Ti-12

INKJET REVOLUTION: THE ONLY TIJ THAT NEVER CLOGGS!

Bad prints, purged ink spills and clogged half full cartridges. Notorious TIJ issues due to dried nozzles. Known solutions are to cap or interval purge when not printing. But taking the cartridge out and capping manually is user unfriendly and often forgotten. And constant purging makes a mess and also wastes ink. Enter our patented *Robocap™* system! Nozzle maintenance is fully automated. But now the cap and purge ink collector are part of the consumable instead of the printer! Meaning that they are renewed along with each cartridge exchange! This not only allows for the use of a truly hermetic soft silicone cap, but also that just one single purge is needed regardless of how long the printer has been idle. Which, on top will be clean as purging is done onto a disposable pad that is constantly renewed! The result: Always perfect first prints, clean operation and zero human interaction needed.

POLYTIJ: 200%+ HIGHER ADHESION THAN ANY OTHER TIJ INKJET

With open time no longer being a factor, *Kortho Ti-Series TIJ* allows the use of faster drying inks than any other TIJ. Without downsides nor compromises! This is why the Ti-Series is developed especially and exclusively for *POLYtij™* ink. Manufactured by Digital Ink Technologies in Australia, this ink uses polymer resins for adhesion instead of solvents for absorption. Giving it a 200%+ higher adhesion than any other TIJ ink, while instantly drying on even the most difficult non-porous substrates like glass, metals and plastics. Effectively offering the only TIJ ink with real CIJ performance, but at TIJ pricing, zero maintenance and complete worry-free operation!

SMART, OMNICOMPATIBLE AND 100% INDUSTRY 4.0 READY

Next to offering our own Kortho Control Center LMS software for free, Kortho also specializes in being omnicompatible with as much third party label and control software as possible. This makes you free to objectively choose the best software and control method for your application! Smart, tailored and error-free coding has never been so accessible. From standalone use to full Industry 4.0 cloud ERP integration: A Kortho printer makes any custom requirement easy to implement by adjusting itself to your coding need, and not the other way around!

SLIMLINE: SAVE UP TO 50% ON EQUIPMENT COSTS

Like with our software, also the use of our Printerface IoT controller is optional. Just install our free Kortho Control Center app on any PC, server or (mobile)device and control any number of printers from there! This makes the ratio between printers and controllers 100% flexible: From an Individual controller for each printer, to full factory control from one single terminal. The more centralized control, the more you save on controllers! We call this SLIMLINE™, which stands for Smart, Less Is More: Save up to 50% on unnecessary equipment by using the infrastructure that you already have!

INDUSTRY 4.0 IS NOW A TURN-KEY AVAILABLE COMMODITY!

SLIMLINE™

MADE IN HOLLAND

Kortho was founded in Amsterdam in 1926 and is still a Dutch family owned business today. Like all our printers the Ti-series is 100% made in The Netherlands

DISPOSABLE ROBOCAP™

Because the cap is frequently renewed we can use the official hermetic soft blue silicone. It's like putting the cartridge back in the clip when not printing. Only now the printer does it for you!

ENDLESS OPEN-TIME

As the cartridge is sealed hermetically when not printing open-time is no longer a factor. Even after months of not printing and with the printer depowered the first print will always be perfect.
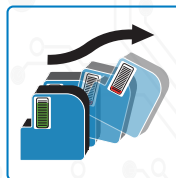
POLYtij : CIJ PERFORMANCE

POLYtij™ Ink: Brings true CIJ non-porous performance to Thermal Inkjet. Offering an instant product drying time and a 90+ rub resistance adhesion on metals, glass and even plastics.
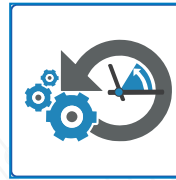
AUTO CARTRIDGE RETRACT

The empty cartridge is offered for exchange away from the print position. Offering a safe and easy exchange clear of the products and the production line.

MAINTENANCE FREE

By constantly renewing cartridge and nozzle maintenance station the Ti-series needs no human interaction and no maintenance.

