INDUSTRIAL

MASTERING THE SCIENCE OF METALS

FOMAS GROUP

THE GROUP

FOMAS Group is a trusted global partner and industry leader in open die forgings, seamless rolled rings, and metal powders. Since 1956, the Group has combined advanced metallurgy, innovation, and precision engineering to deliver high-performance, sustainable solutions — supported by a strong global footprint.

Our purpose is to enable **sustainable energy, reliable power and limitless motion** by moving the needle in mastering the science of metals with a responsible approach. The Group's Mission is to play to win with **innovation**, responsiveness and a passionate **commitment to long-term partnerships**. Our vision for the future is to be a multicultural, **people-centric** organization leading our core businesses by leveraging cutting-edge competencies in the science of metals and embracing **digital transformation**. Everything we do is underpinned by our core values of proactivity, integrity, meritocracy, accountability, reliability, transparency & trust.

1,400
EMPLOYEES

The Group has around 1,400 employees all around the world. Working with us signifies entering a team which is focused on continuous evolution, a company that measures its success in the achievement of **excellence** at each step of function and process. The attention dedicated by our Group to safeguarding the **health and safety** of its employees and to improving the environmental performance of its activities represents a key reference to the continual improvement of business reliability. We believe this is essential to ensure the long-term health of our business.
FOMAS Group promotes safety and environmental protection in every aspect of its production cycle. This mindset is the foundation on which the company builds the continuous improvement of environmental, safety and health conditions in its sites worldwide. An integrated Group **HSE management system** is the means through which this goal is pursued. In a continuous effort to reduce its impacts, FOMAS Group sustainability process adopts also **energy management best practices**. An example is the adoption of certified energy management systems and best practice sharing between the sites.

Our Core values: proactivity, integrity, meritocracy, accountability, reliability, transparency & trust.

	EUROPE		ASIA		NORTH AMERICA
COUNTRY	ITALY	FRANCE	INDIA	CHINA	USA
PRODUCTION	• FORGINGS • RINGS • METAL POWDERS	• RINGS	• FORGINGS • RINGS	• RINGS	• RINGS
PLANT	• FOMAS • ASFO • HOT ROLL • MIMETE	• LA FOULERIE	• BAY-FORGE	• FOMAS DALIAN	• FOMAS USA

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INDUSTRIAL industrial@fomasgroup.com
METAL POWDERS metalpowders@fomasgroup.com

INDUSTRIAL SOLUTIONS

FORGINGS, ROLLED RINGS, AND METAL POWDERS

FOMAS Group manufactures open die forgings, seamless rolled rings, and metal powders, for a wide variety of Industrial applications among which:

- Earthmoving and Mining
- Industrial equipment and systems
- Wind power
- Transportation
- Construction
- Biomedical

Our decades of experience in the manufacturing of industrial components have made us an essential partner to our clients: our network of **8 production sites**, strategically located across the globe, allows FOMAS Group to serve its customers, not only with the quality of our renown technical expertise but also in time and manner adapting to each customer's specific needs. By leveraging the historical and evolving expertise across our various facilities, we deliver best-in-class products, services, and cost efficiency. Delivery is planned according to specific customer requirements — from having materials ready for shipment to managing just-in-time deliveries.

Starting from a thorough analysis of the customer's design, then engineering the production of near net shape forgings up to the finished part. All the required machining processes such as milling, lathe-machining, drilling, and other operations can be carried out within our manufacturing units.

FORGINGS AND ROLLED RINGS

Our forgings and rolled products are available in a wide range of sizes and types of steel and alloys. Thanks to our constant pursuit of excellence, we always guarantee the highest quality and use state-of-the-art processes, offering the best product to our business partners.

FORGINGS PRODUCTION RANGES

EUROPE	INDIA
Max. diameter: 5,250 mm	Max. diameter: 2,600 mm
Max. length: 13,000 mm	Max. length: 7,000 mm
Max. weight (ingot): 125 tons ESR (equivalent to 170 tons conventional ingot)	Max. weight (ingot): 30 tons
Max. shipped weight: 100 tons	Max. shipped weight: 14 tons

Data may vary by material.

