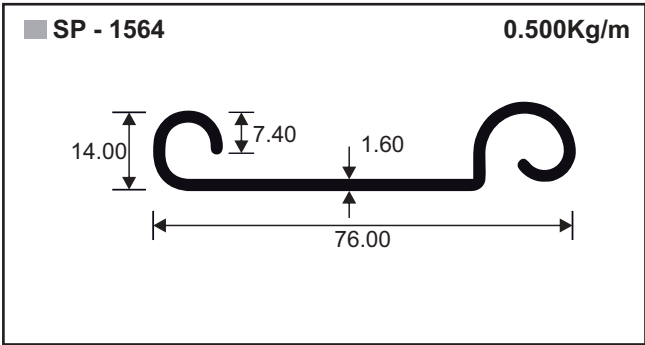


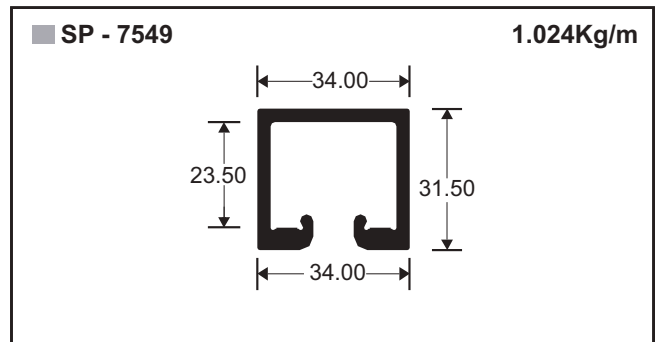
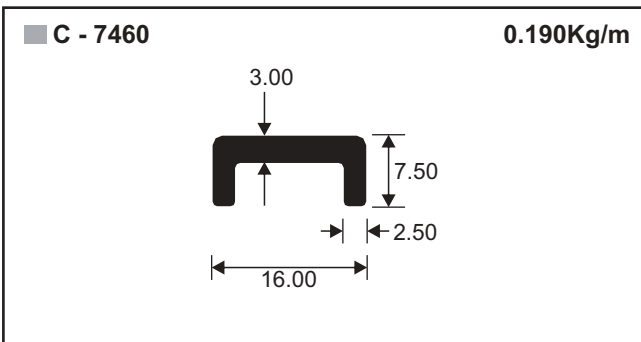
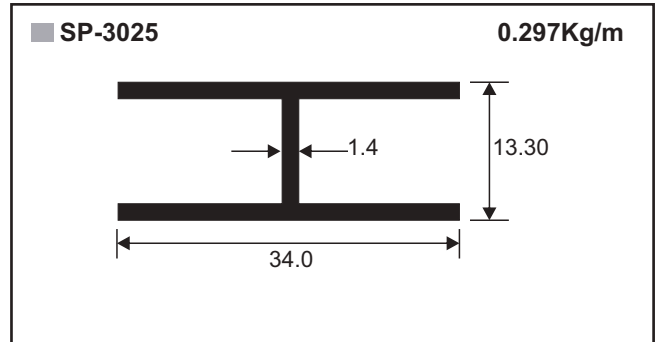
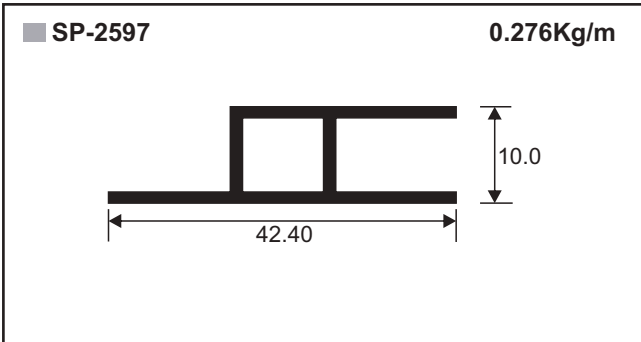
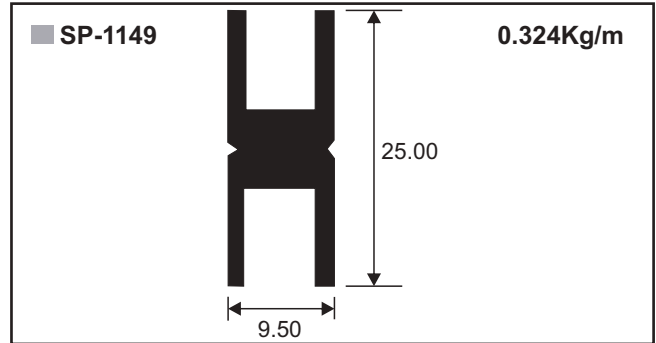
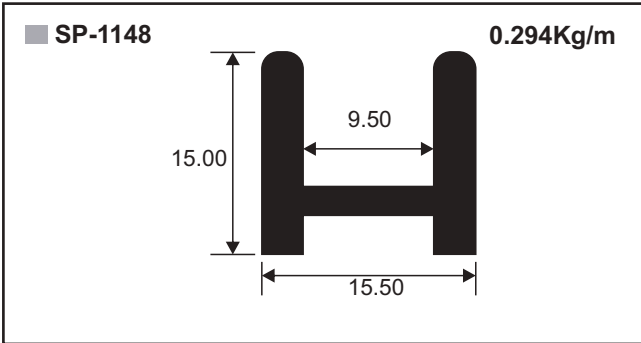


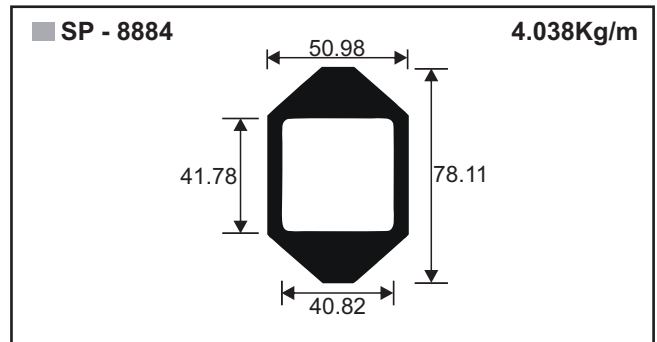
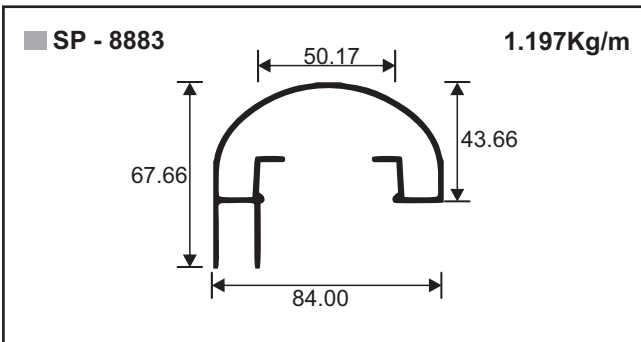
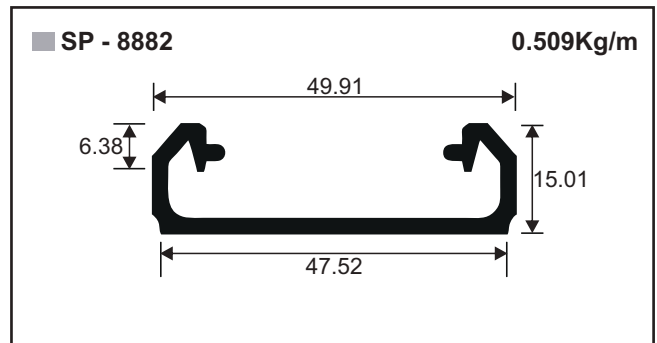
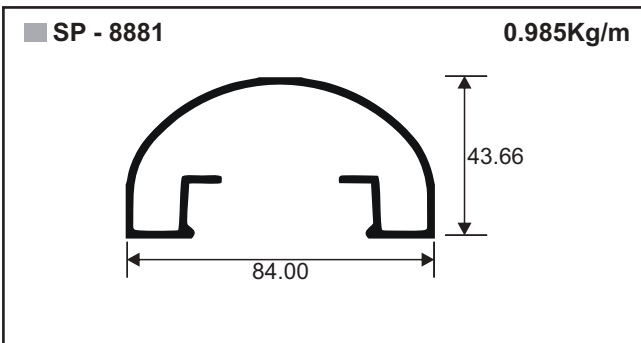
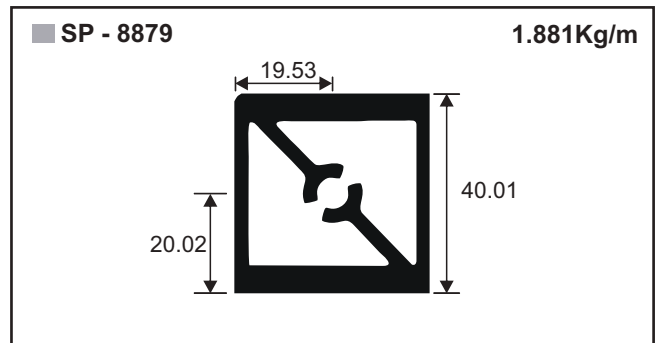
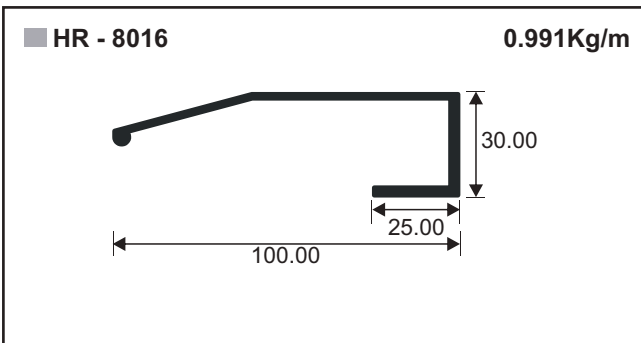
