



**IMPROVE Syringe Pump**



**IMPROVE Infusion Pump**

**Keep your patients safer**  
**Make your job easier**

## Features of Syringe Pump IM-901

1. Compliance with IEC60601, dual-CPU design with high safety.
2. Automatically identify syringe specifications of 10ml, 20ml, 30ml and 50(60)ml.
3. Automatically calibrate Syringe.
4. Bolus Function.
5. Three Work Modes: Rate Mode, Time Mode and Body Weight Mode.
6. Compatible with syringes of all brands. Presetting and customer-setting syringe brands are available
7. Big HD and HB blue LCD, user-friendly operation interface
8. Dedicated detection device of occlusion pressure with 8-level sensitivity setting, dynamically display pressure value.
9. Function of pressure (inside syringe) automatically release if occlusion.
10. Stackable design for space saving and convenient operation.



## Technical Parameters

Injection Mode	Continuous Microinjection	
Syringe Specifications	10ml, 20ml, 30ml, 50(60)ml	
Compatible Syringe Brands	All brands. Presetting and customer-setting syringe brands are available	
Injection Rate Range	10ml syringe: 0.1ml ~ 300ml/h 30ml syringe: 0.1ml ~ 600ml/h	20ml syringe: 0.1ml ~ 400ml/h 50(60)ml syringe: 0.1ml ~ 1200ml/h
Injection Increment	0.1ml/h	
Injection Flow Rate Accuracy	≤±2% (Mechanical accuracy of syringe pump ±1% included)	
Volume Limit Range	0.1ml ~ 9999.9ml and Empty Mode	
Accumulated Volume Range	0 ~ 9999.9ml	
Purge Rate	10ml syringe: 300ml/h 30ml syringe: 600ml/h	20ml syringe: 400ml 50(60)ml syringe: 1200ml
Bolus Rate Range	10ml syringe: 0.1ml ~ 300ml/h 30ml syringe: 0.1ml ~ 600ml/h	20ml syringe: 0.1ml ~ 400ml/h 50(60)ml syringe: 0.1ml ~ 1200ml/h
Work Mode	Rate Mode, Time Mode, Body Weight Mode	
KOV Rate	1ml/h	
Detection of Occlusion Pressure	Detection of dedicated pressure sensor with 8-level sensitivity setting, 20Kpa ~ 140KPa, dynamically display pressure value	
Alarm	Audible and Visual Alarm: AC power failure, Syringe disengaged, Infusion finished, Near empty, Syringe empty, Occlusion, Low battery, Battery depletion, Battery failure, No operation, System failure	
Display	HD and HB blue LCD	
Communication Interface	RS-232 (For Nurse Call)	
Power Supply	AC: 100V ~ 240V, 50Hz/60Hz, ≤25VA	
Battery	Internal rechargeable Ni-Mh battery: DC 9.6V, 2000mAh, ≥4 hours at 5ml/h, Real-time detection and display of battery capacity	
Operation Condition	Temperature: 5℃ ~ 40℃, Relative humidity: 20% ~ 90%, Atmospheric pressure: 70 ~ 106KPa	
Storage Condition	Temperature: -20℃ ~ 55℃, Relative humidity: 10% ~ 90%, Atmospheric pressure: 70 ~ 106KPa	
Classification	Class II, Type CF, IPX 4	
Dimension and Net Weight	Dimension: 305mm × 185mm × 165mm, Net Weight: 2.0Kg	
Application	Intravenous Drug Injection	





## Features of Volumetric Infusion Pump IM-803

1. Compliance with IEC60601, safe for infusion.
2. Volumetric infusion pump with flow rate accuracy  $\leq \pm 5\%$ .
3. Unique automatic calibration function to calibrate IV set and enhance infusion accuracy.
4. Unique anti-reverse function on motor to prevent reverse infusion.
5. Power-on self-test function and real-time self-test during infusion.
6. Dedicated detection device of occlusion pressure and air bubble with 8-level sensitivity setting, dynamically display pressure value.
7. Alarm volume with 8-level setting for convenient operation in different environments.
8. Presetting calibration parameters for various brands of IV sets is available.

