



The hand engraved masterpiece by company founder Paul Röltgen

 **made**
 **in**
 **Germany**

QUALITY LEAVES AN IMPRESSION!

THE COMPANY – A VIEW INSIDE

The individual marking of products and packaging is a fundamental production process. Marks provide manufacturers and buyers with a wide range of information regarding a product's suitability, origin and time of production.

National and international standards and rules regulate markings such as the marking of car chassis numbers (VIN - vehicle identification number).

For almost 70 years, Röltgen Marking-Systems has been working in the car construction and manufacturing sector providing individual marking solutions for all kinds of industrial products. As a family-owned medium sized company now in its third generation of ownership, Röltgen Marking-Systems has grown to become a leading global manufacturer and reliable industry partner.

Röltgen Marking-Systems are in use in the automotive, aviation and space industries, in steel and machine construction as well as in modern packaging machines used in the pharmaceutical, foodstuffs and cosmetics industries. In addition to the wide standard product range, around 80% of our products are customized. Our output is "Made in Germany" and produced by highly qualified employees using cutting-edge machinery.

Pipes, slabs, moulds, turbine blades - as you can see from our product range, the palette of possible product types and shapes is limitless. Contact us - Röltgen Marking-Systems has the right tool for you!



Röltgen Marking-Systems is dedicated to production in Germany, qualified vocational training and staff professional development.



die sinking



quality assurance

DOING OUR BIT FOR THE ENVIRONMENT!

HIGH PRODUCT QUALITY AND ENVIRONMENTAL PROTECTION GO HAND IN HAND

It is not a coincidence that environmental sustainability and the responsible use of resources are central to our entire production process. Many years ago, Röltgen made the decision to install an electroplating waste water processing system. In addition to this, we use a rain water collection and treatment system and a 200m² photovoltaic array to make our cutting-edge production facility an environmentally friendly one.

By changing to renewable energy, Röltgen is saving around 87 tons of CO₂ emissions annually. That is the equivalent of the environmental effect of 4348 trees.

The company has been DIN-EN ISO 9001 certified. Production is carried out exclusively in Germany. Röltgen Marking-Systems prides itself on providing apprentices with recognised on-the-job training (approx. 10% of the staff) and on providing our employees, many of whom have been with us for years, with ongoing professional development. In order to secure a skilled personnel base now and into the future, as part of its training measures, Röltgen Marking-Systems works in close partnerships with schools and universities.

Last but not least, the company has invested considerable enthusiasm and energy into the project "Radsport für jedermann" ("Cycling for Everyone"): the international Röltgen Cycling-Team. Our motto: the journey is the goal.





DNV BUSINESS ASSURANCE

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 117093-2012-AQ-GER-TGA

This is to certify that

RÖLTGEN
GMBH + Co. KG
MARKING-SYSTEMS
Röltgen GmbH & Co. KG

Paul-Röltgen-Str. 10
42699 Solingen - Germany

has been found to conform to the Management System Standard

ISO 9001:2008

This certificate is valid for the following product or service ranges:

**Development, construction, production, installation, repair and service for
marking coding tools, marking machines and pharma-equipment**

Initial Certification date:

11.09.2000

This certificate is valid until:

30.11.2015

*The audit has been performed under the
supervision of*

Hans-Joachim Kinter
Lead Auditor



Place and date:

Essen, 20.12.2012

for the Accredited Unit:

DNV ZERTIFIZIERUNG UND UMWELTGUTACHTER GMBH

Nikolaus Kim
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DNV ZERTIFIZIERUNG UND UMWELTGUTACHTER GMBH, Schnieringshof 14, 45329 Essen, Tel: +49 201 7296 222 Fax: +49 201 7296 333 - www.dnvba.de

CERTIFICATIONS

		 Neue Zahnradwerk Leipzig GmbH
		
		
		
		
		
		
		
		
		
		
		
		



MARKTRONIC MARKMATE

Group 1940 5000

The Marktronic Markmate is the newest member of our range of dot marking machines. This easy to use dot marking machine allows you to mark almost any work-piece.

Whether plastic or hardened metals (up to 62 HRC or 800 VHN), this machine will allow you to clearly and directly mark your workpieces with serial numbers, drawing numbers or product data. The device is operated via an LCD screen or a computer.

Test run functions and password protection ensure that workpieces will be correctly marked and that the relevant marking layouts can only be changed by people with the correct authorisation.

Naturally, the Markmate is manufactured pursuant to current CE, EMC and LVD standards and in accordance with DIN 9001.



Technical data:

Marking head

- 100 x 75 mm marking field
- font height from 0.18 mm to 75 mm
- marks 2 characters per second with a font size of 2.5 mm
- electric solenoid
- various stylus lengths
- variable marking force

Controller & software

- compact tower housing
- high definition LCD screen
- shift and batch counter
- automated time and date
- serial numbering
- simple logo generator
- sheet marking
- RS 232 interface
- test run function

Operational requirements

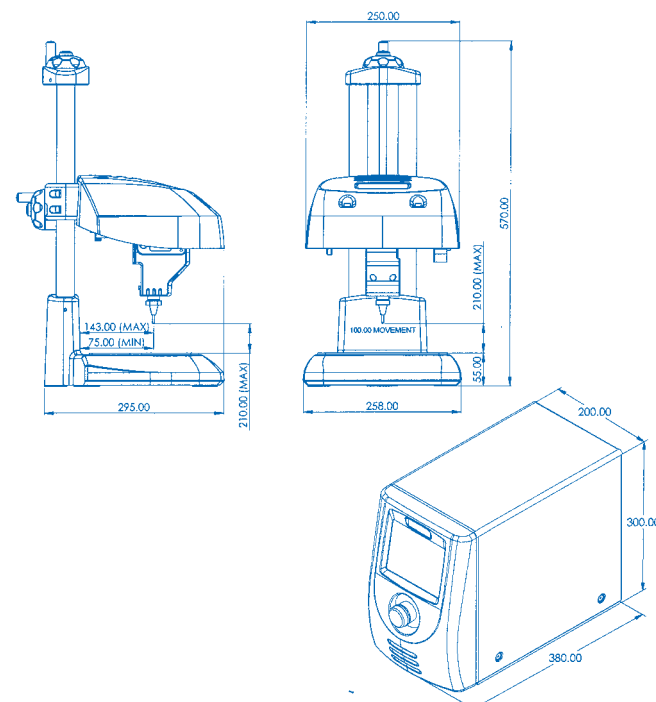
- 230 V or 110 V 50-60 Hz (single phase)
- no pneumatics required
- ambient temperature during operation 0° - 50° C

Optional extras

- Start / stop box
- various magnetic tables
- T-groove table
- customised additions on request



Example of standard typeface
5 x 7 point matrix with 5 mm font size.



MARKTRONIC MARKMATE

Group 1940 5000

The MARKMATE dot marking machine is available in various different versions:

Controller with display:

- **Standard version –**
(as described on the first page, electro-mechanical)
- **PHA version –**
extra high strike distance (up to 12 mm from workpiece without affecting marking depth)
- **PHF version –**
particularly high marking speed (same as Standard version, but with pneumatic rather than electro mechanic drive)

Computer (not included) with Windows software:

- **USB basic version –**
(the key functions are activated in the software)
- **USB advanced version –**
(all functions are activated in the software e.g. Windows fonts and database interface)
- **USB PHA version –**
extra high strike distance (up to 12 mm from workpiece without affecting marking depth)
- **USB PHF version –**
particularly high marking speed (same as Standard version, but with pneumatic rather than electro mechanic drive)

Group 1940 5000

MARKMASTER Windows software

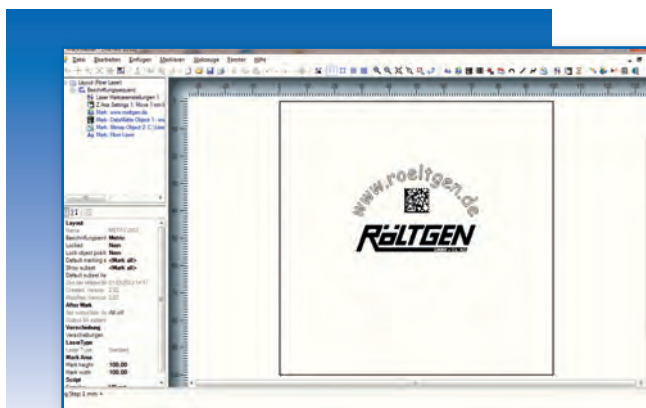
The universal MARKMASTER Windows software for our dot marking machines and laser marking devices combines a personal computer processing power with our high quality marking devices. Texts, logos or codes can be easily dragged and dropped in the right position using the mouse. The complete layout can then be saved on the hard drive. The various modes in the software mean that it can be used to control multiple devices.

Some key features of the MARKMASTER software:

- true type fonts
- WYSIWYG preview
- drag and drop relocation of elements
- real time, real date, shift coding
- data matrix code, bar code
- logos (.HPGL / .DFX / .BMP / .JPG)
- multilingual software



Markmate USB PHF circumferential fixture included



MARKMASTER Windows software



MARKTRONIC BENCHDOT 3000

Group 1942

The Benchdot 3000 is the product of a policy of tireless improvement and development of the Marktronic range. Through the use of high quality ball screws, double linear guides and bearing sets, we have been able to further improve the marking quality and reliability without any negative effects on the unit's robustness or durability.

The carbide metal stylus is driven by a solenoid. This results in individual points being embossed into the material, forming the mark. Almost all materials, up to 62 HRC can be marked.

The surfaces may be flat or uneven.

The dot marking machine can cancel out height differences of 3 mm. The Benchdot 3000 can also mark difficult-to-reach spots.

The Benchdot 3000 consists of a marking head, a manual Z-axis with a table, the controller and the relevant connection cable.

For special applications, we can design and manufacture customized systems, including completely automated solutions. Alternatively, the product range also includes portable dot marking machines and installable marking heads.



With a special marking head and a pneumatic connection, the Benchdot 3000 can be retrofitted as a scribe marking machine. The diamond needle is pressed onto the workpiece by the pneumatic system and then drawn through the material. The marking is similar to an engraving however it does not leave sharp shavings behind.

Subject to change. 05-14

MARKTRONIC BENCHDOT 3000

Controller:

- QWERTY membrane keyboard
- large, high contrast display
- storage capacity for up to 1350 layouts
- USB connection
- 2 x RS232 connections
- digital I/O

Software:

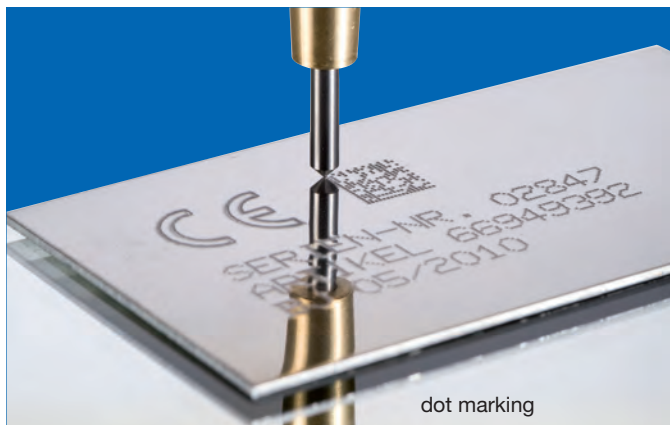
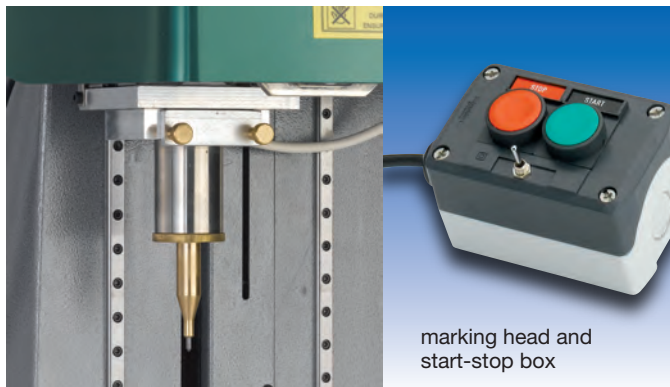
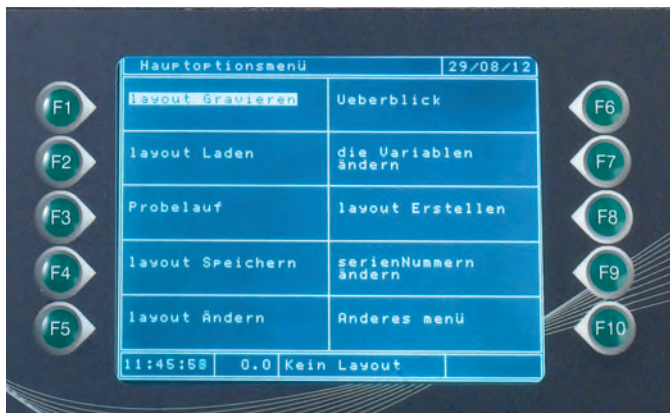
- font height of 0.55 – 99.9 mm in 0.15 mm increments
- variable marking force (including depth)
- various fonts
- marking at any angle
- marking with any radius
- serial numbering
- 2D Data matrix code
- vector graphics and logo marking (.plt/.hpgl)
- real time and date
- mirror writing
- password protection
- test run function
- various menu languages

Optional extras (surcharges apply)

- various stylus lengths 50 mm, 100 mm or 150 mm
- various stylus contact angles, including pursuant to ASME regulations
- dividing head for radial labelling of pipes or cylinders
- electrical z-axis for automated height adjustment
- Auto-sense, automated distance finding workpiece needle
- pneumatic deep marking for very deep marking
- VeriSmart camera and software, immediate checking of data matrix code after marking
- TCP/IP Ethernet connection
- MarkMaster Windows software
- magnet to clamp the work pieces
- vice to clamp the work pieces
- T-groove plate
- manual nameplate marking device
- automated nameplate marking device with magazine
- diamond scribe marking head (pneumatic)

Technical data:

- weight: marking head with z-axis and table: 34 kg, controller: 10 kg
- power supply: 230 V 50Hz or 110V 60Hz
- marking area: 60 x 60 mm, 100 x 100 mm, 150 x 150 mm or 300 x 150 mm





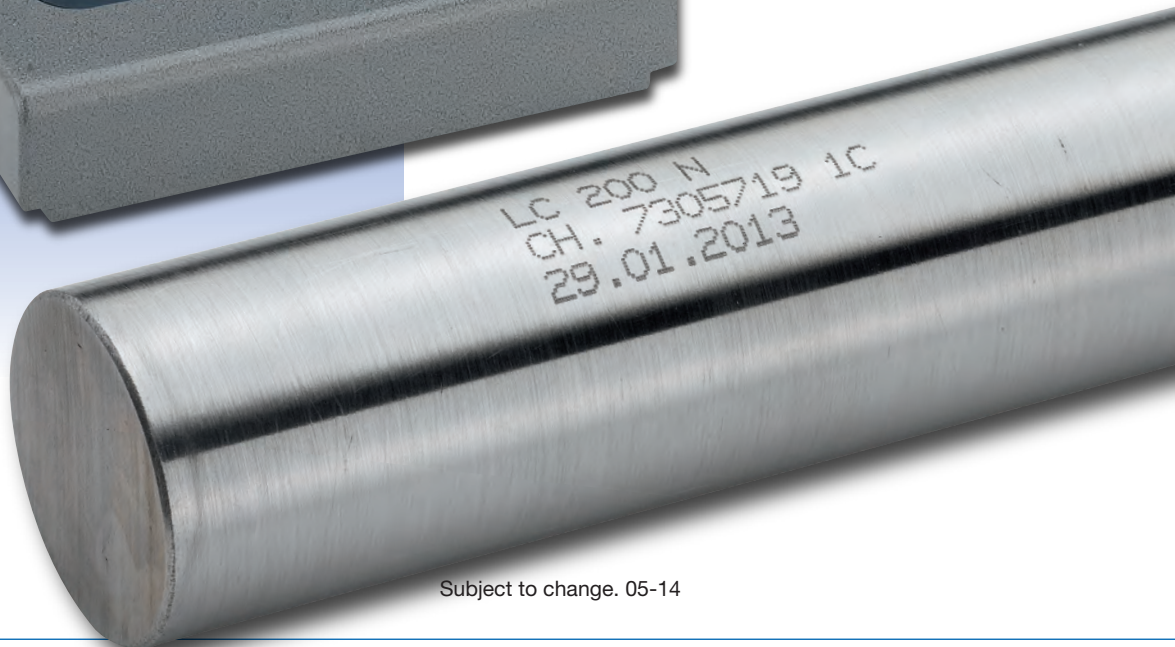
MARKTRONIC PORTADOT LD 2

Portable, fully programmable dot marking device for use in all applications in which the workpiece is too heavy or cumbersome to be brought to the machine. Uncompromising product quality in a light weight device make the Portadot LD2 suitable for mobile use. Marking systems for almost any area.