RINGS PRODUCTION RANGES

	WEIGHT		D ext		HEIGHT	
	Kg	Pounds (lb)	mm	inches	mm	inches
EUROPE	1-15,000	2.2-33,000	100 - 7,000[1]	3.9 - 275	25-1,250	0.9-49
USA	6-1,590	13-3,500	191 - 3,048	7.5-120	35-508	1.4-20
CHINA	5-2,000	11-4,410	125 - 2,000	5 - 78.7	55-700	2.2-27.5
INDIA	250 - 25,000[2]	551 - 55,100	600-5,600	23.6-220	100 - 1,000	3.9 - 39

Ranges refer only to rolling mill capabilities; data may vary by material.
(1) 2,500 max / 7,000 max depending on rolling mill
(2) Up to 5,500 diameter mm

MATERIALS

Mastering the Science of Metals is FOMAS Group's core business. This is why it is able to work with any type of steel and non-ferrous alloys:

- Austenitic
- Superalloys
- Carbon and Low Alloy Steels
- Duplex & Superduplex
- Martensitic
- Aluminum
- Titanium

Other materials and alloys are available on request.

TRANSMISSION SYSTEMS

FOMAS Group tailors its processes to customer needs, delivering **reliable components and efficient services**. We manage fluctuating market volumes through dedicated **supply chain solutions**, and handle heat treatment and machining in-house or through trusted specialized partners.

Main applications:

- Railway
- Industrial Equipment
- Automotive
- Wind
- Earthmoving & Cranes
- Naval

BEARINGS

- Rings for Cylindrical Roller Bearings (CRB)
- Rings for Spherical Roller Bearings (SRB)
- Rings for Deep Groove Ball Bearings (DGBB)
- Rings for Angular Contact Ball Bearings (ACBB)
- Rings for Barrel Roller Bearings (BRB)
- Rings for Axial Spherical Roller Bearings (ASRB)
- Rings for Spherical Roller Thrust Bearings (SRTB)
- Rings for Self-Aligning Ball Bearings (SABB)
- Rings for Spindle Bearings (SB)

GEARS

- Rings for gears
- Rings for planetary gears
- Hollow shafts
- Rings for sun gears
- Rings for intermediate gears
- Rings for output gears
- Discs
- Shafts
- Rings for bevel gears

Rings for transmission systems

WIND

FOMAS Group supplies key components for wind towers – onshore and offshore – and supports the demanding wind-gearbox market, meeting requirements not only in terms of volume but also in component characteristics, with close attention to the environmental impact of its activities.

GEARBOX

- Ring gears
- Planet gears
- Sun gears
- Hollow shafts
- Main bearings
- Main shafts
- Couplings

PITCH AND YAW SYSTEM

- Slewing bearings
- Pitch and Yaw drive gears

TOWER

- Flanges

Ring Gear for Wind Turbine

EARTHMOVING AND MINING

(UNDERCARRIAGE & TUNNELING)

- Slewing Rings
- Bearings
- Hubs
- Semiclosed die
- Rollers
- Idlers
- Cutters
- Specially designed parts based on customer inputs

NAVAL

- Pre-shaped elements for naval shafts
- Slewing bearing for orientable propellers
- Connecting elements
- Foils
- Rudders

