



COUNTLESS
POSSIBILITIES.
**ENDLESS
SOLUTIONS.**



Hindalco Industries Ltd.
hindalco.extrusions@adityabirla.com
www.hindalco.com

GREENER. STRONGER. SMARTER.





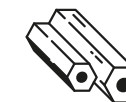
ADITYA BIRLA GROUP

Aditya Birla Group (ABG), a global conglomerate with a turnover of \$65 Billion, is in the league of Fortune 500 companies.

Headquartered in India, the Group has a diversified business portfolio and presence across 14 industry sectors, employing more than 1,87,000 individuals belonging to 100+ nationalities.

ABG has embarked on its sustainability journey 2.0 with a focus on mainstreaming ESG.

Globally, Aditya Birla Group is:



#1 IN ALUMINIUM ROLLING



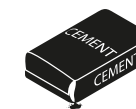
#1 RECYCLER OF ALUMINIUM



#2 IN CARBON BLACK



#2 IN VISCOSE STAPLE FIBRE



#3 IN CEMENT (Excluding China)



#3 IN INSULATORS

All the Group companies are driven by five core values – Integrity, Commitment, Passion, Seamlessness, and Speed.



HINDALCO INDUSTRIES LIMITED

Hindalco Industries Limited is the metals flagship company of the Aditya Birla Group and an industry leader in Aluminium, Copper and Specialty Alumina.

Hindalco is amongst the world's largest non-ferrous metals company with a full suite of packaging, automotive, building and construction and aerospace solutions.

Novelis Inc., a subsidiary of Hindalco Industries Limited, oversees an integrated network of state-of-the-art rolling and recycling facilities spanning four continents.

Hindalco stands as a prominent player in the international aluminium industry, operating as a fully integrated producer with operations in ten countries including India.

Operations at Hindalco:



Carbon Footprint

Currently, 80% of waste is re-used, including 2.3 M tons of red mud and over 100% of fly ash.



Environmental Effects

Hindalco aims to reduce net water intensity by 30% by FY'25 compared to 2019, saving over 18 MCM of water annually.



Recycling of Waste

During the fiscal year 2022, Hindalco processed and recycled 2.2 MM tons of aluminium scrap.



Impact on Biodiversity

Hindalco contributes to environmental conservation with 190 HA of greenbelt and 450,000 trees planted each year.



HINDALCO INDUSTRIES MATERIALS, ALUMINIUM INDUSTRY

TOP 1%

S&P Global ESG Score 2022

83 / 100

as of February 7, 2023.

Position and Score are industry specific and reflect exclusion screening criteria. Learn more at [spglobal.com/esg/yearbook](https://www.spglobal.com/esg/yearbook)

ESG Targets

- Zero net carbon & net loss of biodiversity by 2050
- 5 times water positive by FY'24
- 100% of electricity requirement from renewable energy by 2050
- Zero waste to landfill by 2050
- Zero harm to occupational health & safety

HINDALCO EXTRUSIONS

Hindalco Industries Limited, a prominent player in the Aluminium Extrusions industry, boasts an annual production capacity of 1,15,000 tons. The company is at the forefront of developing tailored solutions for a wide spectrum of industries, including automotive, building & construction, defense, aerospace, maritime, renewable energies, railways and more. Drawing from over five decades of experience, Hindalco Extrusions, manufactured from high-quality billets, provide the expertise and assurance of top-tier extrusion quality to fuel the growth of these industries.

OUR STRENGTH

- 4 | Manufacturing Plants
- 4 | Billet Casting
- 3 | Die Manufacturing Shops
- 15 | Extrusion Presses
- 2 | Anodizing Plants
- 3 | Powder Coating Plants
- 2 | Fabrication and Assembly Shops



OUR PRESENCE

We are primarily involved in the business of aluminium and copper, operating across 10 countries with 52 established units.




Our operational footprint across India has been indicated on the map.



