RESUSCITATION BAGS

OVERVIEW

- Part I

  Manual Ventilator

- Part II:

  Value Proposition

  Selling Tips

PART I.

MANUAL VENTILATORS

PHYSIOLOGY SYNOPES

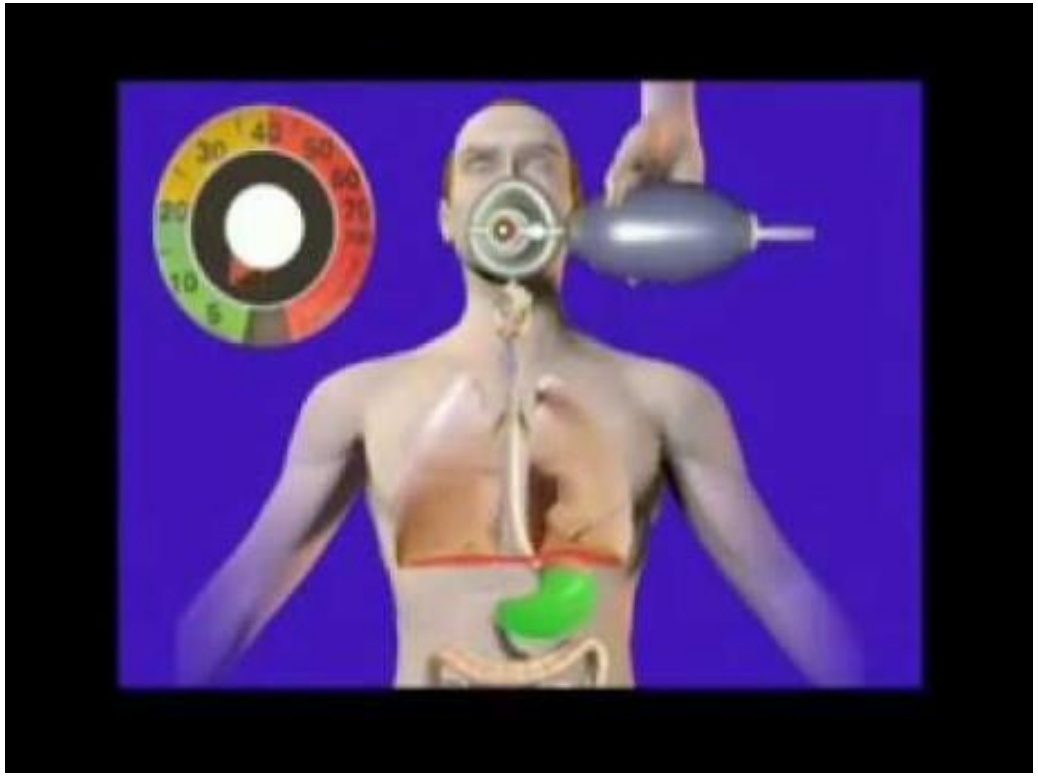
- Peak Inspiratory Pressure (PIP):
  The highest level of pressure applied to the lungs during inhalation
- Positive End-Expiratory Pressure (PEEP):
  The pressure in the lungs that exists at the end of expiration
- CPAP:
  Continuous positive airway pressure
- FiO_2 (Fraction of Inspired Oxygen):
  The measurement of how much oxygen in the air is being inhaled from a ventilator
- Tidal Volume:
  The volume of air moved in or out of the lungs during quiet breathing

TERMINOLOGY

- Resuscitation bag
  - Manual ventilator
  - Self-inflating
  - BVM
  - Resus bag

AIRFLOW (AF SERIES)

- Self-Inflating Resuscitators



AIRFLOW (AF SERIES)

Features

- Variety of styles
- Integrated Pressure Manometer
- Pliable body bag
- Highly customizable
- Bacterial/Viral Filter
- Single use, non-sterile, latex free

Market

- Ambu, Mercury, Smiths, Vyaire, Westmed, Teleflex

AIRFLOW COMPONENTS

www.Sun-Med.com | 800-433-2797

RESUSCITATION / VENTILATION

Ventlab AIRFLOW™ MANUAL RESUSCITATOR

LATEX FREE | SINGLE PATIENT USE | DISPOSABLE | CE MARK | DEHP

The AirFlow Resuscitation/Ventilation Bag comes with a bacterial/viral filter, oxygen reservoir and mask. Available with Ventlab's signature pressure manometer and several components to create a custom resuscitation bag.

