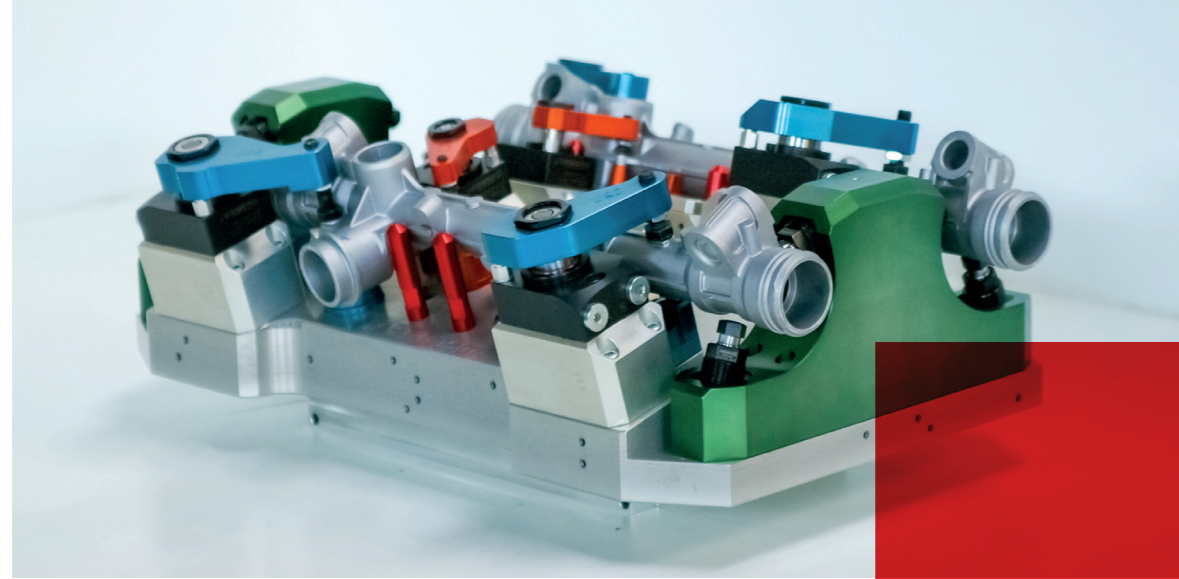


tech **TEAM**



**Your partner
for clamping
systems**



OUR OFFER

CLAMPING SYSTEMS

We provide comprehensive solutions encompassing the system's design, manufacturing, delivery along with assembly and installation, as well as production tests and start-up. We offer:

- hydraulic fixtures
- pneumatic fixtures
- mechanical fixtures

DEDICATED DEVICES AND SPECIAL MACHINERY

We specialize in manufacturing components developed by our in-house design office. Our team of engineers is ready to face the challenge of designing dedicated machinery in accordance with your strictest requirements.

- special machinery
- robotic grippers
- custom components

TECH TEAM's custom-made CNC fixtures are what you've been looking for - solid, precise workholding solutions fully adapted to your production process.

YOUR PARTNER

FOR CLAMPING SYSTEMS

TECH TEAM is a leading provider of specialized clamping systems for CNC machine tools and equipment. We design, manufacture and install complex hydraulic, pneumatic and mechanical fixtures and we equally specialize in manufacturing parts, equipment and tools based on customers' designs. With our qualified staff, impressive number of completed assignments and implementations, the capabilities of TECH TEAM have become broadly known in Poland and abroad.

Our mission is to supply our customers with fixture solutions, allowing to achieve maximum efficiency in the process of mass production of machined parts.



HIGHLY QUALIFIED STAFF



EXPERIENCE AND INDUSTRY KNOW-HOW



INTERNATIONAL REFERENCES



WORLD-CLASS MACHINE PARK



CERTIFIED QUALITY



FINANCIAL INDEPENDENCE

18

YEARS OF
EXPERIENCE

OUR EXPERIENCE AND KNOW-HOW

IS YOUR KEY TO SUCCESS

The knowledge of our engineers in the field of CNC machining results from wide array of experience ranging from machine tools sales, starting up the production in turnkey projects, daily mass and unit production of workpieces on various machining centres.

<800

PROJECTS

<130

CUSTOMERS

48

TEAM MEMBERS

WORLD-CLASS MACHINERY AND DEVICES

AT YOUR SERVICE

TECH TEAM's design and production engineers work with respective CAx software and our machine park encompasses a Wenzel measuring machine, as well as 20 CNC machine tools running in a production hall of over 4000 m². Nearly all our machines are multi-axis CNC machine tools dedicated to the production of clamping systems.

