Commercial Catalogue

Standard, Kitchen, and Miscellaneous









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Managements Message

Established in 1977, Bahrain Aluminium Extrusion Company BSC, (BALEXCO), is a leading Aluminium Extrusion company in the GCC with 40 years of experience in Aluminium Extrusion and surface finishing by powder coating and anodising. The company also offers a range of building system designs that are aesthetically pleasing, versatile and have timeless appeal for the end user.

The company was founded to meet the increasing demand for aluminium extrusions and surface finished products in the domestic markets and regional markets for architectural and industrial products.

BALEXCO is a name recognized for its high quality as well as innovative services and products. The company has earned the reputation in the markets that it serves as one of the most innovative, productive and reliable aluminium extrusion companies in the Middle East.

BALEXCO is strategically located close to its primary billet supplier, Aluminium Bahrain – (ALBA), enabling the important and steady stream of uninterrupted billet supply; which is the critical raw material for aluminium extrusion.

From its inception in 1977, BALEXCO has always been progressive by constantly investing in upgrading its production facilities to meet the ever growing demands of its customers and meet the increasing quality standards and expectations that apply within the industry. This is a trend that will continue to keep the company abreast of the latest available technology within the aluminium extrusion and surface finishing industry.

With the clear aim to remain a leader in the aluminium extrusion industry, the company provides a combination of innovation, business know-how and cost effectiveness. BALEXCO works closely with its customers and clients to develop new applications and create added value culture for products and services. The focus is on creating and building customer satisfaction as well as product diversity and innovative service for its customers and to expand into new profitable markets for the company.

BALEXCO is and will remain the accessible aluminium extrusion company for all its current and future customers to ensure the highest quality of products and services are supplied.



Company Profile



Historical Information about Bahrain Aluminium Extrusion Company (BALEXCO)

Bahrain Aluminium Extrusion Company BSC – (BALEXCO) was established in 1977, the first extrusion plant in the Arabian Gulf.

Its main objective was to add value to primary aluminium. BALEXCO commenced operations with one extrusion press and one adnodizing line, mainly targeted to meet the demands of the building industry in the Gulf.

Over the years, BALEXCO has multiplied its capacity manifolds and expanded into markets in the GCC, Middle East, Asia and Europe. BALEXCO now exports 80% of its production output to GCC and other Middle East and North African (Mena) and European countries.

Being an ISO 9001:2008 certified company we strive to go beyond the expectation of the customers, and achieve high levels of customer satisfaction as part of our continuous improvement process. We also operate under a rigorous environmental as well as occupational health and safety policy and program.

The powder coating plant is in compliance with Qualicoat standard and the anodizing plant with the Qualanod standard. These are subject to regular reviews by a third party to assure ongoing compliance.

Consumption of aluminium globally has been increasing in various industrial applications due to its main characteristics, which are as follows:

- · Light Weight
- Corrosion–Resistant, when powder coated/ anodized
- Ability to accommodate in a variety of surface finishes
- · Ease of machining into desired shapes
- · Low maintenance because of its durability

In our vision to be one of the most advanced extrusion plant across the GCC, embracing latest technical know-how available in the international market, BALEXCO plans to continuously upgrade its plant and machinery to keep abreast to the changes of the Extrusion Industry.

The recent technology upgrade includes the new infrared die heating ovens to provide reliable heating and consistent quality of dies. The powder coating facilities now have an upgraded state-of-the-art horizontal powder coating plant and a vertical powder coating plant equipped with visual recognition technology. To increase the volume of architectural systems profiles, a new high speed thermal break system to reduce carbon footprint and promote the green building concept.

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Company's Facilities

BALEXCO's aim is to provide the best aluminium profiles which suit the systems for Aerofoils/Sunbreakers, Curtain walls, windows and doors, kitchen cabinets, scaffolding in the construction industry apart from various other applications in the industrial sector.

With four state-of-the-art Extrusion Presses, a fully automated anodizing plant and a horizontal and vertical powder coating lines the company has come a long way from the initial production capacity of 6000TPA to present capacity of 33,000TPA.

Since its establishment, BALEXCO has remained synonymous with Aluminium Extrusion. Extrusions are manufactured in strict accordance with DIN specifications with standard and special tolerance as per the end users requirements. The in-house powder coating process is in compliance with Qualicoat and the anodizing process with Qualanod standards.

The technology upgrade includes a new infrared die heating oven from Novatec to provide reliable heating and consistent quality of dies, a new horizontal powder coating booth, powder center & powder recovery system from Wagner Itep from Italy, the state-of-the-art vertical powder coating plant from SAT, Italy first of its kind in the middle east with visual recognition system technology for consistency in powder quality and eliminate human error. To increase the volume of architectural systems profiles a high speed precision production line for thermal break assembly from OEMME, Italy has been set-up to promote the green building concept.

BALEXCO is consistently making steady progress, into the future by expansions and investments that are being made in all phased manner to meet the requirements of all the customers thereby providing peace of mind and happiness with all the products.



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QUALITY CONTROL STANDARDS

SCOPE: EXTRUSION STANDARDS

This specification in particular meets the requirements for architectural and industrial aluminum extrusions.

1. ALLOY COMPOSITION As per Aluminum Association "AA"

EN 573-3 Part 3: CHEMICAL COMPOSITION FOR ALUMINIUM

ALLOYS: Routinely available from BALEXCO are listed below. Other alloys in the AA6000 series can be considered for supply subject to enquiry.

	%Si	%Fe	%Cu	%Mn	%Mg	%Cr	%Zn	%Ті	
AA6063	0.20-0.60	0.35	0.1	0.1	0.45-0.90	0.1	0.1	0.1	
AA6082	0.70-1.3	0.5	0.1	0.40-1.0	0.6-1.2	0.25	0.2	0.1	
	Dozent hyweight						- Other elements each .05, Total		
	- Percent by weight					.15			
	- Except where a range is shown all value maximum					- Remaind	ler is alumin	um	

2. MECHANICAL PROPERTIES (BSEN 755-2:2016: MECHANICAL PROPERTIES FOR ALUMINIUM EXTRUSION)

	Minimum Yield Strength Mpa	Min-Ultimate Tensile Strength Mpa	Min % Elongation
6063-T6	170	215	8
6082-T6	250	290	8

3. HEAT TREATMENT

T6- Forced cooled or quenched on the press and age hardened at elevated temperature for development of T6 properties.

T4- Cooled on press and naturally aged at ambient temperature to a substantially stable condition.

4. DIMENSIONS AND SHAPES

Standard Dimensional tolerances, which meet BS EN 755-9:2016 are applicable for all extruded sections, unless special tolerances are requested by the customer and agreed to in advance of supply of the order.



QUALITY CONTROL STANDARDS

STANDARD TOLERANCES **CROSS-SECTIONAL DIMENSIONS** of solid and hollow profiles

BS EN 755-9:2016 Part 9

Table 1: Tolerances on cross-sections dimensions of solid and hollow profiles. - Alloy 6063

	Table 1: Tolerances on cross-sections dimensions of solid and hollow profiles Alloy 6063 Note: Dimensions are in millimeter					
Dimer	Dimension H Tolerances on H for circumscribing circle CD					
Over	Up to and including	<i>CD</i> ≤100	100 < <i>CD</i> ≤200	200 <cd ≤300</cd 	300 <cd ≤500</cd 	500< <i>CD</i> ≤800
-	10	±0.25	±0.30	±0.35	±0.40	±0.50
10	25	±0.30	±0.40	±0.50	±0.60	±0.70
25	50	±0.50	±0.60	±0.80	±0.90	±1.0
50	100	±0.70	±0.90	±1.1	±1.3	±1.5
100	150	-	±1.1	±1.3	±1.5	±1.7
150	200	-	±1.3	±1.5	±1.8	±2.0
200	300	-	-	±1.7	±2.1	±2.4
300	450	-	-	-	±2.8	±3.0
450	600	-	-	-	±3.8	±4.2
600	800	-	-	-	-	±5.0

a These tolerances do not apply to tempers O and Tx510. For these tempers, the tolerances shall be subject to agreement between supplier and purchaser.

For profiles with open ends, see Figures 2 and 3, the tolerances for H in the area of the open ends

shall be increased by the values specified in Table 3

Table 2: Tolerances on cross-sections dimensions of solid and hollow profiles Alloy 6082 Note: Dimensions are in millimeter								
Dimen	sion H	Т.	olerances	on <i>H</i> for ci	rcumscrib	ing circle	CD ^{ab}	
Over	Up to include	and	<i>CD</i> ≤100	100 < <i>CD</i> ≤200	200 <cd ≤300</cd 	300 < <i>CD</i> ≤500	500 <cd ≤800</cd 	
-	10)	±0.40	±0.50	±0.55	±0.60	±0.70	
10	25	5	±0.50	±0.70	±0.80	±0.90	±1.1	
25	50)	± 0.80	± 0.90	± 1.0	± 1.2	± 1.3	
50	10	0	±1.0	±1.2	±1.3	±1.6	±1.8	
100	15	0	-	±1.5	±1.7	±1.8	± 2.0	
150	20	0	-	±1.9	±2.2	±2.4	±2.7	
200	30	0	-	-	±2.5	±2.8	±3.1	
300	45	0	-	-	-	±3.5	±3.8	
450	60	0	-	-	-	±4.5	±5.0	
600	80	0	-	-	-	-	±6.0	
a Those to	These tolerances do not apply to tempers O and Tx510. For these tempers, the tolerances shall be							

These tolerances do not apply to tempers O and Tx510. For these tempers, the tolerances shall be subject to agreement between supplier and purchaser.
For profiles with open ends, see Figures 2 and 3, the tolerances for H in the area of the open ends

shall be increased by the values specified in Table 3

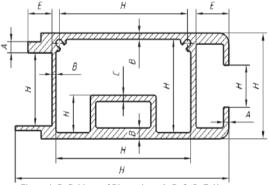


Figure 1: Definitions of Dimensions A, B, C, D, E, H

Legend:

A - Wall thicknesses except those enclosing the hollow spaces in hollow profiles;

- B Wall thicknesses enclosing the hollow spaces in hollow profiles except those between two hollow spaces;
- C Wall thicknesses between two hollow spaces in hollow profiles;
- **E** The length of the shorter leg of profiles with open ends;
- H All dimensions (except wall thickness) between points on the cross section of the profile or the centers of open screw holes.

Table 3: Additions to the tolerances on cross-sectional dimensions H of					
	solid and hollow profiles with open ends. Alloy 6063 and 6082				
Dimer	sion E	Additions to the tolerances on H in Tables 1			
Over	Up to and	and 2 for dimensions across the ends Over			
Over	including	Up to and including of open ended profiles			
-	20	-			
20	30	±0.15			
30	40	±0.25			
40	60	±0.40			
60	80	±0.50			
80	100	±0.60			
100	125	±0.80			
125	150	±1.0			
150	180	±1.2			
180	210	±1.4			
210	250	±1.6			
250	-	- ±1.8			
Figures 2 and 3 be	low show open ends	on hollow and solid profiles.			

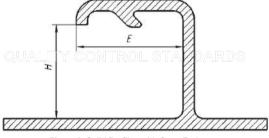
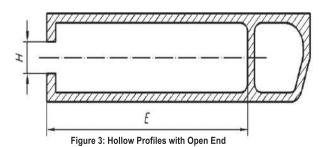


Figure 2: Solid Profiles with Open End



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STANDARD TOLERANCES

BS EN 755-9:2016 Part 9

B. WALL THICKNESS for profiles w/ a circumscribing circle up to & including 300 mm.

Table 4: Tolerances on wall thickness for profiles with a circumscribing circle up to and including 300 mm. - Alloy 6063

Note: Dimensions are in millimeter.

	Trete: Billionologie de il millimiteter.							
		Tolerances on wall thickness						
	Nominal wall ckness A. B or C Wall thickness A Circumscribing circle			Wall thickness B a Circumscribing circle		Wall thickness C Circumscribing circle		
Over	Up to and including	CD ≤ 100	100 < CD ≤ 300	CD ≤ 100	100 < CD ≤ 300	CD ≤ 100	100 < CD ≤ 300	
-	1.5	±0.15	±0.20	±0.20	±0.30	±0.25	± 0.35	
1.5	3	±0.15	±0.25	±0.25	±0.40	±0.30	±0.50	
3	6	±0.20	±0.30	±0.40	±6.0	±0.50	±0.75	
6	10	±0.25	±0.35	±6.0	±8.0	±0.75	±1.0	
10	15	±0.30	±0.40	±8.0	±1.0	±1.0	±1.2	
15	20	± 0.35	±0.45	±1.2	±1.5	±1.5	±1.9	
20	30	±0.40	±0.50	±1.5	±1.8	±1.9	±2.2	
30	40	±0.45	±0.60	-	±2 <u>.</u> 0	-	±2.5	
40	50	-	±0.70	-	-	-	-	
a For se	amless hollow pr	ofiles the tole	erances given fo	r wall thickne	ss C shall apply			

Table 5: Tolerances on wall thickness for profiles with a circumscribing circle up to and including 300 mm. - Alloy 6082

Note: Dimensions are in millimeter.

		Tolerances on wall thickness						
	minal wall ess A. B or C	Wall thickness A Circumscribing circle		cribing Circumscribing		Wall thickness C Circumscribing circle		
Over	Up to and including	<i>CD</i> ≤100	100 < <i>CD</i> ≤ 300	<i>CD</i> ≤100	100 < CD ≤ 300	CD ≤100	100 < CD ≤ 300	
-	1.5	±0.20	±0.25	±0.30	±0.40	±0.35	±0.50	
1.5	3	±0.25	±0.30	±0.35	±0.50	±0.45	±0.65	
3	6	±0.30	±0.35	±0.55	±0.70	±0.60	±0.90	
6	10	±0.35	±0.45	±0.75	±1.0	±1.0	±1.3	
10	15	±0.40	±0.50	±1.0	±1.3	±1.3	±1.7	
15	20	±0.45	±0.55	±1.5	±1.8	±1.9	±2.2	
20	30	±0.50	±0.60	±1.8	±2,2	±2.2	±2.7	
30	40	±0.60	±0.70	-	±2.5	-	-	
40	50	-	±0.80	-	-	-	-	
a For se	amless hollow p	ofiles the toler	ances given	for wall thickne	ess C shall a	pply.		

STANDARD TOLERANCES

C. CONVEXITY-CONCAVITY for open section

Table 6: Convexity - concavity tolerances. Alloy 6063 and 6082

Note: Dimensions are in millimeter.

Width W		Deviation f				
VVIU	vviatn vv		Hollow profiles a			
Over	Up to and including	Wall Wall thickness		Solid profiles		
		t ≤ 5	t > 5			
-	30	0.3	0.2	0.2		
30	60	0.4	0.3	0.3		
60	100	0.6	0.4	0.4		
100	150	0.9	0.6	0.6		
150	200	1.2	0.8	0.8		
200	300	1.8	1.2	1.2		
300	400	2.4	1.6	1.6		
400	500	3.0	2.0	2.0		
500	600	3.6	2.4	2.4		
600	800	4.0	3.0	3.0		

For alloys in Group II (6082), the specified tolerances shall be multiplied by a factor of 1,4.

In the case of solid and hollow profiles with a width W of at least 150 mm, the local deviation f1, shall not exceed 0,7 mm for any 100 mm of width W1.

Key	
W=	width
f =	deviation
$W_1 =$	100 mm
$f_1 =$	local deviation per any 100 mm

BS EN 755-9:2016 Part 9

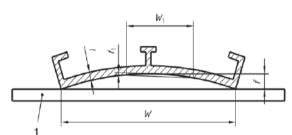


Figure 4: Measurement of Convexity -Concavity for Open Section

Key	
1	base plate
W=	width
f =	deviation
$W_1 =$	100 mm
$f_1 =$	local deviation per any 100 mm

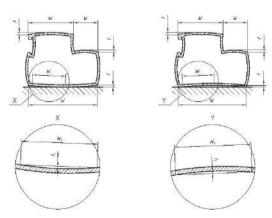


Figure 5: Measurement of Convexity - Concavity for Hollow Sections

a If the profile has varying wall thicknesses in the measurement range, the thinnest wall thickness shall be used.



QUALITY CONTROL STANDARDS

STANDARD TOLERANCES

BS EN 755-9:2016 Part 9

D. ANGULARITY tolerances for right angles

Table 7: Angularity tolerances for right angles Alloy 6063 and 6082

Note: Dimensions are in millimeter.

	Width W	Mariana allemakia desirtira 7 forma dektarada				
Over	Up to and including	Maximum allowable deviation. Z from a right angle				
-	30	0.4				
30	50	0.7				
50	80	1.0				
80	120	1.4				
120	180	2.0				
180	240	2.6				
240	300	3.1				
300	400	3.5				
For profiles with W which	or profiles with W which exceeds 400 mm, the tolerances shall be subject to agreement between the supplier and purchaser.					