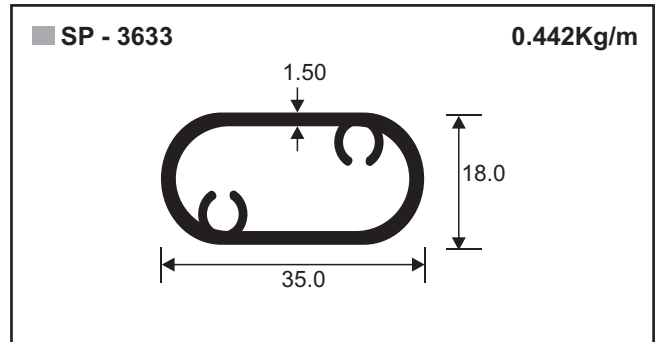
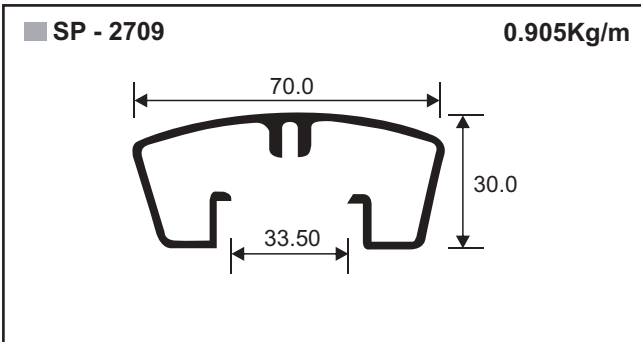


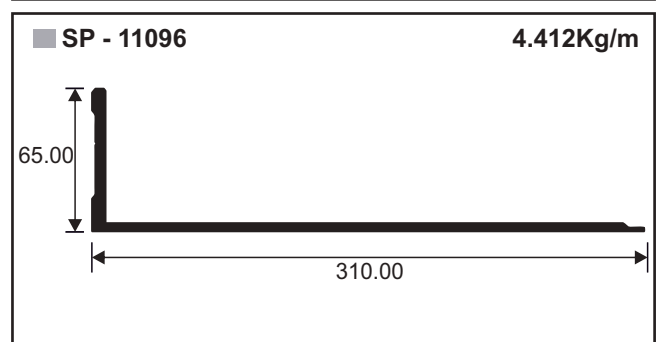
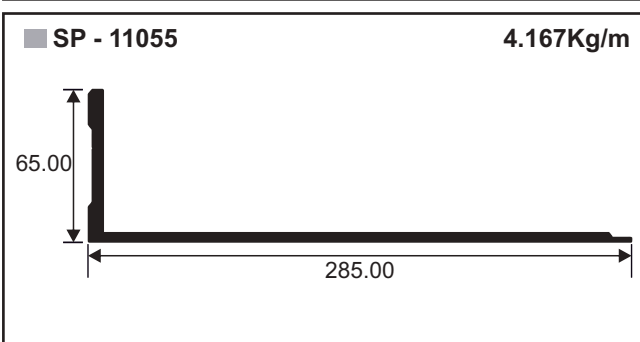
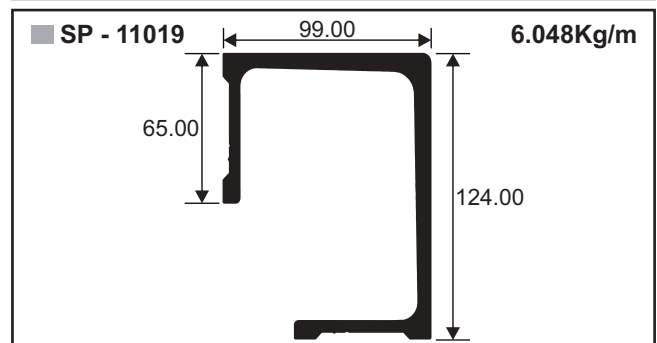
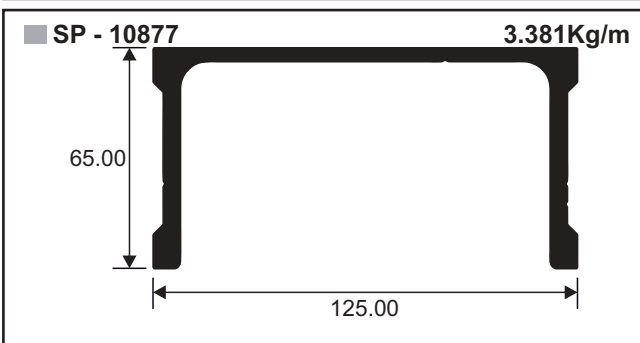
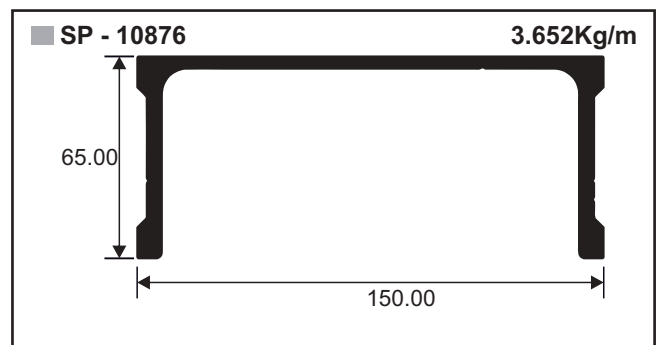
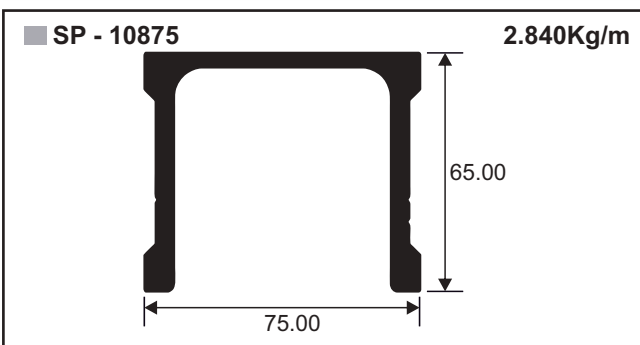
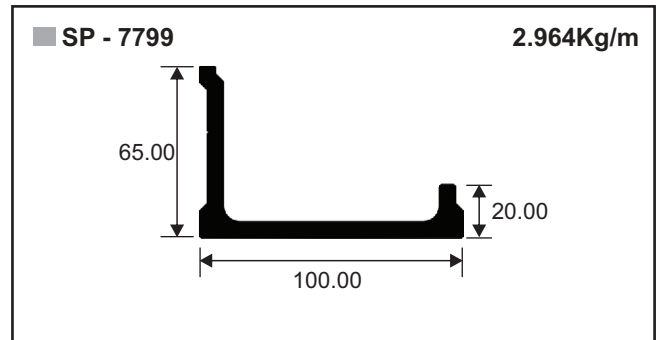
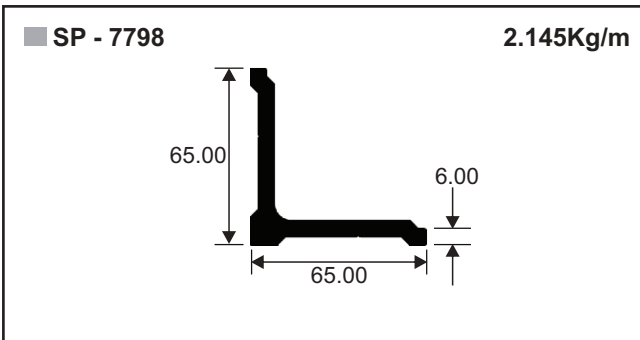
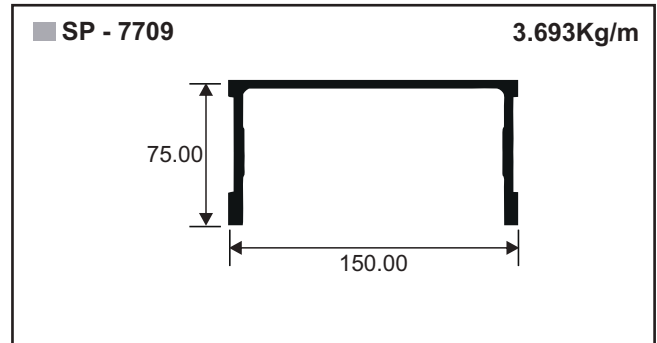
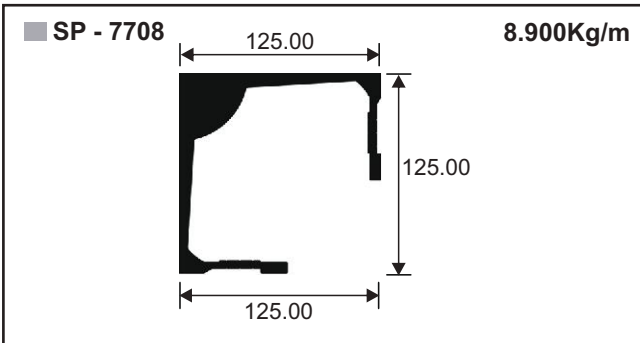
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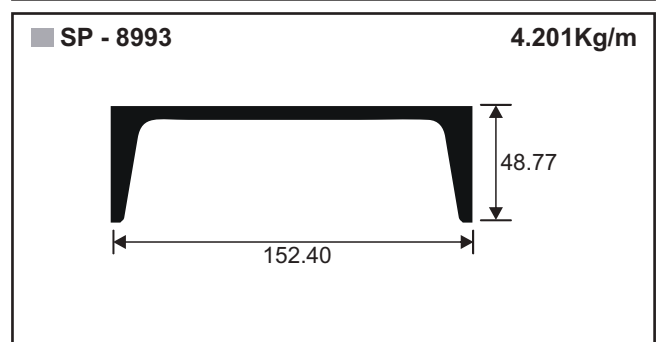
