

A division of thyssenkrupp
Aerospace

thyssenkrupp Autômata

Machining
Engineering
Assembling
Oil and Gas Fabrications



thyssenkrupp



CONTENT

1 About thyssenkrupp Autômata

Your one-stop partner for machining, engineering and assembly

2 Machining

Advanced technology for different depths of processing

3 Engineering

Customized solutions for your unique needs

4 Assembling

Experience across a broad spectrum of components

5 Oil and Gas Fabrications

Excellence in CNC precision machining services

6 Quality Management and Inspection

Certificates, awards and testing procedures

7 Sustainability

Our commitment to climate action and sustainability

8 The thyssenkrupp Aerospace network

Your strong partner with a global presence

About thyssenkrupp Autômata

Your one-stop-shop for machining, engineering and assembly

thyssenkrupp Autômata is a supplier in machining, engineering, assembly and supply chain services for the Aerospace industry and other sectors with similarly high quality and tolerance requirements. With leading-edge technologies, we have established a global reputation as a partner for your high precision machined components, engineering and assembly needs.

Combining CNC programming with 5-axis machining thyssenkrupp Autômata offers a true one-stop solution to deliver integrated supply chain solutions. We serve our clients around the world with in-depth expertise and innovative solutions tailored to their unique needs.

thyssenkrupp Autômata is a company of the thyssenkrupp Aerospace network.



The Team



WILMAR MELLO



TARCISO BELLATO



GILCIMAR SILVA



ALEX COELHO



FABIANO SANTANA



AMARILDO GUIMARAES



BRUNO OLIVEIRA



FABIO CRUZ

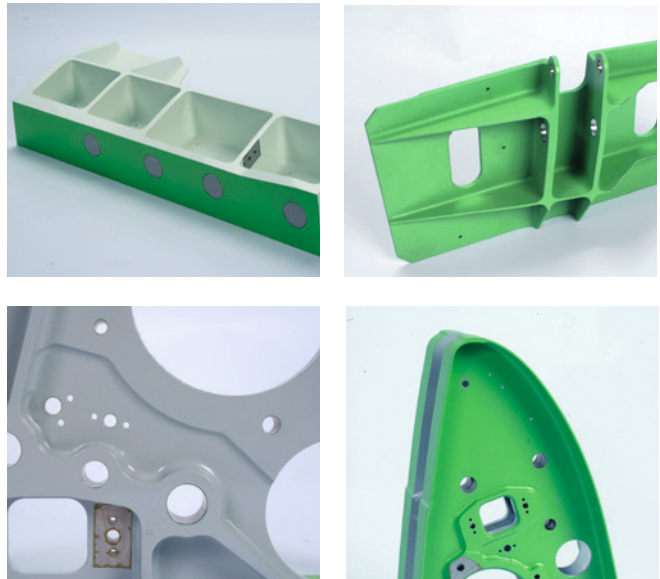
Machining

Advanced technology for different depths of processing

The Aerospace sector operates some of the most complex supply chains in tough cost competition with highest demand of quality in sourcing of materials and components, maintenance, parts and support operations.

In this context, our clients are looking for a machinery partner, who offers high and standardized quality at different depths of processing (machine-ready blanks, roughing, finish-machined components) with just-in-time delivery and low cost.

thyssenkrupp Autômata is partner of choice for many ambitious customers in the industry. Next to the machining work, we remove bottlenecks in the processes by eliminating redundant in-house inspection and testing. This leads to considerable time savings and cost reductions.



