



MARKATOR®-PRODUCT RANGE

**TABLE-, HAND-HELD AND
COMBI MARKING SYSTEMS**



MANFRED BORRIES GMBH

MARKATOR® ABOUT US

We are experts for the unforgeable, durable and economic marking of industrial parts.

For over 20 years MARKATOR® has been developing and manufacturing high-quality systems for pin and scribe marking. We also produce hand-held and machinery marking tools to specifically match the individual and exclusive needs of our customers.

Our complete quality philosophy plays a fundamental role in every part of this process: beginning with the initial, competent project consulting, throughout the customer-related development process, and culminating in the completed marking system, our attention to detail meets the highest expectations.

Through continuous dialogue with our customers concerning evolving needs and applications, we secure a decisive advantage in furthering product optimisation and innovation within our product range.

Our complete offer to you as the first choice in marking systems is rounded out with a dedicated professional service team, composed of our highly trained and qualified employees.

Come see for yourself! We're looking forward to meeting you!



FUNCTIONALITY OF PIN AND SCRIBE MARKING

Pin Marking

A full carbide pin oscillates by either pneumatic or electronic means. It is moved by two carriages in the x and y directions and impacts the material with an up and down movement. Depending on the impact frequency, the marking either becomes a continuous or a single dotted line – perfect for

characters, logos or two-dimensional codes, e.g. The marking technique of placing single dots close to one another minimizes force effects on the material. This makes pin marking ideal for the marking of highly sensitive parts.



MARKATOR® Pin Marking Systems

- Custom programming
- Extremely fast marking time
- Very high quality
- Easy to use software
- Simple handling with a high-resolution display
- System expansion with additional components (consistent modular design concept)

Scribe Marking

In contrast with pin marking, the scribe pin does not impact the material with an up and down movement, but is rather pressed into the material. In this position the carbide or diamond scribe pin is moved by two carriages in the x and y directions.

The MARKATOR® scribe marking system offers optimal flexibility and high quality at maximum marking speed. The system is suitable for almost all materials – from hardened steel to pressure-sensitive finished products.



MARKATOR® Scribe Marking Systems

- Custom programming
- Deep marking free from distortion
- Minimal force effect
- Durable and quiet marking under full load
- Compact design
- System expansion with additional components (consistent modular design concept)

Single Dot Characters

Raster fonts are created in uniform size by single dots. The typeface is 5 x 7 and 9 x 13. The result of the special matrix typeface is a font without continuous line that prevents the creation

of predetermined break points in the marked material. Single dot marking achieves only a small notching effect – perfect for applications in aerospace industries.





CENTRAL CONTROL UNIT ZE 301

Our marking systems are part of a consistent modular concept. They are expandable with different additional components. The development of the central control unit ZE 301 is also based on this consistent modular design concept.

Hardware

The central control unit ZE 301 is equipped with integrated PC functions for independent operation without need for an external PC. A big high-resolution display is integrated in the front panel, presenting all information at a glance.

For the marking of round parts the central control unit can be extended with a rotating axis. It is also possible to attach a manual barcode scanner or to integrate a chip card reader.



Software

The standard system software S 301 is 100% operator prompted. It offers high flexibility and comfort for the quick creation of marking files. The logical and self-explanatory operating interface enables a fast and simple training.

The preview function allows for the intended marking to be checked on the display. Additionally, over 2000 marking files can be managed in the memory of the central control unit.

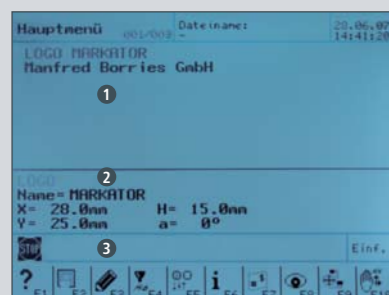


Interfaces

- PS2-keyboard-port
- 2 x 9 pin Sub-D-connector RS 232
- Optional power board for stepping motor
- Optional chip card reader
- 37 pin Sub-D-connector, synchro-connector for I/O



Menu



- 1 Marking text
- 2 Parameter overview
- 3 Function keys
- 4 Marking preview
- 5 Scale
- 6 Online help

PIN MARKER T0 AND T1

This flexible table marking system is available with marking areas of 100 x 100 mm (T0) and 200 x 100 mm (T1).