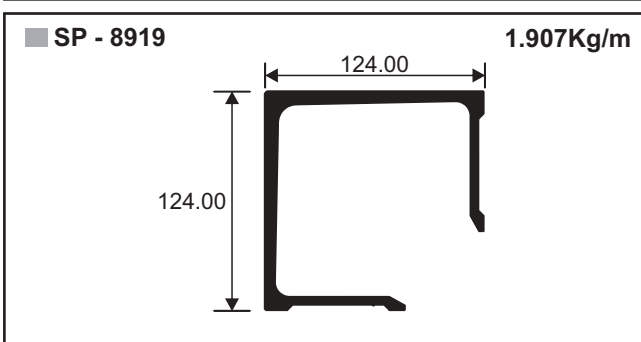
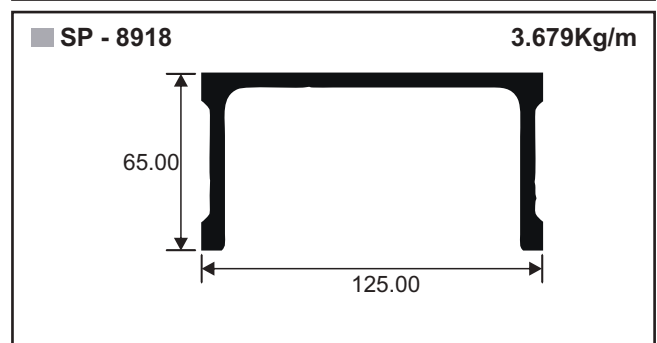
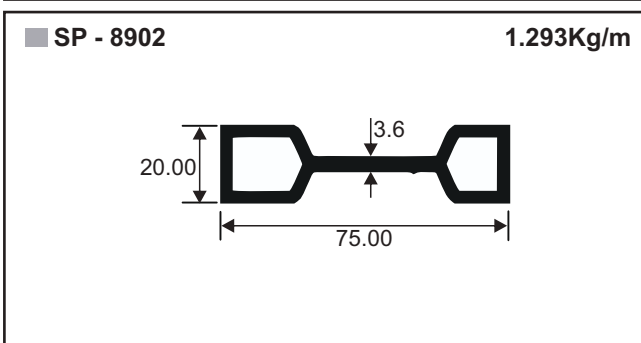
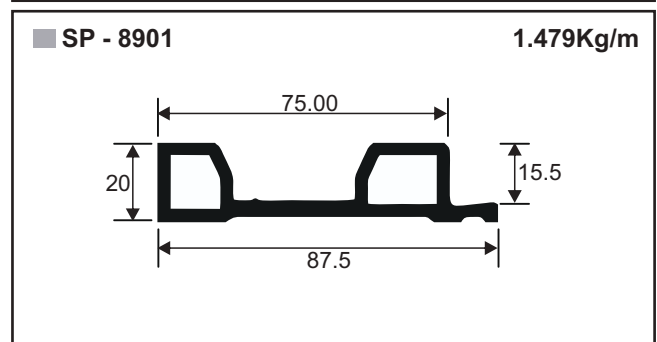
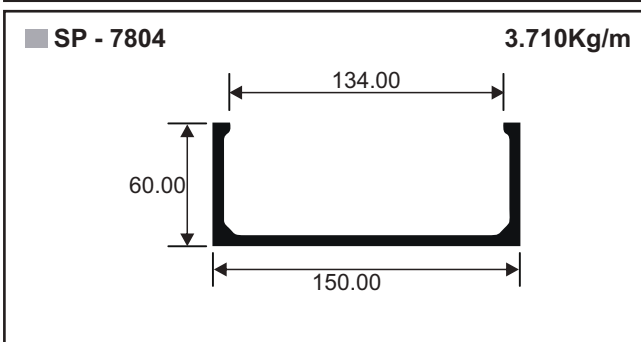
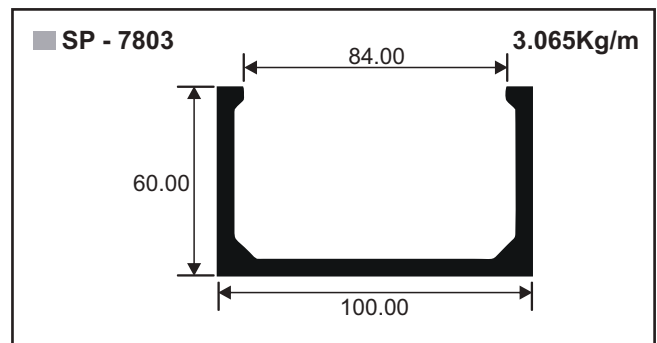
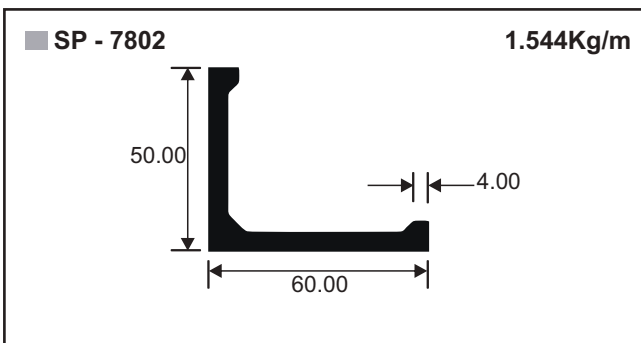
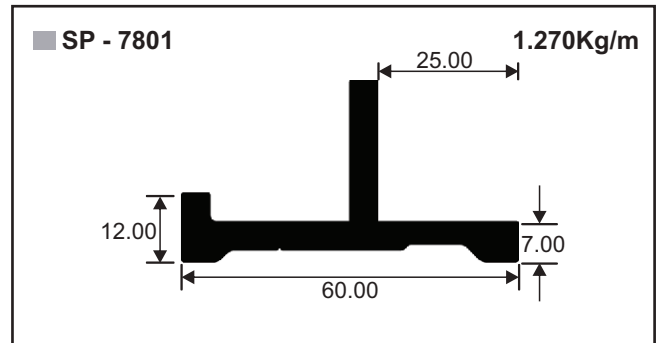
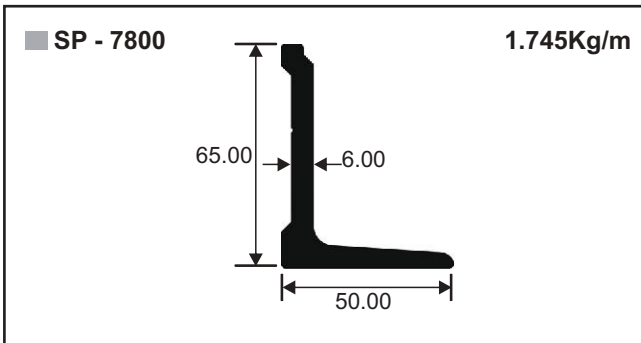


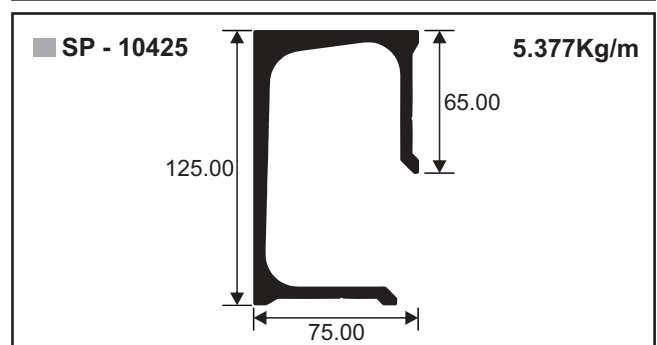
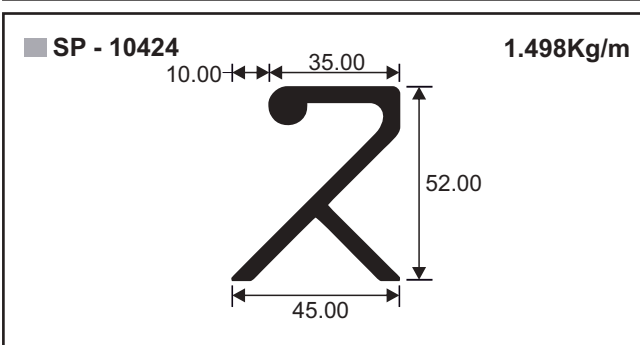
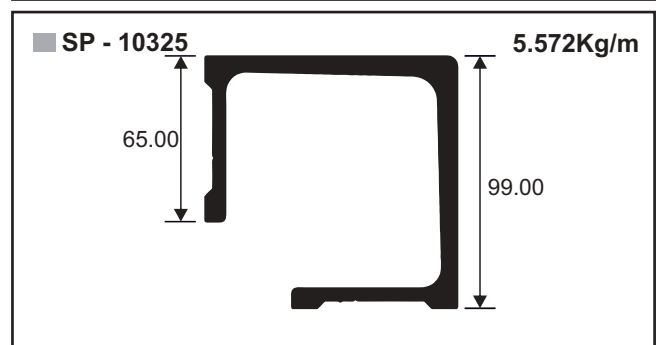
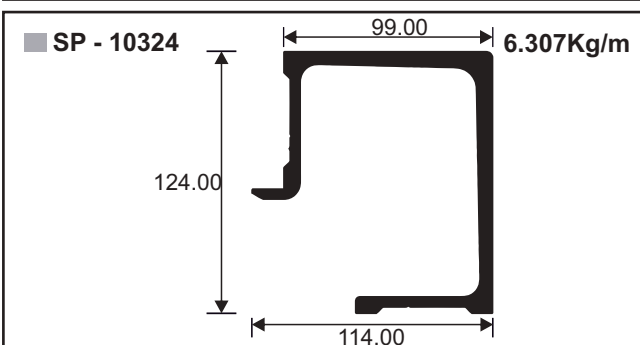
