INDUSTRIAL CODING AND MARKING SOLUTIONS – MADE IN GERMANY

The World of Coding and Marking
Product Overview
REA JET – Industrial Coding and Marking Systems

Since our company was founded in 1982, we have been designing and developing industrial coding and marking systems for contact-free coding and marking of a wide variety of products and surfaces. Thousands of REA JET systems are being used throughout the world, ensuring efficient identification and traceability.

REA JET systems are not only the systems of choice in the tough everyday industrial world of steel, wood, rubber and plastic-processing factories, they also master sophisticated coding tasks such as in the pharmaceutical, food or packaging industries.

In our product range, we offer coding and marking systems that include large character ink jet printers (DOD), high resolution ink jet printers (HP print technology and piezo), small character ink jet printers (CIJ), laser systems, spray mark systems and labeling systems, thus providing coding and marking solutions for applications in all industrial areas.

Our REA VERIFIERS enable you to ensure the quality and hence readability of your barcodes and 2D codes.

REA JET sees itself as a system supplier. You obtain your tailor-made solution from a single source. In addition to providing a large number of standard coding and marking systems, implementing customized solutions is one of our strengths.

Apart from our state of the art technology, it is our highly qualified and committed employees from various specialty areas that make a significant contribution to the satisfaction of our customers and the success of our products.

By using high-quality components along with training your employees, we guarantee the best possible coding and marking results, together with high availability of the equipment, with a minimum maintenance overhead.

A fast and flexible response to customer requests, as well as expert and straightforward service assistance are additional hallmarks of the quality of REA products.

REA JET is the only medium-sized manufacturer to develop, produce and constantly improve a complete coding and marking product program at the company headquarters in Germany.

From suitable coding and marking systems, through a selection of inks (over 400 special inks can be supplied), to professional installation with customer-specific solutions (holding devices, positioning units, robotics etc.), as well as care and maintenance of the systems – whatever your needs, you have an expert partner in REA.

"Industrial coding and marking solutions – made in Germany" – we feel bound by this standard.

The company headquarters of REA Elektronik GmbH, 30 km south of Frankfurt am Main

www.rea-jet.com
Large Character Ink Jet Printers (DOD)

High Resolution Ink Jet Printers (HP)

High Resolution Ink Jet Printers (Piezo)

Small Character Ink Jet Printers (CIJ)

Laser Systems

Spray Mark Systems

Barcode Verifiers

Labeling Technology

Inks + Consumables
The Reference in its Class: Large Character Ink Jet Printer (DOD)

The modular coding and marking systems for texts, dates or logos are available in printing heights up to 140 mm for each print head. The resolution meets the requirements of virtually all industrial applications for marking and coding.

Applications:
- absorbent and non-absorbent surfaces such as paper, cardboard, metal, glass, ceramics, stone, wood, plastic, rubber, foils, carpet, textiles, non-woven fabric, organic surfaces etc.
- under extreme environmental conditions such as dust, humidity, vibration and temperature fluctuations

Advantages:
- REA JET print head technology: robust and reliable
- sparing use of consumables
- suitable for pigmented and non-pigmented inks
- product speeds up to 300 m/min.
- IP65 protection class
- REA Plug & Print technology (high system availability and process reliability via quick-change system for module components)
- REA Purge & Clean technology (rapid cleaning of the print head at the press of a button)
- REA DSC technology (dot-size control, freely adjustable drop size for economical use of consumables)
- REA Micro-Slanting technology for 32-dot print heads (customizable height- and width-ratio of fonts for print image optimization)
- cascadable print heads for large area print images
- interface connection to superior software systems to increase production efficiency and safety

Print Head Variants:
- 7-nozzles (one-line markings at heights of between 3 and 27 mm)
- 16-nozzles (one- to two-line markings at heights of between 3 and 67 mm)
- 32-nozzles (one- to five-line markings at heights of between 3 and 140 mm)
Coding of pipes (steel, plastic etc.)

Coding of aluminum plates

Raw rubber tread coding

Coding of shrink hoods

Marking of concrete pipes

Large-scale logo print on stacked boards

Coding of sheeting
Innovative, Maintenance-Free Product Marking: High Resolution Ink Jet Printers (HP)

The high resolution ink jet printers with HP print technology utilize the thermal ink jet technology that is trusted by millions of users of office printers. The robust stainless steel housing, the intuitive operation and well-conceived print head design make this coding and marking system suitable for unlimited industrial-strength applications. The system particularly proves its worth in the pharmaceutical, food, wood, paper and packaging industries. Each cartridge can be used for the marking of print heights up to 12.7 mm. If greater print heights are required, several print heads can be cascaded. With its integrated Ethernet interface and full Unicode support, the HR print system is the system of choice for serialization tasks and track & trace projects.

