MARKATOR®-PRODUCT RANGE

MARKING SYSTEMS MV5 ZE 101

MARKATOR®

MARKATOR®
ABOUT US

We are experts in durable and economic marking of industrial parts to help eliminate forgery.

MARKATOR® have been developing and manufactures high-quality systems for pin and scribe marking for over 25 years. We also produce hand-held and machinery marking tools. We can meet our customers needs individually and precisely.

Our aim to achieve the highest quality possible. We attach importance to solid consulting, customer-related development and user-friendly marking systems.

We maintain a constant dialogue with our customers and their applications which help us maintain a continual development, optimisation and innovations within our product range.

Our benefits are completed with a committed and professional service manned by our high-qualified employees.

See it for yourself! We look forward to getting to know you !

FUNCTIONALITY OF DOT PEEN AND SCRIBE MARKING

Dot peen marking

A full carbide pin oscillates by pneumatic and electronic means. It is moved by two carriages in the x and y direction and strikes the material by 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. Data Matrix® Code. The force produced by the single dot marks is negligible.

Scribe marking

Compared to dot peen marking the scribe pin doesn't strike into the material with an up and down movement. It is pressed into the material. In this position the carbide or diamond scribe pin is moved by two carriages in x and y direction.

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

Single dot characters

As an alternative variation of the dot peen marking, the marking of single dot characters works also through a carbide marking pin which works pneumatic or electric. Single dots are achieved by the up and down movement of the marking pin. Raster fonts are produced in uniform size by single dots. The typeface is 5 x 7 or 9 x 13.

CENTRAL CONTROL UNIT MV5 ZE 101

The MV5 ZE 101 has been designed as a compact central control unit incorporating the most important functions required to provide a reliable marking product to meet the growing demands of industry.

The product is ideally suited to automated production marking. Satisfying a wide range of requirements the central control unit contains all the necessary operating components such as the power supplies, stepper motors drives, a real-time clock, microprocessors, memory modules and digital inputs and outputs as well as the standard fonts within a compact assembly.

The housing of the central control unit is type IP54 protected and is equipped with integrated PC functions for independent applications and can be mounted as a front or rear installation in your control cabinet.

The front panel of the housing contains a back-lighted LC-display and keyboard providing a simple and easy interface for data entry. The marking text can also be transferred directly into the central control unit via a RS232 interface – for example from a computer or a barcode scanner.

Software

During the development of the standard system program our aim was to produce a simple, intuitive and easy to operate device. Due to the logical, self explanatory user-interface of the control unit, no programming skills are required by the user. An easy to understand manual has also been produced which provides a simple explanation to the controller functions and describes how to adjust and customise the factory settings to suit individually requirements which can when if required be password protected.

The user is able to select the actual marking job between three pre-configured profiles after entering the password he is able to change the pre-settings and adjust them to suit the actual marking job. These changes are not stored enabling the original marking file to be retrieved at any time.

Connections

Digital Standard-Inputs:
- Potential isolated Opto-coupler-Inputs, 18V-28VDC

Digital Standard-Outputs:
- Potential free Relay-contact, NO switch, max. Capacity 30V, 500mA

Electrical connections:
- 24VDC + 10 % / 5A

Available interfaces:
- Synchronisation-interface

Digital signal communication with an external control, e.g. SPS, with following signals:

- Inputs: START, STOP with configurable STOP-Input

- ERROR ACKNOWLEDGEMENT and separate START-STOP-connection

- Outputs: READY, ERROR, BASIC POSITION, READY FOR MARKING

Serial Interfaces:
- COM1 + COM2, RS 232; with galvanic separation, max. Baud 115200 (up to approx. 15m length of shielded cable,)

After entering the password the master has full control of all the configurable parameters within the central control unit. He can pre-set up to three different profiles and thus prepare up to three marking files for unskilled users. If the entered text is too wide for the marking area, it will be automatically squeezed together. Positioning of the marking file via the x- and y-direction is not necessary.

