



NOVANOR

Mühendislik Mimarlık

PRODUCT CATALOG

www.novanor.com.tr

The **NOVANOR** design team brings together a talented group of mechanical and software engineers. Since 2014, we have been building our expertise through the maintenance and retrofit of material testing machines. Our entry into the sector with material testing machines enabled us to work on complex systems. Through this experience, we simultaneously engaged in mechanical design, manufacturing, hydraulics, software, and hardware, thereby gaining substantial expertise in these fields. Drawing upon the strength and engineering knowledge acquired from this foundation, we decided to expand our scope of activities to encompass broader operations in the fields of manufacturing and engineering. Over the years, **NOVANOR** has expanded its field of expertise to include mechanical design, hydraulic systems, and control systems, ultimately advancing towards the design and manufacture of complete turnkey projects. In order to ensure precision and reliability in production, we have established strong collaborations with a network of highly experienced technicians specializing in advanced manufacturing processes.



Our machine shop is equipped with CNC vertical milling machines, CNC lathes and CNC cylindrical grinding machine, providing us with the capability to produce critical components in-house with accuracy and efficiency. Guided by a strong commitment to engineering excellence, NOVANOR offers a comprehensive range of services encompassing design, manufacturing, and technical solutions across diverse sectors such as defense, construction machinery, automotive, food and beverage processing equipment. Each project is approached with meticulous attention to detail, supported by personalized consultations and expert engineering insights, ensuring that our clients receive the highest level of service and support. We invite you to review our catalogue to explore how NOVANOR's tailored engineering solutions can contribute to the advancement and success of your projects.

CNC Cylindrical Grinding Machine



Studer S33-2011 model

CNC Lathe



Doosan-Lynx 2100G



Doosan-LYNX 2100



Doosan-GT3100



Doosan Puma 4100LC

CNC Swiss Lathe



Hanwha-XE26-Swiss Lathe

Vertical Millin Machines



Doosan-DNM-6700



ETASIS VL-1100



ETASIS VL-1500

One of our company's specialized areas in production is the manufacturing of ATD components. Since 2022 , our company has produced a total of 5 different models of ATDs, delivering over 7000 units to customers during this period. The material used for the ATDs we produce is 316 stainless steel.

Initially, the body of the part is cut using laser cutting, followed by cutting the middle hub part from 316 stainless bar and then performing stainless steel welding.

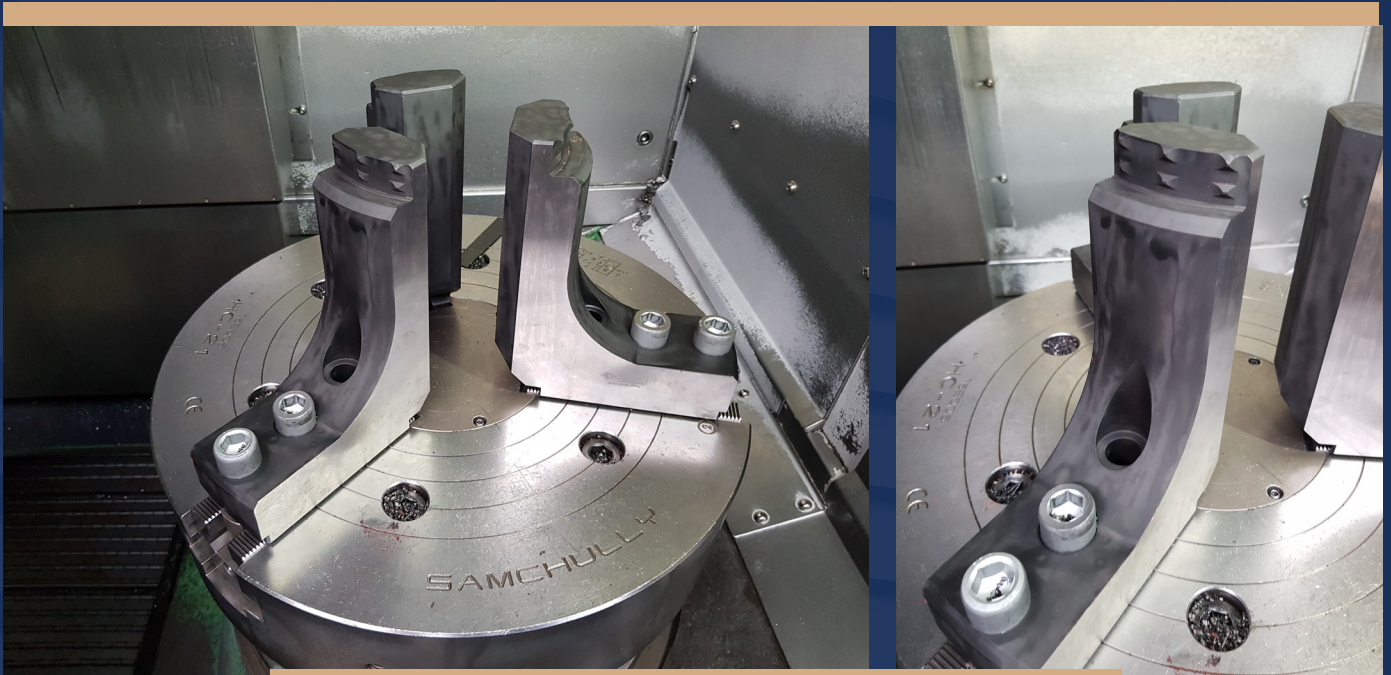
The welds are done precisely and evenly. There are no weld gaps, discontinuities, or cracks occurring after the welding process. Additionally, each part is inspected by the quality control unit after welding and is only approved for further turning and milling operations once it passes inspection.

