



# Assessment & Placement GUIDE

*Passy Muir*®

Millions of Voices, ONE VALVE™

# Passy Muir®



# Quick Tips for Application of the Passy Muir® Valve

## All Passy Muir® Valves

Have the patented, bias-closed position, no-leak design, which means the Valve is always closed until the patient inhales. This allows the patient to create positive airway pressure and restores the patient to a closed respiratory system. The Valve opens easily and closes automatically at the end of the inspiratory cycle without air leak and without patient expiratory effort.

Invented by a patient for patients, the Passy Muir Valve restores communication, improves swallowing and oxygenation, and expedites weaning and decannulation. The Valve may be used interchangeably on or off the ventilator for both pediatrics and adults. It is latex free and made in the USA.



*Passy Muir®*

Millions of Voices, ONE VALVE™

# Clinical Complications of a Tracheostomy Tube with an Inflated Cuff

## Complications of an Inflated Cuff

- An improperly managed, inflated cuff may cause necrosis and trauma to the tracheal wall
- Laryngeal anchoring may interfere with closing of the epiglottis and airway protection during swallowing
- Reduced airflow to the upper airway may:
  - Reduce sensation
  - Affect vocal fold closure
  - Reduce smell and taste
  - Result in loss of voice
- Reduced subglottic pressure may affect:
  - Swallow
  - Cough
  - Physiologic PEEP
  - Valsalva maneuver

Inhalation



Exhalation



# Clinical Benefits of the Passy Muir® Valve

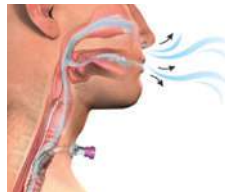
## Clinical Benefits

- Restores access to voice and ability to communicate
- ADA and JCAHO Compliance
- Eliminates need for finger occlusion or chin dropping
- Restores airflow for return of sensation, taste, and smell
- Restores sub-glottic pressure and may improve swallowing and reduce aspiration
- May improve core strength and trunk control
- May improve cough and reduce suctioning needs
- Improves gas exchange
- May facilitate lung recruitment and decrease risk of atelectasis
- May expedite weaning and decannulation
- Improves quality of life

### Inhalation



### Exhalation



# Quick Tips for Assessment & Placement

Proper airway assessment, patient education, therapy, and a multidisciplinary team approach are keys to successful Passy Muir® Valve application.

## **Patient Selection**

- Awake and alert
- Medically stable
- Able to tolerate cuff deflation
- Manageable secretions
- Patent upper airway

## **Airway Assessment**

- Achieve full cuff deflation
- Occlude tube with gloved finger on exhalation
- Ask patient to voice or cough

## **Passy Muir® Valve Placement**

- Fits on universal 15mm tracheostomy tube hub
- Apply with a quarter turn to the right
- Monitor vital signs and work of breathing
- Increase wearing time as tolerated
- May use with humidity (non-medicated heated aerosol)
- Remove Valve for medicated aerosol treatment

*Note: please affix Pilot Balloon Warning Label to the pilot line on the tracheostomy tube.*

# Quick Tips for Assessment & Placement

## **Some factors that may affect upper airway patency**

- Trach tube size or type
- Upper airway obstruction
- Incomplete cuff deflation
- Edema
- Foam-filled cuff (absolute contraindication)

## **Assessment and treatment of common issues**

### **Inadequate exhalation or breath stacking**

- Check for complete cuff deflation
- Suction trach tube and/or oropharynx
- Reposition patient and/or trach tube
- Retrain for normal breathing patterns
- Assess need for downsizing trach tube
- Consider direct visual assessment for airway obstruction

### **Coughing**

- Allow patient time to move secretions
- Suction patient, if needed
- For persistent or dry cough, remove Valve and reassess

### **Anxiety and Depression**

- Use oral exhalation exercises
- Solicit family involvement
- Educate and use relaxation techniques
- Consult recreational therapy, psychology services, or clergy

