



A member of Elite Group of Companies





Elite Extrusion LLC is undoubtedly among the GCC leaders for aluminium extrusions and one of the most advanced factories in the region.

Is the flagship company of Elite Group of Companies, thus a brand synonymous of top-quality aluminium products, whether architectural or industrial.

The primary purpose of Elite is to be a partner. We aim to provide solutions and services with turn-around times to address the ever increasing demands of the discerning end use customers.

The clients-focus approach allow Elite Extrusion to tie strong partnership with the world's famous brand for architectural glazing systems, as prove of quality, credibility and consistency.

Efficacy & efficiency run from the supply chain to the customer relationship, empower us and strengthen our position in the regional markets and overseas.



Top-equipment & modern machineries

Elite Extrusion has one-of-a-kind state-of-the art aluminium extrusion manufacturing facility located in Ras Al Khaimah (U.A.E.) The plant covers an area of over 50,000 sqm with three extrusion presses fully PLC controlled and possess 100 meters long runout press table for natural cooling. Two European manufactured presses of 8" container size (2,500 MT each) and an upcoming new press are engineered to extrude more than 30.000 MT a year of high quality aluminium profiles.

Press Equipme	nt Capacity M	IT Bolster	No
Elite Extrusion	2.400	8"	2
	3.500*	11"	1

*Recently approved the substitution of the 7" press with the one press of 11" container

Horizontal and vertical powder coating lines have an annual production capacity of 20,000 MT/ year. The units are certified with Qualicoat and an approved applicator for powder coating by M/s. Jotun and AkzoNobel for both PE-F & PE-SDF coatings.

Powder Coating	Model	Capacity (MT/Year)	Profiles Length (mtr)	Coating Thick (µm)	Specification
Line 1	Horizontal	8.000	1 – 7,5	60 – 120	BS 6496 Qualicoat
Line 2	Vertical	12.000	3 – 7	60 – 120	BS 6496 Qualicoat

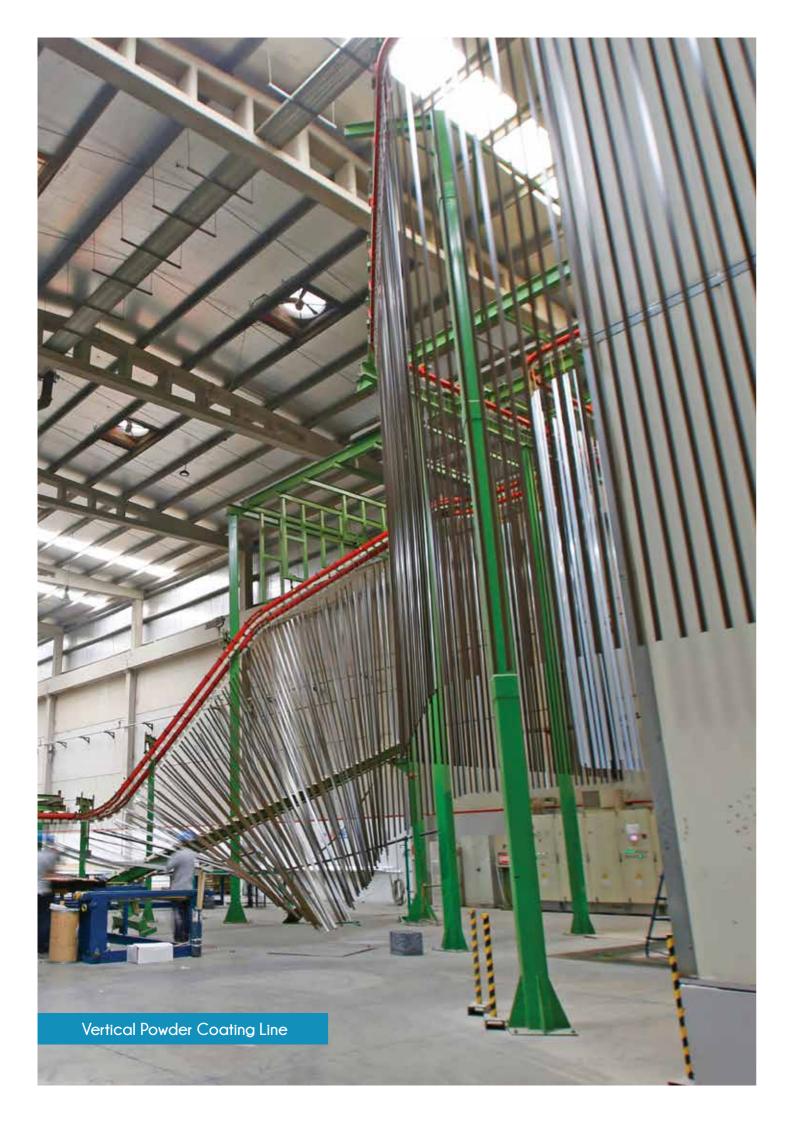
Wood coating line available for wood-touch architectural finishing with a capacity of 2.500 MT per year and a standard application of $60 \, \mu m$.