INTERBUS-/PROFIBUS-/PROFINET- or DEVICE NET-cards are also available as options, through these devises it is possible to connect the MV5 ZE 101 central control unit to a field bus system. For an even faster integration in the SPS environment it is also possible to deliver function modules for the Siemens-S7-control.

We are also happy to offer bespoke solutions if required.

INTEGRATION UNITS DOT PEEN MARKERS

The compact CNC dot peen markers MV5 U30, MV5 U75, MV5 U100 und MV5 U200 are the ideal partner for rational, durable and gentle marking of a wide range of work pieces. The solid dot peen markers are suitable for almost all materials – from hardened steel through to materials which are pressure-sensitive, thin walled, laminated or round finished products.

The technology is designed for large quantities and short cycle times. Fast marking times, highest quality marking coupled with ideal adaptability are the features of the marking heads at a very good price performance ratio.

The marking heads are factory set for the integration in production- and assembly-lines or testing plants. Through to this, a quick and trouble-free integration in automatic – e.g. SPS-controlled – processes of productions lines is possible.

MV5 U30

Marking area (x/y):
30 x 65 mm

Available character heights:
1,0 up to 64,9 mm, stepless adjustable in 1/10-steps

Marking direction:
Any, from 0° to 359°

Fonts:
Standard fonts, similar to DIN 1451 (other fonts as an option available)

Available characters:
Capital and small letters A to Z, figures 0 to 9, various punctuation marks

Resolution of the stepping motors:
0,05 mm for a very high marking quality

MV5 U75

Marking area (x/y):
75 x 25 mm

Available character heights:
1,0 up to 64,9 mm, stepless adjustable in 1/10-steps

Marking direction:
Any, from 0° to 359°

Fonts:
Standard fonts, similar to DIN 1451 (other fonts as an option available)

Available characters:
Capital and small letters A to Z, figures 0 to 9, various punctuation marks

Resolution of the stepping motors:
0,05 mm for a very high marking quality

The marking axes are driven by two brushless stepper motors, this guarantees optimal wear behaviour. Due to the hardened, ground and chromed guides in connection with a combination of a self-lubricating slide and ball bush bearings, all dot peen markers work maintenance-free. The oil-free pneumatic valve works frictionless and optimal wear behaviour can be guaranteed.

The marking head works independently and can be used in a wide range of positions. Certain parts of the marking head which are sensitive to dirt are housed in a protective area accessible by removing the upper protection cover.

The marking is produced by a full-carbide-marking pin. This marking pin is available in several sizes which provides the required adjustment needed to marking on different materials. The break proof marking pin oscillates pneumatically and can be re-grinded several times. The stylus for the seating of the marking pin is maintenance-free.
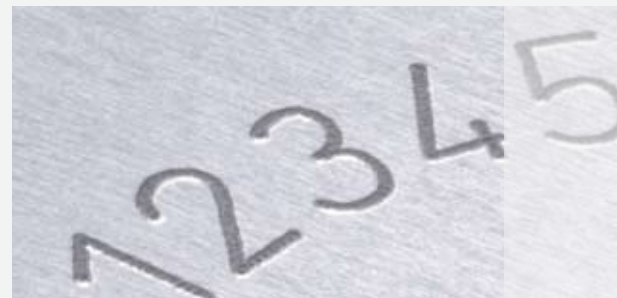
MV5 U100

Marking area (x/y):
100 x 100 mm

Available character heights:
1,0 up to 64,9 mm, stepless
adjustable in 1/10-steps

Marking direction:
Any, from 0° to 359°

Fonts:
Standard fonts, similar to DIN 1451
(other fonts as an option available)

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Resolution of the stepping motors:
0,05 mm for a very high marking quality

MV5 U200

Marking area (x/y):
200 x 100 mm

Available character heights:
1,0 up to 64,9 mm, stepless
adjustable in 1/10-steps

Marking direction:
Any, from 0° to 359°

Fonts:
Standard fonts, similar to DIN 1451
(other fonts as an option available)

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Resolution of the stepping motors:
0,05 mm for a very high marking quality

