

IQJET PRODUCT PRESENTATION COMPANION BOOKLET

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LEIBINGER
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PARTNERS
PROHIBITED**



IQ. PRINT®





Nozzle Seal System



- Leibinger printers provide a unique advantage with the use of a unique and innovative nozzle seal system.
- Conventional CIJ printers either do not have the capability to seal the fluid system or do so ineffectively.
- This problem inherent to conventional CIJ printers allows for the introduction of air and dust/debris into the system.
- Flushing and cleaning of the printhead and fluid lines due to dust/debris results in downtime and additional solvent consumption.
- Introducing air into the system dries out the system, causing blockages and additional solvent consumption during cleaning and viscosity management.
- As an intelligent coding and marking system, the IQJET solves these problems by the use of the moving nozzle seal system.
- Additionally, the IQJET features a 40% improvement to speed in the closing process compared to previous models.
- With the optional UPS system, this closing will occur automatically on a loss of power. This ensures the printer can be returned to service quickly and reliably after the event.





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Ink Mixing Tank



- The IQJET Ink Mixing Tank presents a unique and advanced method of viscosity control.
- In a conventional CIJ printer all ink that is fed to the printhead comes from the ink tank.
- This results in print quality being partially reliant on the viscosity in the ink tank. When it is too thick, solvent must be added to return it to the optimal range. When the ink is too thin, the printer must slowly return the viscosity by evaporation via the gutter or system leakage.
- When the ink is too thin, but the printer must be used immediately, the typical solution is to drain the ink and refill. This results in wasted time and consumables.
- This problem does not exist with the use of the ink mixing tank. With the IQJET intelligent coding and marking system, viscosity can be rapidly corrected without waste and costly delays.
- The Ink Mixing Tank has an agitator standard and in applications using a pigmented ink, an additional agitator in the ink tank is used.

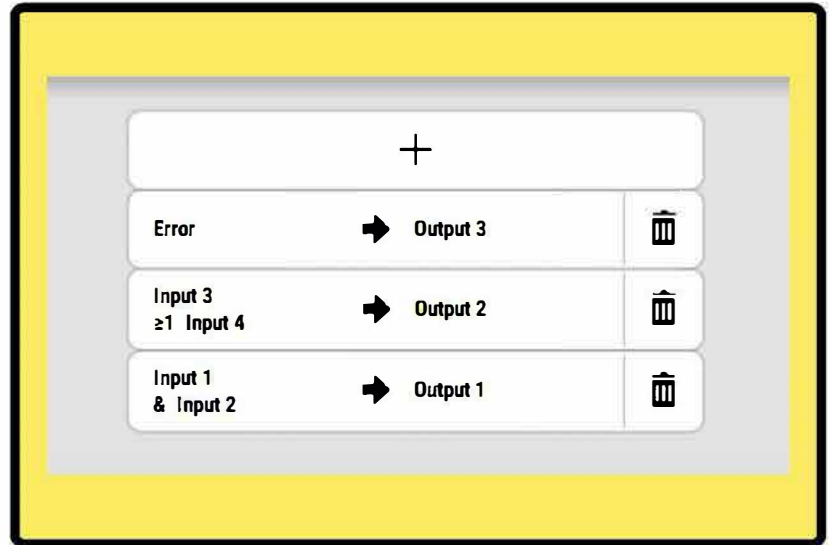
IQ. PRINT[®]



SMART.OS



Integrated PLC



- As part of the intelligent design of the IQJET, an on-board PLC feature exists to provide simple integration and functions to the end user.
- The logic AND/OR functions are customizable in the software alongside a variety of internal signals when designing logic functions.
- Example 1: When there is an error present on the printer, an output could be generated on output 3.
- Example 2: When either input 3 or input 4 are present, an output is generated on output 2.
- Example 3: When input 1 AND input 2 are present, an output is generated on output 1.
- By default all outputs are unassigned in order to provide greater flexibility. An example of this would be an alarm beacon.