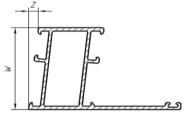


Figure 6: Measurement of angularity in a right angle

Figure 7: Measurement of angularity in an angle other than a right angle

- The angularity tolerances for right angles shall be as specified in Table above as a function of profile width W.
- The maximum allowable deviation α in an angle other than a right angle shall be \pm 1°.
- In the case of unequal side lengths the tolerance on angularity shall apply to the shorter side of the angle, i.e.it is measured starting from the longer side.

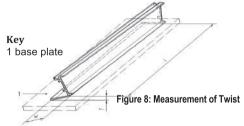
STANDARD TOLERANCES

BS EN 755-9:2016 Part 9

TWIST TOLERANCES (As a function of the width W and the length L of the profile

Table 8: TWIST TOLERANCES (As a function of the width W and the length L of the profile. Alloy 6063 and 6082

				110to. Dimonolollo dio in millimotor.		
	Width W	Twist tolerances T for length L				
	Up to and	Per 1 000 of	Per 1 000 of On total profile length L			
Over	including	length a	Over 1 000 and			
			including 6 000	Over 6 000		
-	30	1.2	2.5	3.0		
30	50	1.5	3.0	4.0		
50	100	2.0	3.5	5.0		
100	200	2.5	5.0	7.0		
200	300	2.5	6.0	8.0		
300	450	3.0	8.0	1.5 x L (L in metres)		



STANDARD TOLERANCES

F. Fixed LENGTH

BS EN 755-9:2016 Part 9

Table 9: Tolerances on fixed length. Alloy 6063 and 6082

Note:	Dimensions	are in	millimeter.

Circum	scribing circle diameter CD	Tolerance on fixed Lenth L				
Over	Upto and including	L ≤ 2 000	2 000 < L ≤ 5 000	5 000 < L ≤ 10 000	10 000 < L ≤ 15 000	15 000 < L ≤ 25 000
-	100	+5	+7	+10	+16	+22
		0	0	0	0	0
100	200	+7	+9	+12	+18	+24
		0	0	0	0	0
200	450	+8	+11	+14	+20	+28
		0	0	0	0	0
450	800	+9	+14	+16	+22	+30
		0	0	0	0	0

If fixed lengths are to be supplied, this shall be stated in the order document.

If no fixed length is specified in the order document, profiles may be delivered in random lengths.

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QUALITY CONTROL STANDARDS

SPECIAL STANDARD TOLERANCES A. CROSS-SECTIONAL Dimensions

BS EN 12020-2:2016

Table 1: Tolerance on Cross-Sectional Dimensions

ote:	Dim	ensions	are in	millime	ter

Dimensions H		Tolerance on H	Tolerance on I	H (open ends)
Over	Up to and including	(except open ends)	E≤ 60	60 <e≤ 120a<="" th=""></e≤>
-	10	± 0.15	± 0.15	b
10	15	± 0.20	± 0.20	b
15	30	± 0.25	± 0.25	b
30	45	± 0.30	± 0.30	± 0.45
45	60	± 0.40	± 0.40	± 0.55
60	90	± 0.45	± 0.45	± 0.65
90	120	± 0.60	± 0.60	± 0.80
120	150	± 0.80	± 0.80	± 1.00
150	180	± 1.0	± 1.0	± 1.30
180	240	± 1.20	± 1.20	± 1.50
240	300	± 1.50	± 1.50	± 1.80
300	350	± 1.80	± 1.80	± 2.10

NOTE: Tolerances given in Table 1 do not cover dimensions from a given point inside a closed hollow chamber to any other point outside the chamber.

b - Shall be subject to agreement between purchaser and supplier

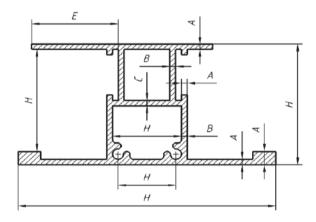


Figure 1: Definition of dimensions A, B, C, E, H

Legend:

- A. Wall thicknesses except those enclosing the hollow spaces in hollow profiles.
- B. Wall thicknesses enclosing the hollow spaces in hollow profiles, except those between two hollowspaces;
- C. Wall thicknesses between two hollow spaces in hollow profiles;
- D. The length of the shorter leg of profiles with open ends;
- E. All dimensions (except wall thickness) between points on the cross section of the profile or the centres of open screw holes including open ends.

SPECIAL STANDARD TOLERANCES

B. WALL THICKNESS of solid and hollow profiles

BS EN 12020-2:2016

Table 2: Tolerance on Wall Thickness of Solid and Hollow Profiles

Moto: Din	nensions a	ro in n	illimotor

Nominal wall thickness A,B,C Tolerances on wall thickness, A		all thickness, A	Tolerances on wall thickness, B & C		
Over	Up to and	Circumscribing circle	Circumscribing circle	Circumscribing circle	Circumscribing circle
	including	CD≤ 100	100 <cd≤ 350<="" th=""><th>CD≤ 100</th><th>100<cd≤ 350<="" th=""></cd≤></th></cd≤>	CD≤ 100	100 <cd≤ 350<="" th=""></cd≤>
-	2	± 0.15	± 0.20	± 0.20	± 0.30
2	3	± 0.15	± 0.25	± 0.25	± 0.40
3	6	± 0.20	± 0.30	± 0.40	± 0.60
6	10	± 0.25	± 0.35	± 0.60	± 0.80
10	15	± 0.30	± 0.40	± 0.80	± 1.0
15	20	± 0.35	± 0.45	± 1.20	± 1.50
20	30	± 0.40	± 0.50	a	a
30	40	± 0.45	± 0.60	a	a
^a Shall	be subject to agreem	ent between supplier and	d purchaser.		

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a - Tolerances for values of dimension E over 120 mm shall be subject to agreement between supplier and purchaser.



SPECIAL STANDARD TOLERANCES

C. FIXED LENGTH

Table 3: Tolerance on Fixed Length

BS EN 12020-2:2016

		.		Note: Dimensio	ns are in millimeter.	
Circumscribing Circle CD		Tolerances on fixed length L				
Over	Up to and including	L ≤ 2000	2000 < L ≤ 5000	5000 < L ≤ 10000	L > 10000	
-	100	+ 5 0	+ 7 0	+ 10 0	Subject to	
100	200	+ 7 0	+ 9 0	+12 0	agreement between	
200	350	+ 8	+ 11	+ 14	supplier and purchaser	

If no fixed or minimum length is specified in the order, profiles may be delivered in random lengths. The length range and the tolerances on the random lengths shall be subject to agreement between supplier and purchaser.

SPECIAL STANDARD TOLERANCES

D. CONVEXITY- CONCAVITY Tolerances

Table 4: Convexity – Concavity Tolerances

Note: Dimensions are in millimeter.

Width W		
Over	Up to and including	MaximumAallowable Deviation f
-	30	0.2
30	60	0.3
60	100	0.4
100	150	0.5
150	200	0.7
200	250	0.85
250	300	1.0
300	350	1.2

BS EN 12020-2:2016

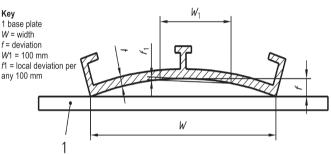


Figure 2: Measurement of Convexity-Concavity for Open Section

In the case of profiles with a width W of over 150 mm, the local deviation f1 shall not exceed 0,50 mm for any width W1 of 100 mm.

SPECIAL STANDARD TOLERANCES

E. TWIST Tolerance

Table 5: Twist Tolerances

V	Vidth W	Twist tolerances T for specified length L						
Over	Up to and including	L ≤ 1000	1000 < L ≤ 2000	2000 < L ≤ 3000	3000 < L ≤ 4000	4000 < L ≤ 5000	5000 < L ≤ 6000	L > 6000
-	75	1.0	1.2	1.5	1.8	2.0	2.0	Subject to
75	100	1.0	1.2	1.5	2.0	2.2	2.5	agreement between
100	125	1.0	1.5	1.8	2.2	2.5	3.0	supplier
125	150	1.2	1.5	1.8	2.2	2.5	3.0	and purchaser
150	200	1.5	1.8	2.2	2.6	3.0	3.5	
200	350	1.8	2.5	3.0	3.5	4.0	4.5	

BS EN 12020-2:2016

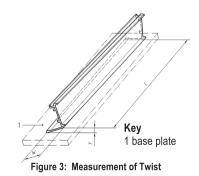


Figure 3 shows an example of a simple case of twist. There are other possibilities where the twist has to be identified differently. Some examples are given below:

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[•] Differing positioning of the profile on the base plate such that the maximum twist has to be calculated as the sum of two separate measurements on the diagonal end positions.

[•] Discontinuous twist over the profile length such that the maximum twist is the difference between specific points along the length. The maximum twist in this case is not necessarily equal to the maximum distance to the base plate and should not be confused with flatness of the surfaces (combination of twist and straightness). In case of such difficult interpretation of twist, the specific requirements and methods of measurement shall be subject to agreement between supplier and purchaser



SPECIAL STANDARD TOLERANCES

BS EN 12020-2:2016

F. ANGULARITY

Table 6: Tolerances for Right Angles

Note: Dimensions are in millimeter.

	Width W	Maximum allowable deviation Z
Over	Up to and including	from a right angle
-	30	0.3
30	50	0.4
50	80	0.5
80	100	0.6
100	120	0.7
120	140	0.8
140	160	0.9
160	180	1.0
180	200	1.2
200	250	1.5

The deviation from a specified angle shall be measured as shown in Figures 4 and 5.

- The angularity tolerances for right angles shall be as specified in Table 6 as a function of profile width W.
- The maximum allowable deviation α in an angle other than a right angle shall be \pm 1 on figure 5.
- In the case of unequal side lengths the tolerance on angularity shall apply to the shorter side of the angle, i.e. it is measured starting from the longer side.

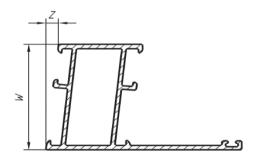


Figure 4: Measurement of Angularity in a Right Angle

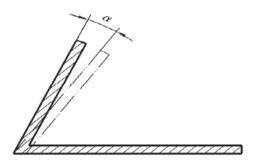


Figure 5: Measurement of Angularity of other than Right Angles



QUALITY CONTROL STANDARDS

SCOPE: ANODISING STANRDARDS

BALEXCO's Quality Specifications are based on International Standards. (QUALANOD Edition 01.01.2019)

BALEXCO specification in particular meets the requirement for architectural aluminium extrusion.

1. SURFACE FINISH

The following/tests/ checks are based on International Standards including DIN

- 1.1 Significant surfaces of extrusions after chemical/ mechanical pre-treatment are checked to ensure that the surfaces are free from metallurgical/ mechanical defects.
- 1.2 Anodic film thickness on significant surfaces are checked by the following instruments (Eddy current):
 - a) Permascope
- b) Isoscope
- 1.3 Anodic film thicknesses are as follows:

There are the following thickness classes:

Class 16-18 Micron = average thickness 16 Micron

Class 20-22 Micron = average thickness 20 Micron

Class 23-25 Micron = average thickness 23 Micron

2. SEALING QUALITY

For the sealing assessment of our anodized products, the following tests are regularly conducted.

- 2.1 Sealing assessment using "Dye Absorption Test"
- 2.2 Weight loss test

3. COLOUR VARIATION

Colour variations for our colour anodized products are controlled within permissible range of maximum and minimum limits of each shade.



QUALITY CONTROL STANDARDS

SCOPE: POWDER COATING STANDARDS (QUALICOAT)

The BALEXCO specification in particular meets the requirements for architectural aluminium extrusions. Regular quality checks are made during production to ensure high quality products as follows:

Gloss – Adhesion – Impact Resistance – Flexibility – Cupping.

Limit Values for:

Gloss	Coat Thickness
65% to 84%	48 um to 170μm
Adhesion Cross Cut	No flaking 100%*
Impact	No crack*
Flexibility	No crack*
Cupping	No crack*

^{*} when applied to test panel less than 1mm thick, Provided coat thickness is between 40 to 80 µm

SCOPE : FINISESMILL FINISH

ANODIZED FINISH: Bronze Colinal® Matt, Black Colinal® Matt, Black COLINAL® Brushed, Colinal Black,

Bronze COLINAL®, is available in 5 shades, COLINAL® No.10, 12 and 16 light, No.11,

17 and 21 medium, No.30-40 very dark

POWDER COATED

FINISH: Wide range of RAL painted polyester Power Colours.



Authorization to use the quality sign



This is to certify that

BAHRAIN ALUMINUM EXTRUSION COMPANY (BALEXCO)

Building 267, Block 601, Road 105 P.O. Box 1053 BH - Sitra Industrial Area

Licence number: 2200

is authorized to use the quality sign which is shown above, according to the regulations for the use of the quality label for ARCHITECTURAL ANODIZING as described in the current edition of the Specifications for the QUALANOD quality label for sulfuric acid-based anodizing of aluminium (Edition 01.01.2019). Architectural anodizing is one of the four types of anodizing covered by the Specifications.

Date of issue of the licence:

08.09.2009

Period of validity of the licence:

until 31.12.2019

Zurich, 20 November 2018

QUALANOD

CERTIFICATION BODY

Remco Baartmans President

Josef Schoppig General Secretary













Mailing address: QUALANOD, P.O. Box 1507, CH-8027 Zurich

QUALANOD c/o ARCO Association Management AG (certification body) Tödistrasse 42, CH-8002 Zurich

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Authorization to use the quality sign



This is to certify that

BAHRAIN ALUMINUM EXTRUSION COMPANY (BALEXCO)

Building 267, Block 601, Road 105 P.O. Box 1053 BH - Sitra Industrial Area

Licence number: 2700

is authorized to use the quality sign which is shown above according to the REGULATIONS FOR THE USE OF THE QUALICOAT QUALITY SIGN FOR PAINT, LACQUER AND POWDER COATINGS ON ALUMINIUM FOR ARCHITECTURAL APPLICATIONS.

Date of issue of the licence:

27.05.2003

Period of validity of the licence:

until 31.12.2019

Zurich, 7 January 2019

QUALICOAT

CERTIFICATION BODY

Mohammed C. Panam

President

Josef Schoppig Managing Director



QUALICOAT, Todistrasse 42, CH-8002 Zurich

Domicile: QUALICOAT c/o ARCO Association Management Ltd, Tödistrasse 42, CH-8002 Zurich





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BAHRAIN ALUMINIUM EXTRUSION COMPANY B.S.C. (C) (BALEXCO)

BUILDING 267, ROAD 105, BLOCK 601, SITRA INDUSTRIAL AREA, P.O. BOX 1053, KINGDOM OF BAHRAIN.

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015

Scope of certification

PRODUCTION AND SUPPLY OF ALUMINIUM EXTRUDED PROFILES IN VARIOUS SHAPES, ALLOYS AND SURFACE FINISHES

Original cycle start date:

13-NOVEMBER-2018

Expiry date of previous cycle:

Recertification Audit date:

11-SEPTEMBER-2018

Recertification cycle start date:

13-NOVEMBER-2018

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 12-NOVEMBER-2021

Certificate No. IND18.8930U/E

Version: 01, Revision Date: 13-NOVEMBER-2018







Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom Local office: Bureau Veritas Certification Bahrain Flat No. 11, Building No. 574, Road 1111, Tubli





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BAHRAIN ALUMINIUM EXTRUSION COMPANY

Statement of Policy

BALEXCO is committed to providing quality products to our customers that ensures they are provided with the best possible products, whilst endeavoring to protect the environment, our employees, visitors and all others who may be affected directly, or indirectly, by our activities.

