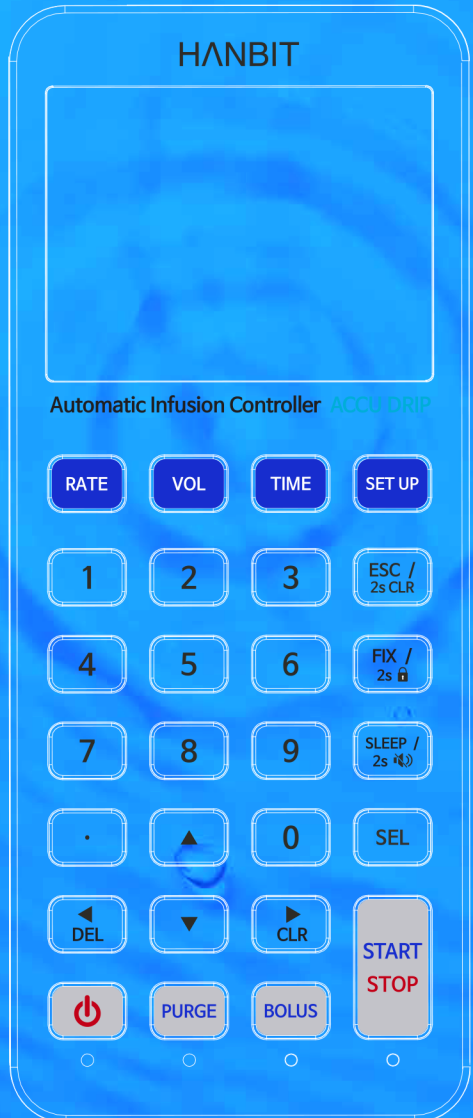


HANBIT MediTech

Providing people with the value of health life





Greeting

“

HANBIT MD will strive to maximize our enactment of corporate values through ceaselessly taking challenges toward our dream.

”

As the saying goes, "Necessity is the mother of invention." HANBIT MD was established with a sense of desperation to solve the problems of fluid therapy, seen through experience as a medical care provider.

The initial trial and error gave us an opportunity to broadly understand the overall problems of fluid therapy, and the sense of duty as a medical care provider elicited the motivation to solve the fundamental problem with a scientific approach rather than give up.

We are confident that we have found the answer and have laid the foundation for reliable fluid therapy. In the future, we will continue to devote ourselves to research and grow into a better company by paying attention to the medical environment.

"From small beginnings come great things." Like a passage from Eastern philosophy, we at HANBIT MD have done our best with the belief that we can change the world starting from putting our heart into small things. We think that this is just the beginning, we will continue to devote ourselves to becoming a company loved by all.

HANBIT MD believes that value ought to be shared and grow and develop. We will share our dreams and values with you.

CEO of Hanbit MD Co., Ltd M.D. / Ph.D

이득영



History



- 2022** Renewed Confirmation of Start-up Company,
Renewed Certification of Corporate Affiliated Research Institutes,
Received GMP (Good Manufacturing Practice) certification
of AccuDrip

- 2021** Designated as an Innovative Product by the Public Procurement
Service (AccuDrip)

- 2019** Received GMP certification for AccuMonitor

- 2018** Began commercialization of AccuMonitor

- 2016** Began commercialization of AccuValve IV set

- 2015** Received New Health Technology Certification (IVIC-PRO),
Began commercialization of IVIC-PRO

- 2014** Designated as an Excellent Procurement Product by the Public
Procurement Service (IVIC-300)

- 2013** Received GH (Goods of Health) certification for IVIC-300

- 2011** Founded Corporate Affiliated Research Institutes,
Received Award from the Minister of Economy,
Began commercialization of IVIC-300 & IVIC-H

- 2010** Began commercialization of IVIC-M & IVIC-200

- 2009** Received Confirmation of Start-up Company,
Began commercialization of IVIC-100

- 2007** Founded HANBIT MD Co., Ltd.



HANBIT

Automatic Infusion Controller

AccuDrip

SmartDrip

Dedicated IV set

AccuValve IV set

Others

IVIC PRO

AccuMonitor

ACCU DRIP

Automatic Infusion Controller

Accurate / Convenient / Safe



AccuDrip

AccuDrip is a device that automatically injects fluids through the monitoring of the drip sensor and control over the flow control valve, allowing the device to infuse under constant pressure from gravity.

