# REA JET

## The World of Coding and Marking
### Product Overview

# REA JET –
# Industrial Coding and Marking Systems

Ever since our company was founded in 1982, we have been working intensively on the development of industrial systems for the contact-free coding and marking of a wide variety of products and surfaces. Systems from REA JET are used in thousands of applications worldwide and ensure efficient identification and traceability. REA Elektronik GmbH has been certified according to DIN EN ISO 9001:2015 since 2017.

REA JET systems are the first choice in the rough and tumble of everyday industrial applications. Users from sectors ranging from steel working plants to the packaging, foodstuffs or pharmaceutical industry have appreciated the reliability of our systems for more than 35 years.

Under the REA JET brand, we sell coding and marking systems in the areas of large character inkjet printers (DOD), high resolution inkjet printers (HP printing technology and piezo), small character inkjet printers (CIJ), laser systems and spray mark systems. Moreover, we offer labeling systems under the REA LABEL brand. As such, we market coding and marking solutions for applications in all industry sectors.

Our optical verification systems bearing the REA VERIFIER brand enable you to guarantee the quality and thus the legibility of your barcodes and 2D codes.

REA JET is a system supplier. You will therefore receive your tailor-made solution from a single source. Alongside a large number of standard coding and marking systems, the realization of individual solutions is one of our strengths.

The very latest technologies and our highly trained and committed employees from the various specialist areas play a key role in ensuring our customers are satisfied and guaranteeing the success of our products. Our systems are fully ready for Industry 4.0.

By using high-quality components and training your employees, we guarantee optimum coding and marking results and high systems availability while also keeping maintenance work to a minimum.

Fast and flexible reaction to customer wishes as well as competent and unbureaucratic help if service is required further underline the quality of REA products.

REA JET is the only medium-sized manufacturer who performs the entire process of developing, producing and continuously improving a complete coding and marking product range in Germany.

REA is your competent partner for all steps of the process – from identifying the right coding and marking system for your needs, through selecting the suitable ink (more than 500 special inks are available), all the way to professional assembly with customer-specific solutions (mounting brackets, positioning units, robotics etc.) as well as care and maintenance of the systems.

**„Coding and Marking Solutions for Industry – made in Germany": We are committed to this promise.**



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

**www.rea-jet.com**

# Content

# The Benchmark in its Class: The New Generation of Large Character Inkjet Systems (DOD 2.0)

The modular coding and marking systems for texts, data and logos are available with a print height of up to 140 mm per print head. The resolution meets the marking and coding requirements of virtually every industrial application.

These large character inkjet systems with 7-, 16- or 32-nozzle print heads are simple to operate, robust and highly flexible thanks to the modular design of the system components.

## Areas of application:

- Absorbent and non-absorbent surfaces such as: paper, cardboard, metal, glass, ceramic, stone, wood, plastic, rubber, foils, carpet, textiles, fleece, organic surfaces etc.
- Under extreme environmental conditions such as dust, moisture, vibration and temperature fluctuations

DOD 2.0 Print Heads

## Advantages:

- Control via REA JET TITAN Platform: the single operating concept for all REA JET technologies with decisive advantages for customers (see page 20)
- Doubling of previous potential speed to more than 600 m/min
- Print heads with cascading capability for printing large surfaces: up to 512 nozzles can be addressed
- REA JET print head technology: robust and reliable
- Economical use of consumables
- Suitable for pigmented and non-pigmented inks
- Protection class IP65
- REA Plug & Print technology: high level of system availability and process reliability thanks to fast changeover system for modular components
- REA Purge & Clean technology: fast cleaning of the print head at the touch of a button
- REA DSC technology: dot size control, freely adjustable drop size for economical use of consumables
- REA Micro-Slanting technology: fine adjustment of height and width ratio of the text to optimize the print image
- Modern interface connection to superordinate software systems for improving efficiency and reliability of production

DOD 2.0 Controller Unit

DOD 2.0 Print Head Controller Units

## Print head variants:

- 7 nozzles: single-line marking with a height of 5 to 27 mm
- 16 nozzles: single- to two-line markings with a height of 5 to 67 mm
- 32 nozzles: single- to five-line markings with a height of 5 to 140 mm

REA JET Ink Supply Unit TV-PP 4.5 l (AFS) with automatic flushing function

**TITAN** The REA JET TITAN Platform.
The single operating concept for all REA JET technologies.

Coding and marking of pipes (steel, plastic etc.)

Marking of aluminum plates

Marking of paper bags

Marking of tread on raw rubber

Coding and marking of shrink hoods

Marking of concrete pipes

Large marking of logos on stacked boards

Coding and marking of sheeting materials

# Innovative, Maintenance-Free Product Marking: High Resolution Inkjet Printers (HP)

**HI-RES**

The high resolution inkjet printers of the REA JET HR range with HP cartridge technology use thermal inkjet technology that is tried and tested in millions of office printers. The robust stainless-steel housing, intuitive operation and well-thought-out print head design of this coding and marking system make it fully suitable for industrial applications. The system has proven to be particularly suitable for the pharmaceutical, foodstuffs, wood, paper and packing sectors for markings with a print height of up to 12.7 mm per print head. Moreover, multiple print heads can be cascaded for greater print heights. With its integrated Ethernet interface and full Unicode support, the HR printing system is the system of choice for serialization tasks and track & trace projects. Up to 50 serialized prints per second and 762 m/min make the HR system the fastest printing system in its class.

