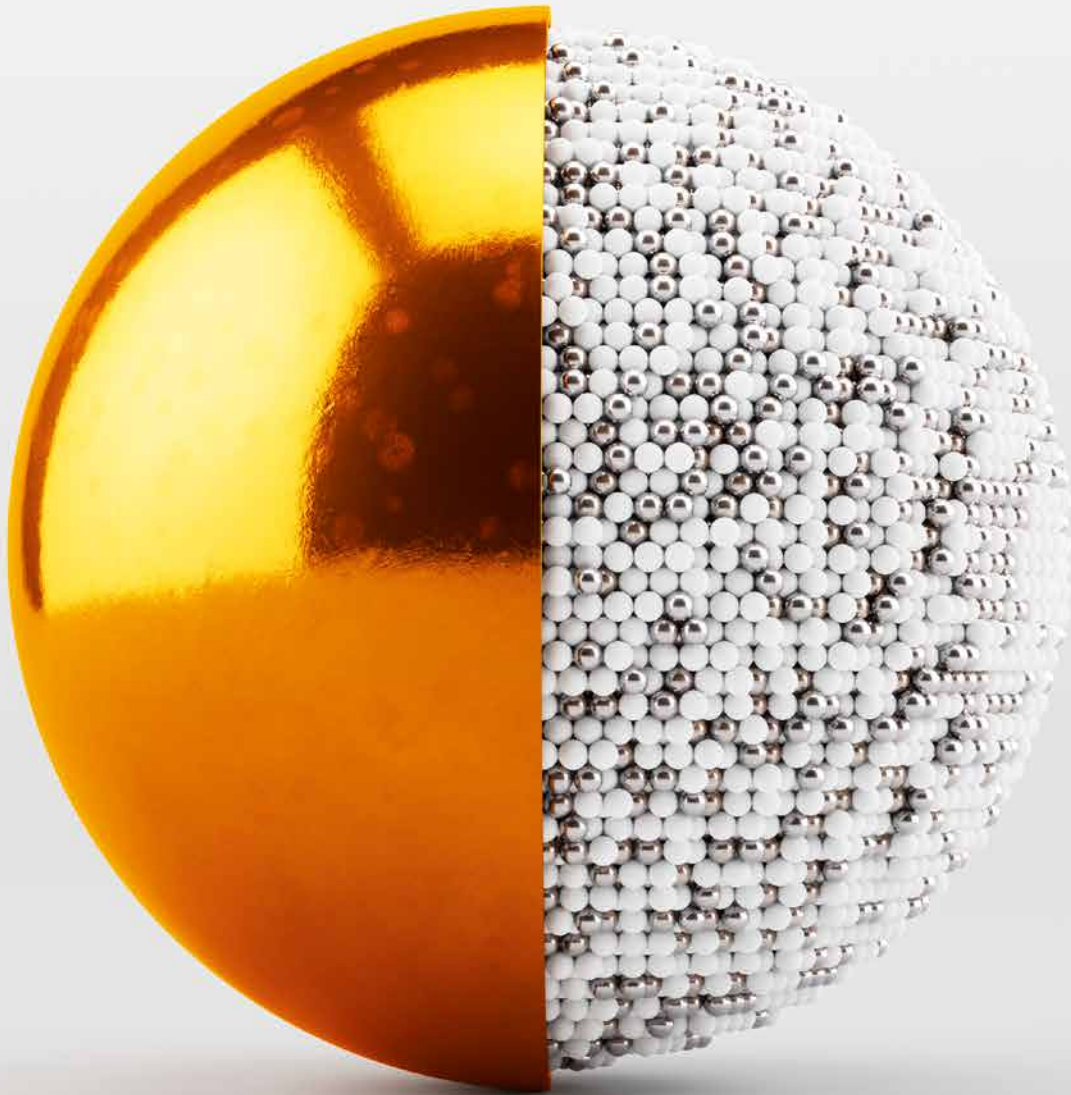


EXCITING.



**HOME OF
CLAMPING**

INVISIBLE. INDISPENSABLE.

Most people don't even notice the products from AMF. And yet, in many cases, their sophisticated technologies are what make smooth production possible in the first place. This is because cost-effective production processes depend on innovative developments that increase efficiency by shortening setup times.

The innovative strength of AMF takes centre stage as a strength that sets standards. The concentrated expertise of dedicated people ensures the continuous further development of technologies that make production processes ever more efficient. Our developers and specialists are driven by the idea of reducing set-up times and thereby extending machine running times. A plan that is working: our innovative technologies are already helping to optimise processes and increase production in many areas of application.

It goes without saying that our products and solutions are made for all sectors and branches of industry. We will undoubtedly find or develop the right possibility to optimize the production process for each specific application by fast and safe clamping operations.