Operation Process

- ① The drip sensor connected to the main body by a cable detects drops of fluid falling into drip container in real time and delivers information to the main body
- ② The main body derives the corrected position value of flow control valve through microcontroller unit equipped with flow coefficient
- ③ The operating part acts on flow control valve to achieve the target flow rate quickly and accurately

Accuracy

- Maintains a stable flow rate of infusion from beginning to end with an error rate less than 3%

Convenience

- IV set is easy to attach and detach
- Small and lightweight, easy to move
- Long battery life without power cord

ACCU DRIP

Automatic Infusion Controller

Accurate / Convenient / Safe



Safety

- Infusing under constant pressure lowers the risk of tissue injury by extravasation
- No chance of rapid infusion
- Prevent human error with voice feedback

✳ Global guidelines for blood vessel extravasation

: Various literatures recommend that peripheral vesicant drugs such as antineoplastic agents should be administered by gravity drip, not by infusion pump.

Extravasation Management (Vesicant and Contrast Agents)



Peripheral IV Vesicant Administration:

• Must be administered via gravity drip or IV push (e.g., no pump administration). If the medication is administered via a pump, it must be infused through a CVAD. Vasopressors during an emergent situation will be an allowed exception and may be infused via a PIV through a pump, if deemed medically necessary.



This Best Practice applies to all hospital settings, both inpatient and outpatient (e.g., magnetic resonance imaging [MRI] department, emergency department, outpatient infusion clinics), and to all situations in which medications are infused by the IV or epidural route, including anesthesia use and patient-controlled analgesia (PCA). The only exception is for small volume vesicant infusions (i.e., chemotherapy vesicants) which, when administered via the peripheral route, should only be infused by gravity and NOT by an infusion/syringe pump.

Chemotherapy extravasation guideline :

In general, peripheral vesicant infusions should not be administered using an infusion pump. There are a few vesicants (eg dacarbazine and paclitaxel) which may be administered as peripheral infusions via a pump, as long as there is frequent close supervision of the patient's IV site. A full risk assessment should be done when considering whether to administer vesicant drugs using an infusion pump.

Pediatric Reports 2012; volume 4:x28

Extravasation of antineoplastic agents: prevention and treatments

• Peripheral vesicants are administered by gravity infusions or i.v. bolus and should not be infused using an infusion pump since the pump may continue to deliver a vesicant into the tissue until the pump alarm is triggered (AIB).^{5,11,16}

References

- [1] Extravasation management (vesicant and contrast agents). The University of Texas MD Anderson Cancer Center (2021)
- [2] Targeted medication safety best practices for hospitals. Institute for Safe Medication Practices (2021)
- [3] Chemotherapy extravasation guideline. WOSCAN Cancer Nursing and Pharmacy group (2012)
- [4] Extravasation of antineoplastic agents: prevention and treatments. Pediatric Reports (2012)

ACCU DRIP

Automatic Infusion Controller

Accurate / Convenient / Safe



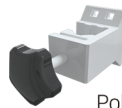
Components



Main Device



Drip sensor



Pole clamp



Charger

Product Specification

- Product Name : AccuDrip
- Model Name : IC-A
- Manufacturing license number : No. 20-614
- Category Name : Medicine Injection Amount Monitoring Controller
- Input range of Infusion rate : 1 ~ 350mL/h
- Input range of Volume : 1 ~ 9999mL
- Input range of Time : 1min ~ 99hrs 59mins
- Control range : $\pm 3\%$, $\pm 5\%$
- Clinical Alarm Function : Abnormalities during infusion, End of infusion, No drop detection, Air bubble detection, Low battery
- Power : 12 ~ 15DC, 100 ~ 240VAC, 50/60Hz, 0.5 ~ 1.2A
- Type and Grade of Protection : Grade 1, Internal power supply, BF type
- Size : 78mm (Width) x 162mm (Length) x 64mm (Thickness)
- Weight : 546g (Including battery, excluding stand & clamp)
- Battery : Nickel hydrogen 4.8V 4200mA
- Battery life : 24hrs
- Waterproof grade : IPX2
- Dedicated IV set : AccuValve IV set (No. 16-4867)

SMART DRIP

Automatic Infusion Controller

Accurate / Convenient / Safe

Wireless communication module

SmartDrip

SmartDrip the next-generation model of AccuDrip, which is designed to be stackable (up to 5) for multi-drug injection.

Equipped with a wireless communication module, the central station can monitor real-time information of patients receiving fluid therapy.



