**THE SAHARA® SYSTEM FEATURES:**

- **EASY-TO-READ VISUAL INDICATOR AND AIR LEAK CONTROL**
- **PATIENT AIR LEAK METER:** quantifies the size and progress of air leak
- **SAHARA® SYSTEM FEATURES AND BENEFITS**

**TO INCREASE SUCTION**

is quick and easy, with no need to fill suction chamber with water. Window when prescribed suction is attained, eliminating guesswork. Setup is quick and easy, with no need to fill suction chamber with water.

**DRAINAGE TUBES**

- Needleless sampling port in the connector allows clinicians to obtain fresh samples of patient drainage. Use a standard luer lock syringe for withdrawing samples. Color-coded ATS connectors and clamp-on drainage tube allow for quick and easy Sahara unit replacement.

**SAMPLING PATIENT DRAINAGE OR REPLACING UNITS USING THE COLOR-CODED ATS CONNECTORS**

**NURSING CONSIDERATIONS AND TROUBLESHOOTING**

**IS THE DIAL SET AT THE PRESCRIBED SUCTION?**

Turn the dial into the prescribed suction setting. 0-20 cm of water suction is most common for adults.

**IS THE ORANGE FLOAT IN THE INDICATOR WINDOW?**

The orange float indicates that the desired suction has been achieved. This visual indicator replaces the bubbling noise of a water seal suction system.

**MONITORING PATIENT AIR LEAKS**

The patient air leak meter quantifies the size of an air leak from 1 (slow) to 7 (fast). The higher the numbered column through which bubbling appears, the greater the magnitude of the air leak. Observation building at the bottom of the columns of the air leak meter. By documenting the number, the clinician can monitor air leak increase or decrease. The fluid in the air leak meter is used for air leak detection and is not a water seal.

**AUTOMATIC POSITIVE PRESSURE RELIEF VALVE / HIGH NEGATIVITY RELIEF**

The automatic positive pressure relief valve automatically opens with increases in positive pressure if the suction tube in port is blocked, minimizing the risk of reestablish pneumothorax. Negative pressure is limited to approximately -10 cm of water.

**CAUTION:** If suction is not operative, or if operating on gravity drainage, depressing the orange float may decrease negativity thereby causing reestablish pneumothorax. Obama suction pressure-relief valve is used with the Sahara system to reduce patient negativity to desired level. Depress the button to manually release suction pressure.

**SETUP INSTRUCTIONS:**

1. Connect patient drainage tube (number 1, right) to thoracic catheter to establish one-way seal for patient protection.
2. For air leak diagnostics, add pre-packaged 20 mL sterile fluid to air leak meter through the needleless injection site (number 2, right). Fill to the 20 mL line.
3. If suction is required, connect the suction source to suction port (number 3, right). Increase source suction until orange float appears in window.

**IS THE NEUTRAL PRESSURE INDICATOR VISIBLE?**

During gravity drainage, the indicator may be partially or completely filled with fluid if the suction source is turned on. Fluid should flow freely through the indicator chamber with no evidence of negative pressure.

**CAUTION:** If the negative pressure indicator does not flow “yes,” as described: 1) check patient connections for leaks; 2) check tubing connections on unit; if all connections are secure and the “yes” does not appear; replace the unit. The negative pressure indicator does not confirm drainage tube patency. Routinely check the drainage tube patency.

**IS THE DRAINAGE RISE IN THE SMALL ARM OF THE AIR LEAK METER WHEN THE DRY SUCTION SETTING IS LOWERED?**

This is normal. It simply reflects the previous higher setting. If the patient does not have an air leak, vent the access to negativity by depressing the high negativity initial valve.

**DOES THE WATER RISE IN THE SMALL ARM OF THE AIR LEAK METER?**

This is normal. If suction is operative, the suction source must be increased.

**ARE ALL CONNECTIONS SECURELY TAPED OR BANDED?**

Reconnect any loose connections and tape securely, unless a new or increased air leak. Notify doctor if new drain or increased leak present.

**IS THE CLAMP OPEN?**

The tube should be unclamped unless: a) the clamp is being used to control hemorrhage. b) offender if air leak is high blood pressure. c) offender if air leak is high blood pressure. d) offender if air leak is high blood pressure.

**IS DRAINAGE BLOODY, STRAW-COLORED, OR PULMONARY-FLOODED?**

Document findings. Notify doctor if drain character changes significantly, i.e., straw-colored drainage at last check is now blood.

**HAS THE RATE OF DRAINAGE SUDDENLY INCREASED OR DECREASED?**

Sudden hemorthage in a preoperative patient is likely caused by a ruptured suture line or broken graft. The patient can lose 1,000 to 1,500 mL of blood in a matter of minutes. Immediately alert surgeon and prepare for return trip to OR.

**HAS DRAINAGE STOPPED SUDDENLY?**

A sudden (not gradual) cessation of drainage in the patient with mediastinal tubes can be caused by accumulated clotted blood occluding the tube. This can be life-threatening in the context of a mediastinal bleed at the site of an aortic anastomosis. To keep the tube patent, or to dilate the clot, gently mill the tube.

If the patient’s condition is deteriorating rapidly, follow the emergency procedures of Urging the distal pole to eliminate clots. If the patient appears stable, make sure the unit is low enough so gravity can assist drainage: raise the bed, lower the Sahara® unit, or turn the patient on the affected side.

Check tubing for leaks or blockages. Make sure tube is not clamped.