

Automated Pre-Analytical Traceability Solution

Phlebotomy Tube Preparation System GNT9 Series

GNT9

GNT9-KBU (Kit Boxing Unit)

GNT9-TDU (Tray Dispensing Unit)



GNT9 Series

GNT9 | GNT9-KBU | GNT9-TDU

The GNT9 Series is a blood collection automation solution that automatically attaches and provides tubes with labels attached, extra labels, and patient identification labels.



Option2

GNT9-KBU (Kit Boxing Unit)

KIOSK/Stand Alone Type

- Patient receiving function using KIOSK
- Simultaneous discharge of KIOSK and Conveyor Kit
- Sealed Kit / Open top Kit



Sealed Kit



Open Top Kit

Option1

GNT9

Table Type

- Transfer TRAY to each sampling table using conveyor
- Automatic conveyor sterilization system
- Prioritized emergency patient tray supply system



GNT9 Series can be installed with various modules and layouts according to the environment of the blood collection room in the hospital

- Automated barcode labeling
- Prevention of human errors due to manual operation
- Efficient blood collection process

Option3

GNT9-TDU (Tray Dispensing Unit)

Tray Dual Dispensing Type

- TRAY dispensed in both directions using TDU
- Secure blood collection space using compact extra label printer

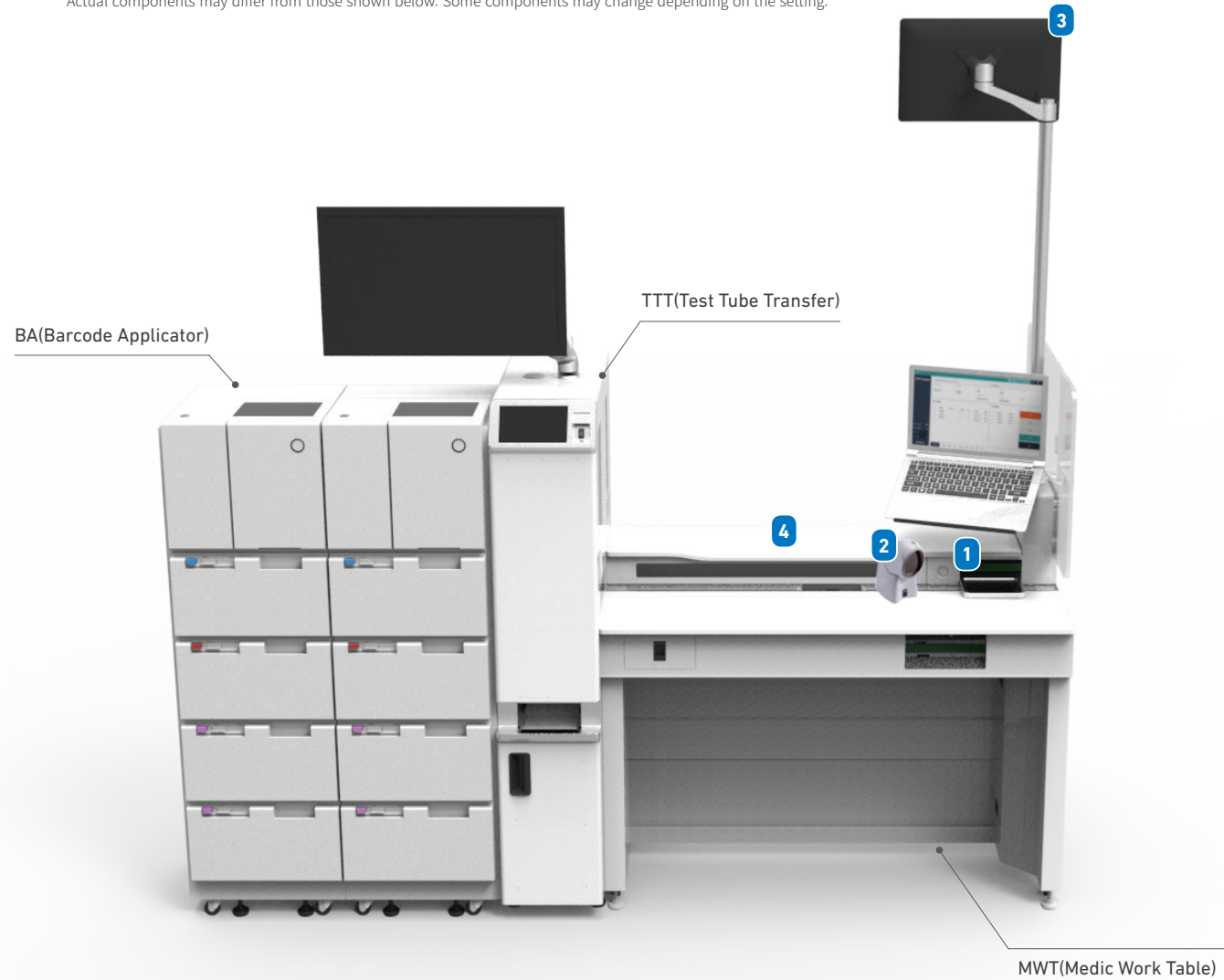


GNT9 Series

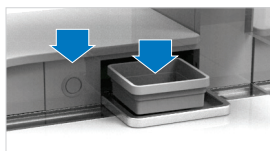
GNT9 | GNT9-KBU | GNT9-TDU

GNT9 is a table-type blood collection automation device that automatically provides tube with label attached, extra label, and patient identification label and transports TRAY to each blood collection table using conveyor.

* Actual components may differ from those shown below. Some components may change depending on the setting.



GNT9 Process



1. Press Call button, A tray containing a tube with a specimen label attached, a specimen label, and a patient identification label is sent to the MWT tray outlet.

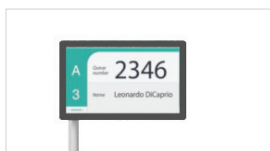


2. Read the printed patient identification label with the Barcode scanner.



4. After the patient's receipt is recognized by the barcode scanner, proceed with the blood collection.