Product Specification

- Product Name : SmartDrip
- Model Name : Undefined
- Input range of Infusion rate : 1 ~ 350mL/h
- Input range of Volume : 1 ~ 9999mL
- Input range of Time : 1min ~ 99hrs 59mins
- Control range : $\pm 3\%$, $\pm 5\%$
- Clinical Alarm Function : Abnormalities during infusion, End of infusion, No drop detection, Air bubble detection, Low battery
- Power : 100~240VAC, 50/60Hz, 0.5 ~ 1.2A
- Type and Grade of Protection : Grade 1, Internal power supply, BF type
- Size : 220mm (Width) \times 100mm (Length) \times 90mm (Thickness)
- Weight : 700g (Including battery, excluding stand & clamp)
- Battery : Nickel hydrogen, 7.2V, 3500mA
- Battery life : 24hrs
- Waterproof grade : IPX2
- Multiple drug injection : Stacking system (up to 5)
- Dedicated IV set : AccuValve IV set (No. 16-4867)

AccuValve IV set

IV set for Accu Drip



AccuValve IV set

AccuValve IV set is a disposable IV set that achieves higher accuracy through a precise flow control valve. AccuValve can be used independently as a flow regulator, and, when used with a dedicated device, AccuDrip, can inject with 97% accuracy.

Product Specification

- Product Name : AccuValve IV set
- Model Name : IC-Valve-180-WF02-W and 259 cases
- How to write model name
- IC-Valve- ■■■■ - ■ - ■■

[Length]

180 : 180cm
200 : 200cm
220 : 220cm
250 : 250cm
280 : 280cm

[Color]

W : White
DG : Dark Green
YG : Yellow Green
B : Blue
O : Orange

[Drip chamber]

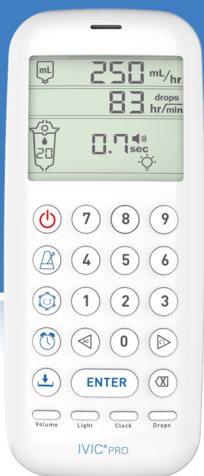
Unmarked: Basic Drip chamber
1: Type 1 Drip chamber

[Filter]

B : Basic Model
F02 : 0.2 μ m Filter
F12 : 1.2 μ m Filter
F50 : 5.0 μ m Filter
W : 3-way
WF0 : 3-way, 0.2 μ m Filter
WF12 : 3-way, 1.2 μ m Filter
WF50 : 3-way, 5.0 μ m Filter

IVIC PRO

Flow rate measuring device



IVIC PRO

IVIC PRO is a device that controls and measures infusion rate easily and accurately.

As the device is portable and it can be used for multiple patients, work efficiency can be increased by calculating the infusion time accurately.

Infusion rate measurement

Current infusion rate is shown on the display when a button is pushed at a rate of drip interval

Infusion rate setting

The drip sound generated from the device helps determine drip interval with a roller clamp or flow regulator

Timer & Memory

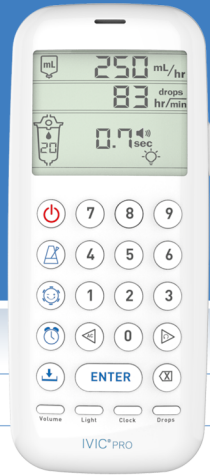
- Can set an alarm for the end of infusion
- Can save up to 7 frequently used fluid prescriptions

Regulator Mode

- Calculates the difference between the current infusion rate and the flow regulator's scale position
- Displays the flow regulator's new scale position of flow regulator, matching the prescribed infusion rate

IVIC PRO

Flow rate measuring device



Product Specification

- Product Name : IVIC PRO
- Input range of Flow rate : Upper limit 1800mL/h @20drops
600mL/h @60drops
Lower limit 2mL/h @20,60drops
- Input range of Volume : 1 ~ 9999mL
- Input range of Drop rate : 1 ~ 600drops/min @20, 60drops
- Size : 54mm (Width) x 126mm (Length) x 28.5mm (Thickness)
- Weight : 86g (Excluding battery)
- Power : DC 3.0V (2 x 1.5V AA battery)

ACCU MONITOR

Flow rate monitoring device



AccuMonitor

AccuMonitor is a device that monitors the infusion status of the fluid to help ensure that the actual infusion rate matches the prescribed infusion rate.

Infusion rate measurement

Current infusion rate, volume and time is shown on the display

Timer and Alarm

- Can set an alarm for the end of infusion
- Alerts when abnormalities during infusion occur

Product Specification

- **Product Name** : AccuMonitor
- **Category Name** : Medicine Injection Amount Monitoring Device
- **Display range of Infusion rate** : 1 ~ 999mL/h
- **Display range of Volume** : 1 ~ 9999mL
- **Display range of Time** : 1min ~ 99hrs 59mins
- **Size** : 90mm (Width) x 80.5mm (Length) x 31.4mm (Thickness)
- **Weight** : 157g (Excluding battery)
- **Power** : DC 3.0V (2 x 1.5V AA battery)
- **Type and Grade of Protection** : Internal power supply, B type