### **Weak voice**

- Refer to ENT or Otolaryngologist
- Glottic closure exercises
- Diaphragmatic breathing exercises

# Pediatric Airway Differences

## Anatomical Differences

Compared to the adult airway, an infant's airway passages are smaller, and even tiny amounts of tissue edema or obstruction can create a critical loss of airway. Airway assessment of the pediatric patient is critical, considering:

- The tongue is larger within the oral cavity
- Vocal folds are positioned with an anterior slant
- Larynx is shorter and narrower than an adult larynx
- Epiglottitis in infants and young children is relatively long, floppy, and narrow
- Narrowest portion of the airway is below the glottis in children under 10 years





# Clinical Benefits

of Passy Muir® Valves  
for Infants and Children

## **Pediatric Benefits**

- Can be used as early as one to two weeks chronological age
- Supports normal speech and language development
- Facilitates child and caregiver interactions through vocalization
- Facilitates life activities and socialization
- Eliminates finger occlusion and chin drop for voicing
- Reduces secretions and suctioning
- Improves swallowing and may reduce aspiration



# Pediatric Therapy Techniques



## Techniques

- PLAY! PLAY! PLAY!
- Build trust and rapport with child
- Give play names to Valves and other respiratory equipment
- Use tracheostomized dolls or stuffed animals with Valves
- Provide verbal praise and rewards

## Activities to encourage oral exhalation

- Bubbles
- Pinwheels
- Whistles
- Straws
- Horns
- Cotton balls
- Kazoos



## Activities to encourage voicing and speech

- Making vehicle or animal noises
- Singing
- Humming
- Imitation



# Toby Tracheapuppet™

A therapist's best partner  
and a child's best friend

Featuring a pediatric tracheostomy tube and PassyMuir® Valve for demonstration and education, the Toby Tracheapuppet™ plush therapy puppet is ideal for interacting with young patients to facilitate vocalizations and therapeutic play.



[www.passymuir.com](http://www.passymuir.com)

# TRACHTOOLS™

Speech & Resources App

## TRACHTOOLS™

Speech & Resources App



- User-friendly app for iPhone, iPad, and Android
- Pre-recorded responses and phrases enable communication at the touch of a button, in English or Spanish
- User-defined male or female voice
- Child voice option
- Easy to use features and navigation
- Links to useful resources for both patient and clinician
- Patient videos

Available for **FREE** download at the App Store, Google Play, or [www.passymuir.com/app](http://www.passymuir.com/app)

[www.passymuir.com](http://www.passymuir.com)



# Accessories & Connections GUIDE

*Passy Muir*®

Millions of Voices, ONE VALVE™

# David A. Muir

Passy Muir® Valve Inventor

## Invented by a patient, for patients

Diagnosed with muscular dystrophy, David eventually became ventilator-dependent and, as a result, was unable to speak. He experienced firsthand the isolation and frustration caused by the loss of his voice. After months of being unable to communicate, David was determined not to suffer in silence, and from his wheelchair, he used his scientific background in engineering to invent a speaking Valve that could be used on and off the ventilator.

His personal experience fueled his passion and inspired him to find a way to help other patients with tracheostomies and ventilator-dependence through the use of his Valve.

David A. Muir  
Inventor of the  
Passy Muir® Valve



*Passy Muir*®  
Millions of Voices, ONE VALVE™

# Accessories & Connections Guide

for the Passy Muir® Valves

## All Passy Muir® Valves

- Have the patented bias-closed position, no-leak design
- Are designed to fit the universal 15mm hub of tracheostomy tubes, including neonatal and pediatric tubes
- Can be used interchangeably by all tracheostomy patients, pediatric and adult, non-ventilator and ventilator, with the exception of the PMV® 2020\*

\* PMV 2020 is for metal tracheostomy tubes



*Passy Muir*®  
Millions of Voices, ONE VALVE™

# Tracheostomy & Ventilator Swallowing & Speaking Valves

## Passy Muir® Valves



**PMV® 007** (Aqua Color™)  
Designed for ventilator application with disposable tubing. May be used on or off ventilator.