We support our industrial partners from the following sectors: automotive, mechanical engineering, medical technology, wood and plastics industry, food industry, aviation, automation technology, chemical and pharmaceutical industry are just the most important examples.

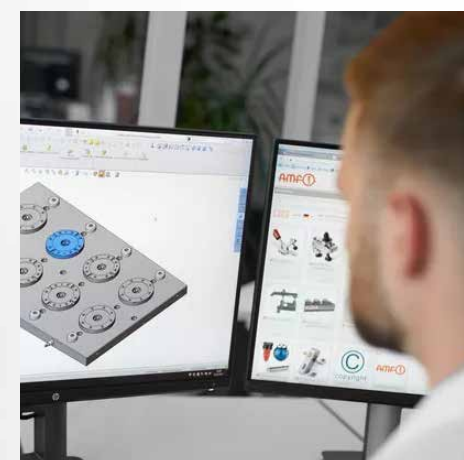


A comprehensive product range is the best prerequisite for a wide range of requirements. It also provides the basis for challenges that cannot be solved with the standard programme. In such cases, our specialists develop a customised solution and adapt the products precisely to the respective requirements. And as a full-service provider, AMF always offers the option of combining systems to get the best out of them.

Requirements for which there initially appear to be no solutions are the most exciting challenges for our experts. This is where our innovative spirit comes into play alongside our experience in various sectors. This begins with customised planning for the respective requirements. Our design engineers combine various methods to optimise the products. The result is optimised clamping solutions for the respective requirements - and everyone involved benefits from this.

Combining different products often also means using different systems. Thanks to our extensive product range and comprehensive expertise, we can draw on the full range of possibilities. The complexity of the project business requires holistic process support in order to ensure maximum efficiency in all phases. This is where AMF's strengths as a full-service and system provider pay off at all levels.

SUPERIOR. CONVINCING.



UNIQUE. VERSATILE.

With more than 5000 products from the fields of clamping systems and automation technology, AMF, as a leading manufacturer, is always in a position to fulfil every requirement and every need. It is not just a matter of supplying the desired product - our experts always use their know-how to optimise productivity in the manufacturing process with innovative solutions.

08/09 Clamping technology

- 10/11 Zero-Point-Systems
- 12/13 Hydraulic clamping systems
- 14/15 Magnetic clamping systems,
Vacuum clamping systems
- 16/17 Single and multiple clamping systems
- 18/19 Modular fixture systems,
Block-clamping systems
- 20/21 Toggle clamps
- 22/23 Standard clamping elements

24/25 Automation technology

- 26/27 Wireless sensing systems,
Grippers
- 28/29 Marking and cleaning tools
- 30/31 Smart Automation

32/33 Reduction of set-up times

CLAMPING EFFECTS.

Energy has a special effect in all successful systems. All of our clamping systems have been developed to make manufacturing processes more efficient. With different focal points and innovative technologies, they constantly open up new possibilities.

Sometimes it is only small changes that bring major benefits for certain applications. Recognising such conjunctions and details requires a trained eye, a lot of experience and a feel for practical applications. But there is something else that characterises our engineers and designers: this unbroken passion for constantly improving processes and exploiting additional savings potential. This is the real driving force behind our unique range of clamping systems, which reflects our innovative strength.

Quality – made in Germany

Our high quality standards are reflected in every single one of our products. Our decades of experience and comprehensive expertise enable us to develop first-class solutions that guarantee maximum precision and reliability. By continuously developing our existing products, we set standards in clamping technology and always offer our customers innovative, high-performance and economical clamping solutions.

ZERO-POINT-SYSTEMS

A revolution in the zero point clamping technology market that proves its technological superiority in many areas of application. High pull-in, locking and holding forces ensure perfect clamping, while the many variants emphasise its versatility.

The efficient zero-point clamping system with its high-precision clamping modules has proven itself in everyday production, regardless of whether it is used in mechanical engineering, the automotive, food and pharmaceutical or chemical industries. Minimised setup times thanks to fast fixture and workpiece changes increase machine running times and thus boost productivity.

The advantages at a glance

- Increase in machine running time
- Up to 90% less setup time
- Uniform interface for all machines
- High repetition accuracy < 5 microns
- Positioning and clamping in a single operation
- High holding forces of up to 105 kN, high pull-in and closing forces of up to 40 kN
- Stainless steel
- Large intake catchment

Innovative technology that pays off quickly

We will be happy to explain how the zero-point clamping system can be used in a targeted manner and what savings potential can be realised in individual cases.



Catalogue

HYDRAULIC CLAMPING SYSTEMS

The principle of hydraulic clamping technology forms the basis for an extensive range in this product segment, which is continuously being expanded with innovations and highlights in order to be able to offer the optimum solution for every requirement at all times.

