

## Revolution from the first breath

### Smart

- All-in-one non-invasive rescue device that combines PIP with CPAP
- rPAP™ Generator design enables the clinician to perform nasal prong or standard face mask resuscitation and stabilisation, whilst reducing iWOB by up to 92%<sup>1</sup>
- Dedicated portable rPAP™ Driver features two gas output channels providing safe and accurate PIP and CPAP control

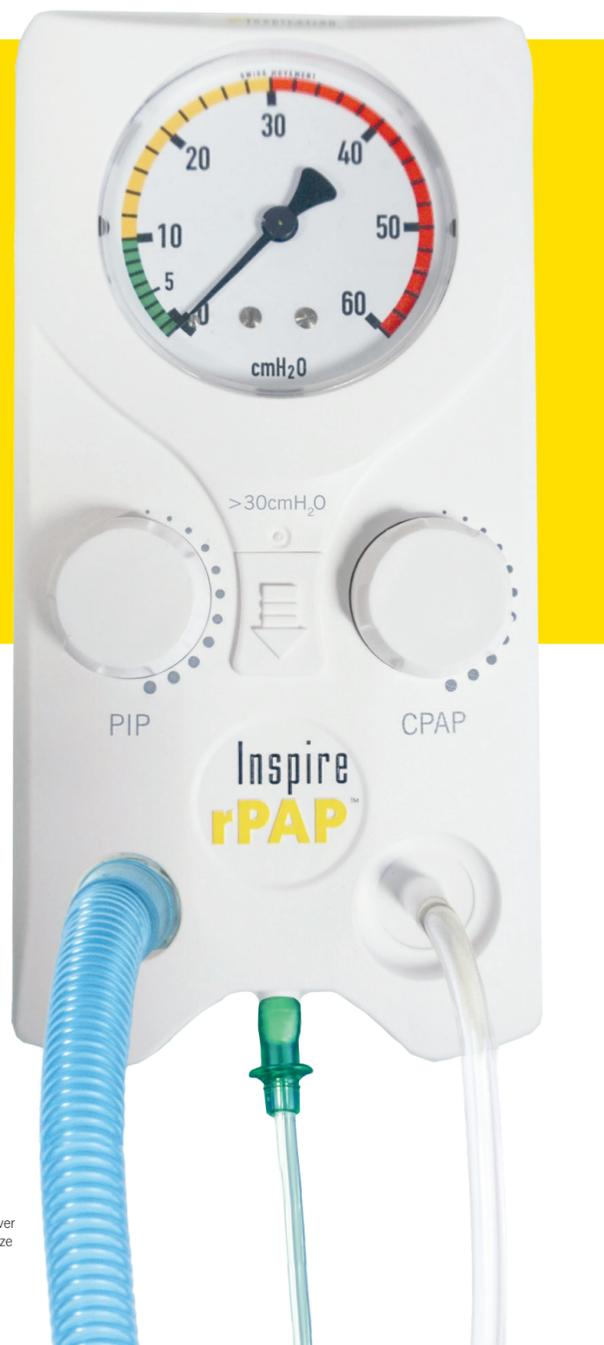
### Simple

- Easy to use rPAP™ Generator combines familiar working principles of resuscitation and nCPAP with clinical benefits of fluidic flip technology, all in one device
- Reduced training effort due to familiarity with working principles and device accessories
- Intuitive and maintenance-free rPAP™ Driver

### Seamless

- Compact, lightweight rPAP™ Driver and simple fixation enables safe transfer from delivery area to NICU
- Maintain infant on nCPAP with capability to add supplementary inflation breaths using same device
- Versatile rPAP™ Generator compatible with range of resuscitation units\*

\* For a list of compatible devices, please contact your local Inspiration Healthcare representative



