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# Penelope®

Advanced nitric oxide delivery system for use in Inhaled Nitric Oxide (iNO) therapy



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Penelope is SOL Group's answer to the demand for a medical device that dynamically doses inhaled nitric oxide based on the medicines' indications for use. The medicine is generally administered to critically ill patients in Intensive Care Units, in Neonatal Intensive Care Units and in the Operating Room.

The device enables Doctors and Nurses who use it in medical settings to dose and monitor NO and O<sub>2</sub> flow, and to monitor NO<sub>2</sub> levels, a highly toxic substance, in the inhalation line of patients submitted to nitric oxide inhalation therapy (iNO).

Aware of the importance of workplace quality for operators, engineers at SG Lab (SOL Group's company dedicated to the development of innovative electromedical solutions) have integrated the device with advanced environmental monitoring systems that continuously monitor ambient levels of NO and NO<sub>2</sub> to always guarantee the utmost quality, comfort and safety in the workplace.

The device can manage up to two cylinders of NO/N<sub>2</sub> mixture at a time. It features an internal pneumatic circuit that reduces pressure and selects which of the two cylinders to use. Based on the ventilator's flow, the system automatically doses the mixture in the inhalation line, ensuring compliance with parameters indicated by the operator.

The device can function in automatic mode, during which the NO supply is managed by the software, and in manual mode with NO and O<sub>2</sub> supply managed via two analogue flow-meters, whose settings are entered by the operator without relying on the electronic system in order to guarantee absolute



required at every moment. NO mixture dosage, alarm thresholds, alarm timelines and monitored values are entered via the display.

Penelope also features a download option for the events log, alarms log and report of continuous dosage of the medicine to the patient. This log can be downloaded by simply connecting the USB stick placed behind the head of the device. The USB connection also allows to update the device's software.

The device Penelope can be secured onto a trolley with proprietary design studied for the unit to be conveyed along with two cylinders for nitric oxide therapy (NO/N<sub>2</sub> mixture) and with a small O<sub>2</sub> cylinder.

continuity of the drug delivery process even in case of machine failure.

Communication with the user is established via a 10.1" display screen, which provides all the information



## Datasheet

Dimensions	450x280x230 mm
Weight	7,5 Kg
Supply voltage	24 V
Noisiness	<50 dB
Battery life	>4 hours
Maximum altitude (MASL)	2000 m
Operating temperature	10 ° C - 35 ° C
Display	Touchscreen LCD 10,1"
Nitric Oxide automatic dosing range	0 - 80 ppm
Automatic adaption range to the ventilator flow	0,5 - 100 l/min
Nitric Oxide manual dosing flow	10 - 800 ml/min
Oxygen manual dosing flow	3 - 25 l/min
Certification according to 93/42 CEE	IIb
Manufacturer	Sol Group Lab S.r.l.