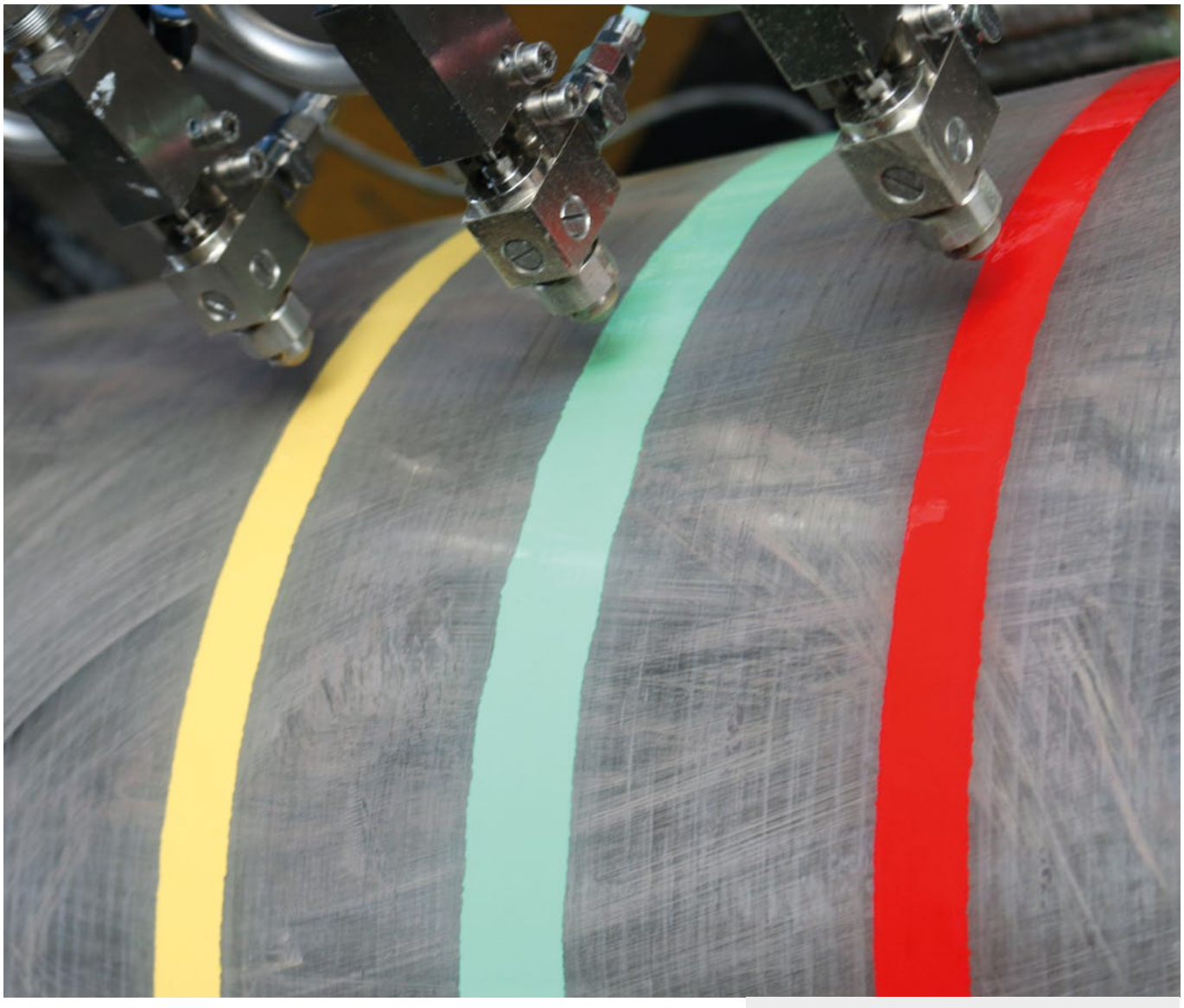
REA JET

INDUSTRIAL CODING AND
MARKING SOLUTIONS –
MADE IN GERMANY

REA JET Spray Mark Technology

Identification, marking and pre-treatment



REA JET Spray Mark Technology: Perfect marking thanks to precise lines

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In industrial processes, high-contrast colors provide information on the quality and condition of products, control processes and specificactions to be taken. They are used, for example, in the fields of steel production, metal processing, electrical, automotive and food industries, wood processing and packaging production.