The management established this policy covering the quality, environment, health & safety compatible with the context and strategic direction of BALEXCO and will be achieved by:

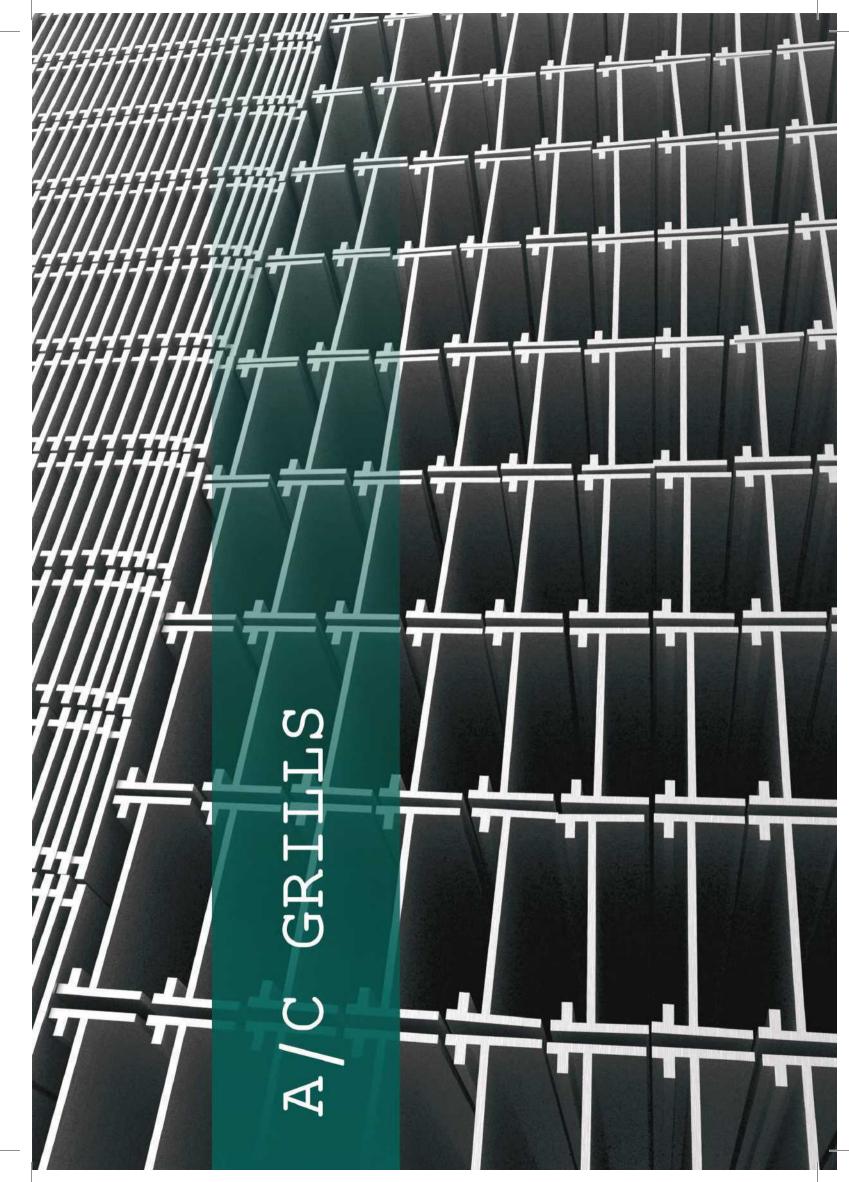
- Continual improvement of people, products and services through process standardization, system development implementation, automation, innovation and performance measuring mechanism to achieve organizational excellence.
- Proactively seek, appraise and implement feedback from customers and other stakeholders with regards to the processes we adhere to; while we continually improve the management systems.
- Manufacture products with demonstrable superiority in minimizing consumption of natural resources, operating with minimum inventory, minimizing waste-scrap generation and prevention of pollution to achieve sustainable growth.
- Adopting latest cutting-edge technologies and techniques that translate in quality products & services, accident-free operations, minimize impact on environmental & occupational health operations.
- Identifying business, health, safety risks & environmental impacts and ensure they are treated through appropriate measures to level "As Low As Reasonably Practicable".
- Comply with all applicable legal, statutory, regulatory and other requirements related to our business
- As a socially responsible company, be sensitive to our employees' needs as well as the community we operate in, by providing performance ambiance of challenge and empowerment of our employees and partners.
- The undersigned ensures that the responsibilities and authorities for relevant roles are assigned, communicated and understood for effective implementation of the above statements and ensures the integrity of the IMS is maintained when changes are planned and implemented.

Robert Holtkamp General Manager

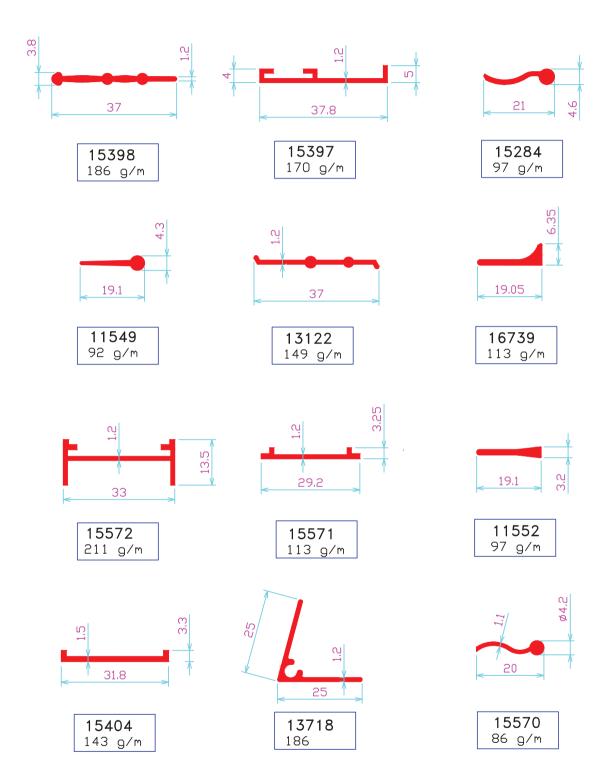




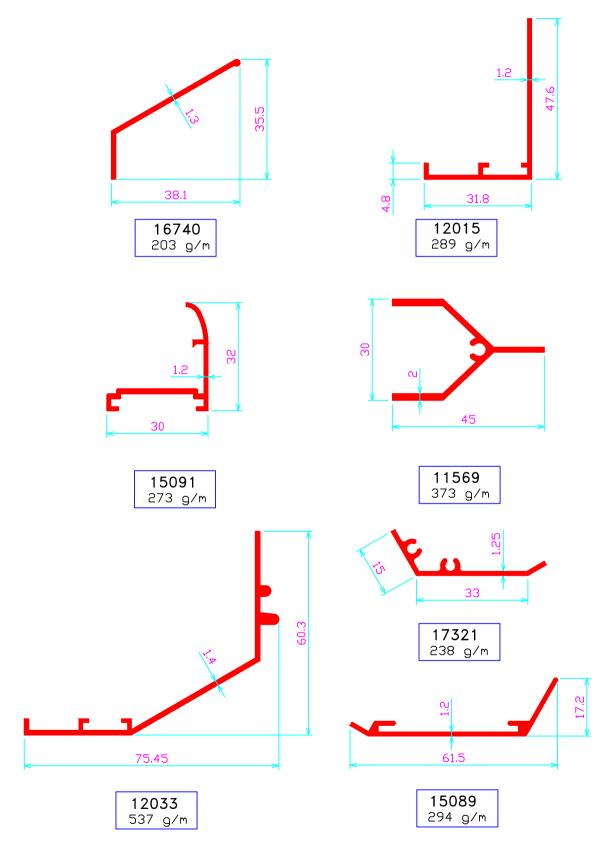






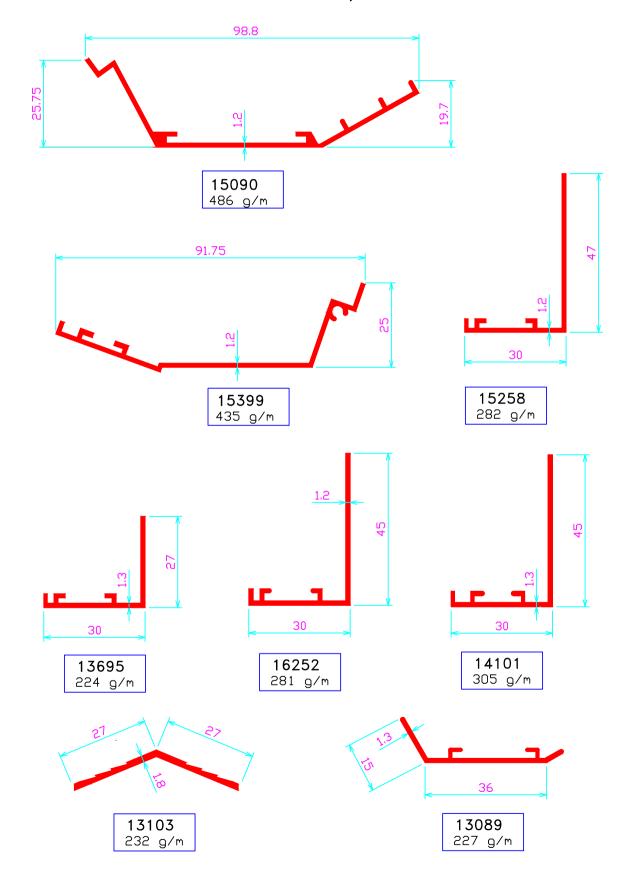






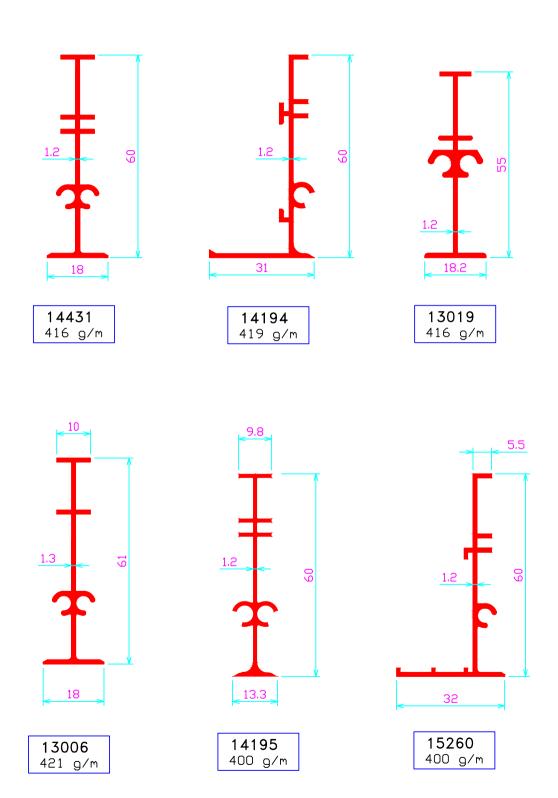
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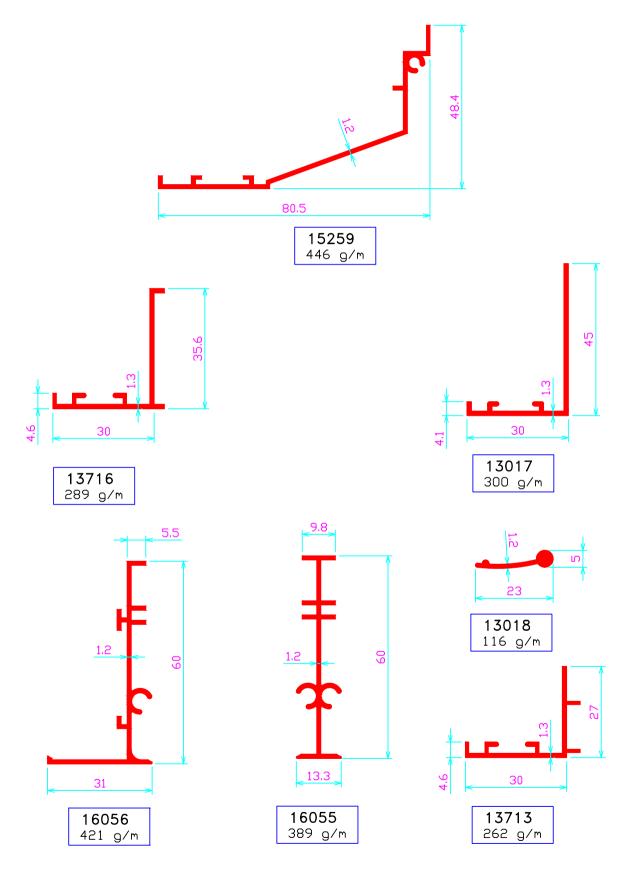
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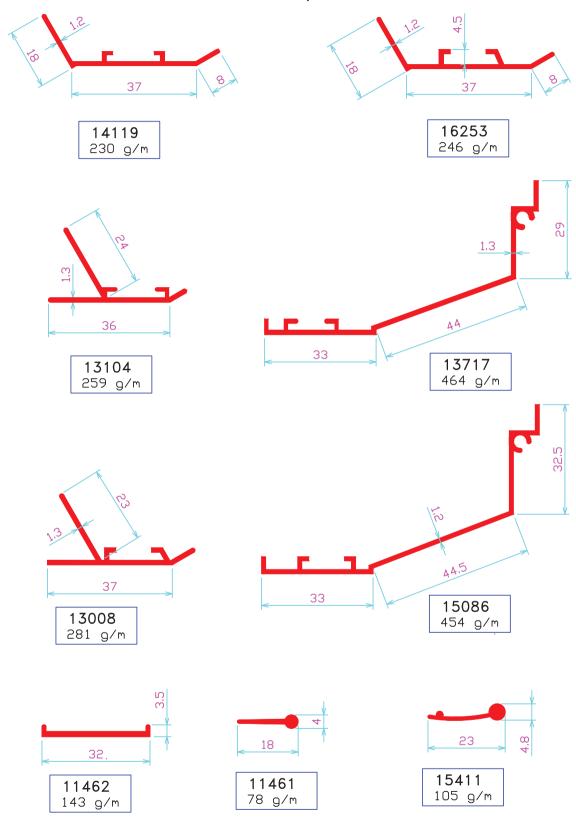
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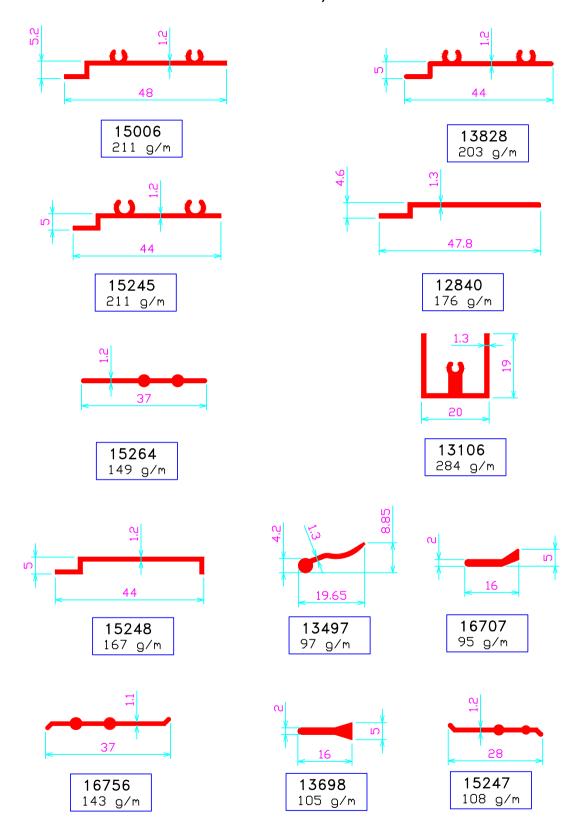
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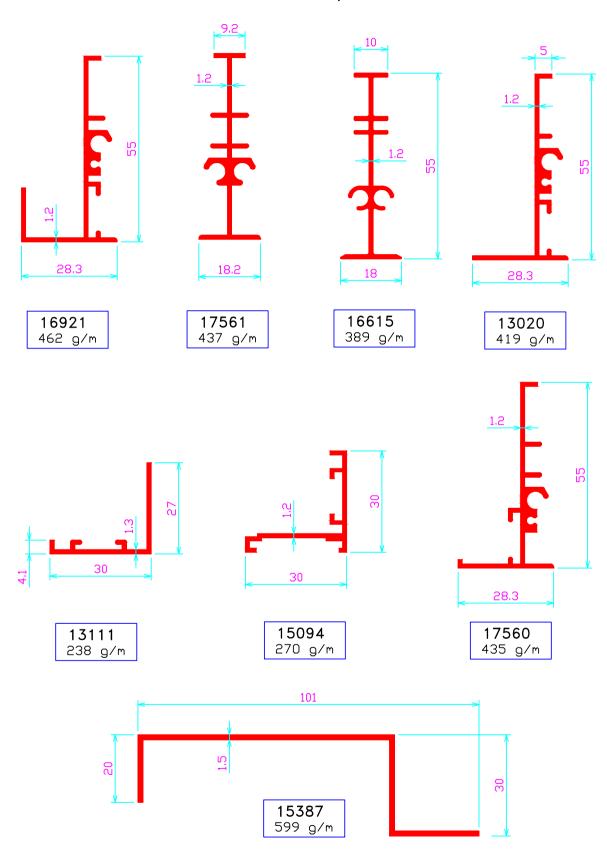
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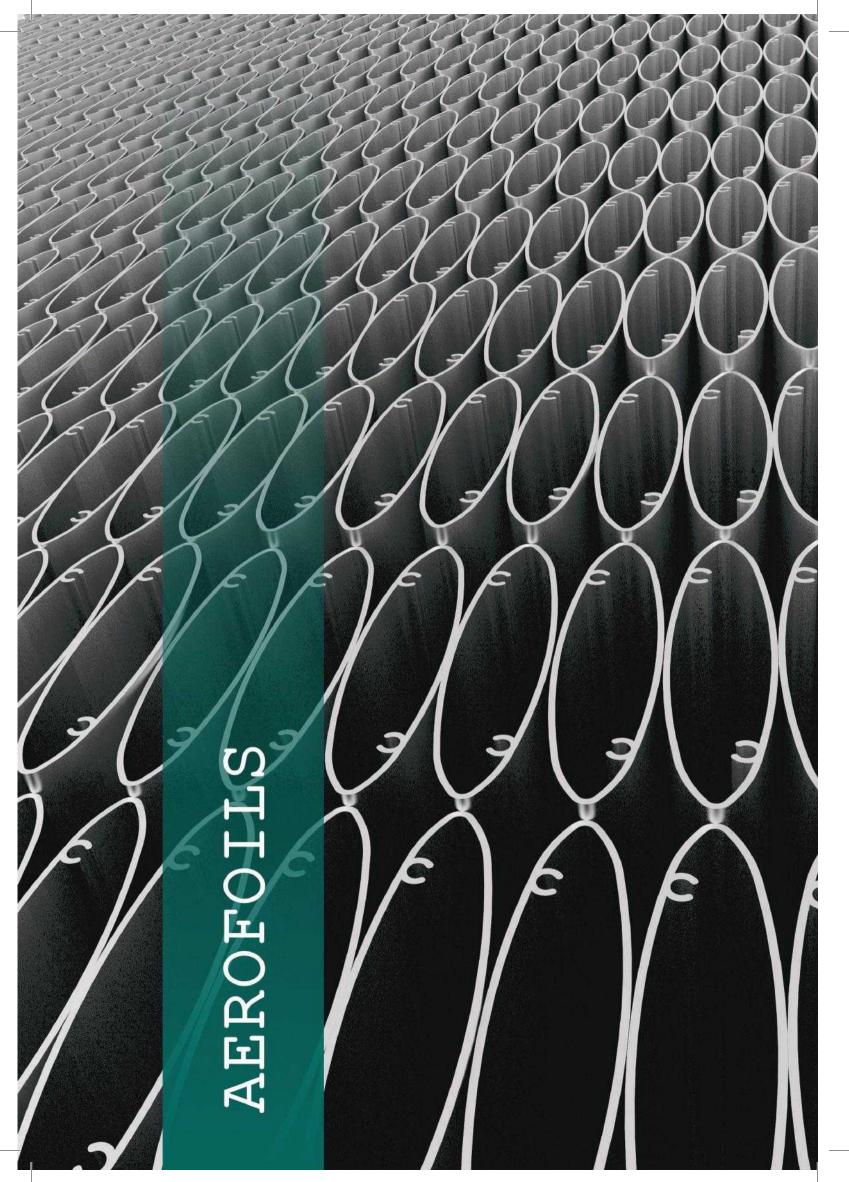


