



Aerospace & Defense | Integrated Manufacturing Services & Supply-Chain Management

COMBUSTION

HYDRAULICS

EQUIPMENTS



Unique expertise in the manufacturing of heat and wear-resistant components for the aerospace and defense industries

Deloro Stellite serves the aerospace and defense industries with comprehensive manufacturing services to help our customers produce the most critical parts and components, with the highest quality, within the shortest timeframe.

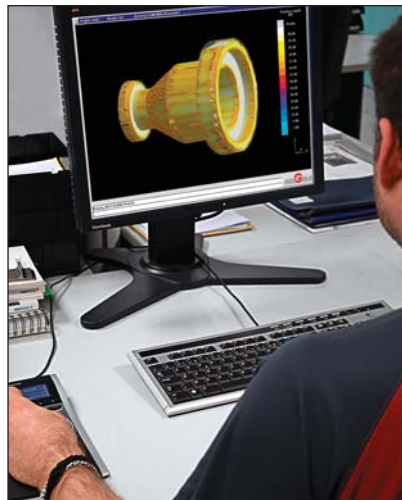
A trusted partner to the major aerospace and defense leaders

Deloro Stellite benefits from long-lasting and close industrial partnerships with leaders of the industry: Snecma, Messier-Bugatti motors, Turbomeca, EADS-MBDA, Zodiac, Goodrich, MMP, Thales Avionics, GE Aviation and Techspace Aero.

Our teams help design and manufacture parts and components for aircrafts and missile operations :

- Combustion nozzles
- Hydraulics
- Heat shields
- Braking parts
- Covers
- Blades

These partnerships all include innovative Design For Manufacturability (DFM) assistance, rapid prototyping services and worldwide manufacturing and supply-chain solutions.



From design to delivery: full-featured, customer-focused manufacturing services

Our manufacturing operations are designed to bring you a full-featured service, from design to delivery.

- Feasibility and design studies
- Casting simulation
- Rapid Prototype Development
- Manufacturing design and programming
- Production
- Testing
- Packing
- Supply-chain

Each project is managed by a dedicated team of engineers that will answer any of your technical, commercial and logistics needs and questions.

Versatile in-house manufacturing and supply-chain capabilities

Deloro Stellite offers a rare combination of investment casting and machining production technologies.

These technologies enable you to produce the most complex geometries, with strict tolerances and the highest cost-efficiency achievable on the market.

- Air and vacuum investment casting
- Heat treatments
- Milling
- Grinding
- Turning
- Electroerosion
- Polishing
- Marking
- Testing

Deloro Stellite also offers complete supply-chain management tools to help your company implement just-in-time programs, with single-source accountability.





Worldwide expertise in extreme temperature and fatigue requirements

Deloro Stellite is a world leader in manufacturing technologies addressing extreme wear challenges. Leading edge vacuum investment casting, unique superalloys expertise and advanced cooling technologies ensure your components stand up to the most demanding environments of aerospace and defense components: engines, braking systems, fastening systems, missile technologies, etc.

Stringent quality management system

The Deloro Quality Management System has earned us the trust of respected leaders of the aerospace and defense industry. Our plants integrate a comprehensive set of testing tools: mechanical tests, 3D, metrological inspection, fibroscopy, endoscopy, X-Ray, metallographic inspections and spectrometry, ... Our teams are involved in Total Quality Management, which fosters the continuous progress of our industrial practices, on a daily basis: lean manufacturing, 5S, etc.

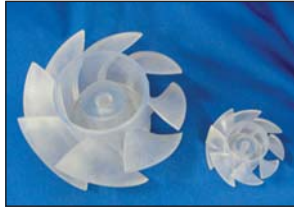


A worldwide R&D center for aerospace manufacturing

To answer the needs of the most safety and quality-driven industries, Deloro Stellite has established a worldwide network of expertise dedicated to the design and the manufacturing of extreme heat and wear-resistant aerospace components. Led by our specialized teams of metallurgists and engineers, our R&D center provides unique insights and a privileged access to several patented manufacturing technologies that help exceed the most demanding requirements, reduce your time-to-market and ensure total traceability.