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OPC UA



- **OPC UA stands for "Open Platform Communication Unified Architecture."**
- **It is managed by an organization, OPC Foundation, that has members from manufacturing, automation, and industrial sectors.**
- **OPC UA software is installed directly onto devices that are meant to communicate and work together to perform a function.**
- **An example of this would be an IQJET, a VFFS machine, and a sorter working together. Without OPC UA, an expert from each respective manufacturer has to come together to script the communications to make them integrate properly. After this lengthy and costly process the communications are typically not secured. This means when the VFFS machine sends the command "Externtext settext "Text 1" "012345" - that information is openly available to anyone who has the ability to intercept the signal.**
- **In an OPC UA environment, all data is encrypted and uses a common language for ease of communication. This facilitates integration and promotes network security.**

SMART.OS



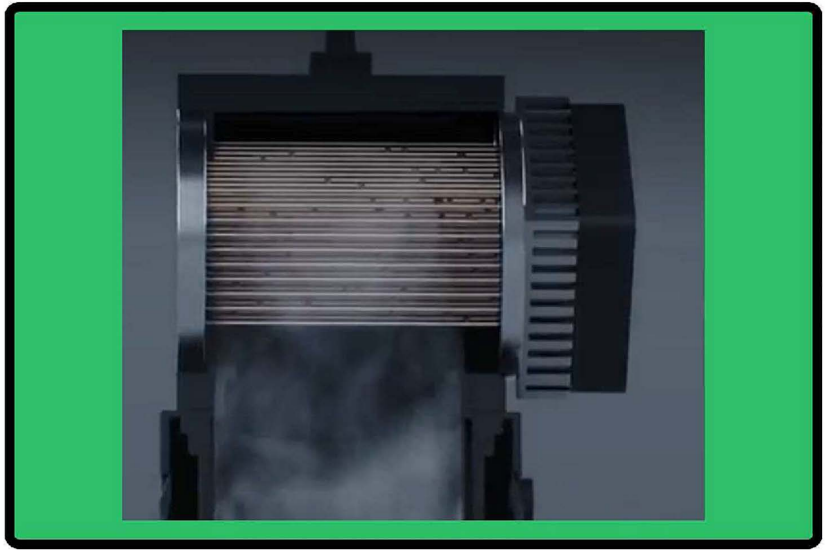
SMART. EFFICIENCY





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Solvent Reclamation



- The Ink Mixing Tank and Solvent Reclamation System are all part of the same component in the IQJET.
- On a conventional CIJ printer, the ink tank/reservoir is vented to allow any gasses that have entered the system via the gutter to escape. While this works to remove undesirable elements from the ink - it also has a side effect of drying the ink and causing additional solvent consumption.
- As an intelligent coding and marking system, the IQJET still vents any undesirable gasses out of the system - but, critically, it does not cause solvent consumption in this process. Evaporated solvent is captured and condensed by the solvent reclamation system and returned to the printer. This reduces solvent consumption which, in turn, lowers the cost of ownership for the user/customer.
- Another item of note is that this efficiency is commonly sold as an option in conventional CIJ printers. It is standard on the IQJET.
- Compared to a typical peltier system, this new design can be used with heavy pigmented inks.

