STEPHAN®

Clinical Experience
Technical Competence

Pediatrics

EasyFlow nCPAP

The non-invasive ventilation system accessory for neonatology

+ Anatomical design for perfect fitting
+ Easy to handle and gentle in use
+ Very soft, flexible prong
+ Self-sealing mask
+ Optional pressure measurement
+ NEW: Now with an abdominal respiration sensor for even more effective ventilation and synchronisation

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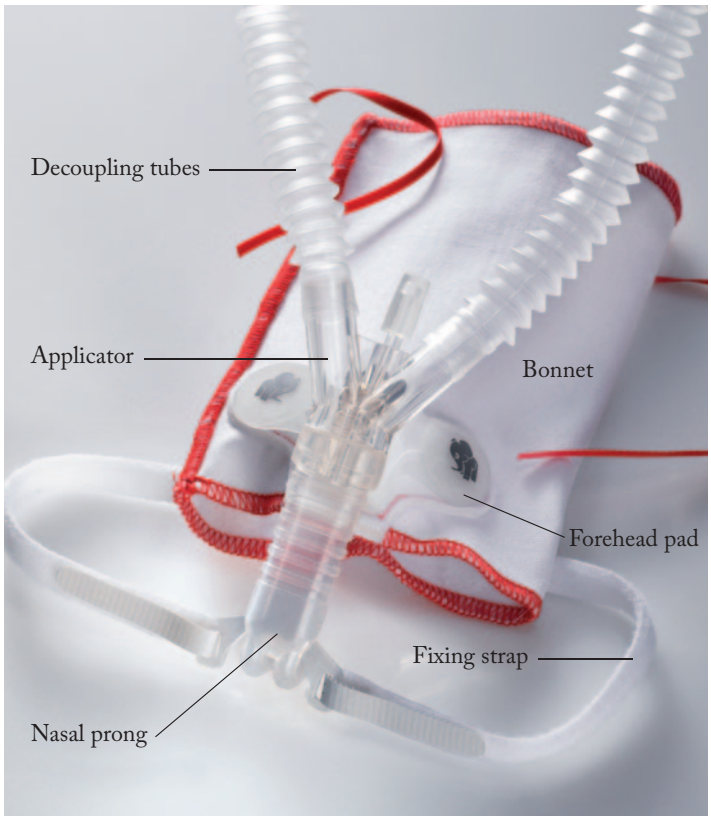
EasyFlow nCPAP

The new EasyFlow system from Fritz Stephan GmbH adapts optimally to the anatomy of premature and newborn infants. Perfectly fitting prongs and masks are essential for gentle, non-invasive ventilation. The EasyFlow system is easy to use and integrates perfectly with the SOPHIE and STEPHANIE neonatal ventilation systems.



The user-friendly system accessory consists of a bonnet or headband, a forehead pad, an applicator, and a prong or mask. The length and height are progressively adjustable. Decoupling tubes and a medication vaporiser can optionally be connected.

All system components are easy to use and adapt optimally to the individual anatomy of infant patients. Nasal prongs and masks are both available in different sizes. Bonnets are available in 11 color-coded sizes. EasyFlow nCPAP – a perfect fit, gentle and reliable.

As pleasant as possible ...

Gentle ventilation and a high degree of protection provides optimal support for small premature infants with breathing problems. EasyFlow nCPAP, the innovative ventilation system for premature infants, is fully designed for gentleness and reliability – with perfectly fitting adjustable applicators, non-irritating nasal prongs and masks and a truly innovative sensor for the optimal synchronisation of spontaneous breathing effort with mechanical ventilation. Premature infants experience less stress from ventilation, are able to calmly sense the heart-beat and breathing of their mother, enjoy a feeling of relaxed security, and get a healthy start on life.

High-quality, very soft and flexible silicone rubber is used for maximum wearing comfort.

The **nasal prong** avoids irritation of the skin or mucus membrane and with its perfectly fitting anatomical design it does not rest on the septum, thus avoiding stress on the septum.

With its special flap design, the **mask** also provides an optimal fit and is self-sealing.

The **cushioned forehead pad** of the elasticated bonnet holds the **applicator**, to which the tubes and nasal prong or mask are docked. Integrated magnets allow the applicator to be positioned on the forehead pad with millimetre precision for optimal pressure and strain relief.

The **decoupling tubes** increase wearing comfort and improve anchoring. They significantly reduce pressure and strain from the heavy ventilation tubes and decouple them from the patient's nose.

Clinically tested ...

Fritz Stephan GmbH collaborated with scientists at renowned university hospitals to conduct clinical studies of abdominal motion resulting from diaphragm contraction in spontaneous breathing. These studies led to the development of a motion sensor for this abdominal motion.

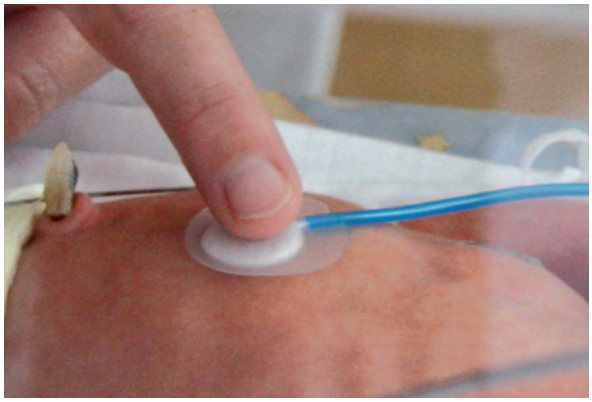
This abdominal motion is ideally suitable for synchronising the spontaneous inspiration efforts of premature infants with mechanical ventilation.

