

MARKATOR®-PRODUCT RANGE

MARKING SYSTEMS

MV5 ZE 100~~XL~~ & MV5 ZE 101~~XL~~



MARKATOR®

ABOUT US

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

MARKATOR® have been developing and manufacturing high-quality systems for dot peen and scribe marking for over 25 years. We also produce hand-held and machine-operated marking tools. We can meet our customers needs individually and precisely.

Our aim is 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 highly-qualified employees.

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



FUNCTIONALITY OF DOT PEEN AND SCRIBE MARKING

Dot peen marking

A solid 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.



Single dot marking

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 defined up and down movement of the marking pin. Through to the exact definition of the dots, the matrix fonts are produced in the uniform size of 5 x 7 or 9 x 13. The technology of the single dot marking also allows to mark accurate 2D-Codes.

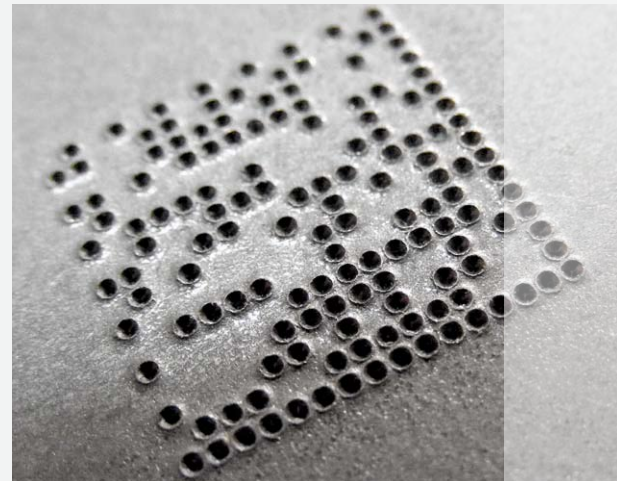


Data Matrix Code

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

The Data Matrix 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 marking, provides a high information density and an omnidirectional readability. The reconstruction of the data content by the Reed-Solomon error correction is even possible in cases where the code is destroyed by up to 25%.

The carbide marking pin pushes dots into the material by a defined up and down movement. The content of the precise Data Matrix Code can be read via a scanner.



CENTRAL CONTROL UNITS

MV5 ZE 100^{XL} & MV5 ZE 101^{XL}



The compact central control units MV5 ZE 100 XL und MV5 ZE 101 XL are tailored to the most important features of the automation and they convince through their small-sized housing.

The compact central control unit is equipped with operating components such as power supplies for stepper motor drives, a real-time clock, memory modules and standard fonts.

The IP54 protected central control unit is also equipped with integrated PC functions for independent applications. DEVICENET-/ INTERBUS-/PROFIBUS- or PROFINET-cards (also LWL) can be used.

MV5 ZE 100 XL

The central control unit MV5 ZE 100 XL convinces to its simplicity. Only 6 LEDs on the housing serve as control function for example for operating voltage, basic position X, basic position Y, Ready for marking, Marking is running, etc.

Through the PC-Software XL CONTROL, the installation in an automatic plant is very simple. The central control unit MV5 ZE 100 XL is the perfect and cost-effective variant of a central control unit using as a control element, if no frequent operator intervention is necessary.

MV5 ZE 101 XL

If frequent interventions are necessary, the central control unit MV ZE 101 XL is the ideal solution. This central control unit is equipped with a high resolution LC-display (640 x 480 pixels) and a capacitive keyboard. The display facilitates the installation, the adjustment and the diagnosis of the central control unit enormously.

The software of the central control unit can be operated directly via the display and texts can be inserted via a keyboard shown on the touch screen. Frequently needed keys are installed on the right side of the LC-display. This "Option TOUCH" can be upgraded any time on the central control unit MV5 ZE 100 XL.

The PC-Software XL CONTROL is optionally available with this central control unit.