## Areas of application:

- Counterfeit protection and traceability
- Perfectly suited for serialization as well as track & trace tasks
- Qualitative examination of code quality in one process with verification systems from REA VERIFIER (see page 18)
- For absorbent and non-absorbent surfaces
- Alphanumeric texts, barcodes, 2D codes (e.g. Data Matrix codes) and logos
- Variable data such as date, time, counter, shift code, database contents
- Highest print resolution of up to 600 dpi
- Late Stage Customization – digital inline printing of variable data

HR Controller for up to four print heads

## Advantages of HR printing systems: REA JET HR, HR *pro*, HR *pro* OEM

- Control via REA JET TITAN Platform: the single operating concept for all REA JET technologies with decisive advantages for customers (see page 20)
- Simple assembly of print head and controller thanks to compact design and mounting flange
- Stable stainless-steel housing
- Only one device version for all countries thanks to multi-voltage power supply unit
- Full TrueType font and Unicodesupport including UTF-8
- Print height up to 50.8 mm
- Free from maintenance – you receive a new print unit with each cartridge change
- Highest level of operational reliability and availability thanks to:
  - Monitoring of cartridge locking
  - Permanent storage of cartridge levels
  - Automatic adjustment of operating parameters for the ink used
  - Intuitive graphical user guidance
- Simple transfer of print data using USB scanner
- Various device versions for standalone operation, installation in switching cabinets and full machine integration

HR *pro* Controller for mounting in machines, up to four print heads

HR *pro* OEM Controller for complete integration in switching cabinets and machines

HR Print Heads

Inkjet Technology by **hp** invent

**TITAN** The REA JET TITAN Platform. The single operating concept for all REA JET technologies.

**NiceLabel** NiceLabel compatibility: transfer of NiceLabel print layouts using REA JET's own printer drivers.

Back-side numbering

Two-colored marking of foil

Coding and marking of laminate

Marking of flour bags

Coding and marking of folding boxes with Data Matrix codes

Marking cardboard boxes with barcodes

Coding and marking of fleeces

Contact-free coding and marking of extruded pipes

# Multi-Purpose and Multi-Line:
# High Resolution Inkjet Printers (Piezo)

High resolution Piezo Inkjet Printers are ideal for marking cardboard boxes and enable texts, barcodes and logos to be changed quickly and conveniently. Depending on the user's wishes, a print height of up to 100 mm is possible per print head.

The print heads of our systems can be used in all positions, with marking possible from the side, above or below. What's more, various solvent-free inks are available.

## Areas of application:

- Porous and absorbent surfaces: paper, cardboard boxes, wood, textiles, fleeces, building material etc.
- Flexible alternative to labels and preprinted cardboard boxes
- Serialization and track & trace applications
- Qualitative code examination in one process with verification systems from REA VERIFIER (see page 18)

Print Head

Controller with Ink Supply Unit

## Advantages:

- Control via REA JET TITAN Platform: the single operating concept for all REA JET technologies with decisive advantages for customers (see page 20)
- Low consumable costs
- Solvent-free REA JET inks
- Printing of up to 42 text lines with a print height of up to 100 mm with a single print head
- Very high print quality, sharp-edged with high contrast
- Prints codes in optimum quality
- Simple data transmission and backup via USB connection
- Supply line length of up to 5000 mm from print head to ink supply unit
- Modular system design
- Data security for packaging marking with REA JET DataCon software: data management for print assignment from databases

Convenient Touchscreen Operation (optional)

## Print head variants – print heights:

- GK 768/256  – 2 to 100 mm
- GK 384/128  – 2 to   50 mm

**The REA JET TITAN Platform.**
**The single operating concept for all REA JET technologies.**
– Soon available for piezo printing systems –