Applications:
- protection against counterfeiting and traceability
- ideally suited for serialization and track & trace applications
- optical quality measurement of codes in one process using REA VERIFIER code verification devices (see page 16)
- for absorbent and non-absorbent surfaces
- alphanumeric texts, barcodes, 2D codes, DataMatrix codes and logos
- variable data such as date, time, counter, shift code, database contents
- highest print resolution up to 600 dpi, configurable in 16 levels

Advantages of HP Print Technology: REA JET HR + HR pro
- simple assembly of the print head and controller through very compact design and universal mounting flange
- sturdy housing designed in stainless steel
- only one version of the unit for all countries due to wide range power supply
- complete True Type Font and Unicode support incl. UTF-8
- printing height up to 50.8 mm
- zero maintenance – you receive a new printing unit with every cartridge replacement
- greatest operating reliability and availability due to:
  - monitoring of cartridge lock
  - permanent storage of cartridge fill levels
  - automatic adjustment of operating parameters for inks used
  - intuitive graphical operator guidance
- integrated webserver and remote-access software
- easy print data acquisition through USB-scanner
Coding of plastic foils

Marking of wood

Coding of laminate

Marking of flour bags

Cardboard box coding using DataMatrix code

Barcode marking of paperboards

Coding of non-woven fabric

Coding of plastic profile plates
Multi-Purpose and Multi-Line: High Resolution Ink Jet Printers (Piezo)

The high resolution piezo ink jet printers are ideal for marking paperboards. They enable you to change texts, barcodes and logos quickly and conveniently. One can print at a print height of up to 100 mm. The print heads of our systems work, irrespective of position. You can also print sideways, from above and from below. Various colors in solvent-free REA JET ink cartridges are available.

Applications:
- serialization and track & trace applications
- high-quality code verification in a process using verifiers from REA VERIFIER (see page 16)
- porous and absorbent surfaces: paper, paperboards, wood, textiles, non-woven fabric, building materials etc.
- flexible alternative to labels and pre-printed paperboards

Advantages:
- low consumable costs
- solvent-free REA JET inks
- printing up to 100 mm and 42 text lines using a single print head
- very high print quality, sharp-edged with high-contrast
- prints barcodes in optimal quality
- Windows®-based text input
- simple data transfer and data backup using USB port
- up to 1000 mm-long supply line from print head to ink supply
- modular system structure
- data security for package marking using REA JET DataCon software: data management for print assignment from databases

Print Head Variants – Print Heights:
- GK 768/256  – between 2 and 100 mm
- GK 384/128  – between 2 and 50 mm
- LK 192/32   – between 2 and 25 mm
- LK 224/32   – between 2 and 48 mm
- LK 352/32   – between 4 and 48 mm
Small Characters, Big Impact: Small Character Ink Jet Printers (CIJ)

Continuous ink jet technology (CIJ) – few other coding and marking technologies have done as much to promote consumer safety and information in our daily lives. In the food and product packaging industry alone, the benefits are plain to see. This coding and marking technology enables contact-free printing of 1 to 4-line texts, dates, barcodes, DataMatrix codes and logos in high resolution, and with print heights of between 2 and 12 mm, at high speed and with very short drying times. It achieves especially good results on smooth surfaces such as foils, laminates, plastics or metals.

Applications:
- non-absorbent and absorbent surfaces
- especially good marking results on smooth surfaces (plastics, metals, packaging foils)

Advantages:
- low consumable consumption
- fast-drying inks for extremely short drying times
- product speeds of up to 400 m/min. with excellent print quality
- WYSIWYG (What-You-See-Is-What-You-Get) display of the print text
- high process reliability in barcode printing
- print head suitable for mounting on linear motion devices
- service-friendly design
- automatic flushing routine after switching on and before switching off for best possible start-up behavior
- REA JET SC FlexiCart with print head cleaning station for safe use in production
- printer controllable via a PC in the network
Marking of packaging foils

Marking of plastic paint buckets

Marking of cardboard boxes

Marking of packaging foils

Coding of tin cans

Coding of steel pipes

Marking of glass fiber fabric

Marking using pigmented ink on dark surfaces
Tamper-Proof, Light-Based Coding and Marking: Laser Systems

Industrial coding and marking using laser systems has a crucial advantage: it is free of consumables and virtually maintenance-free, i.e. subsequent costs are low. Laser systems lend themselves to all types of marking on organic materials and plastics, glass, anodized aluminum, metals and color removal on any surfaces. One of the main reasons for using laser systems is protection against counterfeiting, and traceability of products due to the permanence of the marking.