Connections

Interfaces:

USB-A:

- Connection of an USB-Stick, to save and to transfer marking files, fonts and logos
- Connection of an USB-Stick to transfer CSV-files (optionally)
- Data transfer via a Barcode-Scanner
- Connection of an USB-keyboard

Ethernet

- Connection to the PC-Software
- Easy transfer of marking files, logos and fonts
- Network-connection to the central control unit (optionally)

Digital exchange of signals with an external control unit (optionally):

- Inputs: START, STOP with configurable STOP-Input
- ERROR ACKNOWLEDGEMENT and separate START-STOP-connection
- Output: READY; ERROR, BASIC POSITION, READY FOR MARKING

More energy efficiency through to the use of the latest technologies.



1. Ethernet
2. USB-A-interface
3. USB-B-interface
4. + 5. Slots for digital I/O-cards / bus-cards / external power supply
6. Marking head connection
7. Emergency Stop
8. Power supply

Software

In developing the software program of the central control unit special emphasis was placed on producing a simple, intuitive and easy to operate device. Due to the logical, self explanatory user-interface, only little programming skills are required when operating the central control unit.

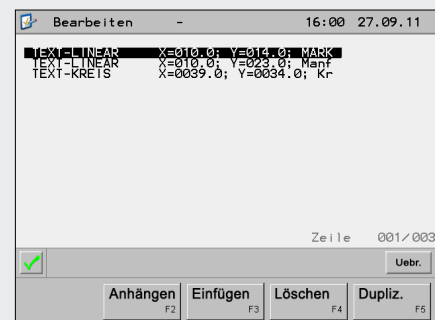
The coloured icons of the software help to identify the different functions and make the navigation very easy.

The parameters of the marking file which are currently set are clearly evident. The factory-made pre-settings can be adjusted and saved any time (password-protected), by using the easy to understand operating manual.

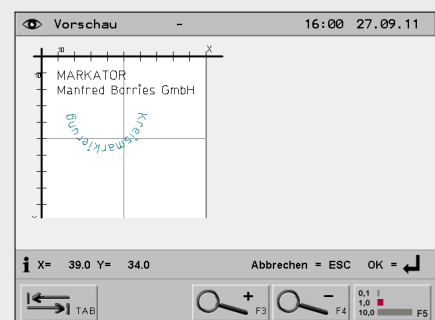
Because of the big, internal memory storage of the central control unit, several hundred marking files, logos and fonts can be saved directly on the unit.

Through to the use of the latest processor technologies, a fast navigation and fast access times can be provided. The software is available in several languages.

The preview function enables to check the created marking files directly on the LC colour display of the central control unit. With this function, the parameters set via the x- and y-coordinates can be checked in advance and if necessary can be modified directly via the display.



Programming window



Preview window

INTEGRATION UNITS DOT PEEN MARKERS

The compact CNC dot peen markers MV5 U30, U100 and U 200 are used for rational, durable and gentle marking of a wide range of work pieces - 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.

Highest quality marking coupled with ideal adaptability are the features of the marking heads at a very good price performance ratio.

The marking axes are driven by two brushless stepper motors which guarantee optimal wear behavior. 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 marking head works independently and can be used also in difficult positions.

The marking is produced by a full carbide-marking pin. This marking pin is available in several sizes which provide the required adjustment needed to mark on different materials.

The pneumatically driven marking pin oscillates quickly and can be reground several times.

The stylus for the seating of the marking pin is maintenance-free.

Available marking areas:

MV5 U30 (30 x 65 mm)

MV5 U100 (100 x 100 mm)

MV5 U200 (200 x 100 mm)

MV5 U30 & U100 & U200

Marking area (x/y):

30 x 65 mm (MV5 U30)

100 x 100 mm (MV5 U100)

200 x 100 mm (MV5 U200)

Available character heights:

1,0 up to 99,9 mm,

stepless adjustable in 1/10-steps

Marking direction:

Any, from 0° to 359°

Fonts:

Standard fonts, similar to DIN 1451

(other fonts optionally available)

Data Matrix Code:

The marking of precise Data Matrix Codes is optionally available (technology of single dot marking)

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



Our latest generation of marking heads

The CNC marking heads MV5 U50, U80 and U120 have been developed especially for the use in production lines and can be integrated very easy due to their very compact housing.