Hydraulic clamping systems from AMF impress with their wide range of variants. As a result, they fulfil every requirement in the individual areas of application. The range includes products for pressure generation, hollow rod and built-in cylinders, screw-in and block cylinders, pressure-pull cylinders and swing clamps, vertical clamps, link clamps and toggle clamps, pull-down clamping elements, centring clamps, support elements, compensating clamps and low-pressure clamping technology products.

The benefits at a glance

- Great variety with many combination opportunities
- Tried and tested for decades
- Excellently suited for series production
- Very good energy efficiency with AMF pump units



Quality in all variants

The variety of the offering in hydraulic clamping technology as well as the quality of every single product is impressive and convincing.



Catalogue

MAGNETIC CLAMPING SYSTEMS

Utilising the power of the magnetic clamping field to make all surfaces accessible for machining – that is the basis of AMF's innovative technology. The powerful magnetic clamping systems achieve maximum perfection with constant clamping.

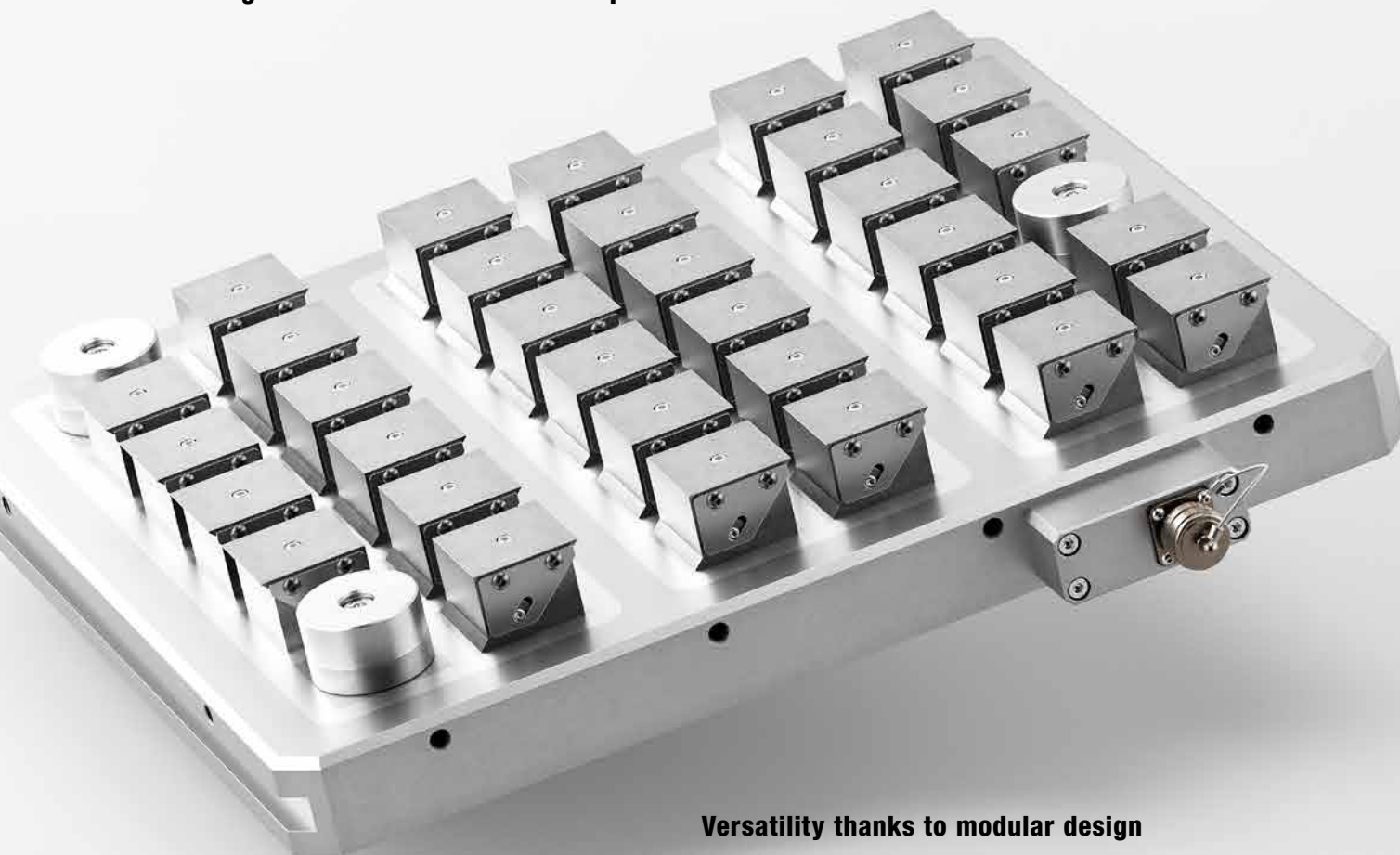
The innovative electro-permanent AMF magnetic clamping technology proves its strengths in performance and handling in countless applications every day in practice. The successes are obvious, as optimised processes and reduced machining times increase efficiency.