TOTAL OVERVIEW OF DOT PEEN- AND SCRIBE-MARKER

MV5 U30

Marking area (x/y):
30 x 65 mm

MV5 U75

Marking area (x/y):
75 x 25 mm

MV5 U100

Marking area (x/y):
100 x 100 mm

MV5 U200

Marking area (x/y):
200 x 100 mm

DOT PEEN MARKERS

MV5 VU4

Marking area (x/y):
80 x 50 mm

MV5 VU4 ECO SPRINT

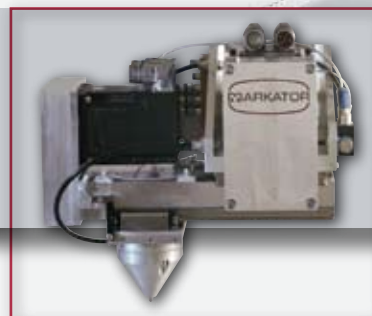**Marking area (x/y):**
80 x 50 mm

MV5 VU4 SPRINT

Marking area (x/y):
80 x 50 mm

MV54

Marking area (x/y):
160 x 50 mm

SCRIBE MARKERS

INTEGRATION UNITS SCRIBE MARKERS

The solid scribe markers MV5 VU4, MV5 VU4 ECO SPRINT and MV5 VU4 SPRINT are extremely reliable marking heads designed for daily use. They are equipped with linear slides in connection with high quality precision ball screw spindles guarantee a high degree of repeatability. Furthermore the quality guidance used on the scribe markers produces extreme steadiness and long durability. The scribe markers are based on a long-standing continuous development and are characterised by dynamic marking speeds, highest qualities marking and optimal adaptability on a good price performance ratio.

The technology is designed to work on large production numbers producing exceptional quantity on short cycle times in a three-shift operation. The marking heads are factory set for the integration in production- and assembly-lines or testing plants, providing a quick and trouble-free integration in automatic – e.g. SPS-controlled – processes of productions lines is possible.

MV5 VU4

Marking area (x/y):
80 x 50 mm

Marking speeds:
Up to 4 characters/second

Available character heights:
1,0 up to 49,9 mm, stepless
adjustable in 1/10-steps

Fonts:
Standard fonts,
similar to DIN 1451 (other
fonts as an option available)

Marking direction:
Any, from 0° to 359°

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Several marking forces:
Stepless, adjustable via the pressure regulator

Resolution of the stepping motors:
0,0125 mm for a very high marking quality

MV5 VU4 ECO SPRINT

Marking area (x/y):
80 x 50 mm

Marking speeds:
approx. 3-4 seconds for
10 characters in 3-4 mm height

Available character heights:
1,0 up to 49,9 mm, stepless
adjustable in 1/10-steps

Fonts:
Standard fonts,
similar to DIN 1451 (other
fonts as an option available)

Marking direction:
Any, from 0° to 359°

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Several marking forces:
Stepless, adjustable via the pressure regulator

Resolution of the stepping motors:
0,0125 mm for a very high marking quality

The marking head and stylus are maintenance-free and incorporate a pneumatically driven solid diamond marking pin. The marking head works self-sufficient.

MV5 VU4
High quality standard scribe marking head for a wide range of marking applications.

MV5 VU4 ECO SPRINT
Short cycle times? No problem! This version is capable of marking 10 characters 3-4 mm high in just 3-4 seconds.

MV5 VU4 SPRINT
Out highest performing system. This version is capable of marking 10 characters 3-4 mm high in just 2-3 seconds.