During the machining process, all tolerances specified in the technical drawings are carefully observed. Each part is individually checked by using Go No Go gauges to ensure compliance with these tolerances.

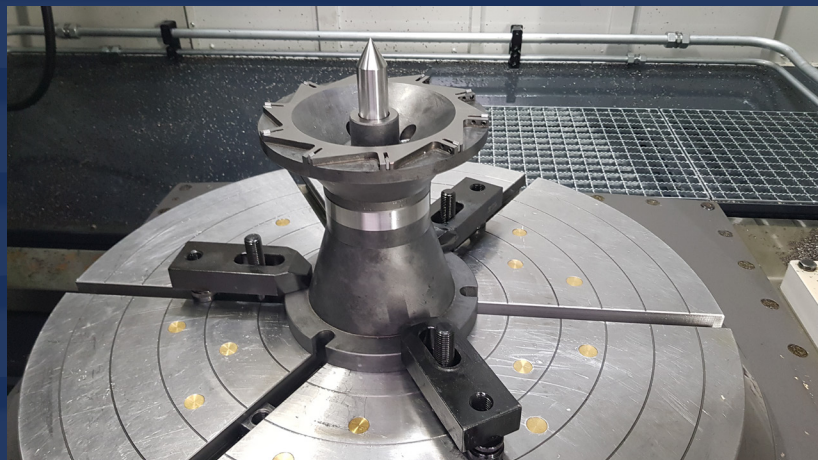
Surface roughness values are taken into consideration according to the technical drawings. Upon customer request , electropolishing can be applied.



Our company is well-positioned to leverage its extensive experience and expertise in production and engineering to effectively address the needs of other manufacturing firms. Companies operating in the manufacturing sector, particularly those engaged in mass production, consistently require jigs, fixtures, and various apparatuses. These instruments play a crucial role in ensuring manufacturing processes are carried out with precision and accuracy, fully complying with the specifications outlined in technical drawings. At the same time, we design and deliver custom measurement gauges to our clients with the aim of minimizing the dependency on CMM (Coordinate Measuring Machine) quality control procedures within the production process. These gauges enable faster yet equally precise inspection of dimensional and geometric tolerances directly on the shop floor. Some of our products, which are designed to ensure the precision and efficiency required for mass production, are presented as follows.