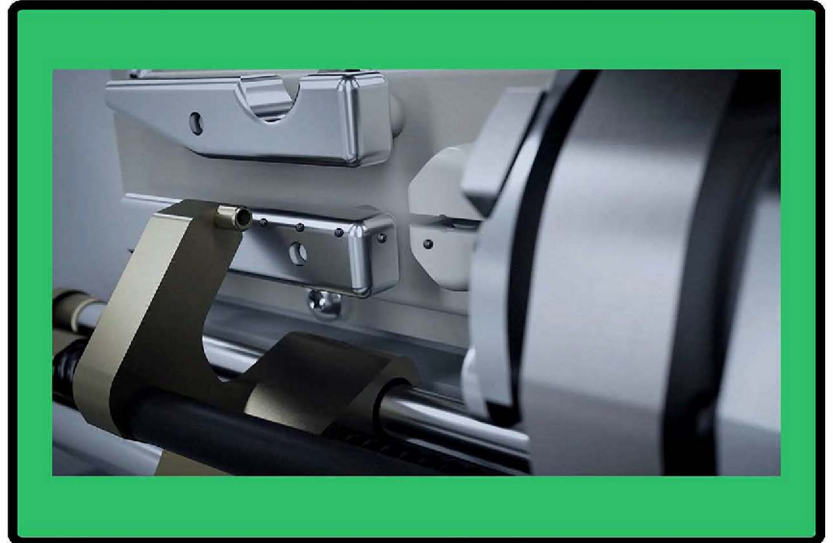
SMART.EFFICIENCY





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Eco-Mode



- Eco-Mode is an option in the software for customers seeking to further improve their system's efficiency.
- It causes the nozzle seal system to activate after periods of inactivity to conserve solvent consumption. When the nozzle is sealed, evaporation in the ink stream is halted.
- On a conventional CIJ printer, this system isn't feasible due to the fact that the introduction of air between the nozzle and gutter is the main method of maintaining viscosity



SMART.EFFICIENCY



SMART.CARE



Refresh Unit



- During a refresh cycle, the gutter will be extended and then emit pressurized solvent from the gutter to improve printhead performance. The gutter will move upwards while solvent is being emitted to allow for adequate coverage. After the solvent portion of the refresh cycle is completed, air will be discharged from the gutter to aid in drying the printhead.
- The Refresh Unit can be mounted on the side of the IQJET or on an alternative surface, if desired.
- The housing must be mounted at the appropriate angle. This is the default angle when mounted on the side of the IQJET. When mounted in an alternative location, an available bracket must be used to ensure this angle is achieved.
- Total elapsed time for one refresh cycle is approximately 5 minutes.
- One refresh cycle consumes less than 42 mL of solvent.