- light weight design
- portable
- highly flexible
- easy to operate
- quiet, quick,
high performance marking
- wide range of possible applications
- intelligent marking solutions
- optional: battery operated



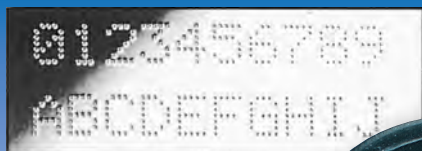
RÖLTGEN Portadot LD2, the light, portable dot marking system offering exceptional flexibility as a mobile, hand-held marking device, straight onto the workpiece.



Subject to change. 05-14

MARKTRONIC PORTADOT LD 2

Example of the standard font
5x7 dot matrix in 5 mm character size



battery insertion optional



Field of application:

- 2D data matrix marking
- steel stock marking
- vehicle identification marking
- cast and wrought iron marking
- programmable marking
- components identification
- finding components
- serial number marking
- time and date marking
- quantity and shift coding
- component number marking

● Technology

The RÖLTGEN Portadot LD2 is a fully-programmable dot marking device that can be easily used from one setting to another, from one workplace to another or in transport. The tried and tested dot marking technology is part of the development of RÖLTGEN'S most compact and programmable marking solutions.

● Light weight design

With a weight of only 2.3 kg and an optical ergonomic design, the Portadot LD2 is easy to handle, maximizing productivity.

● Portable and versatile

The patented aluminium marking head, protected by a stable polymer housing makes the Portadot LD2 suitable for use in most industrial settings. Heavy parts can be marked on location and do not need to be transported for marking.

● High flexibility

The marking area of 50 mm x 25 mm is suitable for most marking applications with a single programmable system. Variable marking power for optimal marking depth on all work materials up to 62 HRC (800HV). The lead screw which is driven by the marking head guarantees a level of dot precision that cannot be achieved by other systems. The Portadot LD2 is thus capable of printing 2D data matrix code markings.

● Technical data

marking area:	50 mm x 25 mm
standard font sizes:	0.15 mm to 24.9 mm in increments of 0.15 mm
marking format:	5x7, 7x9, Varidot, 2D Data Matrix
marking speed:	depends on the application
storage capacity:	LCD: 1350 layouts Windows: depends on the hardware capacity

● Easy to use – immediately ready for use

The compact ergonomic design makes the device easy to handle and suitable for use at any location. The high performance software minimizes operator training time and maximizes production efficiency. The multilingual interface allows you to choose from the various font types and sizes, as well as rectangular or curved markings, serial numbers and date and time marks.

● Quiet, quick and efficient marking

The Portadot LD2 does not need compressed air, and instead comes with a 230 Volt (or, optionally, 110 Volt) electric connection, making it not only highly efficient, but also considerably quieter than compressed air systems.

● Wide range of potential uses

The standard hardware options include V plates for marking round components, tables and columns for table-mounted applications and an extension cable of up to 9 m (3 m standard) for complete freedom of movement. The Windows software allows the operator to control the system using the familiar PC Windows interface and improves the networking and data storage capacity. Extended warranty packages are available.

Customised equipment and material capabilities available on request.

weight:	marking head / cable: 2.3 kg computer: 10 kg
electrical supply:	230 V 50 Hz, 110 V 60 Hz
dimensions:	
marking head:	250 x 650 x 172 mm
computer:	395 mm x 343 mm x 128 mm

Subject to change. 05-14

MARKTRONIC PORTADOT 130-30

Group 1940

When working with large, heavy and cumbersome workpieces it is advantageous to be able to take the marking machine to the workpiece for on-site labeling.

The robust, steel sheet Portadot 130-30 makes this possible, as all it requires is a power supply.

The high torque motors and the precise threaded spindles make the dot marking machine ideal for the demanding requirements of industrial use.

The carbide metal stylus is driven by a solenoid. This results in dots being marked into the material, forming the marking. Almost all materials, up to 62 HRC can be marked. The surface can be flat or uneven.

The dot marking machine can cancel out height differences of 3 mm.

The Portadot 130-30 consists of a marking head, the controller and the relevant connection cable.

On request, we can construct customised work piece holders to suit your workpiece. In order to be independent of the electricity supply, the Portadot 130-30 is also available as a battery operated model. With the rechargeable battery, the device can be used for marking for several hours.



marking head



control panel

Subject to change. 05-14

MARKTRONIC PORTADOT 130-30

Controller:

- QWERTY membrane keyboard
- large, high contrast display
- storage capacity for up to 1350 layouts
- USB connection
- 2 x RS232 connections
- Digital I/O

Software:

- font height of 0.55 – 99.9 mm in 0.15 mm increments
- variable marking force (including depth)
- various fonts
- marking at any angle
- marking with any radius
- serial numbering
- 2D Data matrix code

- vector graphics and logo marking (.plt)
- real time and date
- mirror writing
- password protection
- test run function
- various menu languages

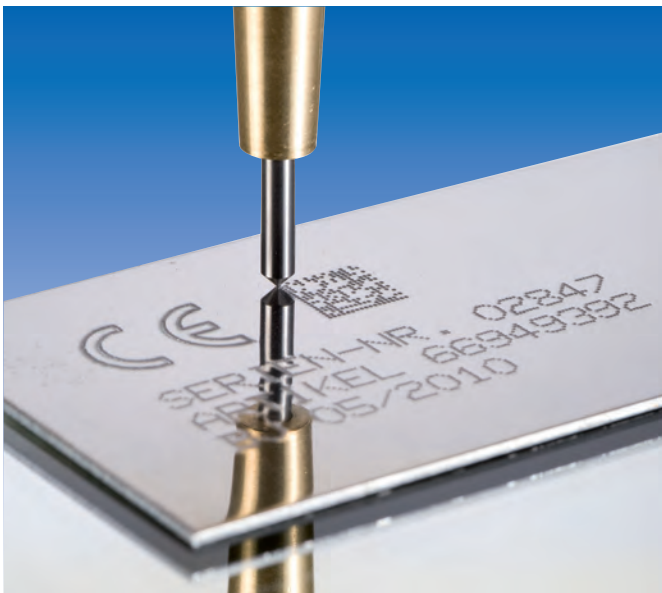
Optional extras (surcharges apply):

- various stylus contact angles, including pursuant to ASME regulations
- TCP/IP Ethernet connection
- MarkMaster Windows software
- manual z-axis with table (quick conversion to table machine for smaller workpieces)
- 6 or 9 m connection cable from controller to marking head
- battery operated

Technical data:

- weight:
 - marking head 5 kg, controller 10 kg
- power supply: 230 V 50Hz or 110V 60Hz
- marking area: 130 x 30 mm or 130 x 40 mm
- cable length (marking head – controller):
 - 3 m (standard), or optionally available in 6 m and 9 m

Subject to change. 05-14





MARKTRONIC PORTADOT HD2

Group 1940 2000

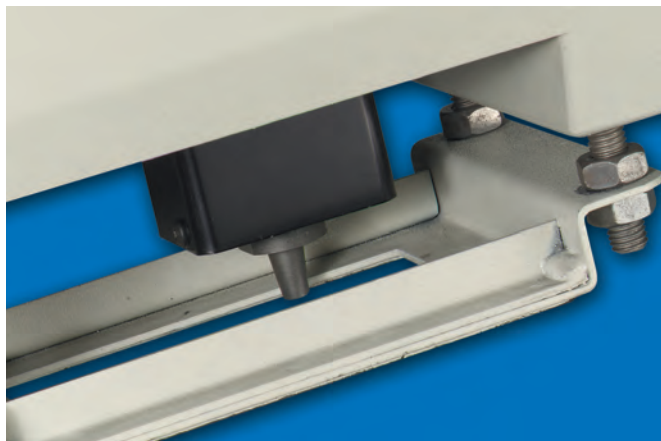
The MARKTRONIC PORTADOT is a further advancement in the simple and flexible marking of products. The work piece no longer has to be brought to the marking machine; the dot marking machine comes to the product. Almost all materials (up to 62 HRC, 800 VHN) can be marked using the carbide metal stylus.

Programmable markings:

- in straight lines which can be marked at any angle (0 - 360°)
- circular or curved labels
- around cylindrical workpieces

Faster text editing than with traditional marking systems:

- text, font size and marking thickness can be changed via the standard keyboard



Simple logos and brands can be created by the user and saved for future use.

Test run function:

- the stylus runs across the area being marked, thus reducing the number of wrong marks.

The Varidot font option allows the distance between the dots to be increased, thus improving the clarity of characters marked in larger font sizes. By reducing the distance between the dots, an almost continuous line can be formed.

Various levels of password protection (surcharge applies).

The stylus marks most materials and hardened metals up to 62 HRC, 800 VHN.



Marktronic Portadot Specifications

The machine consists of the marking head, the controller, keyboard, connection cable (5 m) and a fixture for straight work pieces.

Standard marking area:

100 x 75 mm

Font height:

from 0.5 mm - 50 mm, in 0.15 mm increments

Font types:

5 x 7 point matrix, 7 x 9 point matrix, Varidot, 5 x 9 OCR point matrix, OCR Varidot

Storage capacity:

150 layouts (or, optionally: 1,350)

Marking serial numbers:

counting up or down, up to 30 different serial numbers per layout; both numbers and letters can be used in serial numbers.

Variablen:

up to 30 different variables can be used in a layout.

Marking speed

multiple characters per second, depending on the font size and layout. It is, however, important that test marks be made on the workpieces in order to determine the marking speed for the application in question.

Electrical supply:

230V/50Hz or 110V/60Hz

(please state preference when ordering)

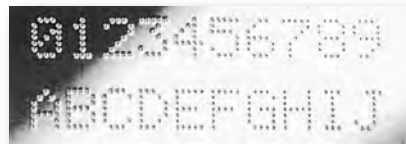
Net weight:

- marking head: approx. 8 kg

- computer: approx. 9 kg

Example of standard font

5 x 7 dot matrix in 5 mm character size



Standard equipment:

marking head and computer with software including the following:

- 1 group with 150 layouts which can be saved
- up to 40 lines per layout (depending on the font size)
- up to 100 characters per layout (depending on the font size)
- straight lines can be marked at any angle (0 - 360°)
- forward and backward marking of the given text
- font types: 5 x 7 point matrix, 7 x 9 dot matrix, Varidot,
- the number 0 can be marked with or without a horizontal line through it
- variable marking speed
- running serial numbers
- 1 variable text
- language selection (German and various other European languages)
- measurements can be given in millimeters or inches
- automatic layout loading function
- auto-save for some data (e.g. serial numbers)

Following software options are available:

- curved marks
- capacity for 1,350 layouts
- regular engraving, adjustable text length, repeated marking of individual points
- entry of simple logos
- I/O interface to send and receive digital data
- serial RS232 interface to communicate with external computers
- serial numbers, variable and multi-layer password protection
- time, date
- variable marking speeds
- electrical depth marking
- dust-protected keyboard
- 3 prism sets for different diameters



Subject to change. 05-14



MARKTRONIC INDOT 3000

Group 1942

Marktronic Indot 3000

Dot marking machine for installation in production lines

This model from the Marktronic range was specially built for independent, self-sufficient use in production lines. The marking heads are dust and water spray resistant.

The machine's rigid construction and the high quality of the threaded spindle drive allows these machines to be used for the most complex data matrix applications, as well as in continuous operation at high speed. The controller is connected to the marking head via a high quality cable. This avoids static charges building up in the control.

You are offered a range of different connection options. The controller has a 24 V digital input/output with 8 inputs and 6 outputs. These can be programmed to control the customer system using a script language. The two RS 232 interfaces can also be programmed to download marking data or to control the machine. Additionally, the optional TCP/IP Ethernet connection allows the system to be controlled via a centralized server.

For applications in which high quality is particularly important, or where the workpiece tolerances are a little bigger, we offer you the AutoSense system as an optional extra. The machine automatically adjusts the distance from the surface and chooses the optimal distance from which to perform the marking. After completion of marking, the machine returns to its starting position.

Models with the AutoSense system require a digital z-axis which is also available as an optional extra. We recommend the use of the AutoSense system and digital z-axis for data-matrix markings and markings on components with varying heights.

The Indot marking heads are available in various sizes:

e.g. Image above

– 50 x 25 mm marking area

Image below

– 150 x 150 mm marking area

Subject to change. 05-14

DATA-MATRIX-CODE

Data matrix code or 2D code

It has become quite common for products to be tracked and identified long after they leave the factory doors. In order to follow articles throughout their entire life cycle, manufacturers use two dimensional (2D) codes which are marked directly on the articles themselves, allowing them to be tracked during and after production. This process is known as DPMI (direct part mark identification).

Being able to track parts can contribute to improvements in quality as it allows manufacturers to ensure that the right processing steps are happening in the right order. DPMI is key to efforts to recognise faults and reduce defects. Not only does DPMI avoid the element of human error involved in the manual entry of part numbers during production, it also facilitates and simplifies the filing of data for safety, liability and warranty matters. It eases compliance with legal regulations which require that articles which are at high risk of theft or counterfeiting be easily identifiable.

However, if a part is to be identifiable throughout its entire life, the code must be equally durable. The mark's required durability is, however, relative given that the individual industries have their own rules when it comes to setting product life cycles.

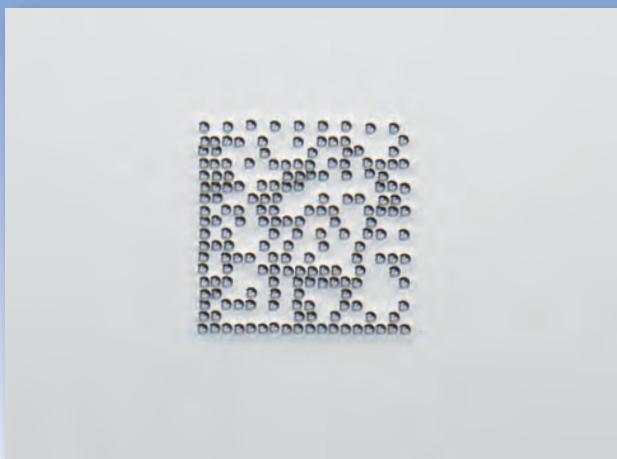
Machine readable DPMI symbols are typically applied using dot marking and laser systems. The relevant considerations when selecting the method used include the required life cycle, the material, environmental factors and production volumes. The surface structure, the quantity of data to be coded, the available space and the position of the marking on the article should also be considered.

Dot marking involves hitting the material surface with a marking stylus with a carbide metal tip to apply the marking. Dot marking has the advantage of not being expensive, of not requiring any consumables and of creating very durable, heat resistant marks. Dot marking is often used in the automotive, aviation and space industry due to the high life cycle requirements in these sectors.

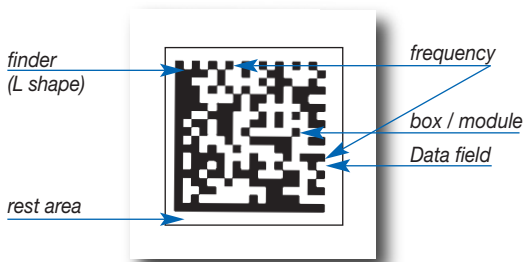
Laser engraving creates markings by melting the surface of the material using a laser beam. Laser engraving has a number of advantages, including high speed and great precision. It is therefore ideal for the application of small, high density (i.e. high data volume) 2D codes.



Data-Matrix-Code made by laser marking



Data-Matrix-Code made by dot marking



Explanation of the single parts of a Data-Matrix-Code.

LASER MARKING SYSTEM



product video



Group 1914

Fibre laser marking systems are cheaper and easier to use than traditional lasers. A particularly high quality result in terms of durability of the laser source (approx. 50,000 hours), the excellent efficiency factor, the good processing of the components and the resulting clean marks. A fibre laser is almost maintenance-free, compact and not affected by external factors.

Röltgen's closed systems are able to mark almost all metals and plastics at very high speeds.

Subject to change. 05-14



laser marking system closed and open

LASER MARKING SYSTEM

The included Windows based MarkMaster software can be used to create and save label layouts. You can reposition and rearrange the individual lines using the mouse. Where the mark is located on the component, a safe, red guiding laser is used to provide a preview of the label.

Any Windows font in any font size may be used for marking. You can also create and mark company logos, images, bar codes or data matrix codes. Of course, we also offer the relevant reading devices for the codes.

Fibre-optic laser marking systems are available in various sizes depending on the marking requirement.

10 watt, 20 watt and 50 watt systems are available. The marking area may be 60 x 60 mm, 100 x 100 mm or 150 x 150 mm in size.

Marking systems are typically supplied in an enclosed cabin which can be mounted on a work bench or table. A 110 – 230 V power supply is sufficient.

This robust steel cabin is laser class 1 compliant and therefore guarantees operating personnel's safety. The system has a large door on bearings, making it easy to open. In order to monitor the marking process occurring in the cabin, a large viewing panel is built into the door. Another key safety aspect is the 3x key-locked system, a feature which prevents misuse.

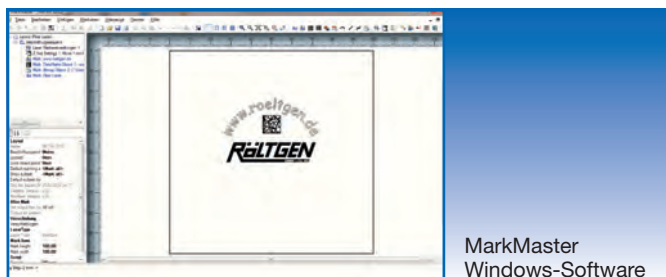
On request, Röltgen can also integrate laser marking heads into production systems or develop special housings to meet our customers' requirements. These heads are then equipped with a 19 inch wide controller and are able to mark completely autonomously.