Advantages of REA JET Laser Systems:
- simplest mechanical integration through compact design and variable connection of print head
- highest printing speeds through digital mirror activation
- integrated pilot laser for simple setup of the system
- user protection by 2-channel safety query
- full True Type Font and Unicode support incl. UTF-8
- intuitive graphical user interface
- network functionality and interface protocols via Ethernet
- integrated web server and remote maintenance software
- print data transfer using USB scan technology

REA JET CO₂-Laser Applications:
- marking of glass, wood, rubber, engraving and color change marking of plastics (automotive, medicine, consumer goods)
- coding of cardboard boxes and outer packaging (e.g. in the pharmaceutical, cosmetic and food sectors)
- coated substrates (e.g. anodized aluminum)
- direct marking of foodstuffs
- laser marking of foodstuffs
- color mirror engraving

REA JET Fiber Laser Applications:
- engraving and color change marking (annealing) of metals
- high-contrast marking of untreated plastics and plastics treated with laser additives
- marking of ceramics
- layer removal: e.g. day and night design
- marking using laser transfer foils
- marking on laminate foils
Laser Systems

Marking of PET bottles

Marking of laminate foils

Marking on glass using CO₂-Laser CL IP65

2D-Code marking of soot particle filters

Marking of plastic profiles

Color change marking on plastic

Marking of medical instruments

Marking on tin plate cans by color removal
Dots, Lines, Extra-Large Marking: Spray Mark Systems

Color-coded markings are crucially important to many technical areas. In industrial applications, color-coded markings provide information about product quality and condition, regulate processes and determine procedures. Whether dot marking in red, indicating inspected quality in green or colored line marking for pipes, profiles or continuous products - REA spray marking technology has even more to offer: Using spray mark heads as a spray mark block, one can write large texts, up to 700 mm in height. Dot by dot!

Applications:

- absorbent and non-absorbent surfaces
- metallic surfaces up to temperatures of 1000 °C
- dots and solid lines with diameters of between 3 and 30 mm
- large texts with spray mark blocks
- colored line marking for pipes, profiles and continuous products
- multi-colored dot and line marking to differentiate between product types
- welded seam marking in the manufacture of metal profiles
- machine-detectable line markings for edge trimming
- applying location and position markings, as well as “bend here” and “cut here” markings
- two-dimensional application of contrast colors (“color mirror”) as a basis for subsequent processing
- applying primers, adhesives etc.

Advantages:

- large selection of media such as inks, paints, lacquers, adhesives, resins, hot mark paints and annealing paints
- integrated flushing facility ensures immediate operational readiness
- quick-change system for module components
- REA Plug & Print technology (high system availability and process reliability)
- exactly reproducible spray results due to precision notch setting
Marking of aluminum ingot

Marking of steel springs for type classification

Marking of steel coils

Marking of drive shafts

Highpoint marking on finished tires

Color marking of cables

Ring marking of steel pipes

Precision application of oil to plastic parts
Verifying Code Quality: Barcode Verifiers

Nearly all products in today’s world provide coded information. Manufacturer data, product IDs, prices, article numbers and so on are translated into machine-readable barcodes and 2D codes. This information needs to be read at supermarket checkouts and at many places in operational goods logistics in an error-free, fast and reliable manner. 99% of applications in use are covered by fewer than 10 different code types with defined quality criteria. REA’s code verifying devices, also called verifiers, are the market leaders. Verifying codes in time avoids cost and error risks.

Applications:
- code quality verification according to international standards and GS1 specifications
- verifying codes to ensure accuracy in terms of content
- spot checks during production, using mobile devices
- incoming and outgoing goods inspection

Advantages:
- avoidance of rejects due to timely detection of incorrect coding
- low complaint risk
- measurement report with evaluation of the code criteria (e.g. also for ISO certification)
- legal certainty due to compliance with quality standards (ISO/IEC, GS1 etc.)
- fully mobile application
Code verification on products

DataMatrix code verification on product packaging

Flexible on-site barcode verification

Verifying barcodes on metal barrels

Verifying DataMatrix codes on mailing bags

Verifying DataMatrix codes on label sheets

Measuring barcodes on print sample sheets

Quality inspection of barcodes

REA MLV-2D (for 2D codes and barcodes)

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Custom Made Solutions for Logistics: Labeling Technology

Like our entire range of products, our labeling systems are also designed to operate reliably in demanding industrial environments. The modular structure of the REA JET labeling systems, their robustness due to the use of high-quality materials and their user-friendly handling ensure that they can be deployed efficiently and flexibly in a large number of fully automatic labeling applications.

