KGK JET India

Subsidiary of Kishu Giken Kogyo, Japan

KGK JET CCS3000L

Small Character Industrial Ink Jet Printer

| compact printhead | A 1 to 10mm | Touch Panel | 1 Printhead Only | INK For Pigment Ink | INK For Edible Ink |

Designed for high speed

Fluorine protected nozzle

Powered by SMS
(Service Management System)

5.7" Touch pannel

High Speed & Compact printhead

Print-head with lense to see drop formation

KGK JET CCS3000L

High Speed Industrial Inkjet Printers for Small Character Printing.

Advanced functionalities added with intuitive user interface, The CCS3000L has a design that is extremely space-efficient.
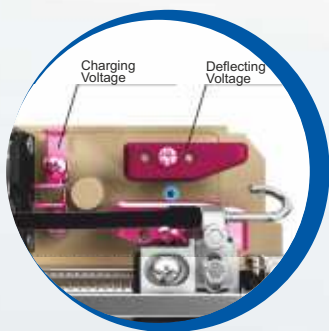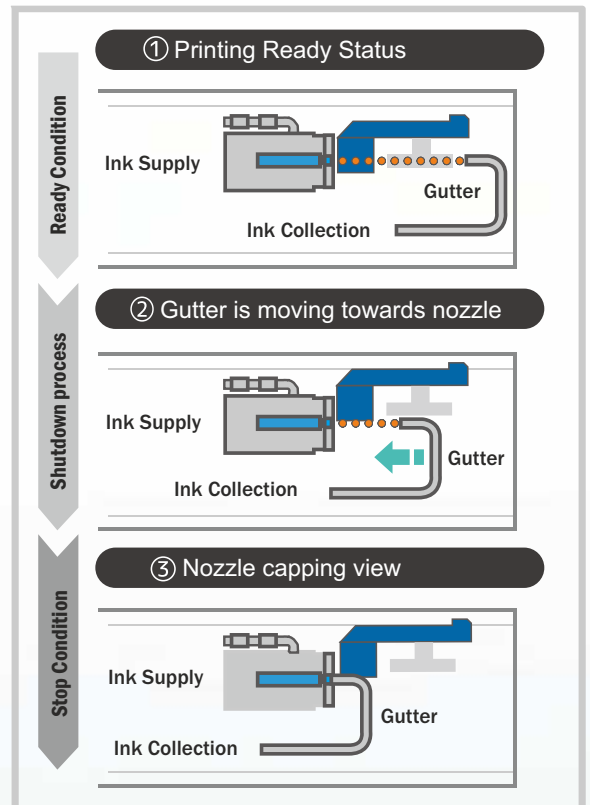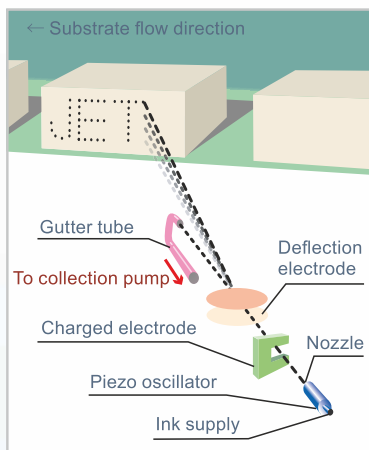
New generation P-type head for high speed and reliable production.
An excellent match for beverages, pharmaceuticals, food, personal care and extrusion industries.

Equipped with Fluorine coated nozzle, to protect nozzle against contamination.

New Generation P-Type Print Head
for High Speed Printing
available in 40μm / 50μm / 60μm nozzle

① Printing Ready Status

Ready Condition

Ink Supply

Gutter

Ink Collection

② Gutter is moving towards nozzle

Shutdown process

Ink Supply

Gutter

Ink Collection

③ Nozzle capping view

Stop Condition

Ink Supply

Gutter

Ink Collection

← Substrate flow direction

JET

Gutter tube

To collection pump

Charged electrode

Piezo oscillator

Ink supply

Deflection electrode

Nozzle

Working principle of Continuous Charging System

- The ink is continuously passed through nozzle at pressure and crystal oscillator creates ink droplets at fixed interval.
- The precise electrode ensure that every ink droplet is charged negatively.
- These negatively charged ink droplets are deflected by high voltage electrode to exit from print head.
- Charged ink droplet falls on moving substrate to form the character of print.
- The uncharged ink droplet returns to the ink tank through gutter tube.