Furthermore, there is a transportable laser marking device. However for safety reasons, it can only be operated as a class 4 laser if it is provided with suitable protective equipment. With a radius of 3 m, it is also possible to mark very large components.



laser head

machine panel



MarkMaster Windows-Software

Technical data:

Type	19140102	19140202	19140252	19140502
power	10 watt	20 watt	20 watt pro	50 watt
marking area	100 x 100 mm or 150 x 150 mm			
pulse length at 20 kHz	100 ns	100 ns	4, 8, 14, 20, 30, 50, 100 and 200 ns	120 ns
temperature range	0° – 42° C			
cooling	active air cooling			
operational lifespan	approx. 50,000 hours			
power consumption	less than 200 watts			
power supply	110 or 230 V			

Optional accessories available:

- dividing head for marking circumferences
- automatic, digital z-axis
- suction
- digital I/O interface
- automatic door opening
- data matrix reading devices and software
- turntable
- sign magazine

Subject to change. 05-14



PNEUMOHYDRAULIC STAMPING PRESSES

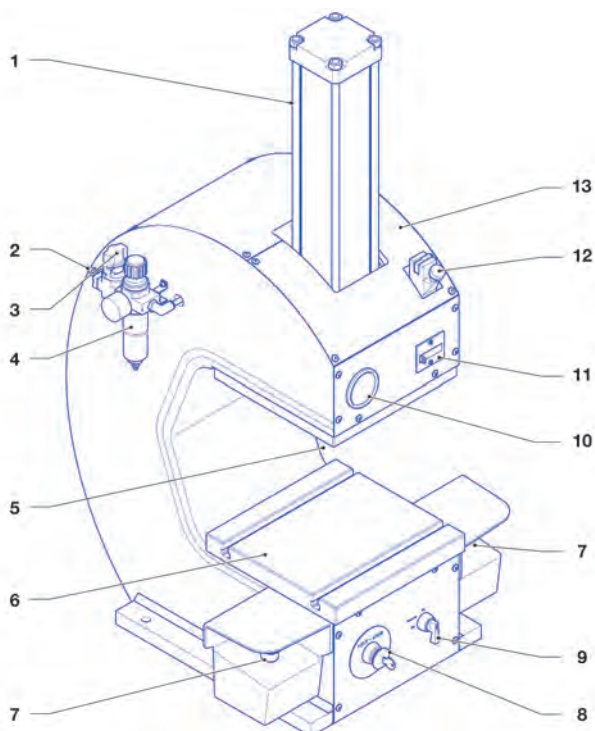
Group 1720

Pneumohydraulic stamping presses, Pressing force 4 – 50 tonnes

Completely connection ready. Only requires a 6 bar compressed air connection. The two-hand controls which have been approved by the trade association mean that the presses meet the latest workplace health and safety regulations. The complete mechanism is hidden behind the covering rack.

The pneumohydraulic cylinders in this stamping press exploit the advantages of air and oil. The use of air, a fast medium, means that the distance between the zero point and the workpiece can be covered quickly. Given that air at high loads is not very protective of either marking tool or workpiece, once a force of a few Newtons is reached, the system switches over to oil and marks the label onto the workpiece powerfully but gently.

The unusual design of this modern press was not developed solely to be aesthetically pleasing - it has other advantages, too. The shape allows for a larger immersion depth which means that it can be used to mark larger workpieces.



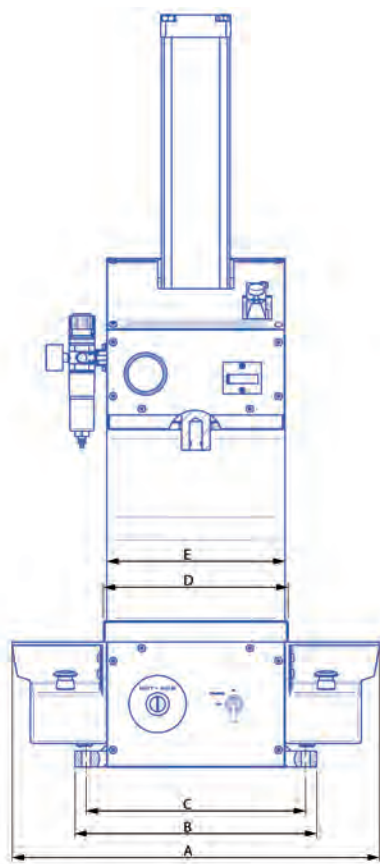
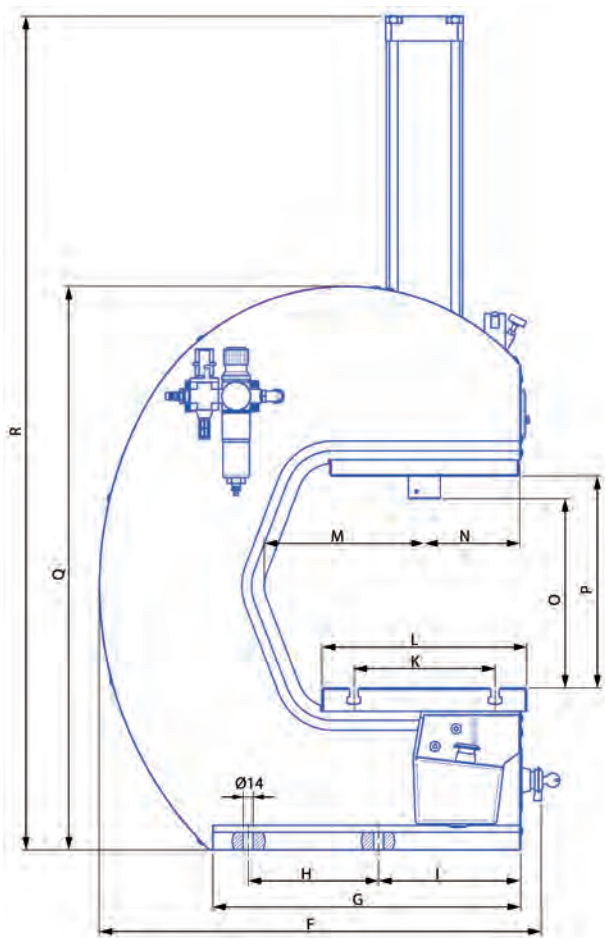
- 1 power cylinder (40 kN to 500 kN)
- 2 compressed air connection (Festo KSS 6 connector)
- 3 manual on/off valve (lockable)
- 4 filter regulator valve with water trap and manometer (pneumatic)
- 5 tool holder (standard holder for stamping tools:
40 kN: Ø 15H9 mm x 30 mm,
80 kN and 140 kN: Ø 20H9 mm x 40 mm,
300 kN and 500 kN: Ø 30H9 mm x 40 mm)
- 6 t-groove table to hold tool
- 7 two hand safety control buttons
- 8 emergency off button with key unlock
- 9 "control on / off" switch
- 10 hydraulic manometer
- 11 counter
- 12 hydraulic switch
- 13 housing (removable)

Subject to change. 05-14

PNEUMOHYDRAULIC STAMPING PRESSES

The presses are available with stamping force of: 4 tonnes (product no. 17200400), 8 tonnes (product no. 17200800), 14 tonnes (product no. 17201400), 30 tonnes (product no. 17203000) and 50 tonnes (product no. 17205000). Without two-hand controls, the press can also run automatically in a production line. Customised designs are always available on request.

Other design features include the piston anti-twist protector (to prevent the stamping tool from twisting), the throttle to adjust the stamping pressure, the piece counter and the emergency off button.

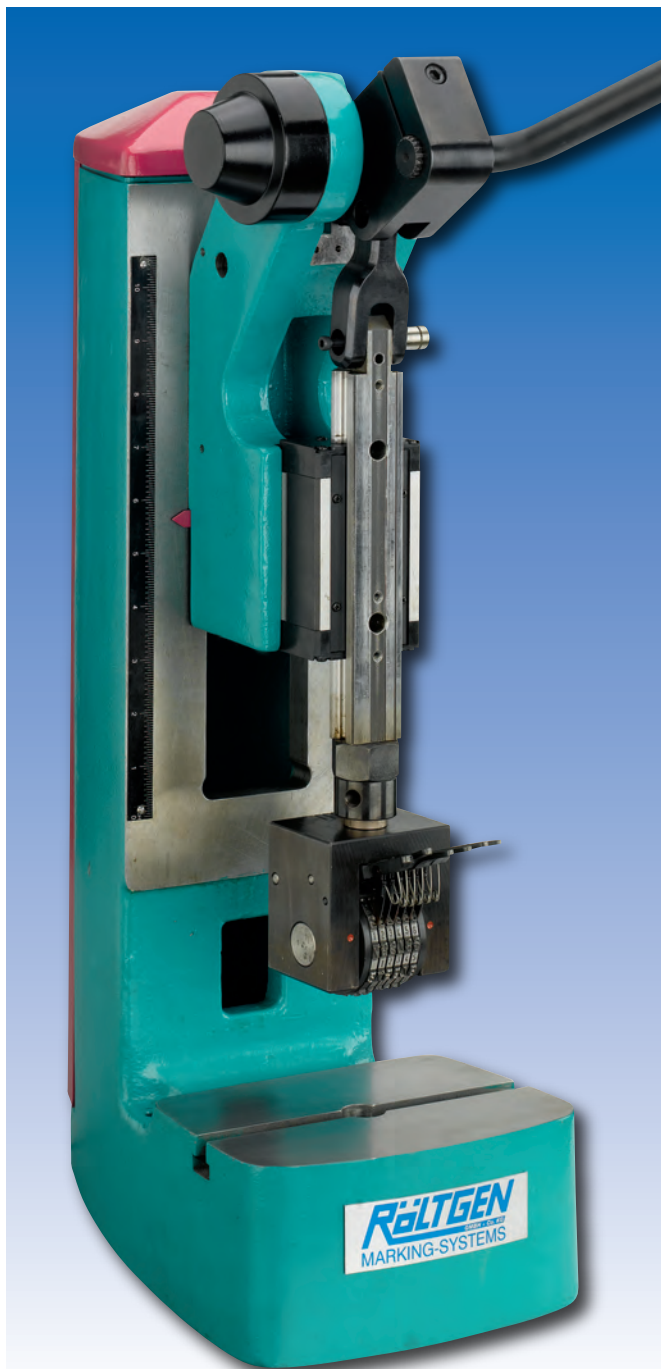


Technical datas:

1720 -	unit	0400	0800	1400	3000	5000
maximum pressing force	kN	40	80	140	300	500
variable press force	kN	2,3 - 40	4,0 - 80	6,3 - 140	10,3 - 300	13,0 - 500
force lift	mm	6	6	6	6	6
work lift	mm	50	50	50	50	50
minimum compressed air supply	bar	6	6	6	6	6
maximum compressed air supply	bar	10	10	10	10	10
maximum noise level, approx.	dB(A)	89	89	89	89	89
maximum noise power level, approx.	dB(A)	96	96	96	96	96
weight	kg	158	280	390	650	787
tool holder size	mm	Ø 15H9 x 30	Ø 20H9 x 40	Ø 20H9 x 40	Ø 30H9 x 40	Ø 30H9 x 40
pressure relief valve	bar	6,5	6,5	6,5	6,5	6,5

Measures (in mm)	0400	0800	1400	3000	5000
A	517	577	597	647	707
B	340	380	400	450	510
C	290	345	365	415	475
D	230	290	310	360	420
E	220	280	300	350	410
F	527	626	793	833	896
G	347	437	547	595	645
H	140	185	285	355	405
I	182	200	205	190	190
K	170	200	220	260	260
L	230	290	310	360	420
M	202	227	257	283	283
N	110	135	155	174	210
O	222	268	272	279	280
P	254	300	300	302	303
Q	675	800	981	1029	1137
R	1062	1183	1364	1620	1850

Subject to change. 05-14



STAMPING PRESSES

Group 1700

Knee lever hand press

Knee lever hand presses are notable for their high quality output and flexible use. The modular construction and the wide range of accessories mean that we can tailor our knee lever presses to your precise needs. The low-bend cast steel frame is available in 3 versions. Press forces of 2 - 33 kN.

Advantages of knee lever presses

Like those of all other knee lever press manufacturers, our presses are also classified as manual knee lever presses. They take advantage of the so-called knee lift effect. This refers to the operator being able to apply a very high force to the lever using an outstretched knee, while the preceding movements can be performed with a low force and consequently at a relatively higher rate. This allows a high manual work rate to be achieved using low expenditure of energy. Consequently your operating personnel's physical work capability is greatly multiplied and that also with an ergonomic work station.

We are happy to manufacture customised, suitable tools for you.

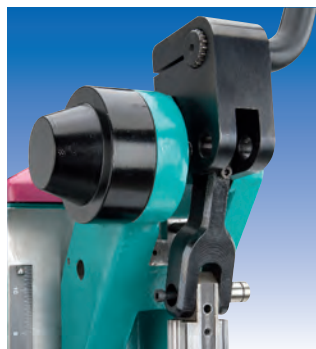
The knee lever hand press is available in three versions:

1. standard design "S"
2. increased work height "L"
(340 - 415 mm instead of 200 - 220 mm)
3. increased load "W"
(300 mm instead of 90 - 105 mm)

When ordering, please state which type you would like.

Accessory options for knee lever presses

- ergonomic additional lever.
- electrical lift count with long-life batteries.
- return lift lock for knee lever systems including return spring.
- distance sensor.
- tool holder: with 3-in-1 clamping design, with or without force sensor and fine tuning settings to adjust the pressure at the lower dead point.
- standardised interface for all electrical sensors.



Subject to change. 05-14

UNIVERSAL HAMMER SPRING PRESSES

Group 1705 3500

Universal hammer spring press

Processes such as stamping, aligning, trimming, drilling rivets, punching, bending, crimping are used in a range of industrial areas in the manufacturing and processing of workpieces. In some cases, this kind of work is still done by hand. Hammer spring presses are an attractive alternative which allow processes to be rationalised and modernised.

Method:

A certain level of pressure is required for the processes mentioned here. The presses in question use a spring and a striking pin. Dependent on the application in question, the striking spring is compressed to a certain point and then released. The striking pin then transfers this force to the clamped tool. Considerable forces are created by the speed of the impact.

By changing the spring tension, the strike impact can be continuously regulated. The manual force required is minimal, as the toggle lever is only used to control the loading and clamping processes.

The effective work pressure is applied by the hammer spring press.

The hammer spring press is supplied with three hammer springs. The force can be continuously adjusted from 7 kN to 30 kN.

Technical data:

dimensions:	250 x 650 x 309 mm
adjustable stamping force:	up to 30 kN
clearance:	330 mm
weight:	33 kg
tool holder:	10 mm Ø x 38 mm
T-grooves:	10 mm (DIN 650)

Subject to change. 05-14



RBM PNEUMATIC HAND STAMPING DEVICES

RÖLTGEN - hand stamping devices are typically used for punch stamping, inspection stamps and marking. They are used as hand-held devices or are integrated into systems.

A slight contact pressure is applied to the workpiece to trigger the stamp.
The device stamps recoil-free can be continually adjusted.

The simple operation, flexible applications and quick and easy punch insert and stamping tool changes make these devices indispensable tools for artisan applications and industry alike.

Group 1707 ...

RBM 10 Pneumatic hand stamping device
length: approx. 260 mm
weight: approx. 520 g

Group 1708 ...

RBM 22 Pneumatic hand stamping device
length: approx. 300 mm
weight: approx. 980 g

Group 1709 ...

RBM 25 Pneumatic hand stamping device
length: approx. 350 mm
weight: approx. 1,660 g



RBM 10

RBM 22

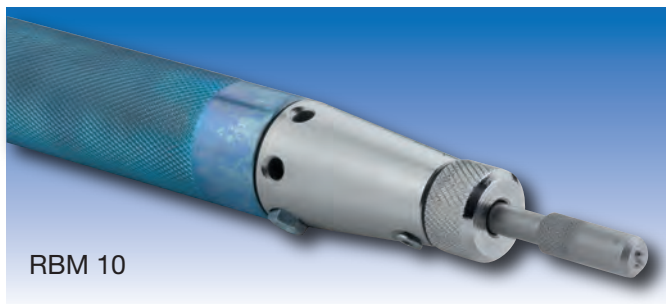
RBM 25

Subject to change. 05-14

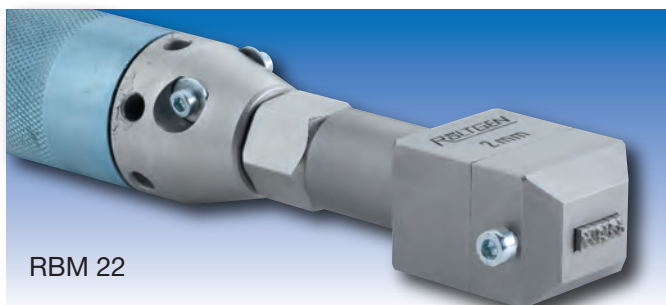
RBM PNEUMATIC HAND STAMPING DEVICES

The images to the left show some of the various tools that can be clamped in the RBM.