Wood Coating	Model	Capacity (MT/Year)	Profiles' Length (Mtr)	Coating Thick (µm)	
Line 1	Horizontal	2.000	1,5 – 7	60 – 90	

Anodizing line with pre and post-treatment can reach an annual capacity of 7.500 MT for a standard application between 12 µm and 16 µm It can reach 25 µm on demand.

Anodizing	Capacity MT/Year	Profiles' Length	Finishing	Coating Thick (µm)	Specification
Line 1	7.500	1 – 6,8 mtr.	Silver Bronze Gold Black	12 – 16 µm 25 µm on demand	Qualanod BS 3987









Spectrum of Quality Products

Elite Extrusion offers an array of premium, innovative products for architectural and non-architectural applications that are versatile yet functional. Lending a distinct visual appeal we provide aluminium profiles for several applications such as windows & doors (casement, sliding & hinged version), curtain walls, louvers & grills, handrails & balustrades, kitchen profiles, air conditioning, sign board, scaffolding sections, furniture and partition sections among others. In addition all the most common section like squared & round bars, equal & unequal angles, rectangular & squared tubes with different design, dimensions and thicknesses.

Moreover Elite Extrusion is pleased to support the protected design of world-wide known glazing systems such as Shuco, Alumil Milonas, Gutman, Technall, Vistawall and Reynaers.

Thermal and Non Thermal Break Systems

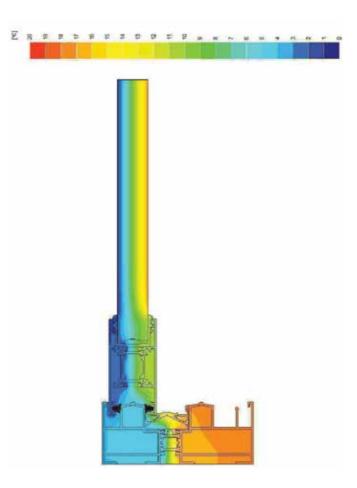
As research and innovation evolves, so as materials and systems' performances need to be improved accordingly.

In architecture and building construction a thermal break is an element of low thermal conductivity placed in an assembly to reduce or prevent the flow of thermal energy between conductive materials. Subsequently aluminum windows and doors separating the frame into two separate interior and exterior pieces joined with a less conductive material reduces temperature transfer.

Thermal breaks are made of hardy, rigid, low thermal conductive polyamide or polyurethane which is mechanically locked in aluminum window framing. Moreover thermal breaks can have the added benefit of reducing sound transmittance by dampening vibration.

We have incorporated modern glazing systems:

- THERMOS 110® and THERMOS 120® sliding series, thermal break.
- ECO 500 ® casement and sliding series, thermal break.
- Elegant 65® & Elegant 50® Structural Glazing System, thermal break.
- AL-WIN 80® casement series and AL-WIN 105® sliding series, no-thermal break.