Integrated pressure manometer to promote proper pressure delivery

Bacterial/viral filter protects clinician from contaminated expiration content

Patient port swivel allows clinician to easily move around patient while maintaining proper resuscitation

Pliable bag body allows very good tactile feel of patient's lung compliance

Red fits-all O_2 tubing connector enables quick visualization of proper O_2 connection

Adult AirFlow AF1140-Series

Shown with integrated pressure manometer, B/V filter, size 5 inflatable mask, and inflatable O_2 reservoir

AIRFLOW™ MANUAL RESUSCITATOR

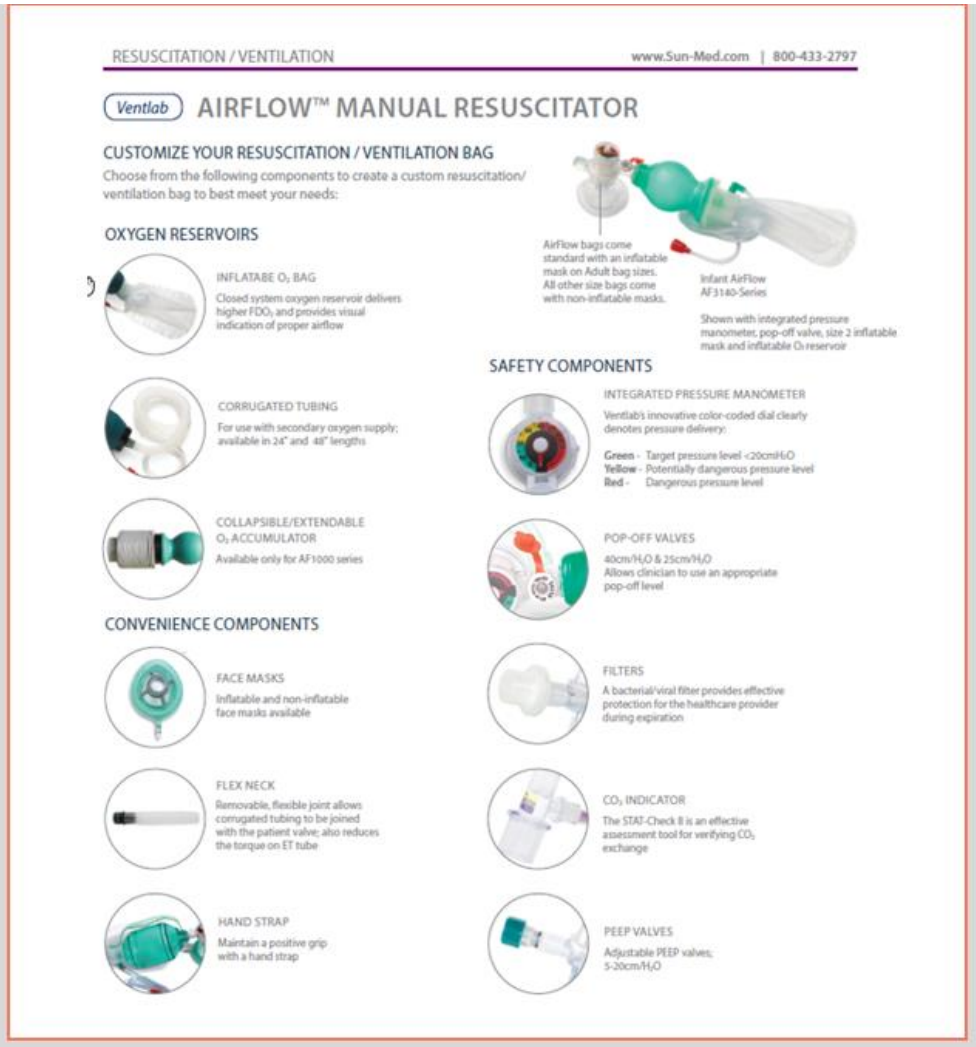
- Single patient use resuscitation/ventilation bag available in five sizes/volumes
- Available with or without integrated pressure manometer
- Integrated color-coded pressure manometer effectively promotes proper pressure delivery (<20cmH_2O); the tri-color fields alert to the risk level of delivered pressure
- Accurate pressure delivery helps reduce gastric insufflation, thus preventing vomiting, aspiration and resulting pneumonia
- Face mask proportionately sized to resuscitation bag size
- Select from a variety of components to assemble a custom resuscitation bag to meet your unique patient needs (see opposite side)

AIRFLOW + INTEGRATED PRESSURE MANOMETER

CAT#	SIZE	VOLUME	STROKE VOLUME	PK
AF2140MB	Pediatric	1000ml	650-670ml	10
AF3140MB	Infant	300ml	140-170ml	10
AF4140MB	Child	550ml	320-340ml	10
AF5140MB	Adult	1500ml	640-660ml	10
AF1140MB	Adult	1900ml	950-960ml	10