METAL FORMING TOOLING

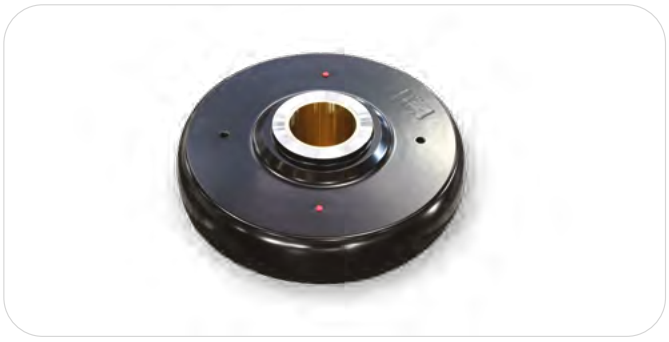
- Molds
- Dies

HVAC

- Nozzles
- Connecting elements
- Shafts
- Hubs

MACHINERY

- Hydraulic presses components
- Structural elements
- Discs
- Extrusion rings
- Rolls
- Tubes



Roller for Earthmoving application

Forged spindle for Earthmoving application

Fin stabilizer for Naval application

ONE STOP SHOP

FOMAS Group capabilities allow us to supply goods in different delivery conditions from raw/heat treated to rough machined, from pre-cladded/cladded to coated depending on the level of **vertical integration** required by the Customer. This business model allows us to optimize the overall supply chain, providing an exclusive point of contact and assures us of the shortest possible response time to market requirements.

1

AS ROLLED
OR AS FORGED

2

HEAT
TREATED

3

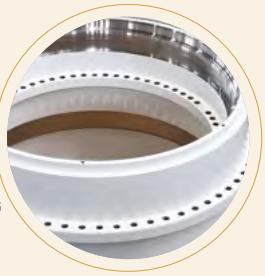
ROUGH
MACHINED

4

FULLY
MACHINED
PREASSEMBLED

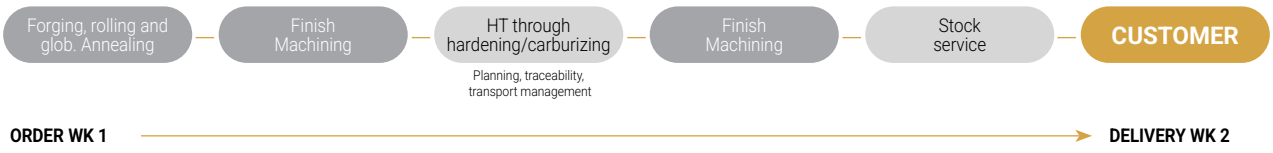
5

SURFACE
TREATING OR
CONDITIONING



JUST-IN-TIME DELIVERY

Our supply chain ensures the highest Just-In-Time delivery standards, minimizing stock levels and providing materials exactly when needed. This guarantees seamless integration into our customers' production processes, without interruptions.



ELECTRONIC DATA INTERCHANGE

EDI enhances supply chain integration by enabling **fast**, **automated data exchange** between customers and internal systems. It streamlines orders, schedules, and documentation in real time, eliminates manual processes, and **improves planning**, **flexibility**, **and efficiency**—while supporting **sustainability** goals.

METAL POWDERS

FOMAS Group produces **nickel-, iron- and cobalt-based** alloy atomized metal powders through a **VIGA** (Vacuum induction melting Inert Gas Atomization) plant. Our powders are available for Additive Manufacturing, (Powder Bed Fusion, Directed Energy Deposition and Binder Jetting), Thermal Spray and HIP (Hot Isostatic Pressing) manufacturing applications. Furthermore, we can provide four different PSD (Particle Size Distribution), based on the requests of our customers.
Our metal powders stand out with their **sphericity and flowability**, giving a competitive edge in your applications. To ensure the highest standards, each cast undergoes a rigorous testing process, involving over 20 tests.

METAL POWDERS FOR INDUSTRIAL APPLICATIONS

Iron-based alloys

- MIMETE® M 316L
- MIMETE® M H13
- MIMETE® M M300

Nickel-based alloys

- MIMETE® V 718

Cobalt-based alloys

- MIMETE® N 75

PARTICLE SIZE DISTRIBUTION

Small 0-20 µm	**Medium** 15-45 µm or 20-60 µm
Large 50-150 µm or 50-100 µm	**One size** 0-150 µm or 0-300 µm

APPLICATIONS

- 3D printing (PBF)
- Welding
- DED
- HIPping
- Cladding

TECHNICAL SUPPORT

Thanks to our experience and expertise in metallurgy, as well as to our deep knowledge of the relevant processes, we can offer our complete **support to our customers**, during every phase of the purchasing process.