<ul style="list-style-type: none">  Regional Sales Offices  Headquarter  R & D Lab - HIC Talaja 	<ul style="list-style-type: none">  Warehouses - Delhi - Faridabad - Ludhiana - Ahmedabad - Bhiwandi - Bengaluru - Hyderabad - Kolkata 	<ul style="list-style-type: none">  Plants - Renukoot, Sonebharda, Uttar Pradesh - Alupuram, Kochi, Kerala - Kuppam, Andhra Pradesh - Silvassa, Dadra and Nagar Haveli - HAAL, Aurangabad
--	---	---

★ Fabrication Shop |
 ● Die Shop |
 ▲ Powder Coating |
 ● Billet Casting |
 ■ Anodizing

CAPABILITIES OF OUR PLANTS

Plant Location		Renukoot								Alupuram		Kuppam		Silvassa		
Extrusion Presses	Press Force	11 MN	12 MN	14 MN	16 MN	25 MN	20 MN	22 MN	50 MN	11 MN	29 MN	22 MN	25 MN	20 MN	26 MN	40 MN
	Container (Inch)	6"	6"	6"	8"	8"	9"	9"	13.5"	6"	9"	8"	8"	7"	8"	10"
Max. CCD (mm)	Hollow Profiles	60	80	80	100	120	150	150	350	80	150	190	190	175	195	460
	Solid Profiles	150	150	150	210	210	234	234	425	152	267	190	190	200	225	480
Alloy Range		1xxx, 2xxx, 3xxx, 4xxx, 5xxx, 6xxx, 7xxx, Special Alloys										1xxx, 3xxx, 6xxx, Special Alloys		6xxx, Special Alloys		
Surface Treatment		-								Powder Coating		Anodizing Powder Coating		Anodizing Vertical Powder Coating		
Fabrication Facility		CNC Machining, 4-Axis and 5-Axis VMCs, Precision Cutting, Chamfering Machine								-		CNC Machining, CNC Milling, Manual & Robotic Welding, Punching, Flaring, 5-Axis VMC		-		
Additional Capabilities		Billet Casting Solution Heat Treatment Furnace								Billet Casting Solution Heat Treatment Furnace		Thermal Break MIG Welding Lines Bright Nickel Silver Dip		-		
Industry Focus																

ABOUT SILVASSA PLANT:

Hindalco has made a major advancement by establishing a state-of-the-art extrusion plant at Silvassa, near Gujarat and Maharashtra. This new facility has a capacity of 34,000 tons and is India's first fully automated plant. It ensures efficient production and high-quality output for various applications, along with value-added services.

Hindalco has also partnered with Phoenix Middle East for die manufacturing, to ensure precision and innovation in die design.

Applications:

- Building & Construction
- Automotive
- Consumer Goods
- Industrial Goods

Our Capabilities:

- The facility has **3 Extrusion Presses** of 7", 8" and 10", equipped with Italian technology.
- It features **India's first vertical powder coating line** and an anodizing line for 8 mtr. profiles.
- Top class testing systems and procedures to ensure **high-quality standards**.
- The **automated plant with ASRS** (Automatic Storage & Retrieval System) ensures efficient production and high-quality output.

Hindalco's Silvassa plant is a pioneer in India's aluminium extrusion industry. With cutting-edge technology, sustainable practices, and a commitment to quality, Hindalco is set to lead in serving both architectural and automotive applications.



Silvassa Complex



ETP & ZLD



Automatic Storage & Retrieval System



Vertical Powder Coating



Extrusion Lines



SHAPING SOLUTIONS: THE EXTRUSION PROCESS

- BILLET CASTING
- DIE MANUFACTURING
- EXTRUSION
- ANODIZING
- POWDER COATING
- FABRICATION & ASSEMBLY



BILLET CASTING

Our extrusion process utilizes billets that are internally casted. This in-house casting approach provides us with the flexibility needed to customize alloys according to specific customer requirements. Hindalco's billets are cast using advanced technologies such as Wagstaff® Airslip® Air Casting Technology and Almex Technology.