Such comprehensive infrastructure allows us to manufacture fixtures in accordance with the highest global standards. We are proud to be trusted by companies like: Fiat, Valeo, Magneti Marelli, Opel, Daewoo, Borg Warner Turbo Systems, TRW, Kongsberg Automotive, Neumann Aluminium, Faist Light Metals, Saint Jean Industries.

THANK YOU FOR YOUR TRUST

 **BorgWarner**

 **BOSCH**


KONGSBERG
AUTOMOTIVE

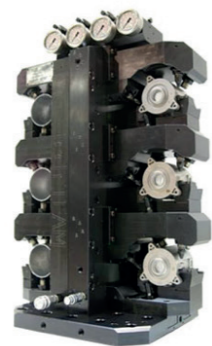

TRW
Automotive


NEUMAN
ALUMINIUM
RAUFOSS

 **LFP**



HYDRAULIC CLAMPING SYSTEMS



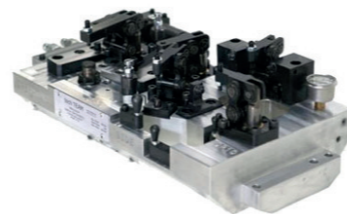
Hydraulic fixture for horizontal double pallet machining centre. Used for machining a thin-walled motor engine housing from both sides in a single clamping.

AUTOMOTIVE



Hydraulic fixture for horizontal, 4-axis double pallet machining centre. Allows for workpiece handling by a robot.

AUTOMOTIVE



Hydraulic fixture for vertical machining centre, equipped with a fourth axis assembly. Allows for complete workpiece machining in two operations.

AUTOMOTIVE

SAMPLE PROJECTS

Our workholding solutions are applied in multiple industries, primarily in the automotive, but also in: aviation and cosmonautics, production machinery and equipment construction, building engineering, household appliances production, packaging production, cast iron and non-ferrous metals casting, moulds and dies manufacturing, as well as in the electrical, pharmaceutical, timber and food industries, amongst others.

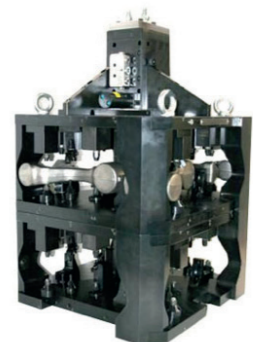
Below please see an extract from our portfolio containing over 800 projects.

PNEUMATIC CLAMPING SYSTEMS



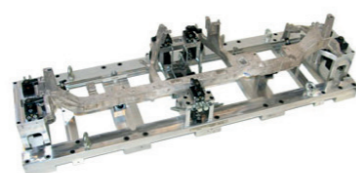
Hydraulic fixture for vertical four-axis centre. Allows for four-side machining of three different workpieces in a single clamping operation.

CONSTRUCTION ENGINEERING



Hydraulic fixture for 4-axis horizontal double pallet machining centre. It allows for efficient machining of eight workpieces in a single clamping operation. Workpiece machining from four sides of the system.

AUTOMOTIVE



Hydraulic fixture for a robotized cell. Supple, magnesium workpiece machining by robot. Fixture with actuators position control.

AUTOMOTIVE



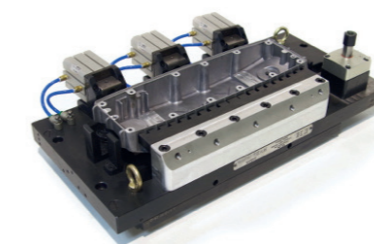
Hydraulic fixture for vertical, five-axis machining centre. Allows to machine two types of workpieces in a single clamping operation, after simple retooling.

AUTOMOTIVE



Pneumatic fixture for vertical, five-axis machine. Allows for workpiece machining in a single clamping operation.

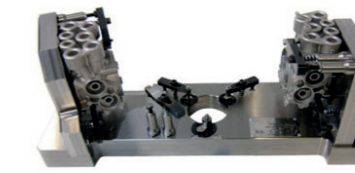
AUTOMOTIVE



Pneumatic clamping for 4-axis vertical machine. Four-side workpiece machining in a single clamping operation.