Charging Voltage

Deflecting Voltage

Automatic Nozzle Capping™ Technology

KGK Jet Patented Nozzle Capping Technology automatically closes the nozzle with gutter, if the printer is not in use. This safeguards ink from exposure to external environments and contamination, leading to significant savings for customers.

Simple, Efficient, Stable, Energy Saving and Environment Friendly

Scheduler: Auto Start & Stop

The Scheduler feature of KGK Jet machine enables you to start using the machine instantly even after a prolonged shutdown.
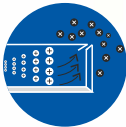
This feature ensures that ink is circulated at scheduled time and any potential blockage is avoided. Enabling customers to use the machine without having to wait for service engineer visit.

Stable coding even in humid and dusty environment

New print-head design (P-type) for high-speed & legible coding. Also equipped with Fluorine coated nozzle, which protect print-head from contamination.

Positive air pressure inside the print-head, keeps dust and humidity out, resulting in no contamination of head and ink. Operators need not clean print-head before every start & stop.

Superior printing function

A single nozzle has a maximum longitudinal marginal space of 26 dots which is flexible to meet special information compilation requirements. Customers can freely edit 1-4 lines of text, serial number, linear bar code QR/2D barcode as well as graphics & logo.

Extended language support & Weighing machine connectivity

Language support for both software & hardware including English, Arabic, Chinese, Korean, Italian, German, Spanish, Iranian & Turkish.
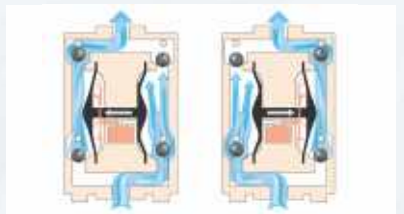
Simple & convenient to integrate with on-line or off-line check-weigher machine of any brand through RS-232, TCP/IP(LAN) with the support of weighing machine suppliers.

Unique diaphragm pump advantage

KGK Jet's ink delivery system is powered by a diaphragm pump. Diaphragm pumps are rated at 97% efficiency and are considered to be more trustworthy than geared pumps.

These pumps don't generate heat through friction and have a stable ink composition for KGK Jet machines. Furthermore, minimal evaporation of ink and solvent leads to more savings for customers.

In-house ink development & production

KGK Jet has developed its own ink in response to the various needs of the market In addition to regular inks, we manufacture Food Grade ink, UV ink/Stealth ink also.

Tailor-Made intelligent data communication

Easy integration with customer ERP system or database. Linked through customised special integration software which provide various access right, report generation as well as mailing report to concern team for continuous & batch production.

This in turn allows faster product setup and changeover times, and eliminates recalls and reworking caused by operator error.