Elite Extrusion product range includes:

- Mill finish profiles
- Thermal break systems
- Non-thermal break systems
- Powder coated profiles
- Wood finish profiles
- Anodized profiles

Product Specification

CHEMICAL COMPOSITION	Al	LLOY 6063	063 ALLOY 6061		ALLOY 6082		
Mg	0.48%-0.9%		0.80% - 1.20%		0.4- 1.2 %		
Si	0	.20%-0.6%	0.40%-0.80%		0.6-1.3%		
Cr	0.10%		0.04% - 0.35%		0.25%		
Zn		0.10%		0.25%	0.10%		
Fe	0.35%		0.70%		0.60%		
Cu	0.10%		0.1	0.15%-0.40%		0.10%	
Mn	0.10%		0.15%		0.4- 1.0 %		
Ti	0.1%		0.15%		-		
Others	0.05% each		0.05% each		0.05 % each		
	C).15% Total	0.15% each		0.15 % Total		
MECHANICAL PROPERTIES		6063	6061		6082		
Ult. Tensile strength N/mm2 0.2 % Proof Stress N/mm2	T5 160 110	T6 205 170	T4 180 110	T6 260 240	T4 205 110	T5 270 230	T6 290 250
Ult. Shear Strength N/mm2 Elongation on 50mm %		155 9	210 8		230 8		

Powder coating process

Powder coating is a type of coating that is applied as a free-flowing, dry powder. The main difference between conventional liquid paint and powder coating is that the powder coating does not require a solvent to keep the binder and filler parts in a liquid suspension form. The coating is typically applied electrostatically and is then cured under heat to allow it to flow and form a "skin". The powder may be a thermoplastic or a thermoset polymer. It is usually used to create a hard finish that is tougher than conventional paint.

After application of the powder coatings, the extruded aluminum proceed to an indirectly heated convection oven for a complete cure of the powder coatings. The natural gas fired ovens are very energy efficient in design and provide the optimum environment to cure the powder coatings. Indirectly heating the powder cure oven eliminates the concerns about possible contaminants from the burner and helps provide excellent control over the temperature profile within the oven.



Wood coating process

The wood effect finishing is a film coating process offer a perfect integration with the aluminum properties and offering a natural appearance of wood. The products have stable quality, appealing appearance and therefore a higher value of decoration.

The wood pattern coating can be cured and transferred to the surface of aluminum profile under a temperature of 200 degree Celsius and reach a usual thickness of 60 µm. The wood effect can be applied to any profile for exterior and interior design such as window profiles or kitchen cabinet. Advantage points of wood coatings are:

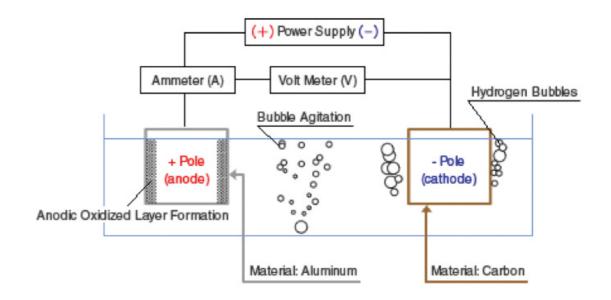
Aesthetic Value: patterns of the most precious woods, such as oak, chestnut, cherry and walnut, can be imitated. Durability: excellent weathering-resistance performance, durable in all kinds of applications. Cost Savings: maintenance free, will resume original effect simply by regular cleaning. Environmental Friendliness: the special decoration needs can be realized without using wood, meanwhile the products can be recycled.



Anodizing process

Anodizing is a process in which the aluminum profiles are immersed in an acid-based electrolyte tank and a current pass through the solution. The aluminum profiles serves as the anode, so the electrolyte releases oxygen ions on the profile' surface. The oxygen simultaneously react with the aluminum surface to form a hard oxide film. The full process includes pre-treatment and post-treatment and is called anodizing because the part to be treated forms the anode electrode of an electrical circuit.

Anodizing increases resistance to corrosion, offer aesthetic touch and provides better adhesion for paint primers and glues than bare metal.





Die Design and Die Shop

The die is the heart in the extrusion process and can be made to form a limitless array of shapes and sizes. The die is placed in the extrusion press along with the necessary supporting tools like backer, bolsters, die ring and plates that provide support for the die itself, improve tolerance and control the extrusion.