Label printing with maximum flexibility
On-demand label printing for daily labeling tasks by individual design of your blank and pre-printed labels. We are a certified partner of the following manufacturers:

TOSHIBA

Inline printers
for integration into labeling and packaging lines

Standard and customized software solutions
REA JET offers professional software solutions to design and print your labels. The standard software from NiceLabel, Codesoft and Sentinel form the basis for individual customized solutions to meet special customer requirements.

Pallet labeling in conformity with CCG/GS1, 1 stop for 2 labels at an angle
Labeling Technology

- High performance labeling system
- Pallet labeling (1 stop, 2 labels at an angle)
- Cardboard labeler
- Pallet labeling on stretch film
- Tandem-print dispenser for continuous labeling
- Cardboard labeling from the side
- Dispensing system for multiple-labeling
- Label dispenser for pre-printed labels
A Comprehensive Assortment: Inks, Paints and Consumables

REA JET develops and distributes inks, paints and cleaning agents worldwide, for virtually all coding, marking and spray mark applications. Chemical compatibility and interaction with all the components of the REA JET product families are the top priorities when it comes to approval for processing in REA JET coding and marking systems, ensuring trouble-free operation of REA JET industrial printers in your production. To guarantee the reliable and safe operation of our systems, original REA JET inks, paints and cleaning agents should be used. The over 400 standard and special inks in our product range enable us to provide our customers with a wide offering. Modern development and testing methods provide continuous assurance of the quality of our consumables.

- with over 400 standard and special inks in our product range
- packaging sizes: from the HP cartridge to the 200 liter (50 gallon) drum
- industry solutions and formulations for medical and pharmaceutical packaging, building materials, plastics, foodstuffs, tire industry, metal, wood, stone, carpet, non-woven fabric, and all kinds of other packaging
- customer-specific developments of inks and paints
- modern development and testing methods assure the quality of our inks, paints and cleaning agents

Please note:

- inks and paints have an extremely varied chemical composition and must “fit” your product
- criteria such as drying speed, UV resistance, storage life, material compatibility, printing precision, degree of coverage, color etc. must be matched to your specific requirements and on-site conditions
- our experts will create print samples under field conditions before recommending a suitable comprehensive solution

Ribbons and labels

We carry ribbons (thermal transfer ribbons) and labels in a variety of qualities, sizes and specifications, suitable for all common label printers (thermal transfer printer).

![Image of ribbons and labels]
Always On Call: Service by Our Specialists

A fast and flexible response to customer requests, coupled with straightforward and expert assistance, are services that underscore the quality of REA JET products.

Always Up to Date: Individual Product Training

We offer training courses that are individually tailored to our customers' requirements and requests, for the complete REA JET and REA VERIFIER product ranges.

Providing proper training of your staff will allow for increased uptime of your equipment. Appropriate handling of the system, maintenance and care during operation and knowledge of troubleshooting measures when failure occurs will ensure the maximum possible availability of the coding and marking equipment.
No Matter What Location: Worldwide in Use

REA is an international company, which is represented by its own subsidiaries and qualified distribution partners in all continents of the world. This enables us to guarantee a reliable consultancy and service network, thereby ensuring the necessary proximity to the markets and our global customers.

The brand name REA JET stands for a comprehensive product range of industrial coding and marking systems. Our industrial printers have been deployed in an extremely wide variety of applications, in virtually all industries, for more than 30 years.

From the rough environmental conditions in the steel-producing industry, right through to the pharmaceutical environment of strict specifications, REA JET systems are used every day.

We offer our customers solutions that enable them to meet the various coding and marking requirements of industry and commerce in an efficient and economically appropriate way. Our solutions range from the standardized system configuration through to custom made special solutions, in combination with suitable printing inks for distinctive coding and marking.

Our solutions thus make an important contribution to the unique identification and traceability of products within internal logistics and worldwide commodity flows.

Worldwide REA JET subsidiaries and distribution partners