3. The alarm sounds in the QND and calls the patient.



BA(Barcode Applicator)

Attaches a label to a tube, and transfers the labeled tube to TTT. When loading tubes, the inlets that are not in operation can be opened to load tubes without stopping the machine.

Automatic labeling system

The top label printer prints the patient information label and automatically attaches it to the tube.

Easy tube supply

It accommodates large volumes of tubes into the Inlet easily and quickly without the need to align the tubes.

*Up to 100 tubes can be supplied per Inlet.

Expandable module

BA modules can be expanded to suit the environment of the blood collection room

* Standard BA consists of two-column configuration, with up to four columns available for further expansion.



TTT(Test Tube Transfer)

Print out the patient information label and transport it to the MWT in a tray with the tube delivered from the BA.

LCD UI for easy status check

The LCD screen allows the user to check the status of the product. (Operating status, alarms, errors, and troubleshooting)

Emergency Patient Priority Response

In case of emergency, priority tray is given to emergency patients.

All-in-one System

- Tube with a specimen label attached
 - Specimen label
 - Patient identification label





Awarded 'BEST OF BEST' by
Ergonomics Society of Korea for 2016

Grand Prix
Best of Best
Best of Best

Genesis EQ900 / HYUNDAI
GNT9 MWT / ENERGIUM
Easy TV / LG Electronics

User-oriented ergonomic design

MWT(Medic Work Table)

Designed through extensive ergonomic study, the MWT for blood collection table provides a stable and comfortable environment by preventing the muscle strain caused by repetitive motion over extended period of time.

※ Designed based on data information acquired from phlebotomists in real life working environment.

Easy & Convenient Software Program

The phlebotomist can use the software program that can interoperate with the Hospital Information System (LIS, OCS, EMR) to perform patient call, blood sampling, patient management, statistics management.



