Press release

Application Femalk, Hungary

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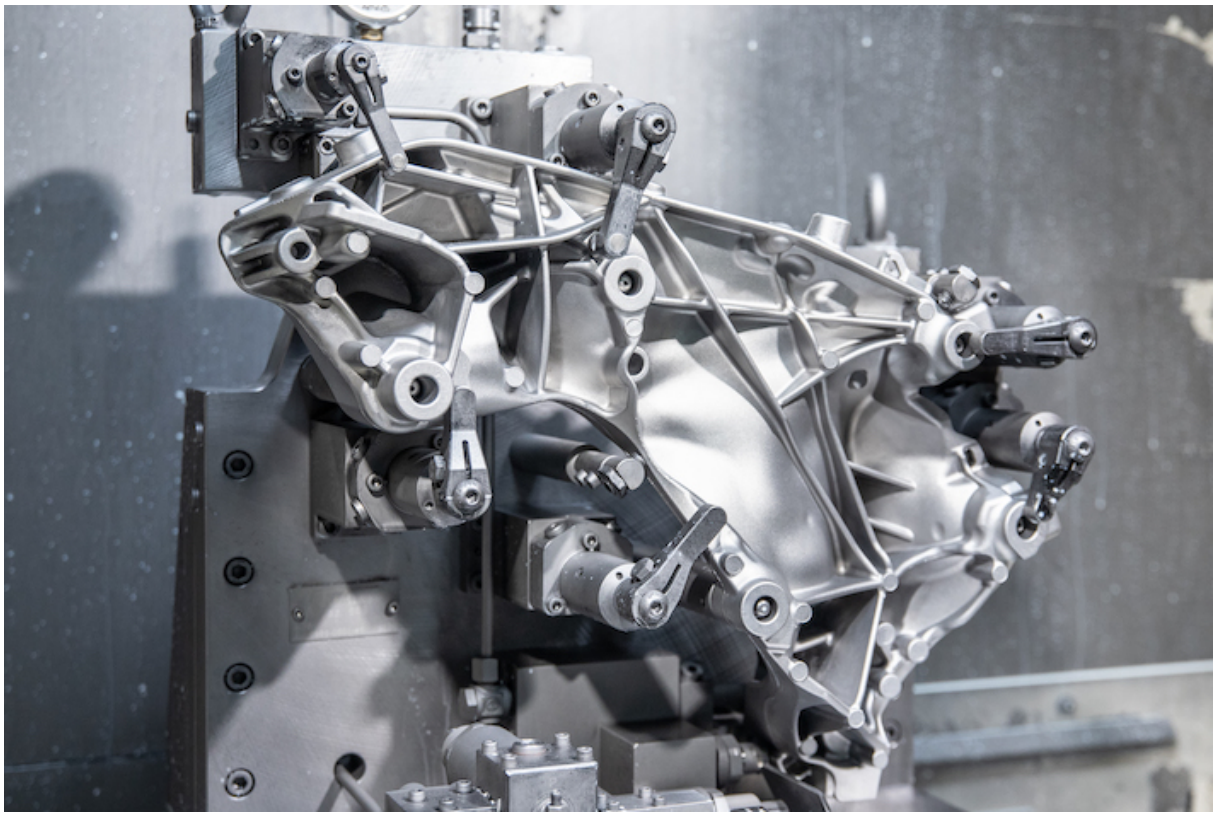
AMF clamping technology supports production at pioneering Hungarian supplier



"There is one of our parts in almost every car"

(Fellbach/Dunavarsány) It is well known that Eastern Europe has excelled in metalworking for a long time. But one supplier in Hungary stands out above the rest. A manufacturer of aluminium die-cast parts for major OEMs in the automotive and large-scale industries processes these parts into important components. A complete system for workpiece clamping on the machine table is created from a clever fixture construction and efficient zero-point clamping technology from Andreas Maier GmbH & Co. KG (AMF). It is so flexible that the machines can be set up quickly for both mass production and small-series production. Even the most prestigious customers are impressed.

"Through consistent investments in top-class machining and manufacturing technologies, in the past few years Fémalk has developed into one of the most in-demand manufacturers in the processing of aluminium die-cast parts in Eastern Europe", Samuel

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Netzer, AMF sales engineer for Northern and Eastern Europe, reports. The company is proud of how their business has developed since 1989. The engaged and qualified employees produce castings weighing from 30 g to 5,500 g in the modern factories, thanks in no small part to the modern clamping technology from AMF. It is not hard to believe the company spokesperson when he says that "almost every car in Europe has at least one of our parts in it".