There are three basic types of extrusion dies and the same can be provide by Elite Extrusion:

- Solid
- Hollow
- Semi-hollow

A die can extrude separate profiles simultaneously. The lifecycle of an extrusion die is generally determined by the wear of the bearing which is the surface of the extruding aperture at the right angles to the die front that controls the metal flow and the velocity.

Elite Extrusion design, develop and manufacture an average of 200 dies each month through its in-house facility but still related to the main overseas' suppliers in order to satisfy the most critical shape and guarantee a perfect final product. Technicians, Quality machineries, bolstered by innovation and fully equipped CAD-CAM design units assure the precision on this service.

Services

At Elite, we deploy full—service engineering team to work in tandem with our clients, understand their requirements, find the best effective solution and supply products within the stipulated time frame to avoid project delays. Moreover assist with the development and design for architectural and non-architectural applications. Elite group provide technical support to identify the suitable aluminium solution, optimize the profiles' sections and comply with specification requirements to enhance the overall project's feasibility. Service include:

- Structural calculation
- Wind load
- U Value
- Design concept
- Calculation Report and assistance for consultant approval

Moreover Elite can offer a certified glazing system for sliding or casement series that match or exceed the requested performances, supporting the client with technical report and assisting for consultant approval.





Quality Assurance

Elite Extrusion has acquired the ISO 9001:2008 certification for quality assurance since its inception and the Emirates Quality Mark as award for its high-class output.

The Company is conformed to the stringent quality control procedure & methods and under process to update the ISO certification up to 9001:2015 version. Powder coating & anodizing processes and related tests are carried-out in compliance with Qualicoat & Qualanod standards of quality. In the standard procedure several technical aspects are take into consideration such as dimensional checks, deviation, flatness, sharpness, angularity, hardness checks and surface inspection. The system controls the report at every check point and thereby maintains traceability at all points of manufacture.

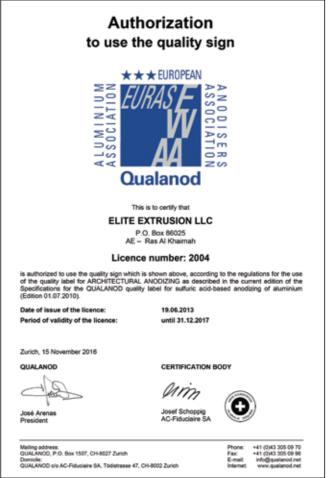
Elite endeavour to be customer-focused in its entire chain and build a partnership with customer, supplier and associates. Training and updating its human resources for constant improving their competencies so to strengthening the overall quality management. Complying with applicable statutory and regulatory requirements as a service to community.







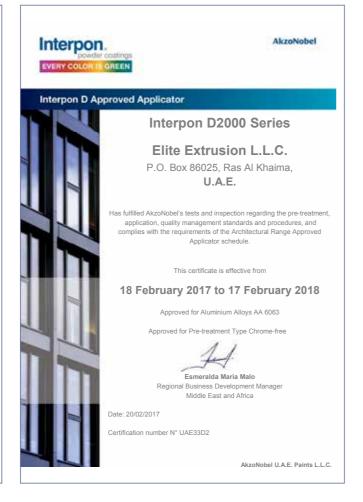














Authorization to use the quality sign



This is to certify that

ELITE EXTRUSION LLC

P.O. BOX 86025 AE - Ras Al Khaima

Licence number: 1912

is capable of providing products meeting the requirements for SEASIDE Class and 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: Period of validity of the licence: 08.07.2009 until 31,12,2017

Zurich, 15 November 2016

QUALICOAT

CERTIFICATION BODY

am

Mailing address: QUALICOAT, P.O. Box 1507, CH-8027 Zurich Domicole: QUALICOAT olo AC-Fiduciaire SA, Todistrasse 47, CH-8002 Zurich

Phone: +41 (0)43 305 09 70/79
Fax: +41 (0)43 305 09 98
E-mail: info@qualicoat.net
Internet: www.qualicoat.net