Capabilities:

- Annual production capacity of 1,50,000 tons
- 1xxx, 2xxx, 3xxx, 4xxx, 5xxx, 6xxx, 7xxx, & special alloys
- 5, 6, 7, 8, 9, 10, 13.5-inch billet diameters
- Billet casting length up to 6000 mm
- ALSCAN and PoDFA used for assessing metal purity
- Ultrasonic tested aluminium billets

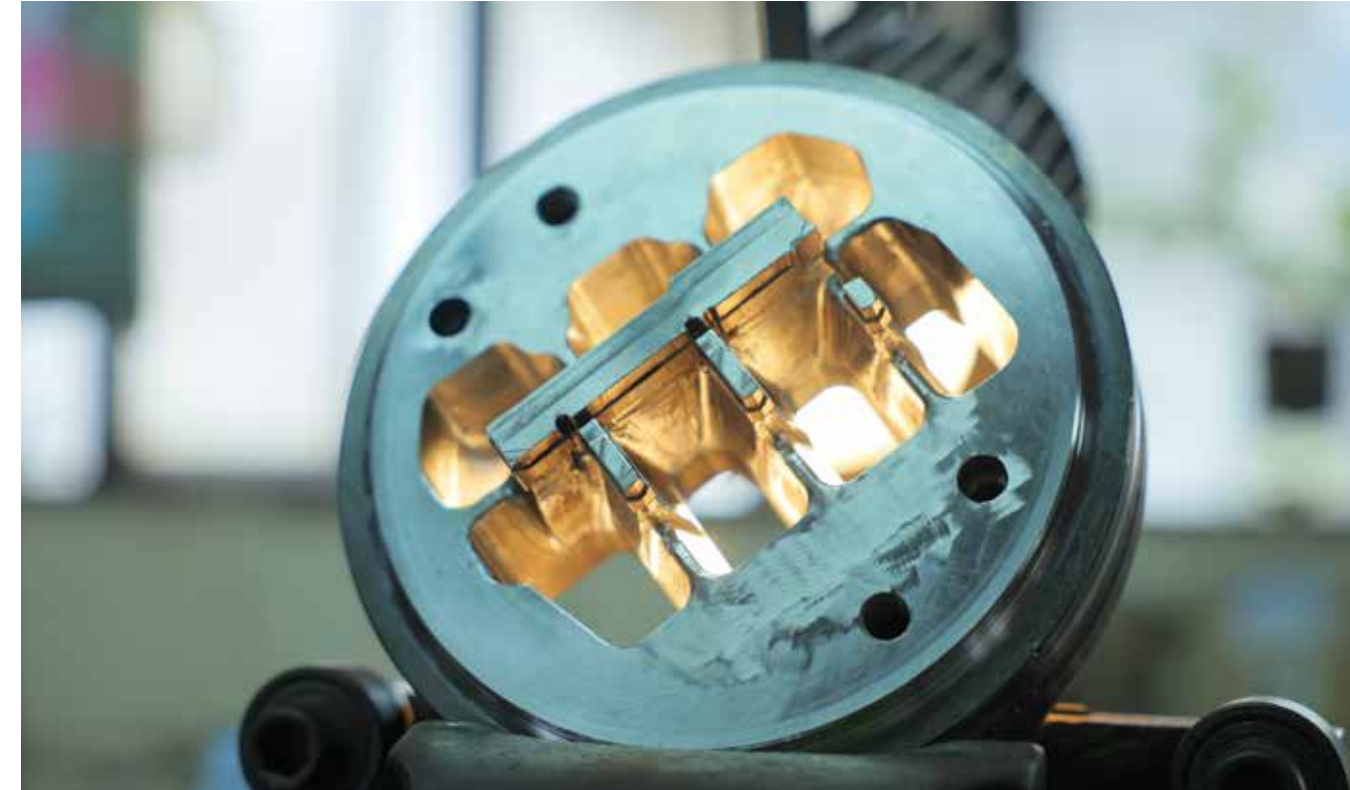


DIE MANUFACTURING

Our proficient die design and development team is committed to crafting top-notch extrusion dies, with the entire process centred around the customer's project objectives. Our team's primary focus is to deliver solutions that not only meet but exceed customer expectations, all while minimising the time required for development. Every plant has its own dedicated die repair shop, and the Central Die Shop is situated at our state-of-the-art facility at Silvassa, servicing the demands of all four extrusion plants.

