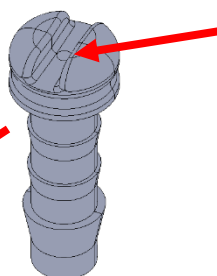
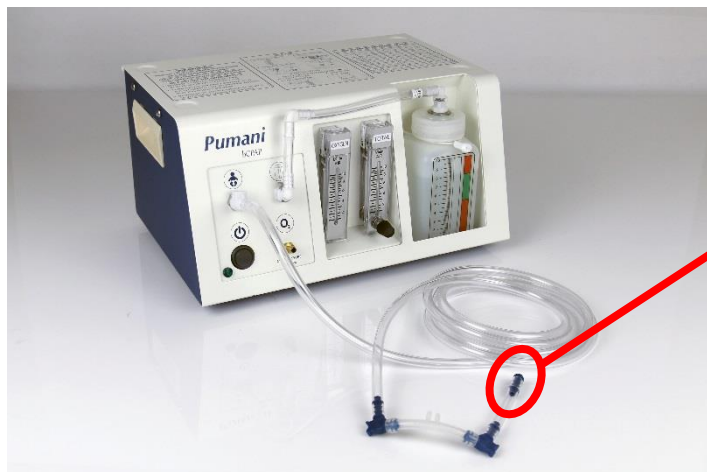


Pumani bCPAP End Cap & Clearance of CO₂

The Pumani bCPAP contains an 'end cap' placed at the distal end of the nasal prongs. This end cap is designed to release CO₂:



The end cap contains a small hole which allows for release of CO₂ during patient treatment. This hole is specifically designed to prevent blockage with a finger.

Hadleigh Health Technologies and its clinical and academic partners have conducted extensive testing of this end cap hole to ensure that CO₂ is released at the nasal prongs for varying patient sizes, from premature neonatal patients to one-year old patients.

Measurements of the percent CO₂ at the nasal prongs in both the Pumani bCPAP and a standard Fisher & Paykel bCPAP (F&P) were taken over one minute periods. The results below show the percent CO₂ measured at the nasal prongs (shown in green/yellow/red) of both bCPAP systems for various tidal volumes (tv), respiratory rates (rr), and flows.

Setup	Parameter	F&P		Pumani	
		Min Flow	Max Flow	Min Flow	Max Flow
12tv, 67rr	CO ₂ rebreathing	none	none	none	none
	ETCO ₂	~4%	~4%	~4%	~3.5% (low)
12tv, 100rr	CO ₂ rebreathing	none	none	none	none
	ETCO ₂	~3.5% (low)	~3% (low)	~3% (low)	~3% (low)
60tv, 55rr	CO ₂ rebreathing	~0.6%	none	none	none
	ETCO ₂	~3.5% (low)	~4%	~4%	~3.5% (low)
60tv, 100rr	CO ₂ rebreathing	~2.5%	~0.6%	none	none
	ETCO ₂	~5.5%	~3% (low)	~5.5%	~5%

These results indicate that the Pumani bCPAP does not increase the CO₂ rebreathing compared to a standard bCPAP system. Additional details on these test methods and results are presented in a pending publication.

For further questions or comments on the end cap and clearance of CO₂, please contact Hadleigh Health Technologies at info@hadleighhealthtechnologies.com.