General Information

Advantages of Aluminium Extrusion

Advantages of aluminium

- Strength: Aluminium alloys usually have tensile strengths of between 70 and 700 MPa. Unlike most steel and other metals, aluminium becomes strong at low temperatures. Extruded aluminium products possess high strength and low weight. This unique combination makes them ideal for applications like aerospace, truck trailer and bridges.
- Lightweight: Aluminium is about 1/3 the weight of iron, steel, copper or brass, making aluminium extrusions easier to handle and inexpensive to ship.
- Resilient: Aluminium is a strong and flexible metal. Moreover have the ability to resume both shape and size which is good when flexible strength is required. Aluminium can flex under loads or recoil from the shock of impact. Hence extruded components can be used in automotive crash management systems.
- Corrosion resistant: Aluminium extrusions do not corrode and the aluminium surface is protected by its own naturally occurring oxide film that could be enhanced by anodizing or other finishing processes.
- Excellent thermal conductors: Aluminium is an excellent conductor of heat and electricity. Making aluminium extrusion ideal for applications that requiring heat exchangers. Extrusions' design flexibility allows designers to optimize heat dissipation in residential buildings.
- Non-sparking: Aluminium doesn't emit sparks. So it is ideal for applications involving explosive materials.
- Non-magnetic: Aluminium does not acquire a magnetic charge. Aluminium extrusions are handy in high-voltage applications and in electronics, wherein magnetic fields are active.
- Non-combustible & Non-toxic: Aluminium is fire-resistant and even at very high temperatures does not produce toxic fumes.
- Reflective: Aluminium is a good reflector of both visible light and radiated heat. Hence aluminium extrusion is an attractive option for lighting applications or for applications where it is desirable to shield areas from light and infrared radiation.
- Joinable: Extrusion of aluminium facilitates easy jointing features that can be incorporated into the design. Fusion welding, Friction Stir Welding, bonding and taping are also used for joining.
- Recyclable: Aluminium is an environment friendly and sustainable metal. It is 100% recyclable and retains all the properties of aluminium.

Aluminium Extrusion Process Advantages:

- Attractive: Aluminium has an attractive and natural finish. Extruded aluminium offers designers the optimum design flexibility.
- Wide Range of Finishes: An array of finishes can be applied to aluminium to enhance its surface characteristics, or alter its appearance. The metallic surface may be coloured by chemical or anodising processes. Coatings such as liquid paint, powder coatings, anodizing, lacquer, enamel, electroplating or laminate may also be applied.
- Seamless: Complex shapes can be realized in one-piece extruded aluminium sections without having to rely on mechanical joining methods. This makes the parts stronger and less likely to loosen or leak over time.
- Complex Shapes: Being a versatile metal, aluminium can be extruded into intricate, complex shapes of various sizes. And offer designers and engineers to come up with infinite design possibilities.
- Fastening and Assembly: Aluminium profiles produced by extrusion process do not require joining or assembly. Aluminium extrusion process offers flexibility in product designs that reduce fastener and assembly costs. And can even be designed to snap-fit together with other extruded profiles.
- Fabrication: Extruded aluminium is easy to fabricate and assemble. And custom fabrication is possible for any application.
- Cost-effective: The malleable qualities of aluminium permit flexible options in design and cost-effective production.

- Tolerances: Aluminium extrusions, and extrusion-based components, can be produced to very precise tolerances, as well as per accepted "industry standard" dimensional tolerances.
- Short Lead Times: Tooling for aluminium extrusion is cost-effective with generally short lead times. It facilitates prototype development, testing, and product launch. Thus make it quick to market alu

Tolerances

The specified acceptable range of deviation from a given dimension is known as tolerance. Tolerances generally cover such characteristic as straightness, flatness, and cross-sectional dimensions like thickness, angles, contours and corners. Dimensional tolerances then are central part in the extrusion.

Elite extrusion operates as per BS EN 755-9:2008 (for full details see technical catalogue)

Alloys & Tempers

Aluminium alloys are the ones in which aluminium (AI) is the predominant metal and other alloying elements are copper, magnesium, manganese, silicon, iron, nickel and zinc that are usually added to aluminium in amounts ranging from 0,05% to 7.0%.