AIRFLOW STANDARD (WITHOUT PRESSURE MANOMETER)

CAT#	SIZE	VOLUME	STROKE VOLUME	PK
AF2040MB	Pediatric	1000ml	650-670ml	10
AF3040MB	Infant	300ml	140-170ml	10
AF4040MB	Child	550ml	320-340ml	10
AF5040MB	Adult	1500ml	640-660ml	10
AF1040MB	Adult	1900ml	950-960ml	10



RESUSCITATION / VENTILATION

www.Sun-Med.com | 800-433-2797

Ventlab AIRFLOW™ MANUAL RESUSCITATOR

CUSTOMIZE YOUR RESUSCITATION / VENTILATION BAG

Choose from the following components to create a custom resuscitation/ ventilation bag to best meet your needs:

AirFlow bags come standard with an inflatable mask on Adult bag sizes. All other size bags come with non-inflatable masks.

Infant AirFlow AF3140-Series

Shown with integrated pressure manometer, pop-off valve, size 2 inflatable mask and inflatable O_2 reservoir

OXYGEN RESERVOIRS

INFLATABE O_2 BAG

Closed system oxygen reservoir delivers higher FDO_2 and provides visual indication of proper airflow

CORRUGATED TUBING

For use with secondary oxygen supply; available in 24" and 48" lengths

COLLAPSIBLE/EXTENDABLE O_2 ACCUMULATOR

Available only for AF1000 series

CONVENIENCE COMPONENTS

FACE MASKS

Inflatable and non-inflatable face masks available

FLEX NECK

Removable, flexible joint allows corrugated tubing to be joined with the patient valve; also reduces the torque on ET tube

HAND STRAP

Maintain a positive grip with a hand strap

SAFETY COMPONENTS

INTEGRATED PRESSURE MANOMETER

Ventlab's innovative color-coded dial clearly denotes pressure delivery:

Green - Target pressure level <20cmH_2O
Yellow - Potentially dangerous pressure level
Red - Dangerous pressure level

POP-OFF VALVES

40cmH_2O & 25cmH_2O
Allows clinician to use an appropriate pop-off level

FILTERS

A bacterial/viral filter provides effective protection for the healthcare provider during expiration

CO_2 INDICATOR

The STAT-Check II is an effective assessment tool for verifying CO_2 exchange

PEEP VALVES

Adjustable PEEP valves; 5-20cmH_2O

V-CARE

Features

- Ultra soft pliable silicone bag body
- Integrated Pressure Manometer
- Pliable body bag
- Highly customizable
- Bacterial/Viral Filter
- Red fits-all O2 tubing connector

Market

- Ambu, Mercury, Smiths, Vyaire, Westmed, Teleflex

SAFESPOT (SS SERIES)

Features

- Ultra-thin ‘spots’ to provide an enhanced tactile feel for lung compliance
- Integrated Pressure Manometer
- Pop-off valve options of 40cmH2O and 25 cmH2O
- Bacterial/Viral Filter
- Single use, non-sterile, latex free

COMPETITOR BAGS

AMBU

Smiths

Mercury

ACCESSORIES

BACTERIAL / VIRAL FILTER			
CAT#	BF101	BF102	BF103
DESCRIPTION	Accepts 19mm	Accepts 19mm or 30mm	Accepts 19mm or 30mm
B/V EFFICIENCY	>99.99%	>99.99%	>99.99%
WEIGHT (G)	9.6	11.8	12.4
ID / OD (MM)	19ID x 19ID	19ID x 22ID / 30 OD	30ID x 22ID / 30OD
DEAD SPACE (ML)	16	20	29
RESISTANCE (CMH2O) 30LPM	<1.8	<2.2	<2
SAMPLING PORT	No	No	No
PKG	50	50	50

Most Popular:
- BF102

PARTICLE SIZE REFERENCE

- Bacterial and viral (B/V) filters help reduce the transmission of microbes and other particulate matter in the breathing system. Providing highly efficient filtration, the B/V filters are lightweight and shaped to reduce drag on the breathing system while ensuring patient comfort.

- Additionally our B/V filter protects against the spread of the Measles which has particle sizes ranging from 0.12 - 0.25 microns.

POTENTIALLY INFECTIOUS BACTERIA & VIRUSES

Particle sizes indicated in µ (microns).