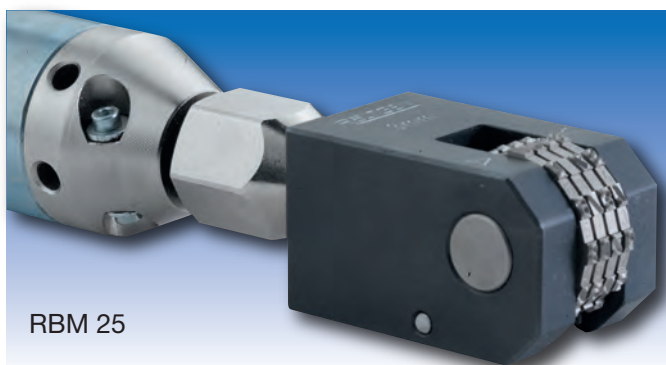
A punching attachment is mounted on the RBM 10, a type holder with exchangeable steel types on the RBM 22 and a stamping tool with adjustable wheels is on the RBM 25. It is quick and easy to change the tools.



RBM 10



RBM 22



RBM 25

Marking performance for steel or aluminium when using RÖLTGEN steel types and type holders

These are rough reference values. Precise measurements can only be attained by trial marking.

Example:
 hand marking device: RBM 22
 font size: 3.0 mm
 workpiece: Steel
 max. number of characters: 3

character size (mm)	RBM 10		RBM 22		RBM 25	
	Steel	Alu	Steel	Alu	Steel	Alu
	maximum number of digits					
1,0	3	5	4	6	7	8
1,5	3	5	4	6	6	8
2,0	3	5	4	6	6	8
2,5	2	4	3	5	5	8
3,0	2	4	3	5	4	7
4,0	1	3	2	5	3	6
5,0	-	2	1	3	3	6

Subject to change. 05-14

FOTOS folgen

UNIVERSAL ROLL STAMPING MACHINE

Group 1801 0000

PR 1126 Table roll stamping machine

Robust roll stamping machine for round parts with a circumference of between 18 and 400 mm. Straight parts can also be marked using this machine. Pressure settings and pressure compensation during stamping. With height adjustment and piece counter. The roll stamping type holder can be used in a single or multiple line version. The type holder is loaded with segment steel types comprising individual or block types allowing you to create any text. The customer can set a font size of up to 10 mm.

Procedure:

The type holder is loaded with types across 180°. In the start position, the flattened part of the roller head is opposite the workpiece. The workpiece is inserted between the counter roller and the type holder. The stamp depth is set using the crank handle on the right hand side of the stamping head. The height difference is set using the knob above the type holder (optional standard height adjustment with tool). After the two hand operation has been activated, the type holder begins to turn through 360° and rolls the text into the workpiece. After successful stamping, the turning stops automatically and the workpiece can be removed.

Technical data:

stamping area:	18 - 400 mm Ø
height adjustment by	
type rolling head:	0 - 75 mm
typeface length:	bis 500 mm
font height:	max. 10 mm
theoretical output:	approx. 700 workpieces/hr
supply voltage:	380 V, 50 Hz
machine dimensions:	1100 x 750 x 1100 mm (W x D x H)
weight:	approx. 250 kg

applications:

Flanges, fittings, circular blanks, waves, sleeves, pipes, tins, turned parts, sockets etc.

Optional accessories:

- the roll type holder, 156 mm diameter
- height adjustment by rotary knob
- aluminium profile table
- fixed embossing stamp

Subject to change. 05-14

ROLL STAMPING TYPE HOLDER

Group 1801 0200

Embossing type holder, 156 mm diameter

Suitable for the embossing stamping machine PR 1126 for holding 1801 1500 segment steel types.

Group 1801 1500

Segment steel types

For 156 mm diameter embossing stamps, with 2 - 8 mm font sizes, engraved: A - Z, 0 - 9 or punctuation.

Group 1801 1546

Segment filler pieces

For 156 mm diameter embossing stamps, cured with rubber so that the workpiece will continue to turn even if there are spaces.

Group 1801 0100

Embossing type holder, 202 mm diameter

Suitable for the embossing stamping machine PR 200 for 1801 1000 segment steel types.

Group 1801 1000

Segment steel types

For 202 mm diameter embossing stamps, with 2 - 8 mm font sizes, engraved: A - Z, 0 - 9 or punctuation.

Group 1801 1046

Segment filler pieces

For 202 mm diameter embossing stamps, cured with rubber so that the workpiece will continue to turn even if there are spaces.

Group 1801 5000

Special steel type segments

Customised special symbols, company logos, testing stamps or similar.

Subject to change. 05-14



1801 0100
with assembled types



1801 1000



ROLL STAMPING MACHINE PR 1099

Group 1850

The defining feature of the versatile PR 1099 roller stamping machine is its unique design: Both the workpiece contact and the subsequent stamping are carried out by turning the crank handle.

The machine is suitable for marking parts of various shapes and can compensate for variations of up to 3 mm in the workpiece thickness.



Set-up times have been reduced by simplifying the positioning of the various elements using pre-drilled holes. By using steel segment types or specially engraved roll stamps, a wide range of workpieces can be marked - an affordable solution to the wide range of marking tasks required in modern production.

Advantages:

- short changeover times
- high production performance
- low costs - use of standard equipment/ installations
- compensates for irregular workpiece thickness
- no need for protective equipment
- stamping pressure up to 0.75 t
- simple operation
- robust design and construction
- suitable for a range of different workpieces
- flat, round or curved marks



Subject to change. 05-14



ROLL STAMPING MACHINE PR 1099

Group 1850

Rolling stamp with 2 rollers

The two-part roller unit takes a range of different workpieces in the form of solid cylinders and thick-walled hollow cylinders. It is secured using tapped holes and is suitable for workpieces of between 6 mm and 175 mm in diameter.

Mandrel holder

Thin walled, pipe-shaped parts can be marked with the help of a mandrel; to prevent workpiece deformation, it is placed on the mandrel which provides it with support from the inside. The mandrel holder allows the mandrel to be swapped quickly and supports workpieces of up to 175 mm in diameter.

Stamping flat parts

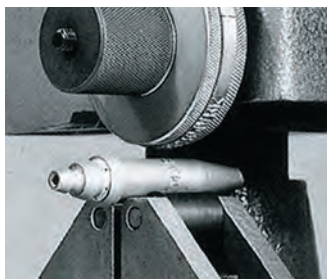
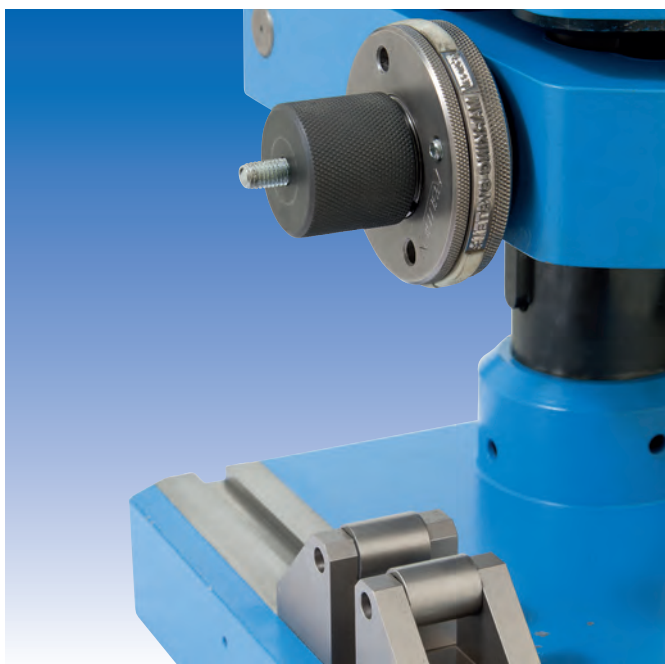
By putting the U profile on the roller unit, flat workpieces can have labels of up to 175 mm in length marked on them.

Stamping curved marks

By extending the mandrel unit with an additional shaft, rings and similar workpieces of up to 175 mm in length can have curved labels marked on them.

Technical data:

dimensions:	280 x 280 x 500 mm (width x height x depth)
holder:	roller stamping type holder, 76.3 mm Ø.
inserts:	segment steel types in font heights 2 mm, 2.5 mm, 3 mm, 4 mm and 5 mm
stamping pressure:	variable up to 0.75 t
net weight:	45 kg



rolling device with two rolls



marking of a flat work piece



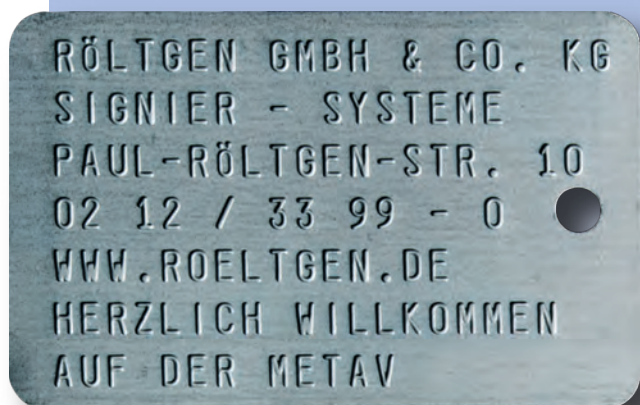
marking of an arched mark

Subject to change. 05-14

LABEL EMBOSSING SYSTEM PR 410

Group 1920

The PR 410 label stamping system was specially developed for raised or imprinted labels for industrial applications.



The PR 410 model's housing provides the operator with easy access to the system; the feed magazine and the entire label conveyor mechanism are accessible from the front panel. The robust housing design makes the machine suitable for set up and operation in industrial settings.

Adjustable feed magazine

The PR 410 comes with a feed magazine, the width and depth can be adjusted in minutes without the need for any tools. A system for the processing of a wide range of different formats. The magazine has a capacity of up to 250 labels with a material thickness of 0.5 mm.

Label output

The label stamping system comes with a side-on label output as standard. This is suitable for applications in which the stamped labels are to be used directly after stamping. Optionally, the machine can be supplied with a label output magazine (FIFO).

You decide which method best suits your needs.

Subject to change. 05-14

LABEL EMBOSSING SYSTEM PR 410

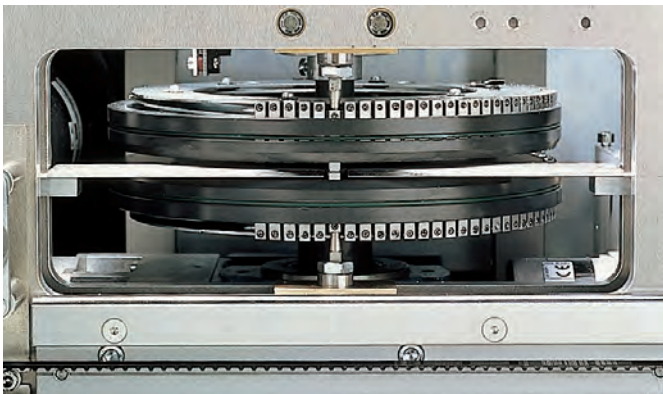
Group 1920

Stamping drums and stamping types

Engraved stamping types are used in the stamping drum of a label stamping system. Depending on the precise industrial use, PR 410 is specially configured as follows: for metal labels or plates which are to be used as type or rating plates, smaller font sizes are typically used; for marking tags or applications which will be covered with thick coats of paint or will be galvanised, larger font sizes are typically used. Depending on the customer's needs, the suitable stamping drum will be determined and the stamping types inserted. Each PR 410 is therefore a customised, configured, ready-to-use device, not a standard off-the-shelf device.

Robust design and construction

The quality of the stamping mechanism is key to reliable and high quality marking. The PR 410 model's powerful motor, extremely robust stamping arms and hardened stamping drum guarantee high stamping quality. Insulating materials in the housing reduce the noise emissions and thus make the system suitable for use in office-like environments.



Technical datas	
marking capacity:	350 lables / hour (max. 40 digits / lable)
magazine capacity:	input: approx. 250 lables (0,5 mm thickness) FIFO magazine: approx. 165 lables (0,5 mm thickness)
thickness of lable:	0,4 - 0,9 mm
size of lable:	min. 30 x 20 mm (w x d) max. 120 x 90 mm (w x d)
size of marking:	min. 30 x 16 mm (w x d) max. 120 x 86 (w x d) 4 mm distance from the edge measured from the bottom line
stamping drum:	for 60 or 100 stamping types
stamping types:	Simplex 2 (3 mm character size) Block USA (4 mm character size) Block (5 mm character size) Double block (6 mm character size - stamping drum 60) Double long block (8 mm character size - stamping drum 60) Maxi Block (12 mm character size - stamping drum 60)
interface:	RS232, optional RJ45 Ethernet interface (LAN)
dimension:	910 x 600 x 420 mm (w x s x h)
weight:	70 kg
power supply:	100 -230 Volt, 50/60 Hz

Subject to change. 05-14

NAMEPLATE STAMPING DEVICES

Group 1900 ...

NAMEPLATE STAMPING DEVICE I, II

These two hand-operated devices distinguish themselves not only through their simple operation, but also through the wide range of applications in all workshop and industrial settings. Multiple digit number and letter markings are stamped one after the other. Before stamping, the desired characters are set on the visible stamping wheel.

The adjustable automatic feed on the work table with the clamped type label ensures that the characters are correctly spaced. The ideal devices for the labelling of smaller series of constantly changing nameplates.

Each device has a strike limit which ensures that the print depth is constant. Differing material thicknesses can be cancelled out in this way.

Group 1901 0000

Our smallest manual label stamping device with adjustable, exchangeable stamping wheel, engraved with letters and numbers in the customer's desired font size of between 2 mm to 5 mm. Maximum label size 140 mm x 90 mm.

Group 1902 0000

Larger manual label stamping device with greater stamping pressure. Adjustable, exchangeable stamping wheel, engraved with letters and numbers in the customer's desired font size of between 2 mm to 5 mm. Maximum label size 180 mm x 130 mm.

Feeding table

The standard version has automatic feeding with a clamping device for the nameplate and layout marking for the line stamping in question. The feeder can be adjusted to suit the various font sizes (widths), 5 positions. Additional layout tables e.g. with semi-automatic adjustment along the X and Y axes are available, as well as special tables with customised designs and dimensions.

Stamping wheels

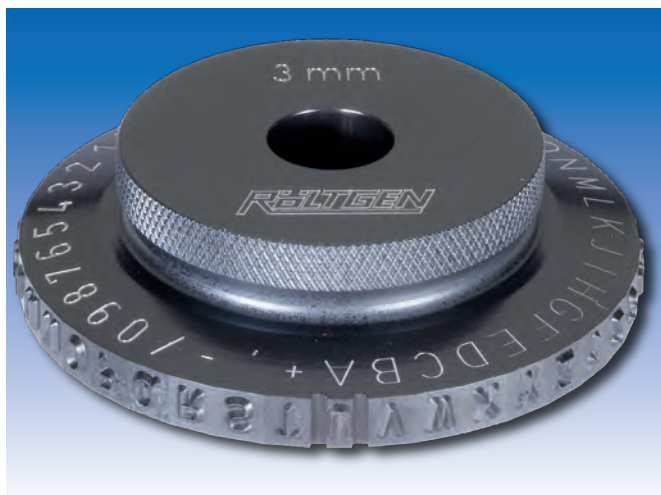
The high quality exchangeable stamping wheels are engraved and hardened. Each wheel contains not only the complete alphabet and numbers from 0-9, but also the special characters period, slash, hyphen and the plus sign (./-+).

The standard font sizes are 2.0, 2.5, 3.0, 3.5, 4.0, 4.5 and 5.0 mm. Special customised font sizes of 1.0, 1.5 and 5.5 mm are also available.

Colour stamping

In order to achieve colour stamping, the SP I or SP II label stamping devices are equipped with an automatic film conveyor for the use of special cold stamping films. This allows you to stamp in colour (mainly on non-metallic signs/labels). They do not need to be heated.

Please note: In such cases, please be sure to send us template labels.



Subject to change. 05-14

LABELS AND PLATES

Group 1860 0001

Type plates and type plate labelling devices Is your product properly labelled?

We are specialists for the production of labels and plates of all kinds and materials. Clear details and instructions using scales and tables ensure correct operation. And furthermore, appealing labelling improves sales. The device's front panel is the face of your often expensive machinery. Our graphics can be used to add to such front panels (applied either directly onto the panel or on a cover plate).

We also produce trim and decorative plates for the consumer goods industry.

For your information!

What types are there?

1. Etched plates

in aluminium, brass and stainless steel.
For watertight connections, raised effect.

2. Anodised aluminium plates, anodised oxidation.

For flat, scratch-free and corrosion-resistant labels. Labels and front plates.

3. Printed labels

on aluminium, acrylic or plastic plates. For front panels and number plates which are not subject to much stress.