Optional marking areas available (not shown):

MV5 VU5: 160 x 50 mm

MV5 VU6: 80 x 100 mm

MV5 VU7: 160 x 100 mm

MV5 VU0: 100 x 100 mm

MV5 VU4 SPRINT

Marking area (x/y):
80 x 50 mm

Marking speeds:
approx. 2-3 seconds for
10 characters in 3-4 mm height

Available character heights:
1,0 up to 49,9 mm, stepless
adjustable in 1/10-steps

Fonts:
Standard fonts,
similar to DIN 1451 (other
fonts as an option available)

Marking direction:
Any, from 0° to 359°

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Several marking forces:
Stepless, adjustable via the pressure regulator

Resolution of the stepping motors:
0,0125 mm for a very high marking quality

VIN SCRIBE MARKER MV54

This marking head is bursting with strength! The solid and robust scribe marker MV54 will powerfully mark nearly all materials. With a marking area of 160 x 50 mm this marking head is particularly qualified for the marking of deep VIN-numbers. You can rely on it. The double guided linear slides in connection with high quality precision ball screw spindles guarantee exceptional repeatability. Furthermore the quality guidance system used on the scribe marker provides a high steadiness and a long durability. The scribe marker is based on a long-standing continuous development and is characterized by dynamic marking speeds, highest qualitie marking and optimal adaptability.

The marking heads are factory set for the integration in production- and assembly-lines or testing plants. providing a quick and trouble-free integration in automatic – e.g. SPS-controlled – processes of production lines is possible.

The break proof solid carbide marking pin oscillates pneumatically and can be re-grinded several times.

The marking head works self-sufficient.

Marking area (x/y):
160 x 50 mm

Marking speeds:
approx. 2-3 seconds
for 10 characters in 3-4 mm height

Available character heights:
1,0 up to 49,9 mm, stepless
adjustable in 1/10-steps

Fonts:
Standard fonts,
similar to DIN 1451 (other
fonts as an option available)

Marking direction:
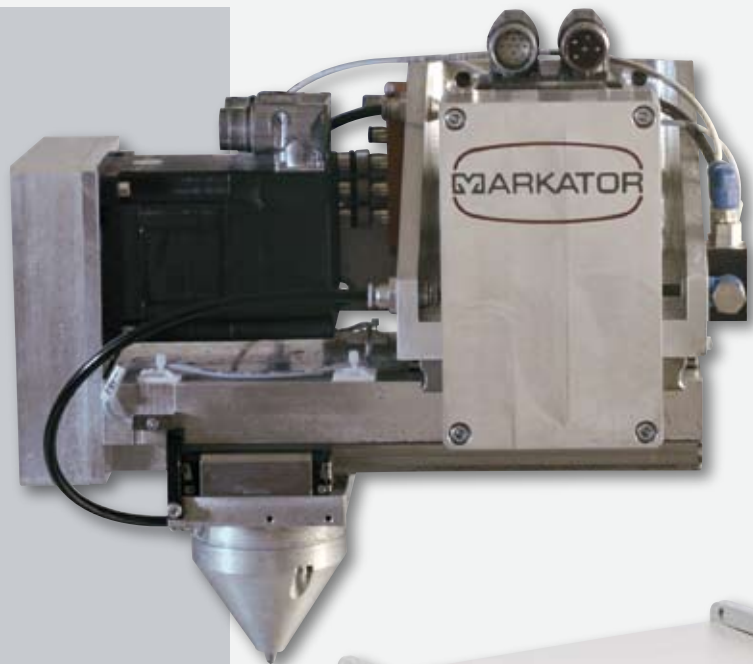Any, from 0° to 359°

Available characters:
Capital and small letters A to Z,
figures 0 to 9, various punctuation marks

Several marking forces:
Stepless, adjustable via the pressure regulator

Resolution of the stepping motors:
0,0125 mm for a very high marking quality

COMMUNICATION

The ability to provide high levels of data transfer between the central control unit and several device components is provided by the external connection-ports on the rear of the central control unit MV5 ZE 101 as described before. Further options, for example a barcode-scanner can be easily connected. It is also a very simple operation to communicate with an SPS-control via the digital inputs and outputs of the central control unit.