The marking head with high-class guidance in connection with a combination of self-lubricating slide and ball bearings is maintenance free. It exhibits optimal wear behaviour.

The marking system is equipped with a maintenance free stylus. The full carbide pin is break-proof and can be re-sharpened.

The column frame has massive tracks and ensures high stability. The marking head can be manually adjusted in height with a hand wheel. Long cranking is avoided by precise and smooth-moving mechanics. The adjustment of the height is four times faster than conventional column frames.

The selected height is shown by a digital display on the column frame, and the adjustments are simply locked in using two clamp levers. The high-class cover protects the spindles from dust and prevents injuries.



Technical Data

Marking Area
 T0 (x/y) 100 x 100 mm
 T1 (x/y) 200 x 100 mm
Available Character Heights
 0.7 bis 99.9 mm
Marking Direction
 Infinite, from 0° to 360°

Marking Frequency
 Approx. 300 Hz, depending on size of the stylus and kind of marked material
Resolution of the Stepping Motors
 0.05 mm for a very high marking quality
Required Space
 342 x 515 mm

PIN MARKER HAND-HELD AND COMBI

The flexible combi marking systems MT0 (100 x 100 mm) and MT1 (200 x 100 mm) are developed as a combination of a table and a hand-held marking system.

The marking head is equipped with a hand-grip and rugged start button. It works in all positions. A hoop guard against unintended operation is attached for safety reasons. Fixing the marking head to the column frame, you can adjust the height using the hand wheel at the column. The respectively adjusted height is shown on the digital display.

The hand-held marker can be mounted on individual supporting feet or prisms as quickly and easily as to the column frame. The hand-grip must not be removed.

The marking head with high-class guidance in connection with a combination of self-lubricating slide and ball bearings is maintenance free. It exhibits optimal wear behaviour.

The mobile, hand operated marking systems are also available separately with marking areas of 100 x 100 mm (M0), 200 x 100 mm (M1) and 30 x 65 mm (M2).



Technical Data

Marking Area

MT0/M0 (x/y) 100 x 100 mm
MT1/M1 (x/y) 200 x 100 mm
M2 (x/y) 30 x 65 mm

Marking Frequency

Approx. 300 Hz, depending on size of stylus and type of marked material

Marking Direction

Infinite, from 0° to 360°

Available Character Heights

0.7 - 99.9 mm

Resolution of the Stepping Motors

0.05 mm for a very high marking quality

SCRIBE MARKER VT0

The machine type VT0 is designed as a scribe marking system with a marking area of 100 x 100 mm. The system features very high quality and very low acoustic emissions at marking.

High value linear guidance in connection with ball bearing screws guarantee highest marking repeat accuracy and ensure high stability of the marking head. Two brushless stepping motors drive the marking axis. The marking head is maintenance free and exhibits optimal wear behaviour.

The different marking strengths are infinitely adjustable using the pressure controller on the compressed-air unit.

The marking system is equipped with the strongest scribe stylus size F and a low-wear diamond-equipped marking pin with a radius of 0.2 mm. The marking pin works pneumatically. Depending on the customer's application, other pin sizes and radiuses are available. The scribe stylus is maintenance free.



Technical Data

Marking Area

VT0 (x/y) 100 x 100 mm

Available Character Heights

0.7 - 99.9 mm

Resolution of the Stepping Motors

0.0125 mm for an extremely high marking quality

Marking Direction

Infinite, from 0° to 360°

Max. Acoustic Emission

Idle running at 1 m distance approx. 70 dB(A), under full load not over 80 dB(A)

Required Space

342 x 515 mm



RAPID COLUMN FRAME

With the simple handling and the exact positioning by a multi-functional hand wheel, the rapid column frame is probably the most economical system to mark your single parts affordably, quickly and effectively. It is equipped with a z-travel of 300 mm and a height detector. A laser pointer is additionally available for an even better handling. The rapid column frame adjustment enables extremely short setup times, saving up to 70% in comparison with conventional column frames with a crank.