Hepatitis B Virus	0.02 µ
Hepatitis A Virus	0.027 - 0.029 µ
Hepatitis E Virus	0.027 - 0.034 µ
Hepatitis D Virus	0.036 - 0.043 µ
Hepatitis C Virus	0.04 - 0.05 µ
Adenovirus	0.07 µ
HIV	0.08 µ
Influenza Virus	0.08 - 0.1 µ
Sars	0.1 µ
Cytomegalovirus	0.1 µ
Orthomyxovirus	0.1 µ
Serratia Marcescens	0.45 µ
Pseudomonas Aeruginosa	0.5 µ
Pseudomonas Diminuta	0.5 µ
Staphylococcus Aureus	1.0 µ
Mycobacterium Tuberculosis	0.3 µ x 1.0 µ (smallest size)

TEST VIRUS / BACTERIA

ϕX174 Bacteriophage	0.027 µ

Filtration Efficiency based on the challenge Bacteriophage, conducted by Nelson Laboratories was found to be 99.99%.

ACCESSORIES

Adjustable PEEP Valve

- Pressure range: 5-20cmH2O
- Large print on scale for visibility
- Multiple options including MRI compatible

ITEM	DESCRIPTION	SIZE	PK
VP700	Adjustable PEEP Valve, 5-20 mg H2O	19 mm	20
VP701	Adjustable PEEP Valve, 5-20 mg H2O	19 mm + 30 mm Adapter Attached	20
VP702	Adjustable PEEP Valve + Adapter, Converts to 30 mm	19 mm + 30 mm Adapter	20
VP703	Adjustable PEEP Valve + Adapter, Converts to 19 mm	30 mm Removable Adapter	20
VP705	MRI Safe Adjustable PEEP Valve	19 mm	20

CO2 INDICATORS

MaxCaps: Neo, Ped, and Adult

- For use up to 6 hours of continuous use with 360° view
- Efficient sponge material
- Neonatal, Pediatric, Regular sizing
- Fully compatible with SunMed devices
- Can be used with ET Tubes and Air-Q

FloCap

- For use up to 24 hours
- For patients greater than 15 kg
- Full compatible with all SunMed resuscitation devices
  - FloCap positioning is important to understand

STAT CHECK

Features

- Effectively verifies CO2 exchange
- Easy to see
- Fits on all our bag offerings
- Great for price conscious accounts

FENEM CO2 INDICATOR

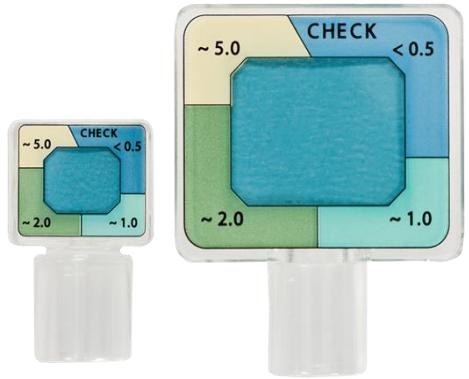
Features

- Effectively verifies CO2 exchange, with manual resuscitator and ET Tube
- Patient Range: >1kg
- Normal Usage: >2 hours
- Shelf Life: 2 years
- Available for attachment on any 30mm or 19mm exhalation ports

COMPETITOR CO2 INDICATORS

Covidien Nellcor Easy Cap II

Westmed CO2 Easy



Vyaire Airlife CO2

Mercury NeoStatCO2

Mercury Medical StatCO2

COMPETITIVE ANALYSIS - ADULT

MAXCAP ADULT (Patient Weight > 15Kg)

Product	Weight (g)	Dead Space (ml)	Resistance (cmH20)	Usage Time (hours)	Shelf Life (years)
Easy Cap II	<20	25	4.4 +/-1.0 @ 60 LPM	2	3
CO2 Easy	<20	20	3.0 +/-1.0 @ 60 LPM	2	3
Stat CO2	22	25	3.0 @ 60 LPM	24	2
Airlife CO2	14	16	2.0 @ 60 LPM	24	2*
FLOCAP	23	<25	2.7 @ 60 LPM	24	3
MaxCap	6	7	2.4 @ 60 LPM	6	3

COMPETITIVE ANALYSIS - PEDIATRIC

MAXCAP ADULT (Patient Weight > 15Kg)

Product	Weight (g)	Dead Space (ml)	Resistance (cmH20)	Usage Time (hours)	Shelf Life (years)
Easy Cap II	<20	25	4.4 +/-1.0 @ 60 LPM	2	3
CO2 Easy	<20	20	3.0 +/-1.0 @ 60 LPM	2	3
Stat CO2	22	25	3.0 @ 60 LPM	24	2
Airlife CO2	14	16	2.0 @ 60 LPM	24	2*
FLOCAP	23	<25	2.7 @ 60 LPM	24	3
MaxCap	6	7	2.4 @ 60 LPM	6	3

COMPETITIVE ANALYSIS - NEO

MAXCAP NEONATAL (Patient Weight 0.25-6 kg)

Product	Weight (g)	Dead Space (ml)	Resistance (cmH2O)	Usage Time (hours)	Shelf Life (years)
Neostat CO2	3	1	3.0 @ 5 LPM	24	2
MaxCap	**5**	**1**	**2.1 @ 5 LPM**	**6**	**2**

MASK

Vent Mask

Vent Mask II

Soft Seal

VALUE PROPOSITION & SELLING TIPS

ventlab

VAP Prevention

Ventilation-Associated Pneumonia (VAP)

Also known as Ventilation-Associated Event (VAE)

Common Path to VAP / VAE

Emergency response.