Aluminum extrusion is made in a wide range of alloys and temper and selection is made to meet different needs and requirements in terms of strength, weldability, type of fabrication, forming characteristic, corrosion resistance for the best end use.

Principal elements in alloy	Series
Aluminium 99%	1xxx
Copper	2xxx
Manganese	3xxx
Silicon	4xxx
Magnesium	5xxx
Magnesium & Silicon	6xxx
Zinc	7xxx
Tin	8xxx

The 6xxx series are the ones most selected for extrusion applications.

6063: The most popular extrusion alloy. Easily welded, excellent corrosion and good natural finish, can be heat treated for strength. Is used in architecture and in those application where stress is moderate.

6061: Most versatile alloy with a high tensile properties and good corrosion resistance. After thermal treatment it can develop a strength comparable to steel, therefore suitable for structural applications.

6082: It has the highest strength of 6000 series with still good extrudability. Large use for structural engineering, pylons, platforms and scaffolding with the benefit of lightness, stiffness and god corrosion resistance.

All aluminium alloys are also classified as either heat treatable or no-heat treatable. Heat treatable alloys attain their maximum strength through controlled heat treatment.

The temper designation is as follow:

- F. As extruded......No special thermal control or strain hardening
- O. Annealed......Thermally treated to obtain the lowest strength temper
- H. Strain hardened.......Cold working used to increase strength and hardness
- T. Thermally treated......Heat treatment to produce stable tempers

Elite Extrusion produces the most of clients' requirements using alloys 6061, 6063 and 6082 with T4, T5 and T6 tempers.

- T4 Solution heat treated and naturally aged to stable condition
- T5 Cooled from an elevated temperature and artificially aged hardened
- T6 Solution heat treated and artificially aged