-Test Items
-Blood Volume By Period



-Time Statistics by Patients
-Blood Collection History



-Number of Patients by Phlebotomist
-Tube usage per Inlet



Label attachment position detection system

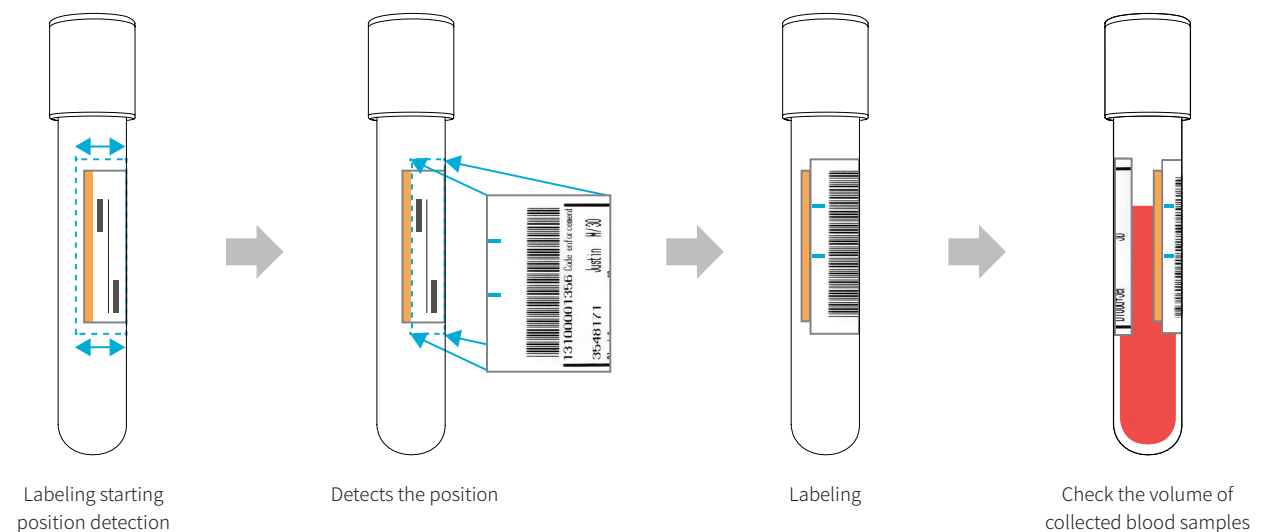
Label attachment position detection system is function that detects the position of the original label before labeling, the clear window is ensured, allowing phlebotomists to check the volume of collected blood samples.

Transport via conveyor
Trays with tubes and labels are transported to each MWT, and empty trays and collected tubes are transported to storage.

Automatic supply of patient tubes and labels

Press Call button from the MWT to dispense the waiting patient tray.

1. Completed blood collection tube insertion
2. Tray ejection with tube and label
3. Empty tray return



GNT9 Series

GNT9 | **GNT9-KBU** | GNT9-TDU

KBU (Kit Boxing Unit) is a variant model of KIOSK / Stand Alone Type, which provides tubes packed with specimen labels and extra labels in a kit. The patient can receive the kit by scanning the patient ID card on the KIOSK or by entering patient number.

* Actual components may differ from those shown below. Some components may change depending on the setting.



▪ **Complete Modular Configuration**
Expandable module: BA modules can be expanded to suit the environment of the blood collection room.
* Standard BA consists of two-column configuration, with up to four columns available for further expansion.

▪ GNT9-KBU Process

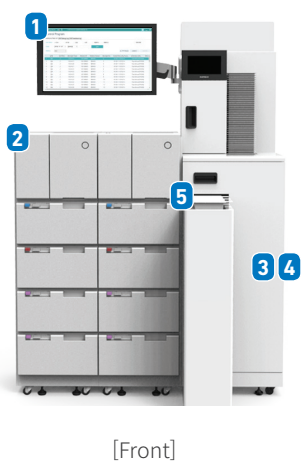
At the time of patient reception (KIOSK kit discharge)



- 1 The patient will scan the patient ID card or order form on the KIOSK or enter the patient number.
- 2 Label with patient information printed on is transported from the BA to the KBU.
- 3 Kit with tube and Extra Label is prepared.
- 4 Patient information is printed on to kit cover and then it is seal packaged.
- 5 The patient moves to the blood collection room with the kit dispensed by the KIOSK tray outlet.