Content workflow and technology:

- ④ CAD/CAM file is provided by customer
- ④ Process Engineering conceives CNC programming and optimized tooling / fixtures
- ④ Material is issued from inventory and cut to size
- ④ Metal blanks are machined according to customer requirements
- ④ Parts are inspected to ensure adherence to technical specifications
- ④ Completed Items are packaged, prepared for shipment, and delivered just in time



MANUFACTURER	MACHINE	QTTY	TECH
DECKEL MAHO	DMU 60T	1	5 axis
DECKEL MAHO	DMU 100P	1	5 axis
MAZAK	VORTEX 815	1	5 axis
MAZAK	VORTEX 1400	1	5 axis
MAZAK	INTEGREX 1060	1	5 axis
MAZAK	INTEGREX 300 II Y	1	5 axis
MAZAK	INTEGREX 400 Y	1	5 axis
MAZAK	VARIAXIS i600	1	5 axis
MAZAK	VARIAXIS i700	1	5 axis
MAZAK	HCN 8800	2	4 axis
MAZAK	NEXUS 510	1	3 axis
WOTAN	VOMAT M2	2	3 axis
WOTAN	VOMAT V1L	2	3 axis
WOTAN	VOMAT V2L	2	3 axis
MAZAK	MTN900	1	2 axis

Key Benefits

Machinery specifications:

- Milling and turning
- Both soft and hard alloys
- Expertise in structural components with complex geometries
- Max dimensions Length 4.200mm / Width 1.600mm
- High speed machines operating 12,000 rpm minimum

1 Over 30 years of CNC experience provide customers with the flexibility of our proven methods and the quality of our personalized service

2 Redundant in-house inspection and testing processes are eliminated as sub-contracted machining work removes bottlenecks in your processes

3 Aggregating and nesting your demands achieves better material yield and reduces scrap handling costs

References



AIRBUS

ALSTOM

sonaca aircraft 
SONACA GROUP

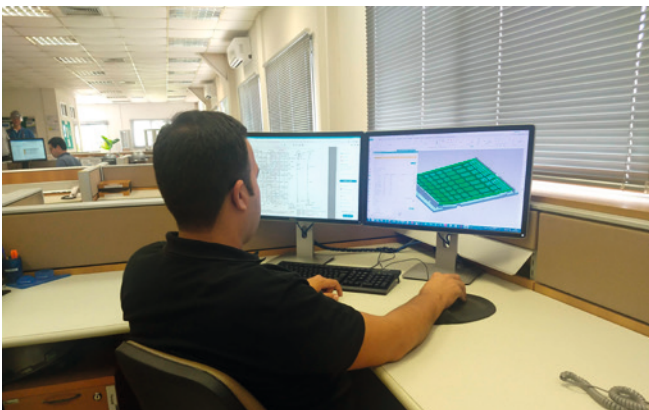
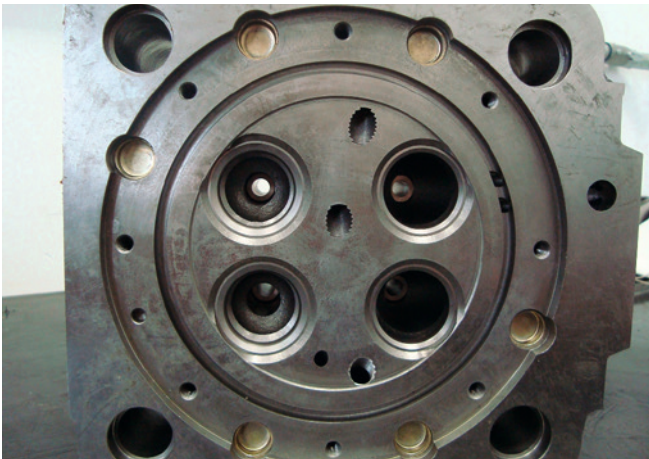
Engineering

Customized solutions for material preparation needs

thyssenkrupp Autômata's team of skilled manufacturing engineers has over 35 years of experience in the Aerospace market and is able to conceive high quality CNC programs for both low and high volume part production.