Inspire rPAP™ Driver shown to actual size

Inspire rPAP™ Stabilisation and resuscitation of infants

## Ordering Information, Technical Description and Specifications

<b>Driver</b> Inspire rPAP™ Driver (Case of 3)	IHC805/3	<b>Manometer range</b>	0 to 60 cmH <sub>2</sub> O
<b>Driver Mounting Bracket</b> Pole Mount Bracket Rail Mount Bracket	IHCBMP1 IHCRCMB1	<b>Manometer accuracy</b>	± 2.5% full scale deflection
<b>Generator and Circuits</b> Inspire rPAP™ Generator & Resuscitation Circuit (Case of 20) Inspire rPAP™ Generator & Resuscitation Circuit with Humidification (Case of 10) Inspire rPAP™ Humidification Circuit (Case of 10)	IHC700/20 IHC710/10 IHC715/10	<b>Maximum pressure relief*</b>	Standard operation: 30 cmH <sub>2</sub> O
<b>Prongs</b> Inspire™ Nasal Prong Extra Small (Case of 10) Inspire™ Nasal Prong Small (Case of 10) Inspire™ Nasal Prong Medium (Case of 10) Inspire™ Nasal Prong Large (Case of 10)	IHC604/10 IHC605/10 IHC606/10 IHC607/10	<b>Override switch</b>	60 cmH <sub>2</sub> O
<b>Head Bands</b> Inspire™ Head Band (Case of 10)	IHBHB005/10	<b>Input gas flow range</b>	5l/min (min) to 15l/min (max)
		<b>Peak Inspiratory Pressure (PIP)*</b>	@ 5 l/min approx. 9 to 59 cmH <sub>2</sub> O @ 8 l/min approx. 10 to 61 cmH <sub>2</sub> O @ 10 l/min approx. 10 to 62 cmH <sub>2</sub> O @ 12 l/min approx. 11 to 63 cmH <sub>2</sub> O @ 15 l/min approx. 13 to 64 cmH <sub>2</sub> O
		<b>Continuous Positive Airway Pressure (CPAP)*</b>	@ 5 l/min approx. 0 to 2 cmH <sub>2</sub> O @ 8 l/min approx. 1 to 5 cmH <sub>2</sub> O @ 10 l/min approx. 1 to 9 cmH <sub>2</sub> O @ 12 l/min approx. 2 to 15 cmH <sub>2</sub> O @ 15 l/min approx. 3 to 22 cmH <sub>2</sub> O
		<b>Dimensions</b>	90mm (width) × 180mm (height) × 55mm (depth)
		<b>Weight</b>	0.2kg
		<b>Recommended patient body weight</b>	Up to 10kg

\* Typical values with rPAP™ Generator

### References

1. Donaldsson, S. et al (2016) Initial Stabilisation Of Preterm Infants: A New Resuscitation System With Low Imposed Work of Breathing For Use With Face Mask or Nasal Prongs. Arch Dis Child Fetal Neonatal Ed 2016.
2. Roberts, C. T. (2016) High-Flow Nasal Cannulae as Primary Respiratory Support for Preterm Infants - An International, Multi-Center, Randomized, Controlled, Non-Inferiority Trial, paper presented to Pediatric Academic Societies (PAS), Baltimore, viewed 3 May 2016.

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## Inspire rPAP™ Stabilisation and resuscitation of infants



An effective, gentle approach to resuscitation and stabilisation

# Inspire rPAP™

## Stabilisation and resuscitation of infants

The Inspire rPAP™ is a revolutionary, non-invasive system for the initial stabilisation and resuscitation of infants.

Its innovative, patented design combines the ability to administer inflation breaths with all the clinical benefits of the gold standard fluidic flip nCPAP technology.

Following birth, the first moments are crucial in defining the respiratory management required to deliver the best outcomes for the infant.

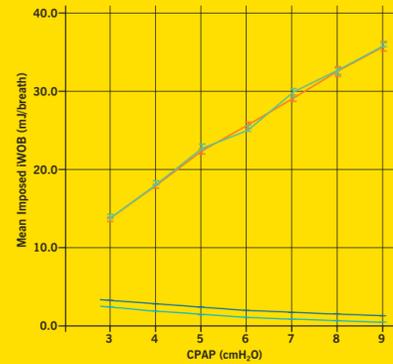


## Lowest iWOB resuscitation device

Inspire rPAP™ reduces iWOB by up to 92%<sup>1</sup>.

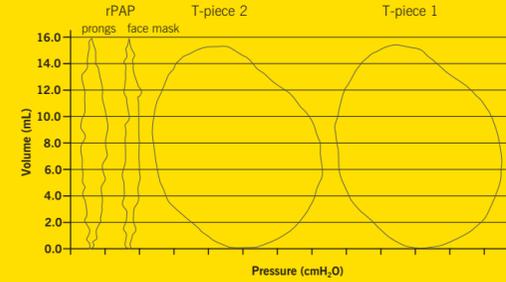
The Inspire rPAP™ groundbreaking design works in harmony with the infant's own respiratory efforts to ensure they do not tire so quickly and preserve valuable energy.