Cycle times can only be achieved with modern clamping technology

In order to achieve this, Fémalk invested not only in buildings, machines and employees, but also in highly efficient clamping technology. What began with individual pilot projects and simple hydraulic clamping elements from AMF has been expanded in recent years into effective clamping technology with automation and zero-point clamping technology. This has reduced set-up times so significantly that machine utilisation has soared. And all thanks to a clever in-house design engineer. Gábor Soós, who is responsible for fixture construction, has always thought ahead and, together with AMF representatives, searched for optimisation potential. The clamping technology is now so flexible, as well as partly automated, that the machines can be set up just as efficiently for small quantities, such as for a Bentley, as for mass production for VW.

In addition, the company has equipped 15 processing centres with the most modern zero-point clamping technology from AMF. It started in 2015 with a simple angle clamp, but they now have a range of around 200 fixtures that are equipped with bolts for the zero-point clamping interface. The specially developed fixtures include a base plate with pull-studs for each machine, which are held by the zero-point clamping modules. The consultants at AMF were able to provide efficient support with many tips and a wide range of products. The products the company uses include swing clamps, clamp arms, stop valves and pressure accumulators, in addition to quick-release couplings, pressure gauges, vertical clamps or support elements and lines, as well as coupling nipples for media ducts. "The fact that one supplier has so many products in its range has been very helpful for us, and has greatly simplified procurement", emphasises Gábor Soós.

Wide product range from AMF simplifies procurement

Four fixture variants with pressure-regulating valves and multiple media ducts on the base plates ensure maximum flexibility. "This means that, for example, all consumer circuits can be controlled with different pressure levels – and, as an extra feature – they can also be controlled with a delay", Netzer points out. This solution means that the support element can first be extended to hold a workpiece and then the clamping fixtures can be closed.

Setting up during operation

The base plates each come equipped with four K 10 zero-point clamping modules. With a force of ten kilonewton each, they reliably pull in the pull-studs on the base plate with a repetition accuracy of five micrometres (5 µm), close it securely and hold it tightly with a force of 25 kN. The modules are opened hydraulically with an operating pressure of 50 to 60 bar. Because the pressure lines are mechanically closed using spring force after clamping, they can then be disconnected at any time afterwards.

The fixtures are loaded outside of the machine with the aid of a pressure accumulator. This means that the next machining operation can be prepared outside the engine room, while production continues. The components are clamped before being transferred into the machine. This is the only way to keep set-up times to a minimum, so that the parts, which the 42 die-casting machines cast mostly fully automatically, can be processed without any major delays. The series production must handle both small- and large-scale batches, with quantities of between ten and 15,000 units per week. "Small-series production requires a quick change of fixtures to maintain a high level of machine utilisation, particularly at the start-up phase of a new product", Gábor Soós explains.

The parts are used in many major OEM plants around the world

The Hungarians process an incredible 4,000 tonnes of aluminium into die-cast parts every month. Further processing sees these parts turned into a range of products including chassis parts, engine and gear bearings, and electrical circuit housing, as well as complex air-conditioning compressor parts and headlight or thermostat housings. The company delivers these to many OEM plants worldwide, including, for example, BMW, Bentley and Porsche, as well as VW, BASF and Boge. Fémalk ranks as a 1st-tier supplier to most of these companies.

With well-trained, committed and motivated employees and through dynamic growth, the company has developed a significant position in the European supply industry. In addition to the die-casting machines and processing centres, the company also has a wide-ranging manufacturing system that includes six CNC lathes, four washing machines, and drilling and thread-cutting machines, along with special press-in machines, blasting machines or mass finishing machines. The close relationship with the clamping technology experts at AMF has been producing efficient solutions for over ten years. As a result, the zero-point clamping technology from the Fellbach-based company is a firm favourite with the Hungarians and is always included in the planning for each new processing centre.

And no one in the Hungarian company has any doubt that this growth will continue.

850 words, 6,567 characters
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((AMF company information))

Market leader in machine-table clamping

Today, Andreas Maier Fellbach (AMF), originally founded in 1890, is a one-stop supplier in clamping technology and is one of the world market leaders. With a global market presence, the company and its employees always have an open ear for the problems of their customers. By listening to these needs, and through its strong problem-solving ability, professional consultancy, intelligent engineering and high manufacturing quality, AMF repeatedly develops project fabrications and customised solutions for customers as well as standard solutions that succeed in the market again. With more than 5,000 products and numerous patents, it ranks among the top innovators in the industry. Speed, flexibility and 230 well-qualified employees guarantee success at Andreas Maier GmbH & Co. KG. In 2021, AMF earned a revenue of almost 44 million euro.

