



THE TOP IN QUALITY
for all areas of healthcare

TOP SYRINGE PUMP TOP-S500



THE NEW STANDARD

Specifications

Name	TOP Syringe Pump	
Model	TOP-S500	
Power supply	AC power supply : 100 ~ 240 V 50/60 Hz Internal battery : Li-ion battery, Rechargeable, DC 3.6 V 3250 mAh (Type: BP-A6LG) Battery life is approx. 10 hours. (At 5 mL/h set using new battery is fully charged) Alkaline battery : AA size Alkaline battery x 4 pcs Battery life is approx. 10 hours (At 5 mL/h set using new batteries)	
Input current	0.3 A	
Use syringe	5, 10, 20, 30, 50 mL Syringe	
Syringe brand	TOP, B.Braun, TERUMO, B-D, NIPRO, JMS, 1% Diprivan Injection-kit 20/50 mL, User- registered syringe (One syringe)	
Flow rate range	0.10 ~ 150 mL/h (5mL syringe) 0.10 ~ 300 mL/h (10mL syringe) 0.10 ~ 400 mL/h (20mL syringe) 0.10 ~ 500 mL/h (30mL syringe) 0.10 ~ 1200 mL/h (50mL syringe, 1% Diprivan Injection-kit 20/50 mL) 0.10 ~ 99.99 mL/h: 0.01 mL/h steps, 100 ~ 1200 mL/h: 1 mL/h steps	
Infusion accuracy	Mechanical accuracy : $\pm 1\%$ Accuracy including syringe : $\pm 3\%$ (Accuracy after infusing for 1 hour or more at 1.0 mL/h or more setting)	
Volume limit range	No Setting, 0.1 ~ 999.9 mL (0.1 mL steps)	
Total volume range	0.0 ~ 999.9 mL (0.1 mL steps)	
Purge flow rate	150 mL/h (5mL syringe) 300 mL/h (10mL syringe) 400 mL/h (20mL syringe) 500 mL/h (30mL syringe) 1200 mL/h (50mL syringe, 1% Diprivan Injection-kit 20/50 mL)	
Bolus flow rate	150 mL/h (5mL syringe) 300 mL/h (10mL syringe) 400 mL/h (20mL syringe) 500 mL/h (30mL syringe) 1200 mL/h (50mL syringe, 1% Diprivan Injection-kit 20/50 mL)	
Bolus volume	0.1 ~ 5.0mL (5mL syringe) 0.1 ~ 10.0mL (10mL syringe) 0.1 ~ 20.0mL (20mL syringe) 0.1 ~ 30.0mL (30mL syringe) 0.1 ~ 50.0mL (50mL syringe, 1% Diprivan Injection-kit 20/50 mL) (0.1mL steps)	
Bolus accuracy	$\pm 3\%$ (± 0.1 mL at 0.1 - 3.3 mL setting)	
KVO rate range	0.1 ~ 5.0mL/h (0.1mL/h steps)	
Occlusion detection pressure	SL (Special low) : 30 ± 20 kPa (225 ± 150 mmHg / 0.30 ± 0.20 kgf/cm ²) L (Low) : 50 ± 20 kPa (375 ± 150 mmHg / 0.51 ± 0.20 kgf/cm ²) M (Medium) : 70 ± 30 kPa (525 ± 225 mmHg / 0.71 ± 0.30 kgf/cm ²) H (High) : 90 ± 30 kPa (675 ± 225 mmHg / 0.92 ± 0.30 kgf/cm ²)	
Alarm	High priority alarm	Occlusion, Syringe empty, Infusion complete, Battery empty, Power loss, Malfunction, Syringe barrel clamp, Syringe plunger clamp, Syringe barrel flange
	Low priority alarm	No Action, No battery, Low battery, Low volume, Infusion complete pre-alarm, No rate, No Volume limit, Flow rate > Volume limit, Flow rate soft limit,
	Information signal (Warning)	Sensor check, Power supply switched, Maintenance timer, Shock detection
Special features	Auto power OFF	When running on internal battery, the power turns off automatically if the device is left for about 3 minutes after a No Action (low priority) is issued.
	Repeat alarm	Sounds the alarm tone again if the device is left for more than 2 minutes without canceling the alarm after the alarm tone is silenced.
	Standby	Temporarily disables No Action (low priority).
	Key-lock	Disables all key operations during infusion.
	KVO	After reaching the volume limit, perform infusion at the KVO flow rate to prevent blood clotting.
	Flow rate change during infusion	Allows the flow rate to be changed without stopping infusion.
	Bolus	Allows bolus injection during infusion.
	Maintenance timer	When the set period is reached, a screen prompting periodic maintenance is displayed.
	Automatic brightness switching	Automatically changes the display brightness according to the ambient brightness. (The display brightness reduces as the surroundings become darker.)
	Change syringe brand	Allows the syringe brand to be changed.

Special features	Changing second decimal place display	The second decimal place display can be changed for the flow rate.
	Operation history	Check the operation history (power ON / OFF, purging, start, stop, bolus, flow rate change, alarms). [Max. 800 items]
	Add purging volume setting	Sets the purging volume to add to the total volume.
	Forced priming	Sets whether or not to prevent infusion starting until purging is performed after mounting a syringe.
	Flow rate soft limit setting	Sets the flow rate soft limit for each syringe size (lower limit value to call attention to the set flow rate).
	Flow rate hard limit setting	Sets the flow rate hard limit for each syringe size (upper limit value of the set flow rate).
	Maintenance timer setting	Sets the number of days before the maintenance timer is issued.
	Syringe brand setting	Allows the syringe brand to be restricted.
	Flow rate soft/hard limit setting	1 ~ 150 mL/h (5mL syringe) 1 ~ 300 mL/h (10mL syringe) 1 ~ 400 mL/h (20mL syringe) 1 ~ 500 mL/h (30mL syringe) 1 ~ 1200 mL/h (50mL syringe, 1% Diprivan Injection-kit 20/50 mL) (0.1mL steps)
	Maintenance	The status of Lighting, Flow rate and Occlusion detection can be checked.
Operating conditions	Shock detection	Allows the date and time when a shock was detected to be checked and reset.
	User syringe registration	Registers a syringe that is not pre-registered in the device.
	External communication	Allows to monitor the operation history of the Device by USB cable.
Transportation and Storage condition	Ambient temperature	: 5 to 40 °C (While charging the internal battery: 5-30°C)
	Relative humidity	: 20 to 90 % (Noncondensing)
Service life	Atmospheric pressure	: 70 to 106 kPa
Classification	Class II ☐ and Internally powered equipment, Type CF ☒ , IP34	
Detentions	360(W) x 110(H) x 135(D) mm	
Weight	Approx. 1.3 kg	
Accessories	AC power cable x1, Operation guide x1, Administrator Manual x1	
Material used	Case, Syringe plunger slider Syringe plunger clamp, Syringe barrel clamp Drive shaft Syringe barrel detection switch Operation indicator Operation panel	ABS (Acrylonitrile Butadiene Styrene) POM (Polyacetal) resin Stainless steel Silicone rubber PC (Polycarbonate) resin Polyester film
Options	Pole clamp, Infusino stand	