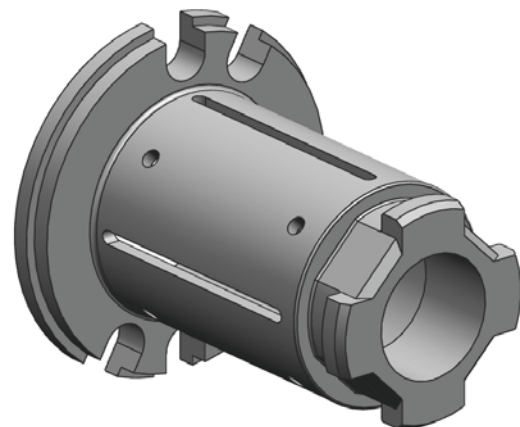
thyssenkrupp Autômata offers a complete CNC programming solution from demand receipt to tryout tracking on customer using the most advanced and efficient machining strategies together with the best software available on the market.

The scope of our services include creating written procedures and set up sheets, design and manufacture of custom tooling as well as cycle time reduction.



thyssenkrupp Autômata offers customized engineering solutions combining CNC machining services with other Value Added Services (VAS) to a true one-stop provider for your material preparation needs:

- ⌚ Your requirements are captured in a Computer-Aided Design (CAD) model which may include a 2D drawing or 3D model
- ⌚ State of the art engineering capabilities with operational experience in feasibility and consulting on process improvements through smart technical solutions.
- ⌚ Your requirements are nested to optimize material utilization.



Oil & Gas component

Key Benefits

Software specifications:

- ➔ Siemens NX CAD/CAM Drafting, PMI, JTtoGo
- ➔ Siemens Machining Simulator 5x
- ➔ ENOVIA DMU Navigator V5-6R2020
- ➔ CATIA Composer Player R2020

1

Experienced Process Engineers,
35+ years Aerospace background

2

Cost savings and strong efficiency
benefits with operations performed
with state-of-the art technologies

3

We combine machining and engineering
services for your cost advantages

References



Assembling

Experience across a broad spectrum of components

thyssenkrupp Autômata's wide range of in-house manufacturing resources gives us a unique strength in assembly. The ability to design the process, tools, and NC programs, while maintaining focus on coordination of multiple details, allows us ease of assembly and better control of tolerances.

Our experience encompasses the wide range of complex components containing multiple details as well as simpler brackets with fasteners. thyssenkrupp Autômata is proficient in riveting to a variety of Aerospace, Military and Commercial specifications. We are equipped with pedestal compression riveters as well as squeeze riveters.

Our assembly services include:



Installation of fasteners

...of most commonly used fasteners: bolts, screws, washers, cotter pins, nut plates, solid rivets, blind fasteners, hi-lok / hi-lite pins, lock wires etc.