REA Spray Mark Systems are suitable for precision line and dot marking as well as surface application of a wide variety of high and low-viscosity media onto a wide variety of products and materials in industry.

For the sometimes oily, greasy, moist, absorbent, hot or even scaly substrates, there is a variety of product-specific media, such as spray paints, inks, adhesives, greases, primers, oils and release agents.

This means that special requirements, such as a rapid drying time or a good recognition and readability of the marking, can be ensured at all times.

Typical applications:

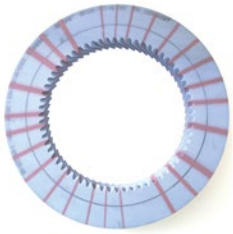
- Marking of OK/NOK parts in production following quality inspection (e.g. weld test, tightness, color gradations, quality, etc.)
- Marking of rejects via dot marking in red ink
- Display tested quality in automated manufacturing processes in green ink
- Colored line marking for pipes, profiles and continuous length goods
- Location and position markings
- Multi-colored dot and line marking for type differentiation and product safety
- Application of contrast color codes for subsequent marking
- Machine readable line markings for edge trimming
- Marking of cutting, bending and folding edges (sheet metal, paper, cardboard)
- Engine block test, crankshafts, balancing systems, camshafts (tightness, concentricity, quality, installation position)
- Dot marking of electric circuit boards or shock absorber springs
- Marking with fluorescent and UV paints

Examples of liquid media application:

- Targeted application of soaps, coolants, cutting agents and lubricants
- Application of flux for automatic soldering processes
- Seals with protective varnish, e.g. in printed circuit board production
- Dosed application of oils and release agents
- Application of distilled water, sugar solution or chocolate in the food sector
- Targeted application of adhesives and screw sealing varnish

Dot marks in the automotive sector

Colored field for high-contrast subsequent printing with REA JET systems



Examples of color marks on grinding wheels and stones

Advanced marking: Modular, flexible and cross-industry

REA Spray Mark Systems are modular and can be flexibly adapted to individual customer requirements.

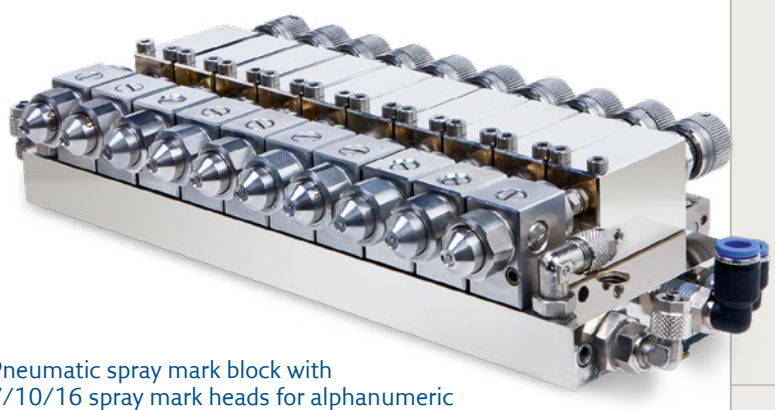
Whether for metal, wood, plastic, stone or textile surfaces, we work with our customers to determine the most suitable color or ink. Especially in the aluminium and steel industry, the processing of heat-resistant paints and hot spray paints is an important requirement that we fulfil for modern spray marking systems.

REA JET Spray Mark Heads apply precise dots and lines to porous and non-porous surfaces. With extremely short switching cycles of 20 milliseconds, speeds of up to 100 m/min are possible. The dot size can be freely selected by regulating the material pressure, the fine adjustment of the detents on the spray mark head and by the nozzle size used. Spray mark heads equipped with wide-beam or round-beam heads can apply large-area markings. These can be implemented from above, below and from the side.

REA JET Spray Mark Blocks are used where the marking of products must be easily legible from a distance. Multiple spray mark heads are combined to form a spray mark block. Alphanumeric information can be spray-marked, including material designations, batch numbers and logos with a print height from 40 mm up to 700 mm. The spray mark blocks are controlled via the REA JET TITAN platform, the cross-device and cross-technology operating concept from REA.

SRM-1 wide beam head

SR-1 with round jet head



Pneumatic spray mark block with 7/10/16 spray mark heads for alphanumeric marking up to max. 700 mm print height

Continuous reliability: Single-nozzle spray mark system and single spray mark heads

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In addition to different material versions (stainless steel, brass, aluminium), the REA JET spray mark heads are available with additional equipment for special media.