The highly legible digital display is easy to operate. It is equipped with a reset button for the respective default settings. For quick adjustment, a hand-grip is mounted behind the marking head. The vernier adjustment is controlled by hand wheel.



OPTIONS



HPGL
Program to transform logos or graphic files in HPGL format. Scaling, turning and positioning occur within the marking file.



Rotating Axis RKM
A device for mechanical clamping means. Includes control board for motor, connection cable and program option to mark round parts on circumference.

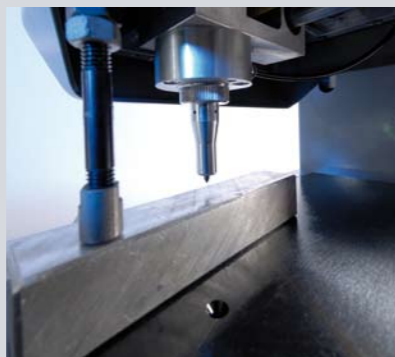


Barcode Scanner
A fast and simple readout of barcodes directly into the central control unit with translation into clear text. Plug & play with RS 232 connection cable and power adaptor.

Process



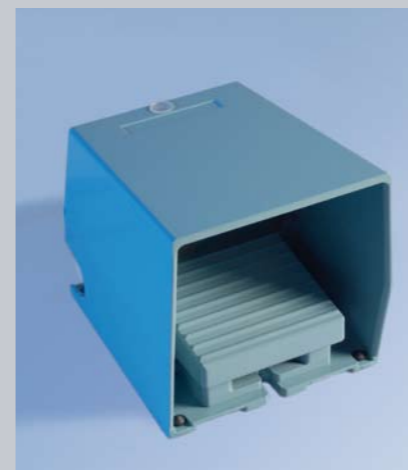
1. Push the hand wheel to unlock the height adjustment. The quick adjustment is activated. Approximately position the marking head with the hand-grip above the part to be marked.



2. Set the required pin distance using the height detector and trim the distance by turning the hand wheel.



3. Lock the height adjustment by pulling the hand wheel. Hold the part to be marked under the positioned pin and start marking! The total required time here is under 10 seconds!



Electrical Safety Foot Switch
Safe working! Both hands remain free for positioning of the part to be marked.



Card Reader Insert
Simple definition of access authorisations and comfortable administration of marking files using a memory card at the front of the central control unit.



Prism Stop
For applications involving round parts. Stability when marking. Fast and simple flange mount.



