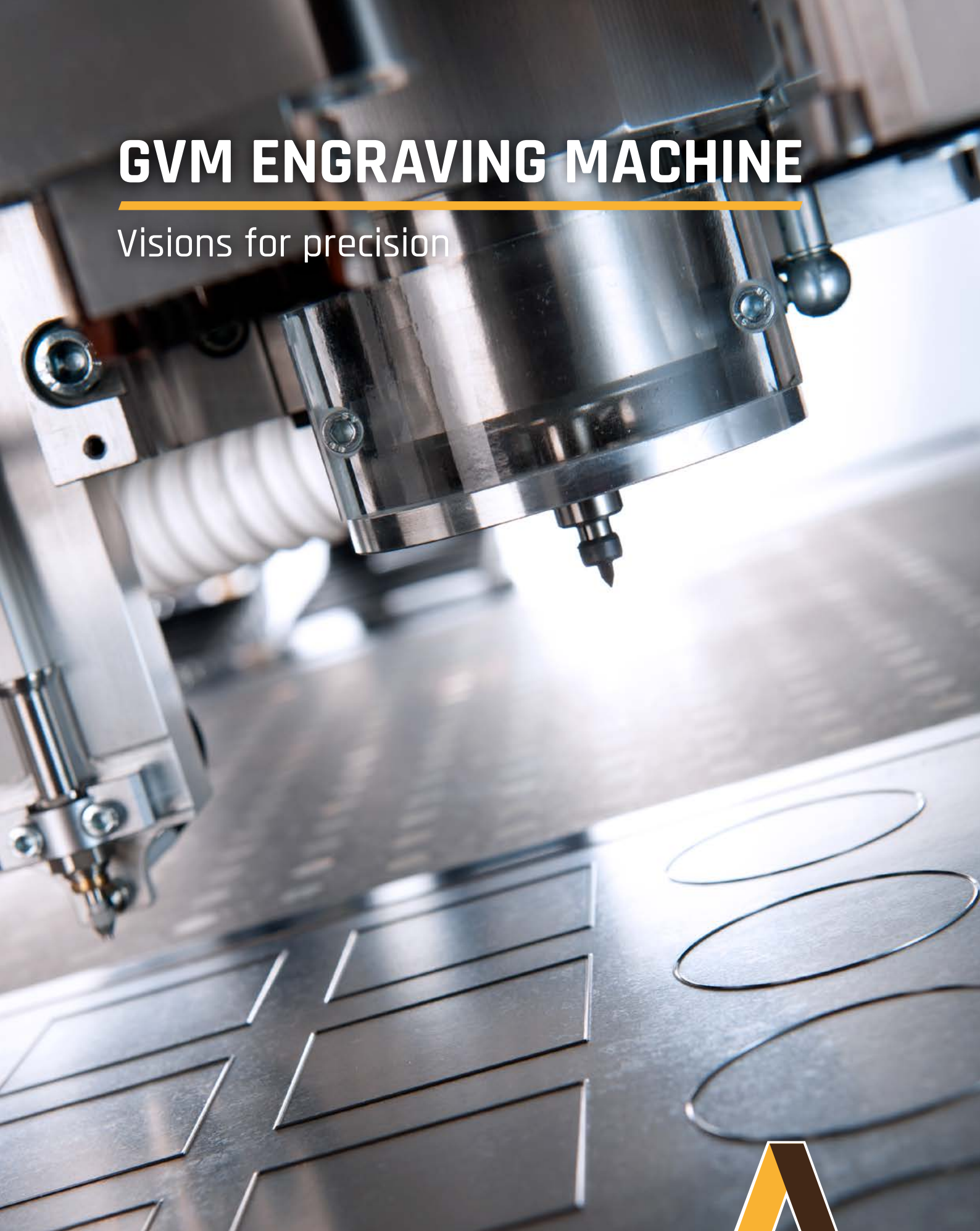


# GVM ENGRAVING MACHINE

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Visions for precision



**Anderson Group**  
ANDERSON EUROPE GMBH





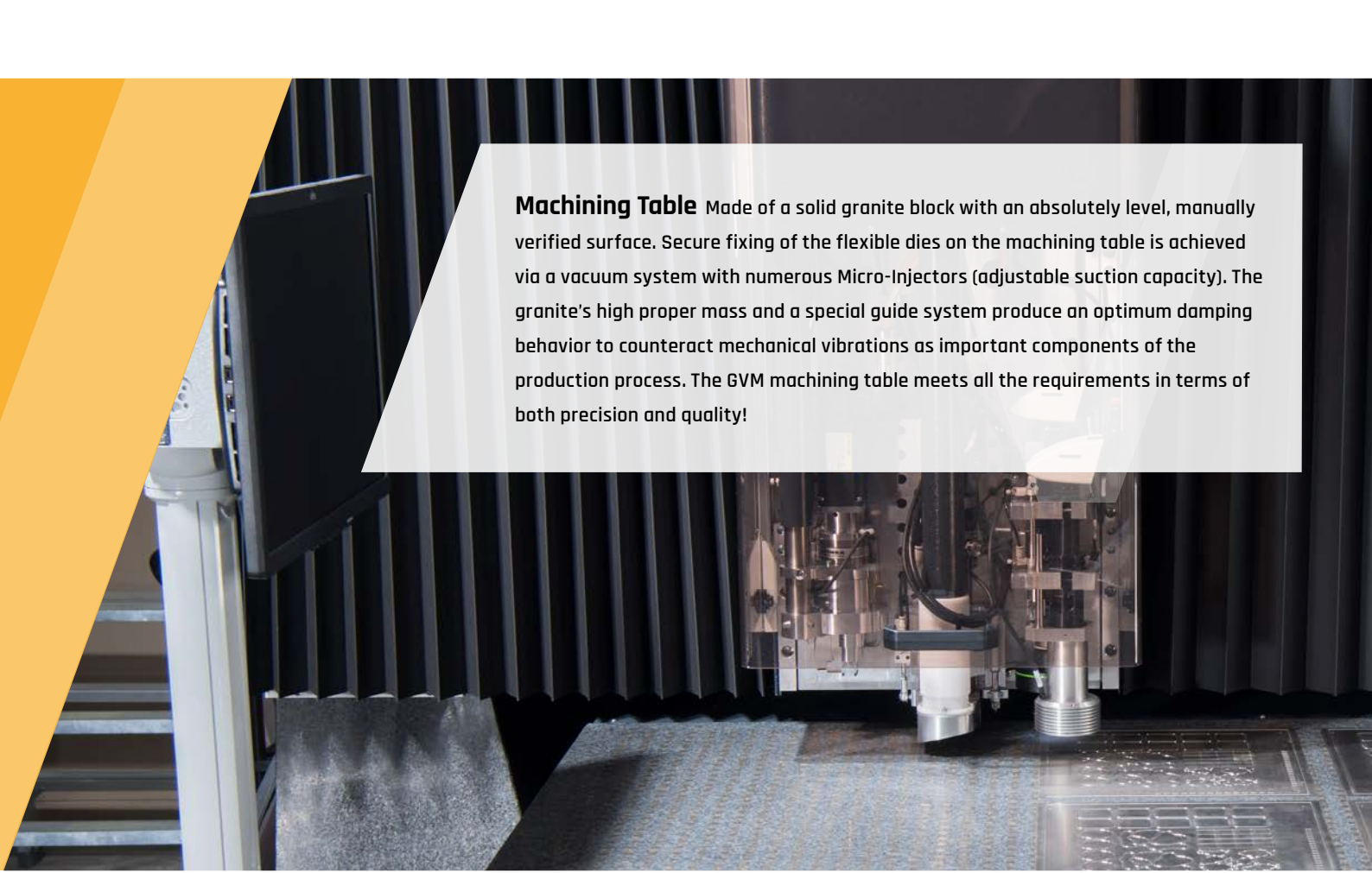
**High-Precision  
CNC Engraving Machine.  
Specifically developed  
concerning the requirements  
for producing flexible dies.  
Worldwide established  
production equipment -  
approved by the manufacturing  
market leaders.**

**Use the GVM to produce Flexible Dies for the Graphics Industry:**

For the manufacture of self-adhesive labels, the kiss-cutting and cutting through (down to the anvil) of foils, all kinds of pressure-sensitive composites, thin cardboard boxes and foam foils as well as an array of woven fabrics and special materials.