4. Engravings, very versatile, suitable for individual units or small batches.

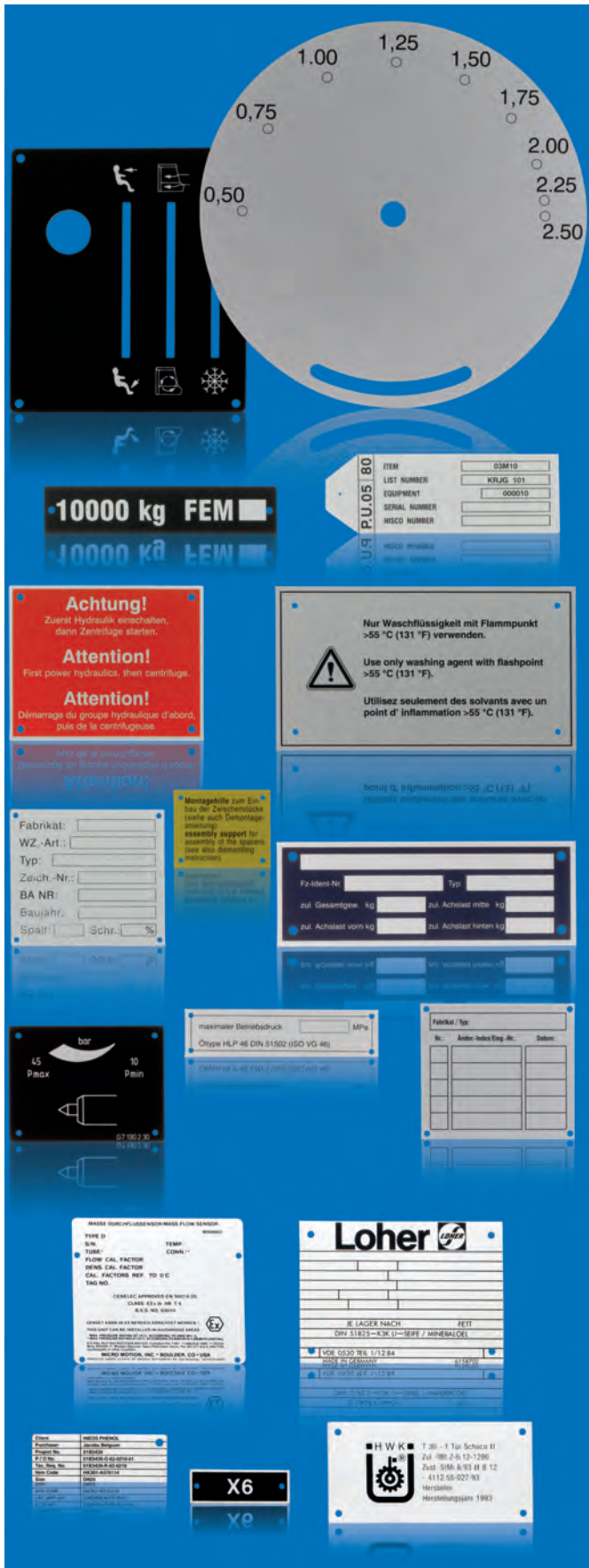
5. Film labels, self-adhesive. Aluminium, plastic, paper, mass production for small labels. High performance industrial stickers are chemical and heat resistant, even under extreme temperatures.

6. Stamped labels, aluminium and plastic, individual units or small batches.

7. Cast signs. Aluminium and bronze.

Durable and legible. Very robust.

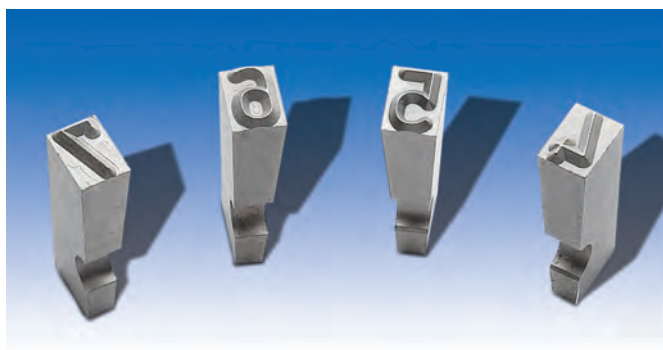
Holes and cut-outs according to the customer's instructions.



Subject to change. 05-14



1520



ROLLER TYPE HOLDER

Group 1520

Roller type holder with return spring for all sizes. A holder for CNC machines and lathes.

Problem and solution

Turned parts often have to be marked with product numbers, company names, material qualities, batch numbers, production dates etc. for product liability reasons. Röltgen precision tools can be used to mark workpieces in machining centres or on lathes during processing and in just a few seconds.



product video

Advantages:

- workpieces come out of the lathe ready-marked.
- it is difficult for mix-ups to occur.
- there is no need for external marking using stamping machines or hand-held stamping devices. This results in considerable savings in costs and time.
- the roller type holders that we use can be used to apply customised marks, as the individual letters, numbers, logos and block types can always be changed around. This means high flexibility.

Function:

- to mark the workpiece, the text is simply rolled out in a single pass.
- it is therefore impossible to write over the text.
- the roller type holder or roller stamp returns to the starting position (0 point) after marking and is ready for the next marking.
- the relatively short rolling movement means that workpieces with different diameters but requiring the same mark can be marked using the same roller. In the past, a different roller was required for each workpiece of a different diameter.

Group 1850 3403

Roller type holder 76.3 Ø

(other diameters available on request)

Customers can put their own texts together using individual types. Block types with text are also available.

Group 1850 3600

Segment steel types

For roller stamping type holders.

Character size:

2, 2.5, 3, 4, 5 mm

Subject to change. 05-14

ROLLING STAMP

Group 1550 ...

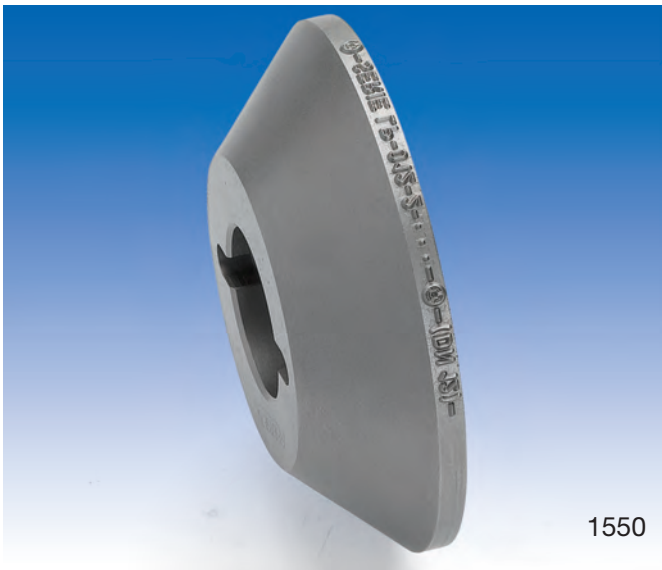
Rolling stamp

Based on your drawing, sketch or design.

The stamps can be engraved in any dimensions with any desired set text. You can select the font size and type. The diameter is adjusted to suit your workpiece so that the entire mark is only embossed onto your workpiece once.

We are happy to engrave your company logo, rating scales or other special characters on the stamp.

Should your machine not have a motor for the roller stamp, the stamp can be engraved with dots, dashes or stars to go between the actual engraved design. This guarantees continual stamping.



Group 1570 ...

BARREL STAMP

According to sketches, drawings or templates.

These stamping tools can be used in connection with other roller marking machines.



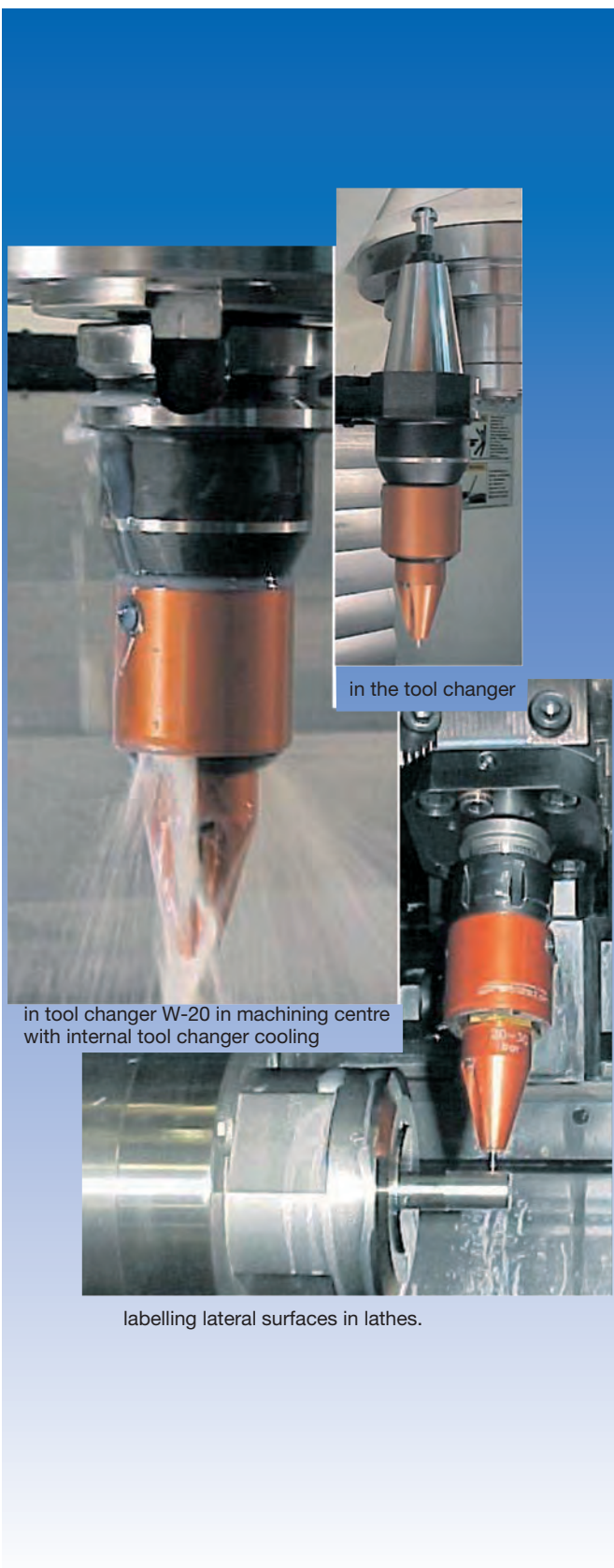
Subject to change. 05-14

DOT MARKING TOOL FOR CNC MACHINES

Group 1930

Gravostar, dot marking tool for use in CNC machines

The **gravostar** is a dot marking tool for use in CNC machines – it is integrated in the machining process and is used to mark workpieces – practically without wear – and with feed rates exceeding 5,000 mm/min. As with engraving, the desired contours are defined via the machine controls. No minimum spindle speed is required, as the marking needle is powered using compressed air or the internal tool cooler's coolant. The **gravostar** can be used to mark practically any material, including aluminium, non-ferrous metals, tool and stainless steel in a wide range of alloys, as well as hardened materials of up to approx. 62 HRC. Thanks to the automated distance compensation function, parts with large differences in size, round or uneven surfaces e.g. raw castings are easily markable.



in the tool changer

in tool changer W-20 in machining centre with internal tool changer cooling

labelling lateral surfaces in lathes.

Advantages of the process:

- **time savings and increases to operational safety**
thanks to workpiece machining and marking in one single process
- **individual workpiece marking**
manufacturer logo, part code, serial no., real-time production date etc.
- **high feed rate**
may exceed 5,000 mm/min
- **integrated distance compensation function**
standard up to 0.5 mm
WS-20 up to 5.0 mm
- **extremely durable marking needle**
- **no minimum spindle speed**
- **automated tool changes via tool magazine**

DOT MARKING TOOL FOR CNC MACHINES

Group 1930 ...
Gravostar, dot marking tool for use in CNC machines

Function description: dot marking

Unlike engraving, dot marking does not remove any material from the workpiece but rather involves slight material compression at individual points. This is applied by the vertical vibrating movement of the marking needle. All functional elements of the impulse control are integrated into the marking head. When the air supply or internal cooling system is turned on, the needle will start to vibrate at a frequency of 300 Hz/second. Due to the high vibration frequency, the individual marking dots are very close to each other, such that they cannot be told apart from one another. This produces a depressed marked line.

CNC machine requirements:

machine software:

possible programmes for the marking contour

tool holder:

clamp or collet holder, 20 mm Ø, VDI 25, VDI 30, (alternative holders on request)

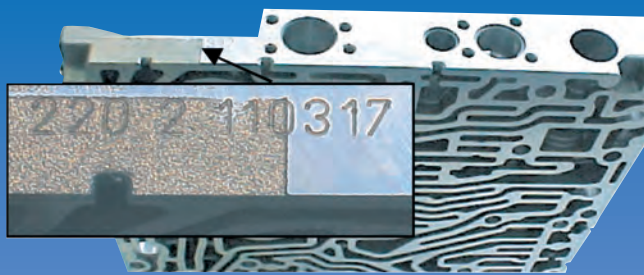
compressed air drive:

constant pressure, approx. 4 – 8 bar
(**gravostar** HV-20 / H-20)

coolant drive:

tool internal cooling, approx. 5 – 50 bar
(W-20 / WS-20), coolant: water or oil

Marking sample



aluminium housing for automatic gear boxes



CrNi Steel, marking onto the radius w/o height correction



housing made of spheroidal cast iron: marking onto raw cast surface



MACHINE EMBOSSING STAMPS

Group 1500

We produce our machine embossing stamps according to your customised details. They are suitable for use in presses, stamping machines, installations or press dies.

For cold stamping, we use the materials X210Cr12 (1.2080), 60WCrV8 (1.2550), X153CrMoV1 (1.2379) or 90MnCrV8 (1.2842).

For warm stamping, we use the materials X37CrMoV5-1 (1.2343) or X40CrMoV5-1 (1.2344).

Where there are special requirements, the stamps can also be produced using powdered metallurgical steel.

The machine embossing stamps are hardened, rust-resistant and finished to meet your requirements.

Subject to change. 05-14

EMBOSSING STAMPS UPPER AND LOWER PARTS

Group 1510

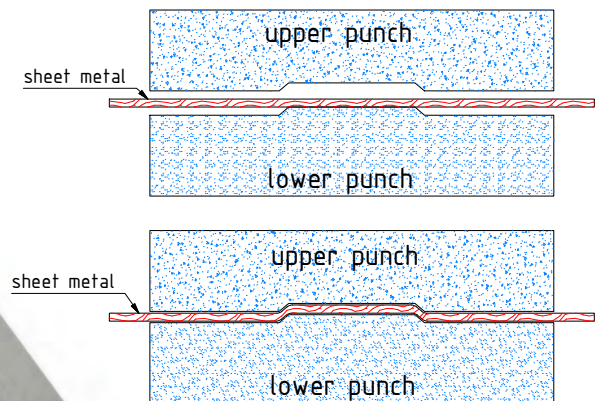
Machine embossing stamps

For raised sheet stamping, machine stamps with a depressed engraving (upper part) and a raised engraving (lower part) are required.

To engrave these stamps, we require information regarding the thickness of the sheets being stamped. The engraving and design are completed based on your instructions, mainly using the material 1.2080, ground on all sides.



embossing example



Subject to change. 05-14



MANUALLY ADJUSTABLE NUMBERING HEAD

Group 1600 ...

Manually adjustable numbering head

For batch stamping.

Customisable number of digits.

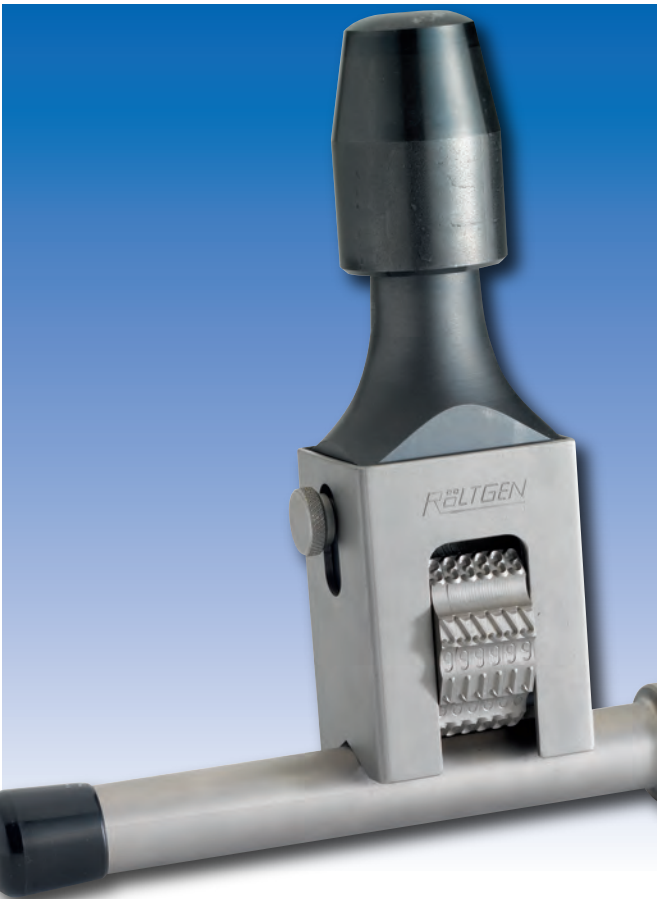
Font size: 2-10 mm, engraving: DIN 1451.