A TAILOR-MADE APPROACH

Our approach focuses on providing our customers with customized services, ensuring **swift and flexible responses to their needs**.

MASTERING THE SCIENCE OF METALS

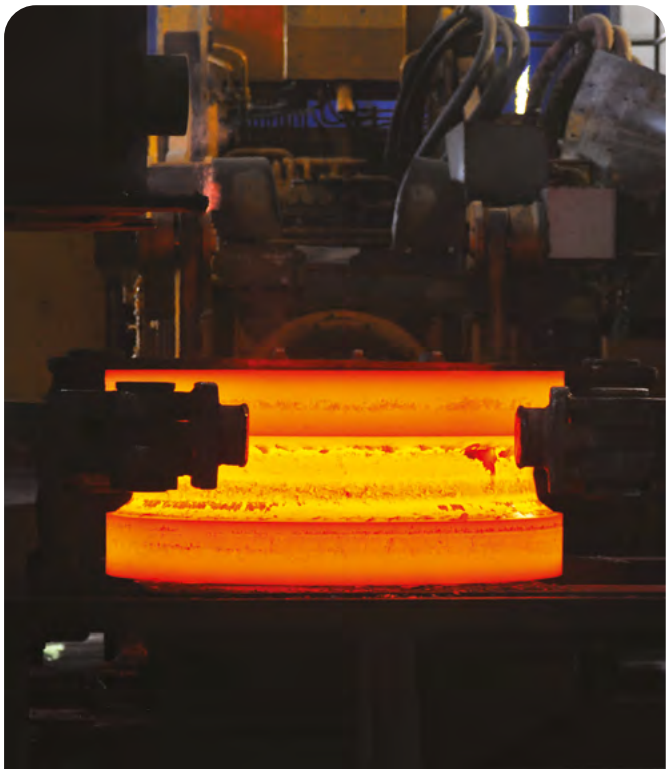
METALLURGY

At FOMAS Group, our deep understanding of metallurgy is rooted in our history and continues to guide our future. For generations, we have cultivated and transmitted extensive knowledge of steels and non-ferrous alloys—encompassing their chemical, physical, and mechanical properties. This heritage is embodied in our slogan, "**Mastering the Science of Metals**," which reflects our advanced **metallurgical expertise** and our **full-process mastery**: from remelting and atomization to forging and hot rolling. This comprehensive capability allows us to maintain precise control over metal behaviour at every stage of transformation.

Our know-how also enables us to support customers in identifying alternative solutions when needed, leveraging our ability to **predict material response** during deformation and machining processes.

We apply **advanced profiling technologies** to manufacture rolled rings, shaping metal with exceptional precision to achieve geometries that closely match the final product. This approach reduces material waste, machining time, and transportation costs—enhancing overall yield while delivering components with outstanding mechanical performance.

In addition, upon request, we can provide **preassembled solutions**, delivered after final machining, to further streamline our customers' production processes and reduce integration time.



FORGINGS

Presses

The forgings are processed in smaller or larger presses depending on the contours and size.
Our presses for open die forgings (all with integrated manipulators):

- **12,500 tons**
- **6,000 tons**
- **n° 2 - 3,500 tons**
- **2,000 tons**

Across our facilities, we operate six state-of-the-art automatic UT stands, both vertical and horizontal, designed by FOMAS and qualified by major turbine manufacturers, as well as titanium and aluminum heat treatment lines equipped with electric drop furnaces.

RINGS

Rolling Mills

- **19 lines (axial/radial)**

State-of-the-art rolling mills worldwide, delivering precision, reliability, and top-quality forged and rolled components for global industries.