Vertical lathe check jaws



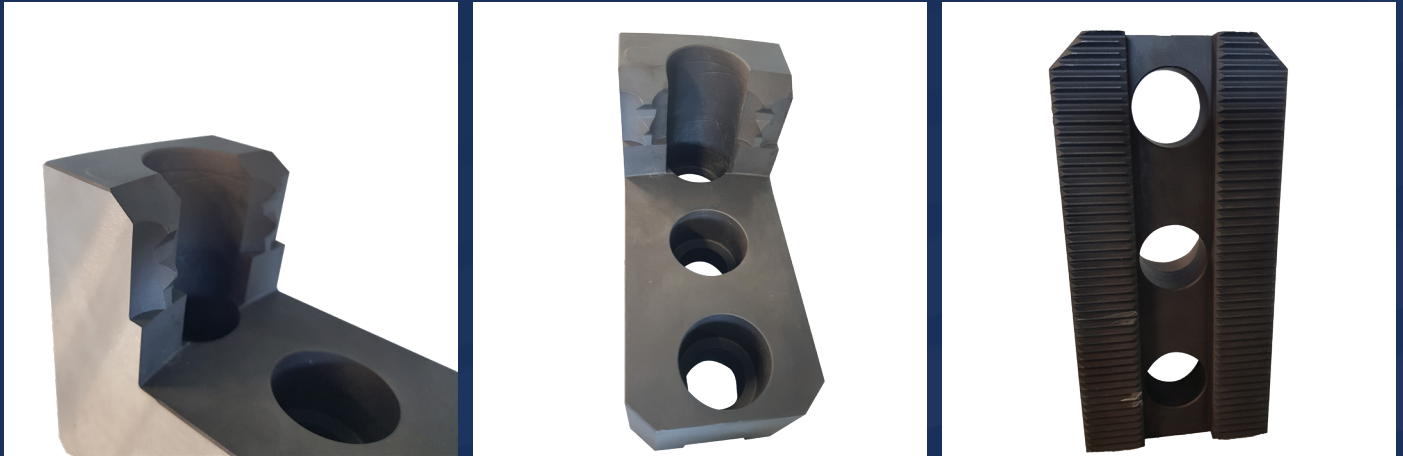
Special vertical lathe fixture

Since our production area mainly focuses on manufacturing high-precision components, we always design both the production tools and the environment to meet these specific requirements. One of the critical aspects of this process is achieving the surface roughness values indicated in the technical drawings. After the machining, an appropriate polishing process is selected and applied in accordance with the material type and the details specified in the operation sheet. This ensures that the final surface quality meets the required standards and is suitable for the intended application.



In our production criteria, not only surface roughness but also the dimensional and geometric tolerances of precision components are carefully taken into consideration to ensure consistent serial production. For such products, the cutting tools used in mass production are selected after comprehensive R&D studies. In addition, all jig and fixture designs, as well as their manufacturing, are carried out entirely in-house within our facilities.





Vertical lathe check jaws



Special gear shaping fixture



Special vertical machining fixture



Special Go / Nogo gauges)



Special dimensional gauge - Go / Nogo gauges

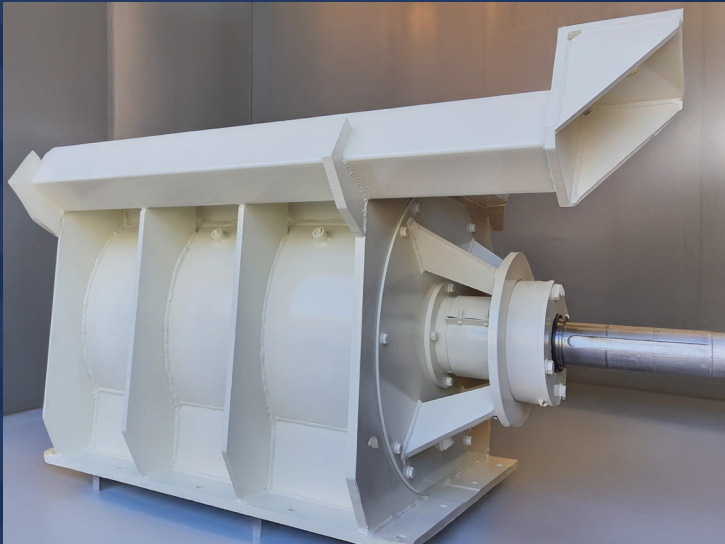


Special dimensional Go / Nogo gauges for gear measurement

Turnkey special projects

Rotary Valve (Built for strength and efficiency, our heavy-duty design meets the highest industrial standards.)

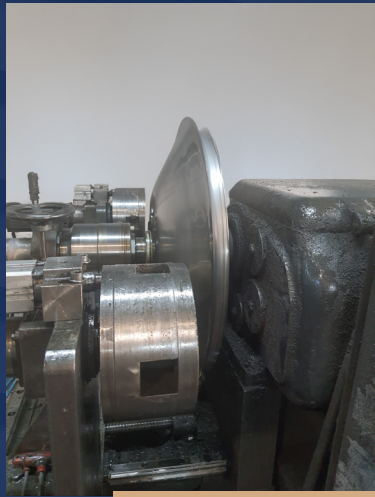
A rotary airlock valve plays a crucial role in industrial bulk material handling systems by regulating the controlled discharge of powders, granules, and other dry solids from silos, hoppers, and cyclones into conveying lines. It not only ensures a consistent flow of material but also maintains the necessary airlock between different process stages, preventing system pressure loss and backflow. These valves are essential in industries such as cement, mining, chemicals, power plants, food, and plastics, where efficiency, reliability, and airtight sealing are critical to continuous production. Our rotary valve is a heavy-duty, drop-through type airlock valve, specially designed for large-scale and demanding applications. Manufactured with robust construction and precision engineering, it delivers exceptional durability, wear resistance, and smooth operation even under abrasive or high-capacity conditions. Thanks to its turnkey design and tailor-made adaptability, it provides clients with a reliable solution that enhances productivity and reduces downtime. With this project, we showcase not only our manufacturing expertise but also our ability to deliver custom-engineered rotary valves that add real value to industrial processes.



