LEIBINGER

PI
Pigmented Ink

100% protection
SEALTRONIC
trouble-free startup, every time



UPgrade your marking process

JET3 UP **PI** Industrial Inkjet Printer



1 Do you need...

... a fast and easy method to mark dark surfaces with high contrast?

... an uncomplicated marking system for pigmented contrast inks without hidden costs?

... reliable German name brand quality and engineering service?

2 Are you tired of...

... losing valuable production time because your inkjet printer has to be cleaned often, because accumulated color pigments are clogging the printer or the ink is dried out in the printhead?

... being unable to sell your products due to faulty or poor-quality coding or even having it result in expensive recall measures?

... your operating costs constantly rising due to the high cost of consumables, energy and service?

3 Do you expect...

... a device that is immediately ready to use, high-performance and 100% reliable – specially developed for using pigmented contrast inks?

... a wide range of practical functions that ease your everyday production and automation?

... fast, fair and transparent service – worldwide?

LEIBINGER has the answer:

THE JET3up PI INKJET PRINTER

The reliable solution for printing with pigmented inks

Continuous inkjet printer (CIJ)

LEIBINGER inkjet printers code **all conceivable products and materials**, such as plastic, glass, wood, metal, ceramic, technical composite material, cardboard and paper **without making contact** using **fixed** and **variable data**. Examples of applications include expiration dates, LOT/batch numbers, serial numbers, barcodes, 2D codes and graphics. **Special inks** are used that dry in less than one second. The marking process takes place during production **speeds** up to 1960 ft/min. **Various product surfaces** do not pose a challenge for the LEIBINGER inkjet printer, regardless of whether they are convex, concave, rough, smooth, flat or structured. Non-contact marking and fast product processing make CIJ technology the most flexible, versatile and cost-effective method of marking products.

The advantages are obvious!

Maximum legibility on dark surfaces

Special printer for highly pigmented inks. High-contrast marking that covers well. Convenient to use.

Reliable production

The ink does not settle thanks to a unique hydraulic system with an integrated agitator and a fully automatic interval mode for pauses in production. No daily service work, no forced stops due to scheduled service intervals.

Maintenance-free starting without cleaning – guaranteed!

Automated **Sealtronic** nozzle seal. No drying out of ink in the printhead. Ready to print immediately, even after long shut-down periods.

Made in Germany

Development and production in Germany. Highest level of inhouse production. Decades of experience in precision engineering. German ingenuity. High-quality materials. Premium industrial product.

Maximum print quality, wide range of applications

Accurate placement of ink drops using Drop Position Control. High-precision and high-contrast printouts. Fixed and variable data such as text, barcodes, LOT/batch numbers, meter marking 2D codes, expiration dates, graphics and much more.

No wait times – ready for operation immediately

The **Clean Instant Start and Stop Technology** is used to make the JET3up PI ready for printing in only a few seconds. Always a clean printhead with any number of start and stop cycles.

More than 2,000 products/minute*

Marking up to 1960 ft/min!

Intuitive operation

Easy and fast, like your computer at home. Color 10.4" touch-screen display. Windows-based, customizable user interface. Optimized menu navigation.

Low operating costs

No solvent consumption during production shutdowns using **Sealtronic**. Low maintenance costs. No replacement of expensive modules.

Innovative technology

No cost-intensive external compressed air. No gear-wheel pump, but instead a low-maintenance, durable diaphragm pump. No continuously running pressure pump.

Countless functions without additional costs

All interfaces and over 800 software functions are standard. Easy integration into the production line. Free lifetime software updates!