METAL POWDERS

- **Vacuum induction melting and inert gas atomization** ensuring the highest purity and sphericity of the powder.
- Complete **inert post processing** comprehensive of handling, packaging, air classification, and sieving facilities.

All machines are controlled by PLC panels for powder process route integration and maximum control for traceability.

MATERIALS PRODUCTION

Electro Slag Remelting (ESR) plant

Production of defect-free metal ingots

- Three ESR stands.
- New 125-ton ESR ingot equivalent to a conventional ingot of 170 tons.
- Pressurized ESR for top quality remelting of special steel & stainless steel under full inert gas atmosphere.

Vacuum Induction Gas Atomization (VIGA) plant

Production of metal powders

- Able to operate at higher temperatures thanks to standard gas atomizers (argon or nitrogen), suitable for high melting point and refractory alloys.
- High-vacuum pumps for minimum content of oxygen and residuals.
- Special nozzles dedicated to specific alloys and particle size.
- Develop for maximum flexibility.

INNOVATION

DRIVING EFFICIENCY AND SUSTAINABILITY

At FOMAS Group, innovation is at the heart of our operations. We leverage automation and digitization to stay ahead of the curve, utilizing cutting-edge software and tools such as Business Intelligence, Digital Twin, Big Data management and analysis, cloud solutions, and Artificial Intelligence.

LEAN APPROACH FOR OPTIMAL EFFICIENCY

Our approach is centered around lean principles, aimed at **minimizing waste and optimizing manufacturing processes**. By streamlining our operations, we reduce inefficiencies and promote sustainability. The effective management and analysis of large datasets (mega-data) enable us to identify areas for improvement and implement targeted enhancements.

STATE-OF-THE-ART TECHNOLOGY FOR SUPERIOR QUALITY

As a global leader in the production of forgings, seamless rolled rings, and metal powders, FOMAS Group is committed to driving growth and innovation.
In 2025, FOMAS Group launched the implementation of **a 5-ton controlled-atmosphere furnace with vacuum induction melting (VIM)** capabilities, dedicated to processing superalloys. The system is expected to be fully operational in **2027**. This cutting-edge technology will enable us to achieve unparalleled control over metal quality, develop tailored melting practices for specific alloy compositions, and further support our circular economy goals.

QUALITY

The Group places quality at the core of all its operations, in every step of manufacturing and customer service. Quality means ensuring compliance with all the required standards and customer expectations in terms of performance, reliability and safety.

This commitment translates into a set of practices and standards encompassing:

- **Strict material control**
- **Advanced manufacturing processes**
- **Testing and continuous verification**
- **International certifications and standards**
- **Continuous employee training**
- **Customer feedback and continuous improvement**

LABORATORIES

IN-HOUSE LABORATORIES

FOMAS Group is equipped with two testing laboratories accredited by ACCREDIA, the Italian national accreditation body, in accordance with ISO/IEC 17025 requirements. One of them is located in our metal powders production facility.

The laboratories are equipped with cutting-edge technology and precision instruments, enabling comprehensive testing, examination, and analysis of materials and final products.

OUR CERTIFICATION

FOMAS Group's plants hold various certifications that demonstrate compliance with international standards for quality, safety, and environmental responsibility. These include:

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 50001
- IATF 16949
- ABS
- LR
- DNV
- BV
- RINA
- PED 2014/68/EU

Certifications may vary by production site. For a complete list of certifications and accreditations, scan the QR code to access our dedicated webpage.

SUSTAINABILITY

Our sustainability strategy is anchored on well-defined pillars that set the framework for short, medium, and long-term targets across departments. This strategic approach enables us to integrate sustainability into every facet of our operations.

THE PILLARS OF OUR ESG STRATEGY:

1 **Mastering the science of metals**

2 **Awareness and commitment for the planet**

3 **People-centric**

4 **Creating shared value for the community**

5 **Embracing the change with our partners**

Discover more:

FOMAS GROUP

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