LUMINAIRES MANUFACTURING

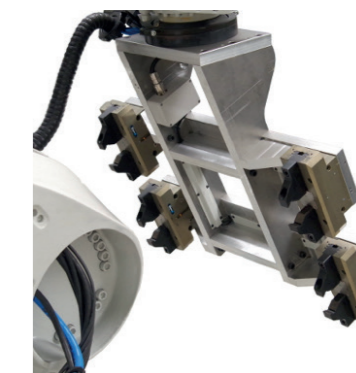
MECHANICAL CLAMPING SYSTEMS



Mechanical clamping for four-axis vertical machine. Allows for machining a single workpiece in three clamping operations. Applied in prototype manufacturing.

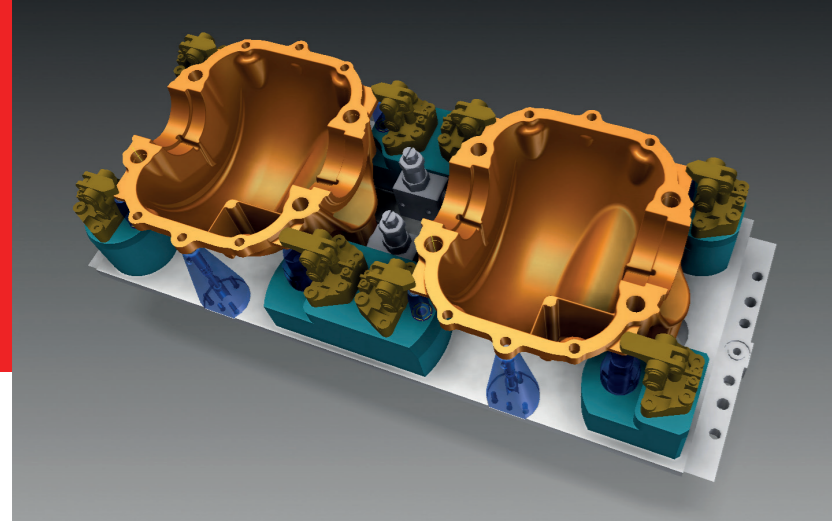
AUTOMOTIVE

DEDICATED DEVICES AND SPECIAL MACHINERY



Robot gripper for two workpieces, with workpiece presence control.

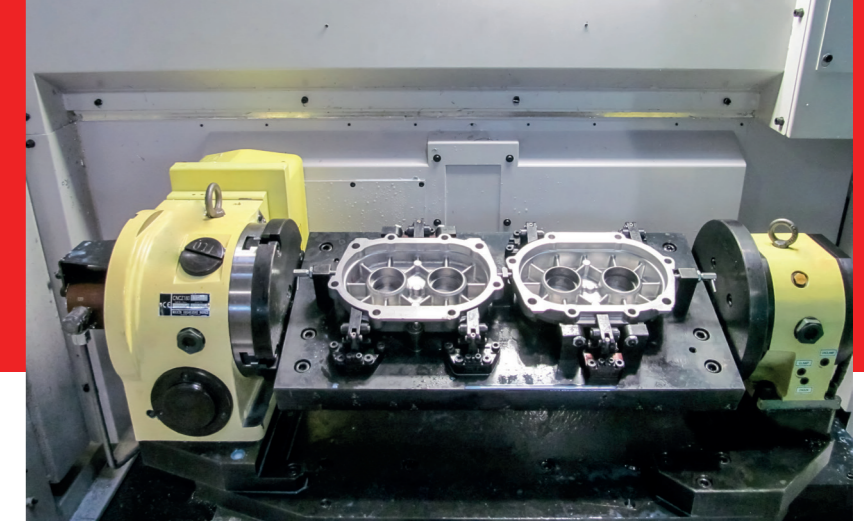
AUTOMOTIVE



HOW WE WORK

CUSTOM SOLUTIONS FOR CLIENT SPECIFIC
WORKPIECES AND MACHINERY

With client satisfaction being the central goal of all our assignments, we provide comprehensive solutions covering the fixture's design, as well as its production and delivery, including assembly and installation, testing and starting production.



STEP 1 DESIGN

The design of clamping systems is performed in our engineering design department with the use of 3D CAD applications. Our engineers analyse the shape and material properties of the workpiece, as well as the type and parameters of machinery, the requirements for the specific procedure, the method of loading the workpiece, the potential risk of vibrations or dislocations of the workpiece, or the risk of chip accumulation.

This way we eliminate faults and perform simulations of the clamping system at the engineering stage. The results of such a comprehensive approach are stable and repeatable machining conditions, short processing cycles, fast retooling times and long life of the clamping systems.