**Convincing in quality and performance:**

By ferrochlorid etched flexible dies are engraved with a high-speed milling spindle at a consistently high quality level. An individually programmable sequence and contouring control allows the flexible production of various free formed shapes. Thanks to the quality of the cutting edges post-machining of the flexible dies becomes unnecessary - a major advantage compared to conventional milling machines in which the cutting quality and productivity is impaired by the necessary grinding of the bottom face of the die.



**Machining Table** Made of a solid granite block with an absolutely level, manually verified surface. Secure fixing of the flexible dies on the machining table is achieved via a vacuum system with numerous Micro-Injectors (adjustable suction capacity). The granite's high proper mass and a special guide system produce an optimum damping behavior to counteract mechanical vibrations as important components of the production process. The GVM machining table meets all the requirements in terms of both precision and quality!

## UNIQUE | TECHNOLOGY-DRIVEN

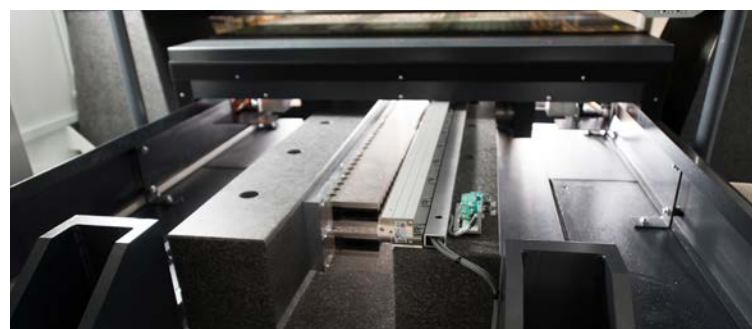
**Key Features** The machine base used for the GVM is natural granite in a quality of a fine-grained structure with an extremely low content of quartz, which offers excellent mechanical properties. As a million year old material granite offers a lot of advantages comparing to common used materials:

- ✓ Outstandingly good damping capacity when subjected to mechanical vibrations
- ✓ Extremely high wear-resistance and long-term stability
- ✓ Considerably harder than steel, free of magnetic influences

These physical properties of the granite base gives the advantage to use pre-stressed air-bearing guides to meet

the outstanding high requirements in terms of a jerk-free and precision positioning as well as the demand for an extremely high availability. The compressed air used as a medium in air-bearing guides prevents all friction and makes virtually maintenance-free working possible.

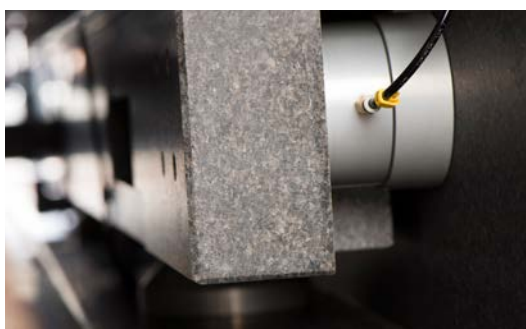
The feed axes of the GVM feature consistent use of linear direct drive technology. Direct drives do not need any mechanical transmission elements (such as ball screws, toothed belts, toothed racks or similar devices) along the force route. As a result, they lend themselves especially well to really high-speed cutting processes (no wearing parts, robust motor technology and no maintenance), due to an excellent control performance and extremely good positioning behavior.





**Adaptive System** The iHOC system (integrated Height Optimized Cutting System) flexibly ensures that the preselected flexible die height between the cutting edge and the bottom face of the die is maintained. The observance of preselected parameters and quality standards during the entire machining process is optimized by the adaptive system.

Flexible dies with different cutting heights and/or cutting opening angles are easy to produce. By including all feed axes remaining material can be multi-dimensionally removed, therefore also tools with special contours can be used.



