

Pioneering Respiratory *Solutions*

HAYEK MEDICAL offers a variety of *ventilation* modes assisting with a diverse range of **RESPIRATORY** and **CARDIAC** conditions

Biphasic Cuirass Ventilation

Biphasic Cuirass Ventilation (BCV) is a method of ventilation which works using a non-invasive cuirass or shell, attached to a power unit which actively controls both phases of the respiratory cycle in both *PEDIATRICS* and *ADULTS*. As ventilation is *Biphasic*, it is possible to achieve both higher tidal volumes (negative inspiratory tidal volume and positive expiratory tidal volume), higher frequencies -from 6 to 1200CPM, and

also for the user to have proper and real control over I:E Ratio, without having to depend on passive recoil of the patient. In addition, the patented technology used for the cuirass and its disposable seal in the **Hayek RTX** allows for a comfortable fit and seal of the air within the cuirass. These **advantages** allow for a much higher minute ventilation to be created and thus making complete ventilation possible in both normal and sick lungs.



BCV Patient Groups

Acute Respiratory Failure

Neuromuscular

(E.g. SMA, Duchene's etc)

Problems with Weaning from PPV

Cystic Fibrosis (CF) and those who require chest physiotherapy

Asthma

Chronic Obstructive Pulmonary Disease (COPD)

Head and Spinal Injuries

Ventilation during anesthesia in Ear Nose and Throat (ENT) Procedures

Aids Related Lung Disease

Ventilation Post-Operation

(E.g. post-coronary bypass, Fontan, Fallot, post-pneumonectomy)

Tel: 855-2-GET-BCV or 619-330-9437

Fax: 866-708-4689 or 215-437-6633

www.unitedhayek.com

BCV and Ideal Ventilation



- ✔ Provides complete ventilation to patient
- ✔ Avoids many of the dangers and problems associated with invasive ventilation such as infection and barotrauma
- ✔ Works in the way that the lungs work most efficiently by actively controlling both phases of the respiratory cycle
- ✔ Improves cardiac output
- ✔ Provides an efficient method of weaning from PPV
- ✔ Assists patient to remove secretions
- ✔ Can begin to provide treatment for patients before their condition deteriorates and hospitalization is required
- ✔ Allows for continuity of treatment for patients in hospital, at home, in transport and in emergency situations
- ✔ Simple to use

Technical and Physical Specifications

Dimensions: 370 x 260 x 180mm (W x D x H)

Cuirasses: 4 Adult Sizes, 7 Pediatric Sizes

Power Unit Weight: 9kg

ACCURACY AND RANGE OF DISPLAYED VALUES

CUIRRASS

| | | |
|-----------------------|-----------------------------------|----------------|
| Inspiratory Pressure: | 0.0 to -50.0 cmH ₂ O | ±3% + 2 digits |
| Expiratory Pressure: | 0.0 to +50.0 cmH ₂ O | ±3% + 2 digits |
| Mean Pressure: | -50.0 to +50.0 cmH ₂ O | ±3% + 2 digits |
| I/E Ratio: | 6.0:1.0 to 1.0:6.0 | ±5% + 2 digits |
| Frequency: | 6 to 1200cpm | ±5% + 2 digits |

AIRWAY

| | | |
|-----------------------|---------------------------------|----------------|
| Inspiratory Pressure: | 0.0 to -25.0 cmH ₂ O | ±3% + 2 digits |
| Expiratory Pressure: | 0.0 to +25.0 cmH ₂ O | ±3% + 2 digits |
| I/E Ratio: | 6.0:1.0 to 1.0:6.0 | ±5% + 2 digits |
| Frequency: | 6 to 1200cpm | ±5% + 2 digits |

DEFAULT ALARM LIMITS:

Apnoea: High = 20s

Respiration Rate: High = 60/min

NOTE:

These Default Alarm Limits apply each time the Hayek RTX Respirator is switched on.

270 Geiger Road, Suite D
Philadelphia, Pennsylvania 19115

752 5th Ave.
San Diego, California 92101

Works entirely
physiologically

Only form of
ventilation that
has an *active*
expiratory phase

No requirement
for additional
sedation

No risk of *VAP*

No risk of
barotrauma

Increased
patient comfort

Increase in
cardiac output

Can be used
in place of NIPPV,
mask, etc.

In most cases, can
be used with or
instead of IPPV

Management of
secretions

Provides
chest
physiotherapy and
cough assistance

Decreased stay in
ICU post operative