Manual ventilation is performed, and excessive delivered pressure results in gastric insufflation, leading to vomiting/aspiration.

Patient requires ventilation.

Days pass, and the effects of vomiting/aspiration take hold.

Patient is diagnosed with pneumonia.

Prolonged hospital stay; increased cost of treatment and costs to facility.

VAP / VAE Prevention

Emergency response.

Manual ventilation is performed.

Proper delivered pressure is administered with integrated manometer to prevent gastric insufflation.

Ventilation needed. Prescribed care proceeds, and pneumonia is effectively prevented.

On time patient discharge without incurring additional costs.

AIRFLOW RESUS BAGS – STRATEGY MATRIX

	Feature	Benefit
Product Attributes	Integrated pressure manometer	• Effectively promotes proper pressure delivery (<20cmH_2O) for greater patient safety • Helps reduce gastric insufflation, thus preventing vomiting, aspiration and resulting pneumonia • Helps achieve targeted volume / inspiratory pressure during transport
	Pliable bag body	Helps reduce hand fatigue while bagging
	Pre-assembled bag	Filter and integrated pressure manometer are ready to go
	Configurable with many options	• Create a custom bag for you specific needs • Components come attached and ready to go
	Swiveling patient port	• Allows clinician to easily move around patient while maintaining proper position of the bag • No torque is applied on ET tube when in use
	Red fits-all connector	Enables quick visualization of proper O_2 connection
	Inflatable & non-inflatable face masks	Large variety of sizes and types to meet your needs
	3 Oxygen reservoirs available	Customizable for your specific needs
	Bacterial / viral filter	• Protects clinician, staff, other patients and visitors from cross contamination • Reduces spread of infection • Standard component on all bags
	PEEP valve (optional component)	Adjustable for meeting patient needs
	Pop-off valve (optional component)	Allows clinician to use an appropriate pop-off level (40cm or 25cm H_2O) to help prevent excessively high inspiratory pressures
	CO_2 indicator (optional component)	Effective assessment tool for verifying ET tube placement
	Flex neck (optional component)	• Removable, flexible joint allows corrugated tubing to be joined with the patient valve • Reduces torque on ET tube
	Hand strap (optional component)	Maintain a positive grip on bag
	Single use, non-sterile, latex free	Helps prevent potential allergic reactions

AIRFLOW RESUS BAGS – STRATEGY MATRIX

Value Proposition	**The AirFlow Manual Resuscitation/Ventilation Bag with integrated pressure manometer and attached filter:** • **Effectively promotes proper pressure delivery (<20cmH_2O) for greater patient safety** • **Helps reduce gastric insufflation, thus preventing vomiting, aspiration and resulting pneumonias** • **Helps achieve targeted volume / inspiratory pressure during transport** • **Protects clinician, staff, other patients and visitors from cross contamination** • **Reduces spread of infection**	
Call Points	Anesthesia, Emergency/ER, Respiratory, Nursing, Physician, Risk Management, Infection Control, Critical Care, Code Blue, Rapid Response	
Market	Product Configuration	Competition
	AirFlow with integrated pressure manometer	None - Ventlab innovation
	AirFlow standard configuration	Ambu, Mercury, Smiths, Vyaire, Teleflex, Westmed
Best Practices	For an effective sell: • Target call points • Identify accounts not using AirFlow product features • For accounts currently using similar features, there is a conversion opportunity • Target the clinician and build consensus with facility (understand who makes the decisions) • Demonstrate the product and highlight features from top to bottom • Provide clear sale follow up with staff education, in-service and proper training	

RESUSCITATION / VENTILATION

Ventlab

AIRFLOW™ BAG - AF5140MB / AF5140MB-M5

LATEX FREE | SINGLE PATIENT USE | DISPOSABLE | CE MARK | DEHP

- Single use resuscitation bag
- Adult face mask
- Non-sterile and latex free
- Volume - 1500ml
- Stroke Volume - 640-660ml
- Weight Range - >40 kg (88 lbs)