Plug-in positions for communication protocols such as PROFIBUS / PROFINET / INTERBUS / DEVICENET are also available on the central control unit. With this it is possible to transfer information, marking commands, stop-signals and so on from the central SPS-control to the central control unit and the particular dot-peen- or scribe-marking head.
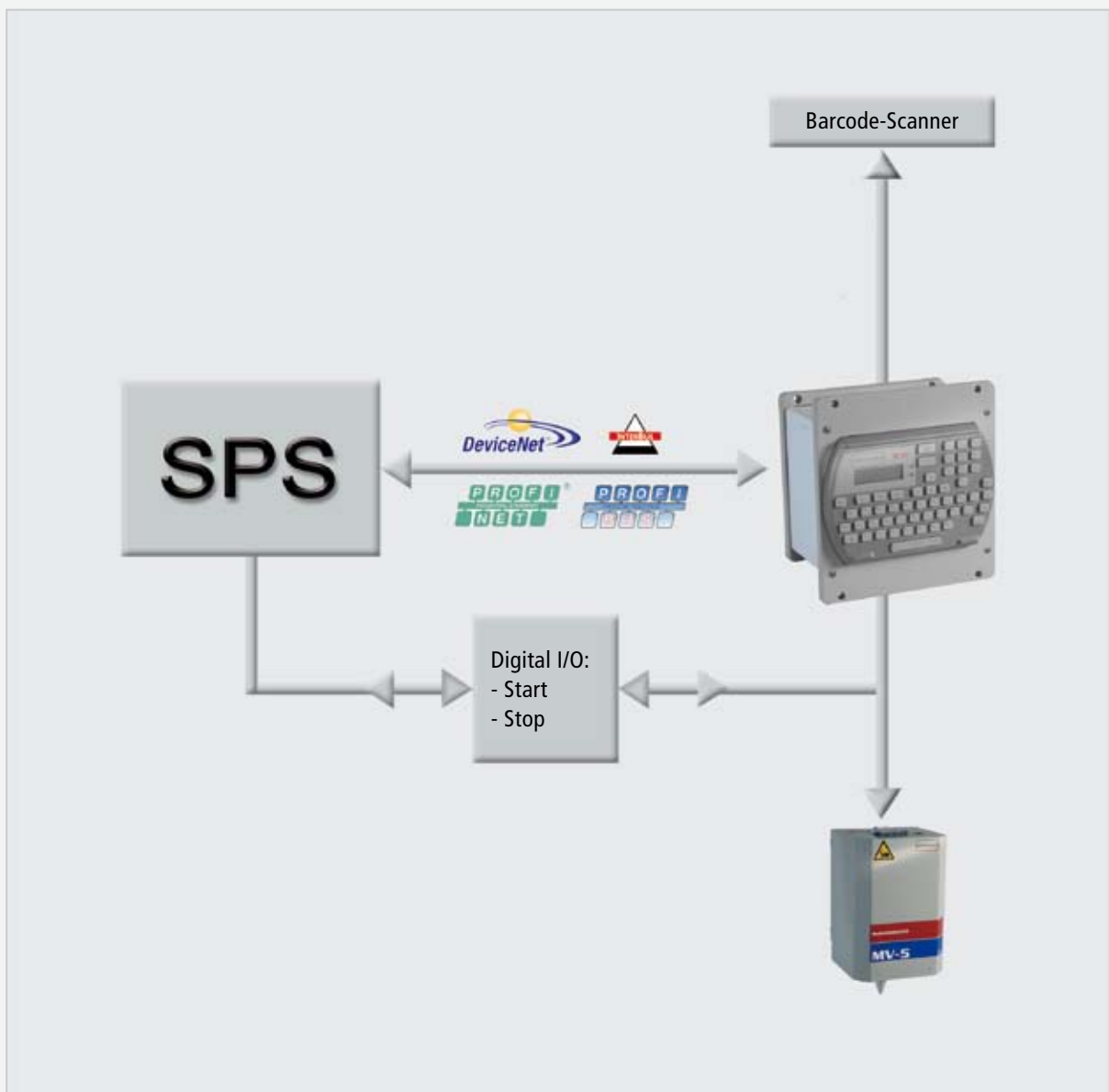
CASES OF APPLICATION
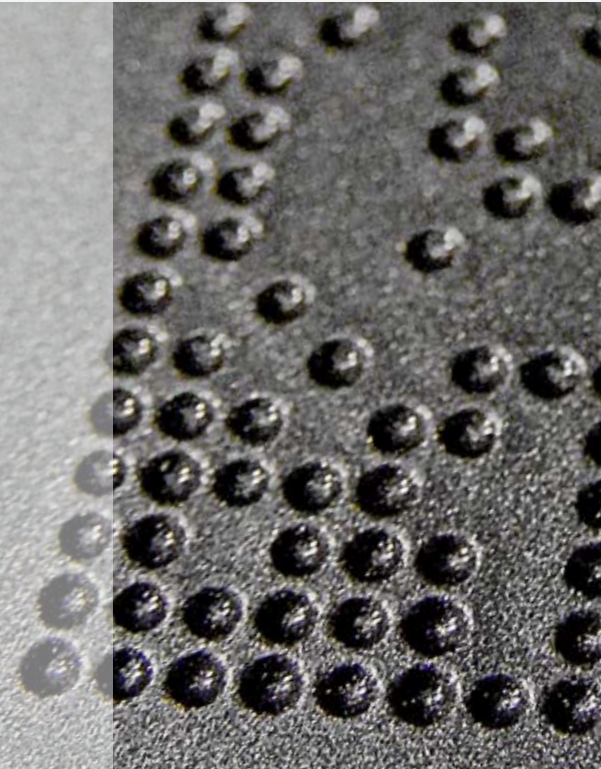
Data Matrix Code