STEP 2 MANUFACTURE & ASSEMBLY

In the manufacturing of our clamping systems we use best quality hydraulic and mechanical components from global market leaders such as: Roemheld, Hilma, Stark, AMF, Enerpac, Kipp, etc.

We benefit from a very modern machine park ourselves. It consists of turning centres as well as five- and multi-axis centres, their average age does not exceed five years. All our machine tools come from renowned manufacturers, and their technical condition is monitored by our internal maintenance personnel on a regular basis. This allows us to produce clamping systems with the highest possible precision, and to meet all our contractual deadlines.

Our company premises include a separate space dedicated for assembly of our CNC workholding systems. The assembly is entrusted to highly qualified staff with many years of experience and training in the field of hydraulic and pneumatic clamping systems, which results in faultless operation of the instruments, even in the most adverse of environments.



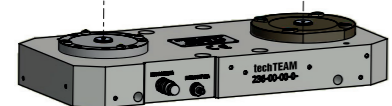
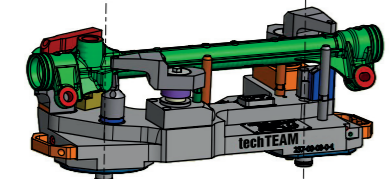
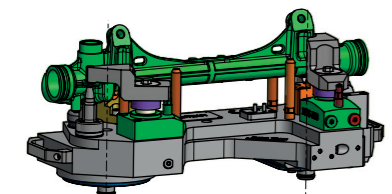
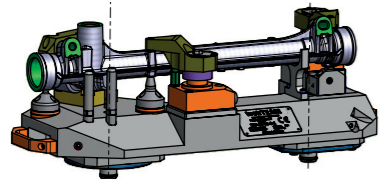
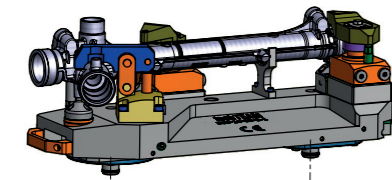
STEP 3 QUALITY CONTROL

Apart from on-going control of the manufacturing process, each clamping system is subjected to dimensional control in the measuring laboratory, as well as to functional tests, including a 24-hour system tightness test at increased pressure as well as an automated 500 clamping cycles test. The correct operation of mechanical, hydraulic or pneumatic clamping systems is confirmed through a written report, delivered to the client together with the system. Our laboratory, conforming to the requirements of the PN-EN ISO 10012:2014 norm, possesses the equipment necessary for performing quality control at each production stage, allowing us to make clamping systems with utmost precision and attention to detail.



STEP 4 INSTALLATION

Thanks to our experienced team of process engineers, we can offer full support, ranging from machinery and technology selection, through selection of machining tools, full automation of work cells with the use of conveyors, robotic grippers and other industrial automation elements, all the way up to the implementation of the full production process.



Example of maximal reduction of changeover time between 4 separate workpieces through the application of a single clamping system.

BENEFITS

RESULTING FROM REPLACING TRADITIONAL SOLUTIONS WITH MODERN, FULLY-AUTOMATED CLAMPING SYSTEMS INCLUDE:

- significant increase in production efficiency through reduction of the time necessary for fixing and removing the workpiece
- eliminating human error in fixing workpieces and minimizing operating hazards
- maintaining the highest quality and repeatability of machining, achieved through proper clamping geometry
- accurate and repeatable adjustment of clamping force
- precise setting of planes and angles of the workpiece
- convenient clamping in low accessibility areas
- excellent damping of vibrations caused by high machining parameters and difficulties in securing the workpiece

QUALITY CERTIFIED



QUALITY UNDER STRICT CONTROL

With the goal of ensuring full customer satisfaction, striving to constantly improve the quality of services offered, we have obtained the internationally renowned AS 9100D certificate (technically equivalent to EN 9100:2016 and JISQ 9100:2016). Based on ISO 9001, it guarantees high standards of both internal organization as well as cooperation with suppliers and customers. This certificate confirms our commitment and motivates us to continue working on the idea of providing our clients with the highest quality products and services.



TRUST AN INDUSTRY LEADER

Tech Team is a brand of Metal Team - one of the leading suppliers of comprehensive solutions for the machining industry in Poland. Its clients portfolio lists over 1500 companies from the automotive, aerospace, energy, construction, machinery, medical, shipbuilding and electronics industries. By choosing us, you can be sure that a team with solid expertise will work on the right solution for you.



EFFICIENCY GUARANTEED

Depending on the chosen configuration, all our solutions are covered by a 12 to 24 months warranty.

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WE'LL FIX IT FOR YOU