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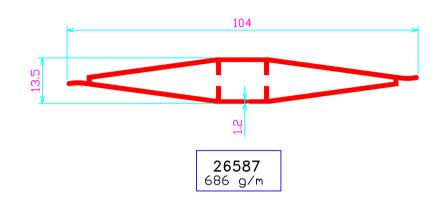


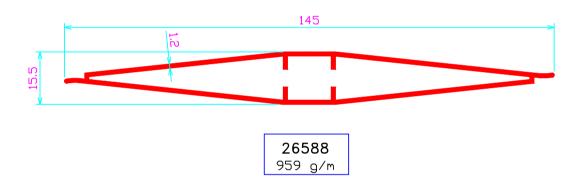
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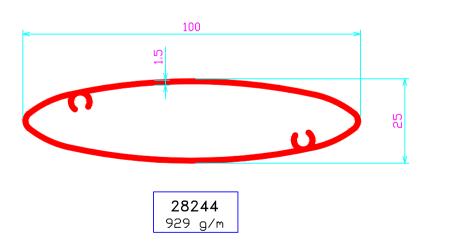




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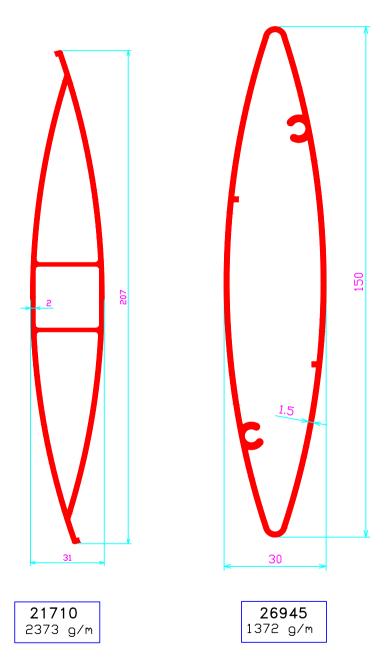




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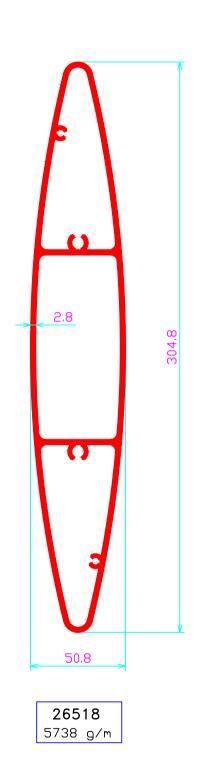
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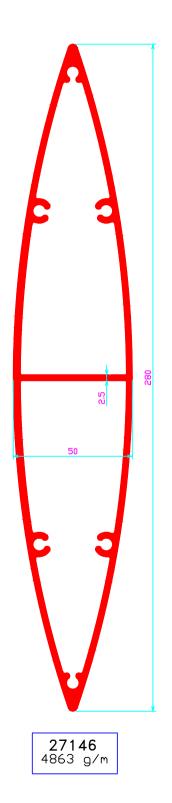


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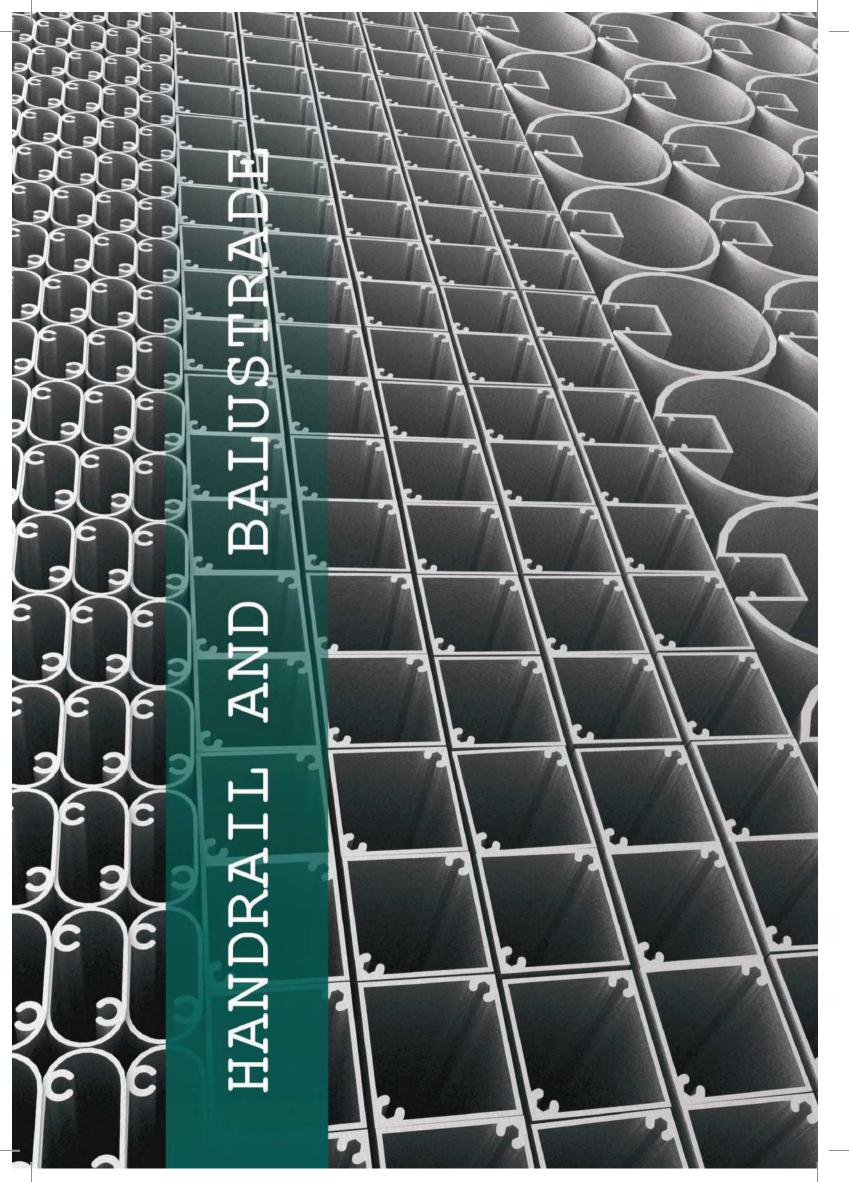


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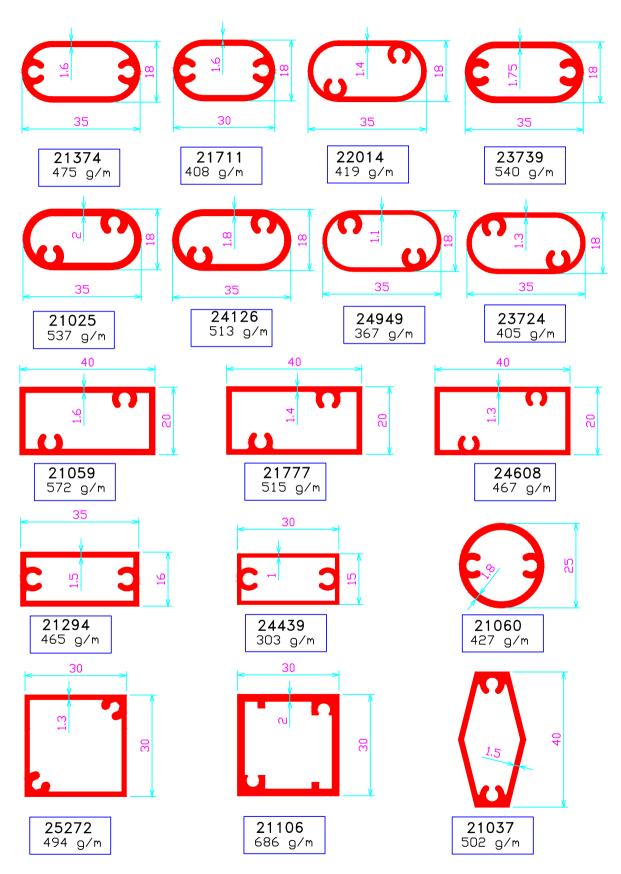




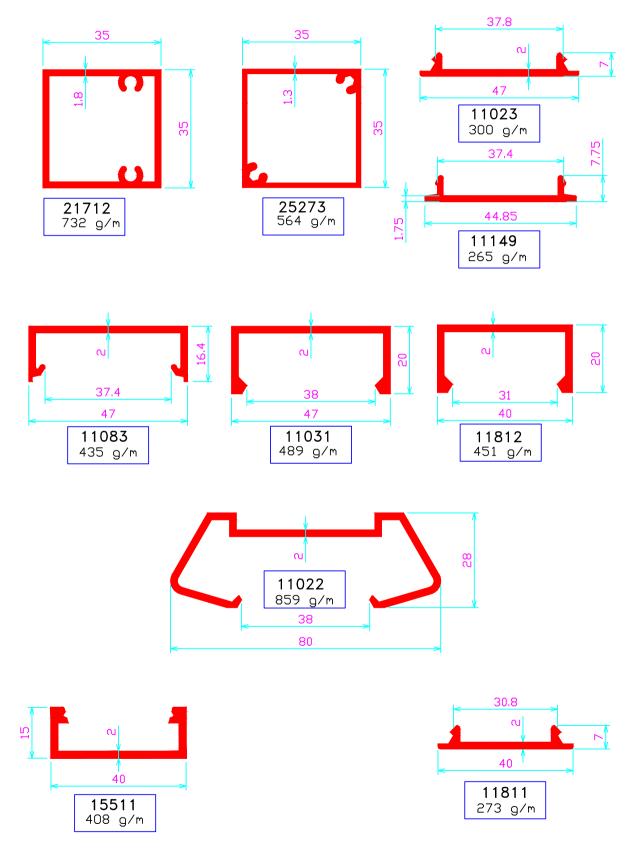
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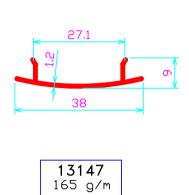