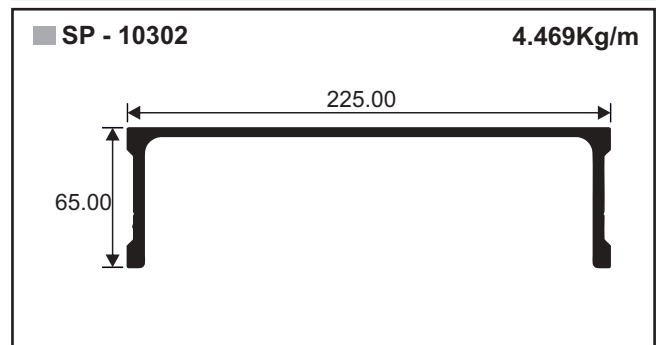
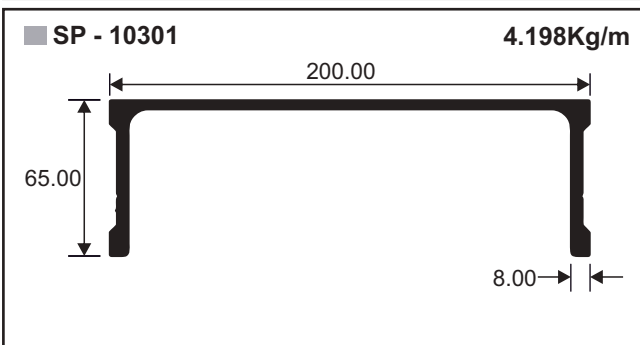
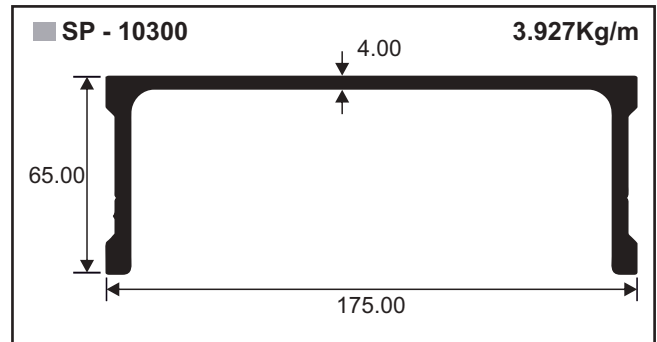
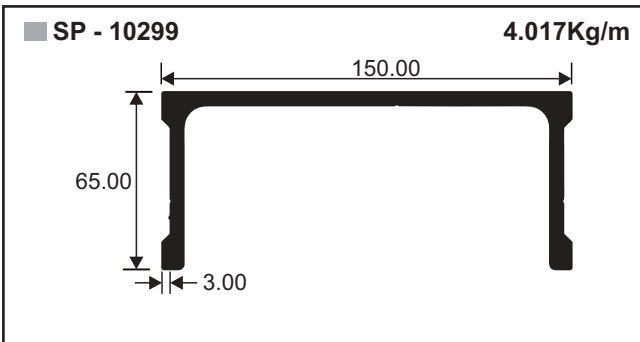
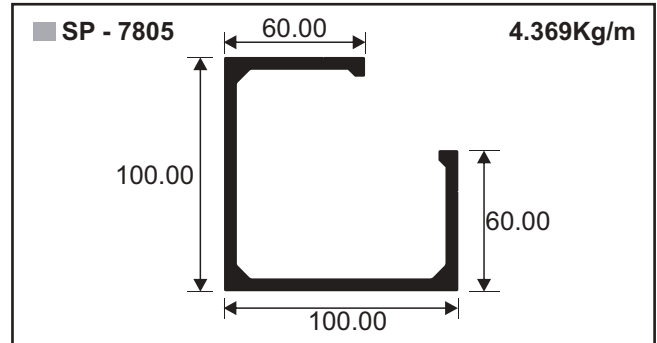
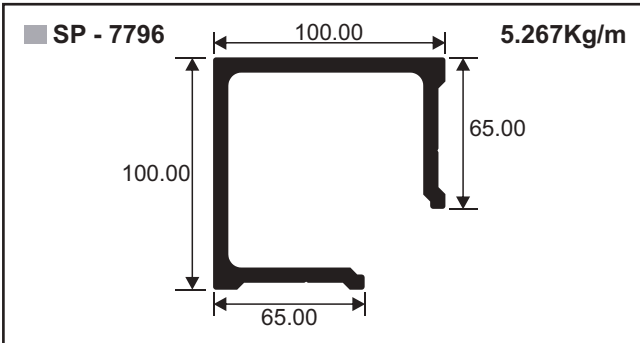


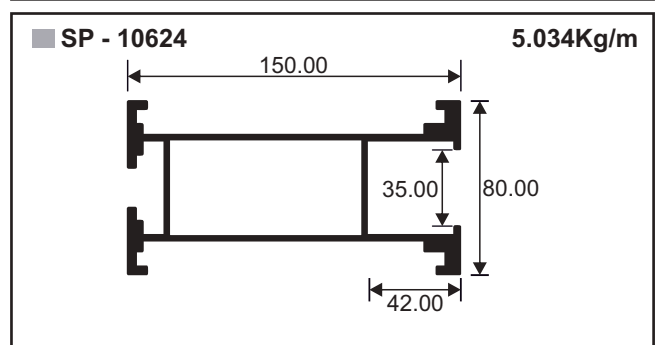
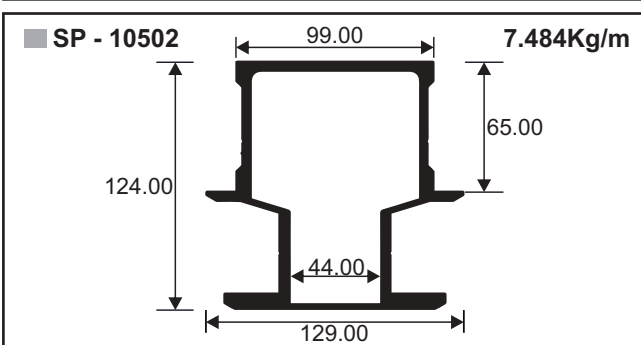
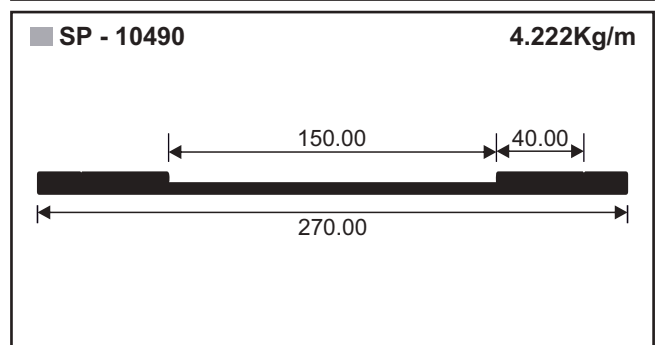
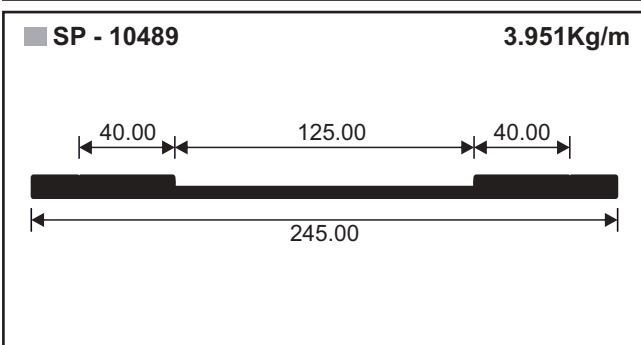
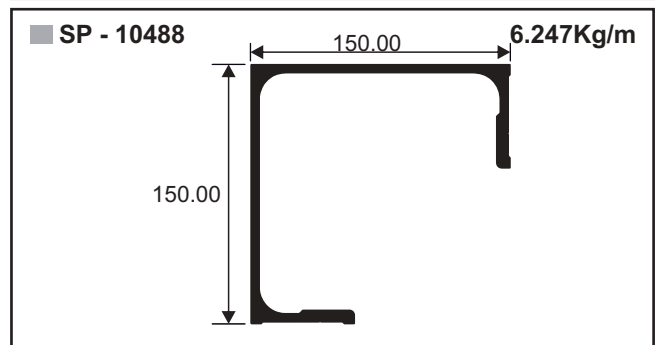
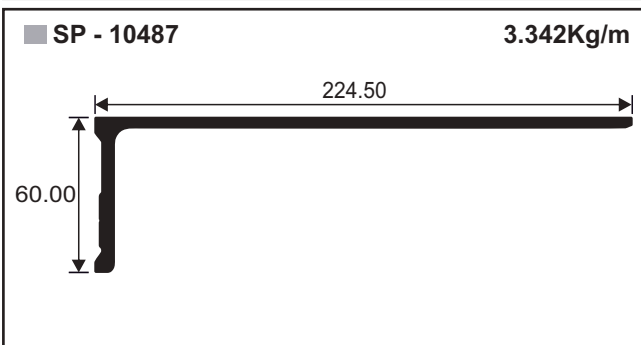
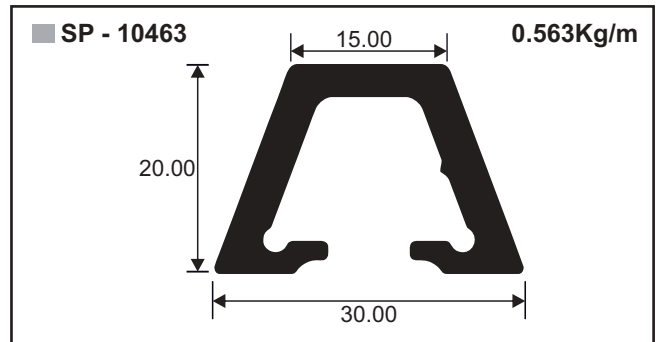