The advantages at a glance

- Very high clamping force up to 384 kN
- 5-side processing possible
- Significant reduction of the setup time



Catalogue



Versatility thanks to modular design

The magnetic clamping system is used just as successfully for heavy milling as it is for high-speed machining.

VACUUM CLAMPING SYSTEMS

When time is of the essence, vacuum is used to clamp the workpiece for 5-sided machining. In doing so, the compressed air on the AMF vacuum clamping plate is sufficient for secure clamping.

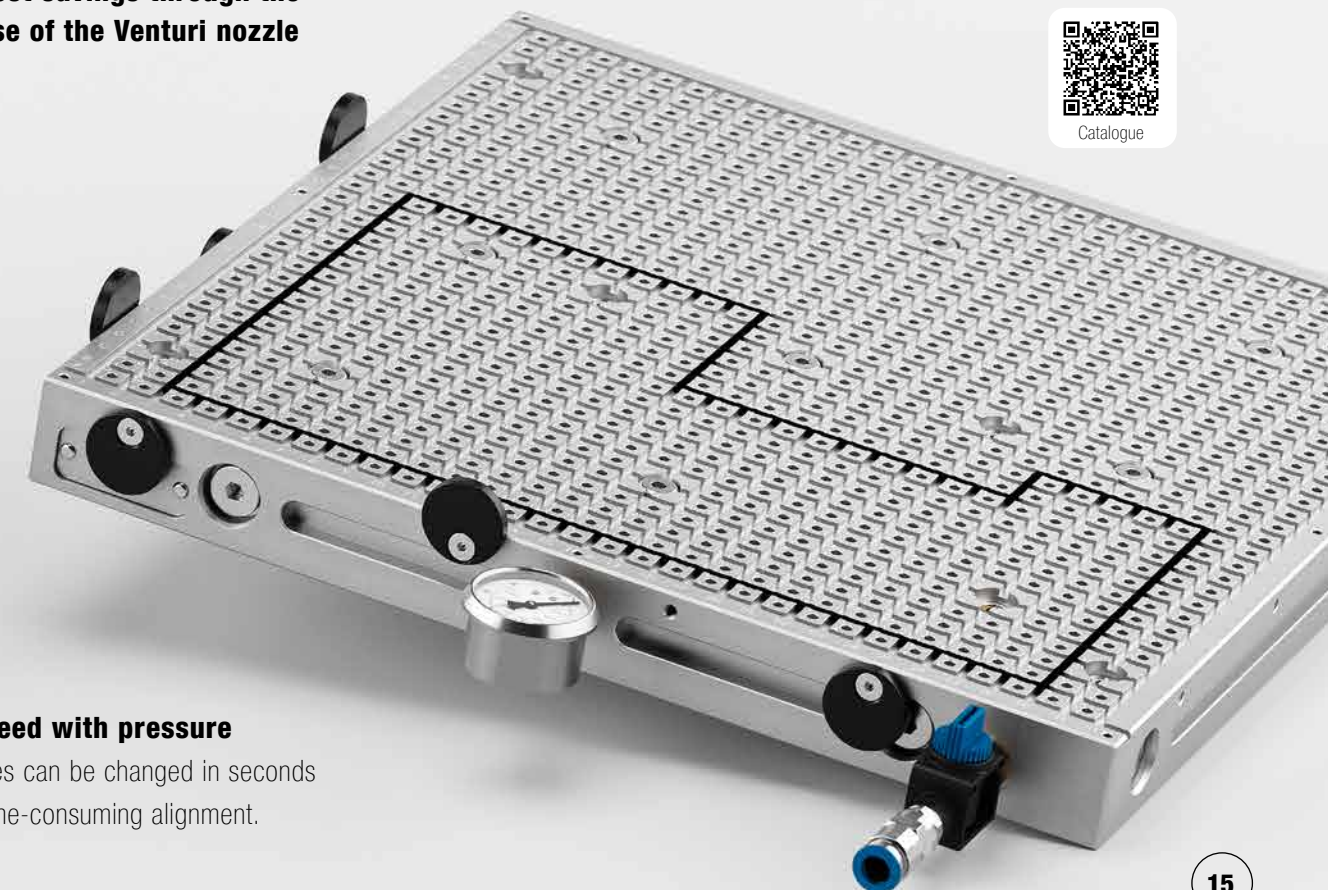
The special fixture makes 5-sided machining easy and protects the workpieces from damage. Several suction points also make it possible to clamp several different workpieces at the same time. In addition to vacuum clamping plates, the AMF range also includes adapter mats and plates, mounting blocks, vacuum pumps, liquid cutters and other accessories.