0-9 mm and space or 10 letters of choice per wheel.
With replaceable striking cap for hand stamping using a hammer.

Advantage: Allows clean and even stamping compared to individual stamps, and also saves considerable time.



product Video



Group 1600 0050

Guiding frame for axial stamping

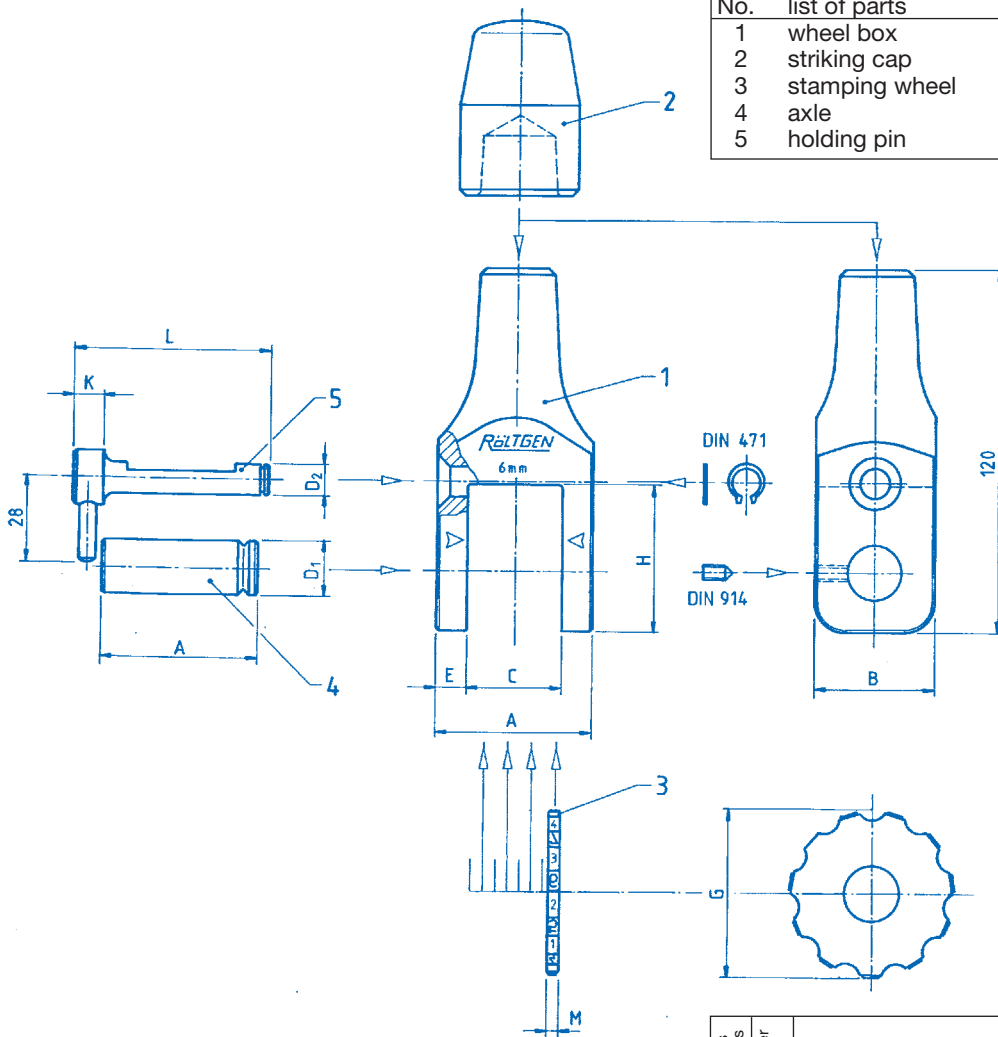
This guide supports you when lining up the stamping device on round materials. On level surfaces, the frame can be manually pushed up.

Subject to change. 05-14

MANUALLY ADJUSTABLE NUMBERING HEAD

List of replacement parts

No.	list of parts
1	wheel box
2	striking cap
3	stamping wheel
4	axle
5	holding pin



n	h	character size										
		A	B	C	E	H	Ø D1	Ø D2	L	K	M	G
4	2 / 2,5 / 3	38	30	10	14	32,5	12	7,0	48,0	8,0	2,5	34,7
6		38	30	15	11,5	32,5	12	7,0	48,0	8,0	2,5	34,7
8		38	30	20	9	32,5	12	7,0	48,0	8,0	2,5	34,7
10		50	30	25	12,5	32,5	12	7,0	60,0	8,0	2,5	34,7
12		56	30	30	13	32,5	12	7,0	66,0	8,0	2,5	34,7
4	4 / 5 / 6	44	40	16	10	49,5	18	10,0	54,5	8,0	4	53,6
6		52	40	24	10	49,5	18	10,0	60,5	8,0	4	53,6
8		60	40	32	10	49,5	18	10,0	69,0	8,0	4	53,6
10	4	70	40	40	10	49,5	18	8,0	80,0	8,0	4	53,6
12		78	40	48	10	49,5	18	8,0	88,0	8,0	4	53,6
4	8 / 10	58	40	28	15	51,5	18	8,0	68,0	8,0	7	58
6		72	40	42	15	51,5	18	8,0	81,0	8,0	7	58
8		86	40	56	15	51,5	18	8,0	95,0	8,0	7	58

Subject to change. 05-14



MANUALLY ADJUSTABLE NUMBERING HEAD

Group 1601

Manually adjustable numbering heads are used when multiple characters are to be stamped next to each other. Components or type plates can be neatly clamped in a press.

As standard, stamping wheels are engraved with the numbers from 0 - 9, a slash and a space. They are engraved in accordance with DIN 1451. The standard font sizes are 2 mm, 2.5 mm, 3 mm, 4 mm, 5 mm, 6 mm, 8 mm and 10 mm. The press shank is 40 mm long and has a diameter of 20 mm.

Of course, the numbering head will be customised to meet your needs. Whether you require letters, logos or block engravings (e.g. DIN on one wheel), we are able to produce customised stamping wheels for you in your desired font size.

In order to avoid errors, the number that has been set on the wheel is visible between the two arrows at the top.

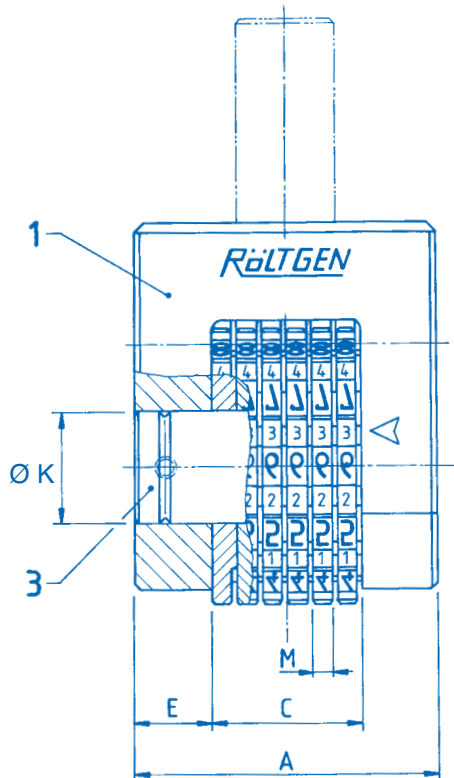
You can find the dimensions of the standard numbering heads on the next page.



Subject to change. 05-14

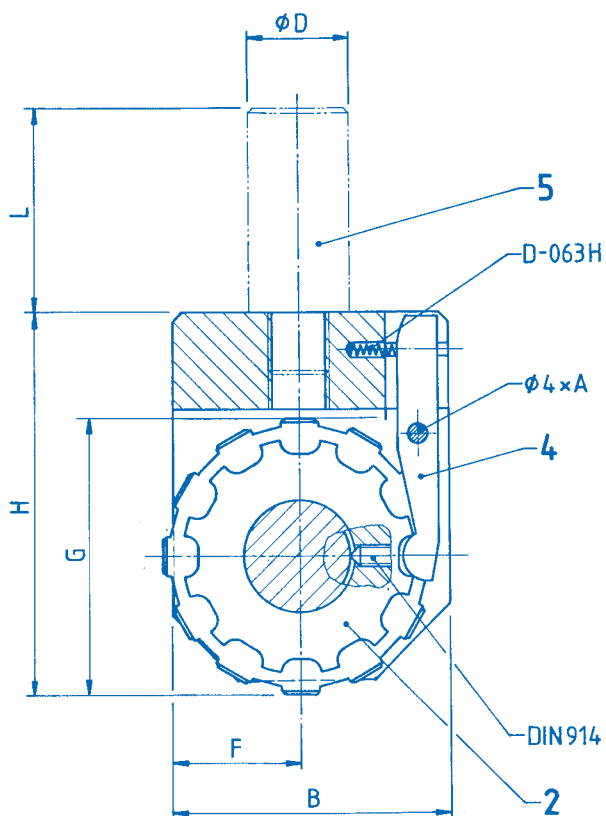
MANUALLY ADJUSTABLE NUMBERING HEAD

Group 1601



List of replacement parts

No.	list of parts
1	wheel box
2	stamping wheel
3	axle
4	rear grabber
5	shank



numbers of wheels	character size	all dimensions in mm										
		A	B	C	D	E	F	G	H	K	M	L
4	2 / 2,5 / 3	35	35	14	20	10,5	15	33	63	14	3,5	40
6		45	35	21	20	12	15	33	63	14	3,5	40
8		50	35	28	20	11	15	33	63	14	3,5	40
4	4 / 5 / 6	40	55	20	20	10	25	54	75	22	4	40
6		60	55	30	20	15	25	54	75	22	4	40
8		70	55	40	20	15	25	54	75	22	4	40
4	8 / 10	60	60	32	20	14	27	58	88	22	7	40
6		80	60	48	20	16	27	58	88	22	7	40
8		100	60	64	20	18	27	58	88	22	7	40

Subject to change. 05-14



AUTOMATIC CHANGING NUMBERING HEAD

Group 1605 ...

Automatic numbering

For sequential numbering of steel, non-ferrous metal, wooden or plastic workpieces. The numbers can be increased manually or automatically when the press raises the mechanism.

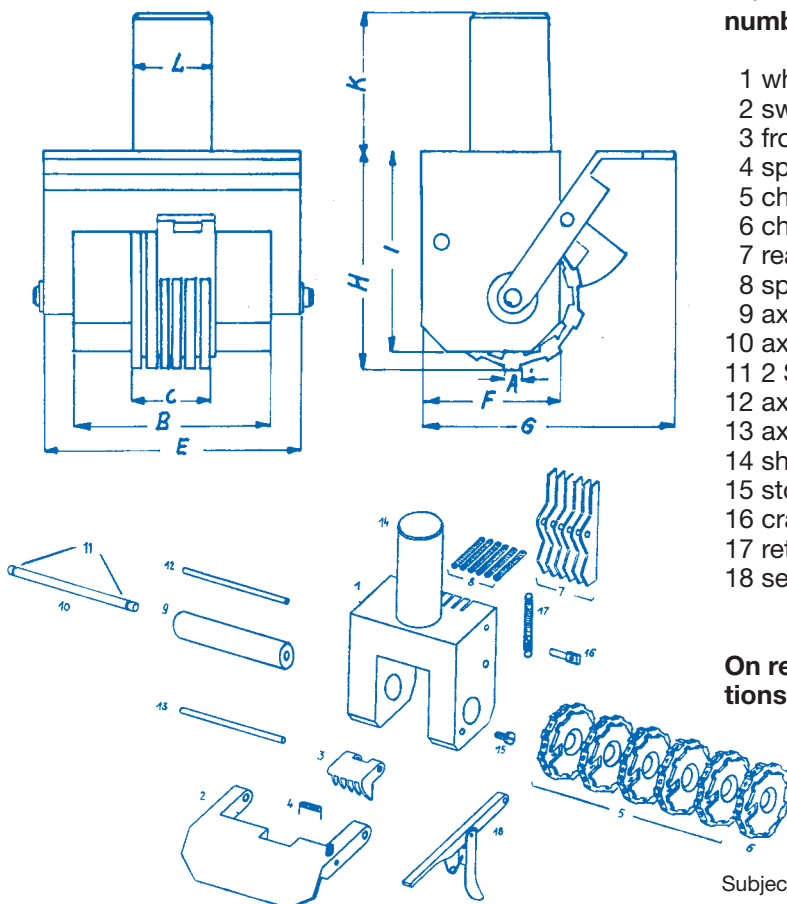
Dimensions for the 6-figure numbering head, Gr. 1605

A	B	C	E	F	G	H	I	K	L
2	50	16,5	65	35	65	54	50	40	20
3	50	19	65	35	65	54	50	40	20
4	60	24	75	50	80	77	70	40	20
5	60	28	75	50	80	77	70	40	20
6	60	30	75	65	110	93	80	40	20
7	70	38	85	65	110	93	80	50	30
8	70	40	85	65	110	93	80	50	30
9	75	46	90	65	110	93	80	50	30
10	80	52	95	65	110	93	80	50	30
11	95	58	110	90	140	130	110	50	30
12	100	62	115	90	140	130	110	50	30

Individual parts for the 1605 and 1610 line numbering head

- 1 wheel box
- 2 switching flap (1605 line)
- 3 front grabber
- 4 spring for front grabber
- 5 character wheels (2nd - 6th digit)
- 6 character wheel (1st digit)
- 7 rear grabber (1st - 6th digit)
- 8 spring for rear grabber
- 9 axle
- 10 axle for switching flap
- 11 2 Seeger rings
- 12 axle for rear grabber
- 13 axle for front grabber
- 14 shank
- 15 stop screw
- 16 cradle suspension
- 17 return spring
- 18 setting button for press (1610 line)

On request, we can manufacture customised solutions to meet your needs.



Subject to change. 05-14

NUMBERING HEADS

Group 1610 ...

Button numbering head

For setting number and letter combinations, each wheel is individually adjusted when the setting button is moved. The setting can be seen on the display numbers. All wheels are engraved with 10 numbers or letters and 1 space. All wheel segmentations are available on request.

Group 1615 ...

Combined numbering heads

Automatic numbering head with additional button setting. All automatic switching wheels can be equipped with a button which allows a new number group to be set out of sequence upon completion of stamping of a sequential number group.

The numbering head can also be partially equipped with letter wheels.

Group 1620 ...

Numbering head with side-on telescopic adjustment

Any desired number can be set using the telescopic adjustment and read in the viewing field. DIN 1451 engraving, customised number of digits, also available with letter wheels.

Group 1625 ...

Quickly adjustable numbering heads

The number groups can be set analogously to a cash register. Wheels can be turned forwards and backwards. The numbers or letters that are set can be read in the viewing field. DIN 1451 digit engraving, customised number of digits. The following wheel options are available:

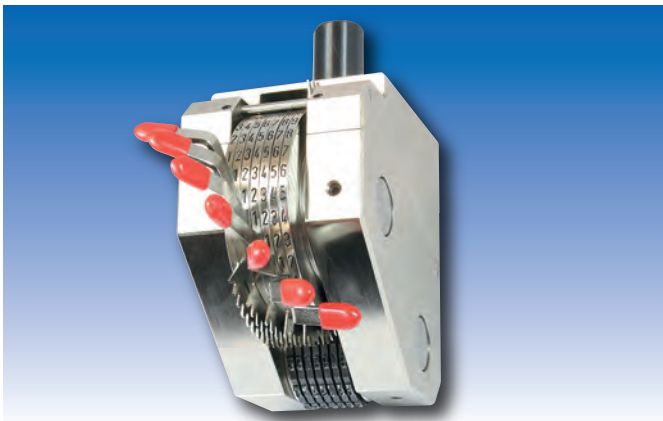
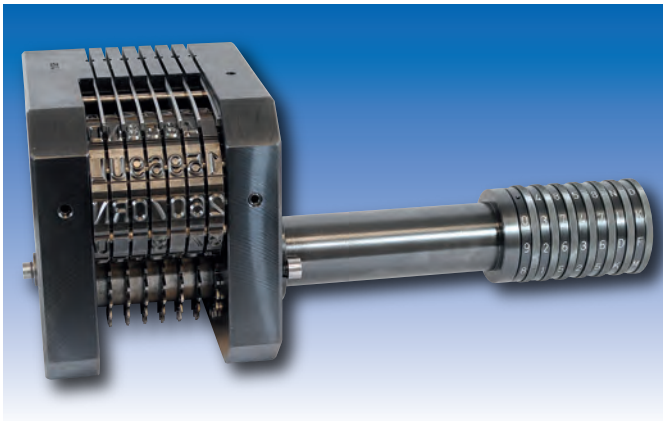
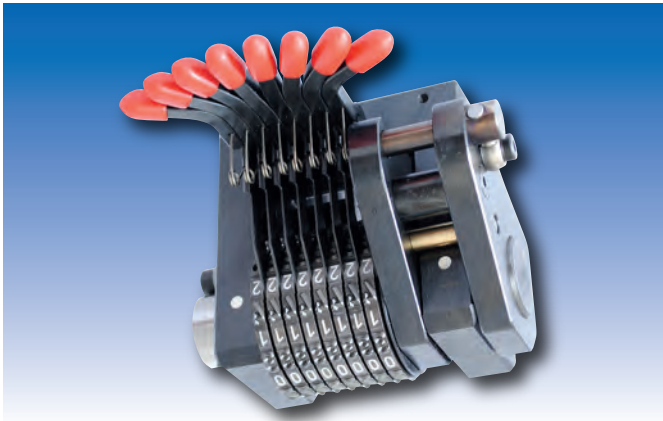
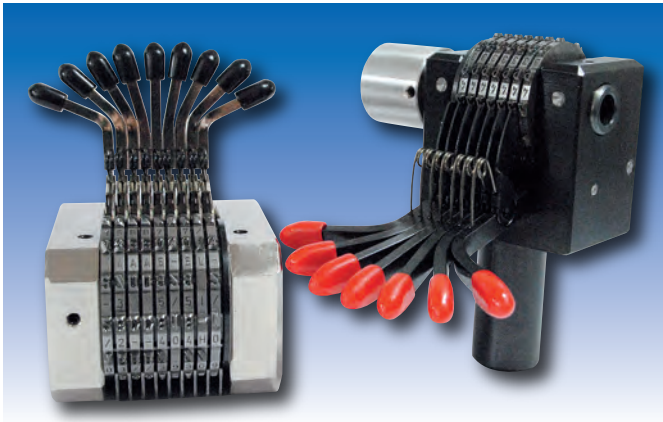
2 - 3 mm font size, 11 or 15 part wheels