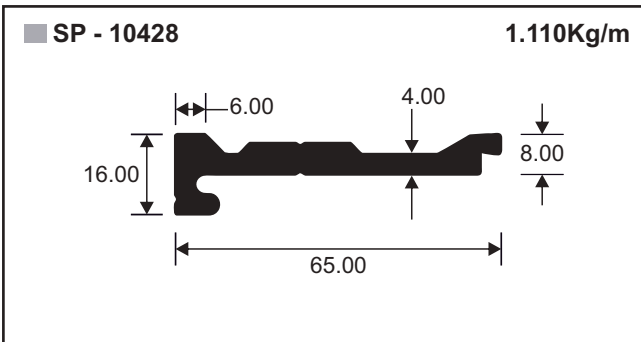
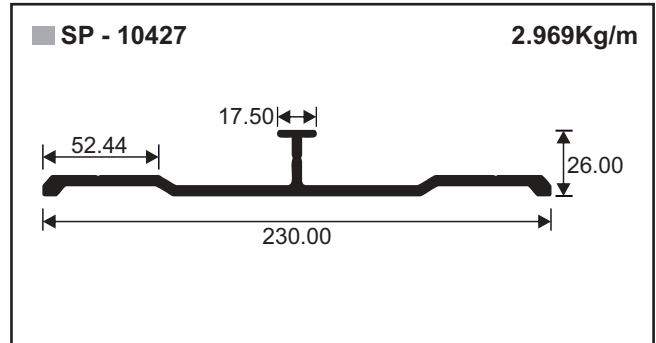
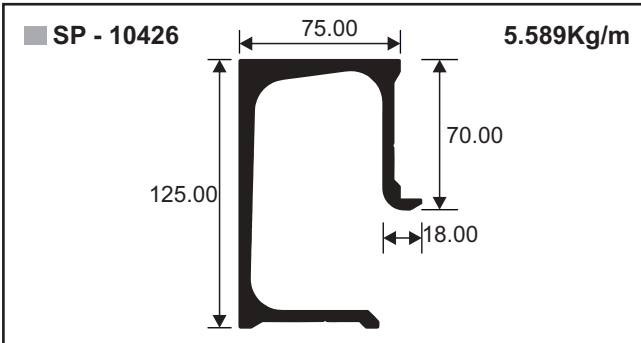


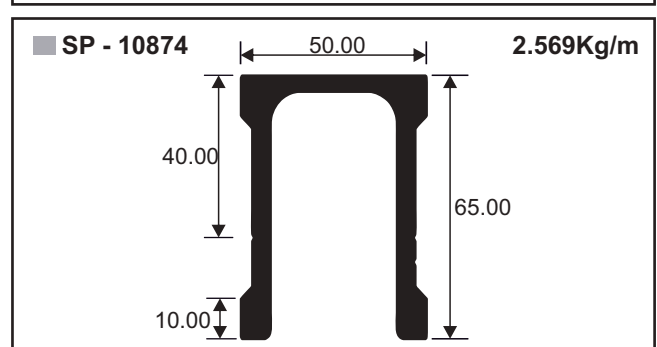
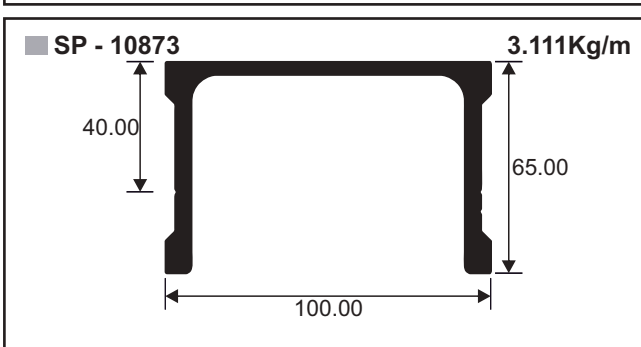
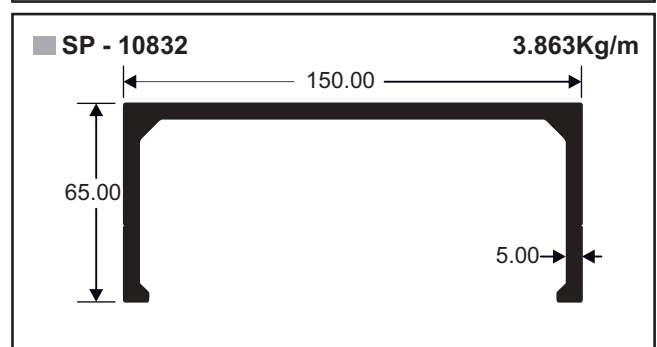
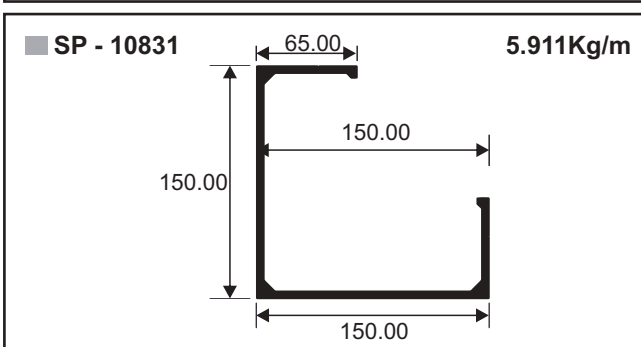
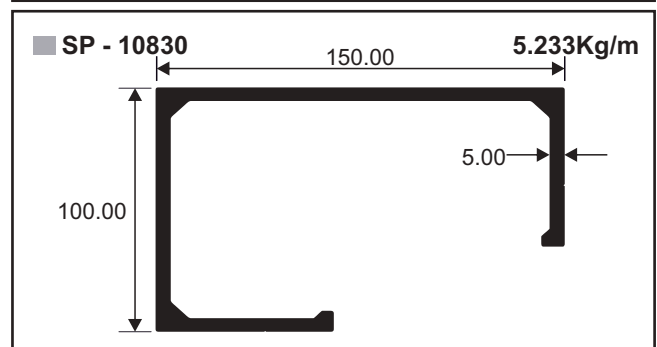
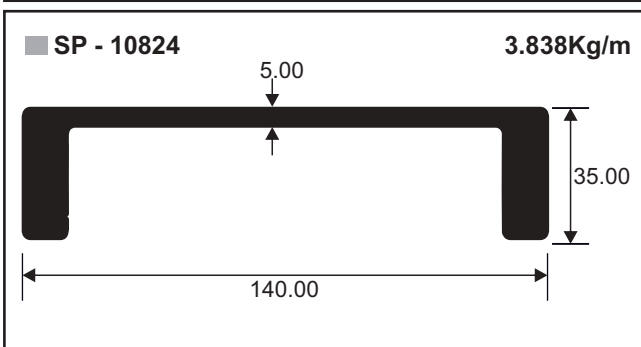
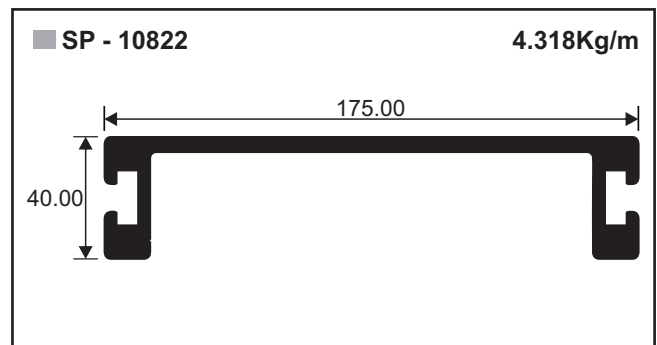
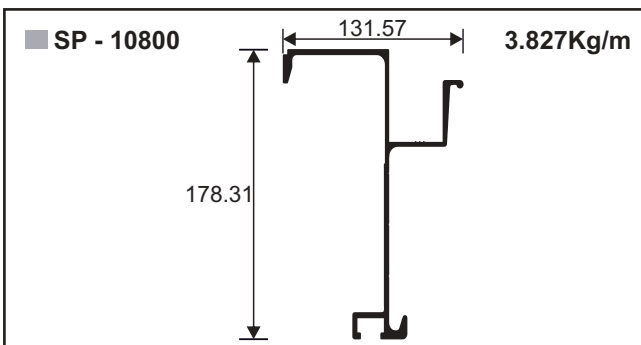
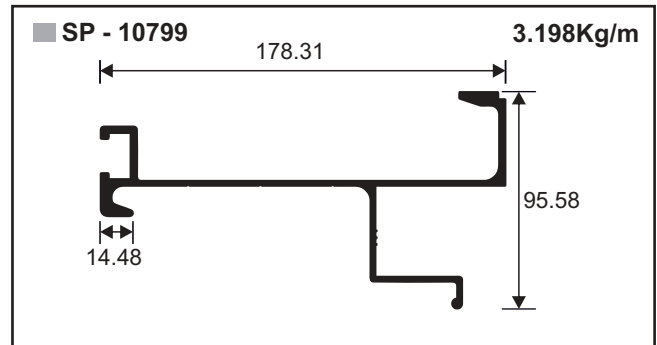
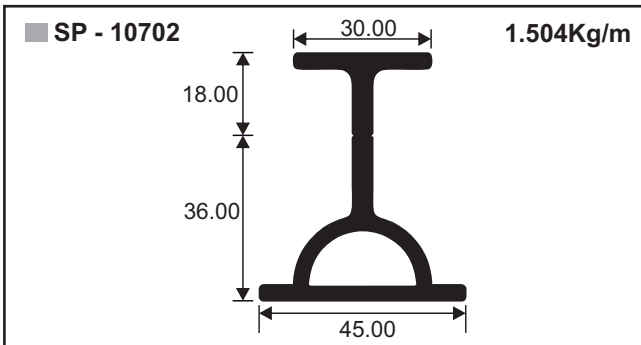






