

Unmatched **Quality**
Meets Limitless **Value**



Presenting our **High Quality Aluminium Range**
for the **Automotive Segment**



Billets

• 3xxx Billet

Extruded into multi-port tubes used in HVAC units in automobile

High thermal conductivity	Corrosion resistance	Formability and Versatility
Efficiently transfers heat, aiding in cooling engine components and maintaining optimal operating temperatures	extend the lifespan of the multi-port tubes and ensures reliable performance over time	can be easily extruded into complex shapes



LARGEST BILLET EXPORTER IN INDIAN SUBCONTINENT AND SOUTH EAST ASIA
LARGEST BILLET PRODUCER IN INDIA

• Billet 6061 and 6063



6063 highly extrudable:

Allows production of complex shapes and profiles, (window and door frames, trim pieces, roof racks, and other exterior or interior trim elements)



6061 Higher Strength:

Offers good strength-to-weight ratio, (structural components in automobiles, such as chassis parts, frames, and suspension components.)

• Crash Resistance Billet

These alloys are particularly well-suited for applications requiring high durability and impact resistance.

- Especially customized **6XXX** billets, ability to absorb energy and deform in a controlled manner during an impact, thereby protecting the structure and occupants.
- The use of these alloys in extruded components is a testament to their critical role in ensuring safety and performance across modern engineering applications such as **Structured Members, Bumper Systems, Crash Boxes, Side Impact Beams, Roll Cages and Roll Bars.**

Primary Foundry Alloy

• For Alloy Wheels

- Primary Foundry Alloy is used by die casters to produce alloy wheels for automobiles
- Grade - Customized A356
- Customer: All major wheel makers
- Chemical composition



Elements	%Si	%Fe	%Cu	%Mn	%Mg	%Zn	%Ti
Range	6.5 - 7.5	0.12 max	0.04 max	0.02 max	0.25-0.45	0.03 max	0.2 max

• For Cylinder Head

Primary Foundry Alloy is utilized by die casters to produce cylinder heads for automobiles.

- Grade – Customized ALSi7Mg0.5Cu
- Customer: Export customers (leaders in automotive cylinder heads and chassis)
- ALSi7Mg0.5Cu has the advantages of light weight, high thermal conductivity, and ease of production to close tolerances
- Chemical composition

Elements	%Si	%Fe	%Cu	%Mn	%Mg	%Zn	%Ti
Range	6.5 - 7.5	0.12 max	0.4 - 0.5	0.02 max	0.05 - 0.15	0.07 max	0.1 - 0.2



• For High Cubic Capacity Bikes

- PFA-High Mg will substitute ADC6
- PFA-High Mg is utilized in casting rare grip, handle grip, subtrain, brake lever and other crucial components
- Customer: Leading 2-wheeler OEM in India, testing under progress
- Physical properties
 - Tensile Strength - 157 Mpa
 - Yield Strength - 104 Mpa
 - Elongation - 3.5%



NEW PRODUCT OFFERINGS

Cu-Doped Alloy (A356.2 with 0.5% Cu)

Key Advantages

- Enhanced tensile and yield strength
- Improved hot strength and wear resistance
- Optimized alloy chemistry with controlled Cu modification
- Modified Mg₂Si and Al₂Cu precipitates for superior performance



Applications



Cylinder heads



Engine brackets



Transmission housings



Clutch housings



Compressor housings

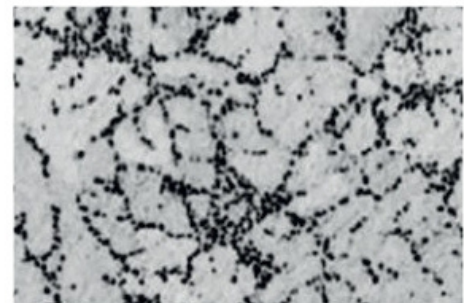


Alternator and motor end covers

Vedanta Foundry Alloy (VFA)

Key Advantages

- Developed with IIT Delhi (Patent Pending)
- Superior consistency in chemistry and product quality
- Improved process stability and material hygiene
- Higher strength and ductility through refined microstructure
- Up to 60% higher corrosion resistance and 4% lighter than conventional PFA



Applications



Engine components



EV & electrical components



Transmission & powertrain parts



Chassis & structural components

**Under lab condition trial (PFA)*

Lab-Scale Result

Alloy	UTS (Mpa)	YS (Mpa)	% El	Hardness (HV)	Density (g/cc)	Corrosion (mm/yr)
VFA	180	>150	>7	100	2.63	0.04



UNPARALLELED GLOBAL EXPERTISE

With state-of-the-art assets, deep talent pool and ecosystem of global experts, our expertise in aluminium is sought-after world-wide.



Advanced Technology

Delivering excellence through world-class technology and digital innovation



Innovation & R&D

Co-creating customized aluminium solutions through strong R&D expertise



Customer Technical Services

Providing end-to-end technical support from product development to commercialization



Supply Reliability

Ensuring consistent supply through an integrated value chain and robust logistics network



Sustainability Leadership

Driving responsible growth with globally recognized sustainability performance



Certifications

CERTIFIED BY THE BEST



Scan the QR code to get the e-brochure or
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