



# BeneFusion SP5 Ex

## Syringe Pump

### Technical Data

#### Physical specification

W×H×D:	295 x 87x 174 (mm)
Net weight:	<2.5kg, Stackable
Classification:	Type CF, Defibrillation-proof, Class I

#### Display

Screen:	3.5" TFT color LCD, 16:9 format
Brightness:	1-8 levels adjustable, default is level 4
Information:	Delivery rate, current infusion ,VTBI, total volume, syringe size, syringe brand, pressure limit, battery capacity, drugs, remaining time, alarms

#### CPU type

Dual-CPU

#### Syringe selection

	5,10,20,30,50/60ml
	Pre-configured 3 syringe brands, including BD,B.Braun, Terumo
	User-defined syringe brands and quantity possible by PC tool, Brand 1 and Brand 2 as default.
	Automatic recognition of syringe size and fixation

#### Basic parameters

Mode:	3 modes: Rate mode, Time mode, Body weight mode
Flow rate :	5ml: 0.1-100ml/h, 10ml: 0.1-200ml/h, 20ml: 0.1-400ml/h, 30ml: 0.1-600ml/h, 50/60ml: 0.1-1500ml/h
Increment:	0.01ml(0.1-99.99ml/h), 0.1ml(100-999.9ml/h), 1ml(1000-1500ml/h)
Preset volume(VTBI):	0.10-9999.99ml (increment 0.01ml)
Preset time:	00:00:01-99:59:59(h:m:s) adjustable
Accumulated volume:	0.01-9999.99ml (increment 0.01ml)
KVO:	0.1-5.0ml/h adjustable, step 0.1ml/h, default is 1.0 ml/h
Purge:	0.10-1500ml/h (depending on syringe size)

#### Accuracy

Flow rate $\geq$ 1ml/h: Accuracy $\leq \pm 2\%$
Flow rate < 1ml/h: Accuracy $\leq \pm 5\%$

#### Bolus

Bolus rate:	Automatic/Manual Bolus: 0.10-1500ml/h ( depending on syringe size)
	Default Bools rate: 5ml: 100 ml/h, 10ml: 200 ml/h, 20ml:400 ml/h,30ml: 600 ml/h, 50/60ml: 800ml/h
Preset bolus volume:	Preset automatic Bolus volume: 0.10-9999.99ml

#### Function spectrum

	Automatic calculation of the delivery rate based on different modes
	Infusion pause/standby: preset parameters remain stored
	Drug library up to 2000 drugs," ON "and "OFF" selectable; use-defined drug list available
	History records up to 2000 , data could be transmitted to PC and saved as EXCEL format to print out.
	Titration function: change flow rate during infusion with increment 0.01ml/h

#### Language

11 languages: English, Spanish, French, Russian, Turkish, Portuguese, Bulgarian, Czech, Polish, Romanian Chinese

#### Safety system

Occlusion pressure:	4 Pressure unit: mmHg/kPa/bar/psi selectable, auto conversion in different units, default is mmHg
	11 levels occlusion pressure, 150-975 mmHg selectable, $\pm 15\%$ as accuracy, default is 450mmHg
Auto data lock:	"ON" and "OFF"

	"ON": 1-5min. selectable, step 1 min, default is "OFF"
Anti-bolus:	Automatic reduction of the bolus volume following pressure alarm
<b>Alarm</b>	
Alarm type:	Visual and acoustic alarms
	High: occlusion, battery empty, VTBI done, syringe empty, syringe disengaged, KVO finish, system error
	Middle: Standby time expired system abnormal
	Low: syringe near empty, Reminder, no battery, battery low, VTBI near done, no AC
Alarm volume:	1-8 levels selectable, default is level 4
Pre-alarms:	1-30min. before syringe is empty, 3 min. before battery is completed, 30 min. as low battery
Reminder :	" ON" and "OFF"
	"ON" : 1-5min. selectable, step 1 min.
<b>Battery</b>	
	Operating time > 10 hrs. @ 5ml/h
	Recharging time ≤ 6 hrs. for 100% of the capacity
<b>Interface</b>	
	Rs232
	Nurse call connector
	DC adapter connector
<b>Power supply</b>	100-240V~, 50/60Hz, 0.53-0.28A ; DC Voltage:10V-16V, 2.25A-1.5A
<b>Environmental requirement</b>	
Temperature:	5 ~ 40°C for operating, -20 ~ 60°C for storage
Humidity:	15 ~ 95% for operating, 10 ~ 95% for storage
Air pressure:	57 ~ 106kPa for operating, 50 ~ 106kPa for storage
Water-proof:	IP23
<b>Lifetime</b>	>5 years under continuous duty conditions
<b>Modes specifications</b>	
<b>Flow rate mode:</b>	VTBI: 0.10-9999.99ml; Rate: 5ml: 0.1-100ml/h; 10ml: 0.1-200ml/h; 20ml:0.1-400ml/h; 30ml: 0.1-600ml/h; 50/60ml: 0.1-1500ml/h
<b>Time mode:</b>	VTBI: 0.10-9999.99ml; Time: 00:00:01-99:59:59 (h:m:s)
<b>Body weight mode:</b>	Weight: 0.1-300.0kg or 0.1-660.8lb, kg/lb selectable, Drug-Amount: 0.1-999.9, g/mg/ug/ng/IU selectable, default is mg; Volume: 0.10-9999.99ml; Dose: 0.01-999.99; Dose unit: mg, ug, ng, IU/kg/h; mg, ug, ng, IU/kg/min selectable, default is mg/kg/h; VTBI: 0.10-9999.99ml; Time: 00:00:01-99:59:59(h:m:s) (Auto. calculated )

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