The precise and stable mechanism and the high quality and double guided linear guides in x- and y-direction guarantee optimum power transmission on the work piece and with this a very high repeat accuracy and an extremely precise and warp-free marking result. This characteristic fulfills the high requirements which are needed for the marking of 2D-Codes (optional) in several industrials. All marking heads are solidly guided and in connection with the high performance stepping motors they can be used in any position. The marking heads also convince due to the rapid marking speed for short marking times.

The marking is produced by a full carbide-marking pin. This marking pin is available in several sizes which provide the required adjustment needed to mark on different materials. The pneumatically driven marking pin oscillates quickly and can be reground several times.

The stylus for the seating of the marking pin is maintenance-free.

The compact generation of marking heads convinces through durability, optimal wear behavior and a very good price performance ratio.

Available marking areas:

MV5 U50/25 (50 x 25 mm)
MV5 U80/25 (80 x 25 mm)
MV5 U120/25 (120 x 25 mm)
MV5 U50/45 (50 x 45 mm)
MV5 U80/45 (80 x 45 mm)
MV5 U120/45 (120 x 45 mm)

MV5 U50/25 & U80/25 & U120/25

Marking area (x/y):

50 x 25 mm (MV5 U50/25)
80 x 25 mm (MV5 U80/25)
120 x 25 mm (MV5 U120/25)
(optional y-movement of 45 mm)

Available character heights:

1,0 up to 24,9 mm, stepless
adjustable in 1/10-steps

Marking direction:

Any, from 0° to 359°

Fonts:

Standard fonts, similar to DIN 1451
(other fonts optionally available)

Data Matrix Code:

The marking of precise Data Matrix Codes is
optionally available (technology of single dot marking)