SAVE PRINTER IMAGE

Save current image of any connected printer profile including all labels and settings. This allows for the quick and easy recovery of previously used printer settings.
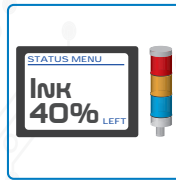
SAVE ON CONTROLLERS

Built according to **SLIMLINE**™ Smart, Less Is More philosophy. Save costs on controllers by operating multiple printers from one single terminal. Maximizing central control benefits.

LED-STRIP SIGNALING

Printer integrated dual RGB LED strips and full color status screen facilitates the use without (nearby) HMI, but also avoids the need for additional signaling equipment.

KORTHO CONTROL CENTER GUI

Operated with Kortho Control Center (KCC) software. Free and very complete platform designed to make Industry 4.0 coding easy and quick to implement. See separate KCC leaflet for details.
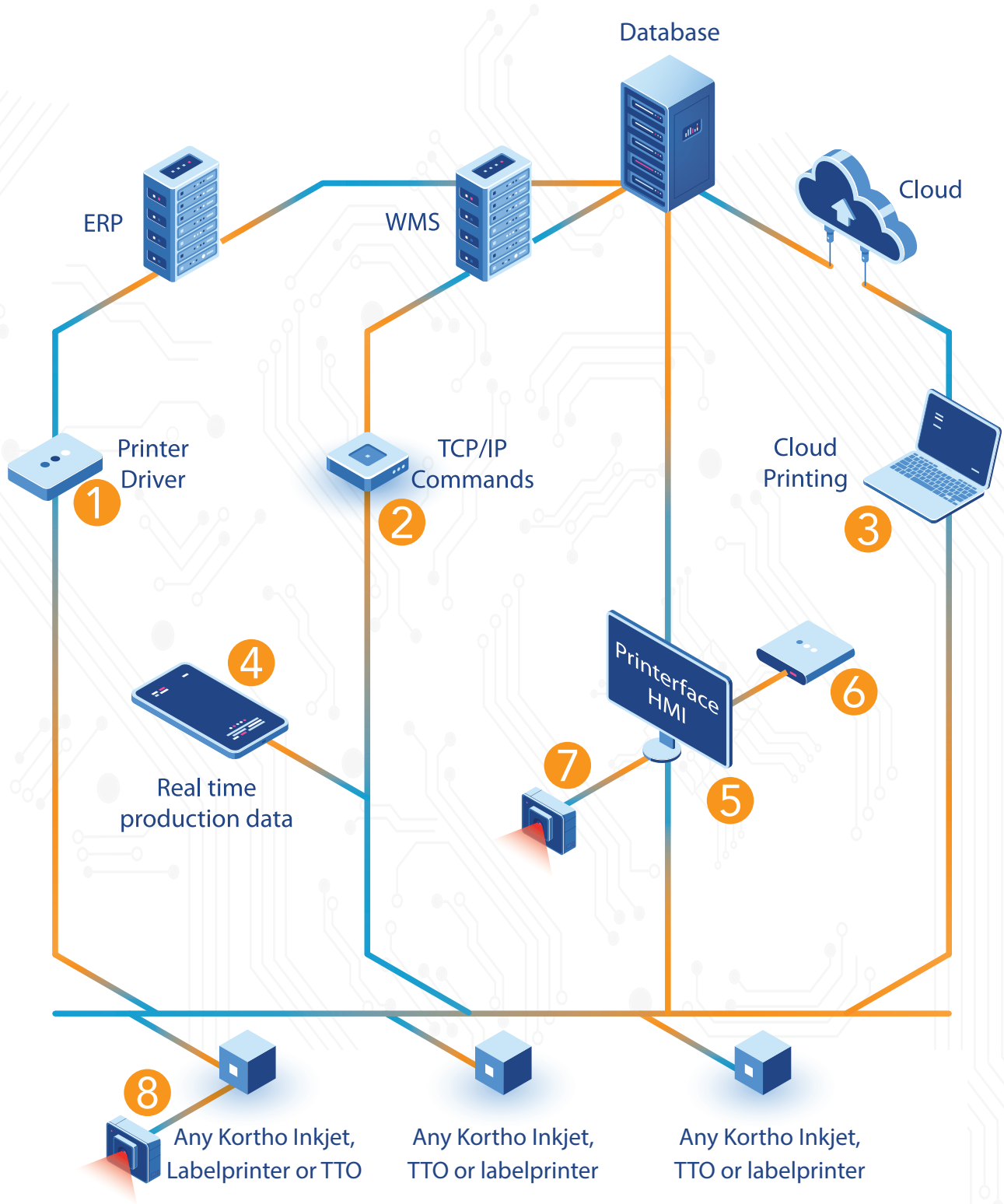
100% INDUSTRY 4.0 READY

Open platform and Windows native OS. Especially designed for extended communication options with third party software. Including Windows generic network driver and 350+ commands protocol.