Service Management System (SMS)
In-built value-added feature which triggers for a service request
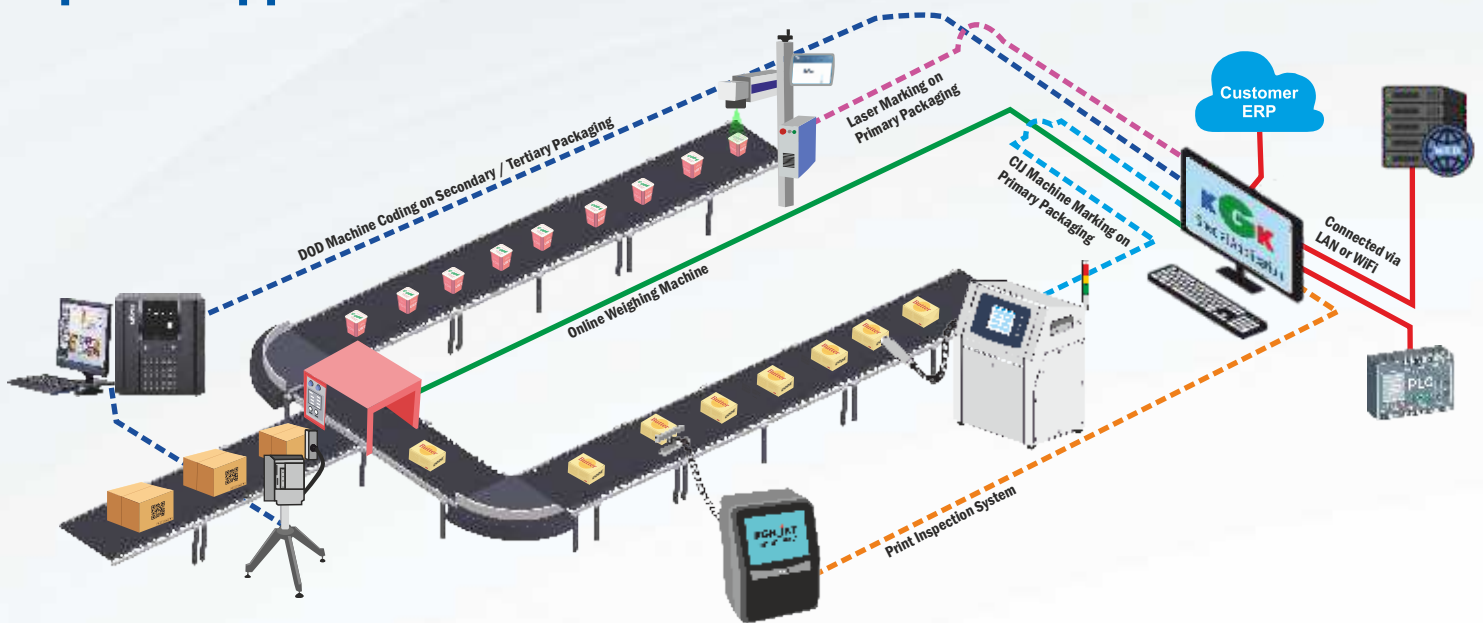
SMS is in-built diagnostic tool an essential component of KGK Jet's dedication to machine reliability, and it's an added value to the CIJ machine, with timely preventive maintenance, uptime, and low running costs. Service Management System (SMS) is designed to provide output that is uninterruptible and of the highest quality.

Key Benefits

- Preventive Maintenance for maximum uptime.
- Pro-active assistance.
- Remote assistance for operators'.
- Eliminates operators' errors.
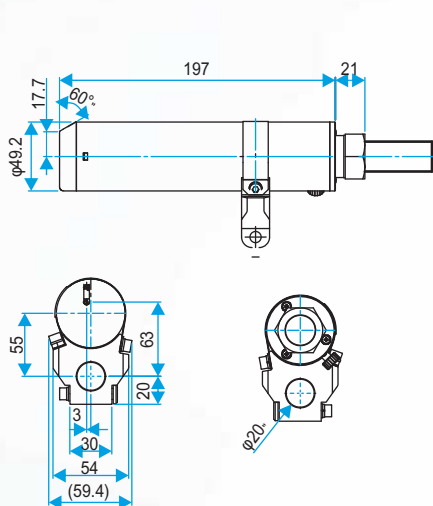- Alerts for consumables and spare part replacements.

Special Applications
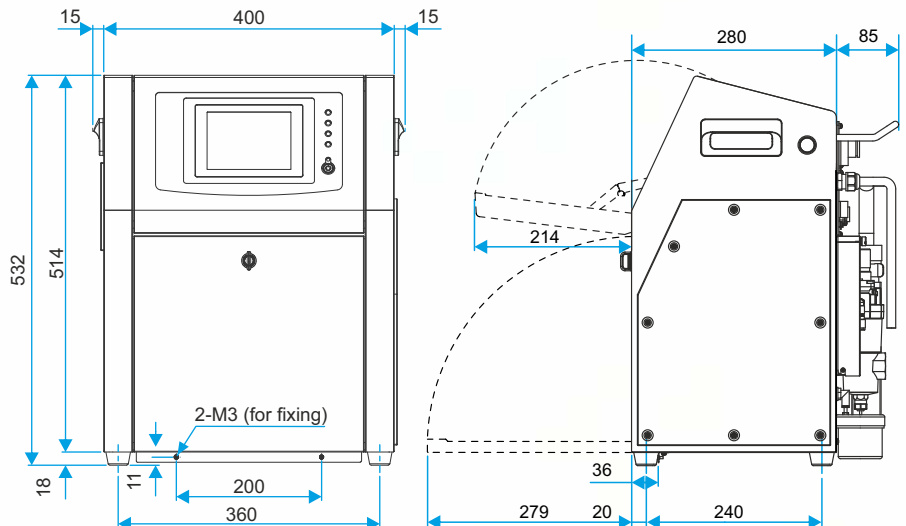### Tailor-made solutions to increase operational efficiency and reduce production errors.