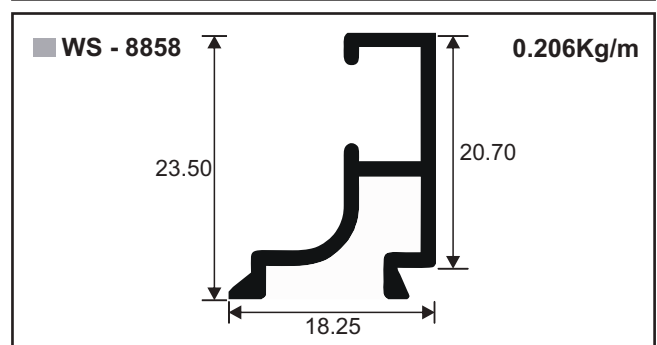
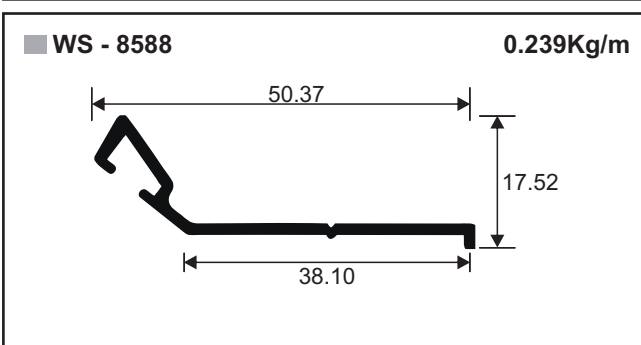
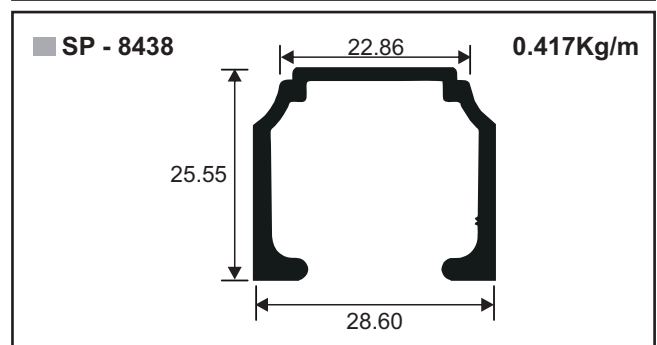
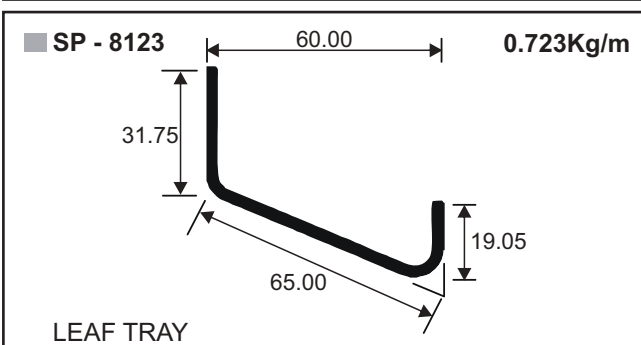
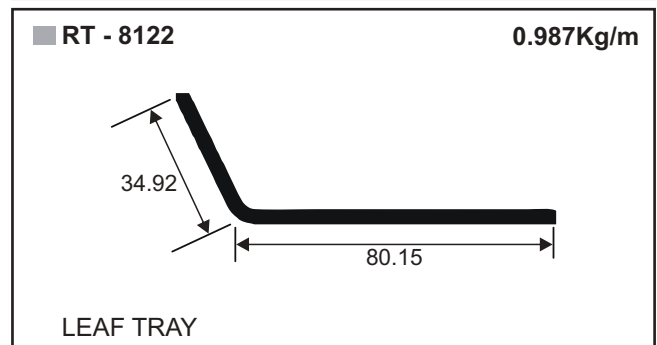
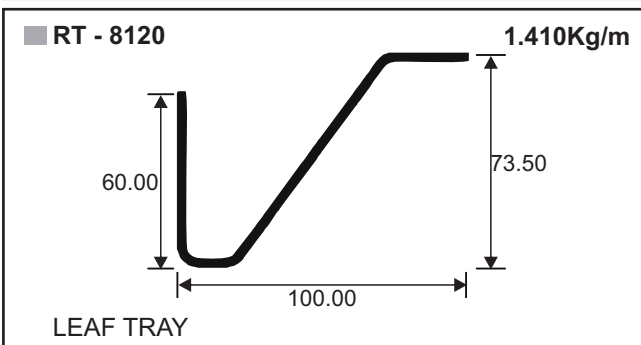
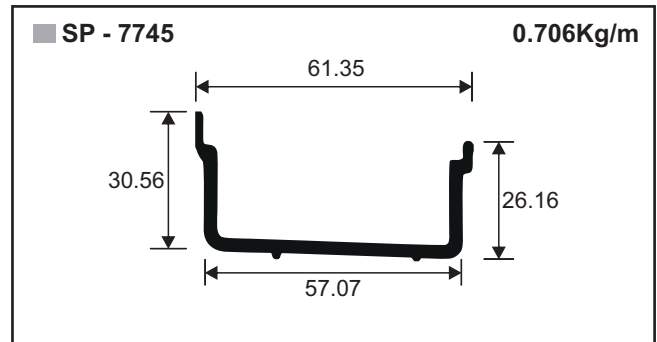
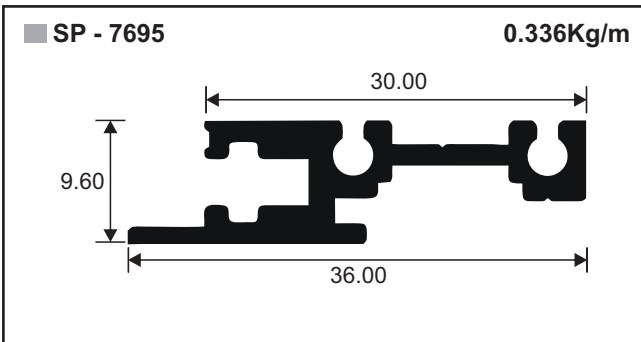
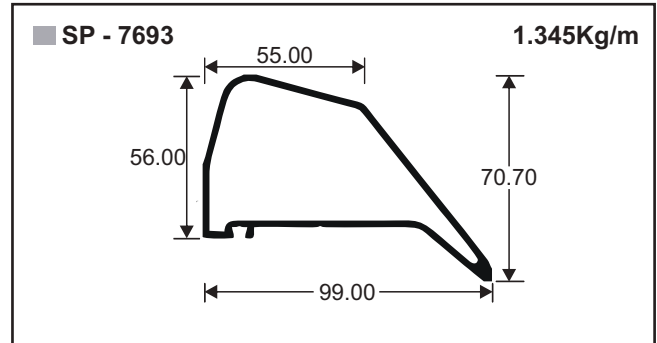
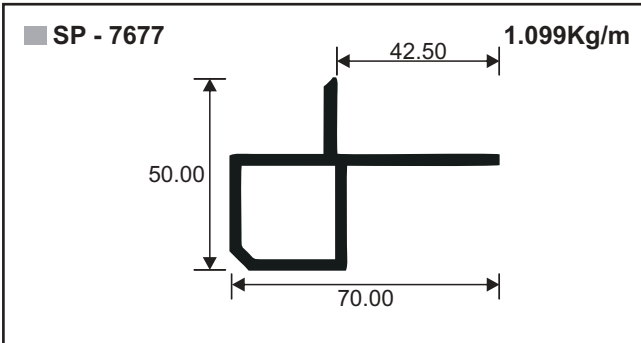


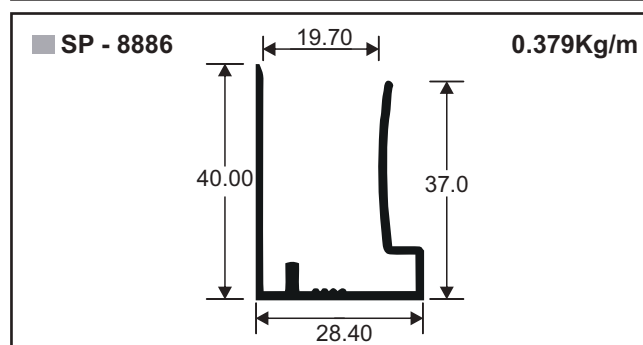
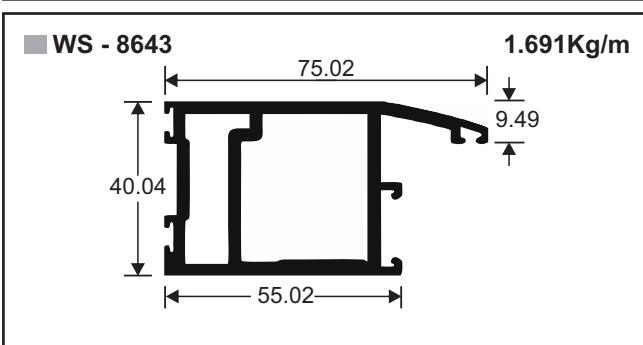
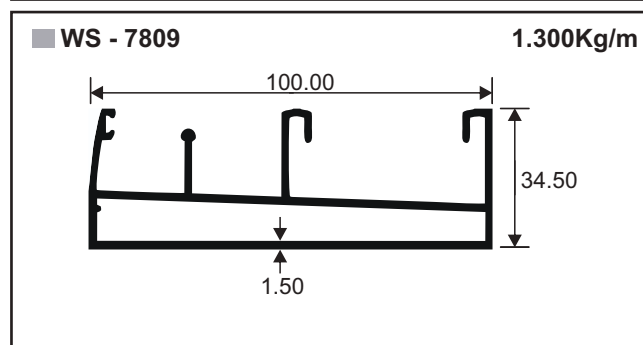
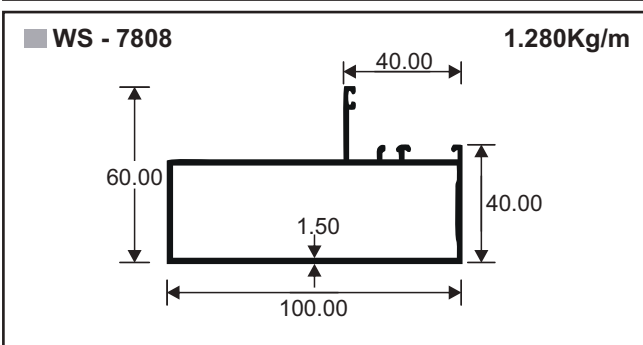