Rotary valves ready to be delivered

Fire palce project,

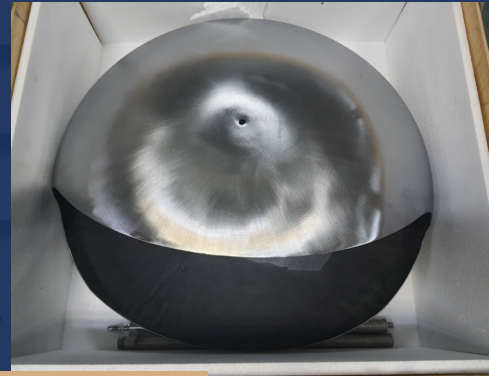
Our Fireplace is a testament to the exceptional craftsmanship and attention to detail that defines our production process. This sophisticated design begins with two meticulously spun sheet metal pieces, expertly joined together using the precise TIG welding method. This ensures a strong, seamless bond, creating the perfect foundation for the next phase of the manufacturing process. Once welded, the assembly undergoes further refinement with cutting-edge 5-axis laser cut technology. Our laser cutting machine, guided by an intricate CAD model, delivers flawless precision and high-quality cuts that complement the design's elegance and functionality. Each piece then enters the polishing stage, where expert technicians ensure every surface is smooth, refined, and free from imperfections. This is a delicate process, carried out with the utmost care to guarantee the final product is flawless. Throughout each step of production, our highly skilled technicians and engineers are dedicated to maintaining the highest standards of quality. Every process is carefully monitored and inspected to ensure the final product meets our strict quality control guidelines. The finishing touch is the static powder coating process, which not only enhances the visual appeal of the Fireplace but also provides a durable and long-lasting finish, ensuring its resilience against wear and tear. The result is a Fireplace that combines modern design with superior craftsmanship—perfect for adding both functionality and aesthetic value to any space. Each unit is the culmination of cutting-edge technology, expert skill, and an unwavering commitment to quality.