The advantages at a glance

- High holding forces
- Height-adjustable eccentric stops for easy positioning
- Integrated mounting bores for the AMF zero-point clamping system
- Cost savings through the use of the Venturi nozzle



Catalogue



More speed with pressure

Workpieces can be changed in seconds without time-consuming alignment.

SINGLE AND MULTIPLE CLAMPING SYSTEMS

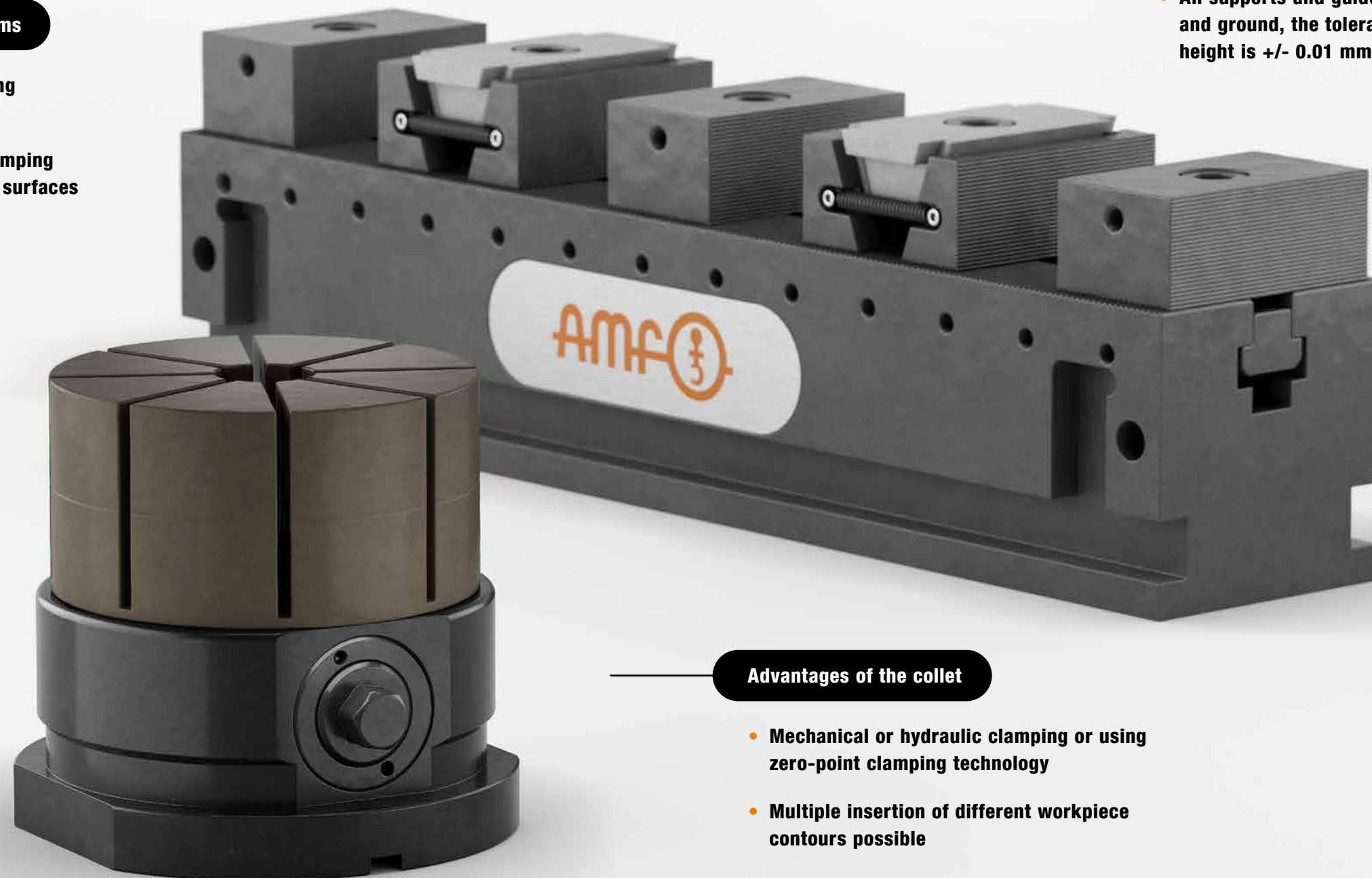
The vice or collet chuck are the classic solutions for smaller components. The modular multiple clamping systems also save a lot of time, as several different workpieces can be clamped at the same time. Precision and safety are always guaranteed.