Nozzles	SR-1 B	SR-1	SRM-1	SR-5	SR-7
Special	Pneumatic Continuous needle for faster needle change Chromium-nitrided needle for longer life Adapter plate for faster spray mark head change Option: Mounting on adapter plate possible	Pneumatic Internal control Integrated circulation function Option: Nozzle and airhead flushing	Pneumatic Internal control Integrated circulation function Diaphragm seal, making it suitable for abrasive media Option: Nozzle and airhead flushing	Pneumatic Spray-air control via auxiliary valve Compact design Option: Nozzle and airhead flushing Circulation function	Pneumatic Spray-air control via auxiliary valve Extremely compact design for minimal installation spaces Integrated circulation function
Media	Paint Ink	Paint Ink	Paint Ink Abrasive media (e.g. adhesives)	Paint Ink	Paint Ink
Dot	3 – 30 mm	3 – 30 mm	3 – 30 mm	3 – 30 mm	3 – 30 mm
Line	3 – 25 mm	3 – 25 mm	3 – 25 mm	3 – 25 mm	3 – 20 mm
Surface	20 – 60 mm	20 – 60 mm	20 – 60 mm	20 – 60 mm	–
Nozzle size	0.3 mm 0.5 mm 0.8 mm 1.0 mm 1.2 mm 1.5 mm	0.3 mm 0.5 mm 0.8 mm 1.0 mm 1.2 mm 1.5 mm	0.3 mm 0.5 mm 0.8 mm 1.0 mm 1.2 mm 1.5 mm	0.3 mm 0.5 mm 0.8 mm 1.0 mm 1.2 mm 1.5 mm	0.3 mm 0.5 mm 0.8 mm
Dimensions Weight	130 x 35 x 21 mm 380 – 450 g	130 x 50 x 21 mm 380 – 450 g	130 x 50 x 21 mm 380 – 450 g	65 x 40 x 25 mm 200 g	37 x 20 x 20 mm 90 g
Spray distance	3 – 100 mm	3 – 100 mm	3 – 100 mm	3 – 100 mm	3 – 60 mm

SR-1 B
round jet spray nozzle

SR-1
round jet spray nozzle

SRM-1
wide beam head

SR-5
one dot system

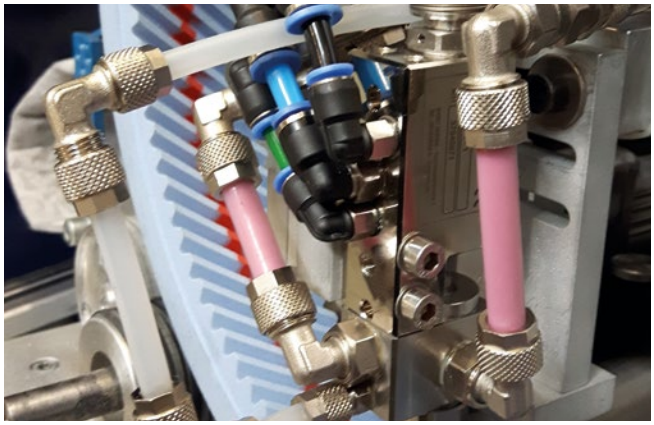
SR-7
micro spraying automat

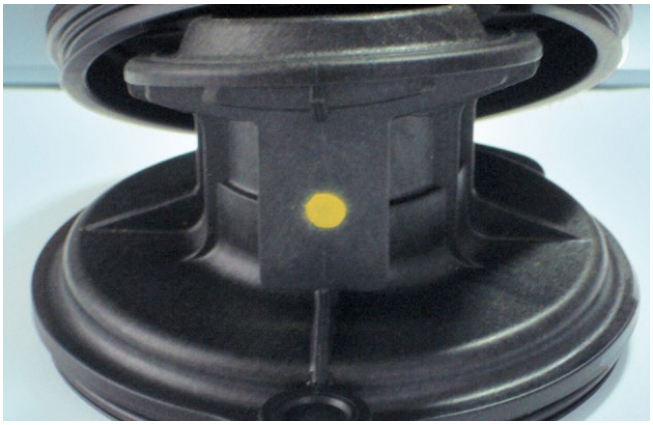
Protection and cleaning for clean spray mark heads

For convenient system cleaning and when changing colors, the spray mark system can be expanded with a flushing function. During operation, contamination of the marking device via overspray is often unavoidable.