TITAN

Coding and marking of fiber drums
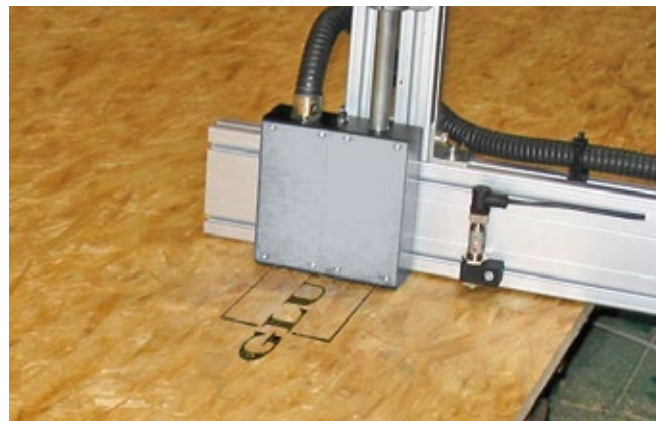


Marking of paper bags



Marking of cardboard boxes
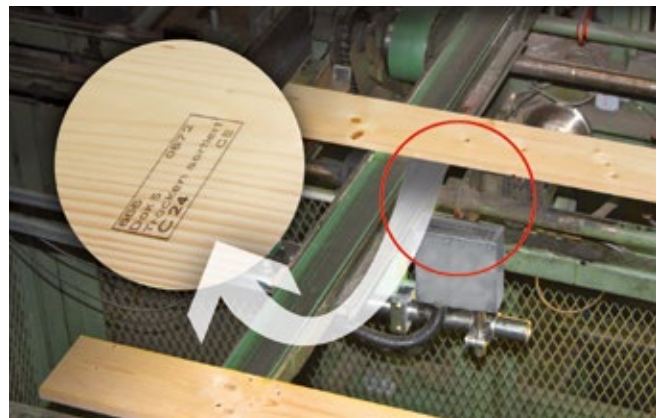


Marking of paper bags



Marking of pallet blocks with IPPC logo



Marking of OSB panels with logo



Marking of gypsum boards with large logos



CE marking on wood

# Small Text, Big Impression:
# Small Character Inkjet Printers (SC 2.0)

No other coding and marking technology has made a greater contribution to consumer safety and information in our everyday lives than continuous inkjet technology (CIJ), as can be clearly seen in the areas of foodstuffs and product packaging alone. With the new SC 2.0, one- to eight-line texts, data, barcodes,

Data Matrix codes and logos are printed in a contact-free process – in high resolution, at fast speeds and with a very short drying time. This process is used in virtually all branches of industry for marking flat surfaces such as foil, laminate, plastic or metal.

## Advantages:

- Control via REA JET TITAN Platform: the single operating concept for all REA JET technologies with decisive advantages for customers (see page 20)
- Compact, elegant and robust – designed for industrial use
- Contact-free coding and marking, even for a larger product distance
- Top print quality
- Stainless steel housing, IP54
- Various hose assembly lengths available
- Vertical resolution: 48 pixels for up to eight lines of text
- Printing of variable data, e.g. counter, date, time, best before date, shift code, serialized data for traceability, machine-readable codes (barcodes and 2D matrix codes)
- Shortest drying time on smooth surfaces
- High production and marking speeds
- Perfectly suited for integration thanks to the latest interface technology
- Ready for Industry 4.0
- Print head suitable for assembly on motion devices
- No manufacturer-bound cartridge system for the greatest flexibility
- Service-friendly design
- Safe and clean filling of ink and solvent, even during operation
- Intuitive user interface, e.g. for commissioning and diagnosis
- Differentiable user levels for the highest process reliability
- Ideal for international deployment with over 20 languages and growing
- Integrated web server enables operation of printing system via tablet or smartphone
- Full Unicode support for companies with international customers
- Integrated VNC server: remote maintenance tool
- Low weight, only approx. 20 kg