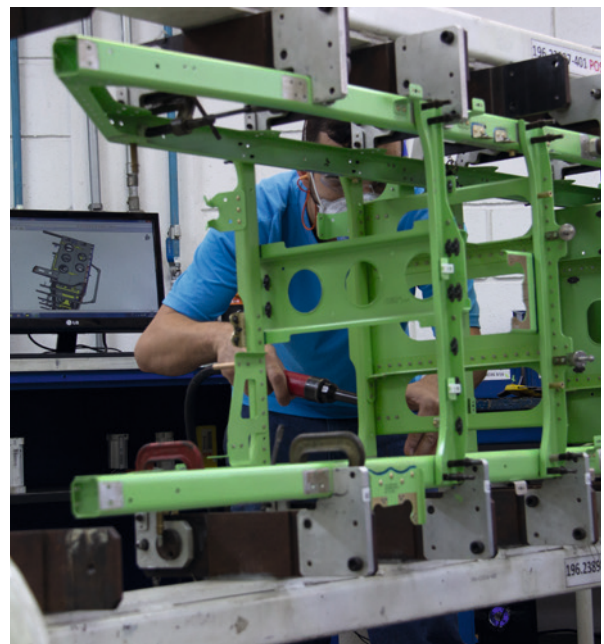
Application

...of fillet, aerodynamic and fastener sealing compound

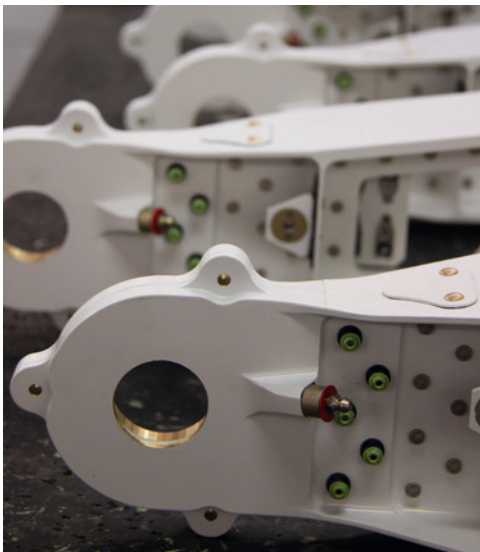


Assembling

...of bushing and bearings



Key Benefits



- 1** The rigorous nature of our teams and the reliability of our equipment mean we can provide customers with the highest levels of expertise in the field
- 2** Industrial infrastructure where performance, efficiency and safety are of primordial importance for both employees and customers
- 3** We ensure that assemblies are delivered just in time in your production line

References



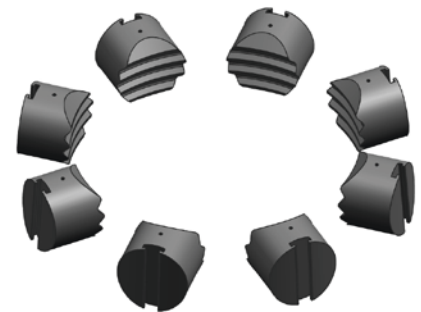
Oil and Gas Fabrications

Excellence in CNC precision machining services

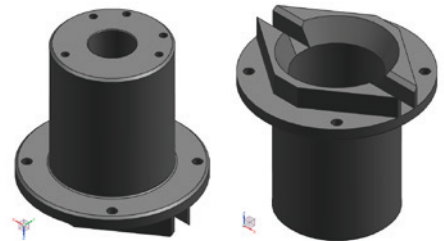
The Oil & Gas industry requires durable and reliable components to be machined with critical tolerances, complex geometries and sometimes from exotic materials.

Our extensive experience in supplying critical machined parts for these applications has earned thyssenkrupp Autómata a reputation of excellence in CNC precision machining services for the Oil & Gas industry.

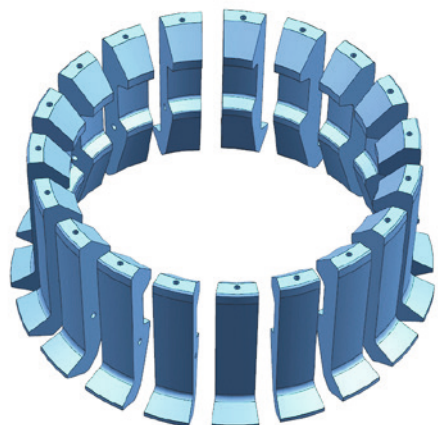
We provide CNC machining for various Oil & Gas applications and possess the requisite machining and fabrication tools that are well suited for your needs.



Oil & Gas component



Oil & Gas component



Oil & Gas component

Key Benefits

- 1 Skilled CNC machinists
- 2 Precision fabrication capabilities
- 3 Familiar with points of concern when machining Oil & Gas components
- 4 Extensive network of subcontractors and material suppliers experienced in the industry's standards

Machinery specifications:

- ⌚ Max machine dimensions: Length 1.500mm/
Diameter 1.300mm
- ⌚ Machining experience with aluminum, beryllium, brass, bronze, Inconel, Invar, nickel, titanium, and other superalloys
- ⌚ Multi-tasking simultaneous milling and turning