## Technical Parameters

Infusion System	Volumetric
Pump Mechanism	Peristaltic Finger Pump
IV Set	Standard IV sets of 10, 15, 20, 60 drops/ml. tubing diameter 3.4 ~ 4.5mm
Flow Rate Range	1.0ml ~ 999.9ml/h
Flow Rate Increment	0.1ml/h
Flow Rate Accuracy	$\leq \pm 5\%$ (After calibration)
Volume Limit Range	1 ~ 9999ml
Accumulated Volume Range	0 ~ 9999ml
Purge Rate	600ml/h
KOV Rate	1ml/h
Detection of Occlusion Pressure	Detection of dedicated pressure sensor with 8-level sensitivity setting, 40Kpa ~ 140KPa
Air Bubble Detection	Ultrasonic detection with 8-level sensitivity setting, 50 ~ 1000 $\mu$ l,
Alarm Volume	8-level setting
IV Sets Management and Flow Rate Calibration	Calibration value of 10 brands IV sets can be memorized, usable after calibration
Anti-reverse Function	Anti-reverse device real-time monitors the running direction of step motor to prevent reverse infusion
Self-test Function	Power-on self-test and real-time self-test during infusion
Alarm	Audible and Visual Alarm: Air bubble, Door open, Occlusion, Infusion finished, Pause overtime, Low battery, Battery failure, AC power failure, Abnormality of motor, alarm sound, pressure sensor, ultrasonic sensor
Display	HB color LED
Power Supply	AC: 100V ~ 240V, 50Hz/60Hz, $\leq 25$ VA
Battery	Internal rechargeable Ni-Mh battery: DC 12V, 2000mAh, $\geq 4$ hours at 25ml/h
Operation Condition	Temperature: 5 $^{\circ}$ C ~ 40 $^{\circ}$ C, Relative humidity: 20% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Storage Condition	Temperature: - 20 $^{\circ}$ C ~ 55 $^{\circ}$ C, Relative humidity: 10% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Classification	Class II, Type CF, IPX 4
Dimension and Net Weight	Dimension: 150mm $\times$ 150mm $\times$ 235mm, Net Weight: 2.3 Kg
Application	Intravenous infusion for various liquid medication as vasodilator, anticancer drug, odinagogue, nutrient solution, etc. Micro and rapid infusion





## Features of Volumetric Infusion Pump IM-804

1. Compliance with IEC60601, dual-CPU design with high safety.
2. HD and HB blue LCD , user-friendly operation interface.
3. Easily switch among drop/min, ml/h and volume/time.
4. Bolus Function.
5. Unique anti-reverse function on motor to prevent reverse infusion.
6. Power-on self-test function and real-time self-test during infusion.
7. Dedicated detection device of occlusion pressure and air bubble with 8-level sensitivity setting, dynamically display pressure value.
8. Unique IV sets management function: various brands IV sets can be input and memorized, usable after calibration.
9. Alarm volume with 8-level setting for convenient operation in different environments.

### • Technical Parameters

Infusion System	Volumetric
Pump Mechanism	Peristaltic Finger Pump
Infusion Method	Drop/min, ml/h, volume/time
IV Set	Standard IV sets of 10, 15, 20, 60 drops/ml. tubing diameter 3.4 ~ 4.5mm
Flow Rate Range	1ml ~ 1200ml/h
Flow Rate Increment	0.1ml/h
Flow Rate Accuracy	≤ ± 5% ( After calibration)
Volume Limit Range	1 ~ 9999ml
Accumulated Volume Range	0 ~ 9999ml, > 9999ml
Purge Rate	600ml/h
KOV Rate	1 ~ 5ml/h, adjustable
Bolus Function	Bolus function, flow rate is adjustable
Detection of Occlusion Pressure	Detection of dedicated pressure sensor with 8-level sensitivity setting, 40Kpa ~ 140KPa
Air Bubble Detection	Ultrasonic detection with 8-level sensitivity setting, 50 ~ 1000μl,
Alarm Volume	8-level setting
Anti-reverse Function	Anti-reverse device real-time monitors the running direction of step motor to prevent reverse infusion
IV Sets Management and Flow Rate Calibration	Various brands IV sets can be input and memorized, usable after calibration
Self-test Function	Power-on self-test and real-time self-test during infusion
Alarm	Audible and Visual Alarm: Air bubble, Door open, Occlusion, Infusion finished, Pause overtime, Low battery, Battery failure, AC power failure, Abnormality of motor, alarm sound, pressure sensor, ultrasonic sensor
Display	HD and HB blue LCD
Communication Interface	RS-232 (For Nurse Call)
Power Supply	AC: 100V ~ 240V, 50Hz/60Hz, ≤ 25VA
Battery	Internal rechargeable Ni-Mh battery: DC 12V, 2000mAh, ≥ 4 hours at 25ml/h, Real-time detection and display of battery capacity
Operation Condition	Temperature: 5°C ~ 40°C, Relative humidity: 20% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Storage Condition	Temperature: -20°C ~ 55°C, Relative humidity: 10% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Classification	Class II, Type CF, IPX 4
Dimension and Net Weight	Dimension: 150mm × 150mm × 235mm, Net Weight: 2.3 Kg
Application	Intravenous infusion for various liquid medication as vasodilator, anticancer drug, odinagogue, nutrient solution, etc. Micro and rapid infusion