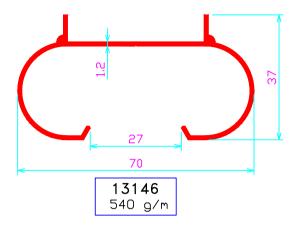


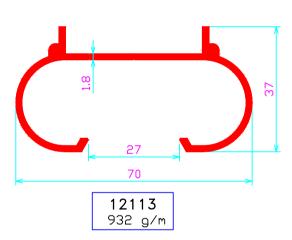


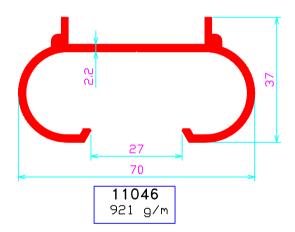


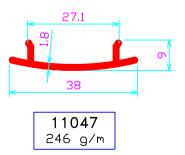






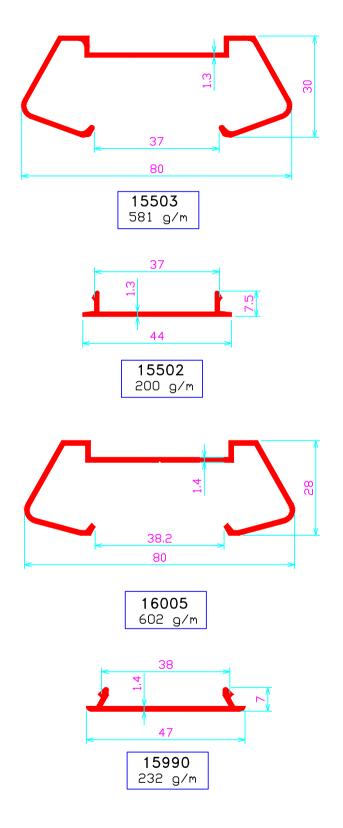




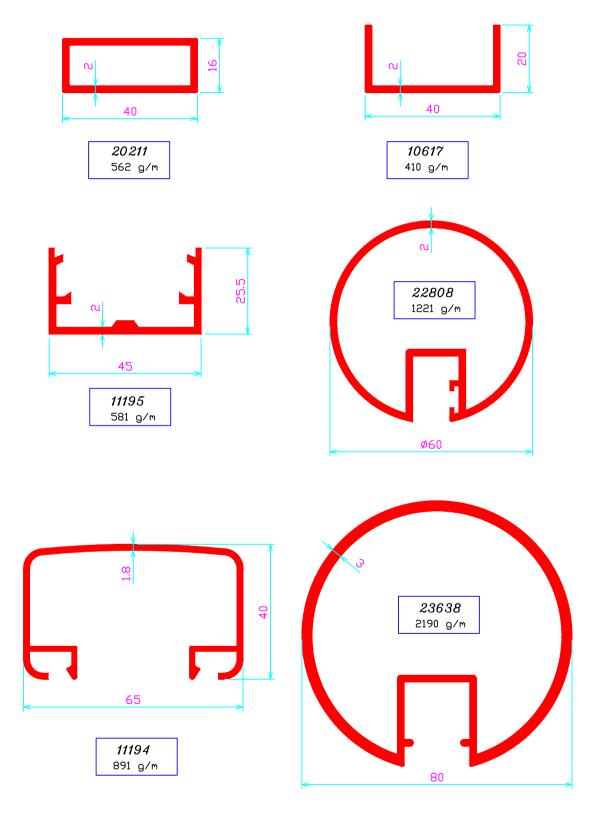


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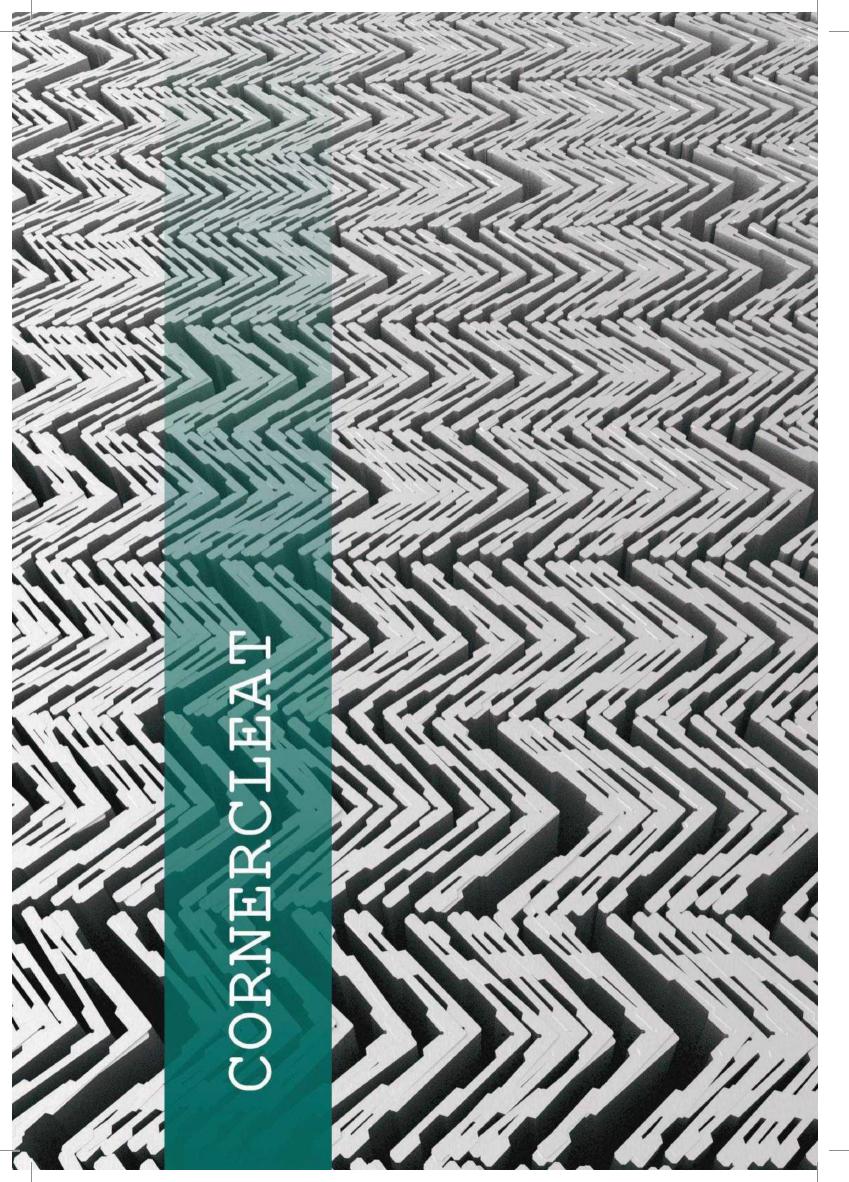




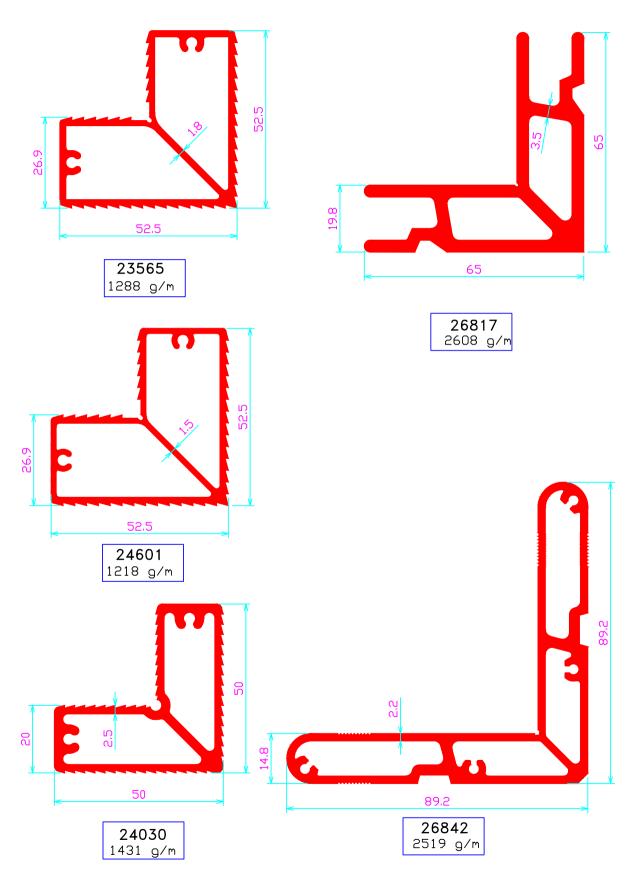




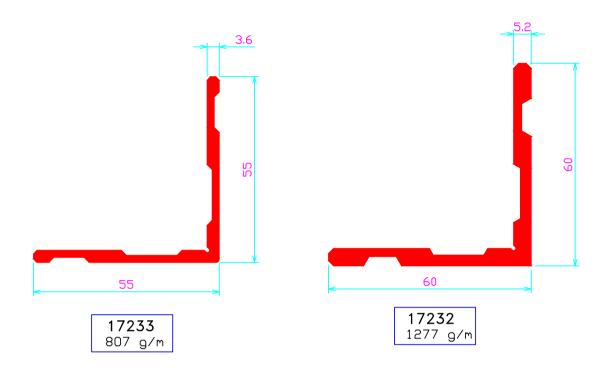
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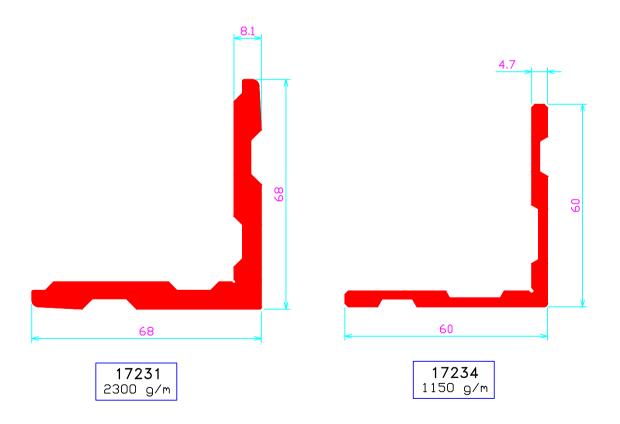




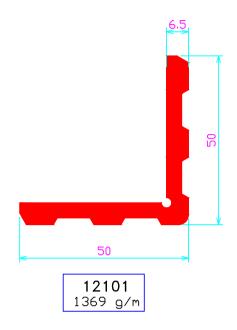


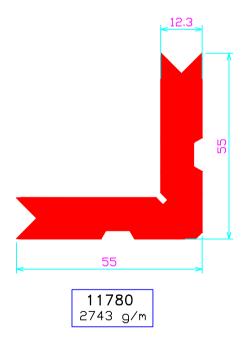


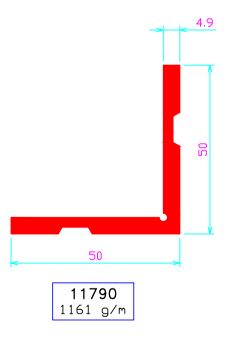






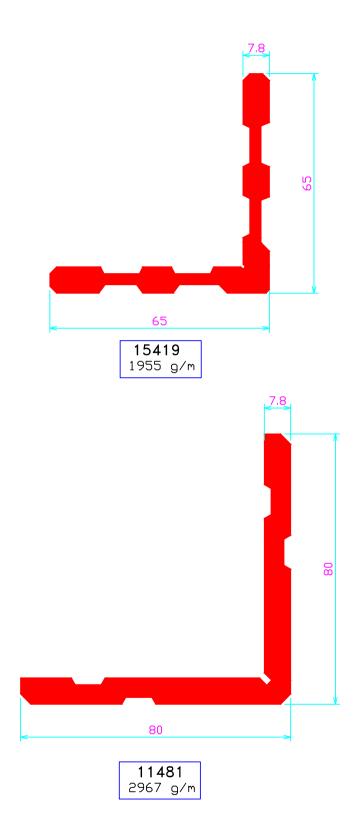


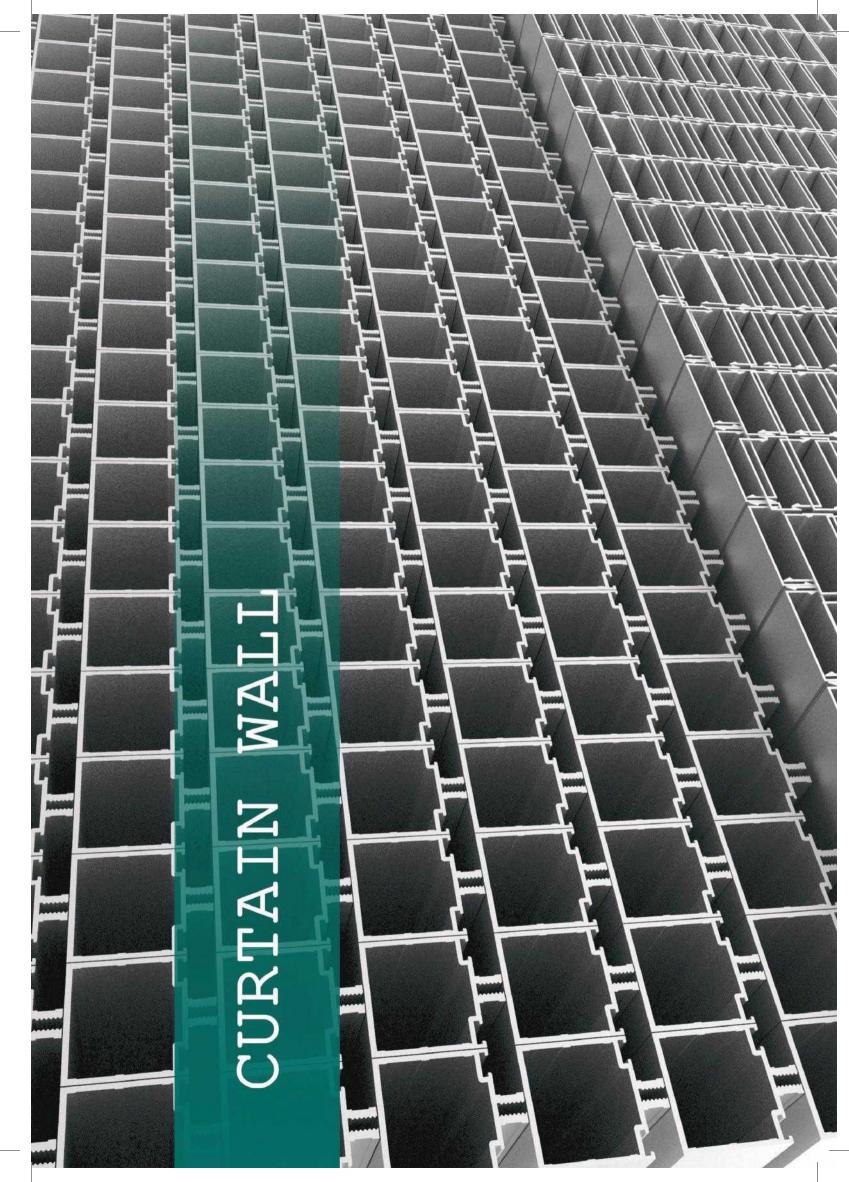




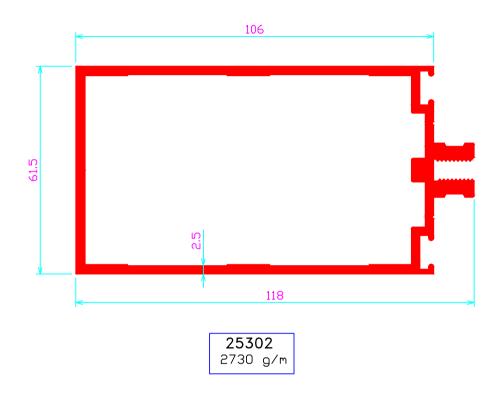
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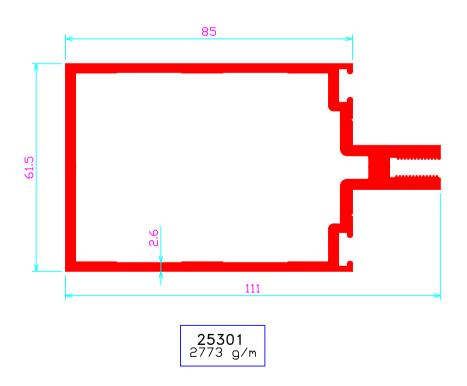






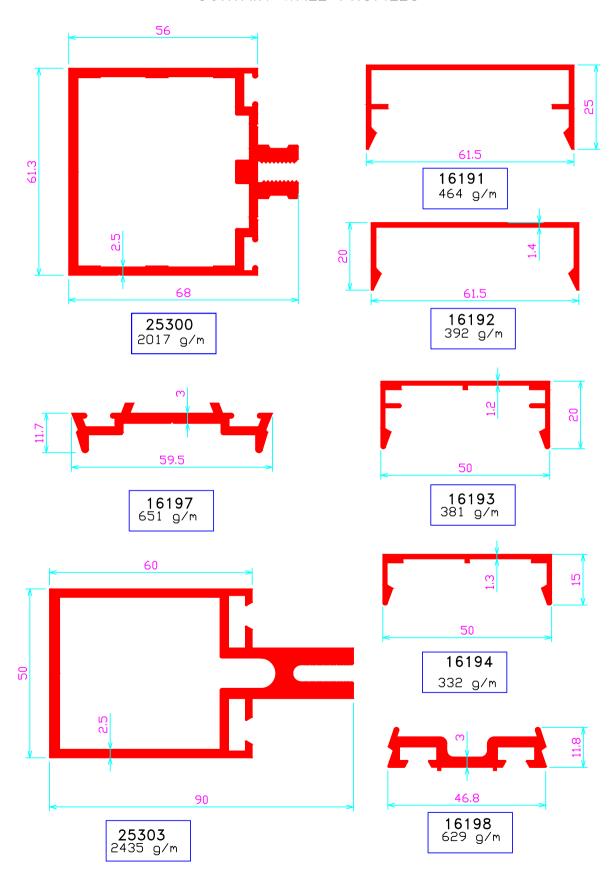






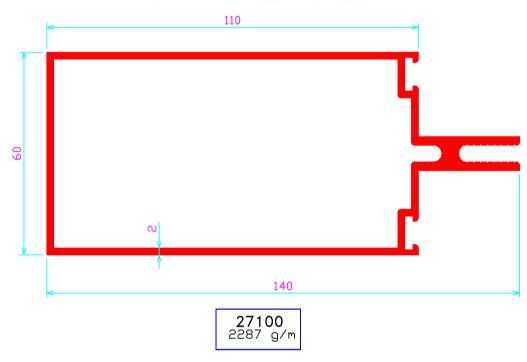
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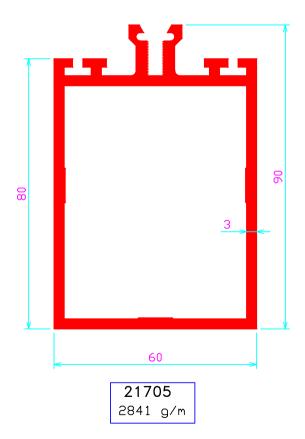


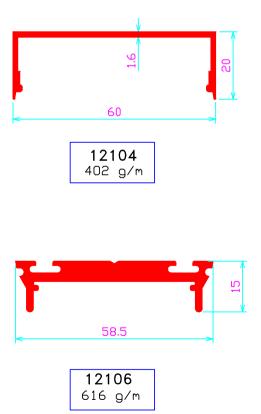


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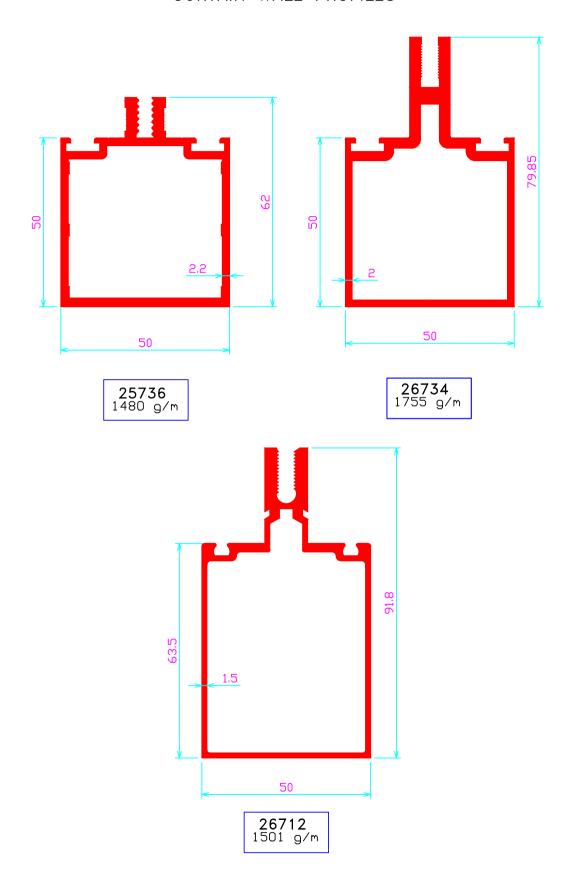