**PMV® 2001**  
(Purple Color™)  
Lightweight, low profile, recommended for inpatient use. May be used in-line with adapter.



**PMV® 005** (white)  
Original Passy Muir Valve. Attaches to a standard 15mm tracheostomy tube hub or connects to a ventilator with adapter.



**PMV® 2000** (clear)  
Lightweight, low profile, recommended for outpatient use. May be used in-line with adapter.



# Passy Muir® Valve Accessories

## Passy Muir® Valve Oxygen Adapter PMA® 2000

The PMA® 2000 Oxygen Adapter snaps onto the PMV® 2000 and PMV® 2001 and allows for easy delivery of low flow supplemental oxygen and humidity.



## PMV® 2001 with PMA® 2000

PMV® 2001  
(Purple Color™)

PMA® 2000



## PMV® Secure-It®

PMV® 2000  
(clear)

The PMV® Secure-It® strap is designed for use with the 2000 series Valves and attaches the Valve to the trach tie to prevent loss.

PMV® Secure-It®



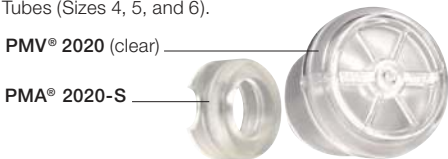
# Passy Muir® Valves for Metal Tubes

## **PMV® 2020** (clear)

The PMV® 2020 (clear) with the PMA® 2020-S Adapter are for use with metal Jackson Improved Tracheostomy Tubes (Sizes 4, 5, and 6).

**PMV® 2020** (clear)

**PMA® 2020-S**



The Jackson Original Tracheostomy Tube with Permanent 15 mm Adapter can accommodate all Passy Muir® Valves except the PMV® 2020.

# Ventilator Adapters

## **Passy Muir Adapter**

Part # PMV-AD1522  
15mm x 22mm Adapter  
[www.passy-muir.com](http://www.passy-muir.com)  
800-634-5397



## **Passy Muir Adapter**

Part # PMV-AD22  
22mm Silicone Adapter  
[www.passy-muir.com](http://www.passy-muir.com)  
800-634-5397



AirLife® Omni-Flex™  
Adapter



Dual-Axis  
Swivel Adapter

[www.passymuir.com](http://www.passymuir.com)