- 1 The phlebotomist uses the Software Program to receive patients.
- 2 Label with patient information printed on is transported from the BA to the KBU.
- 3 Kit with tube and Extra Label is prepared.
- 4 Patient information is printed on to kit cover and then it is seal packaged.
- 5 The phlebotomist delivers the kit from the Tray Conveyor Outlet to the patient.

When received by phlebotomist (CONVEYOR kit discharge)



KIOSK

Provide a step-by-step screen to allow the patient to receive a kit.

▪ Reception with patient ID card / order form

If the barcode identifies the patient ID card, reception is quick without having to enter additional information.

▪ Reception using patient number

If there is no patient ID card, touch the LCD screen and enter the patient number.

*The actual screen may vary in different hospitals.



KBU(Kit Boxing Unit)

KBU provides collection kit containing labelled tubes, extra labels, and patient confirmation label.

▪ Kit discharge through conveyor

At the same time as the patient is accepted through the KIOSK, the phlebotomist can discharge the kit from the conveyor via a separate software program. In addition, multiple kits can be ejected quickly when the conveyor is extended.

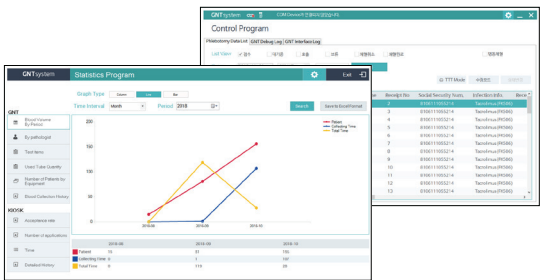
Patients can utilize KIOSK type to get required tubes and extra labels in a kit (sealed or non-sealed)



Sealed Kit



Open top Kit



▪ Task-Optimized Software Program

The phlebotomist can use the software program of the built-in PC to perform blood sampling, patient management, and statistical management.



- Test Items
- Blood Volume By Period



- Time Statistics by Patients
- Blood Collection History



- Number of Patients by Phlebotomist
- Tube usage per Inlet

▪ UI for easy status check

The LCD screen allows the user to check the status of the product. (Operating status, alarms, errors, and troubleshooting)