INSTRUCTIONS FOR USE

PREPARATION FOR USE

1. Test the resuscitator for proper functioning: With patient port completely occluded, squeeze bag body to assure resistance is present. Positive needle movement should occur if equipped with a manometer.
2. Before using the mask, inspect for adequate inflation.
3. The manual resuscitator /ventilator may be used with a 19 mm peep valve with or without the expiratory filter attached. A 30 mm peep valve can used with the expiratory filter attached. Attach peep valve to the expiratory filter that is attached to the exhalation port. Be sure that the accessory fits properly and does not interfere with compression of the resuscitator.
4. Actual PEEP may vary with patient lung compliance and resistance. Verify PEEP with a certified manometer.
5. For correct performance on the manual resuscitator/ventilator with oxygen reservoir, unfold the reservoir bag and assure that airflow is not restricted.

CAUTIONS

Expiratory filter, the filter must be dry and free of secretions. Wet filters have a high resistance that can impede ventilation and cause serious patient injury. Also, wet filters will not provide effective filtration.

DIRECTIONS FOR USE

1. Place the patient in a supine position. Establish and maintain an open airway.
2. Grasp the bag body with one hand.
3. Hold the mask between the index finger and thumb of the other hand. Place mask over face firmly to form a tight seal around the patient's nose and mouth.
4. Ventilate the patient by compressing the bag body for inhalation and releasing the bag body for patient's passive exhalation and bag body re-expansion. Continue this cycle as directed by medical authority.
5. Monitor peak airway pressures by observing the integrated manometer. **NOTE: If the patient is not intubated and patient condition allows, keep the peak inspiratory pressures <20 cm H_2O which will help prevent gastric insufflation during mask ventilation.**
6. To remove vomitus: Disconnect resuscitator from patient. Tap the patient valve several times while squeezing the bag body. Re-test the resuscitator for proper functioning.

AIRFLOW RESUS BAGS – STRATEGY MATRIX

	Feature	Benefit
Product Attributes	Integrated pressure manometer	• Effectively promotes proper pressure delivery (<20cmH_2O) for greater patient safety • Helps prevent barotrauma or pneumothoraces of babies' fragile lungs as a result of excessive pressure delivery • Helps reduce gastric insufflation, thus preventing vomiting, aspiration and resulting pneumonia
	Pliable silicone bag body with thin-walled, indented safe spots	• Effectively enhances tactile feel of lung compliance • Helps reduce hand fatigue while bagging
	Pre-assembled bag	• Integrated pressure manometer and optional filter are ready to go
	Configurable with many options	• Create a custom bag for your specific needs • Components come attached and ready to go
	Swiveling patient port	• Allows clinician to easily move around patient while maintaining proper position of the bag • No torque is applied on ET tube when in use
	Red fits-all connector	Enables quick visualization of proper O_2 connection
	Inflatable & non-inflatable face masks	Large variety of sizes and types to meet your needs
	2 Oxygen reservoirs available	Customizable for your specific needs
	Bacterial / viral filter (optional component)	• Protects clinician, staff, other patients and visitors from cross contamination • Reduces spread of infection
	PEEP valve (optional component)	Adjustable for meeting patient needs
	Pop-off valve (optional component)	Allows clinician to use an appropriate pop-off level (40cm or 25cm H_2O) to help prevent excessively high inspiratory pressures
	CO_2 indicator (optional component)	Effective assessment tool for verifying ET tube placement
	Flex neck (optional component)	• Removable, flexible joint allows corrugated tubing to be joined with the patient valve • Reduces torque on ET tube
	Hand strap (optional component)	Maintain a positive grip on bag
	Single use, non-sterile, latex free	Helps prevent potential allergic reactions

AIRFLOW RESUS BAGS – STRATEGY MATRIX

Value Proposition	**The SafeSpot Manual Resuscitation/Ventilation Bag with integrated pressure manometer and optional filter:** • **Effectively promotes proper pressure delivery (<20cmH_2O) for greater patient safety** • **Helps prevent barotrauma or pneumothoraces – thus improving patient outcomes** • **Helps achieve targeted volume / inspiratory pressure during transport** • **Protects clinician, staff, other patients and visitors from cross contamination** • **Reduces spread of infection**	
Call Points	NICU, Anesthesia, Emergency/ER, Respiratory, Nursing, Physician, Risk Management, Infection Control, Critical Care, Code Blue, Rapid Response	
Market	Product Configuration	Competition
	SafeSpot with integrated pressure manometer	None - Ventlab innovation
Best Practices	For an effective sell: • Target call points • Identify accounts not using SafeSpot product features • For accounts currently using similar features, there is a conversion opportunity • Target the clinician and build consensus with facility (understand who makes the decisions) • Demonstrate the product and highlight features from top to bottom • Provide clear sale follow up with staff education, in-service and proper training	