For all applications relating to fast production lines, difficult interfaces, small marking area or safe codes, a 2D-Code is the perfect solution.

The DataMatrix Code is one of the most important representatives in the range of two-dimensional codes. It is already the standard coding of the future. This modern and machine readable mark provides a high information density and an omni-directional readability. The reconstruction of the data content by the Reed-Solomis error correction is even possible, even in cases were the code is destroyed by up to 25%.

Benefits of the DataMatrix Code:
* High information density on small area
* Memory capacity from 1 to 2300 characters
* Readable with low contrast
* Reduction and increasing of the data content without changing the physical size
* Readable with every angle of vision
* Registration of fast moving objects

Type plates

To mark products for identification at a later date and to guarantee traceability, type plate are extremely common place thin industry. Manufacturing numbers, serial numbers and so on can be marked on the type plate which can then be attached to the particular product. We offer different solutions depending on style and size of the type plate. With our central control units it is very easy to prepare and modify marking files. If a high number of type plates are required, we can offer automatic solutions in form of an automatic type plate machine. Please ask us for further information if this is of interest!

Logos

Beside alphanumeric characters, it is also possible to mark your company logo, the logo of your customer or a certification mark (for example CE-mark) on your product. The central control units offer a certain amount of disk space to save these logo-files. The logo itself will be created by MARKATOR® and we will save them on your central control unit before delivery. Optionally it is possible to buy the HPGL-software to administrate, convert and transfer the logo and graphic files yourself. With this you can create as many logos as you want and transfer them onto the central control unit as required.

MORE PRODUCTS

Table- and hand-held marking systems

MV5 T0 ZE 301

Flexible CNC table marking system with a marking area of 100 x 100 mm. Through our modular conception this marking system is extendable. Further marking areas are available.

MV5 M75 ZE 301

Mobile hand-held marking system, perfect to mark heavy, unmovable and large work pieces directly on site. Very space-saving and very handy.

FlyMarker

Battery operated, handy and compact hand-held marking system to mark unmovable and large parts directly on site.

Central control units

MV5 ZE 401

The innovative central control unit MV5 ZE 401 is a real all-rounder and is the centrepiece of all central control units of MARKATOR®. The installation is possible as a 19" front or rear installation or as a table version

MV5 ZE 301

The central control unit MV5 ZE 301 can be used for all MARKATOR® table marking systems. It is equipped with all necessary features for the operation of a self sufficient table marking system in your workshop.

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 stamps.