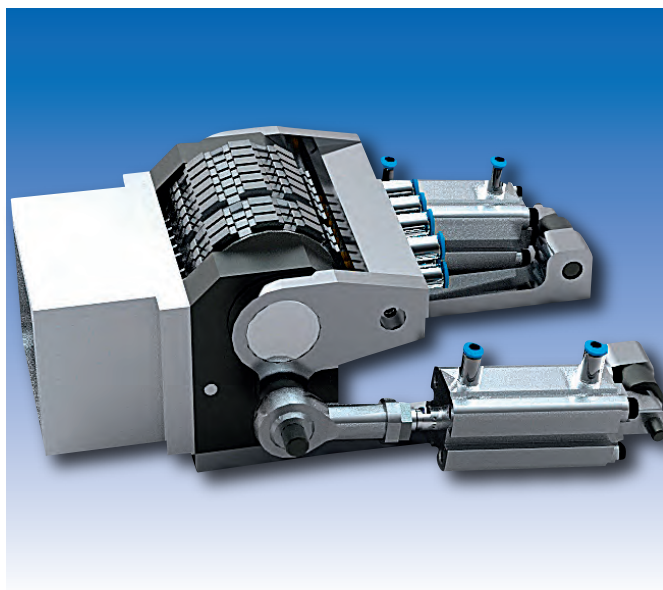
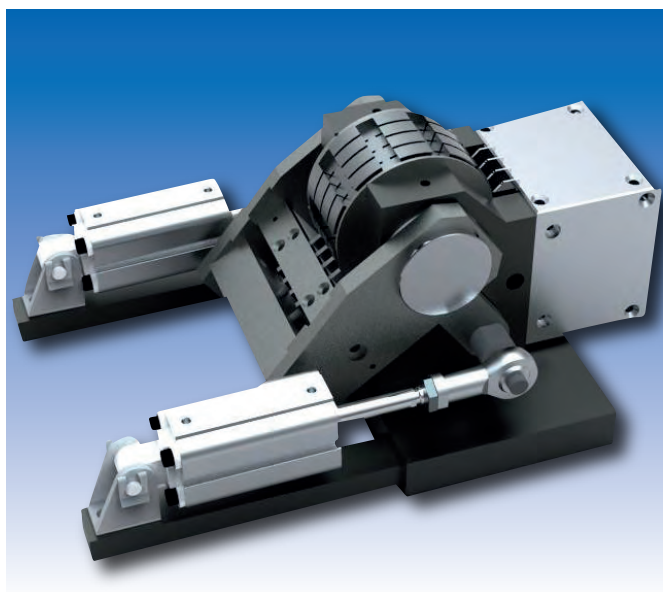
3.5 - 6 mm font size, 11 or 13 part wheels

6.5 - 12 mm font size, 11 part wheels

Also available with heating as a customised extra.

Subject to change. 05-14





COMPUTER CONTROLLED NUMBERING HEAD

Group 1600

Application:

Computer controlled numbering heads are ideal for marking flat material surfaces in vertical marking or roller marking. Typical marking applications: logos, numbers, combinations of letters, labels with special characters, markings etc. This numbering head can be used for roller pressing or mechanical power pressing of any kind. The tools are available as hot stamping tools and can be specially configured to meet your needs.

Group 16051605, automated switching

Completely automated numbering head with a pneumatic switching cylinder, ready for electronic control.

Optional extras:

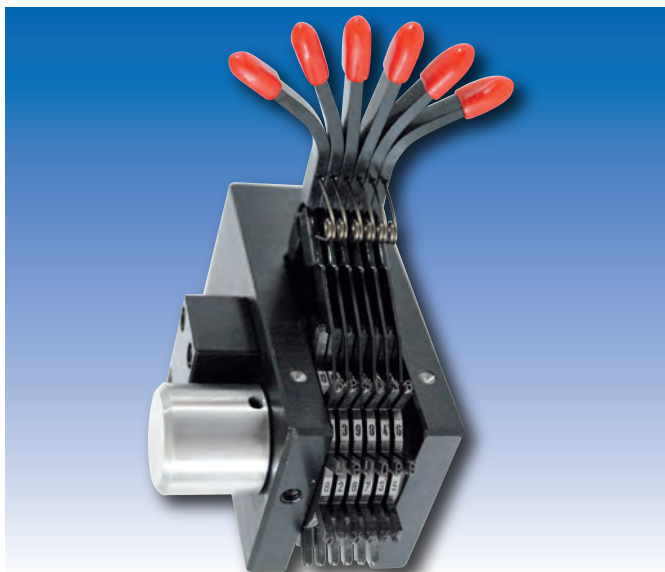
- **Character size:** 1,0 bis 13 mm
- **Numbers of digits:** 1 to 50 digits
- **Engravings:** (max. 10 engravings) standard 0 - 9, others on request
- **Kind of engraving and fonts:**
 - sharp for metal marking
 - soft surface for colour marking
 - surface for hot marking
 - rounded to minimise notching
 - point engraving for lower stamping force
 - digital engraving to correct erroneous marks
- **Font types:**
 - standard font DIN 1451 middle
 - Braille
 - Farsi fonts
 - unique fonts of all kinds on request or based on templates
- **Special bearings**

In order to prevent the wheels from sticking together if they get dirty or in case of oil build-up, the wheels may be fitted with special bearings.
- **Finish:**

The marking wheels may be finished with TIN, TIC, TIN/TIC and anti-stick coatings.

May be customised on request according to sketches, drawings or templates.

Subject to change. 05-14



HEATING FOR NUMBERING HEADS

All numbering heads and all type holders can be equipped with electrical heating. This option enables the application of very clean, lasting markings on almost any thermoformable materials such as plastic, leather, celluloid, wood, etc. without excessive force being required. All heaters are powered by 230 V or 110 V AC.

Please note: When using heating and film transports, the numbering heads and types are engraved with a flat engraving.

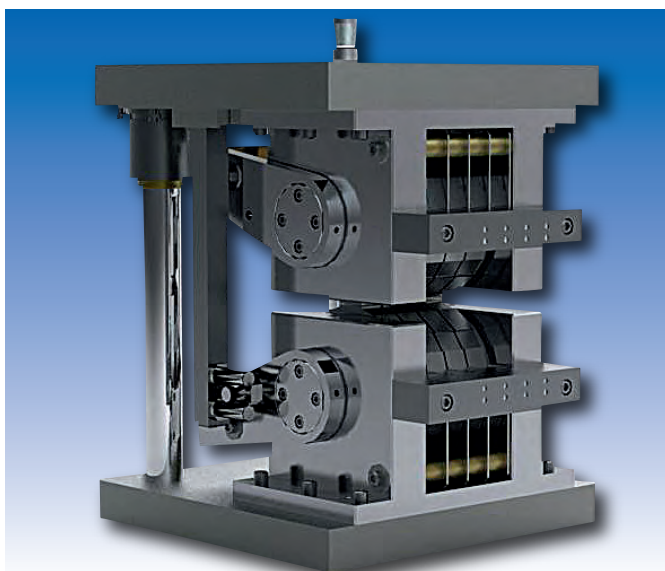


Group 1693 0000

Heating device with electronic temperature regulation

A particularly precise heater with separate fine tuning temperature regulator. Suitable for stamping materials which require a precise stamping temperature. Temperatures between approx. 50° and 200°C can be set continuously. When the desired temperature is reached, it is indicated via a control light. Can be installed in any model.

Even the mini numbering heads can be equipped with a heater with a separate temperature regulator.



DOUBLE NUMBERING HEAD

Group 1635 ...

Double numbering head

This numbering head is used when labels or sheets are to have raised or depressed markings stamped onto them e.g. because they are to be galvanised.

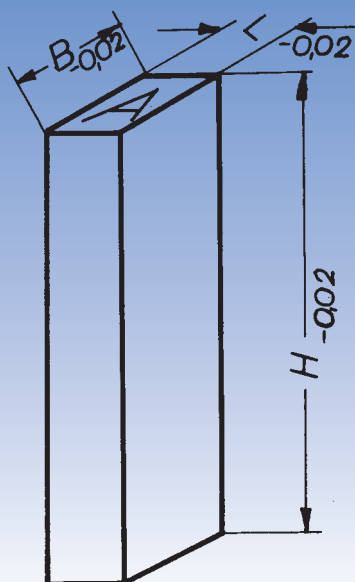
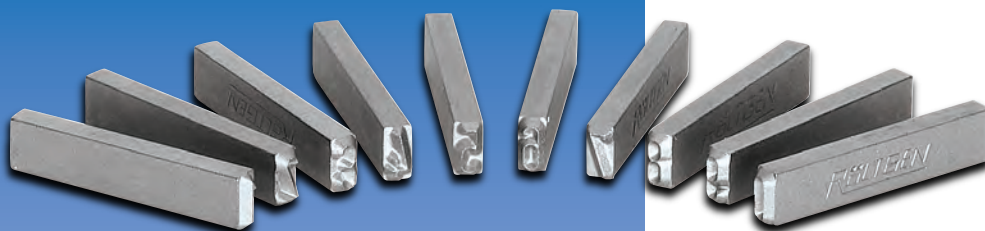
The double numbering head consists of one stamp with raised engraved numbers, letters or logos and one with depressed ones. For accuracy, a die set rack is necessary and can be supplied with the head if desired. For the production of badges or signs, the numbering head can also be combined with cutting or hole punching tools.

Subject to change. 05-14

STEEL TYPES

Group 1400

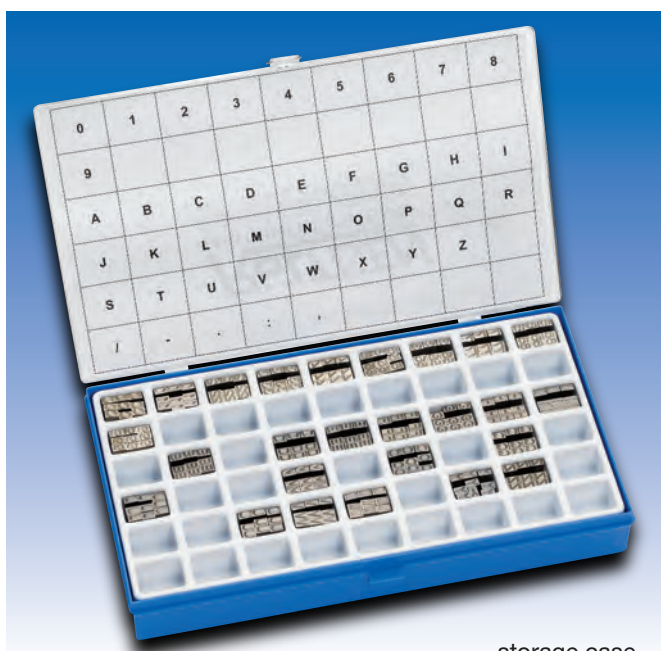
The steel types displayed on this page fit into all 1300 product line type holders with **locking screws** to hold them. Please ensure that you order the correct size.



Capital letters, numbers and punctuation symbols are available from stock.

Steel types are manufactured in accordance with DIN 1451. Furthermore, steel types are produced using the material 90MnCrV8 (1.2842), hardened to approx. 58 - 60 HRC and nickel plated to protect from corrosion.

We can also provide you with so-called block types which are combinations of letters or numbers that are frequently repeated. This makes it easier to change the steel types. Of course, logos or other special characters are also available.



storage case

group	character size in mm	body in mm		
		L	B	H
1410	1,5	1,5	4	19
	2	1,5	4	19
	2,5	1,5	4	19
1411	1,5	2	4	19
	2	2	4	19
	2,5	2	4	19
	3	2	4	19
1412	1	2	4	20
	1,5	2	4	20
	2	2	4	20
	2,5	2	4	20
	3	2	4	20
1414	3	3	6	19
1418	4	4	8	19
	5	4	8	19
1417	5	5	8	19

Subject to change. 05-14

STEEL TYPES

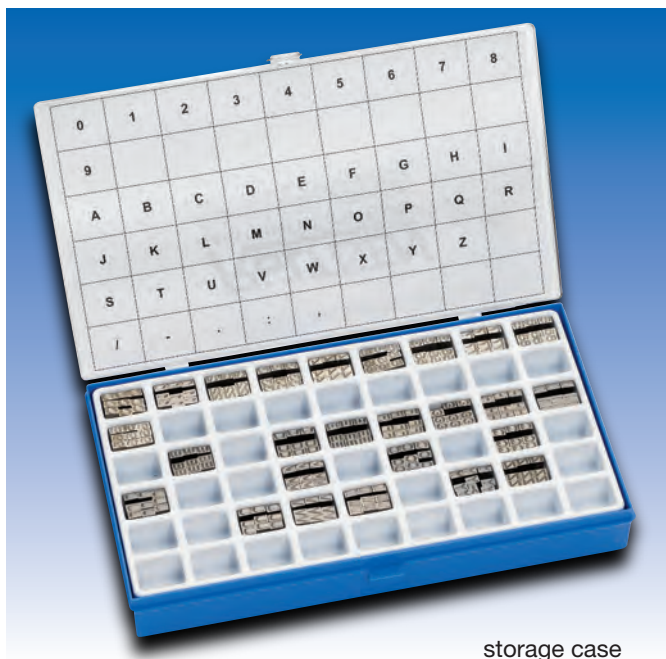
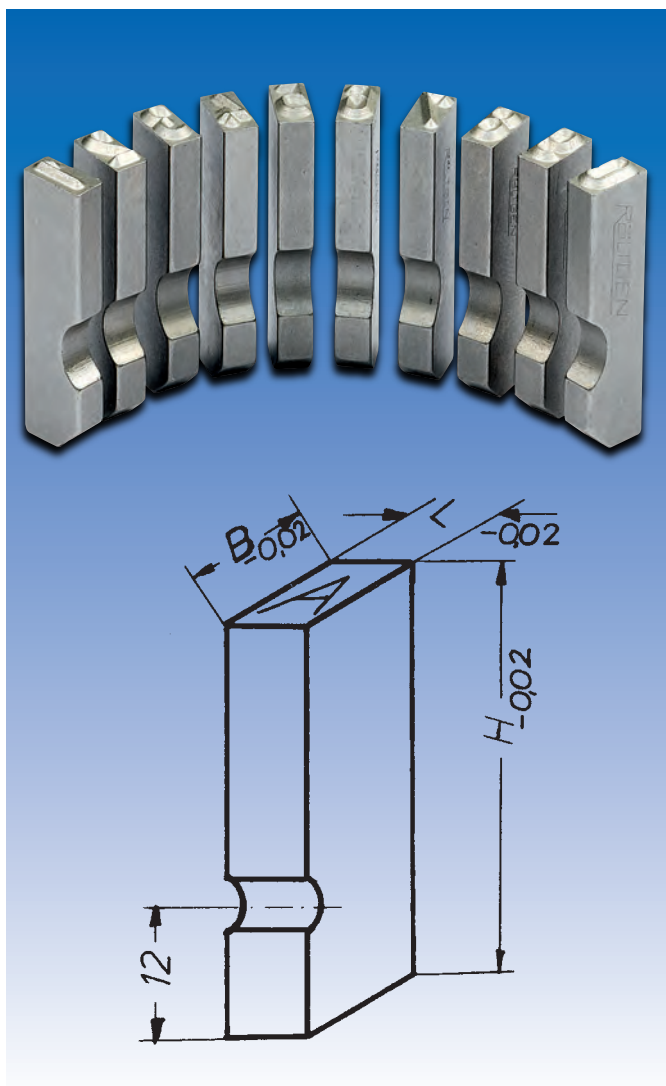
Group 1400

The steel types displayed on this page fit into all group 1300 type holders with a **locking pin**. Please ensure that you order the correct size.

Capital letters, numbers and punctuation symbols are available from stock.