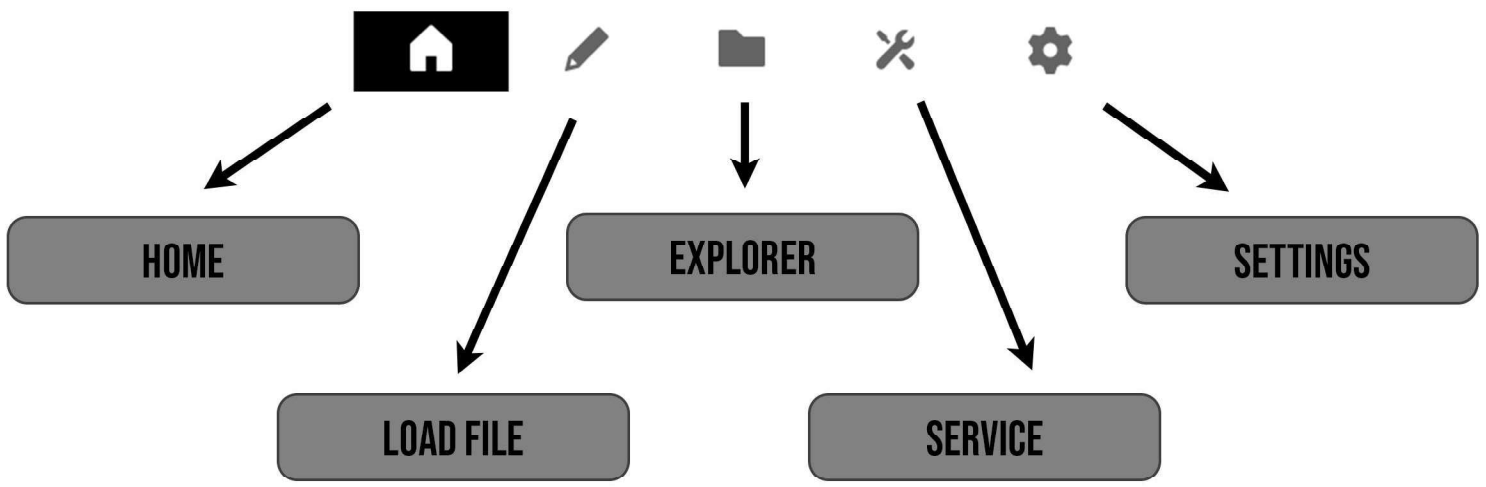
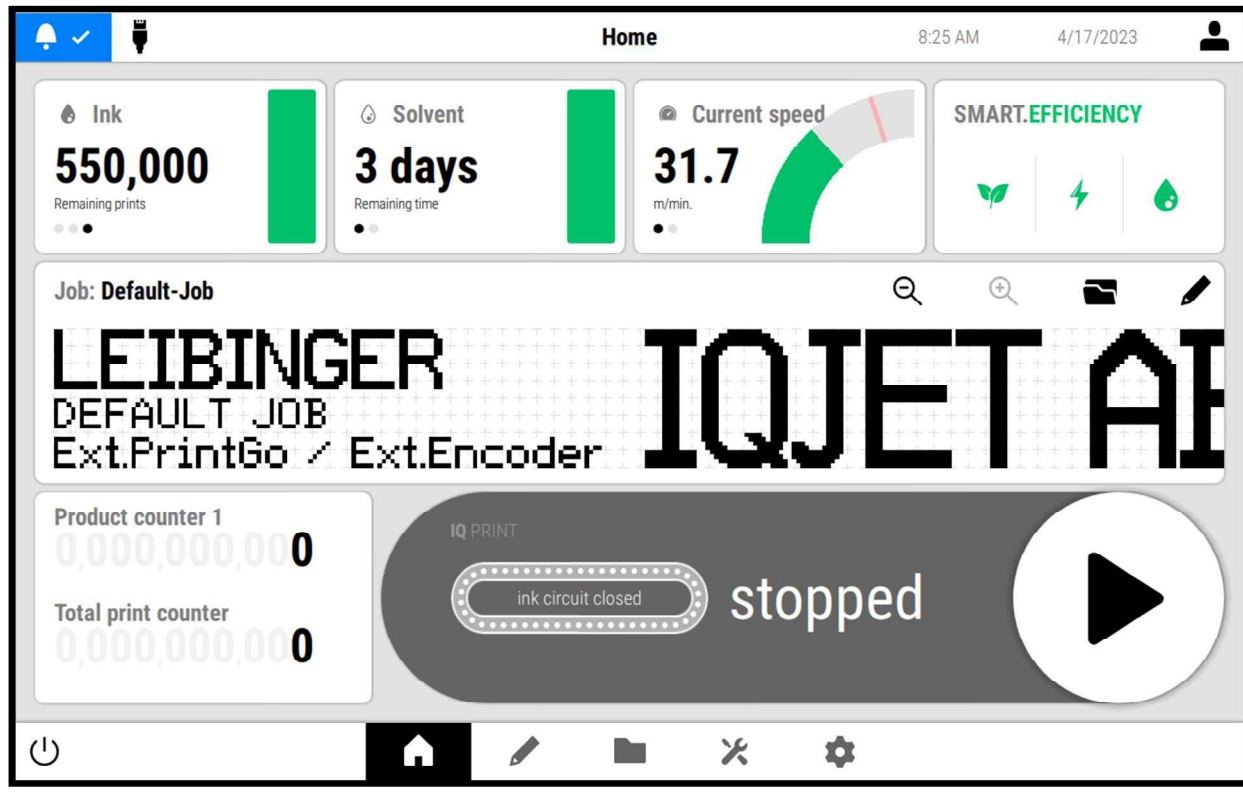
IQJET