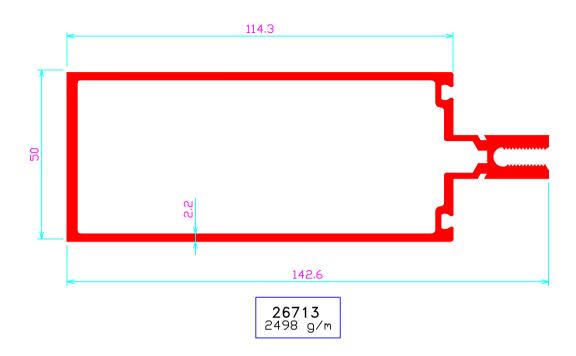


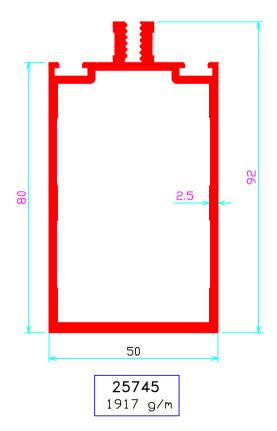


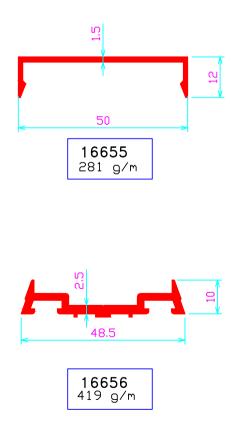


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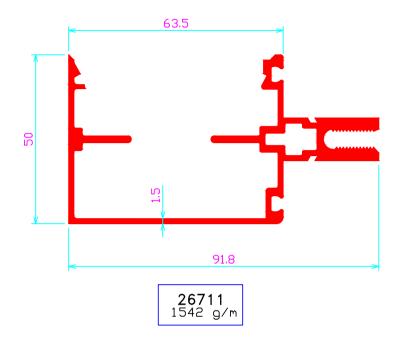


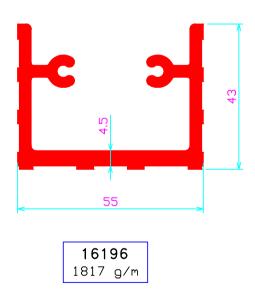


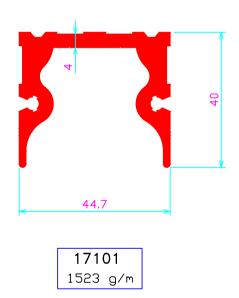




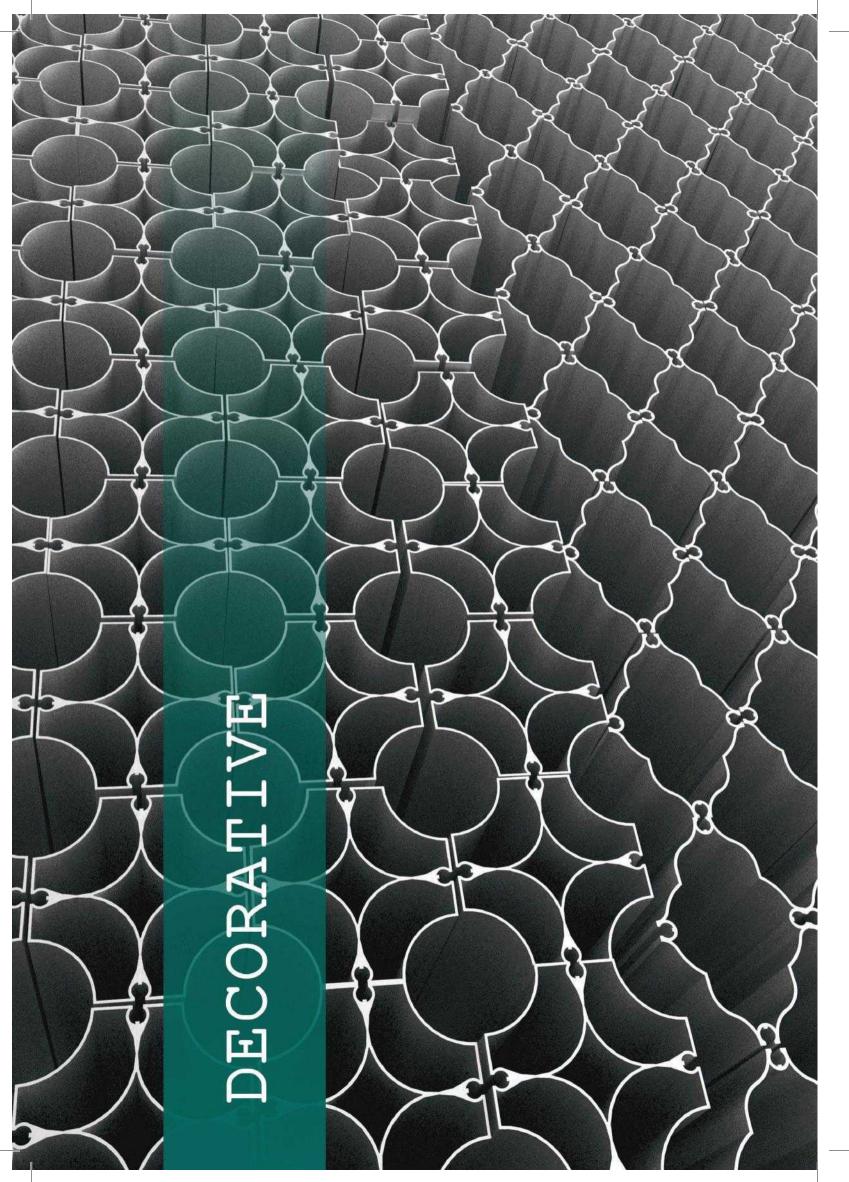






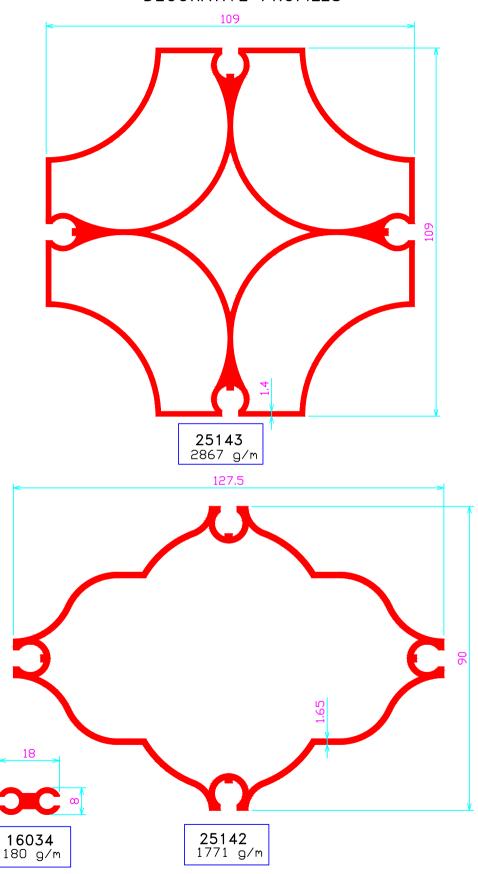


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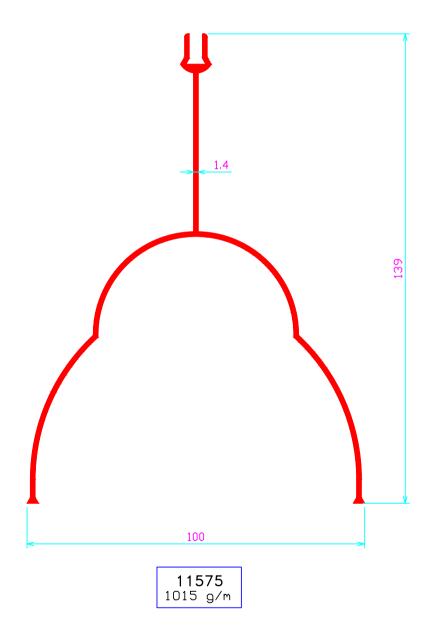


DECORATIVE PROFILES



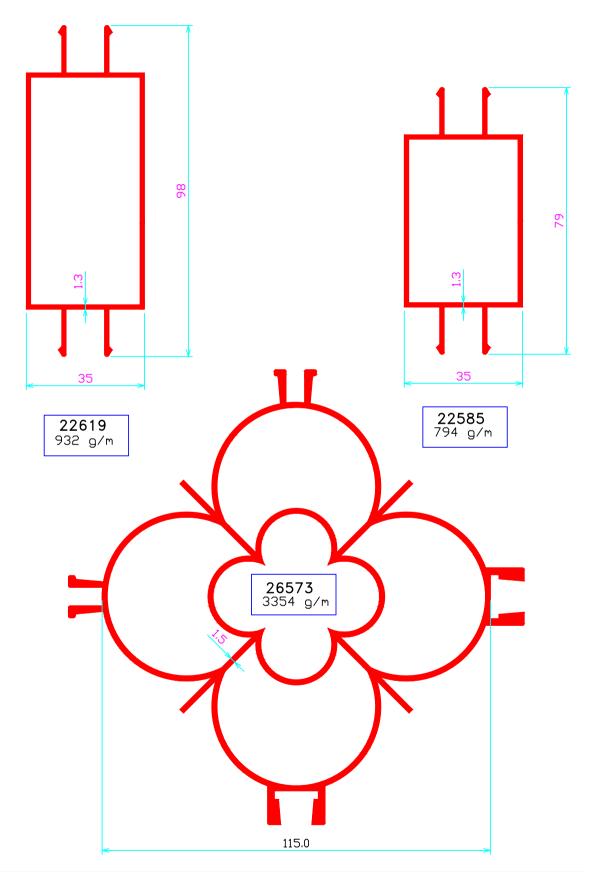


DECORATIVE PROFILES

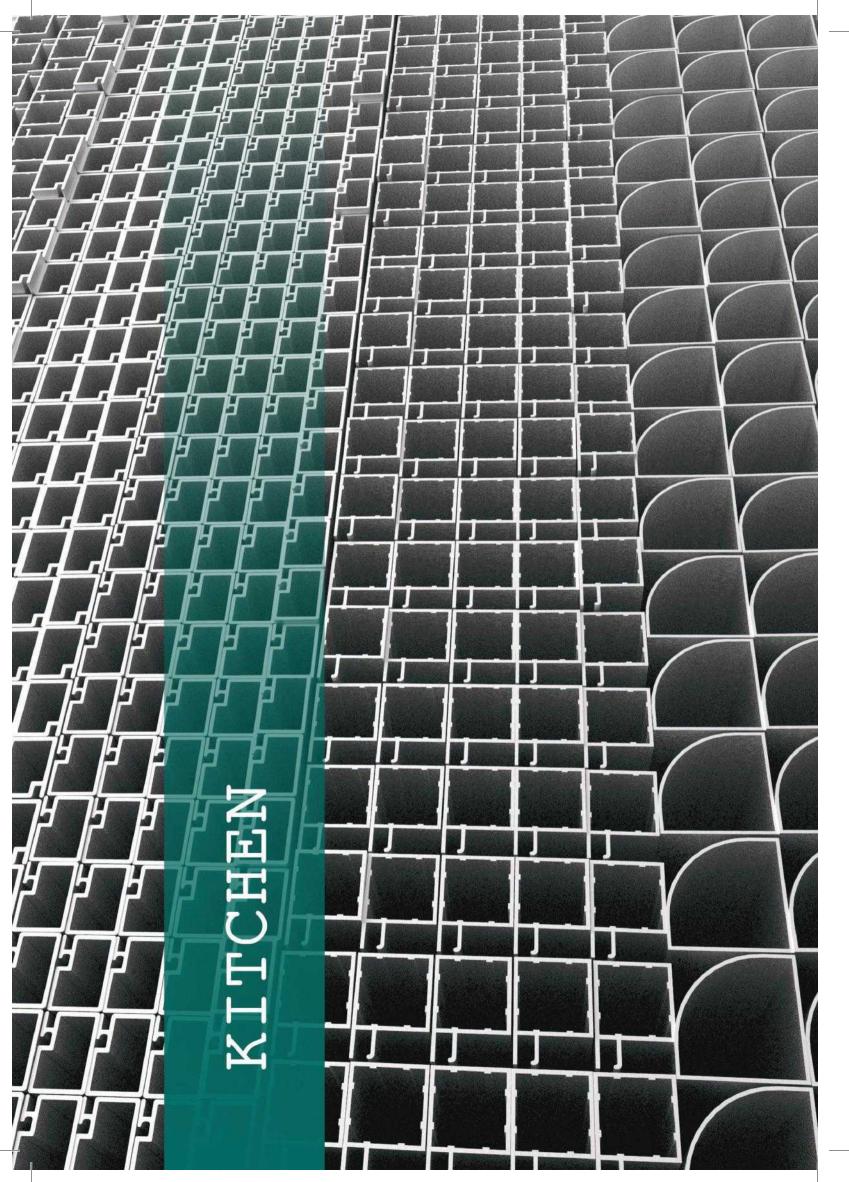




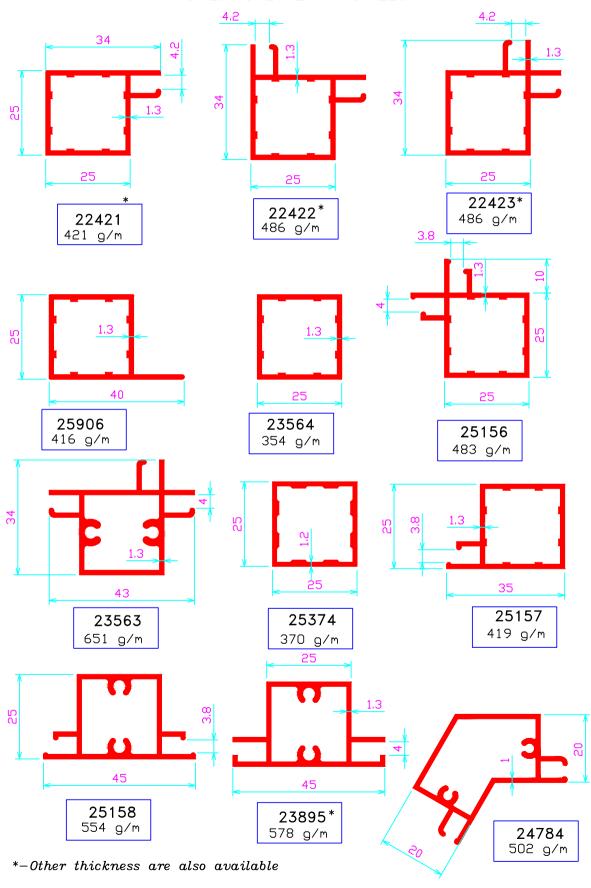
DECORATIVE PROFILES



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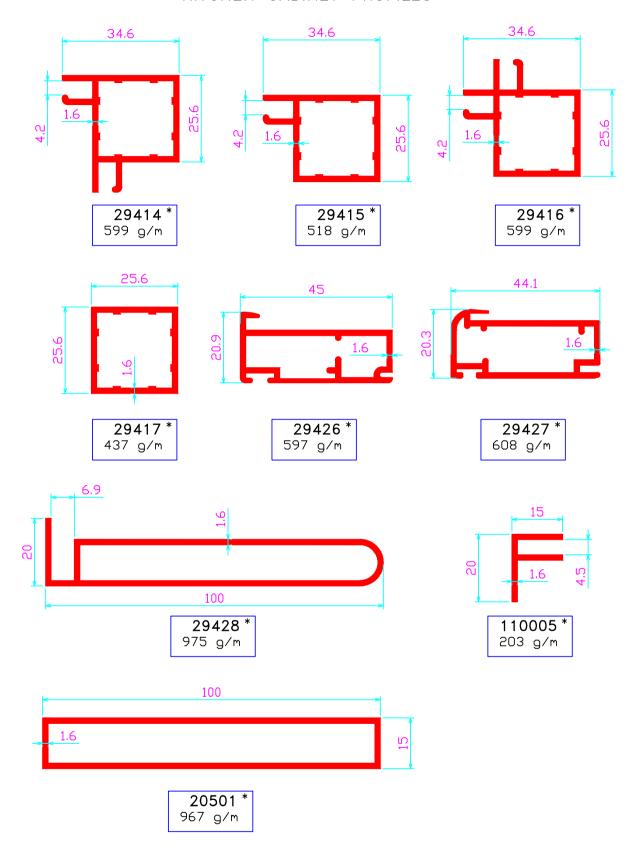






