

- d. RESET - push and display is cleared to 00.00
 - e. RANGE - 199.99 liters then display will go to 00.00 and start again.
4. To measure tidal volume, turn Control unit on, and during the inspiratory phase press the reset button; the next expiration will be registered. To retain this reading, press hold button before next expiration cycle begins. Flow is recorded in one direction only.
 5. To measure minute volume, a time-piece with a seconds hand or a stop watch is required. With control unit in the on position, and the reset button pressed in and held, at the start of the next expiratory cycle release reset button, and start timing for 60 seconds; press hold button at the moment 60 seconds is completed. The volume registered on the control unit is the minute volume.

TECHNICAL SPECIFICATIONS

Case	Injection molded
Display	4½ digit LCD .4 inch character height
Range	00.00 - 199.99 liters
Resolution	.01 liter
Flow Rate	5 liters per minute min. 1'00 liters per minute max.
Accuracy	± 2% at 16 liters per minute
Resistance to flow	2cm H ₂ O at 100 LPM
Dead Space	22 ml
Power Source	9 volt battery or AC Adapter
Sensing Unit Type	Air turbine
Sensing Unit Pick up	Hall effect sensor
Sterilization	Flow Sensor only

AVAILABLE OPTIONS:

00-296	6' RETRACTILE CABLE (extended length)
00-297	AC ADAPTER for 110V use
00-298	CARRYING CASE
00-299	SPARE FLOW SENSING UNIT for ease of cleaning and sterilization

For repairs return to Anesthesia Associates, Inc. or your local Anesthesia Associates, Inc. dealer.



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**ELECTRONIC DIGITAL
RESPIROMETER
MODEL 00-295
OPERATION & SPECIFICATIONS
MANUAL**

OPERATION & SPECIFICATIONS

A. General Description Electronic Digital Respirometer (EDR)

1. The 00-295 EDR is complete and ready to use as received with the Flow Sensing Unit connected to the Control Unit, 9 volt battery installed, and one (1) 22mm female X 22mm female Adapter. (**non-sterile**)
2. The EDR can be used whenever a Mechanical Respirometer is clinically acceptable for the measurement of tidal or minute volume.
3. The Flow Sensing Unit has only one moving part, that is counted electronically and coupled magnetically through a sealed barrier that isolates the electrical circuit from the breathing circuit. The flow is recorded in one direction only, in the inlet fitting on back, out the fitting on the bottom, both 22mm male.
4. The EDR can be inserted in the breathing circuit on a Gas Anesthesia Machine or Ventilator as received, Flow Sensor coupled to the control unit, or the Flow Sensing unit can be mounted in the breathing circuit, and the control unit mounted in a different location using cable No. 00-296 to couple the two together.
5. To separate the Flow Sensing unit from the control unit, press the large button on top of the Flow unit and separate top, then lift off hook on bottom; to re-connect, place Flow Sensor on Control unit hook and push top to lock.

B. Retractable Cable No. 00-296

1. To use the Control unit separated from the Flow Sensing Unit, No. 00-296 cable is required.
2. To connect the cable, separate the units as described in A-5 (above).
3. Using a small slotted screw driver, remove the screw holding male to male connecting plug to the control unit and remove the double plug circuit board.
4. The female plugs on the retractile cable are indexed, (and must be properly lined up or they will not go together), when properly lined up just push to the locked position. To remove, the small black release button must be pushed.

C. Battery

1. The battery is a standard 9 volt, NEDA 1604.
2. When the battery is getting low, and there is approximately five hours remaining, the "Lo Batt" will be displayed on the left side of the LCD.
3. To change the battery, separate control and sensing unit as described in A-5. Using a Phillips head screwdriver, remove the four screws on

the back of the control unit, and remove back, being careful not to damage the connecting wires. Un-snap the old battery, connect new one and replace back. (Caution: do not overtighten or force the four (4) screws). Snug is all they have to be.

D. AC Adapter

1. When the EDR is going to be used in one location for long periods of time, No.00-297 AC Adapter is recommended.
2. To use the AC Adapter, plug the adapter into a 110V outlet and plug the other end of the adapter into the receptacle on the left side of the control unit. When the AC Adapter is connected, the battery in the control unit is disconnected from the circuit and not being used. If the AC Adapter is going to be used for long periods of time, removing the battery is recommended.

E. Flow Sensing Unit

1. The Flow Sensing unit is the portion of the EDR that connects to the circuit, patient, or gas supply when a volume measurement is to be made.
2. The Flow Sensing unit has a 22mm Male inlet, (back), and a 22mm Male outlet, (bottom). If other adapters are required, please refer to Anesthesia Associates, Inc. catalog.
3. The Flow Sensor has only one moving part, which is the Titanium Vane. Because the vane is Titanium, high flows 100 plus liter per minute or moisture will not destroy it.
4. Spare Flow Sensing units No.00-299 can be ordered and used with your control unit.

F. Control Unit

1. The Control unit contains all of the electronics, push button controls, and battery (see C-3 for battery change).
2. The Control unit is NOT watertight. It can be washed with mild soap and a damp cloth, but DO NOT allow water to get inside unit, possible damage to electronic circuits may occur.
3. Function of control buttons:
 - a. ON / OFF - push on, push again to turn unit off. Turn unit off while not in use so that battery is not drained.
 - b. HOLD - push to hold reading (colons on while on hold mode). Push again to resume.
 - c. LIGHT - push and hold for light.