Software Flow Chart



Version 1.0
April 20, 2023

Home Screen



Load File

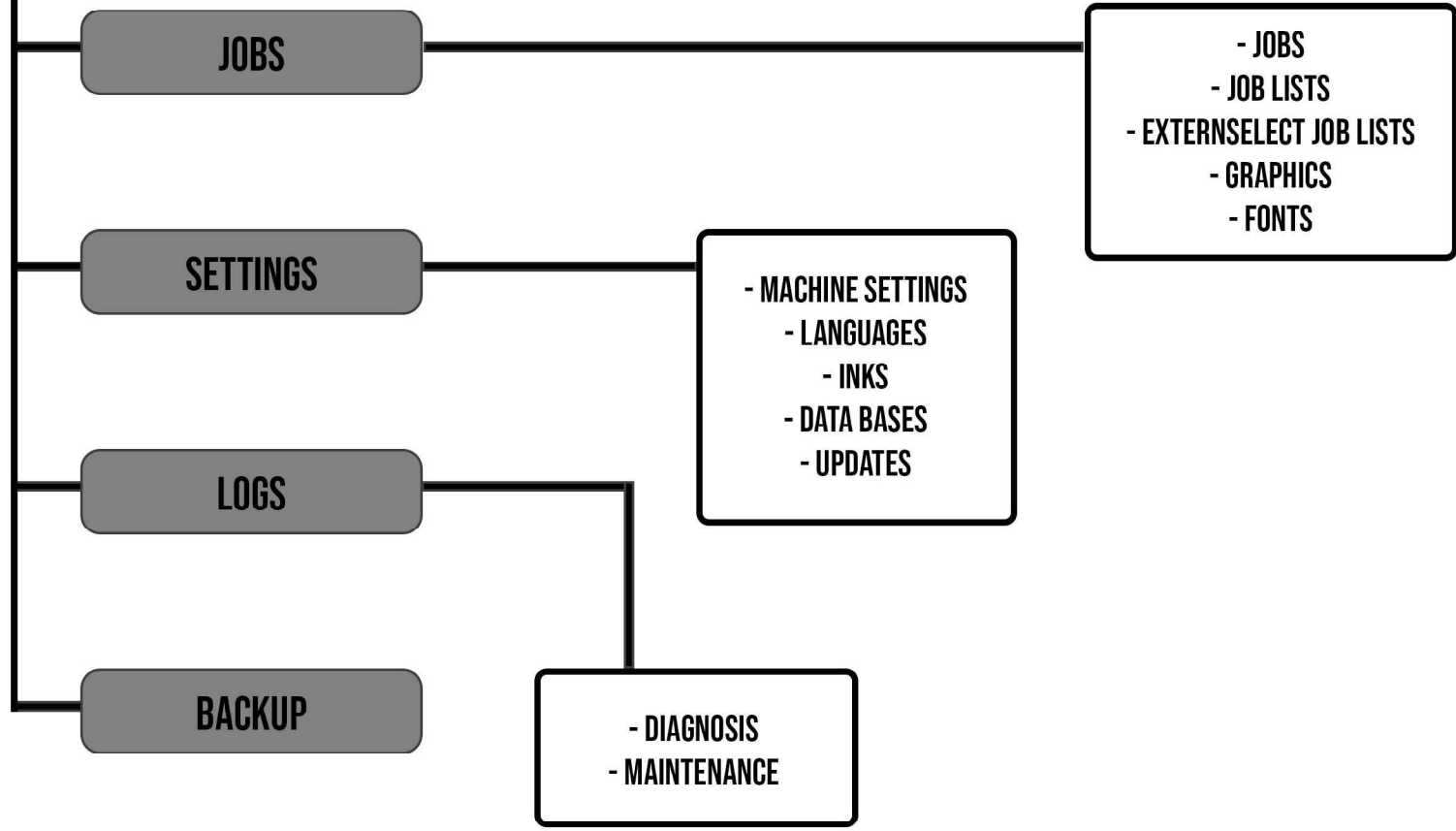


When the “+” button is touched, the editing mode opens, creating a new job, graphic, etc., and is accessed based on which submenu the user is browsing.