New REA JET SC 2.0
Small Character Printer

REA JET SC 2.0 FlexiCart with integrated print head cleaning station

**The REA JET TITAN Platform.**
**The single operating concept for all REA JET technologies.**

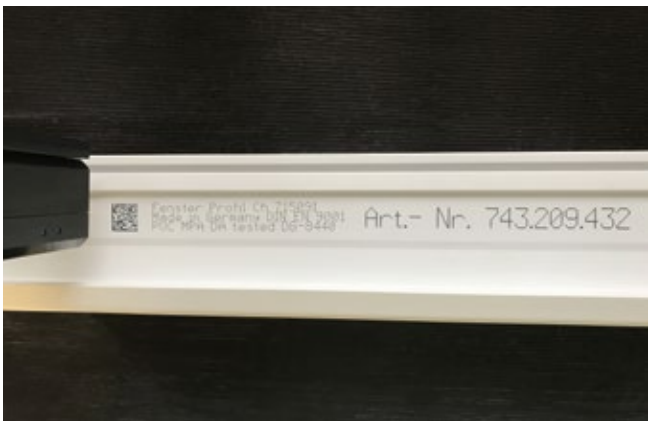Coding and marking of steel pipes


Marking of plastic paint buckets

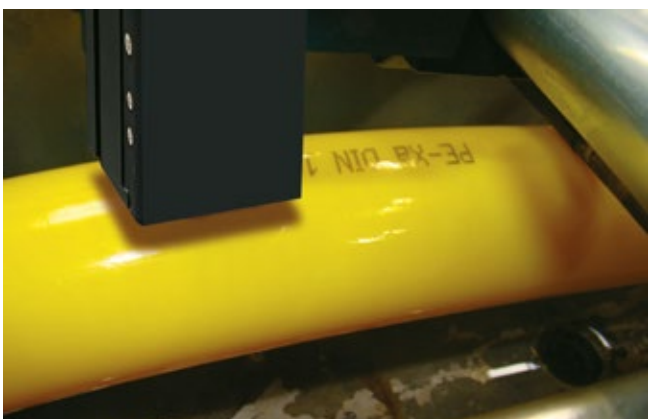
Marking of folding boxes


Marking of toothed belts


Coding and marking of plastic profiles


Marking of packaging foils


Marking of plastic pipes


Marking with slightly pigmented ink

# Counterfeit-Proof and Permanent Coding and Marking with Light: Laser Systems

Industrial coding and marking with laser systems offer a clear advantage. Since they require no consumables and are virtually free from maintenance, subsequent costs are low. Laser systems are suitable for all kinds of marking on almost every material and for color removal on all surfaces. One of the main reasons for using laser systems is protection against counterfeiting and traceability of products thanks to the permanent marking.

## Advantages of REA JET Laser Systems:

- Control via REA JET TITAN Platform: the single operating concept for all REA JET technologies with decisive advantages for customers (see page 20)
- Extremely simple mechanical integration thanks to compact design and variable connection
- High marking speeds through digital mirror activation
- Integrated pilot laser for simple and precise system setup
- Machine conformity through two-channel interlock with performance level d
- Full TrueType font and Unicode support including UTF-8
- Network capability and interface protocols via Ethernet

FL Laser Unit

FL Controller Unit

FL Controller

## Areas of application of the REA JET CL $CO_2$ Laser:

- Coding and marking of glass, wood, rubber
- Engraving and color change of plastics (automotive, medical, consumer goods)
- Marking of folding boxes and outer packaging (e.g. in pharmaceutical, cosmetic and foodstuff segments)
- Coated substrates (e.g. anodized aluminum)
- Direct marking of foodstuffs
- Coding and marking following laser color change
- Color mirror engraving, e.g. in combination with the REA JET Spray Mark Technology (see page 14)

CL Laser Unit

CL Laser Unit IP65, dust- and splash-proof

## Areas of application of the REA JET FL Fiber Laser:

- Engraving and annealing on metals
- High-contrast marking of plastics
- Marking of ceramics
- Coating removal, e.g. for day and night design
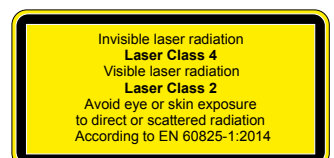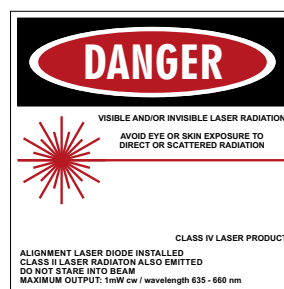- Coding and marking of foils

CL Controller

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**NiceLabel** NiceLabel compatibility: transfer of NiceLabel print layouts using REA JET's own printer drivers.

**DANGER**
VISIBLE AND/OR INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS IV LASER PRODUCT
ALIGNMENT LASER DIODE INSTALLED
CLASS II LASER RADIATON ALSO EMITTED
DO NOT STARE INTO BEAM
MAXIMUM OUTPUT: 1mW cw / wavelength 635 - 660 nm

Invisible laser radiation
**Laser Class 4**
Visible laser radiation
**Laser Class 2**
Avoid eye or skin exposure
to direct or scattered radiation
According to EN 60825-1:2014

Marking of PET bottles
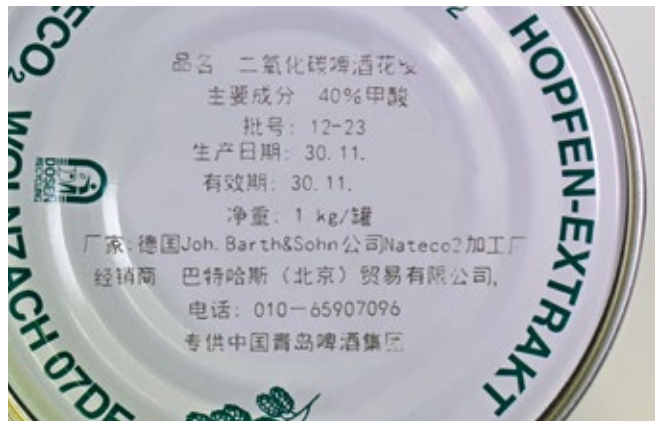


Coding and marking of packaging foils



Coding and marking of glass with $CO_2$ Laser IP65



Marking of 2D codes on particle filters



Coding and marking of plastic profiles



Coding and marking of tinplate cans through color removal



Marking of medical instruments



Coding and marking of packaging through color removal

# Dots, Lines, Large Marking: Spray Mark Systems

Color markings play a key role in many technical fields. In industrial processes, colors and markings indicate the quality and condition of products, control processes and determine actions to be taken. These range from red error markings to notifications of tested quality in green or a colored marking for quality, type or installation location. REA Spray Mark Technology offers even more: Spray mark heads arranged in a spray mark block enable large texts to be written with a height of up to 660 mm. Dot by dot!