Figure 1:  
Imposed Work of Breathing during resuscitation/stabilisation<sup>1</sup>



Legend: T-piece 1 (red), rPAP with prongs (green), T-piece 2 (blue), rPAP with face mask (orange)

Figure 2:  
Pressure volume loops: Inspire rPAP™ compared with other T-piece resuscitation devices<sup>1</sup>



The dedicated rPAP™ driver features two gas output channels, providing safe and accurate PIP and CPAP control.



The portable rPAP™ driver can be mounted on the Lifestart™ Neonatal bedside resuscitation unit, which can be placed close to the mother, facilitating delayed cord clamping.



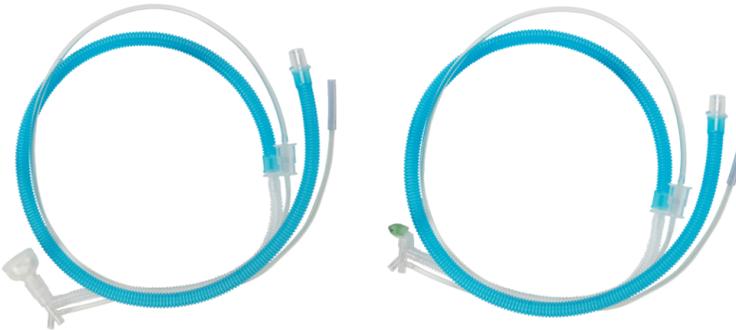
The Inspire rPAP™ Generator design enables the clinician to perform nasal prong or standard face mask resuscitation and stabilisation, whilst reducing iWOB by up to 92%<sup>1</sup>.

Current guidelines recommend the use of a T-piece resuscitation device to deliver a constant stable pressure to the infant's airways, facilitating restoration of the Functional Residual Capacity (FRC). The challenges faced with traditional T-piece resuscitation devices is that they deliver high imposed work of breathing (iWOB) and are pressure unstable<sup>1</sup>.

Inspire rPAP™ overcomes these by significantly reducing iWOB by up to 92%<sup>1</sup> and providing a stable mean airway pressure.

From the first breath, Inspire rPAP™ supports the infant throughout the critical stages of its journey towards respiratory independence.

The Inspire rPAP™ can be used with a face mask or nasal prongs, providing resuscitation with the lowest imposed work of breathing in both applications.



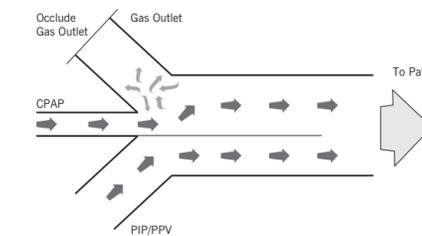
## The science behind the technology

Clinically proven and field-tested fluidic flip technology significantly reduces iWOB and is the key principle behind the Inspire rPAP™ system.



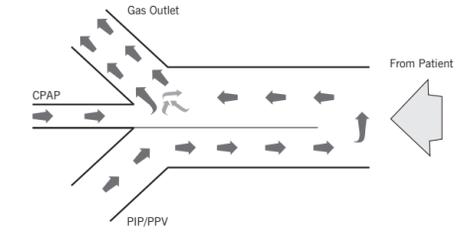
### 1. Resuscitation: Inspiratory Flow

Inflation breaths can be provided to the infant by occluding the gas outlet. At this stage, all gas from the PIP and CPAP limbs will flow to the infant's lungs until PIP is reached.



### 2. Resuscitation: Expiratory Flow

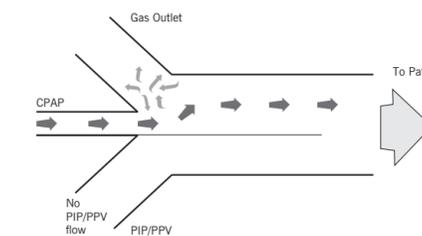
Upon opening the gas outlet, the flow will flip and entrain the expired gas through the gas outlet. Hence, the infant will require much less energy to breathe out.



Once respiratory effort has been established, the patient interface can easily be switched to nCPAP prongs to provide ongoing respiratory support.

### 3. CPAP: Inspiratory Flow

As the infant makes a spontaneous inspiratory effort, gas from the CPAP limb will flow into the infant's lungs.



### 4. CPAP: Expiratory Flow

As soon as the infant stops inspiration, to begin expiration, gases follow the path of least resistance through the gas outlet. When expiratory effort ceases, the flow instantly flips back to the inspiratory position.