Steel types are manufactured in accordance with DIN 1451. Furthermore, steel types are produced using the material 90MnCrV8 (1.2842), hardened to approx. 58 - 60 HRC and nickel plated to protect from corrosion.

We can also provide you with so-called block types which are combinations of letters or numbers that are frequently repeated. This makes it easier to change the steel types. Of course, logos or other special characters are also available.



storage case

group	character size in mm	body in mm		
		L	B	H
1415	2	3	6	24
	2,5	3	6	24
	3	3	6	24
	4	3	6	24
	5	3	6	24
1416	4	4	8	24
	5	4	8	24
	6	4	8	24
1451	3	3	8	32
	4	3	8	32
1455	3	4	8	32
	4	4	8	32
	5	4	8	32
1460	4	5	10	32
	5	5	10	32
	6	5	10	32
	8	5	10	32
1465	10	6	12	32
1470	12	8	15	32

Subject to change. 05-14



TYPE HOLDER STAMP

Group 1300

Type holder stamp are used wherever multiple characters need to be evenly and cleanly marked.

Letters, numbers or logos can be put together (as in typesetting) and marked with a single strike.

The individual parts can be re-ordered if they wear out. The striking cap is placed on top and can be removed and changed using a hammer.

This increases the entire stamp's life and saves unnecessary costs.

Replacement parts:

- small striking cap (product 16000070) (for 19 and 24 mm steel types)
- large striking cap (product 16000072) (for 32 mm steel types)
- type base (product 13010000) for type holder with a holding splint
- type base (product 13110000) for type holder with a holding pin
- holding splint (product 13030000)
- holding pin (product 13130000)



product Video

Group 1321

Type holder stamp with hand guard

The hand guard is simply attached to the top of the extended type holder stamp shaft, protecting the worker from the hammer strike during marking.

Subject to change. 05-14

MACHINE TYPE HOLDER

Group 1330

This type holder is used to hold steel types for group 1400 and above in single or multiple row arrangements. Ideal for marking single or multiple line texts in a single step.

Group 1340 ...

As above, except, for steel types for group 1450.



Group 1350 ...

Type holder quick changer

Similar to the group 1330, however with separable head parts for quick text changes. Subsections are exchangeable without the need to remove the whole type holder from the stamping device.

Group 1360 ...

Type holder quick changer

Similar to the group 1340, however with separable head parts for quick text changes. Subsections are exchangeable without the need to remove the whole type holder from the stamping device.



Group 1370 ...

Round type holder

for steel types for the group 1400.

We can provide you with customised type holders to meet your specific needs.

Subject to change. 05-14



1103



1103

HAND PUNCHES

Made out of high quality tool steel with striking head hardness in accordance with DIN 7353 for machining and metal factories. Suitable for marking steel, iron, aluminium, brass, wood, hard rubber, leather etc., DIN 1451 font available in font sizes from 1 mm to 30 mm.

Group 1103

Letter and number punches in reverse print (i.e. stamp print readable)

To stamp solid materials of tensile strength of up to 2000 N/m² (Rm).

Group 1104 ...

Number punches with "unmistakable" engraving

For use with irregular or rough surfaces, even incompletely stamped numbers can be clearly identified.

Group 1105 ...

Letter and number punches with rounded engraving (ASME regulation)

To avoid notching when stamping pipe and plate (e.g. in nuclear power plants).

Group 1106 ...

Letter and number punches with interrupted engraving (ASME regulation)

To avoid notching in stamping.

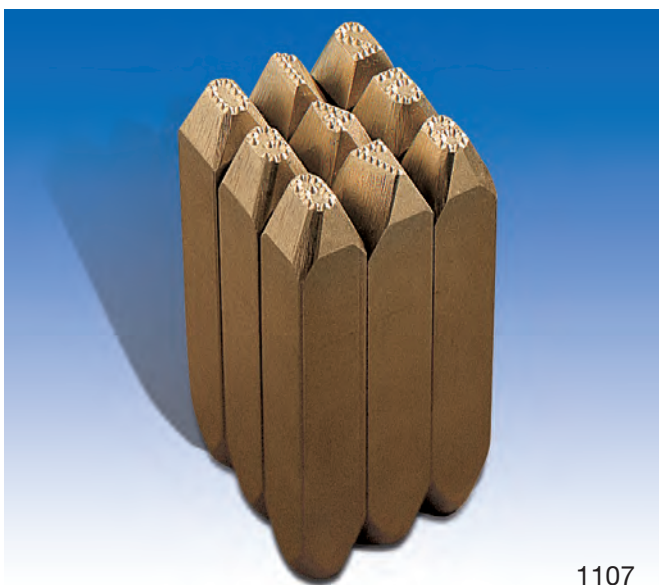
Group 1107 ...

Letter and number punches with point engraving (ASME regulation)

To avoid notching on pipe and plate stamping (e.g. in nuclear power plants).



1104



1107

All letter and number punches can also be supplied with a safety hand guard (only for shafts up to 16 mm Ø)

Subject to change. 05-14



HAND PUNCHES

Made out of high quality tool steel with striking head hardness in accordance with DIN 7353 for machining and metal factories. Suitable for labelling steel, iron, aluminium, brass, wood, hard rubber, leather etc., DIN 1451 font available in font sizes from 1 mm to 30 mm.

Group 1108 ...

Letter and number punches in regular print (i.e. stamp print in reverse), sharp engraving print not readable

Sharp engraving for stamping of dies and cast shapes.

Group 1109 ...

Letter and number punches in regular print (i.e. stamp print in reverse), flat engraving print not readable

Flat engraving for stamping of dies and cast shapes.

Group 1100 ...

Custom letter and number punches

Made to your desired dimensions, with your desired fonts and font sizes.

Group 1121 ...

Welding punches

In addition to the borders displayed above, other shapes such as oval, diamond or trapeziums are available. These stamps are used to indicate inspections of welded joints.

Group 1130 ...

Hand-held punches

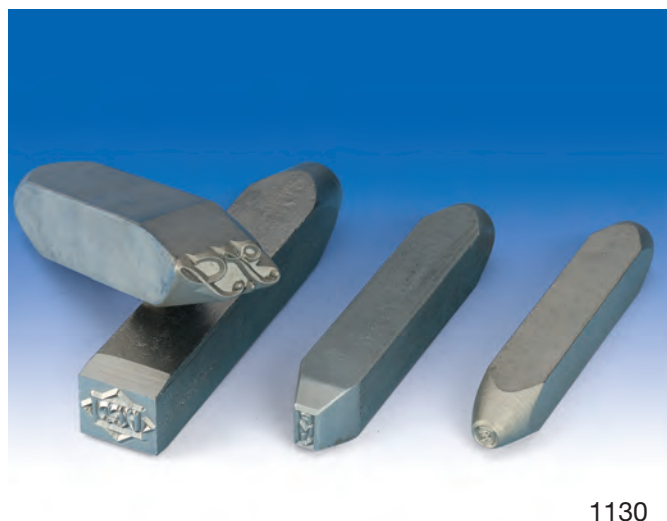
Engraved in accordance with DIN 1451 and bearing a text of your choice. All engravings can be made in accordance with your sketches or drawings (e.g. logos, Roman numerals, handwriting etc.).

Group 1140 ...

Hammer hand-held punches with or without stem

Best used when stamping warm materials and for accident prevention. Engravings in accordance with your instructions, see product line 1130.

All hand-held punches (except for product line 1140) can also be supplied with safety hand guards. (only for shafts up to 16 mm square)



1121

1130

1140

Subject to change. 05-14



Symbol 85

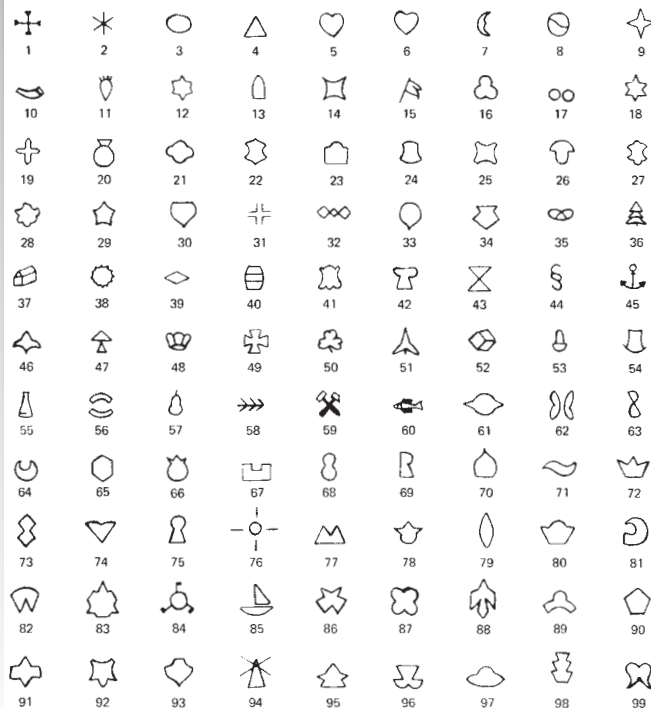
INSPECTION AND ACCEPTANCE PUNCHES

Group 1120

Our hand-held punches are made in our usual excellent quality. Made of C105 material (1.1545), these punches are produced with your desired font size. The punch is hardened to 58 - 60 HRC in accordance with DIN 7353. This is very important in the unfortunate event of an accident during stamping.

The inspection and acceptance punch are used to differentiate between employees, quality inspectors or acceptance inspectors or to indicate production site origins or shifts.

Engravings based on drawing no. PR 143 (see below).



Symbols based on drawing no. PR 143

Please always indicate the font size and the design number.

Subject to change. 05-14

1234567890
 ABCDEFGHIJKLM
 NOPQRSTUVWXYZ
 abcdefghijklm
 nopqrstuvwxyz
 .,:/-!?!%+()

1234567890
 ABCDEFGHIJKLM
 NOPQRSTUVWXYZ
 abcdefghijklm
 nopqrstuvwxyz
 .,:/-!?!%+()

Standard font

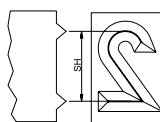
As its standard font, Röltgen uses the font DIN 1451. However, any other font can be used.

DIN 1451 characteristics:

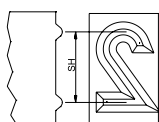
- Fig. top left: DIN 1451-2 narrow
- Fig. top right: DIN 1451-3 mid narrow
- Fig. bottom left: DIN 1451-4 mid
- Fig. bottom right: DIN 1451-5 wide

1234567890
 ABCDEFGHIJKLM
 NOPQRSTUVWXYZ
 abcdefghijklm
 nopqrstuvwxyz
 .,:/-!?!%+()

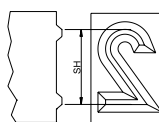
1234567890
 ABCDEFGHIJKLM
 NOPQRSTUVWXYZ
 abcdefghijklm
 nopqrstuvwxyz
 .,: - / ()



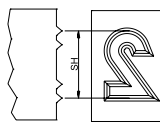
sharp



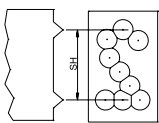
round



flat



outline



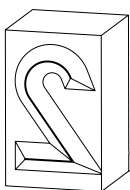
point

Type of engraving and font size

The engraving style determines the print and the stamping force. e.g. a sharp engraving style requires less stamping force than a flatter one. If low-stress designs are required, pointed engraving is preferable.

The font size (or character height) is always measured from the highest, outermost point of the engraving. It is best to first test the stamp using an ink pad and paper on a hard surface. This will allow you to measure the precise font size.

Left-hand-engraving



stamp



print

Right-hand engraving



stamp



print

Engraving orientation

The engraving orientation determines whether the print is legible directly or as a mirror image. This is to be taken into account when the medium is to be stamped from the back, but read from the other side (e.g. blister packaging).

- Left-hand-engraving = print directly readable
- Right-hand-engraving = print not readable (mirror image)

Calculating marking force

In order to select the correct press, it is important to know the required marking force.

This can be determined using the following formula.

$$S = F \times T \times ND$$

- S = marking force in N
- F = factor (see table)
- T = tensile strength in N/mm² of material being marked
- ND = number of digits

Example:

Marking 6 characters in 5 mm character size in S 355 J0 (1.0553)

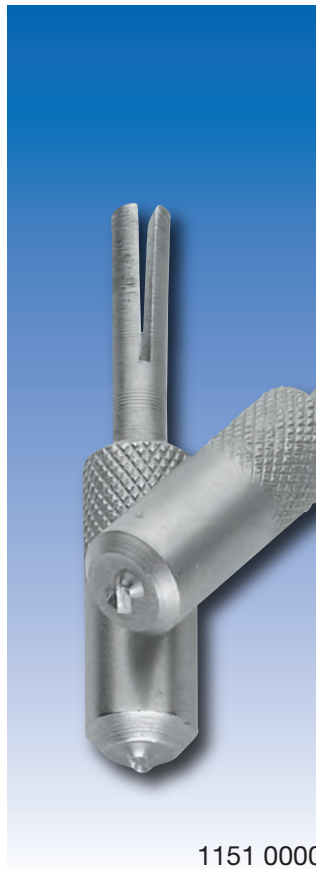
$$S = 17 \times 500 \times 6 = 51000 \text{ N} = 51 \text{ kN}$$

Subject to change. 05-14

character size in mm	fielding factor
1	3,4
1,5	5
2	7
3	10
4	14
5	17
6	20
7	23
8	27
10	32
12	40



1150



1151 0000

SELF-CONTAINED HAND STAMP

Group 1150 ...

Self-contained hand stamp

For universal use in the workshop. Adjustable punch, with exchangeable centre punch tools or inspection inserts

Centre punch tool insert:

Centre punch tool for tool makers (blanking dies and stamping tools).

Inspection tool insert:

For the application of numbers, letters or inspection markings by quality assurance.

Group 1151 0000

Inserts for self-contained hand stamps

Font size of up to 6 mm



1151 0001

Group 1151 0001

Centre punch tool for self-contained hand stamps

Subject to change. 05-14



WHEEL STAMP DIE

Group 1200

Wheel stamp die

Made of 1.2842 alloy tool steel. Easy to use, as the wheel stops at the set position and can be punched in.

Group 1200 ...

Wheel stamp die

Wheel engraving:
Numbers 0 - 9 - / + .
or
Letters A - M
or
Letters N - Z



NUMBERING WHEELS

Group 1210 ...

Numbering wheels

These wheels give you all of the punch numbers or 10 letters in one hand. Consequently it is no longer necessary to painstakingly change the individual punch numbers. The visible engraving helps to select the stamp. The percussion surface on the other side is manufactured the same way as for normal punches, making it highly durable.

Group 1210 ...

Numbering wheels 0 - 9

in font heights 1 - 10 mm

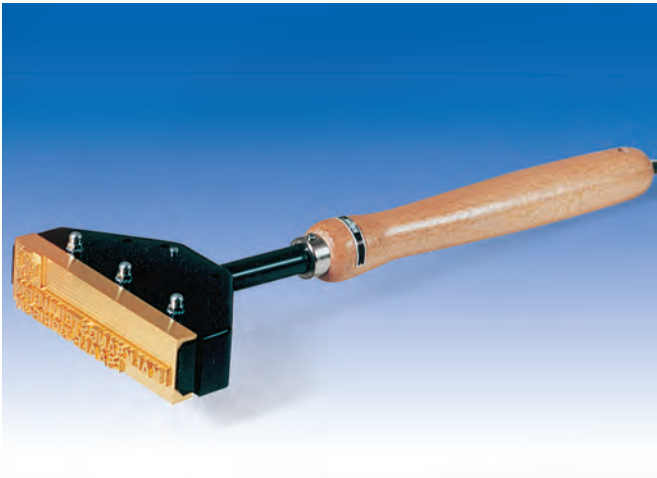
Group 1211 ...

Stamping wheels

in font heights 1 - 10 mm, a complete alphabet comprises three wheels:
wheel 1: A-I and . (period)
wheel 2: J-R and - (hyphen)
wheel 3: S-Z and , (comma) / (slash)

Optionally, you can order a stem for the numbering wheels when stamping warm materials.

Subject to change. 05-14



ELECTRIC BRANDING IRONS

Group 1180 ...

Electric branding iron holder

for an operational voltage of 230 or 110 V, complete with branding iron insert. Branding irons can be used to mark soft or hardwood, rubber or plastic. The branding iron inserts are engraved with a fixed text or logo in accordance with your instructions, or manufactured to take replaceable hot stamping types.

Group 1181 ...

Branding iron inserts with set engraved text



Group 1184 ...

Branding iron inserts for replaceable hot stamping types

Group 1186 ...

Brass hot stamping types for use in branding irons



Subject to change. 05-14

ELECTRIC BRANDING IRONS

Group 1182 ...
Type 10 power regulator
1000 W, 230 or 110 V

This device allows you to continuously regulate the temperature of electric branding irons. The regulator has a crack and fireproof plastic housing with a Schuko plug. The aluminium chassis efficiently dissipates the heat away. A potentiometer regulates the power. Customers wishing to brand rubber or plastic should use an output regulator.

Group 1183 ...
Type 20 power regulator
2000 W 230 or 110 V

Group 1185 ...
Brass heat embossing stamp

Customised according to your instructions, in slim and deep engraving. Suitable for hot stamping with or without hot stamping film.