## Areas of application:

- For absorbent and non-absorbent surfaces
- Metallic surfaces up to a temperature of 1000 ºC
- Dots and lines with a diameter between 3 and 30 mm
- Large texts with spray mark blocks
- Colored line marking for pipes, profiles and continuous material
- Multi-colored dot, colored ring and line marking for product type differentiation
- Welded seam marking for manufacturing of pipe profiles, pipes and steel profiles
- Machine-readable line markings for edge trimming
- Applying location, position, bending and cutting markings
- Two-dimensional application of contrast colors ("color mirror") for subsequent coding and marking (inkjet, laser)
- Application of primers, separating agents, adhesives etc.

## Advantages:

- If desired, we deliver complete marking equipment worldwide with ink supply cabinets, linear axes and robot technology for simple and fast integration into new and existing production systems
- Large selection of processable media including: inks, paints, lacquers, adhesives, resins, hot mark paints and heat-resistant paints
- Integrated flushing device guarantees immediate availability
- Coated nozzles and air control heads to prevent material adhesion
- Fast changeover system for modular components
- REA Plug & Print technology (high level of system availability and process reliability)
- Exactly reproducible spray mark results through precision notch setting and nozzle adjustment

Spray Mark Blocks

Spray Mark Heads

Round Jet

Wide Jet

One Dot Systems

Material Pressure Tanks

Four-Color Supply System

Marking of aluminum ingots
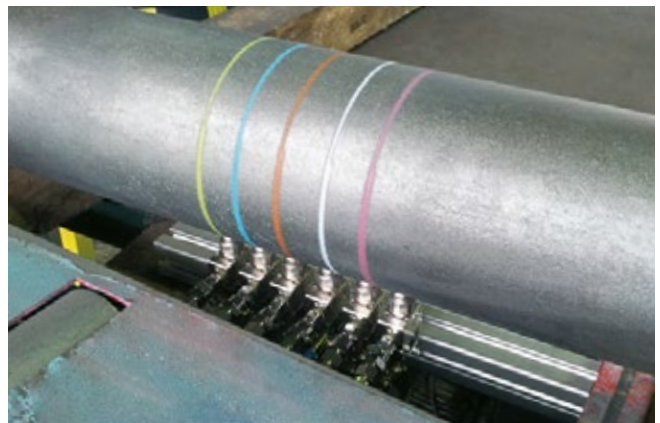
High-point marking on tires

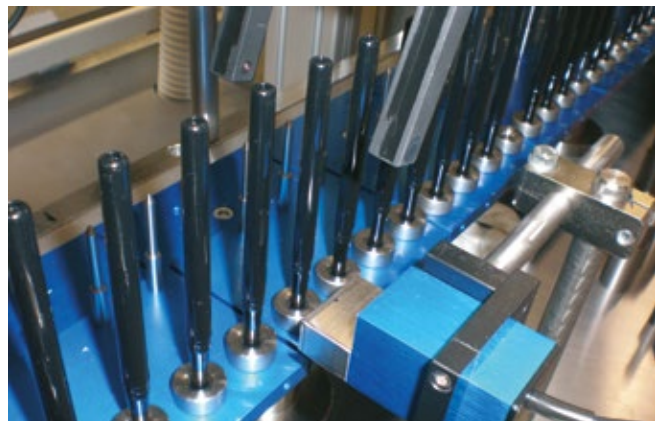Marking of steel springs for type classification

Color marking of wire cables

Marking of steel billets – spray mark block on robot

Ring marking of steel pipes

Marking of drive shafts

Precise application of oil on plastic parts

# Tailor-Made Solutions for Logistics and Automation: Labeling Technology
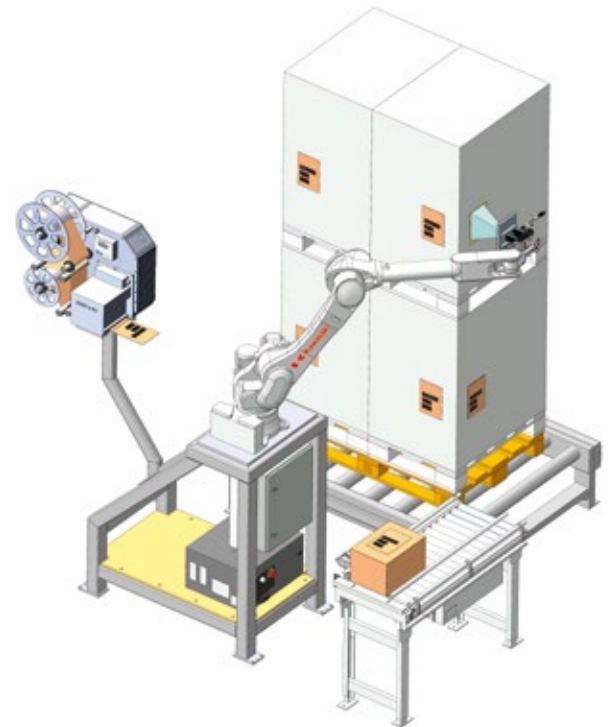
**LABEL**

Like the rest of our product portfolio, our labeling systems are also designed for reliable operation in a challenging industrial environment. The REA LABEL systems are efficient and flexible thanks to their modular design and user-friendly operation.