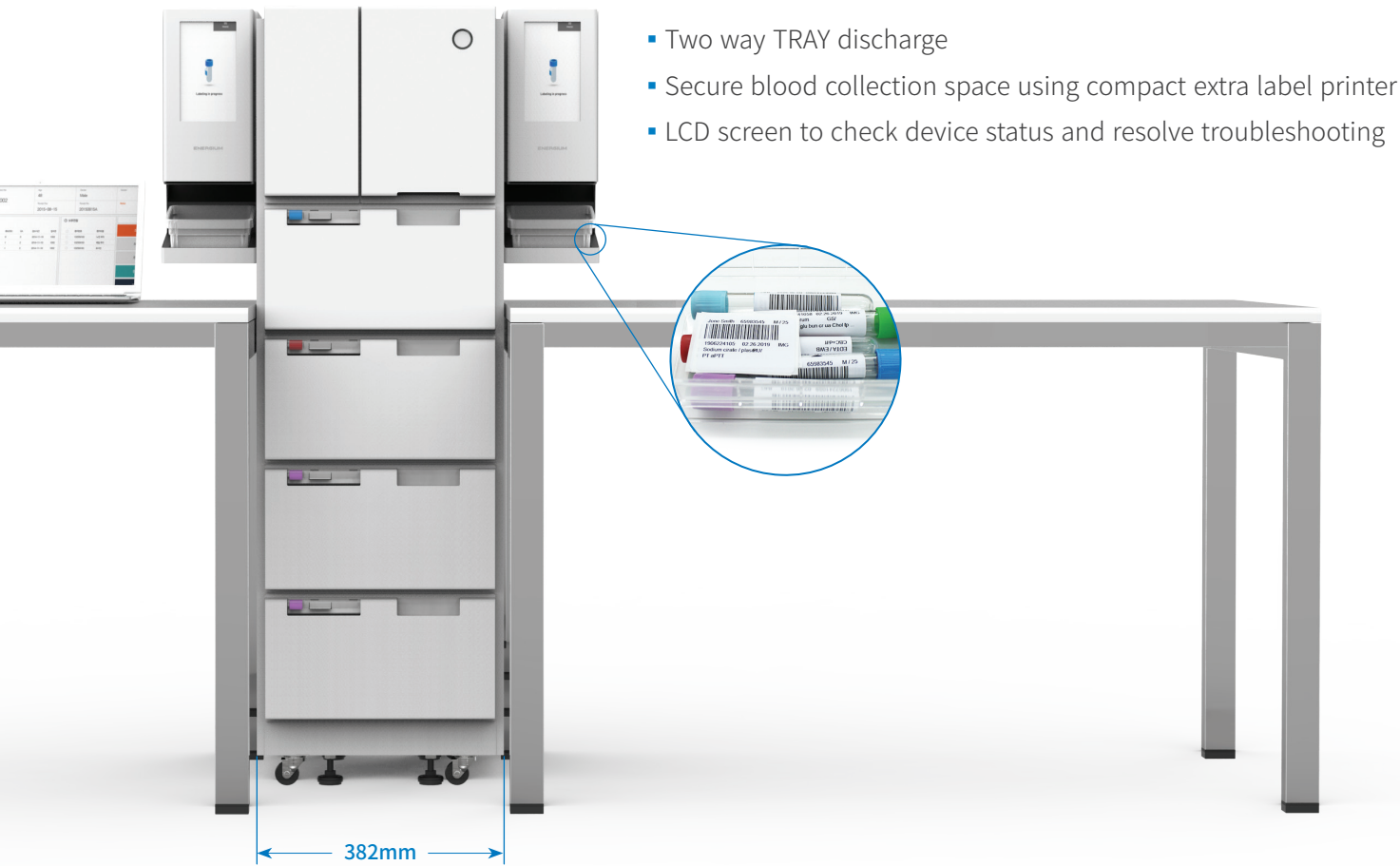


GNT9 Series

GNT9 | GNT9-KBU | GNT9-TDU

The TDU (Tray Dispensing Unit) allows GNT9 BA to be used as a stand-alone or shared unit between stations. Automatically provides tube with sample label attached, extra label and patient identification label required for blood collection and eject the TRAY in either directions.

* Actual components may differ from those shown below. Some components may change depending on the setting.



Complete Modular Configuration

Expandable module: BA modules can be expanded to suit the environment of the blood collection room.

- Up to 4 columns can be linked up with additional expansion of BA (1,600 Tubes)