sheet metal spinning process



5-axis laser cutting

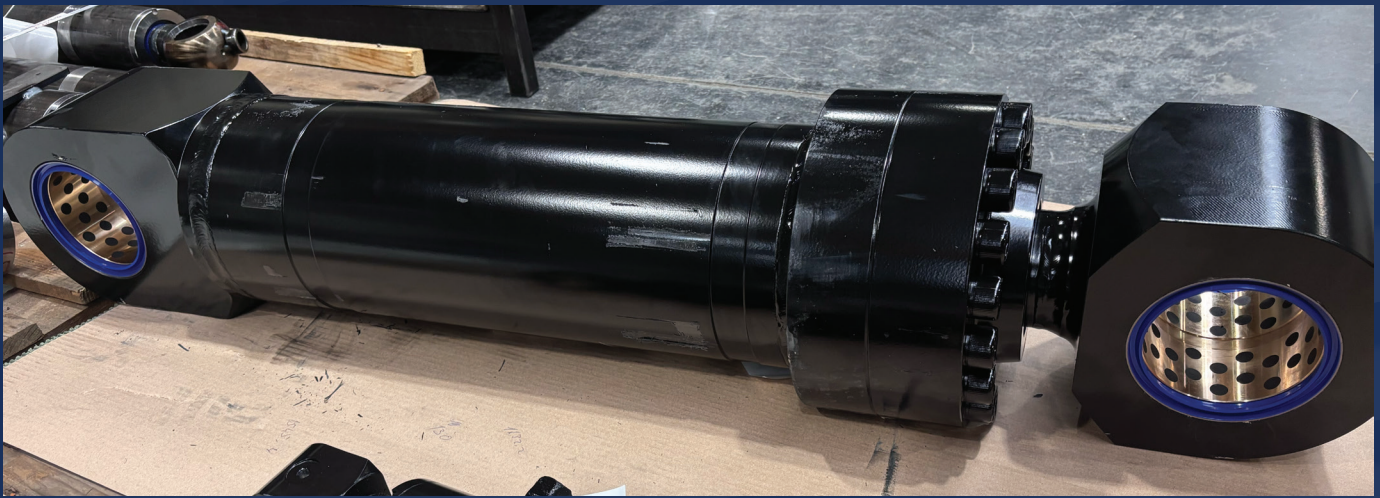


Grinding, polishing and packing processes

Hydraulic Systems and Components

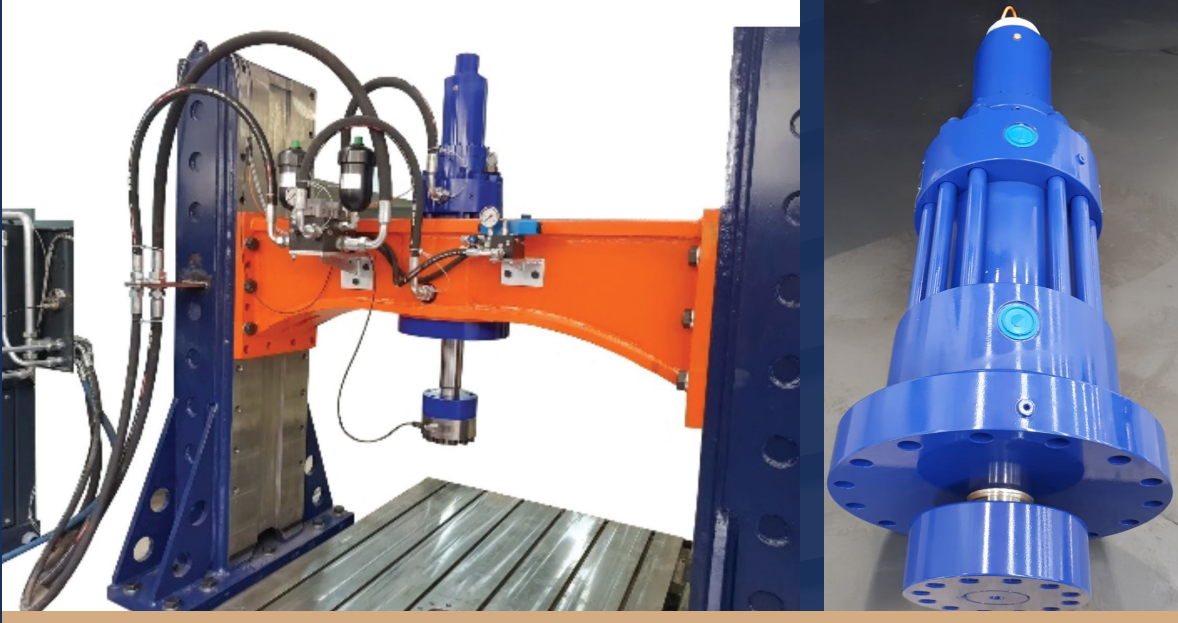
One of the most critical parts of material testing machines is the **hydraulic cylinder** and the **hydraulic power unit**. Thanks to the wide range of projects our company has successfully completed, we now operate as a dedicated division in the field of hydraulics.

Within this scope, we design and manufacture both **industrial and mobile hydraulic cylinders**, ensuring compliance with the required technical specifications. In addition, for hydraulic cylinders that must operate at high frequencies, we apply the **semi-hydrostatic design method**, which provides a lower friction coefficient, resulting in higher efficiency and longer service life.



Hydraulic cylinders tailored for mobile machinery

We accomplish special design also selecting special sealing set for high frequency actuators in order to minimize friction. Therefore customers can perform high frequency/short amplitude cycles without any problem.



Semi-hydrostatic hydraulic cylinder designed for a fatigue testing machine with a 500 kN capacity.

Latest fatigue rated test machines that designed and manufactured by Novanor, Set for high frequency actuators in order to minimize friction. Therefore customers can perform high frequency/short amplitude cycles perfectly.



We provide specialized designs for high-frequency actuators to minimize friction, enabling customers to operate high-frequency, short-amplitude cycles.

In the **hydraulic power unit** segment, all components and assemblies are designed and engineered according to the specific needs of the system, ensuring reliable performance and seamless integration into diverse application



Hydraulic cylinders tailored for mobile machinery



Hydraulic Power Units (300-liter)



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