**Control System** The graphical user interface which is designed to perform the needs of the machine operators is based on an IPC platform by using a Microsoft® operating system. On focus is an optimized production adjustment, which is highly flexible and globally proven. Thus, an individually programmable sequence and contouring system, makes it possible to produce any free-formed shapes. Even complex contours can be engraved to the highest quality (with flexible and dynamic sequences or as machining processes with preset constants). A full integrated online Look Ahead function affects in close collaboration with the direct linear drives actuation a jerk-free positioning, even by the catchiest contour elements.

**Options** The requirements of the production of flexible dies constantly rise. One topic is the processing of perforations. By using the Micro-Perf Add-On on your GVM engraving machine, you'll get the advantage to produce perforations in one step after the engraving job. It makes no difference, if this job needs to do on straight lines or cycles – the Micro-Perf Advanced Add-On will follow the contour as programmed with our CAD/CAM system. Another topic is to increase the degree of process automation, therefore we developed a special kind of a Multi Tool Change System, hereby the GVM engraving machine manages up to 600 milling tools. This option makes it unnecessary to update the standard tool magazine for each production job.

## User Advantages

- Specifically developed...not just based to standards
- Designed for production of High Quality CNC controlled sharpened flexible dies
- Flexible in production for free scalable cutting edge geometries by engraving tool dimensions in flute length, open angle and effective tool diameter
- Remote system via Internet access, available for short-term diagnosis and operator support
- Different models in open frame design as well as complete enclosed sound absorption cover version
- Large working area features a multiple arrangement of different production orders
- Easy Integration into existing network structures via Ethernet interface

## Outstanding Benefits

- Consideration of table surface flatness by correcting deviations in real time by our unique adaptive optional software feature
- Advanced real time 3D tool cutter compensation features the machining of remaining material, i.e. in sharp corners and intersections of various shapes

## Details

- The special design of the milling spindle prevents a negative effect on account of the thermal expansion while maintaining the constant position of the tool tip within the flexible die contour
- Linear direct drive motors and milling spindle are precision water-cooled for maximum temperature stability. The cooling system of the linear drive motors are specifically designed for thermal encapsulation to machine base. Controlled by a precision chiller system features an optional consideration of the machine environmental temperature



## Our Offer

- ✓ The Worldwide Standard for Quality, Precision and Efficiency
- ✓ Approved by a continuous development by consideration of the market requirements
- ✓ An optimized CAD/CAM system provides optional a simple and unified workflow
- ✓ Several options available - scaleable concerning your requirements
- ✓ GVM LongLife engraving tools based on CBN (Cubic Boron Nitride)
- ✓ Consumables like precision spring steel as well as corresponding accessories
- ✓ An outstanding high reliability ensures your invest over many years
- ✓ Made in Germany

# GVM ENGRAVING MACHINE



## Specifications

<b>Working areas:</b>	X 800mm (31,5") x Y 800mm (31,5") X 1200mm (47,2") x Y 1200mm (47,2")
<b>Workpiece Clamping:</b>	Solid Granite Block, Vacuum System with Micro-Injectors, optional featured by our unique inline Flatness Compensation
<b>High Speed Milling Spindle:</b>	Air-Bearings, Water-Cooled, max. 100.000 rpm, ATC (Automatic Tool Change)
<b>Control System:</b>	High performance CNC system, based on IPC (Industrial PC) powered by Multi-Core i7 processor, featured by Microsoft Windows® 64 Bit operating system, 19" Touch Display, SSD (solid state) hard disk, Multi Language HMI
<b>CCD-Color Video System:</b>	Precision digital video system, variable magnification (up to 120 fold), LCD Screen and cold ring-light lamp
<b>Tool Change:</b>	Manual / Automatic, 24 Tools (different options with up to 600 Tools available as Multi-Tool-Change-System)
<b>Elec. Power Supply:</b>	Approx. 14 kVA / 3 / N / PE 400 V 50 Hz (other specification on request)
<b>Compressed Air Supply:</b>	8 bar +/-5 % to ISO 8573-1 class 3.4.1 at a rate of 260 NI/min.
<b>Space Requirement (HxWxD):</b>	Approx. 3000 x 4000 x 5000 mm (10 x 13,5 x 16,5 ft)
<b>Machine Weight (approx.):</b>	GVM 800/600 6.500 kg; GVM 1000/800 7.500 kg; GVM 1200/1200 9.000 kg

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