((Fémalk company information))

Leading European company

Founded in 1989 by Dr József Sándor together with aluminium fabricators, FÉMALK Zrt. is a mid-sized company run by its founder. The company mainly manufactures aluminium die-cast parts for the automotive industry. In addition, surface coating and machining, as well as various other construction processes, are among the core competencies of the approximately 1,200 well-trained and dedicated employees. The company is now spread across three locations. In 2014, a subsidiary was opened in Dunavarsány, which can be considered one of the leading companies of its kind in Europe, thanks to its equipment and structure. Another site was opened - as a green-field project - in Erdőhorváti in 2017. FÉMALK also has its own divisions for product development, parts testing, tool design, tool manufacture and maintenance, in addition to processing. This enables them to provide rapid and independent customer-oriented solutions. Their customers include all the European car manufacturers, among others.

Image directory AMF AWB Fémalk

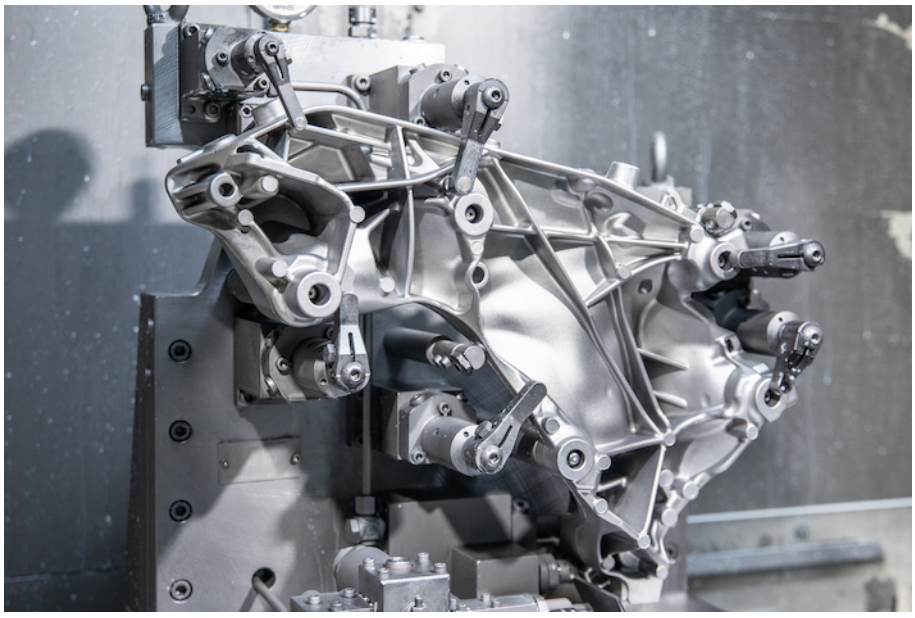

Image no. 116-01 AM_AWB-HU-AWB-HU-Titel.jpg.
Flexible, fast and secure clamping of complex aluminium die-cast parts: Fémalk in Hungary uses the intelligent clamping technology from AMF.
©Image source: Fémalk

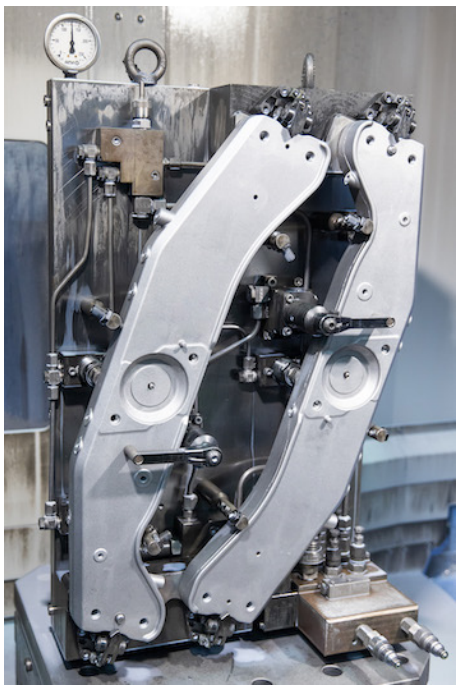

Image no. 116-02 AM_AWB-HU.jpg.

The fixtures include a base plate with pull-studs, held by the zero-point clamping modules, for each of the 15 machines.