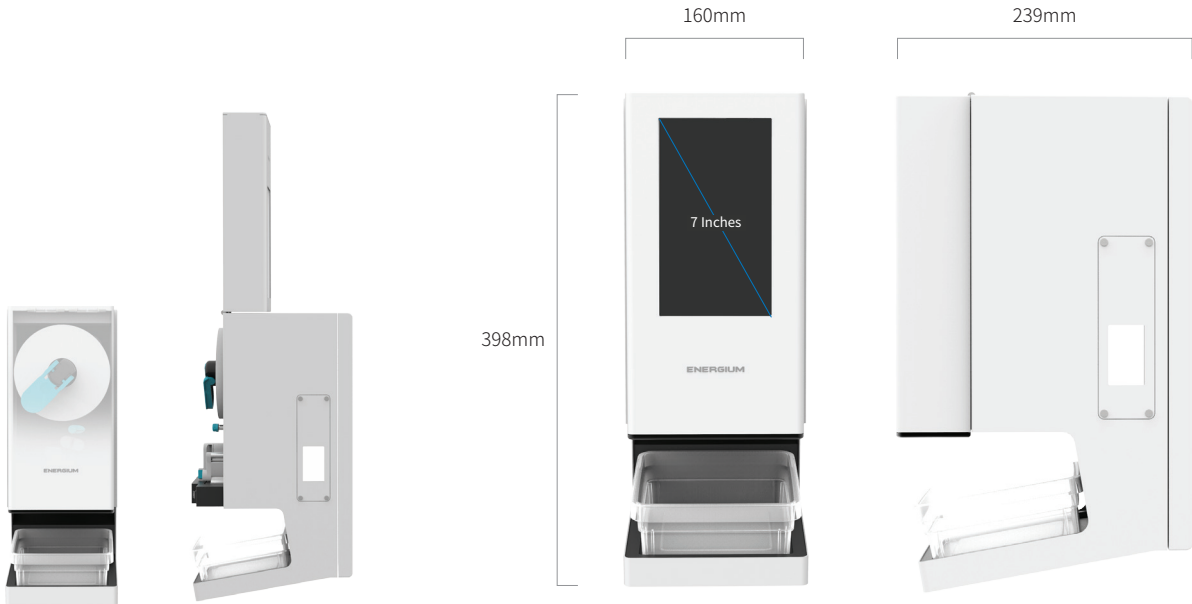


400 Tubes

800 Tubes

GNT9-TDU(Tray Dispensing Unit)

Specifications



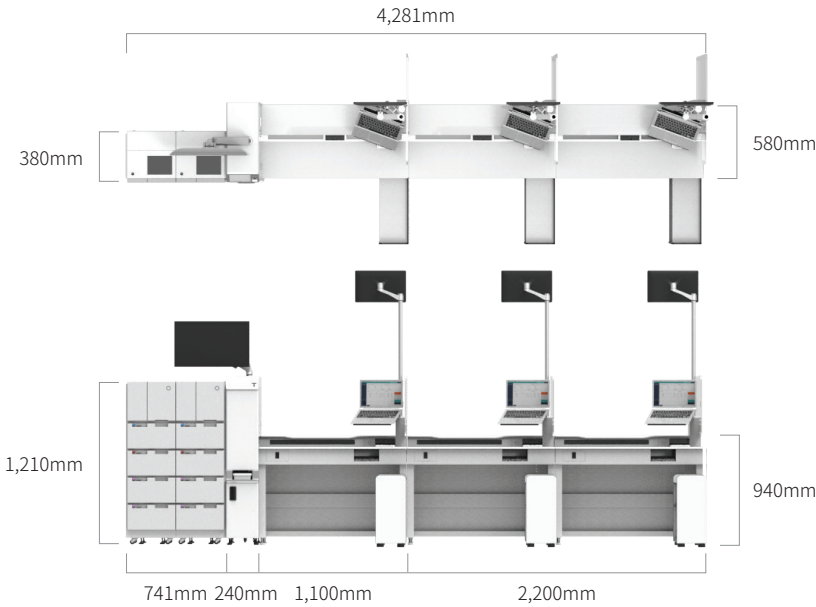
Model Name	GNT9-TDU(Tray Dispensing Unit)	
Tube Loading Capacity	Provides up to 100 Tubes per Inlet (4 Inlet : 400ea, 8 Inlet : 800ea, 12 Inlet : 1200ea, 16 Inlet : 1600ea)	
Tube Inlet	4ea (BA 1columns) *Up to 16 inlets	
Production Volume (Hourly Tube Production)	BA 2 columns : 1,895ea / BA 3 columns : 2,843ea / BA 4 columns : 3,790ea	
Tube Discharge Speed *	1.9sec	
Tube Supply Method	Direct tube supply	
Compatible Tube Types	Diameter : 12~16mm / Length : 75~110mm Manufacturer : BD, GREINER, SARSTEDT, IMPROVE, TERUMO, VACUTEST KIMA, AMPULAB, INSEPACK, etc. - Please consult with ENERGIUM regarding tube compatibility prior to use. (Cannot use rubber cap Tube, only available for verified and tested glass Tube)	
Printing Resolution	Sticking Label Printer	203dpi
	Extra Label Printer	
Label Printing Method	Thermal Printing	
Compatible Label Size	Width : 50mm, Length : 28~35mm, Label Quantity : 2,000 label (per 1 label roll)	
Product Dimension	BA(Barcode Applicator)	382(W) x 1,210(H) x 380(D) mm (BA 1columns)
	TDU(Tray Dispensing Unit)	160(W) x 398(H) x 239(D) mm
Product Weight	BA(Barcode Applicator)	70kgf (BA 1columns)
LCD	7Inches Touch LCD	
Power	AC 100-240 V~, 50/60Hz, 4 A	
Interface	USB, RS232	
Others	- Label attachment position detection system - Reprint function - Barcode scanner verification	
Noise level	55db	
Certification	CE, KC	