Spontaneous breathing and sensor control

Benefits of synchronised spontaneous breathing

Results from clinical studies of synchronisation to abdominal motion conducted at international university hospitals show:

+ reduced oxygen demand
+ improved, greater tidal volume
+ reduced breathing effort
+ less gastrointestinal air
+ reduction in leak syndromes (PIE, PTX)
+ less blood pressure variation
+ lower sedation requirements

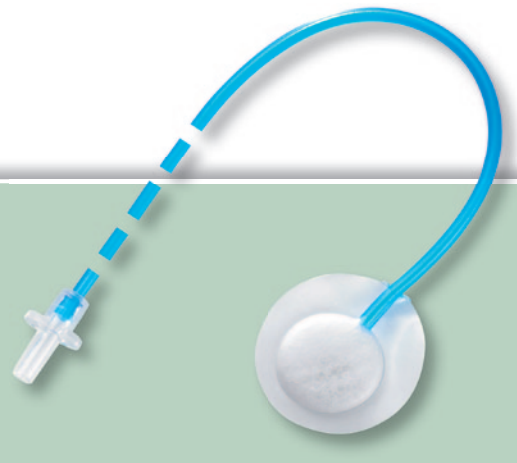


The respiration sensor, with a synthetic film that is gentle to the skin, is fixed on the infant's abdomen. The sensor detects every diaphragm contraction and sends a corresponding pressure signal to the ventilation device through a microtube.

In the Stephan ventilation device the pressure signal is converted to an electrical signal allowing synchronisation of mechanical ventilation. This provides the benefit of active, infant-compatible pressure assistance for the lungs when the glottis opens for spontaneous breathing.

This spontaneous breathing is more effective than non-synchronised inflations, since the breathing air is carried to the lower lung region by the infant's breathing effort.

An innovative software algorithm prevents false synchronisation from spurious events such as patient movement, crying or hiccups. Stephan's SOPHIE and STEPHANIE ventilation systems are waiting for the rhythmic abdominal motion before initiating immediate synchronisation.



Synchronisation using abdominal motion – a harmonious solution from STEPHAN!

An innovative ventilation system for neonatology

The STEPHANIE and SOPHIE NIV ventilation systems allows the nCPAP, nIPPV and synchronised nIPPV (SnIPPV) ventilation therapies, with or without backup ventilation, to be combined with EasyFlow system accessories.

Synchronisation based on abdominal motion is a decisive factor for comfortable and gentle non-invasive ventilation therapy. It prevents impairment of coordination between the larynx and the diaphragm by intubation and allows the infants to personally determine their tidal volume and respiration rate without being influenced by the dead volumes of flow sensors.

Our common goal is to achieve the greatest possible harmony between patients and equipment. The novel introduction of an expiration trigger for non-invasive ventilation is a major step on the way to attaining this goal. The new Stephan respiration sensor allows infant patients to synchronise the start of their spontaneous inspiration and the start of their expiration with the ventilation system.

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EasyFlow nCPAP: system accessory overview

Bonnets (delivered including forehead pad and fixing straps)					
Size	**Color**	**Head circumference**	**Weight**	**Amount**	**Article number**
XS		20 - 22 cm	500 - 700 g	1	1 701 61 019
S		22 - 24 cm	700 - 900 g	1	1 701 61 020
M		24 - 26 cm	900 - 1200 g	1	1 701 61 021
L		26 - 28 cm	1200 - 1600 g	1	1 701 61 022
XL		28 - 30 cm	1600 - 2400 g	1	1 701 61 023
XXL		30 - 33 cm	2400 - 3000 g	1	1 701 61 024
3XL		33 - 36 cm	3000 - 4200 g	1	1 701 61 025
4XL		36 - 39 cm	4200 - 6000 g	1	1 701 61 026
5XL		39 - 42 cm	6000 - 7300 g	1	1 701 61 027
6XL		42 - 45 cm	7300 - 8800 g	1	1 701 61 028
7XL		45 - 48 cm	> 8800 g	1	1 701 61 029

	Amount	**Article number**
Applicator with magnet and pressure sealing cap	5	1 701 61 161
Decoupling tube set Ø 10 mm	5	1 701 63 408
Decoupling tube set Ø 12 mm (F&P)	5	1 701 63 409
Respiration sensor	1	1 035 60 103

Prongs		
Size	**Amount**	**Article number**
S	5	1 701 61 001
M	5	1 701 61 002
L	5	1 701 61 003
XL	5	1 701 61 004

Masks		
Size	**Amount**	**Article number**
XS	5	1 701 61 005
S	5	1 701 61 012
M	5	1 701 61 013
L	5	1 701 61 014
XL	5	1 701 61 015

StarterSet
Welcome to Life

The StarterSet gives you a complete get-acquainted package with all essential system accessories in three sizes. Sufficient for initial care for one to two weeks, and ideal for demonstration or training purposes. Every StarterSet includes a cuddly toy.