Capabilities:

- Die Production lead time 2- 4 weeks
- Production capacity of 700+ dies/month
- Cost-effective and technologically advanced die solutions



EXTRUSION

Hindalco's Extrusion division consists of four distinct and highly efficient production plants, ranging in press size from 6" to 7", 8", 9", 10", and 13.5" using only 100% premium-quality billets.

We at Hindalco specialise in custom profile production by investing in our ability to design and develop more innovative solutions for a broad range of applications.

Capabilities:

- 1,15,000 tons annual production capacity
- From 50g/m to 217 kg/m extrusion capability
- Up to 20 mtr. single-length profile extrusion
- Up to 320 mm diameter or 420 mm width profile extrusion
- End to End traceability

ANODIZING

Hindalco relies on stringent quality management systems to ensure the production of an exceptional anodizing process.

The anodizing process complies with all environmental standards and offers a variety of finishes and colours, such as natural black, bronze, bright dip, brushed nickel, and polished silver.

Capabilities:

- 7250 tons per annum capacity
- Up to 7200 mm of single-length anodizing capability
- Anodizing thickness: 5–25 microns
- Acid Etch and Caustic Etch
- Bright Nickel and Silver Dip



POWDER COATING & PVDF

At Hindalco, we procure premium powders from leading suppliers to provide our customers with aluminium profiles featuring exceptional finishes, available in a vast array of colours and shades to suit their requirements.

Additionally, our electrostatic powder coating facility has earned QUALICOAT certification from the European Aluminium Powder Coaters Association, ensuring high quality standards.

Capabilities:

- Our Silvassa plant houses the only vertical powder coating facility in India delivering high speed, superior finish products.
- 14750 tons per annum capacity
- Powder coating layer thickness, ranging from 60 to 80 microns
- PVDF thickness ranges from 35 to 45 microns
- Uniform coating thickness along the entire aluminium profile
- Up to 7.2 mtr. single-length powder coating
- Vertical and horizontal powder coating facility



FABRICATION SHOP & ASSEMBLY

Hindalco's Fabrication team provides customers with world-class profile prefabrication solutions. By utilising advance prefabrication technology, this team is able to transform extruded aluminium profiles into accurately machined semi-finished or finished parts with adherence to global quality standards. Customers benefit from single-source fabrication by minimising handling, transportation, and lead time for customers in Automotive, Solar, Industrial applications.

Capabilities:

- Up to 8 meter, 4 & 5 axis CNC machine centres
- Robotic and manual welding of aluminium profiles: 6 MIG welding lines
- 4 VMCs and 3 profiling machine centres
- Laser and inkjet marking machines
- Thermal break line
- Punching presses
- Precise cutting machines
- One-stop destination for all machining and assembly needs





TECHNOLOGY CAPABILITIES

The Hindalco Innovation Centre (HIC) is a cutting-edge research and development facility situated at the Hindalco Talaja plant in Navi Mumbai, India. Its main objective is to develop lighter and more environmentally viable solutions for customers while also striving to enhance the overall sustainability of the aluminium industry.

At Hindalco, technology and innovation initiatives actively contribute to the development of business and technical aspects of products and processes across the entire organisation.

Our Capabilities:

- Metallurgy
- Metal-forming technology
- Alloy development
- Mathematical modelling
- Scanning electron microscopy with energy dispersive X-ray spectrometry
- Elemental analysis: OES



SOLUTIONS FOR EVERY SEGMENT

Aluminium stands out as the favored choice across various industries due to its exceptional characteristics, including its lightweight nature, resistance to corrosion, and the ability for infinite recycling. Hindalco Extrusions specializes in delivering tailor-made solutions to meet the specific needs of each industry.