What's more, the use of high-quality material makes them highly robust. They are the first choice for a multitude of fully automatic labeling applications in an extremely broad range of industrial sectors

REA LABEL DS
Print and Apply
System
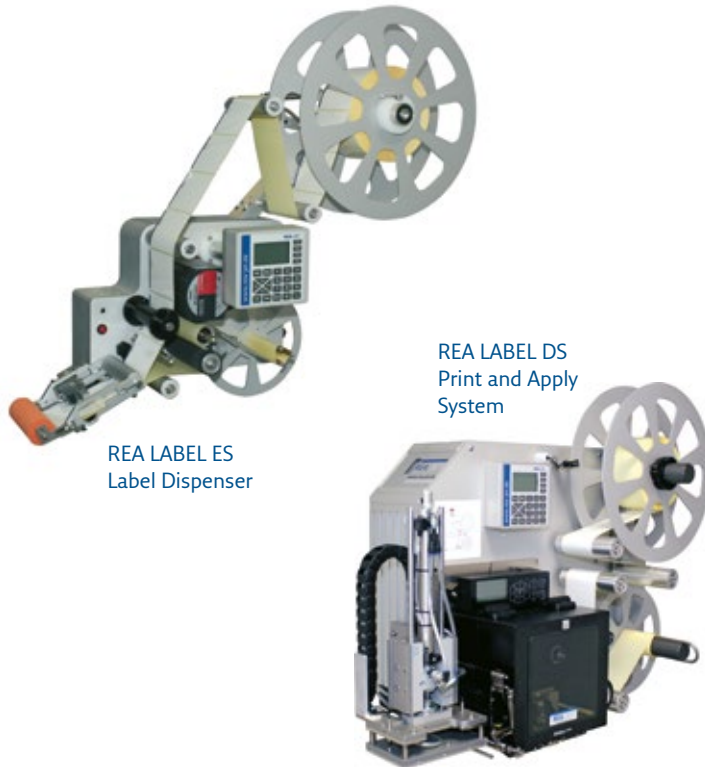
REA LABEL ES
Label Dispenser

Robot Labeling System, optionally expandable with 1:1 inkjet color printing module

## Top flexibility for label printing

Needs-based label printing for daily labeling tasks through the individual design of your plain and pre-printed labels. We are a certified partner of the following manufacturers:

**NOVEXX SOLUTIONS** Authorized Partner

**cab** we identify more

**ZEBRA**

**TOSHIBA**

**AstroNova**

## Standardized and customized software solutions

REA LABEL offers professional software solutions for designing and printing your labels. Standard software from NiceLabel, Codesoft and Sentinel form the basis of these and can be flexibly adapted to your needs.

**NiceLabel** Do more. Faster. With less.

**TEKLYNX CODESOFT**

**TEKLYNX SENTINEL**

Pallet labeling in conformity with CCG/GS1, one stop for two sides

Pallet labeling at various heights


Pallet labeling (one stop for two sides)


Dispensing pre-printed labels


Multi-sided canister labeling


Lateral cardboard box labeling


High-performance servo labeling device


Robot Labeling System


Dispensing system for multiple labels

# Code Verification Systems from REA VERIFIER
# Industry 4.0 Quality Assurance

**VERIFY**

Today, virtually every product we encounter in modern life carries coded information. Manufacturer data, product identifications, prices, article numbers and much more are converted into machine-readable barcodes and 2D codes. These must be read quickly, reliably and without any errors at supermarket checkout tills and in many areas of logistics.

To ensure high first-pass read rates in automated processes, adherence to high code quality and applicable standards is essential. REA VERIFIER offers optical verification systems for examining 1D and 2D codes in order to check the quality of your codes and eliminate the risk of errors and potential further costs.

## Areas of application:

- Verification of quality of 1D and 2D codes in accordance with international standards and GS1 specifications
- Verification of codes for accuracy of content
- Automated spot checking
- Incoming and outgoing goods inspection
- ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 29158 (DPM)

REA VeriPad
(for 2D codes and barcodes, mobile)

## Advantages:

- Avoidance of rejects by detecting incorrect coding and marking in good time
- Ensures high first-pass read rates
- Low risk of complaints
- Measurement report with evaluation of code criteria (e.g. also for ISO certification)
- Legal certainty through adherence to quality standards (ISO/IEC, GS1 etc.)
- Mobile and stationary devices, can be used flexibly
- Examination of codes of virtually any size
- Large number of equipment variants and accessories for a wide range of applications
- Choice of lighting options (red light, white light, diffused red light, UV light, IR light)
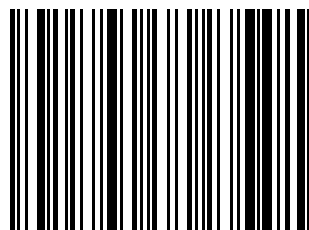
REA VeriCube
(for 2D codes and barcodes, ready for 21 CFR Part 11)