References

Schlumberger

HALLIBURTON

Quality Management

Certificates and awards

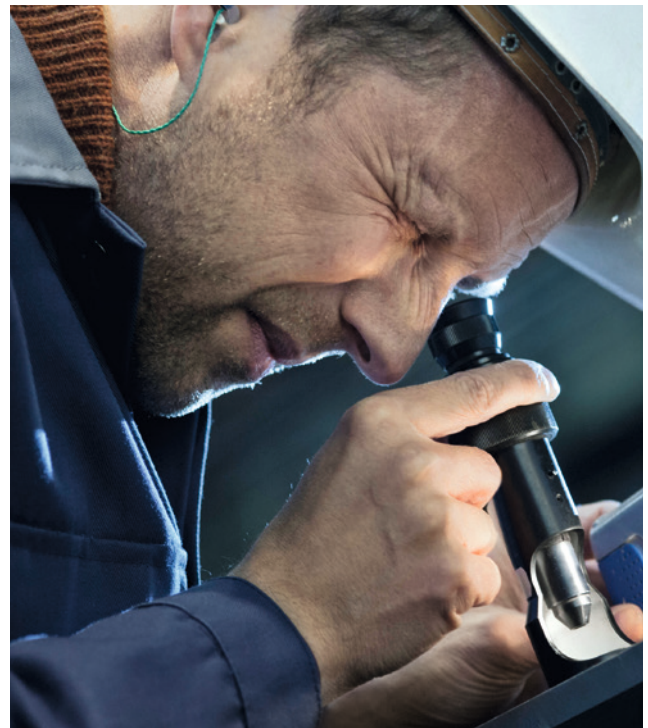
The global Aerospace industry demands products that are held to the highest safety and quality standards. Therefore achieving 100% right first time quality is at the heart of every level of service we provide.

Our business processes are embodied in our Quality Management System. The system defines the training required for each of our employees to deliver the highest quality standard our customers expect. It ensures that we maintain full lot traceability of every item we supply from original manufacture through to the customer's shop floor.

To further ensure quality, thyssenkrupp Aerospace performs periodic self-audits, which are conducted by personnel independent from the process being audited. The scope of the audit, the findings, and any corrective actions are recorded.

Our high performance in quality is confirmed by certificates and awards. In 2018 we were awarded Best Complex Parts Machining Supplier by Embraer.

thyssenkrupp Autômata is part of the global Quality Management System of the thyssenkrupp Aerospace network. We are committed to continuous improvement and are active participants in the global Operational Excellence Program of thyssenkrupp Aerospace.



thyssenkrupp Autômata's Certificates



Inspection

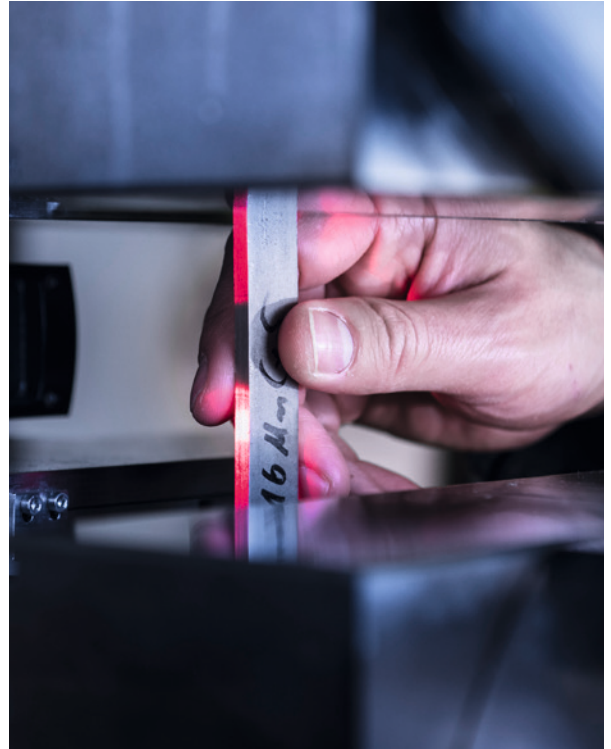
Measurement and testing procedures

The production process of Aerospace structures and components requires quality control tests during different stages of production. Our testing equipment and commitment to quality have made thyssenkrupp Aerospace a top supplier to prominent aerospace OEM companies.

thyssenkrupp Autômata follows rigorous quality control procedures implemented and applied by all employees and reviewed periodically. Our strict adherence to this program has resulted in reduced product delivery lead times and enhanced customer satisfaction.