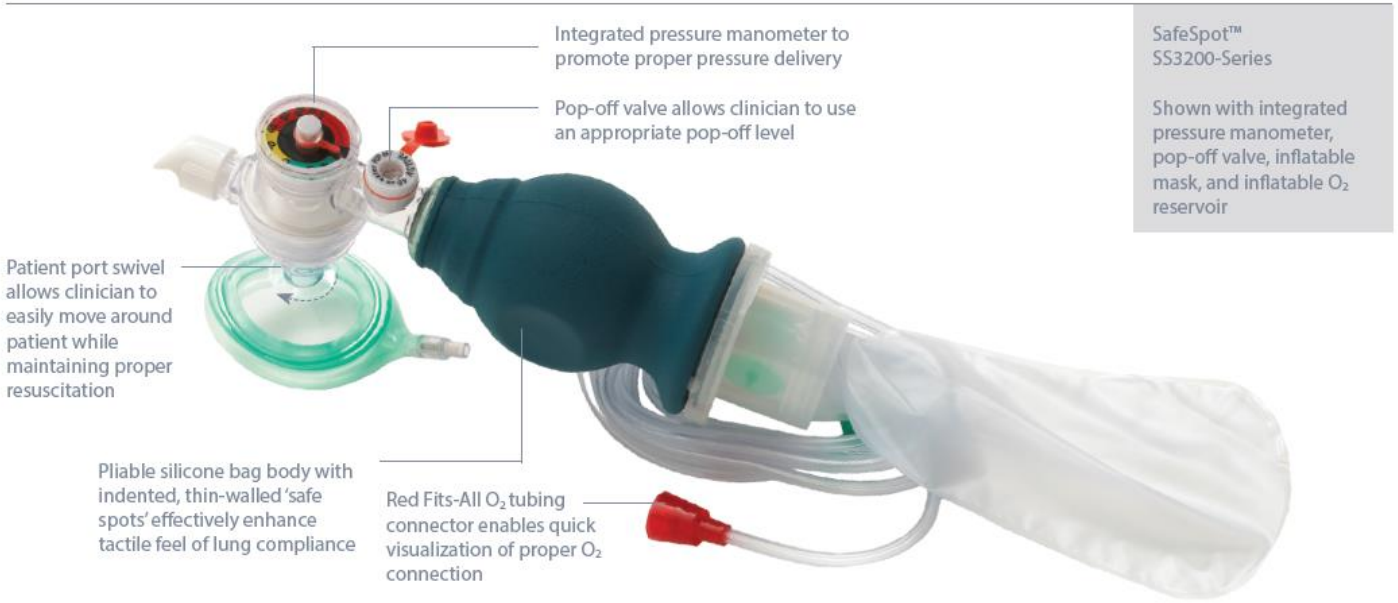
RESUSCITATION / VENTILATION

SunMed

SAFESPOT™ MANUAL RESUSCITATOR

LATEX FREE | SINGLE PATIENT USE | DISPOSABLE | CE MARK

The SafeSpot™ Resuscitation/Ventilation Bag from Ventlab is designed specifically for use on infant patients. The silicone bag body is designed with indented, thinner walls –*safe spots* – that increase the clinician's tactile feel for lung compliance. This feature combined with the integrated pressure manometer, makes the SafeSpot an effective resuscitation/ventilation bag for safely inflating babies' fragile lungs.



SafeSpot™
SS3200-Series

Shown with integrated pressure manometer, pop-off valve, inflatable mask, and inflatable O_2 reservoir

SunMed - Premier Resuscitation Devices Contract Launch

Contract Name: SunMed Holdings, LLC

Contract #: PP-NS-1169

Product Category Name: Respiratory Therapy Products: Resuscitation Devices

Products included: Resuscitation Bags, Hyperinflation Systems, SafeT, Masks, PEEP Valves, MaxCap

Start Date: 11-1-18

Term: 3 years

Marketing: Premier Specific lit sheet has been created and is in a separate attachment.

Competition on contract: Ambu, Vyaire, Smiths Medical, Mercury. Ambu is the Sole Premier Ascend Supplier.

Sales Model: Products to be sold via distribution. THS is listed as an authorized distributor in our contract.

Pricing: Price file is attached separately.

Pricing tiers for Products shall vary according to total dollar volume of Products purchased per calendar year by Participating Members according to the following:

VOLUME TIERS	TOTAL PRODUCT PURCHASES ($ PER CALENDAR YEAR)
TIER 1	No Commitment Required, PMDF Not Required
TIER 2	$15,000 to < $35,000
TIER 3	$35,000 to < $70,000
TIER 4	$70,000 +

IDN Incentive Rebate: 2% of sales for an IDN purchasing $200,000 or more during a 12-month period.