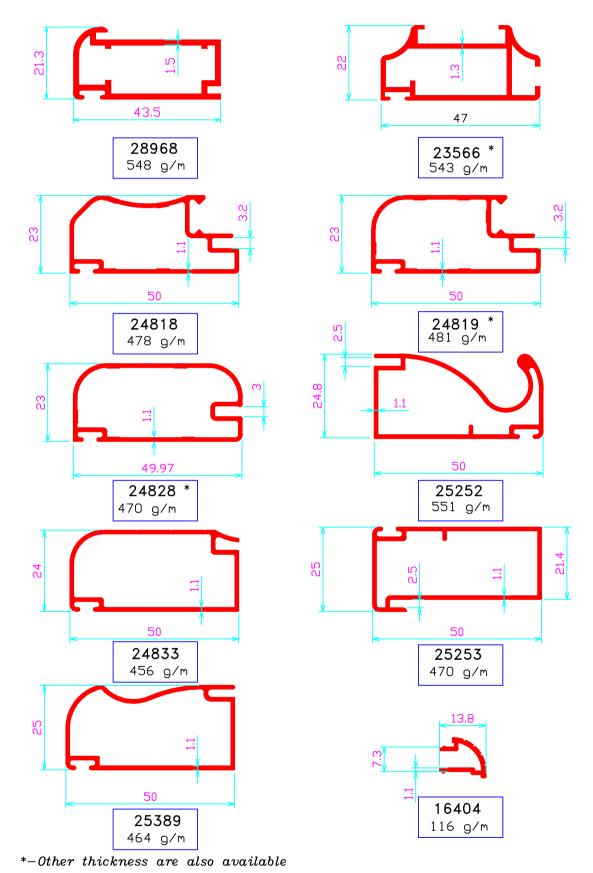
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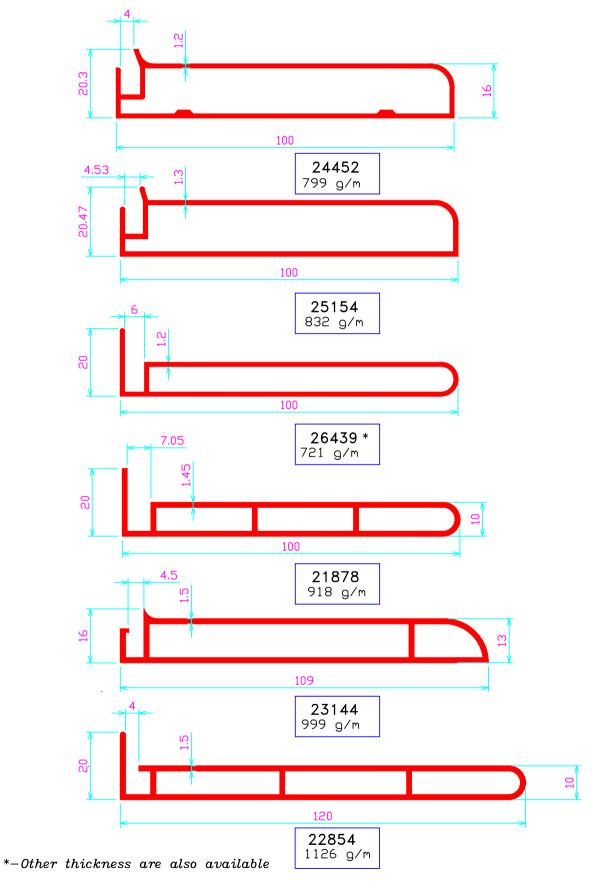
 $*-Other\ thickness\ are\ also\ available$



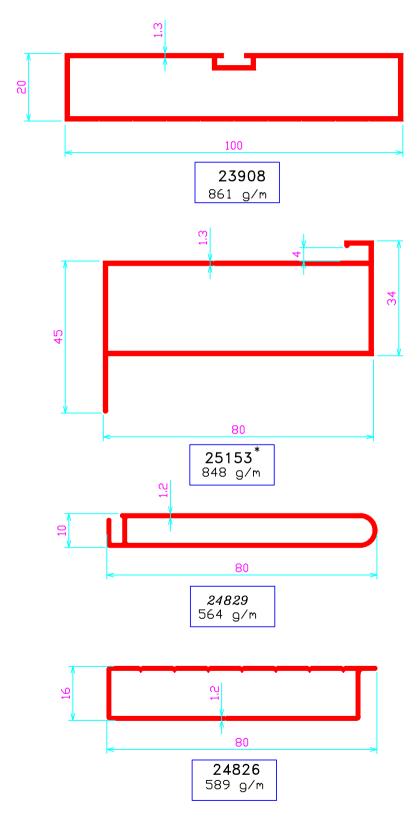


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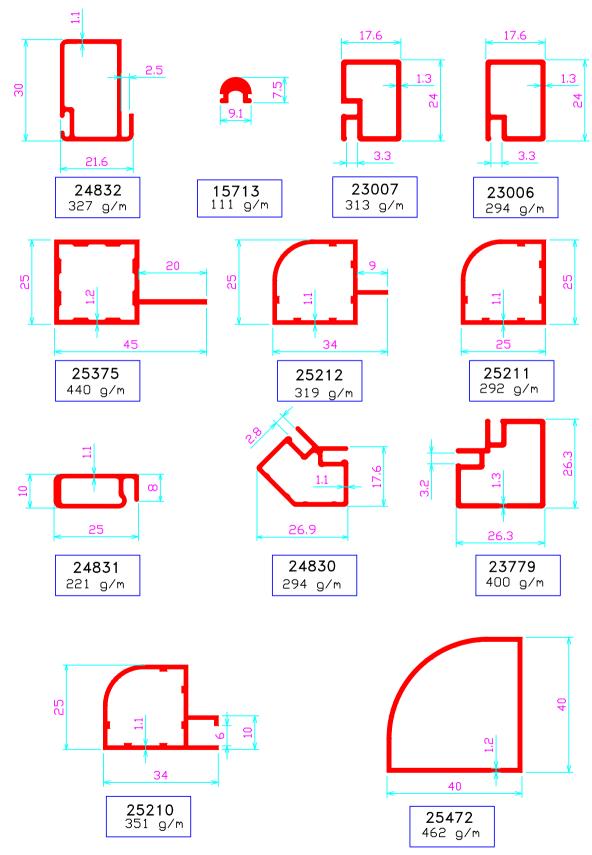




 $*-Other\ thickness\ are\ also\ available$

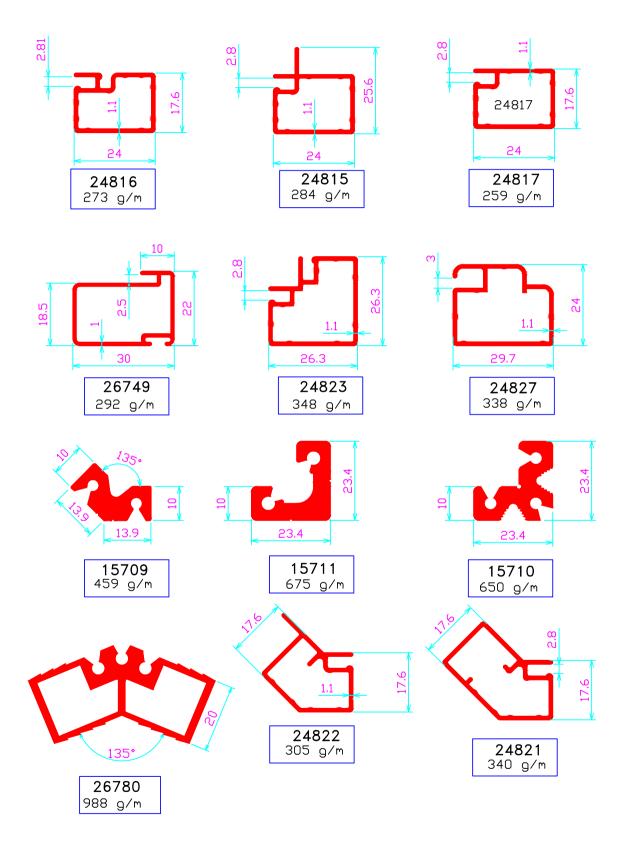
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*-Other thickness are also available

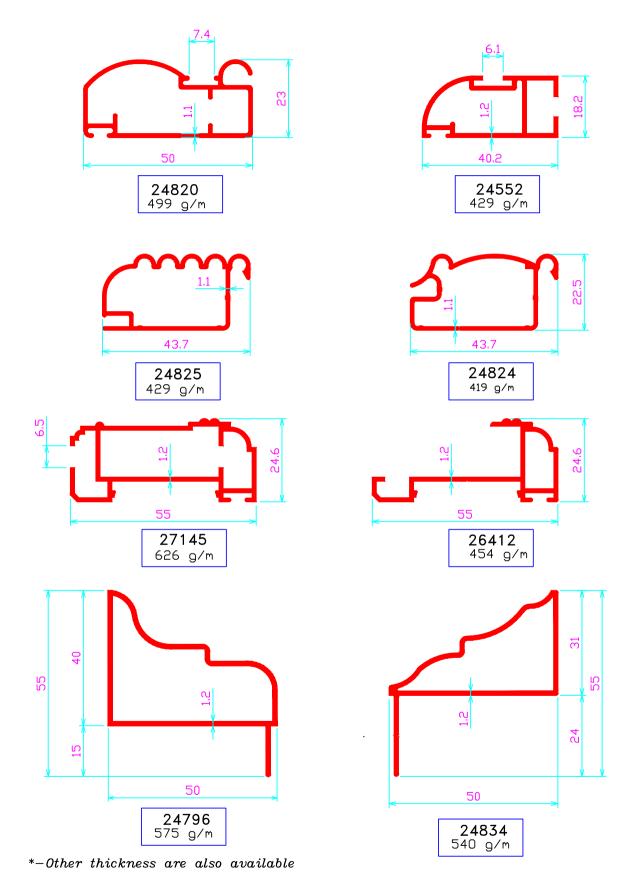




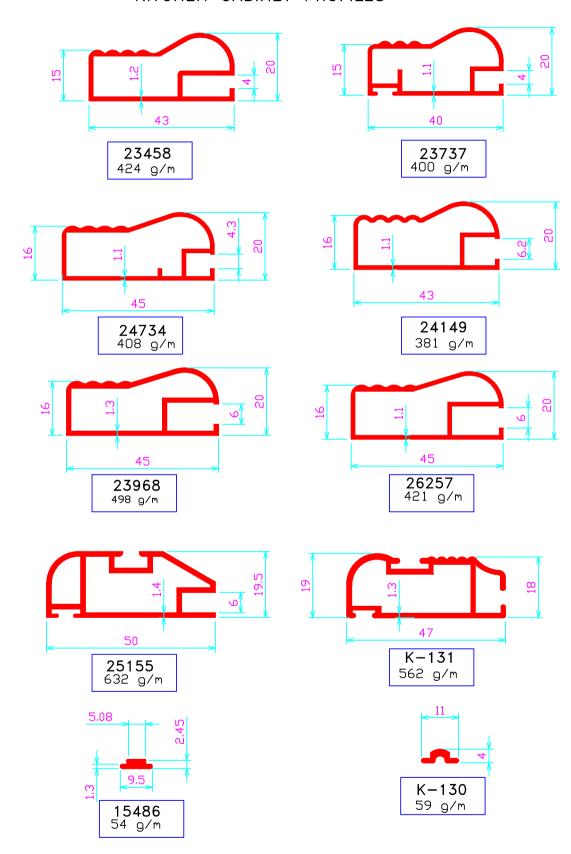
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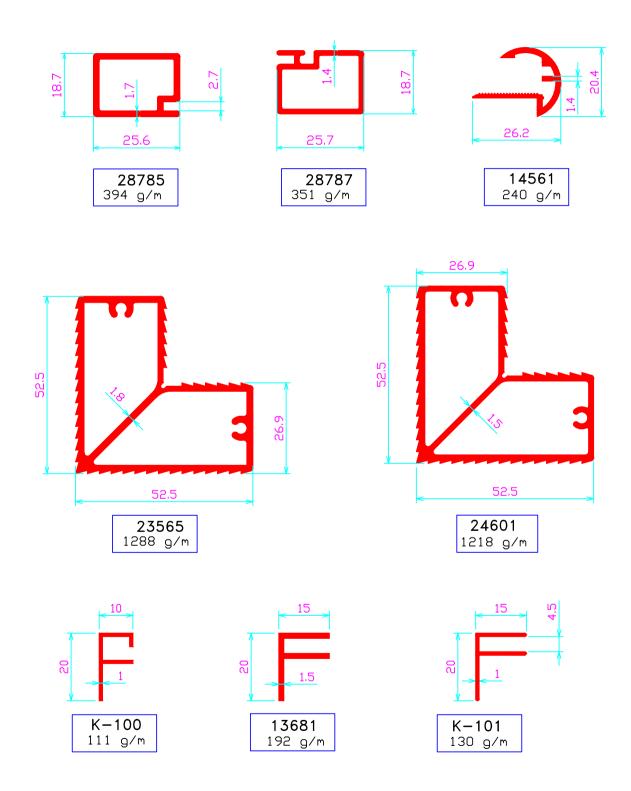




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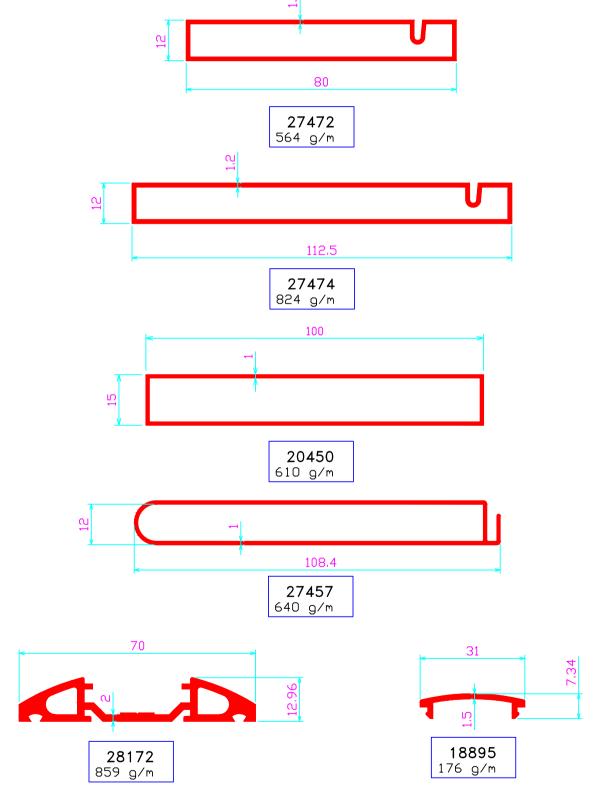
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 $*-Other\ thickness\ are\ also\ available$

