

# Face Tent

For Dilution and Indirect Calorimetry



You need a product that can ensure the comfort and safety of the patient while performing indirect calorimetry using the dilution technique. You also need accurate measurements while allowing the patient to breathe easily without an enclosed canopy. MGC Diagnostics' face tent can solve your needs.

## BENEFITS OF DILUTIONAL INDIRECT CALORIMETRY/VO<sub>2</sub> MEASUREMENTS WITHOUT USING A CANOPY

- A face tent eliminates the feeling of claustrophobia which can alter "normal breathing" and make collecting steady state data difficult as is common with overhead canopy testing.
- System failure alarms are not required with a face tent in the case of a power loss or sudden loss of flow.
- Subtle leaks, which are difficult or impossible to detect with canopies, is not a concern with a face tent.
- With a face tent, there is no concern of a rising inspired CO<sub>2</sub> level, which can cause inaccurate results or patient discomfort.
- Usually readily available in hospitals, a face tent can be discarded after a test resulting in maximum patient safety. Canopies and their plastic drapes are expensive to replace and difficult to sanitize between patients.
- A face tent is ideal for the cardiac catheterization lab because a face tent measuring BxB will equilibrate faster as there is no washout of the canopy. The face tent is also much smaller so that space to work is optimized.



## CLOSED-LOOP\* AUTOMATIC FLOW ADJUSTMENT

For accurate dilution during indirect calorimetry, it is essential that the amount of room air dilution to exhaled gas is correct. Manually adjusting the amount of dilution is difficult and can cause improperly adjusted dilution, which leads to inaccurate data.

**Closed-Loop Automatic Flow Adjustment** allows for the proper dilution:

- Proper dilution is maintained automatically. The fan flow rate will automatically adjust itself.
- Constant fan flow rate adjustment is now unnecessary allowing for accurate data.

## AUTO STEADY STATE DETECTION

When the user selectable steady state criteria has been achieved, the user is notified by the software and testing can be stopped.



## BXB DILUTION OR TIME AVERAGE DILUTION

### WITH CANOPY

- Washout is dependent on patient size, canopy size and patient's respiratory and tidal volume.
- Equilibration of gas in the canopy can take extra time.
- Patient breathes elevated FICO<sub>2</sub> (about .75% - 1.00%) and a lower FIO<sub>2</sub> (about 20.20%).

### BXB WITH FACE TENT

- ✓ Eliminates the canopy and the necessary equilibration of the gas in the canopy.
- ✓ Increases the responsiveness of the system to get accurate steady state data faster.
- ✓ Patient is breathing room air during the test.
- ✓ Time average dilution is available.



## ALCOHOL BURN VALIDATED

When pure methanol is burned, the ratio of carbon dioxide production to oxygen consumption is a predictable .667. When an exact weight of ethanol is completely combusted, a certain volume of carbon dioxide will be produced and an exact amount of oxygen will be consumed. Therefore, the amount of CO<sub>2</sub> produced from the complete combustion of a given weight of pure ethanol can be measured and compared with the known value of CO<sub>2</sub> produced for that particular weight of ethanol. Since the ratio of carbon dioxide consumed to oxygen produced is known (RQ=.667), then oxygen consumed can be directly calculated. **VO<sub>2</sub>=VCO<sub>2</sub>/RQ**

## EASE OF USE IN CATH LAB

- Closed-Loop Adjustment will automatically adjust the fan speed for optimal data.
- Automatic steady state detection.
- Allows VO<sub>2</sub> measurements to 900 ml/min for performing measurements during cardiac catheterization.

The Face Tent is for use with the repackaged Ultima Series™ cardiorespiratory diagnostic systems and CCM Express® indirect calorimeter. Refer to PN 060141-001 for Ultima Series™ and PN 060065-001 for CCM Express® system specifications.

## SPECIFICATIONS

### MEASUREMENT PRINCIPLE

- VO<sub>2</sub> and VCO<sub>2</sub> Accuracy: ±5%
- Flow Rate: 12-200 L/M
- Auto Closed-Loop Adjustment/Manual Adjustment

### POWER REQUIREMENTS

- Fan 24 VDC @ Minimum 2 Amps
- Fan Power Supply Input: 100-240 VAC @ 50-60 Hz

### SOFTWARE REQUIREMENTS

- BreezeSuite Software version 8.4 or higher
- CCM Express Software version 2.0 or higher

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Part# 060145-001 RevC

\*Closed-Loop is patent pending by MGC Diagnostics Corporation.