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

Verifier

REA Check ER
(compact, for barcodes, mobile)

REA ScanCheck 3
(universal, for barcodes, mobile)

REA PC-Scan LD4
(reference device for barcodes)

Verification of Data Matrix codes on product packaging



Stand solution for code verification on 3D objects



Flexible verification of barcodes on site



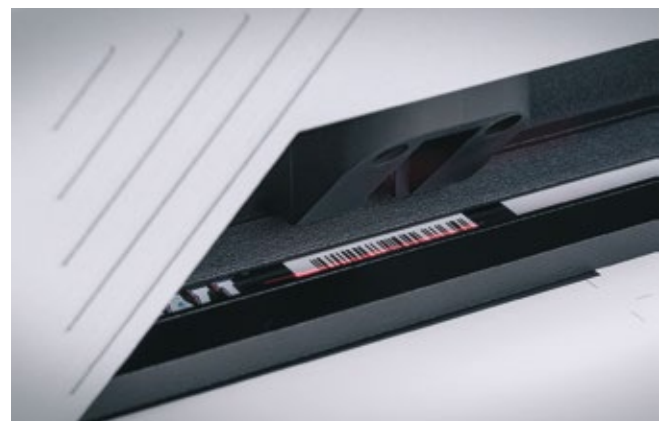Verification of barcodes on metal drums



Verification of Data Matrix codes on label sheets



Mobile verification of 1D and 2D codes



Measuring of barcodes on print sample sheets



Quality verification of barcodes

# REA JET TITAN Platform: The Single Operating Concept for all REA JET Technologies

TITAN

**DOD**  **HI-RES**  **CIJ**  **LASER**

With the REA JET TITAN Platform we offer a genuinely cross-system operating concept for all REA JET coding and marking technologies. The advantages are obvious: As soon as the operating logic for a technology, i.e. for a REA JET product, has been learned and understood, all other technologies can also be operated in the same manner without any need for further training. As well as saving time and money, this also significantly reduces the risk of incorrect use.

It doesn't matter which input concept you prefer for commands and data – we offer all of them! Everything that is modern, future-proof and safeguards the value of your investment is already on board and integrated for deployment all over the world: from the interface architecture, design freedom of all international fonts, characters and languages, all the way up to state-of-the-art remote control technology.

## Immediately deployable worldwide

- Full Unicode support: all world languages can be printed for companies with international customers

- Support of all TrueType Fonts: greatest possible design freedom for your printed texts

- XML-based data structure and communication protocol: globally used standard for data compatibility

- Integrated VNC server: remote maintenance tool for diagnosis and help if needed

- Standard, cross-device communication protocol for status monitoring enables customer-specific signal processing

- Universal graphical user interface in WYSIWYG format: accurate display of print contents

- Integrated web server enables operation of printing system via tablet or smartphone

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### Operable without limitations – now, everything is easier

**Operation with gloves**
Central push-turn jog-dial knob for operation with gloves directly at the production line

**Touch operation**
Touch-sensitive 15-inch screen for operation directly at the production line

**WLAN browser operation**
Browser operation using mobile devices (tablet, smartphone) via WLAN / WebGUI

**PC operation**
Remote control using a PC workstation or production control station via network

**Remote maintenance**
Remote maintenance and operation possible via VNC server

**Keyboard input**
For recurrent, large text entries at the production line, use of international USB keyboards possible

## A Comprehensive Range:
## Inks, Paints and Consumables

INK

REA JET develops and markets inks, paints, primers and cleaning agents for virtually every coding, marking and spray mark application worldwide. Chemical compatibility and interaction with all components of the REA JET product families are given top priority when releasing consumables for use in REA JET coding and marking systems. This ensures the fault-free operation of REA JET industrial printers in manufacturing.

Furthermore, the use of original REA JET inks, paints, primers and cleaners guarantees the reliable operation of our systems.  With more than 500 standard and special inks in our portfolio, we offer a broad selection here.

Moreover, the quality of our consumables is constantly safeguarded with the very latest development and testing methods.

- More than 500 standard and special inks in our portfolio
- Container sizes ranging from a HP cartridge to a 200-liter drum
- Development of customer-specific inks and paints
- Industry solutions and formulations for: medical and pharmaceutical packaging, building materials, plastics, foodstuffs, the tire industry, metal, wood, stone, carpet, fleeces and all other kinds of packaging
- State-of-the-art development and testing methods secure the quality of our inks, paints and cleaners

### Please note:

- Inks and paints are available with diverse chemical compositions; these need to "match" your product
- Criteria such as drying speed, UV resistance, durability, material compatibility, text accuracy, coverage ratio, color etc. must be matched to your specific requirements and the conditions on site
- Our experts create print samples under field conditions and recommend an appropriate overall solution



### Ribbons and labels

We sell ribbons (thermal transfer foils) and labels in a wide range of qualities, sizes and specifications for all standard label printers (thermal transfer printers).