Total industrial know-how

Over the years, Deloro Stellite has built a unique manufacturing solution, equipped with many-sided technologies, led by uncompromising quality management and dedicated to the most demanding industries in the world.



Seasoned engineering skills, for better manufacturability and faster time-to-market

Deloro Stellite's engineering services help fast-track your development process, and optimize your cash flow:

- Experienced industrial project management skills
- Complete CAD / CAM and simulation capabilities
- Precise design for manufacturability know-how
- Exclusive Rapid Prototype Development facilities



State-of-the-art investment casting technology for precision, reliability and cost-efficiency

Deloro Stellite has developed air and vacuum investment casting capabilities that benefit your innovations and products quality in many ways:

- Large freedom of design
- Vast choice of industry-specific alloys and superalloys
- Tight dimensional tolerances
- Higher reproducibility and consistency
- Reduced costs



Heat treatments for enhanced performance

Deloro Stellite's diverse air and vacuum heat treatments achieve enhanced physical and chemical properties, resulting in maximum performance.





Comprehensive machining capabilities, for value-added design

Deloro Stellite's comprehensive in-house 5 and 6 axis machining capabilities complete our casting technologies offering comprehensive design and finishing possibilities:

- Milling
- Turning
- Grinding
- Electroerosion



Complete finishing technologies to meet the highest quality standards

Deloro Stellite offers an extensive set of finishing techniques that allows extremely precise production, including high-volume series:

- Hand, electrolytic and chemical polishing
- Tribo-finishing
- Roto-finishing
- Laser marking



Essential tools to guarantee flawless quality

Deloro Stellite has developed state-of-the-art testing technologies to guarantee unflinching quality:

- Mechanical tests (impact, hardness, tensile, etc.)
- 3D inspection (7 Zeiss centers)
- NDT (penetrant testing, X-ray, fibroscopy, endoscopy)
- Metallographic inspection (structure, cleanliness, porosity)
- Spectrometry



Lean production cycles to optimize your stock and cash-flow

Deloro Stellite's production process and supply-chain management provides complete flexibility and reliability:

- Flexible production, up to 3 shifts
- Worldwide delivery
- Complete production information systems

Total Quality Management

Deloro Stellite's deep-rooted quality and risk management tradition enables our teams to earn the trust of world leaders in the most demanding industries.

International quality assurance certifications

Deloro Stellite's industrial production and management are certified under the prevailing international quality assurance models:

- ISO 9001: 2000
- EN ISO 13485
- EN 9100 (aerospace)
- ISO 14001
- NADCAP (in progress)
- OHSAS 18001 (in progress)

A systematic approach towards risk management

Our long-lasting partnership with the aerospace industries has shaped several proprietary quality-assurance procedures and tools.

This advanced quality system translates into total traceability, complete document management and thorough testing, ensuring 100% application-ready, risk-free components.

Relentless quality and safety improvement

Deloro Stellite's teams continuously strive to achieve better industrial quality and higher levels of safety.

Our industrial organization are daily enhanced within the framework of the Stellite Performance Management System, which coordinates several technological lean and quality initiatives.

Comprehensive and continuous training

Deloro Stellite corporate strategy puts an emphasis on employees' empowerment and skills improvement.

Each member of our teams benefits from a continuous training path fitted to his needs. Our training programs address management, quality, technical and basic skills alike.

Total customer service

Deloro Stellite teams are organized and developed around thematic competencies in order to answer specific customers needs and demands.



Genuine industry expertise

Deloro Stellite provides its expertise to carefully chosen markets and industries. This strategy results in an unmatched skills base dedicated to specific manufacturing needs. Our engineers and metallurgists are all experts in their field, and bring genuine value to your manufacturing outsourcing investments.