*BA 2 columns
- Above specifications are subject to change without notice.

GNT9

Specifications

- Up to 4 columns can be linked up with additional expansion of **BA** (1,600 Tubes)
- **TTT** can be linked up to 2 units only when installing Dual Type.
- Up to 6 **MWTs** can be linked. (However, up to 12 MWTs can be interlocked when installing Dual Type.)



Model Name	GNT9	
Tube Loading Capacity	Provides up to 100 Tubes per Inlet. (8 Inlet : 800ea, 12 Inlet : 1200ea, 16 Inlet : 1600ea)	
Tube Inlet *	8ea (BA 2 columns) *Up to 16 inlets	
Production Volume (Hourly Tube Production)	BA 2 columns : 1,895ea / BA 3 columns : 2,843ea / BA 4 columns : 3,790ea	
Tube Discharge Speed *	1.9sec	
Tube Supply Method	Direct tube supply	
Compatible Tube Types	Diameter : 12~16mm / Length : 75~110mm Manufacturer : BD, GREINER, SARSTEDT, IMPROVE, TERUMO, VACUTEST KIMA, AMPULAB, INSEPACK, etc. - Please consult with ENERGIUM regarding tube compatibility prior to use. (Cannot use rubber cap Tube, only available for verified and tested glass Tube)	
Printing Resolution	Sticking Label printer	203dpi
	Extra Label Printer	
Label Printing Method	Thermal Printing	
Compatible Label Size	Width : 50mm, Length : 28~35mm, Label Quantity : 2,000 label (per 1 label roll)	
Product Dimension	BA (Barcode Applicator) *	741(W) x 1,210(H) x 380(D) mm
	TTT (Test Tube Transfer)	240(W) x 1,232(H) x 591(D) mm
	MWT (Medic Work Table)	1,100(W) x 940(H) x 580(D) mm
Product Weight	BA (Barcode Applicator) *	140kgf
	TTT (Test Tube Transfer)	70kgf
	MWT (Medic Work Table)	100kgf
LCD	7Inches Touch LCD	
Option	QND, Partition, Auxiliary storage box, Tube storage box, Foot switch, PC control monitor	
Power	AC 100-240 V~, 50/60Hz, 4 A	
Interface	USB, RS232	
Others	- Each conveyor system module contains self-sanitization system - Label attachment position detection system - Reprint function - Barcode scanner verification	
Noise level	55db	
Certification	CE, KC	