Explorer



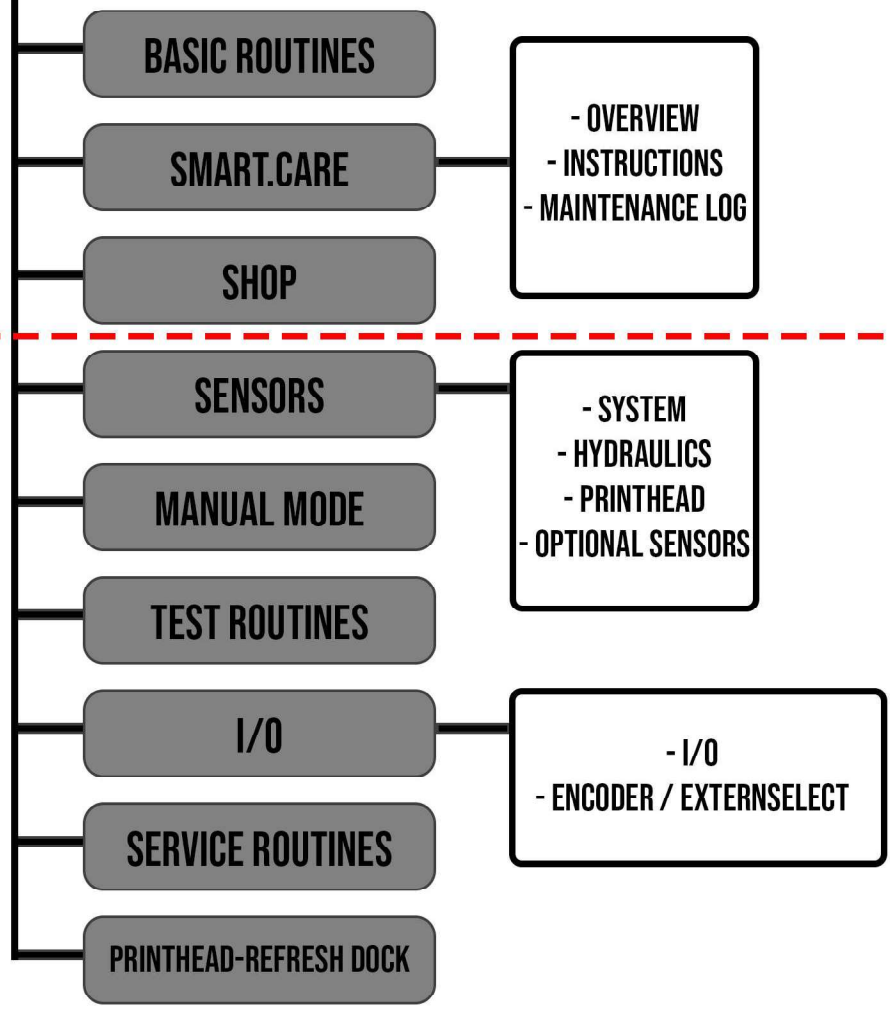
SUB-MENUS



Service

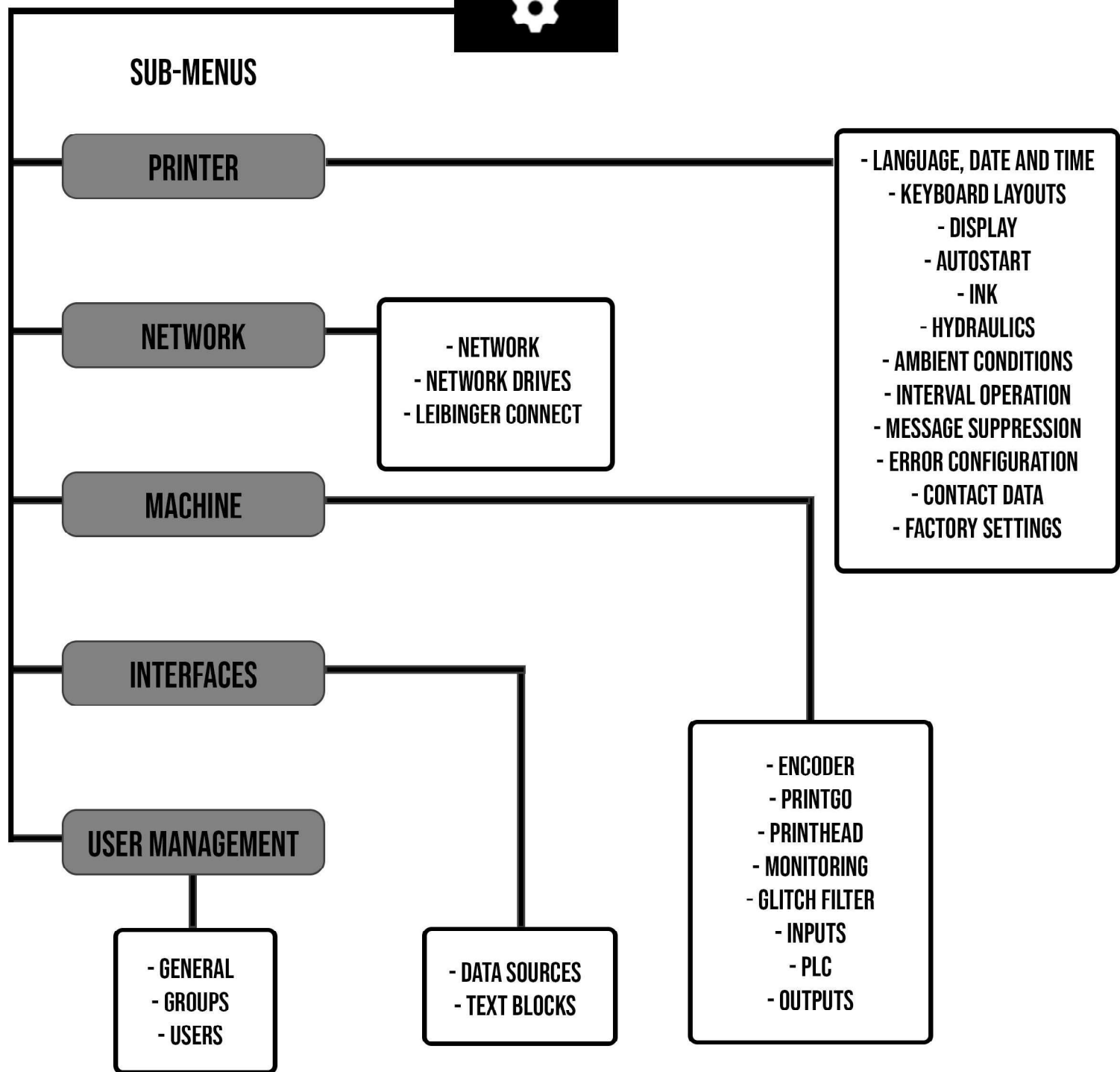


SUB-MENUS



**OPTIONS BELOW WILL NOT SHOW
UNLESS LOGGED IN AS A USER WITH
SERVICE ACCESS**

Settings



IQJET MAINTENANCE EXPLAINER

***5 Years/20,000 Hours
“Do It Yourself”**



There are a variety of wear processes that result in required maintenance on a conventional CIJ printer. As part of the intelligent design of the IQJET, the intelligent coding and marking system has been designed to address these factors as follows:

Wear Process	Intelligent Solution (IQJET)	Conventional CIJ Solution
Particles entering system	Nozzle seal system Sealed cartridge area	Allowed in system Repeated system flushes
Timeout modules/components	Not used	Replaced during preventative maintenance
Pump wear	Ink pump uses low duty cycle Use of pressure tank	Continuous operation of ink pump
Ink flushing and removal	No regular flushing	Regular extensive flushing
Ink composition	Unique and formulated for performance	Generic with undesirable elements
Air entering hydraulic system	Sealed	Introduced regularly
Seals/O-rings/Gaskets	Minimal use	Extensive use
Quality parts	Leibinger manufactured parts/components	Outsourced to varying levels of quality
Dampening/Flow restriction	Not needed	Designed into system
Pigmented inks	Dual stirrers	Modifications and maintenance required
Damage from ink flow	Ink flow minimized by use of pressure tank	Continuously cycling particles
Length and amount of tubing	Minimized	Additional lengths required for fluid travel
Solenoid wear	Consistent viscosity	Repetitive cycling during operation

* Expected maintenance interval impacted by ink usage and environment



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LEIBINGER CONNECT QUICK REFERENCE

Demo website:

<https://democonnect.leibinger-group.com>

Account login:

<https://connect.leibinger-group.com>

- **20 Printers per connect box when using a LAN.**
- **5 Printers per connect box when using 4G LTE wireless dongle.**
- **Remote support dependent on agreement with service partner.**
- **Configurable E-mail notifications.**
- **Usable by any device with a web browser.**

NOTES

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CONNECT





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Last Page



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