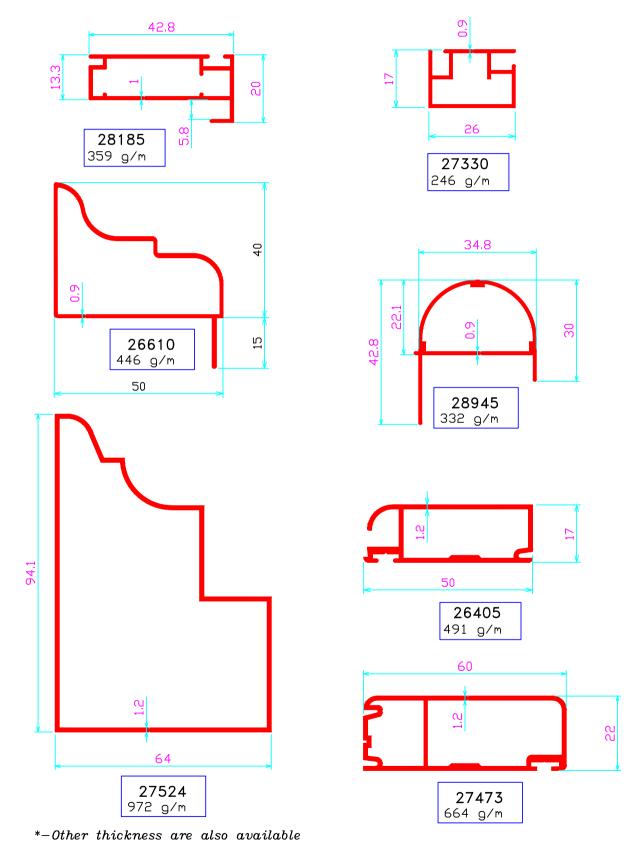




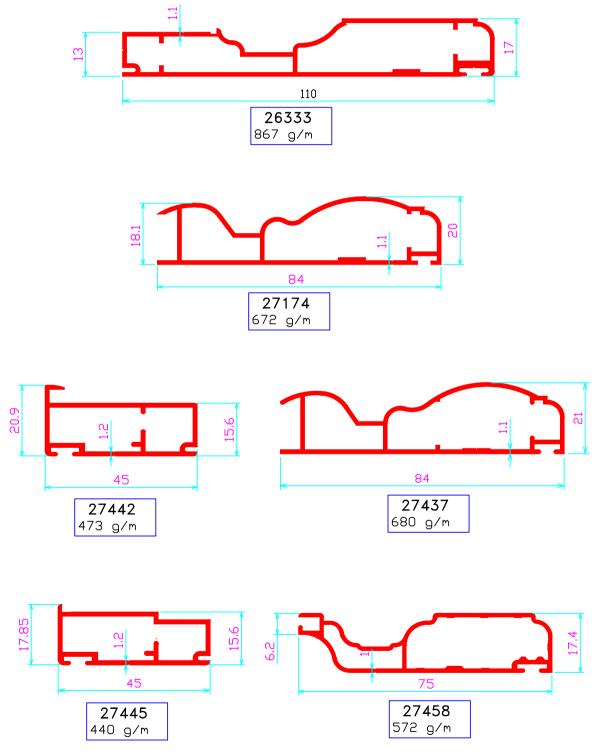
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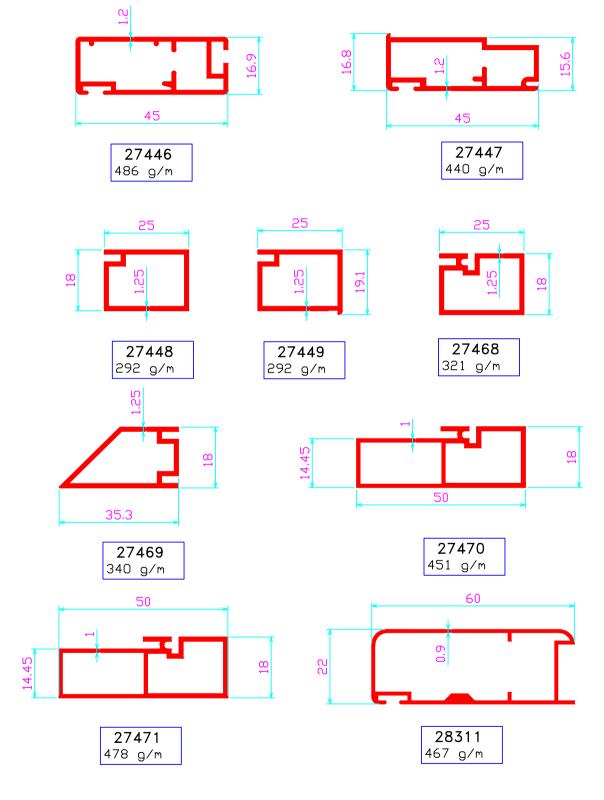




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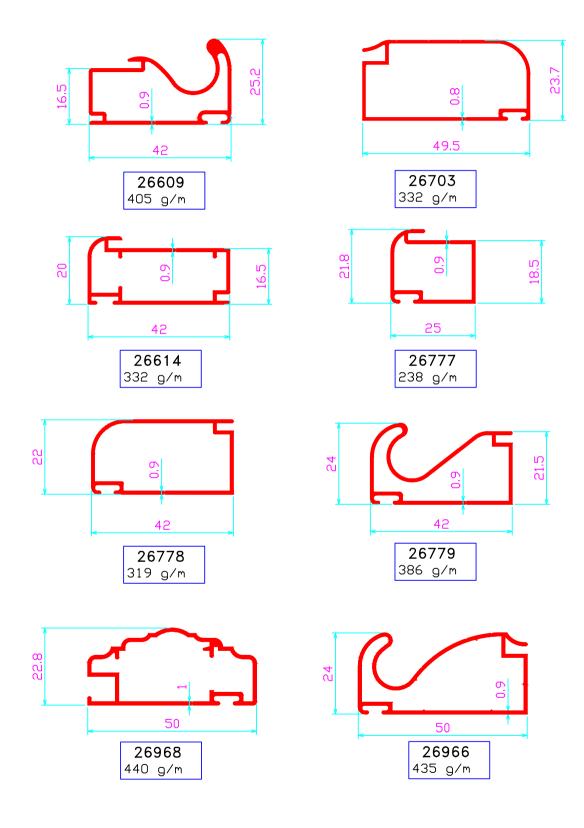
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*-Other thickness are also available

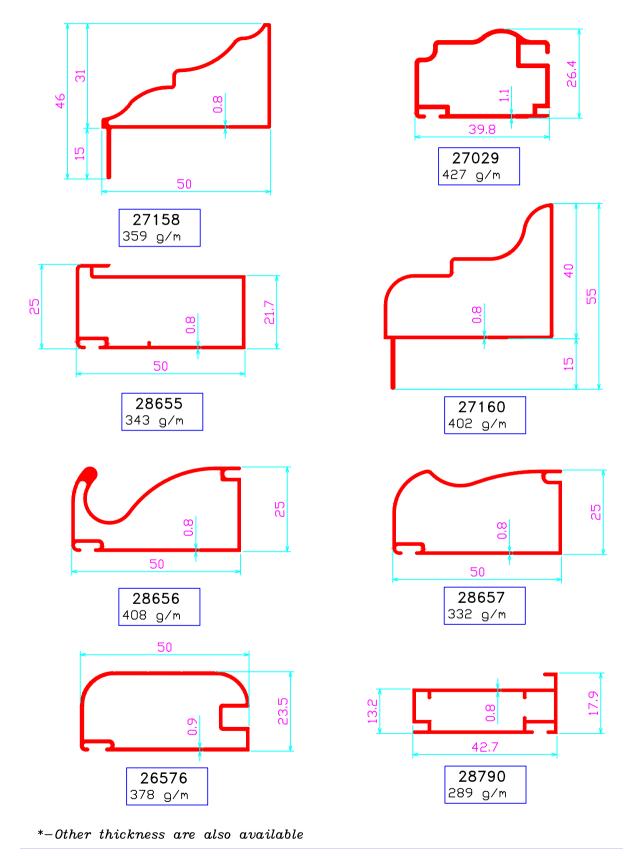




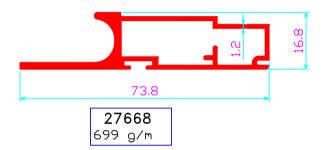
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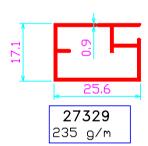
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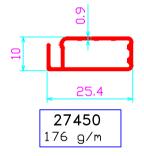


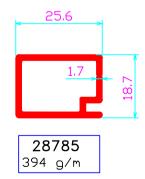


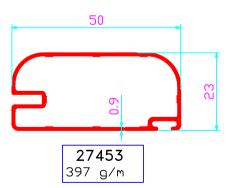






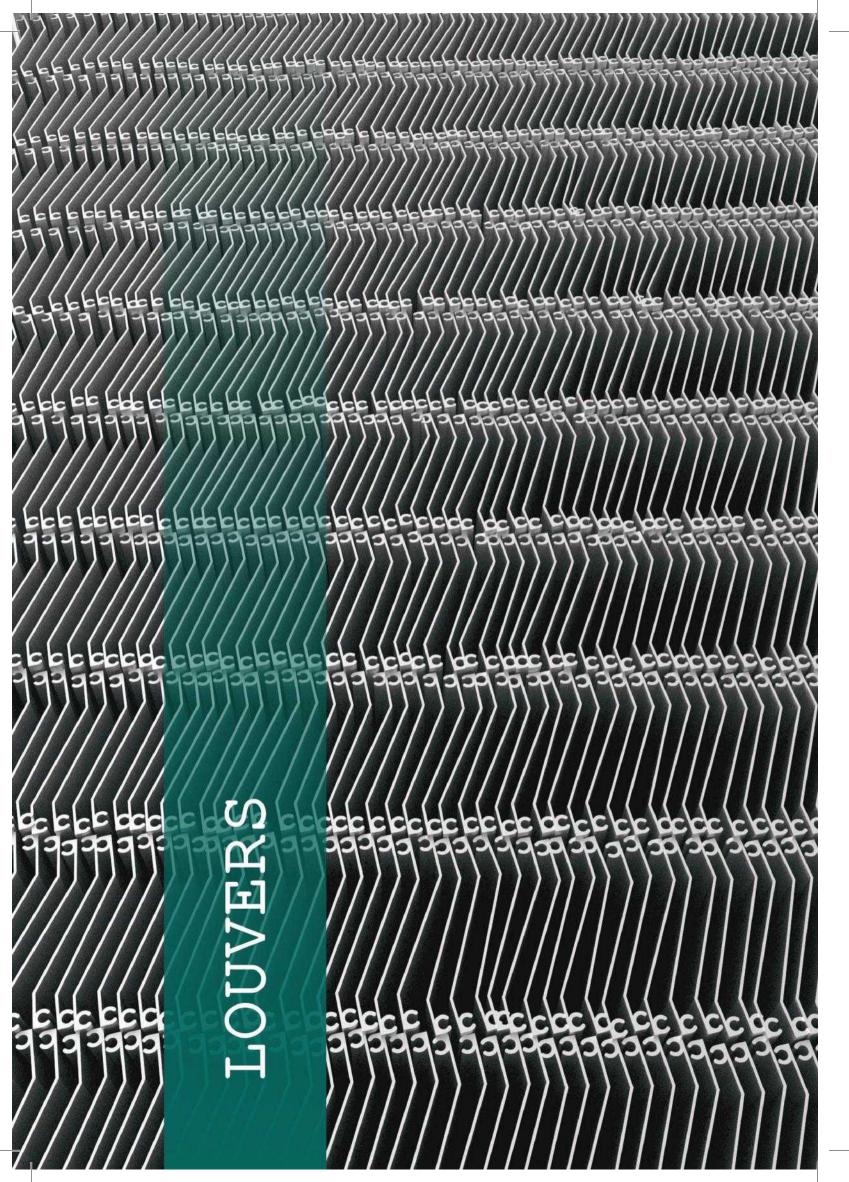






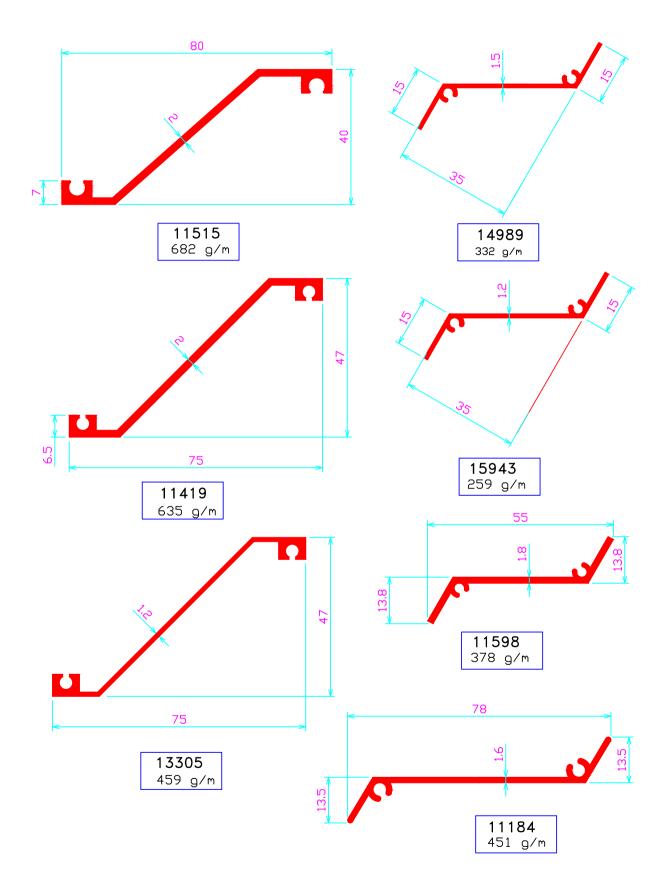
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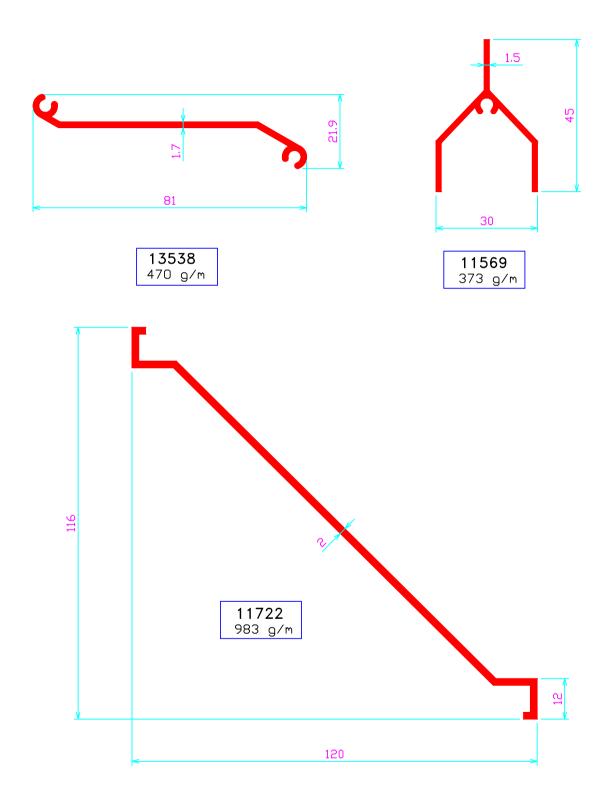
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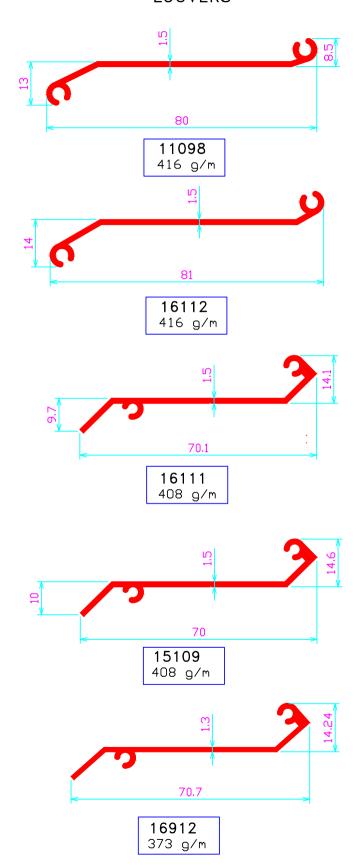
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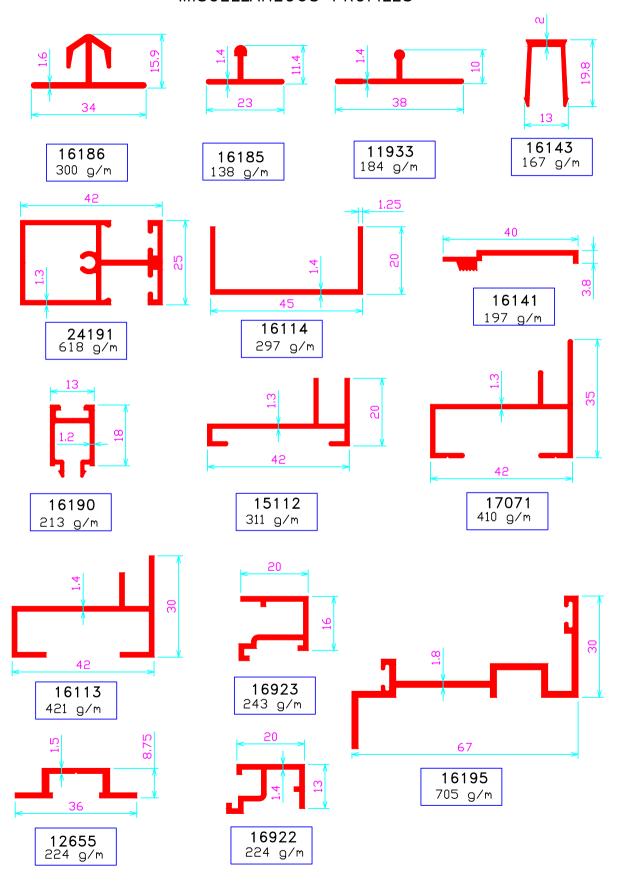


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