Advantages: multiple clamping systems

- Up to 16 clamping points, depending on workpiece size
- Easy and precise setting of the clamping jaws through the serrated support surfaces
- Usable on machine tables, fixture and rapid-change systems
- Additional savings potential in combination with the AMF zero point clamping system

Advantages: pneumatic vice

- Special development for machining single and series parts
- Adaptation of the clamping force to different workpiece requirements
- All supports and guides are hardened and ground, the tolerance of the support height is ± 0.01 mm



Advantages of the collet

- Mechanical or hydraulic clamping or using zero-point clamping technology
- Multiple insertion of different workpiece contours possible
- Radially evenly applied clamping force, perfect for thin-walled workpieces

Proven in practice

Our hydraulic or mechanical collets, the pneumatic vice and the multiple clamping systems offer optimum conditions for safe and rapid clamping processes.



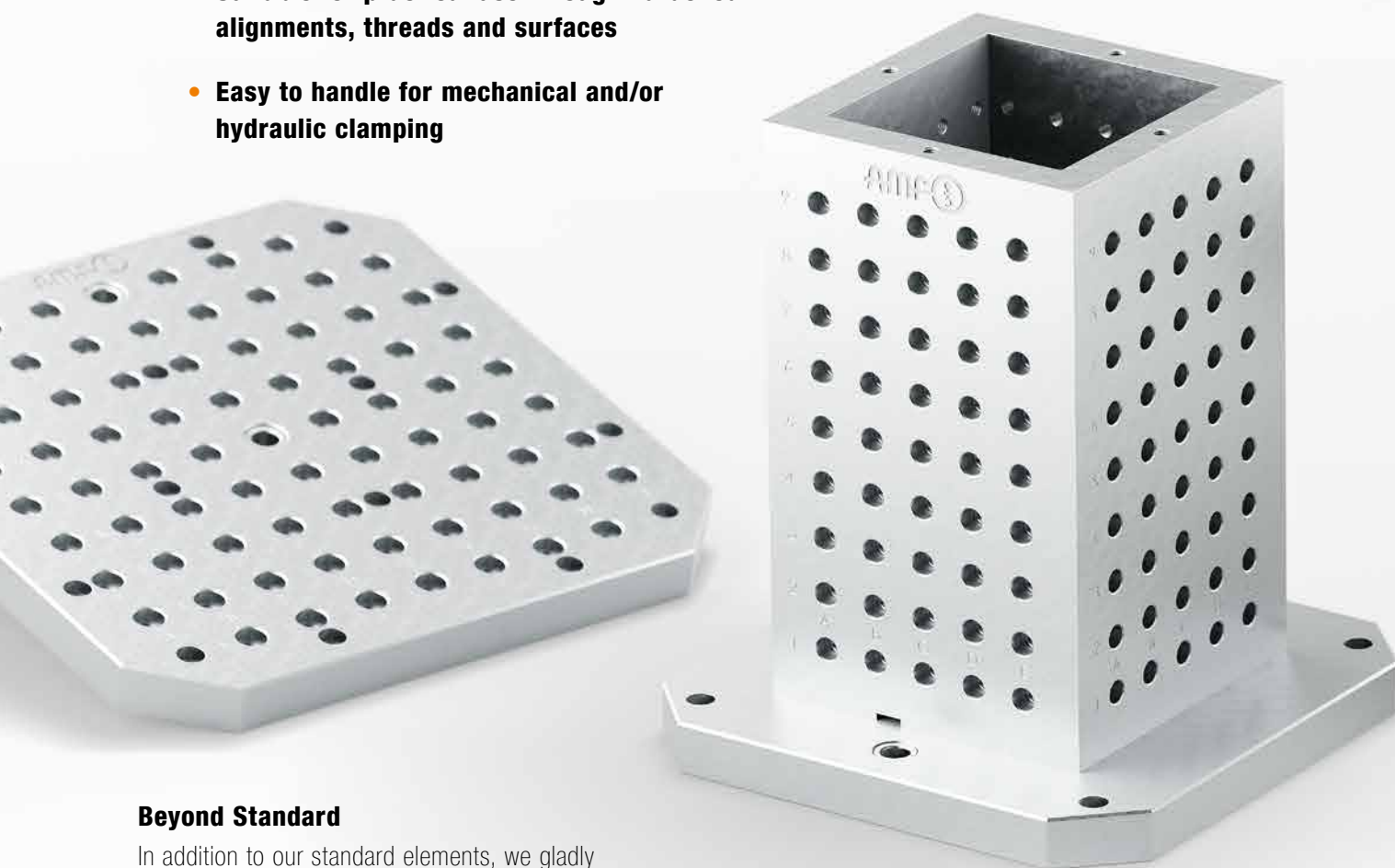
MODULAR FIXTURE SYSTEMS

Flexibility has become the key to successful manufacturing technology. The response of AMF are modular fixture systems that make fixture construction faster and more efficient.