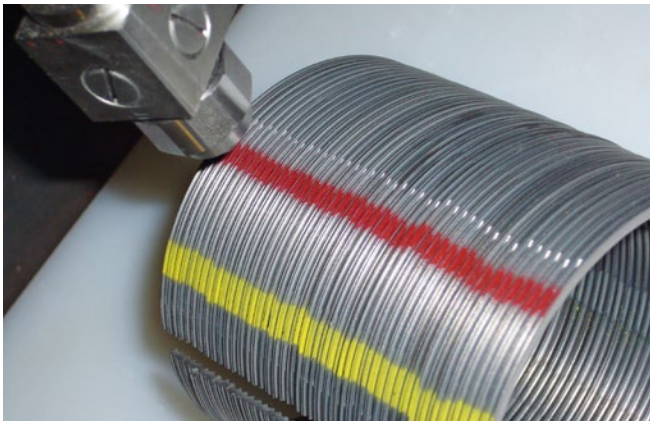
Easy-to-install REA safety covers made from Tyvek or heat-resistant Hakamid help reduce maintenance and cleaning work.

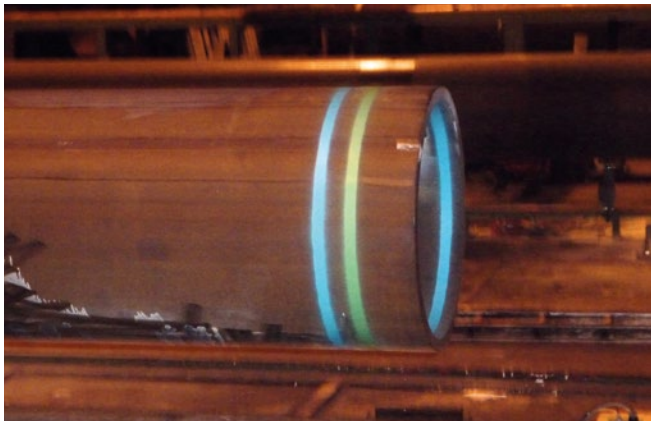
Safety convers for clean spray mark heads

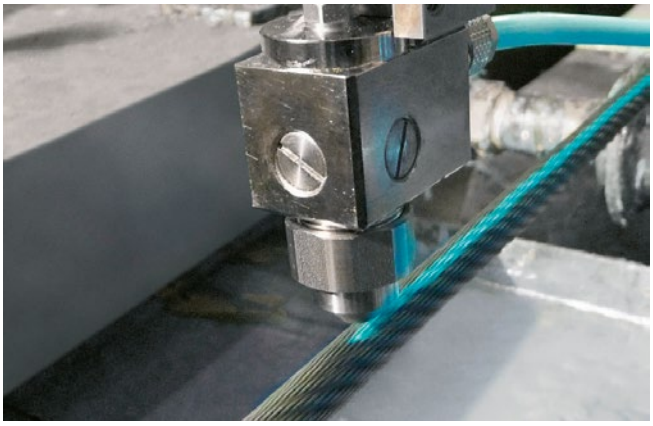

Control line on ceramic component


Marking of good parts after quality inspection

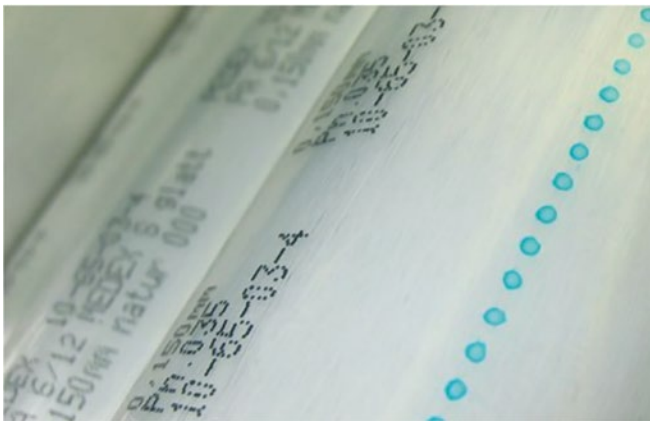

Chimney stone line-marking for correct installation


Multi-colored marking of spring rings


Ring marking of steel pipes


Color marking of wire cables


High-point marking on tires


Control line on PE foil tube

REA JET Spray Mark Block Technology: Marking with large print heights

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To produce very large and easily readable alphanumeric markings, multiple spray mark heads are combined to form a spray mark block.