# Ventilator Connections

Dual-Axis Swivel \_\_\_\_\_

**PMV® 007** \_\_\_\_\_  
(Aqua Color™)

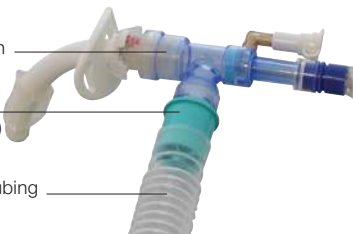
Standard  
Disposable Tubing \_\_\_\_\_



In-line Suction  
Catheter \_\_\_\_\_

**PMV® 007** \_\_\_\_\_  
(Aqua Color™)

Standard  
Disposable Tubing \_\_\_\_\_

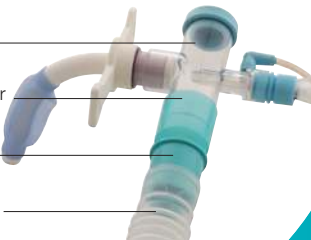


T-piece In-line  
Suction Catheter \_\_\_\_\_

**PMV® AD1522**  
Step Down Adapter \_\_\_\_\_

**PMV® 007** \_\_\_\_\_  
(Aqua Color™)

Standard  
Disposable Tubing \_\_\_\_\_



# Ventilator Connections

Omni-Flex™ \_\_\_\_\_

**PMV® 007**  
(Aqua Color™) \_\_\_\_\_

Standard Disposable Tubing \_\_\_\_\_

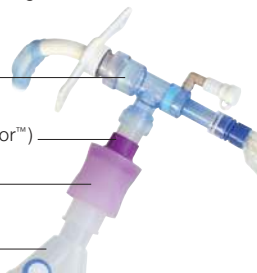


In-line Suction \_\_\_\_\_  
Catheter \_\_\_\_\_

**PMV® 2001** (Purple Color™) \_\_\_\_\_

**PMV® AD22** \_\_\_\_\_  
22mm Silicone Adapter \_\_\_\_\_

Circuit Wye \_\_\_\_\_



T-piece In-line \_\_\_\_\_  
Suction Catheter \_\_\_\_\_

**PMV® AD1522** \_\_\_\_\_  
Step Down Adapter \_\_\_\_\_

**PMV® 2001** (Purple Color™) \_\_\_\_\_

**PMV® AD22** \_\_\_\_\_  
22mm Silicone Adapter \_\_\_\_\_

Circuit Wye \_\_\_\_\_



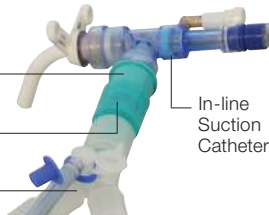
# Pediatric Ventilator Connections

**PMV® 007** \_\_\_\_\_  
(Aqua Color™)

**PMV® AD1522** \_\_\_\_\_  
Step Down Adapter

Pediatric Circuit \_\_\_\_\_

In-line  
Suction  
Catheter



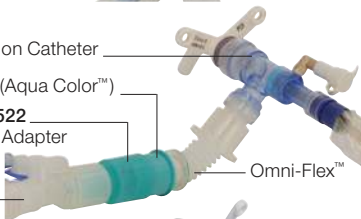
In-line Suction Catheter \_\_\_\_\_

**PMV® 007** (Aqua Color™) \_\_\_\_\_

**PMV® AD1522** \_\_\_\_\_  
Step Down Adapter

Pediatric  
Circuit \_\_\_\_\_

Omni-Flex™



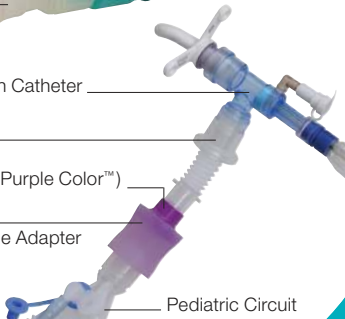
In-line Suction Catheter \_\_\_\_\_

Omni-Flex™ \_\_\_\_\_

**PMV® 2001** (Purple Color™) \_\_\_\_\_

**PMV® AD22** \_\_\_\_\_  
22mm Silicone Adapter

Pediatric Circuit



# Care & Cleaning of the Passy Muir® Valves



## Packaging

Each Passy Muir® Valve comes packaged in a color-coded PMV® Patient Care Kit designed to facilitate proper use and maintenance of the Valve and to ensure patients and clinicians have complete product information and instructions.

## Daily Cleaning Procedures

1. Swish Valve in pure soap and warm water.
2. Rinse Valve thoroughly in warm running water.
3. Allow Valve to air dry thoroughly before placing it in storage container.
4. DO NOT use hot water, peroxide, bleach, vinegar, alcohol, brushes, or cotton swabs to clean Valve.



# Education & Clinical Support



- Live Special Events Webinars
- Self-Study Webinars
- Free Continuing Education
- Free Clinical Resources



## Educational Presentations

- Facility Locations
- State and National Conferences
- Society Meetings
- Seminars
- Colleges and Universities



Email your questions to:

**[info@passymuir.com](mailto:info@passymuir.com)**



**1 800 634 5397**

Speech and Respiratory Clinical Specialists are available to answer your questions



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