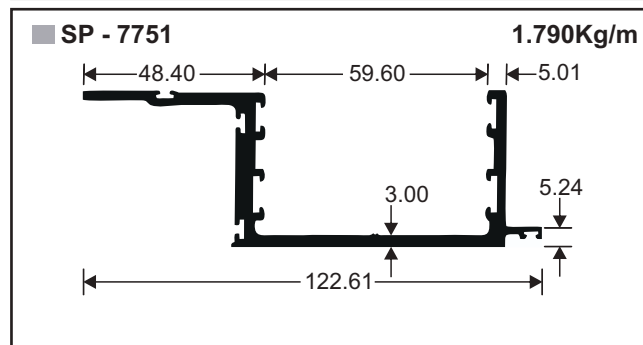
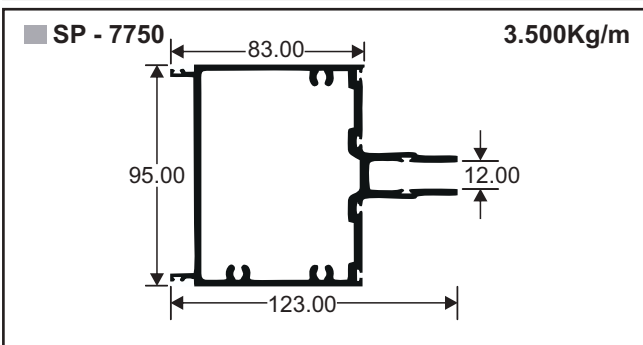
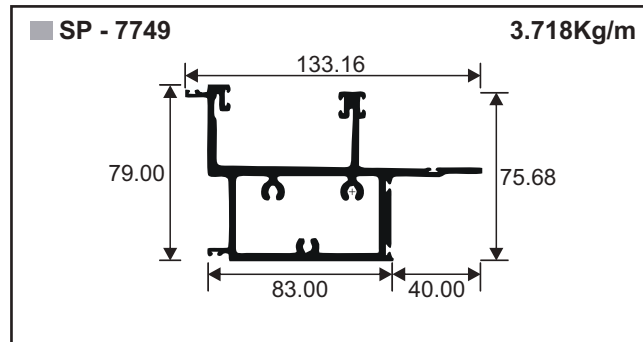
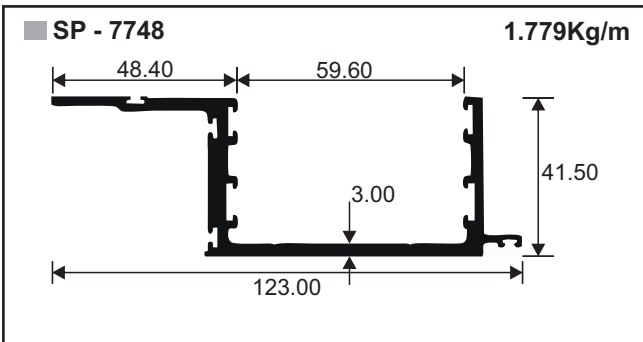
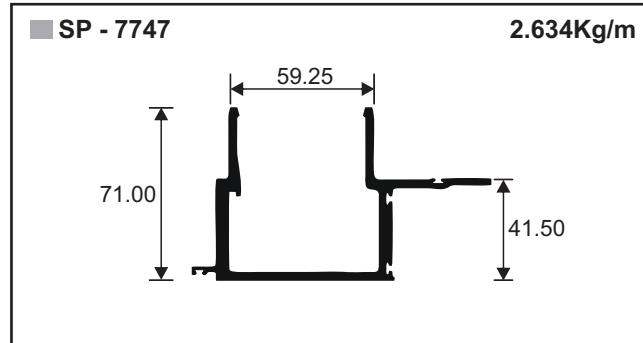
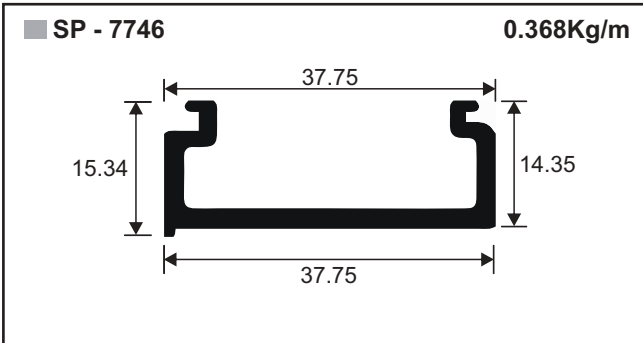


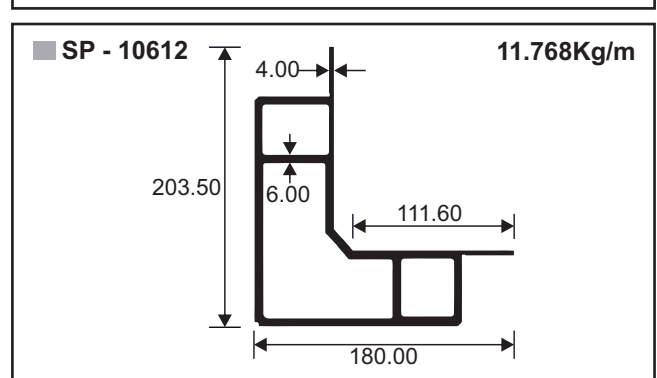
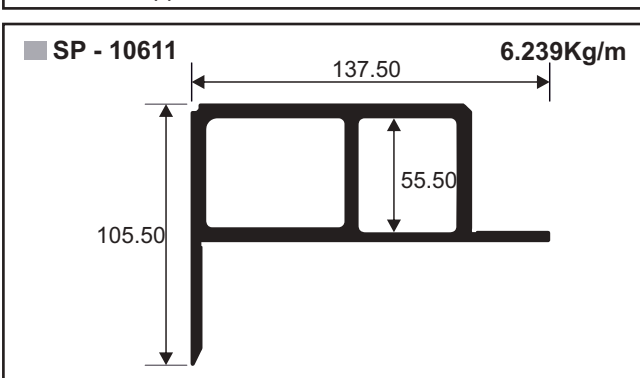
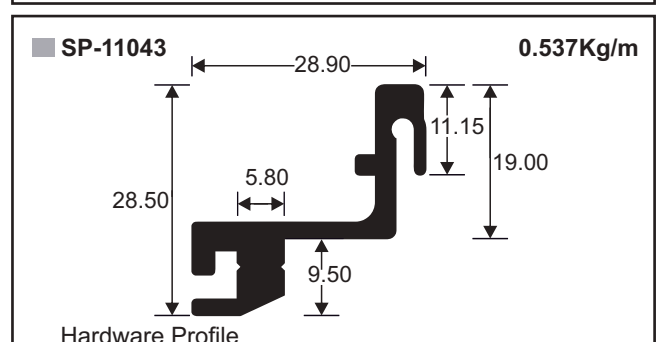
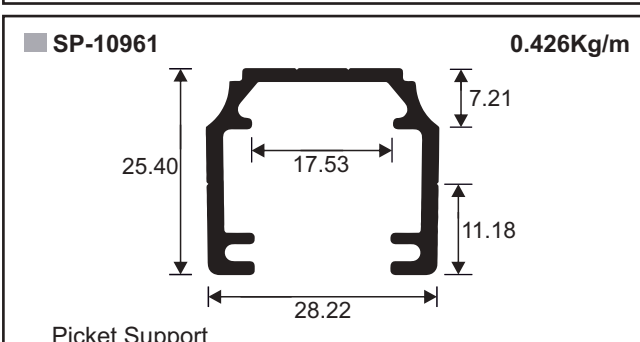
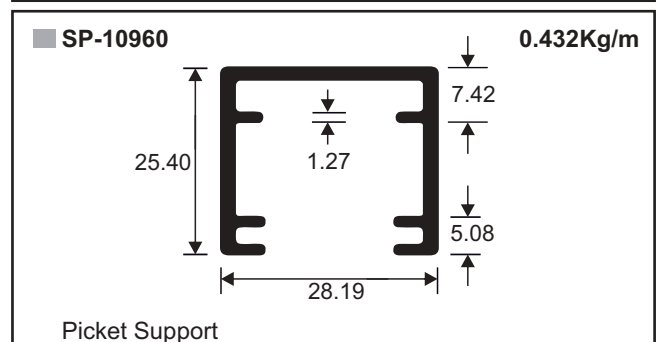
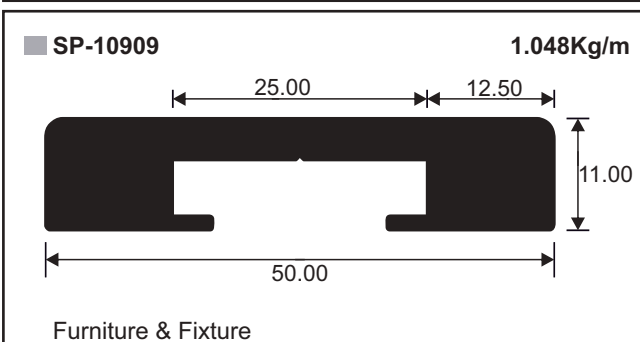
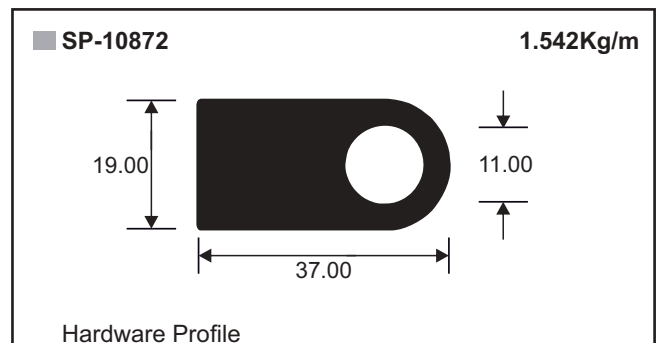