* Depending on print type and content

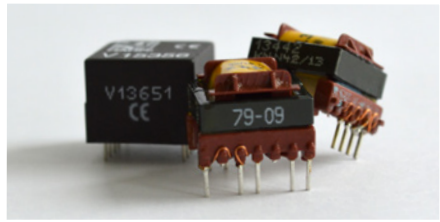
One printer – infinite possibilities: The JET3up PI from LEIBINGER

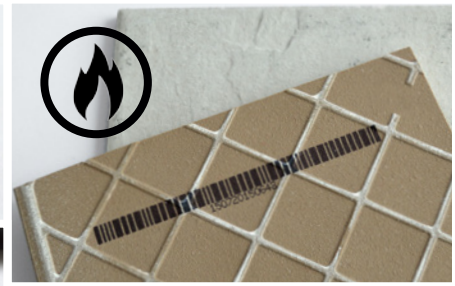


Where do you want to make your mark? The JET3up PI marks all dark surfaces with high contrast

Text, barcodes, LOT/batch numbers, meter marking, 2D codes, expiration dates, graphics and much more - the JET3up PI is your reliable solution for marking with pigmented inks.

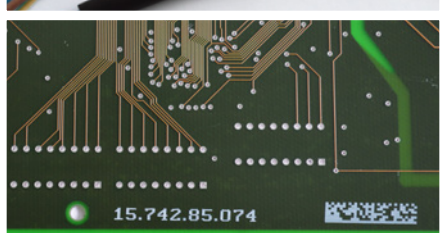














Sealtronic makes the difference

trouble-free startup, every time

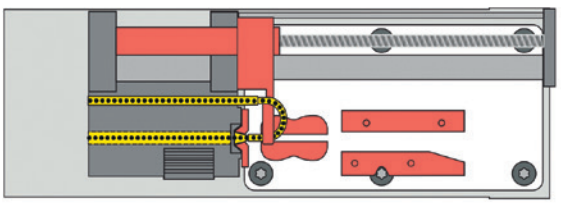
The automated Sealtronic nozzle seal is one of a kind

- due to its accurate precision engineering.
- in its operating principle.
- in its effectiveness.

LEIBINGER printhead with nozzle seal

Shut down process

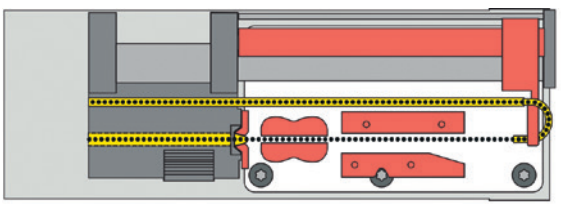
The gutter is moved to the nozzle automatically when shutting down the printer, forming a hermetically sealed, airtight circuit. **The result: 100% secure protection from ink drying out.**
To prevent color pigments from accumulating when the printer is off, the ink automatically circulates in interval mode in an airtight circuit.



Switched-off LEIBINGER printer

Startup process

First, the ink begins to flow in the sealed circuit creating a stable ink stream. The gutter then opens automatically. This happens within a few seconds and guarantees a fast and error-free start. **The printhead remains absolutely clean in this process.**

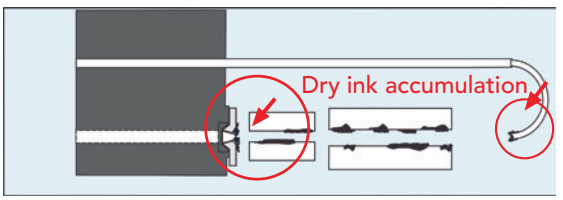


LEIBINGER printer after the startup process

Conventional printhead without nozzle seal

Shut down process

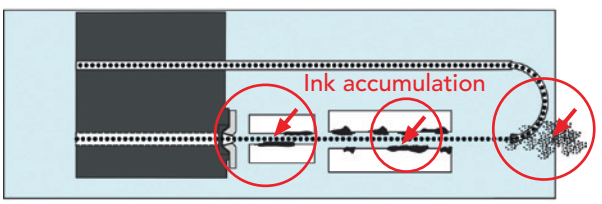
Nozzle and gutter remain open. The residual ink is exposed to the air unprotected and dries out. This causes problems the next time the printer is started.



Switched-off conventional printer

Startup process

The conventional design causes an unstable startup of the jet. The result: the printhead gets dirty regularly and thus drop charging is degraded right from the start.



Conventional printer after the startup process

The advantages for production

- Immediate, reliable starting
- No delays in the start of production
- No cleaning cycle required
- No production interruptions
- Long availability - typically months between cleanings







Countless requirements – always the right solution

There are over **800 functions standard** in the JET3up PI able to handle a wide variety of applications.
You can always find the best solution for yours!