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

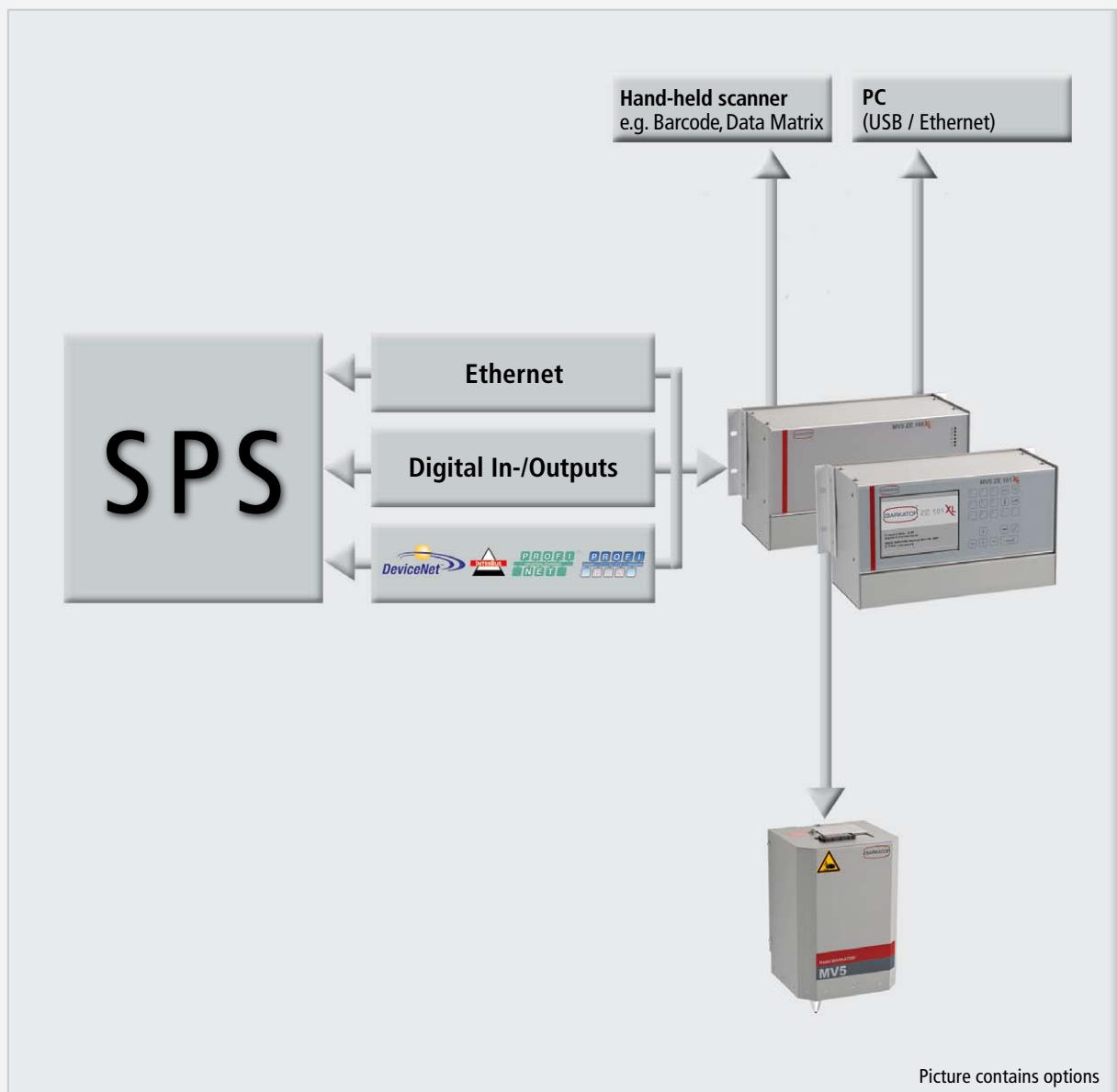


- Easy integration through to compact housing
- High quality, double guided linear guides in x- and y-direction:
 - > Very precise markings / 2D-Codes
 - > High repeatability
 - > Durability
- Short marking times
 - > Latest control technology
 - > Minimal moving masses

COMMUNICATION

The ability to transfer data between the central control units and several device components is provided by the external connection-ports on the rear of the central control units MV5 ZE 100 XL and MV5 ZE 101 XL 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 PLC-control via the digital inputs and outputs of the central control unit. Plug-in positions for communication protocols such as PROFIBUS / PROFINET (also LWL) / INTERBUS / DEVICENET are also available on the central control units. With this it is possible to transfer information, marking commands, stop-signals and so on from the central PLC-control to the central control unit and with this to the particular dot-peen- or scribe-marking head.



MORE PRODUCTS

Table- and hand-held marking systems

MV5 T0 ZE 301^{XL}

Flexible CNC table marking system with a marking area of 100 x 100 mm. Through our modular conception this marking system is extendable with several options.



MV5 M50/25 ZE 301^{XL}

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



FlyMarker[®] PRO

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



Central control units

MV5 ZE 401^{XL}

The central control unit MV5 ZE 401 XL with the dimensions of 19" is the all-rounder of all MARKATOR[®] controllers. It is designed especially for industrial marking jobs. All components for daily marking tasks – such as the power units for stepping motors, microprocessors and memories – are combined on a compact control module. The installation can be delivered as front- or rear-mounting or in the table housing.



MV5 ZE 301^{XL}

The central control unit MV5 ZE 301 XL 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.



MARKATOR®
Manfred Borries GmbH

Bunsenstraße 15
71642 Ludwigsburg
Germany

Telefon +49 (0) 7144 - 8575 - 0
Telefax +49 (0) 7144 - 8575 - 600

info@markator.de
www.markator.de