The principle is very simple: pallets, angles and cubes with grid holes form the basis, while the other components of AMF's modular fixture systems are mounting, positioning and clamping elements in two sizes. In combination with our CAD library, we offer everything you need to optimise machine running times and setup times.

The advantages at a glance

- 100% benefit, as every bore can be used
- Standard dimensions for machine tables according to DIN 55201
- Suitable for practical use through hardened alignments, threads and surfaces
- Easy to handle for mechanical and/or hydraulic clamping



Beyond Standard

In addition to our standard elements, we gladly offer custom sizes to suit your needs.

BLOCK CLAMPING SYSTEMS

Workpieces with different heights represent a challenge for the clamping technology. The solution is the block-clamping systems from AMF with stepless adjustment and easy handling.

Sophisticated technology that impresses with flexibility, safety and speed: our block-clamping systems are excellently suited for use on milling machines, CNC machines and machining centres. Spacer elements adjust to the workpiece height, and the patented tie pull rod ensures for a secure hold with the interlocking.

The advantages at a glance

- Quick clamping and unclamping of the workpiece using just one bolt
- Max. clamping force up to 45 kN
- Slot dimensions 12 - 36 mm, clamping height up to 4000 mm also possible
- Less space needed, less weight, closed design



Flexible and expandable

The block-clamping systems can be inexpensively expanded through standardised spacer elements.

TOGGLE CLAMPS

The versatile range offers the greatest possible safety when it comes to lasting rationalisation successes. There are virtually no limits to our pneumatic or manual toggle clamps in terms of application areas and industries – and this also applies to their particular durability.

The AMF quick-release portfolio is developing dynamically. New variants that are based on the specific requirements in practice are always being added to the proven technology. The wide and fast opening for the exposure and unimpeded removal of the workpiece is an essential common feature. This applies to manual vertical and horizontal toggle clamps, sliding and hook-type toggle clamps, as well as to quick-action clamps with stepless clamping height adjustment and also to the pneumatic version with status monitoring for automation.



The advantages at a glance

- **Wide range of products for every application requirement**
- **Interlock through toggle joint principle**
- **Ergonomic 2-component handle**
- **Safety clamping piece with finger protection**
- **Interlock for clamping screws**
- **Rivet is stainless steel**
- **Robust for ambient temperatures from -10°C to +80°C**

Easy play with strong types

Favourable power and movement conditions as well as easy handling in long-term use characterise the many toggle clamp variants. Special designs according to individual specifications are possible at any time.



STANDARD CLAMPING ELEMENTS

They are all quick and easy to use – and the many variants for different clamping options keep their quality promise at the highest level. Wherever effort can be simplified and processes optimised, our standard clamping elements are in use, making production more economical.

With such a wide selection, there is something for everyone – for large or small components, our versatile range always offers the necessary clamping option. All of our standard clamping elements are based on proven technologies. Screw jacks, clamping arms, support blocks, alignment and supporting elements, clamping bolts and floating clamps, pull-down clamps, eccentric and centring clamps in many variants and with the appropriate accessories leave nothing to be desired.

The advantages at a glance

- Comprehensive portfolio for every requirement
- Proven for decades in all sectors
- Strict quality controls
- Secure power transmission
- Design in accordance with DIN regulations
- Quick and easy handling



Honoured: more flexibility

Versatility that sets new standards with innovative demands: the modular screw block as a winner of the FOCUS OPEN 2020 GOLD is a good example.



Catalogue

ECONOMIC MIRACLE.

Automation and low costs – at first this sounds like irreconcilable contradictions, but integration into existing machines makes additional unmanned shifts possible without high investment costs. The simple principle, modular structure and great flexibility characterise the systems from AMF for low-cost automation.

The dream of uninterrupted production can actually be implemented without robots or automation cells. In doing so, the existing machine tools are used intelligently: the integration of grippers and components of the wireless sensing system creates an innovative automation system that increases efficiency virtually overnight by extending the machine time.

Automation through integration

The modular design ensures great flexibility. With low investment costs, enormous efficiency targets can be achieved and expectations often exceeded.

WIRELESS SENSING SYSTEMS

The innovative technology forms the basis for fully automated, unmanned production processes. For this, the individual components of the system are combined according to the respective customer requirements, so that the highest process reliability is guaranteed around the clock for individual requirements.