BUILDING AND CONSTRUCTION

Aluminium Extrusions have emerged as a cornerstone material in the realm of building and construction due to their exceptional versatility, durability, and eco-friendliness. Notably, 75% of aluminium products ever made continue to serve their purpose today.

Hindalco Extrusions stands out as the premier option, renowned for its exceptional anodizing quality, dimensional precision, impeccable material finishing, and a host of other superior characteristics. Aluminium Extrusions are preferred for their ability to withstand heavy loads, extreme weather conditions, and seismic events.

The company has contributed its expertise to countless innovative construction ventures, spanning from airports and towering office complexes to private residences and municipal structures.

Solutions offered for the architectural industry

- Door and window profiles
- Curtain wall systems
- Façade profiles
- Formworks
- Skylight system profiles
- Thermal breaks
- Ladders & scaffolding
- Interior & decoratives



TRANSPORT

Aluminium has become an indispensable material in the automotive sector, contributing to lighter, more fuel-efficient, and environmentally friendly vehicles.

Hindalco Extrusions specializes in providing tailored solutions with advanced metallurgical composition and mechanical properties, perfectly suited to meet the growing demand for performance, efficiency, and sustainability. Our commitment is unwavering as we strive to introduce innovative solutions that align with India's ambitious mission to modernise its transportation infrastructure.



Our Capabilities:

- Alloy development
- Precise CNC cutting
- CNC machining
- Anodizing and powder coating
- NABL accredited testing lab
- IATF 16949:2016 certification

Applications:

- EV battery casing
- Crash management system
- Metro third rail (Power)
- Tubes for propeller shafts
- ABS and EBS components
- NVH components
- Front forks for high performance bikes
- Forging components

INDUSTRIAL MACHINERY



The use of aluminium extrusion in industrial machinery has gained significant momentum in recent years due to its exceptional versatility, lightweight properties, and durability. From frames to enclosures, conveyor systems to automation components, aluminium's lightweight yet durable properties make it an indispensable material in modern industrial machinery design. Extrusion allows for complex and customised shapes, making it suitable for a wide range of applications in machinery design.

As industries continue to seek innovative solutions for enhanced productivity, energy efficiency, and sustainability, Hindalco Aluminium Extrusion will undoubtedly play a pivotal role in shaping the future of industrial machinery.

Our Capabilities:

- Pneumatic Systems
- Conveyor Systems
- Enclosures and Housings
- Automation Components
- Textile Machinery
- HVAC



ELECTRICAL & ELECTRONICS



Aluminium stands out as the perfect material for electrical applications, offering outstanding heat transfer capabilities and conductivity while being both cost-effective and lighter compared to alternative metals. Aluminium extrusion solutions can weigh up to 70% less than copper, making them an optimal choice for a wide range of electrical and electronic appliances. Aluminium extrusions have redefined the landscape of electrical power distribution through their excellent conductivity, lightweight properties, corrosion resistance, and design flexibility.

Our Capabilities:

- Customer-oriented, tailored solutions
- Flat and Tubular Bus Bars exhibit exceptional bending quality and undergo material tests that meet international standards
- Heat Sink profiles
- Electric Motor Housing
- Lighting fittings and LED profiles



RENEWABLE ENERGY

Aluminium, known for its lightweight properties, exceptional strength, unparalleled resistance to corrosion, and durability, is widely used to construct renewable energy platforms such as solar panels and wind turbines. Hindalco stands out by offering a comprehensive solution—from design and manufacturing to fabrication and assembly—all under one roof. This unique approach makes us the sole mounting structure provider in India covering the entire value chain. Also, supporting the renewable sector with customised value added products as per market requirements.

Our Capabilities:

- Site visit before project initiation
- Structural & wind load analysis
- Design of the array layout
- Complete solar mounting system solution
- Semi-fabricating, including cutting to size, drilling, machining, etc.