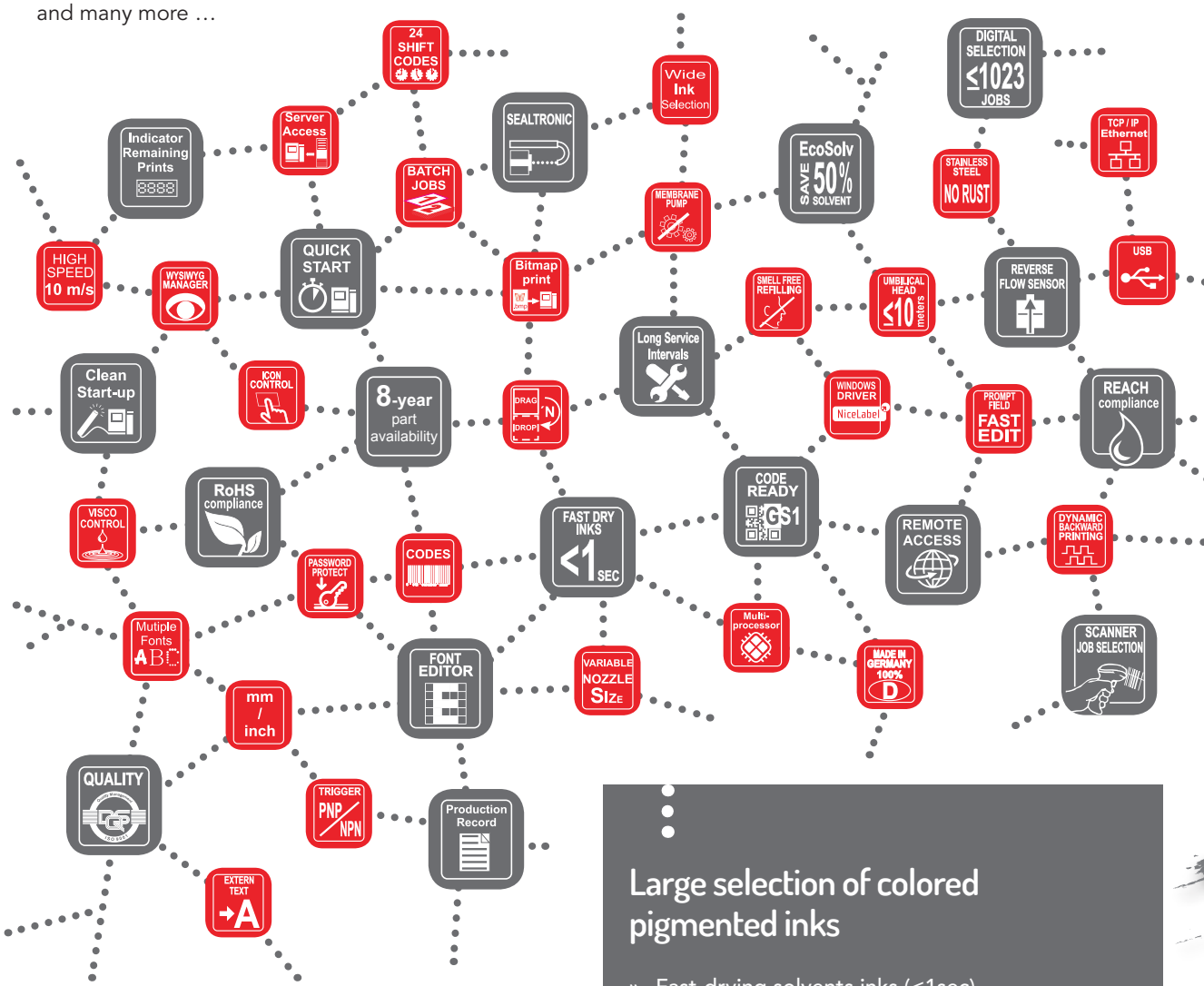
Here are some examples:

- Pre-defined job list
- Special function for plastic extrusion
- Autostart function

and many more …

- Prompt field (fast edit)
- Batch job
- Intelligent self-test
- Database/server access
- Scanner job selection

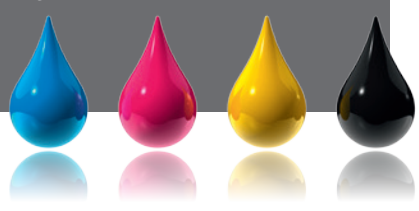
- Various protocols
- Font and graphic editor
- Meter marking
- Remote access



Large selection of colored pigmented inks

- Fast-drying solvents inks (<1sec)
- Variety of pigmented contrast inks (opaque inks)
- MEK-free inks
- Temperature-resistant inks (up to 1000 degrees)
- PVC inks (vinyl inks/transfer-resistant inks)
- UV-curable, halogen-free and aviation-approved inks
- Custom special inks

and many more...



Variety of accessories and options

- Various nozzle sizes and head versions
- Umbilicals up to 32.80 ft in length
- JETmotion linear system
- Expanded computer software solutions
- Camera verification system

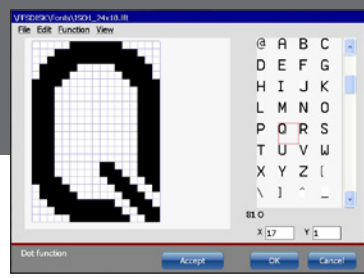
and many more ...

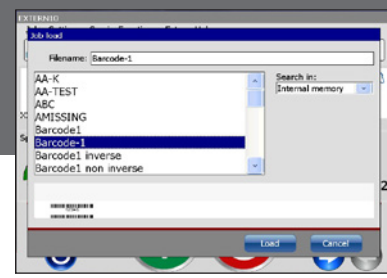
The JET3up:
Easy, intuitive and reliable

With its large 10.4" touch-screen color display and Windows-based user interface, the JET3up is just as easy to use as your computer at home:

» Typical functions such as drag and drop
» Illustrated operator instructions
» User-defined interface with buttons for direct access









Increase your efficiency and lower your costs

» Extremely low energy consumption
» Easy automation integration through interface variety
» Consistent prevention of production interruptions when using contrast inks thanks to the one-of-a-kind LEIBINGER technology
» Minimal solvent consumption using **Solvent Saving Mode** and **Sealtronic**
» No external compressed air, no air filter, no continuously operated pressure pump
» Easy, cost-efficient maintenance and long service intervals
» 8 years guaranteed replacement part availability
» Free software updates

We are there for you – worldwide!

With over 100 LEIBINGER authorized dealers worldwide, we can guarantee you one thing: the best service on-site.



Technical specifications

PRINT PERFORMANCE/FUNCTIONS

- Printing speed up to 1960 ft/min
- Printing height 0.06”to 0.63”, depending on nozzle size and head type
- Country and industry-specific fonts: Arabic, Cyrillic, Chinese, Persian, etc.
- Fonts: from 5x5 to 32x20, special fonts, user-programmable fonts, tower printing
- Multi-line fonts (1 to 5 lines)
- Fonts and graphics can be positioned and combined in the print jobs as desired
- Proportional function for all fonts
- Font height and font width adjustable
- All major barcodes and DataMatrix codes (ECC200), GS1 DataMatrix (EAN/ECC), QR-Code, PPN-Code
- Time, auto-adjustable date, auto-adjustable expiration date, weekdays, calendar weeks, Julian calendar, shift identification
- Replacements: all date, time and counter functions can be replaced and user-programmed
- 32 individually programmable counters, consecutive numbering, production counter, meter marking with “Meter Go” function
- User-programmable graphics/logos can be created in the integrated editor
- Multi-stage contrast and bold function, print repetition, print delay, backward print, rotation/ mirroring of font, inverse, reverse and alternating prints (object-related)
- Dynamic backward printing, for traversing lines
- Programmable batch production and interlinking of multiple jobs
- “External text” function via scanner or data interface
- Printing variable data from external files via USB stick or data interface
- Stop function after reaching preselected value
- Product jam detection / monitoring of product alignment
- Autostart function
- Prompt function (fast edit)
- Solvent Saving Mode
- Self-test function

