



THE TOP IN QUALITY  
for all areas of healthcare

## TOP INFUSION PUMP TOP-2300

Easy to use and fully-featured in a compact body.  
That vision is now a reality.



# Specifications

Name	TOP infusion pump	
Model	TOP-2300	
Power supply	AC power supply : 100 - 240V±10% 50/60Hz External DC power supply : 15V±10% Internal battery : Rechargeable, DC 12V 1800mAh Ni-MH Model : BP-23 Battery life : Approx. 4 hours (When a new battery is fully charged with 25mL/h set)	
Input current	AC power supply : 0.3A External DC power source : 1.5A	
Applicable IV sets	TOP-H series IV set 20 drops/mL, 60 drops/mL standard IV set	
Flow rate range	mL/h (1mL/h increments)	
	1 - 999mL/h	(TOP-H series IV set)
	1 - 300mL/h	(20 drops/mL standard IV set)
	1 - 150mL/h	(60 drops/mL standard IV set)
	drops/min (1drops/h increments)	
	1 - 333 drops /min.	(TOP-H series IV set)
	1 - 100 drops /min.	(20 drops/mL standard IV set)
Purge flow rate	1 - 150 drops /min.	((60 drops/mL standard IV set)
	Micro mode (0.1mL/h increments)	
	0.1 – 99.9mL/h	(TOP-H series IV set)
KVO flow rate range	Maximum flow rate of IV set used	
Volume limit range	Normal mode : 1 - 10mL/h (1mL/h increments)	
	Micro mode : 0.1mL/h(When having set below to 0.9mL/h)	
Total volume range	Normal mode : 1 - 9999mL (1mL increments)	
	Micro mode : 0.1 - 999.9mL (0.1mL increments)	
* Accuracy	mL/h	Normal mode Selecting TOP-H series IV set : ±5% Selecting 20 drops/mL, 60 drops/mL standard IV set : ±10%
		Micro mode Selecting TOP-H series IV set : ±10%(Setting 0.1~0.9mL/h)
* Occlusion detection pressure	drops/min.	±2% (at ≥ 300 drops)
	4 steps selection (Selecting TOP-H series IV set)	
	P13 : High	Under 150kPa (Under 1100mmHg)
	P12 : Medium	Under 120kPa (Under 900mmHg)
	P11 : Low	Under 80kPa (Under 600mmHg)
	P10 : Minimum	Under 40kPa (Under 300mmHg)
	When the flow rate is 0.9mL/h or less, the equipment operates by “P10”.	
* Air-in-line detection sensitivity	2 steps selection (Selecting 20 drops/mL, 60 drops/mL standard IV set)	
	P21 : High	Under 150kPa (Under 1100mmHg)
	P20 : Low	Under 80kPa (Under 600mmHg)
	3 steps selection	
	Ar0 : High	Approx. 50uL
Alarm / Warning	Ar1 : Medium	Approx. 0.1mL / 15 minutes
	Ar2 : Low	Approx. 1mL / 15 minutes
Special features	When the flow rate is 10mL/h or less, the equipment operates by “Ar1” even if set as “Ar2”.	
	* Air-in-line, Empty container, *Flow error, *Free flow, *IV set error, *Occlusion, Low battery, Auto Power OFF, Battery connection, Battery malfunction, Door open, Drop sensor, Reminder, Check setting, Infusion complete, Power supply switched, *System error	
	KVO	: After programmed infusion volume has been delivered, infusion is continued at KVO flow rate to prevent clot formation.
	Auto power OFF	: If the system is left in stand-by state for approximately three minutes while it is operated from the internal battery, the buzzer will sound. If left in this state for another three minutes, the power will be shut off automatically.
	Repeat alarm	: If two minutes elapses without resetting the alarm after it was silenced, the alarm will sound again.
	Data storage setting	: Flow rate set, volume limit / Total volume can be stored.
	Buzzer setting	: Presence/Absence of wait tone and operation tone can be specified.
	Power supply switched	: The system has entered the build in battery operation mode when power is no longer supplied from the AC / DC power source.
	Key-lock	: During infusion, places the system in the Key Lock state.
	History	: History of pump operation can be checked when infusion started and stopped.
	Maintenance timer	: Maintenance timer indicator illuminates, when the setting day has passed.
	Battery refresh	: To refresh the internal battery.
	Nurse call	: When any alarm occurs, the nurse call signal is output.

Operating conditions	Ambient temperature : 5 - 40°C (While charging the internal battery: 5 - 30°C) Relative humidity : 20 - 90% (Noncondensing) Atmospheric pressure : 70 - 106kPa		
Transportation and storage condition	Ambient temperature : -10 - 40°C Relative humidity : 10 - 90% (Noncondensing) Atmospheric pressure : 50 - 106kPa		
Service life	Six years (based on self certification using TOP corporation data) (Assuming inspection and maintenance are carried out as indicated and consumable parts are replaced as needed.)		
Classification	Class II □ and internally powered equipment, Type CF ♥, IPX1 (Drip proof)		
Dimensions	84(W) × 190(H) × 185(D)mm		
Weight	Approx. 2.0kg		
Accessories	AC power cable × 1	Drop sensor × 1	Operation Guide × 1
Material used	Case	: ABS*1	
	Handle	: ABS*1	
	Occlusion sensor	: Glass fiber-forced PBT*2	
	Air-in-line sensor	: Polycarbonate	
	Door handle	: Glass fiber-reinforced Nylon	
	Clamp Lever	: Glass fiber-reinforced Nylon	
	Operation panel	: Polyester film	
	*1 ABS : Acrylonitrile Butadiene Styrene		
	*2 PBT : Polybutylate Terephthalate		
Options	Pole clamp, Multiple pump mount, DC power cable, Nurse call cable, Infusion stand		

\* Essential performance : Critically affects the safety of patients if it is not operated according to specifications. (IEC / EN 60601-1-2)