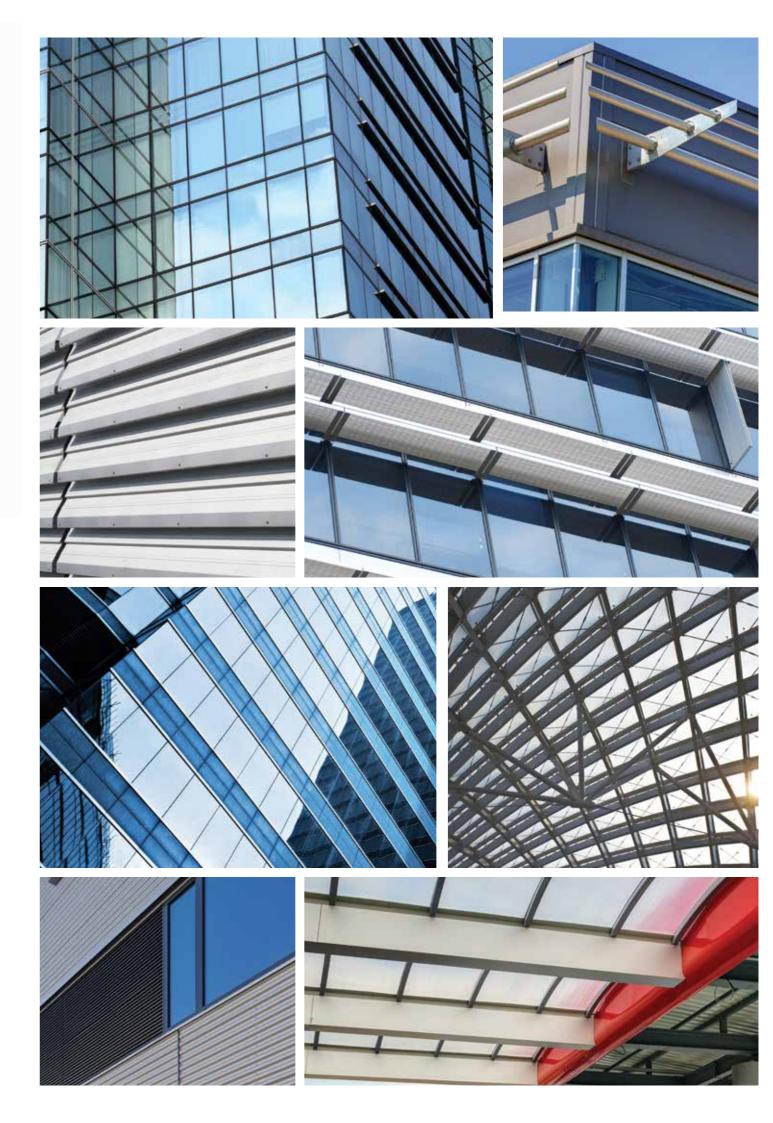


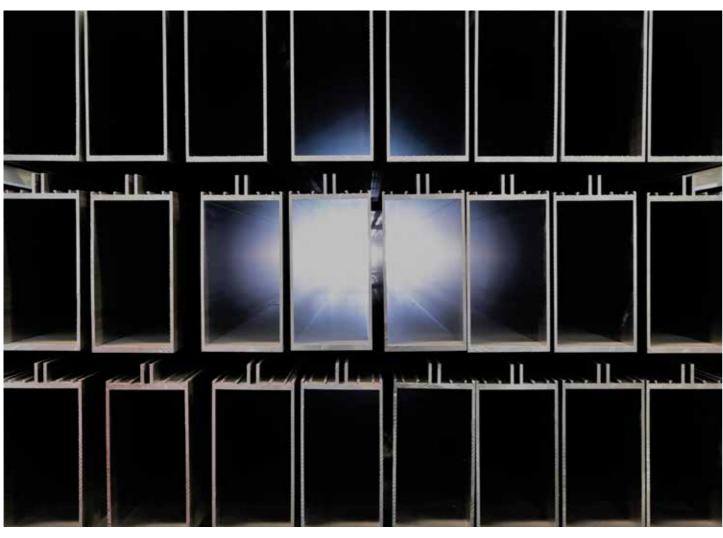
Customized to Suit Your Diverse Needs

At Elite Extrusion we cater extensively to architectural applications like curtain wall, structural glazing systems, facades, shop fronts, decking & partition, and to non-architectural applications like scaffolding formwork, kitchen cabinets, expansion joints, beams, trussing or roofing or any aluminium substructure.

Our extrusions are mainly supplied in AA 6063, 6061, 6082 with temper of T4, T5, T6 in mill finish, powder coated, wood coated or anodized in matt, brush or polish finish.

We can customize as per any customers' specific requirements based on the samples or drawings provided.

















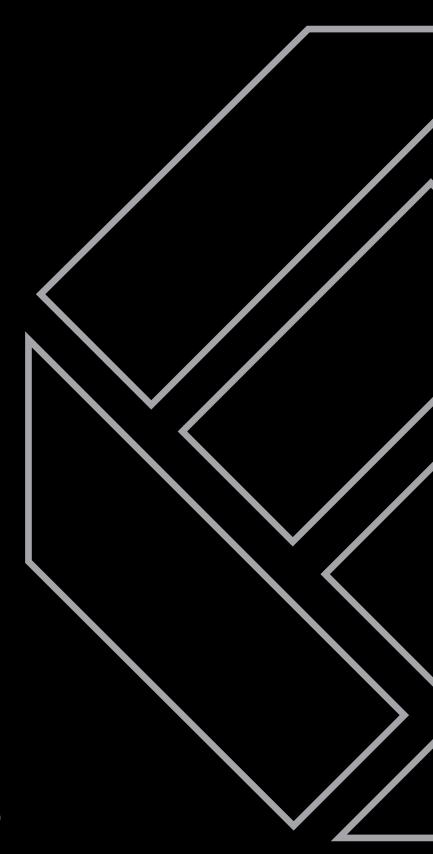






GLOBAL DIES

Empowering Aluminium





Elite Extrusion LLC P.O. Box: 86025

Ras Al Khaimah - UAE.
Tel: +971 7 244 7668 | Fax: +971 7 244 7669
Email: info@eliteextrusion.ae