# Always Ready to Help:
# Service from our Specialists



Fast and flexible reaction to customer wishes as well as competent and unbureaucratic help are services that further underline the quality of REA products.

# Always up to date:
# Individual Product Training



Training courses are offered for the complete REA JET, REA LABEL and REA VERIFIER product ranges, which are geared individually to your requirements and wishes. So your investment in staff training really pays off.

Proper handling of the system, maintenance and care during operation and knowledge of the measures required for remedying any faults ensure the highest level of availability of your coding and marking system.

# We are where you are: Worldwide

REA is an international company, which is represented on every continent with its own subsidiaries and distribution partners. As a result, we can guarantee a reliable consulting and service network while being close to the markets and our customers all over the world.

The REA JET brand stands for a comprehensive range of systems in the field of industrial coding and marking. For over 35 years our industrial printers have been in use in a vast range of applications in almost every sector.

From the tough conditions of the steel working industry to the pharmaceutical sector characterized by stringent regulations, REA JET systems are in operation every day.

We offer solutions to help you meet the various coding and marking requirements of trade and industry in an efficient and economical way: from the standardized system configuration to tailor-made solutions in combination with the right inks for an unmistakable marking.

As such, our systems make an important contribution to the clear identification and traceability of products both within internal logistics and in worldwide goods flows.
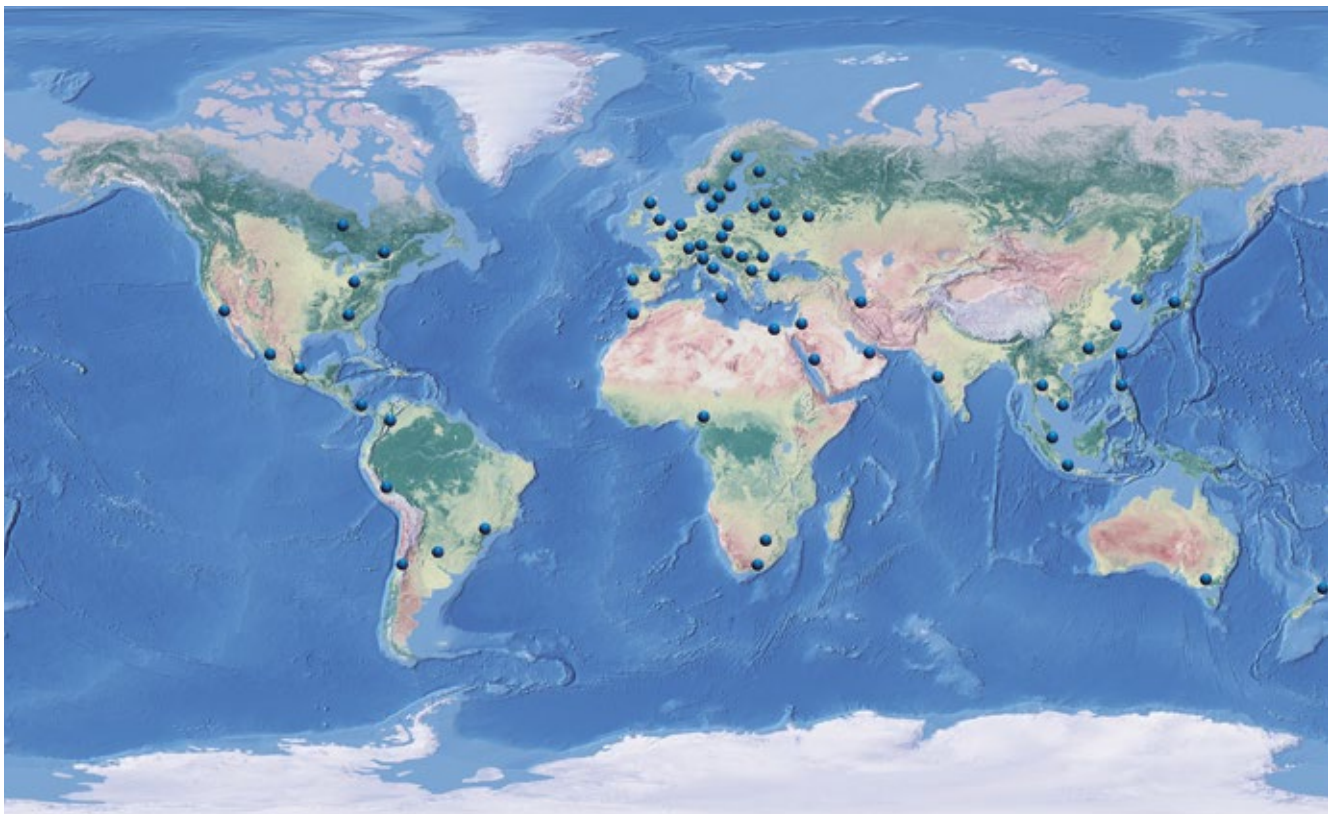
Worldwide REA JET subsidiaries and distribution partners.

**REA** JET

made in Germany