Düsen	SRP-7	SRP-10	SRP-16
Features	Electro-pneumatic control via 3/2-way valve Nozzle and air control head		
Media	Paint, Ink, Abrasive media Special hot mark paints from 100 °C - 1000 °C Heat resistant (up to 650 °C)		
Speed	Up to 75 m/min		
Print height (in mm)	25 – 130	40 – 200 2D Code	60 – 350 2D Code 2-line markings
Dimensions	200 x 130 x 82 mm	260 x 130 x 82 mm	420 x 130 x 82 mm
Weight without housing	8 kg	8,5 kg	12 kg

SRP-7

SRP-10

SRP-16

The comprehensive range: Inks, colors and consumables

For industrial marking applications, REA JET offers a wide range of approved spray marking inks and solvents. There is a range of media available for marking, such as alcohol-based, acetone-based or MEK-based inks, solvent-based paints and varnishes. Special inks such as water varnishes, UV and fluorescent paints, water and solvent-based adhesives, resins, hot-spray and glow paints for surfaces heated up to 1000 degrees.

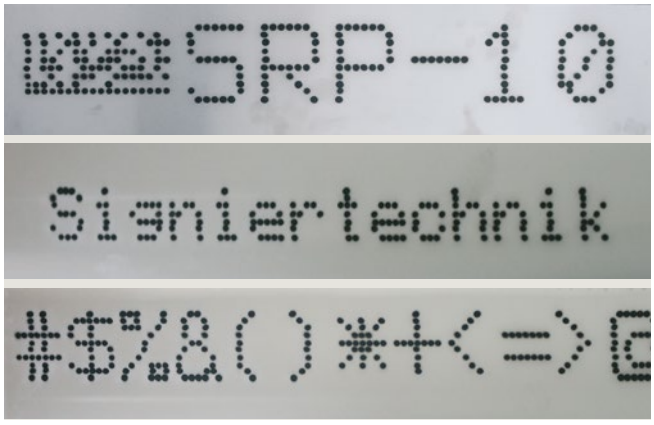
Spray marking inks and varnishes approved by REA JET ensure the high functional reliability of the system. The corresponding cleaning agents are available for every spray mark medium. The option for custom development of an ink with special properties is available any time. Container sizes range from 125 ml bottles to 200 liter barrels.

Application of heat resistant colors on aluminum bars

Protective housing SRP-10 for rough environment

SRP-10 spray mark block for marking sheet metal

Robot controlled billet marking with high temperature paint



SRP-10 block samples

White colored field for downstream printing with REA systems

Marking on steel coils

Marking of red-hot steel with high temperature paint

Future-proof planning: Construction and integration

Our many years of experience in plant engineering ensure the successful implementation of your projects from planning to commissioning in production:

- As early as the planning phase, 3D visualisation provides comprehensive information and helps save costs
- The enlightening animation of the spray marking process in the overall sequence provides a helpful basis for decision-making in complex projects
- We plan, design and integrate systems in rough industrial environments with wide-reaching safety concepts
- Advice on the use of robot-supported markings or linear motion devices

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

TITAN

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.

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

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

Touch operation
Touch-sensitive screen for operation directly at the production line

Remote maintenance
Remote maintenance and operation possible via VNC server

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

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

REA JET TITAN Controller

REA JET Spray Mark Blocks

Ready for immediate use: turnkey spray mark systems

The REA JET Turnkey Systems are fully configured and can be immediately integrated into the production process. A single system can be used quickly and effortlessly at various points in production.

The compact REA JET STC System (Spray Mark System Compact) with 125 ml or 500 ml ink storage is suitable for small to medium jobs with less material requirements, e.g. for quality marking of components.

The REA JET EDC controller controls up to two REA JET ST spray mark heads. It can be expanded for speed-dependent marking including sensor technology.

