

Device History and Theory.

Precis

The basic principal of this device is that of “Resuscitation of Babies at birth”, Bag and Mask Ventilation & Regulated Oxygen Administration are the two main agents for delivery of Oxygen to a patient. The Tom Thumb was designed to replace manual ventilation by the bag, mask and valve methods. The design originated in the R.U.I. Newcastle with much of the input from Dr E. Hays – Consultant Paediatrician, and was first introduced to the market in 1984. Mr. Geoff Black designed the Tom Thumb on behalf of Viamed/Therapy Equipment.

Details.

The Tom Thumb device offers safe and fatigue free resuscitation of the patient. It is intended for use in emergency resuscitation situations in delivery rooms, operating theatres, special baby care units and on transport systems. The combination of a pressure gauge and a specially designed adjustable valve enables accurate ($\pm 1.6\%$) real value monitoring and total pressure control to 45cm H₂O.

It is mains free, deriving its power directly from an oxygen source. Small, and of metal construction where possible, the system has been designed to take the punishment of emergency situations. It is of modular construction allowing the user a variety of configurations to suit all applications.

There are 4 variations of the Tom Thumb, allowing separate configurations with / without a flowmeter, 0-5 & 0-15 litres / minute flowmeter.

A safety valve is incorporated into the design to ensure that pressure delivered to the patient cannot exceed set limits and can be selected to suit most clinical situations.