Approvals: Neil Shapiro approves all Tiers through the Premier Supplier Portal.

SunMed - HPG Resuscitation Devices Contract Launch

Contract Name: SunMed Holdings, LLC

Contract #: HPG2513

Product Category Name: Resuscitation and Hyperinflation Systems

Products included: Resuscitation Bags, Hyperinflation Systems, Some Masks, PEEP Valves, MaxCap

Exp Date: 12-31-2023

Term: 5 years

Marketing: **HPG** Specific lit sheet has been created and is in a separate attachment.

Competition on contract: Ambu,

Sales Model: Products to be sold via distribution. THS is listed as an authorized distributor in our contract.

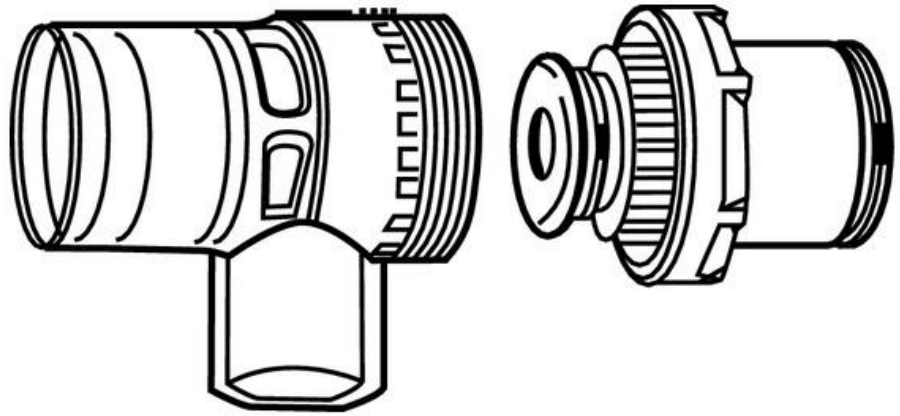
Pricing: Price file is attached separately.

Tiers: Only one Tier

OVERCOMING OBJECTIVES

AMBU SALES TACTICS

- Light weight and simplistic
- Ease of use with strap- Especially for staff with smaller hands
- Shutter valve
- Quick recoil time
- Lowest pricing
- Focuses on no features



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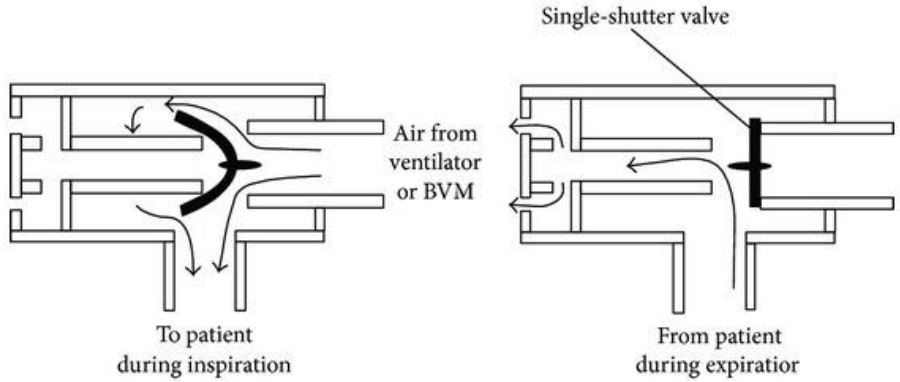

(b)

MANUAL VENTILATOR – POP QUIZ

Common Objections

- Not on contract
  - We are on Premier and Healthtrust.
- More expensive than my current bag
  - We are competitive with the competition and offer features for improved clinician use and patient safety.
- We don’t need a manometer
  - Monitoring of PIP provides a more accurate delivery of breath and reduces chances of harm to patient.
- Why do I need a filter?
  - Filter is 99.99% effective and protect staff from airborne illnesses.

VIDEO RESOURCES

- Importance of a Pressure Manometer: https://www.sun-med.com/resources?v=666
- AirFlow Manual Resuscitator Demonstration Video: https://www.sun-med.com/resources?v=671
- AirFlow Manual Resuscitator features and Benefits Product Training: https://www.sun-med.com/resources?v=670

USE THE TOOLS AVAILABLE TO YOU!

- **Use** the SunMed Ventlab HPG Hot Sheet
- **Use** the SunMed Ventlab Strategy Matrix
  - Product Attributes
  - Value Proposition
  - Call Points
  - Market
  - Best Practices
- **Use** the VAP Diagram