Application:

- Photovoltaic mounting systems
- Solar mounting solutions
- Sub construction and mounting systems for ground & roof
- Other renewable applications



DEFENCE INDUSTRY



Defence solutions not only need to be effective but also need to improve the survivability of personnel on and off the battlefield. Hindalco offers a wide range of light, strong, and corrosion resistant advanced alloys in addition to many standard alloys. Every alloy is available in T or O and F temper enabling any forming by customers. We also have the experience in delivering specific shapes as per customer technical specifications as well as international standards. Across air, land and sea, our defence innovations maximise speed, agility and survivability.

Our Capabilities:

- ISO 9001:2015 certified
- 2xxx, 5xxx, and 7xxx series alloy range
- PCG free product
- CEMILAC certification
- Class A ultrasonic tested billets
- Superior Almex Casting Technology
- R & D facility for new product and process development

Application:

- Tank wheel forging
- Mobile bridges
- Bombshell
- Forging components
- Pinaka Pods

AEROSPACE INDUSTRY

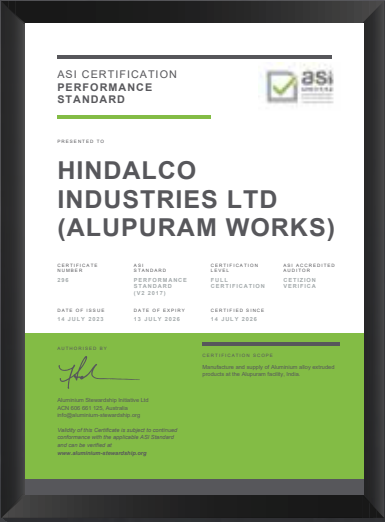


Aluminium Extrusions plays a crucial role in the contemporary aerospace sector due to their exceptional strength-to-weight ratio and ability to resist corrosion. Hindalco Extrusions offers aluminium rods that are extruded in two commonly used alloys, namely 2014 and 7075 aluminium, which are frequently utilised in modern aircrafts.

Our Capabilities:

- AS9100 Rev D certified
- ISO 9001:2015 certified
- 2xxx, 5xxx, 6xxx and 7xxx series alloy range

GLOBAL RECOGNITIONS



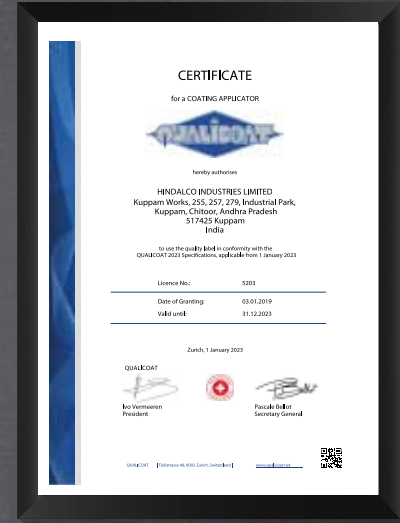
ASI Certified Performance



IATF 16949 2016 (Automotive)



Member of QMEA



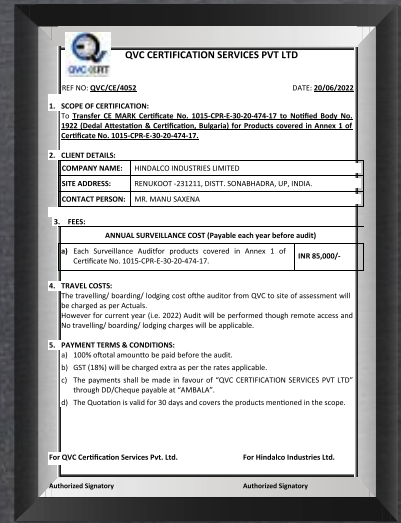
QUALICOAT Certified



ISO 9001 2015, ISO 14001 2015, ISO 45001 2018



AS 9100 2016 Rev D (Aerospace)



CE Certification



Lloyd's Register Certificate