## Features of double-system Infusion Pump IM-805

1. Unique double systems of drip-rate and volumetric.
2. Compliance with IEC60601, dual-CPU design with high safety.
3. HD and HB blue LCD , user-friendly operation interface.
4. Easily switch among drop/min, ml/h and volume/time.
5. Bolus Function.
6. Unique anti-reverse function on motor to prevent reverse infusion.
7. Power-on self-test function and real-time self-test during infusion.
8. Dedicated detection device of occlusion pressure and air bubble with 8-level sensitivity setting, dynamically display pressure value.
9. Unique IV sets management function: various brands IV sets can be input and memorized, usable after calibration
10. Alarm volume with 8-level setting for convenient operation in different environments.

## Technical Parameters

Infusion System	Drip-rate, Volumetric
Pump Mechanism	Peristaltic Finger Pump
Infusion Method	Drop/min, ml/h, volume/time
IV Set	Standard IV sets of 10, 15, 20, 60 drops/ml. tubing diameter 3.4 ~ 4.5mm
Flow Rate Range	1ml ~ 1200ml/h
Drip Rate Range	10drops/ml IV set: 1~ 200drops/min 20drops/ml IV set: 1~ 400drops/min 15drops/ml IV set: 1 ~ 300drops/min 60drops/ml IV set: 1 ~ 150drops/min
Flow Rate Increment	0.1ml/h
Flow Rate Accuracy	≤ ± 5% ( After calibration)
Drip Accuracy	≤ ± 1.5%
Volume Limit Range	1 ~ 9999ml
Accumulated Volume Range	0 ~ 9999ml, > 9999ml
Purge Rate	600ml/h
KOV Rate	1 ~ 5ml/h, adjustable
Bolus Function	Bolus function, flow rate is adjustable
Detection of Occlusion Pressure	Detection of dedicated pressure sensor with 8-level sensitivity setting, 40Kpa ~ 140KPa
Air Bubble Detection	Ultrasonic detection with 8-level sensitivity setting, 50 ~ 1000μl,
Alarm Volume	8-level setting
Anti-reverse Function	Anti-reverse device real-time monitors the running direction of step motor to prevent reverse infusion
IV Sets Management and Flow Rate Calibration	Various brands IV sets can be input and memorized, usable after calibration
Self-test Function	Power-on self-test and real-time self-test during infusion
Alarm	Audible and Visual Alarm: Air bubble, Door open, Occlusion, Infusion finished, Pause overtime, Leakage, Empty, Low battery, Battery failure, AC power failure, Abnormality of drop detection, infusion, motor, alarm sound, drip sensor, pressure sensor, ultrasonic sensor
Display	HD and HB blue LCD
Communication Interface	RS-232 (For Nurse Call)
Power Supply	AC: 100V ~ 240V, 50Hz/60Hz, ≤ 25VA
Battery	Internal rechargeable Ni-Mh battery: DC 12V, 2000mAh, ≥ 4 hours at 25ml/h, Real-time detection and display of battery capacity
Operation Condition	Temperature: 5℃ ~ 40℃, Relative humidity: 20% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Storage Condition	Temperature: - 20℃ ~ 55℃, Relative humidity: 10% ~ 90%, Atmospheric pressure: 70 ~ 106KPa
Classification	Class II, Type CF, IPX 4
Dimension and Net Weight	Dimension: 150mm × 150mm × 235mm, Net Weight: 2.3 Kg
Application	Intravenous infusion for various liquid medication as vasodilator, anticancer drug, odinagogue, nutrient solution, etc. Micro and rapid infusion





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