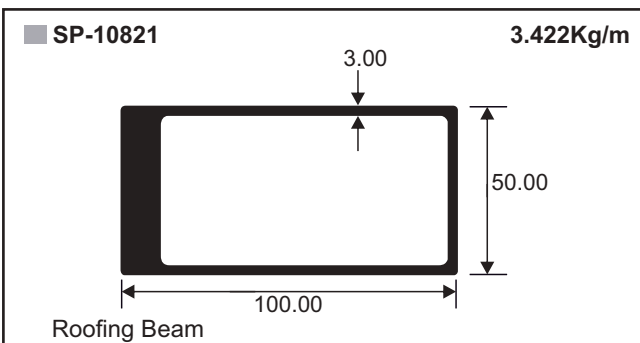
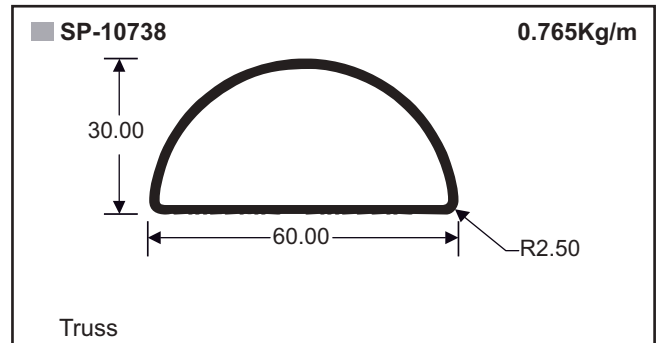
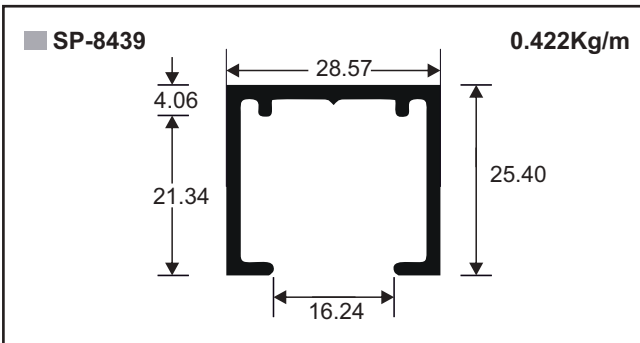


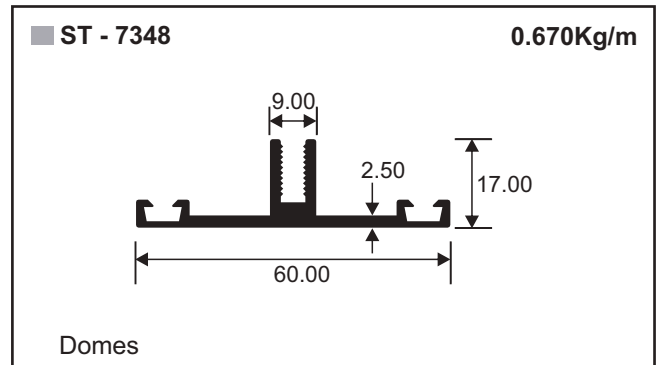
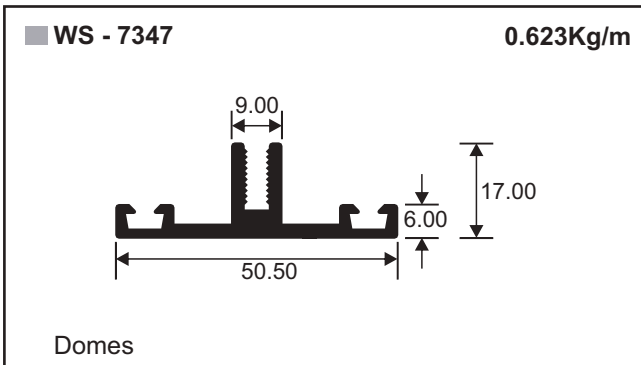
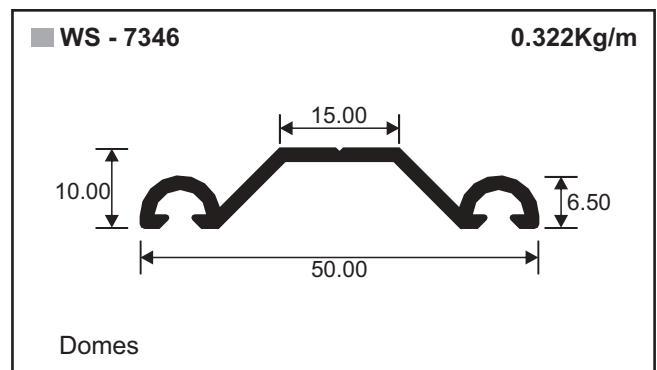
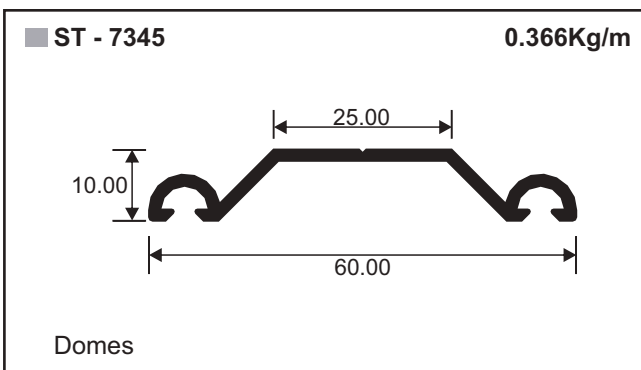
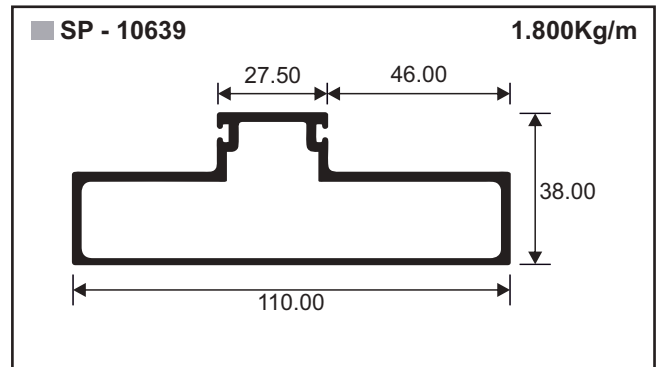
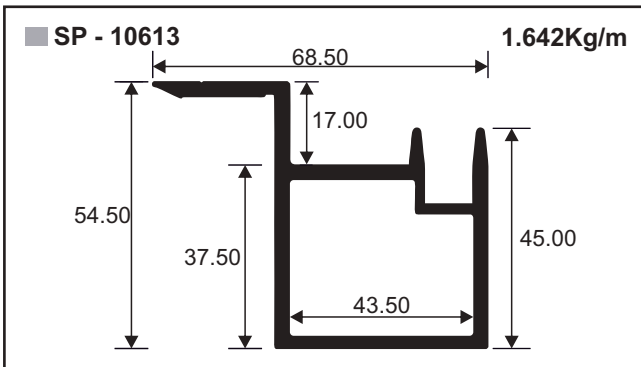


Miscellaneous











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8179	76	8522	45	8788	48	10442	61	10876	96				



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