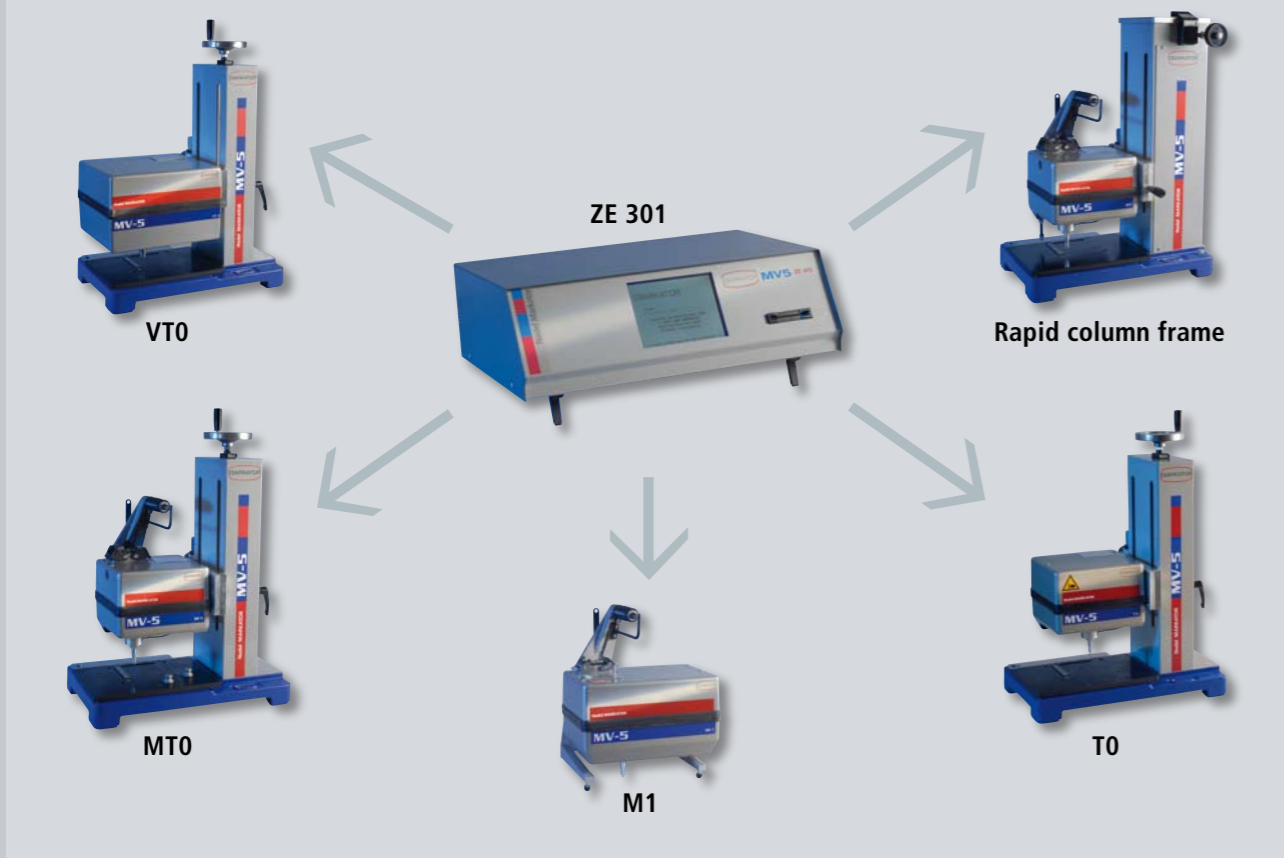
ENGINEERING

MARKATOR® is a manufacturer of rugged marking systems, insensitive of dirt, which are highly regarded for their reliability. Our products are therefore suitable for the direct and permanent implementation in a 3-shift production. Our marking heads are equipped with rigid guide bars for maximum stability and production safety. Our marking systems are equipped exclusively with high-class marking pins to be resharpened, which guarantee a long tool life.

With our scribe marker we obtain highest precision also at maximum speed. Design, development, and production take place exclusively in Germany, ensuring continuously high "Made in Germany" quality standards. Due to our modular design system, which is under permanent expansion and development, we are able to solve the most marking tasks using our standard, serially produced components.



Options of combination



MORE PRODUCTS

Units Ready for Integration



VU4

The scribe marking head VU4 (80 x 50 mm) features a very low noise emission and an extremely high marking quality! With the option Sprint you will achieve even shorter marking times.



U75

The compact marking head U75 (75 x 25 mm) is developed to be integrated in every kind of production line. In connection with the central control unit ZE 101, a fast and easy integration in automatic production processes is possible.



U30

The compact marking head U30 (30 x 65 mm) is the ideal system for rational, durable and careful marking of every kind of part – for high quantities and short cycle times.

Central Control unit



ZE 101

The central control unit ZE 101 was specially designed for the integration of marking units. The installation is possible as a front or back installation. Special features: Type of protection IP54, INTERBUS, PROFIBUS.



ZE 401

The central control unit ZE 401 is for highest requirements. It is offered as a front or back installation but also as a 19" board rack or a cabinet. Special features: Type of protection IP54, VGA display, diagnostic function.



Conventional Marking

In addition to the CNC controlled marking systems we also offer products in the range of conventional marking – e.g. impact marking systems, numbering heads, interchangeable steel types, marking tools and every kind of special stamp.

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