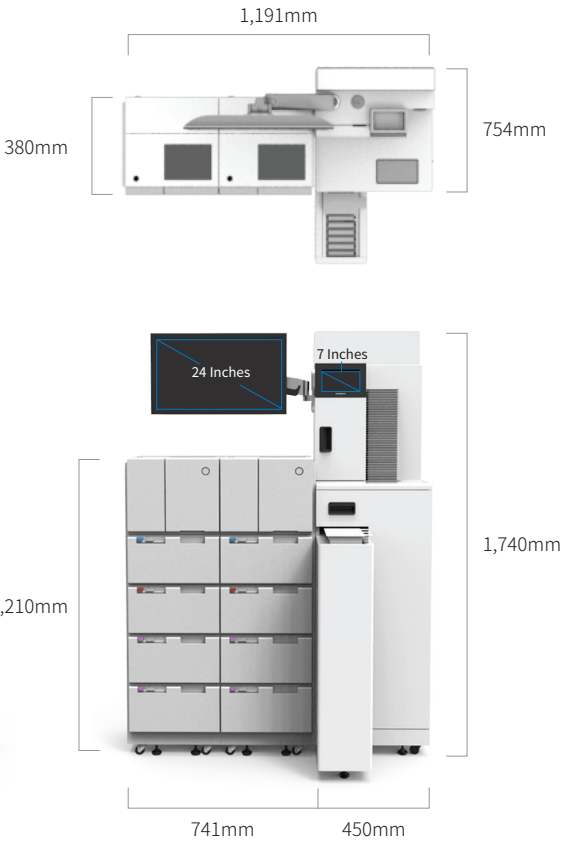
^{*}BA 2 columns

- Above specifications are subject to change without notice.

GNT9-KBU(Kit Boxing Unit)

Specifications

- Up to 4 columns can be linked up with additional expansion of **BA** (1,600 Tubes)
- **Kit Boxing Unit** Conveyor expandable
- **KIOSK** ^{*}Optional



Model Name	GNT9-KBU(Kit Boxing Unit)	
Tube Loading Capacity	Provides up to 100 Tubes per Inlet. (8 Inlet : 800ea, 12 Inlet : 1200ea, 16 Inlet : 1600ea)	
Tube Inlet *	8ea (BA 2 columns) *Up to 16 inlets	
Production Volume (Hourly Tube Production)	BA 2 columns : 1,895ea / BA 3 columns : 2,843ea / BA 4 columns : 3,790ea	
Tube Discharge Speed *	1.9sec	
Kit Discharge Speed *	When not using kit packaging	7sec (based on 4 tubes)
	When using kit packaging	11sec (based on 4 tubes)
Tube Loading Quantity per kit	10ea	
Empty kit Loading Quantity	100ea (Maximum)	
Tube Supply Method	Direct tube supply	
Compatible Tube Types	Diameter : 12~16mm / Length : 75~110mm Manufacturer : BD, GREINER, SARSTEDT, IMPROVE, TERUMO, VACUTEST KIMA, AMPULAB, INSEPACK, etc. - Please consult with ENERGIIUM regarding tube compatibility prior to use. (Cannot use rubber cap Tube, only available for verified and tested glass Tube)	
Printing Resolution	Sticking Label Printer	203dpi
	Extra Label Printer	
	Tray Sealing Label Printer	
Label Printing Method	Thermal Printing	
Compatible Label Size	Width : 50mm, Length : 28~35mm, Label Quantity : 2,000 label (per 1 label roll)	
Product Dimension	BA(Barcode Applicator) *	741(W) x 1,210(H) x 380(D) mm
	KBU(Kit Boxing Unit)	450(W) x 1,740(H) x 754(D) mm
Product Weight	BA(Barcode Applicator) *	140kgf
	KBU(Kit Boxing Unit)	100kgf
LCD	7Inches Touch LCD	
Option	24Inches KIOSK Screen, Tray label sealing module, PC control monitor	
Power	AC 100-240 V~, 50/60Hz, 4 A	
Interface	USB, RS232	
Others	- Label attachment position detection system - Reprint function - Barcode scanner verification	
Noise level	55db	
Certification	CE, KC	

^{*}BA 2 columns

- The Kit boxing unit consists of one packaging unit and two BA units
- Above specifications are subject to change without notice.

GNT9 Series

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