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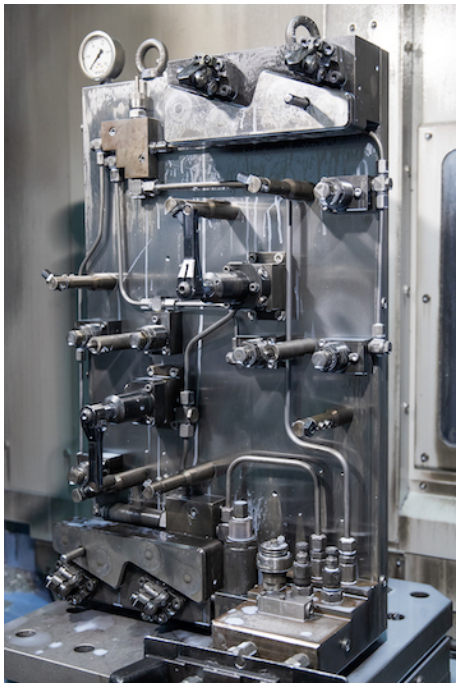

Image no. 116-03 AM_AWB-HU-Vorrichtung.jpg.

The clamping technology is now so flexible, as well as partly automated, that the machines can be set up just as efficiently for small quantities as for mass production.

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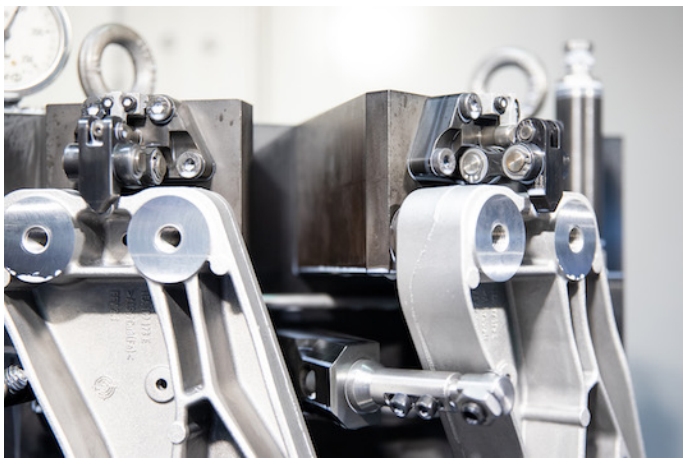

Image no. 116-04 AM_AWB-HU-Detail.jpg.

Fémalk uses 4,000 tonnes of aluminium every month to produce die-cast parts such as chassis parts, engine and gear bearings, and electrical circuit housing, as well as complex air-conditioning compressor parts and headlight or thermostat housings.

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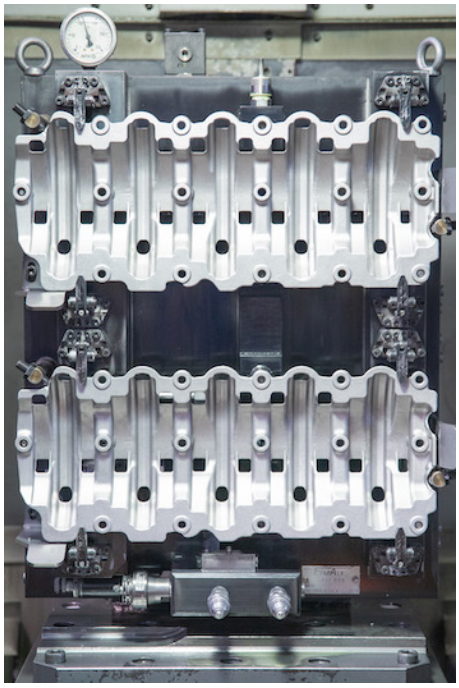

Image no. 116-05 AM_AWB-HU-Pleuellager.jpg.

Products are sent to OEM plants worldwide, including those of BMW, Bentley and Porsche, as well as VW, BASF and Boge.

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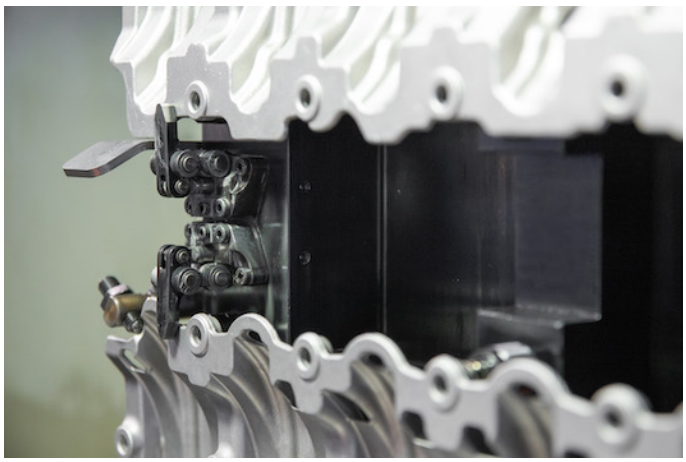

Image no. 116-06 AM_AWB-HU-PleuelDetail.jpg.