REMOTE DIAGNOSTICS

Full printer diagnostics including real-time scope traces of the physical status, position, speed and trajectory of all internal wearing and moving parts.

Database

ERP

WMS

Cloud

Printer Driver **1**

TCP/IP Commands **2**

Cloud Printing **3**

4

Printerface HMI

6

Real time production data

7

5

8

Any Kortho Inkjet, Labelprinter or TTO

Any Kortho Inkjet, TTO or labelprinter

Any Kortho Inkjet, TTO or labelprinter

1 Print directly from an ERP or WMS* by sending your own labels through the Windows printer driver.

4 Monitor production data and statistics from the printer. Use the free variable Machine ID's to see your real time production status.

7 Use a barcode scanner to select your label template from an LMS with the correct product information from a database and update the variable data.

2 Select labels, update label data or choose any of 350+ TCP/IP commands to communicate to the printer.

5 Let operators control the printer by using Kortho Control Center on the Printerface or an (previously purchased) third party HMI.

8 Connect a barcode scanner directly to the printer to select the correct label from the label library by scanning a barcode from a production sheet.

3 Print directly from the cloud or use *LMS to collect your data from the cloud to print real time information.

6 Connect PLC's, checkweighers, metal detectors or other in-line equipment to the Printerface and use LMS to read or send data.

Enterprise Resource Planning (ERP) / Warehouse Management Software (WMS) / Label Management Software (LMS)

Ti-12

Printing	Max. print area vertical	12.7 mm
	Max. print area horizontal	500 mm
	Max. resolution vertical	300 DPI
	Max. resolution horizontal	300 DPI
	Max. print speed	60 m/min @300DPI
Physical	Printunit dimensions (LxWxH)	317 x 214 x 140 mm
	Printunit weight	5 kg
	Print directions	Omnidirectional within 90 degrees angle from fully vertical to top down
	Connectors	Configurable I/O port - Ethernet - USB - Power - Encoder - Print - Uncapsignal
	Power supply	External 130V DC
	Air supply	None needed
	Status signaling	Integrated full color status screen and dual RGB LED strip beacons - I/O
	SLIMLIME concept	No controller needed, operation from any Windows (10+) system
	Material	Stainless steel and aluminum
Consumables	Thermal inkjet technology	Hewlett Packard 45si (19pL)
	Thermal inks technology	Digital Ink Technologies - POLYTIJ
	Cartridge content	35 ml effective printout
	Ink adhesion performance	90+ rub resistance on glass, metals and plastics
	Drying time on product	1 second
	Maximum open time	Endless / equal to ink shelf life (due to Robocap system)
	Temp. window of operation	1°C to 45°C - non condensing
	Ink technology	Polymeric
HMI	Kortho HMI/GUI	See separate KCC leaflet for label design and (printer) control functions
	Third party HMI/GUI	Any Windows based LMS - Nicelabel, Bartender or other
	ERP direct	Direct printer control through ERP output files – SAP, Navision or other
Coms	Wired communication	Ethernet - I/O - USB
	Wireless communication	Bluetooth - RFID
	Supported protocols	Escape protocol - Communication Protocol with 350+ commands
	Driver	Generic Windows printer driver
Accessoiries	Kortho Printerface IoT	Optional: Kortho Branded Windows Industrial tablet + bracket
	Ethernet cable	Industrial M12D network connector
	Encoder	Speed encoder - can be mounted on production line
	Dual photocell	One for uncap/printer ready signal – Other for print signal
	Support bracket	Omnidirectional bracket included
	Custom bracket	Custom bracket sizes available on request