We offer wide range of customised special application software to integrate coding solution for primary, secondary & tertiary packaging. ERP system data access for coding with tailor-made solutions to increase operational efficiency and reduce production errors. E.g. marking variable QR code on packaging by accessing live data from customer ERP system.

Dimensional Drawing (mm)

Print Head

Controller

Specifications

Item	Specification
Printing method	Continuous Ink Jet (Continuous Charging System)
Corresponding inks	Dye inks and pigment inks
Dustproof waterproof	IP54
RoHS	Compliant
Screen size	5.7" Colour LCD / touch panel
Nozzle option	40μm / 50μm / 60μm
Print height	0.8~5mm (40-μm nozzle), 1~10mm (50-μm nozzle), 2~10mm (60-μm nozzle)
Maximum printing speed: number of characters/second(5x5 dot font with spacing of 1)	1780~3200 (depends on nozzle and inks)
Character type	Alphabet (upper case/lower case), numbers, symbols, Japanese hiragana, katakana, kanji (JIS class 1and 2), user mode characters
Number of printed lines number dot (vertical x horizontal)	[1 to 4 Lines] 5×5,5×N, [1 to 3 Lines] 7×5,7×8,7×N, [1 to 2 Lines] 9×7,9×9,10×8,12×10 [1 Lines] 16×12,16×16,24×18,24×24
Number of message characters to register	Maximum of 4096 characters
Number of message register	Maximum of 999 message
Date Time (expiry date)	Christian calendar year, traditional Japanese calender year, year/month/day, day of the week, Printing functiontime (12 / 24H format), Julian date, serial week number in a year, early/middle/late period of the month (variable period setting), AM / PM, shift code, character assignment function (to assign year, month, day, hour, minute, second, day of the week) to a maximum number of 4 to 15 digits of other characters.
Numbering function	Up to 10 digits, any initial value setting, up / down, carry of digit (can be set to 1 count in the work number from 1 to 9999), zero suppression function (replacing the zero of the high-order digits with space, or to eliminate it),numbering character assignment function (can be assigned to non-numeric characters), advance setting numbers (2 to 36 decimal) can be divided (insert any of the characters between the numbers).
Distance printing function	Up to 10 digits, can be divided (insert any of the characters between the numbers).
Bar code printing function	ITF, Code39, NW-7, JAN, Code128
2D code printing function	QR Code, Data Matrix
Japanese kana/kanji conversion function	Yes
Connection with external devices	I/O,Signal Light, RS-232C, LAN, Encoder, UPS, USB memory
Data entry	Touch Panel, RS-232C Communication, Ethernet
Communications	RS-232C 1CH maximum 115,200bps, Ethernet
Print-head cable length	Standard 3.5m length (also available in 6m length)
Multiple head control	A maximum of 16 machines (slave) control is possible with one main (master). [Controllable function] start / stop, power OFF, system clock setting, message selection, printing content editing, numbering current value setting].
Dry air source	Applicable tube outer diameter ø6mm or 8mm Air source pressure: 0.8Mpa or less (Regulator unit included) Air flow rate: less than 10L / Min
Area required for Installation (width x depth x height)	Cabinet: 400W x 330D x 535H (excluding projection) Head: ø49.2mmx197mm
Operating environment (temperature, humidity)	0-40°C (it changes with ink types), 10-85% RH (with no condensation)
Power supply	AC100-240V, 50/60Hz, 80W Single Phase
Weight	25kg
Grounding	Class D

※ CCS3000L

Optional Accessories

Photo sensor	Reflecting type / transmission type, cable length : 1 meter min. to 5 m max./Contrast sensor/Fiber optic sensor/Fork Sensor
Encoder set	5000 or 10000 ppr, cable length : 1 m min. to 5 m max.
Stand	Printer head stand, table top controller stand
Communication cable	RS232 cross cable, cable Length : 1 m min. to 15 m max.
Push button switch	Connectable to the photo sensor connector and usable for manual character verification
Alarm status	3 light alarm beacon

KGK Jet reserve the right to amend design or specifications without notice.