Fémalk ranks as a 1st-tier supplier to most of its customers.

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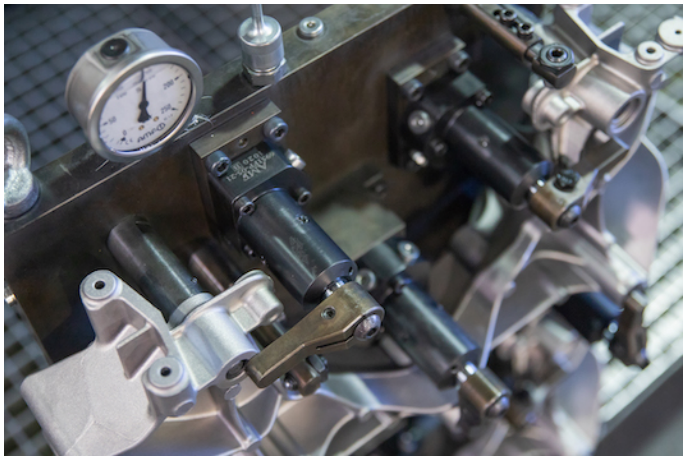

Image no. 116-07 AM_AWB-HU-VorrichtDetail.jpg.

The AMF products it uses include swing clamps, clamp arms, stop valves and pressure accumulators, in addition to quick-release couplings, pressure gauges, vertical clamps or support elements and lines, as well as coupling nipples for media ducts.

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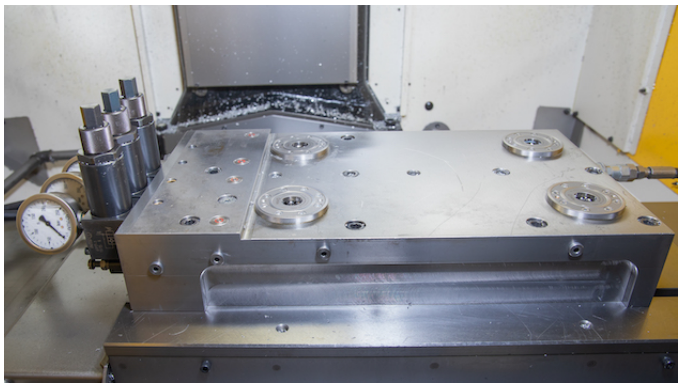

Image no. 116-08 AM_AWB-HU-Grundplatte.jpg.

For each of the 15 machines, the fixtures include a base plate with pull-studs, which are held by the zero-point clamping modules.

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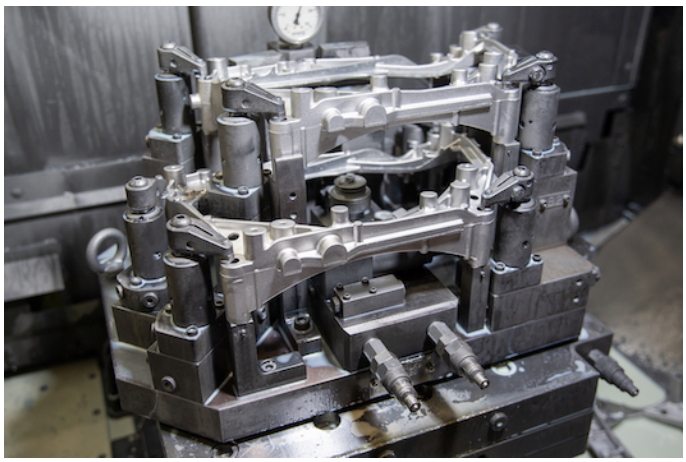

Image no. 116-09 AM_AWB-HU-Komplex.jpg.

Highly complex workpieces can also be fixed securely and flexibly thanks to the clamping technology from AMF.

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Image no. 116-10 AM_AWB-HU-Werk.jpg.

Fémalk in Hungary has developed into one of the most sought-after manufacturers in the processing of aluminium die-cast parts in Eastern Europe through consistent investment in top-of-the-range machining and manufacturing technologies.

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