Our industrial and engineering resources are centered around core industry specific competencies:

- Dedicated quality management teams
- Specific testing equipment
- Thematic centers of expertise

A per-project, multidisciplinary management system

To bring your company maximum expertise, flexibility and responsiveness, each of your projects is managed by a multifaceted team that associates metallurgists, design engineers, industrial project managers, manufacturing professionals and quality assurance specialists. This multidisciplinary approach enables seamless transfer, from design to manufacturing, and brings you a complete and detailed follow-through on each project.

Key Strengths

Aerospace and defense

- More than 15 years of experience
- Over 200 000 parts produced each year
- Specific skills base in landing gear and turbine components
- Dedicated testing and traceability program
- Certification under one of the most demanding quality assurance models

Medical and orthopaedics industries

- Dedicated team of manufacturing project managers and engineers
- Unique metallurgical expertise in superalloys (Stellite®)
- Over 250 000 reconstructive and spine implants produced each year
- Specific expertise in dental implants
- Patented manufacturing processes

Specialty industries

- Unique expertise in industrial gas turbines and power generation systems (including nuclear plants): rotating blades, stationary vanes, partition nozzles, burners, burner inserts, sectors, heat shields, cover plates and radial pins.
- Rare experience in vacuum pumps components used in very demanding chemical applications or semiconductors.
- Thorough knowledge of electromechanical safety components needing unfailing reliability.

Deloro Stellite: innovative solutions to challenging wear problems

With 1600 employees operating in 10 countries worldwide, Deloro Stellite is a global provider of innovative solutions to challenging wear problems. Our specialist products and services help extend the life of components in demanding environments where heat, corrosion and abrasion limit their life.

Total engineering solutions

Deloro Stellite's expertise translates into total engineering solutions that enable our customers to yield more wear-resistant, more reliable and more cost-effective products: castings, powder metallurgy, coating services, machining, consumables manufacturing, equipment design and manufacture.

Our unique ability to integrate these manufacturing processes, combined with our advanced problem-solving skills, enables us to create total solutions ranging from customised alloys to full assembly of complete components and the design of application equipment.

An extensive alloys and superalloys mastery

Deloro Stellite produces its own proprietary metal alloys from cobalt and nickel, which have outstanding metallurgical and physical properties, ideally suited to solving specific wear problems.

A lasting scientific advance

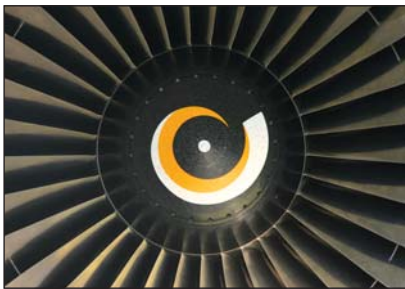
Deloro Stellite has been developing critical scientific and technical knowledge for over 100 years, translating into new or customised alloys and proprietary processes.

Our team of materials engineers constantly works with customers on selecting appropriate alloys and processes to solve complex wear and corrosion problems.

Deloro Stellite is also an active partner with world-renowned universities and research institutes.

A global networked presence

Deloro Stellite operates numerous industrial facilities around the world. Our industrial operations are integrated into an exclusive, worldwide Customer Relationship Management solution that brings our partners a complete and up-to-date coverage of their projects.



17 sites, to offer global presence

ASIA

1. New Delhi
2. Shanghai
3. Yokohama

NORTH AMERICA

4. Montreal
5. Belleville
6. Goshen
7. St. Louis
8. Houston

EUROPE

9. London
10. Swindon
11. Koblenz
12. Ménars
13. Alès
14. Milan
15. Bologna
16. Bellusco
17. Perm



Deloro Stellite serves the aerospace and defense industries with comprehensive manufacturing services to help them produce the most critical parts and components, with the highest quality, within the shortest timeframe.

Deloro Stellite is also a trusted partner in the orthopaedic, IGT and other specialty industries. Do not hesitate to ask for our specialized documentation.



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