



Sophie

Innovative Ventilator System for Neonatology

- + Intuitive, user-guiding operating concept
- + Optimum monitoring
- + All pressure-controlled ventilation modes
- + Optional HFO
- + Ergonomic, innovative design
- + Patient components, tubing and sensors identical with STEPHANIE



With the soon to be launched neonatology ventilation system SOPHIE, F. Stephan GmbH has cooperated closely with renowned physicians at home and abroad in the successful development of a ventilation system based on the proven first-rate technology of STEPHANIE. However SOPHIE sets a new standard in terms of efficiency, design and handling.

The intuitive operating concept

All settings can be adjusted with just one single rotary knob. The intuitive operating concept guides the user systematically through the ventilation menu. Only those parameters relevant to the chosen ventilation form are visible, and can even be adjusted easily to the patient's needs before starting ventilation.

Efficient monitoring permits safe supervision at all times.

The ventilation modes

SOPHIE provides all conventional pressure-controlled ventilation modes.

The wide range of applications has been supplemented by patient-triggered ventilation PSV together with optional high frequency oscillation.

The innovative design

The compact, slim design permits optimum use of the space available. The ergonomic design reduces workload and costs in clinical use and offers clear advantages in terms of hygiene. Another advantage is the high compatibility with STEPHANIE: Patient components, tubing and sensors are identical and can be exchanged between the two machines without any problems.



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Clinical Experience
 + Technical Competence

Sophie

Technical Specifications

General specifications	
MPG class Medical Devices Law (German abbreviation)	II b
Dimensions	395' x 330 x 350 mm (WxHxD) plus patient component 90 mm
Weight	23 kg
Power supply	
Mains	90-264 V AC, 50-60 Hz, 150 VA
Battery	24 V DC, approx 30 min
Gas supply	
AIR	3 – 6 bar + 0,5 bar
O ₂	3 – 6 bar + 0,5 bar
Operating modes	
Pressure-controlled	linear, sinus, square wave
switchable	volume limitation
Ventilation modes	
CPAP	with/without backup HFO (optional)
SIMV	ITT (PSV)
assist controlled	ITT (PSV)
IMV	HFO (optional)
Parameters	
Operating unit	
Pmax	5 ... 60 mbar
PEEP	0 ... 30 mbar
Temperature	30 ... 40 °C
Inspiration time	0,1 ... 2 s
Expiration time	0,2 ... 60 s
FiO ₂	21 ... 100 %
Trigger Flow	0,1 ... 2,9 l/min
Pressure	0,1 ... 2,9 mbar
High frequency oscillation (optional)	
Inspiration part	square wave 33 %, 40%, 50 % sinus
Frequency	5 ... 15 Hz (300 ... 900 /min)
Amplitude	1 ... 100%
Patient component	
Safety pressure	40 ... 120 mbar
Humidifier bottle	350 ml
Pre-oxygenation	
adjustable (max. 7 min)	21 ... 100 % O ₂

Monitoring	
Display	10,4" Farb-TFT
Pressure	Pmax, Pmean, Peep Posc (optional)
Volume	MV, VT _e , VT _i , Vleak Vo, MV _o (optional)
Respiration frequency	
Inspiration part	
FiO ₂	
Respiration gas temperature	
Resistance	
Compliance	
Graph display	p(t), V(t), V'(t) V(p), V'(V), V'(p) Scaling Measuring function
Supervision	
Alarms	Visual, audible Clear text messages
Pressure	Pmax, Pmean, Peep Posc (optional)
Volume	MV, VT _e MV _o (optional)
FiO ₂	
Respiration gas temperature	
Apnea	
Data outputs	
RS232	
Sensors	
Flow/volume	Pneumotachograph Typ B to 10 l/min Typ C to 22 l/min
FiO ₂	el. chem. oxygen cell
Temperature	Temperature sensor proximal distal