STC
Compact Spray Mark Head System with 125 ml or 500 ml material supply

EDC Controller
For connection of encoder and sensors

Continuous reliability: Material pressure tanks for ink supply

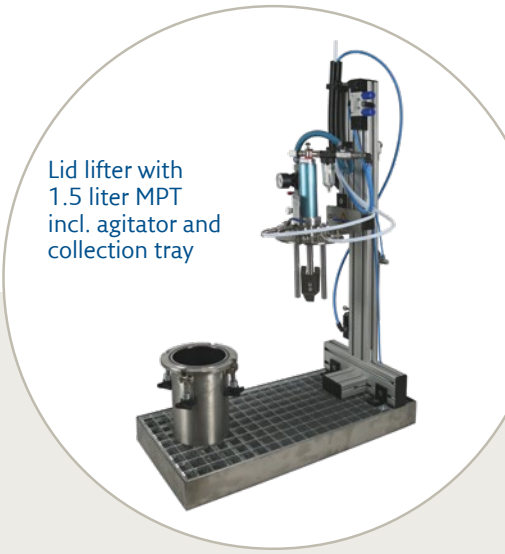
For the REA JET Spray Mark Systems, the material is supplied via special material pressure tanks (MPT) in 1.5 liter and 45 liter capacity sizes for storing original containers. The high-quality design in stainless steel meets the high requirements of industry. In a pressure range of 1 to 3 bar (6 bar optional), they ensure a uniform and pulsation-free material flow of inks and detergent.

When using pigmented media and media with a tendency to form deposits, agitators ensure an even material consistency. Optical, electronic or ultrasonic level indicators facilitate accurate monitoring of the residual material quantity.

Circulation operation is possible by means of an additional material outlet. For special applications, a small tank with a 75 ml capacity to be mounted directly on the spray mark head. To avoid contamination of the lid and the hose lines connected to it, or to damage hoses due to kinks when working on material pressure tanks, e.g. when cleaning or filling the tank, it is recommended to lift the lid using a tool. This provides greatly simplified handling of the material pressure tanks. Maintenance times and the associated costs can be greatly reduced using a manual or pneumatic REA JET lid lifter.

MPT 1,5 liter

Collection tray for up to 4 ink supply systems incl. lid lifter, agitator and MPTs



Lid lifter with 1.5 liter MPT incl. agitator and collection tray

Plug and Play:
Flexible Complete Spray Mark System STF

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The REA JET STF System (Spray Mark System Flexible) is characterised by its particularly flexible application options. It is suitable for medium-volume and larger spray marking tasks and can be integrated into the production environment straight away.

The modular system can be individually expanded and as required. The stainless steel control cabinet complies with the IP54 protection class and is designed for coding and marking with sprayable media. Depending on the design, 1 to 4 spray mark heads can be controlled and up to 4 different inks can be processed simultaneously.

The ready configured system is able to apply dot and line markings. The system is designed for manual and automatic operation. The functions for a spray head flushing system are pre-installed. The use of a REA JET flush box ensures good re-injection response even after a prolonged standstill. With an optional circulation pump and a cyclically controlled agitator, the sprayable medium is circulated through the spray mark heads and the ink is kept in motion so that no pigments can form deposits.

STF-1

STF-2

STF-3

STF-4

Flexible complete system with adjusted material supply from 1.5 – 20 liters

Flexible complete system STF for up to 4 marking heads and paints

Custom-manufactured turnkey solutions: Ink supply systems for intensive industrial use

The correct material supply should always be adapted to the number of markings (per day/week/month), the marking ink used and the process. Joint trials and tests with our customers help to determine the right values.

We also offer a wide range of material pressure tanks right through to complete material supply cabinets as a package. These are generally equipped with a pneumatic drum lid lifter and circulation pump.

To prevent interruptions to the production process, we offer redundant systems with automatic changeover for continuous production.

Our ink supply systems can optionally be expanded for various production processes, e.g. with automatic refilling via a fill level control, various fill level probes such as ultrasonic sensors, minimum level sensors or capacitive probes with several measuring points. The REA systems range includes fully automatic ink change systems for automated production processes as well as flow and viscosity monitoring systems.

For high ambient temperatures, we offer air-conditioned cabinets. For very cold environments, the ink supply can be equipped with heated material tank and flow heaters for the ink supply. From individual MPTs of 1.5 liters to fully equipped ink supply cabinets, we offer the right solution for each individual application.

REA MPTs are available in different sizes:

- From 1.5 to up to 45 liters
- Optional agitators
- Optional circulation
- Optional optical fill level indicator
- Optional ultrasound fill level indicator
- Optional collection trays in different dimensions

Material supply with lid lifter, flow heater and insulated heatable tank

Ink supply cabinet with 4 ink and 1 detergent tanks

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