Each process is controlled via a rigid inspection system. We follow written verification procedures that cover the complete lifecycle of every component – from the receipt of raw materials until the finished product has been delivered.

Measuring devices and testing equipment are calibrated periodically. All testing is performed by qualified and/or certified personnel, and all test results are recorded and traceable to the raw material and product lot manufactured. Records are kept in accordance to industry guidelines. We maintain in-house traceability records that reflect an unbroken chain of documentation from the mill that produced the raw material to our customer.



The equipment listed is used to check the specifications of the customer according to the requirements during the production process (milling), assembly and final inspection of the products:

A Alloy Type Test	F	M Miliohmmeter Micrometer - External Micrometer - Internal Magnetic Particle	S
B	G Goniometer	N	T Thickness Measurement Thread Gage Thread Ring Gage
C CMM Combination Square Set Conductivity Test	H Heigh Gage	O	U Ultrasonic
D Depth Micrometer Dial Caliper Gage Dial Indicator Dial Torque Wrench Gage	I	P Penetrant	V
E Eddy Current	J	Q	W
	K	R Radius Gage Roughness gage	X
	L		Y
			Z

Sustainability

-30%

direct emission
until 2030¹

Our commitment to climate action and environment

Since many years thyssenkrupp systematically drives the energy and climate efficiency of its production and develops efficient solutions to reduce greenhouse gas emissions together with its customers. The climate action efforts of thyssenkrupp are acknowledged externally on a regular basis. thyssenkrupp strives to become climate neutral until 2050. This ambition includes direct emissions, the indirect emissions from purchased energy as well as the indirect emissions in the value chain. As an important step towards climate neutrality, thyssenkrupp has set ambitious targets also for 2030: to reduce the sum of direct emissions and of emissions from purchased energy by 30% compared to 2018 and to reduce the indirect emissions in their value chain, especially in the use phase of the products, by 16%.

-30%

emissions from
purchased energy
until 2030¹

-16%

indirect emissions in our
value chain until 2030¹

¹: Compared to 2018

The thyssenkrupp Aerospace network

Your strong partner with a global presence

thyssenkrupp Autômata is part of the global enterprise thyssenkrupp Aerospace network. As a global enterprise we are part of the worldwide thyssenkrupp network. Global collaboration and the outstanding commitment of our employees make us the partner of choice to the Aerospace industry and their suppliers. Our team ensures that our clients receive tailor-made materials, services and efficient supply chain solutions, all designed to help their business grow.

Our value proposition includes a wide range of supply chain and manufacturing services: procurement of raw materials, warehousing, precision processing, third-party logistics and just-in-time delivery to the point of use. Using our extensive knowledge about markets and the industry, thyssenkrupp Aerospace accompanies your business and programs around the globe. Since we believe in long-term strategies, we engage in strong partnerships that enable us to offer the best solutions for your supply chain, including cost reduction, ensured supplies, outsourced inventory and more effective processes.

Operating from the Americas, Asia Pacific, Europe and North Africa, we are globally present. Based on our global presence in 20 countries, we are always close to you. Our strong local presence allows us to cooperate closely with our customers and their subcontractors, while gaining an in-depth appreciation of their specific needs. Based on our global presence, we offer an unmatched logistics infrastructure to support customers and operations around the world.

Our locations have been approved to EN/AS 9100 and/or EN/AS 9120 standards by the world's leading Aerospace certification companies. Our employees are well trained to meet our customers' quality expectations, ensuring full batch traceability of every item we supply. We are also involved in a number of environmental initiatives and are in the process of fulfilling the requirements of ISO 14001 at all our sites, based on thyssenkrupp Aerospace company policies.





Materials Services
Aerospace

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