With a wide selection of sensors, the AMF system offers entry into fully automated production, both in clamping technology and in modern handling and storage systems. The sensors detect the conditions of the manufacturing environment, and Sender Units transmit these wirelessly to the gateway in an energy-saving manner. This is where the communication between the sensor and the machine control system takes place. The optional connection to a WLAN router also opens up access to the web-based user interface of the gateway via tablet.



Catalogue



The advantages at a glance

- High process reliability
- Enormous increase in economic efficiency
- Complete control
- More flexibility
- No annoying cables



More freedom automatically

Cost-effective automation enables unmanned production and thus creates more freedom for qualified employees to exploit the potential of their core competencies.

GRIPPERS

The effort to turn machines into nocturnal creatures is less than expected: our grippers take over the task of inserting workpieces into the clamping fixture, thus enabling unmanned shifts around the clock.

The key to our low-cost automation is the gripper technology that is integrated into existing machines, thus achieving an enormous increase in machine time with very little investment. The self-resetting counterbalance elements facilitate the exact positioning of the parts and relieve the machine spindle. Our pneumatically driven grippers are available in different versions.

The advantages at a glance

- High, adjustable gripping force
- Suitable for a wide variety of workpieces
- Combined application of different gripper types
- Overload protection prevents damage



Catalogue

The alternative to robots

Various gripper inserts complete the range for low-cost automation and make it even more flexible.

MARKING AND CLEANING SYSTEMS

With low procurement costs for Marker, Writer and Cleaner from AMF, these products also make an important contribution to cost-effective automation. The long service life and high speed also speak for themselves.

A high-quality marking result in the best time with a compressed surface. Added to this is the thorough cleaning of the clamping fixture and the entire interior of the machine, which practically takes place by itself. Our tools are well thought out in every detail and, with the highest functionality, contribute to higher machine running time and economic efficiency.

Advantages of AMF-Marker and AMF-Writer

- 75% reduction in marking time, zero-point clamping technology
- Also suitable for round surfaces (up to 15°)
- Labelling of surfaces with a hardness of up to 57 HRC



Benefits of the AMF Cleaner

- Repeatable, systematic and thorough cleaning
- Intermediate cleaning even during the machining process
- No risk of injury from swarf



A tidy job

With two versions, the AMF Cleaner ensures optimal cleaning of clamping fixtures and the machine interior.

SMART AUTOMATION

With the practical solution for automated workpiece handling, the productivity of turning and milling machines can be increased enormously. Unmanned production at night or at the weekend is also a real option. The change of production orders is carried out quickly and flexibly, and no special programming knowledge is required for operation.

Automation can be as easy as this: a workpiece trolley that acts as a component store with various drawers and always remains mobile. Grid plates for mounting the components are available for different part geometries or can be completely customised. In addition to this, the gripper unit is with a double gripper for the safe loading and unloading of raw and finished parts. This sophisticated robotic system not only saves a significant amount of time, but also allows specialist personnel to be deployed much more effectively.



The advantages at a glance

- User-friendly operating concept, no special robot knowledge required
- Implementation on new and existing machines
- High workpiece capacity, flexibly expandable
- Compact and space-saving with the smallest footprint on the market

Well thought out in every detail

The robot loading system offers maximum efficiency in a small space with maximum flexibility and adaptation options.

SAVES TIME.



Reducing setup times is an important factor for efficient production processes. There is a simple formula for success here: time is money. When it comes to setting up the clamping technology, minimising setup times also means increasing productivity.

Firmly convinced that it is fundamentally possible to increase efficiency in production, our designers' innovative strength is aimed at identifying additional savings potential in the production process in order to fully exploit it. In doing so, a change or combination of methods of clamping technology can prove to be a success factor. Adaptations of standard solutions, customised concepts or planning for individual requirements often form the basis for decisive advantages and enormous time savings. For the optimal solution in each individual case, our experts carry out comprehensive tests to identify further savings potential, even with existing machines.



FAMILY VALUES.

The claim to offer and develop the best quality is also a clear commitment to reliability. In particular, this applies to the development of innovations in relation to the products, to the service, to the interaction and also to the economic stability.

Economic growth goes hand in hand with a growing sense of responsibility. Social commitment, respect and openness in dealing with people reflect this, as does AMF's self-image as a regional and international employer. As a family company, our employees benefit in many situations from the personal nature of recognition, support and motivation. An open ear for the individual life situation, the greatest possible flexibility and a lot of understanding characterise the management style and thus the working atmosphere.



The AMF success story began when Andreas Maier founded the company in 1890. The lock factory in Fellbach quickly became an international company that developed into a competent partner by specialising in various clamping technology systems. With modern team structures and a focus on our core competences, we will continue to take on responsibility in the future and look forward to new challenges and exciting projects.

RELAXED.



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