DATA ADMINISTRATION/SECURITY

- Data buffer in case of power failure
- File Explorer
- Print jobs saved with printing data and machine parameters
- Printer data logging, production run logging
- Up- and download of jobs and graphics using USB stick or network
- Job select (1023 jobs selectable from scanner or PLC)

OPERATION/DATA INPUT

- 10.4“ colour TFT touch-screen display (SVGA)
- Creating and editing jobs during production
- Customizable user interface
- Available menu languages: European languages, Arabic, Chinese, Vietnamese, Thai, Korean, Cyrillic, Persian, etc.
- Integrated font and graphic editor
- Illustrated operator instructions
- Alternative control using the data interface (serial or Ethernet)
- Country-specific on-screen key pad
- Operational available by mouse or keyboard
- Comprehensive self-diagnostics and status display with easy-to-understand text, help function, printer status display
- Storage of numerous jobs and graphics
- Password function and service menu
- Windows based interface, WYSIWYG, real-time updating of display
- Remote control over VNC

INTERFACES, INPUTS/OUTPUTS

- Product detector PNP/NPN 24V, FIFO buffer
- Shaft encoder input for printing speed synchronisation (TTL 5V, HTL 24V, RS422, 5V)
- 9 digital inputs and 8 outputs, user-selectable
- Printer alarm, low fluid, print ready, print finished, external job selection etc.
- Serial interface RS232 up to 115200 baud
- USB port
- Ethernet (industry standard M12D), script protocol
- Sensor for product monitoring and speed measurement
- Option: Special interface to connect several printers

LEIBINGER HYDRAULIC SYSTEM

- Low maintenance, diaphragm pumps with optimized run time
- Fully automatic viscosity and pressure control
- Thermally isolated hydraulics
- No external supply of compressed air is required
- Automatic daily interval function (Auto ink circulation)
- Integrated agitator

PRINT HEAD

- Flexible umbilical, length: 9.84 ft, optional: 19.68 ft or 32.80 ft
- Stainless steel cabinet
- Fully automatic nozzle and gutter seal “Sealtronic”
- Fully automatic drop charging, drop break off control
- Nozzle size from 60 µm to 70 µm
- Upside down - 360° operation
- Safety switch for print head locking
- Options: Head ventilation, 45° to 90° bent umbilical, various print head versions
- Automatic inkjet monitoring

FLUID RESERVOIRS

- Capacity of the ink and solvent tanks are 1 quart, refillable while printing
- Level gauge with fully automated monitoring
- Remaining prints are displayed

INKS

- Ink consumption: up to 120 million characters/qt. (matrix 5x5/nozzle 60 µm)
- Fast-drying solvents inks (<1sec)
- Variety of pigmented contrast inks (opaque inks)
- MEK-free inks
- Temperature-resistant inks (up to 1830°F)
- PVC inks (vinyl inks/transfer-resistant inks)
- UV-curable, halogen-free and aviation-approved inks
- Custom special inks
- Ink colors: black, white, yellow, blue, orange, silver-grey

WEIGHTS AND PROTECTION CLASS

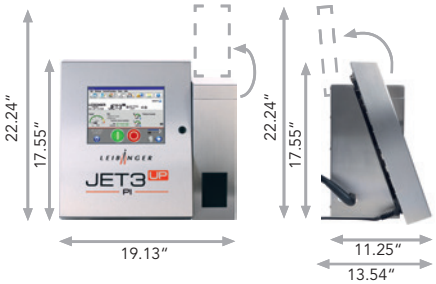
- Weight: print head 3.3 lbs, cabinet 45.2 lbs
- Protection class: IP 54 (option: IP 65)

SUPPLIES AND ENVIRONMENTAL CONDITIONS

- 100-240 V, 50-60 Hz, typical 20 VA
- Temperature range +41°F to +113°F
- Relative humidity max. 90%, non-condensing
- No external air pressure necessary

ACCESSORIES

- Product detector, shaft encoders, printer stand, print head bracket, alarm lamps etc.
- Software for remote control, multi-head control





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