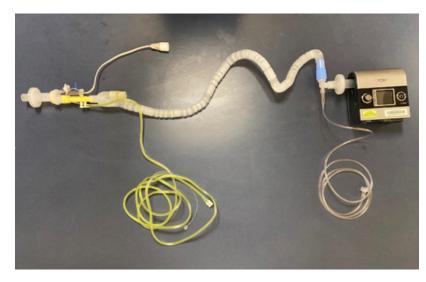
Mount Sinai

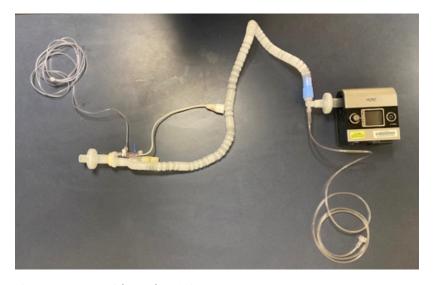
Brian Mayrsohn M.D., M.S., Shan Zhao M.D., Ph.D., Nigel Maitland M.D., Feroz Osmani M.D., Paul Philipsberg, Cheuk Yin Lai, MD.

Anesthesia Circuit with 3D Printed Connector Instructions

BiPAP to Ventilator Conversion



Complete Circuit[Spirometry and Invasive Pressure Transducer]



Complete Circuit *if Spirometry is not available* [only ETCO2 and Invasive Pressure Transducer]

Required Parts

Brian Mayrsohn M.D., M.S., Shan Zhao M.D., Ph.D., Nigel Maitland M.D., Feroz Osmani M.D., Paul Philipsberg, Cheuk Yin Lai, MD.



ResMed VPAP ST Device [or other home BiPAP unit]



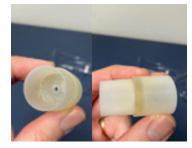
Spirometry Tubing



Invasive Pressure Transducer



Oxygen Extension Tubing 2X depending on how far the patient is from oxygen source



Connector Valve
Side 1: 22mm internal diameter
Side 2: 22mm external diameter
3.2mm hole in middle wall

Fixed Resistance



Anesthesia Circuit Includes:



2X Viral Filters



Gas Sampling Tubing



Heat and Moister Exchange Filter



Elbow



Y-Circuit

Instructions

Brian Mayrsohn M.D., M.S., Shan Zhao M.D., Ph.D., Nigel Maitland M.D., Feroz Osmani M.D., Paul Philipsberg, Cheuk Yin Lai, MD.



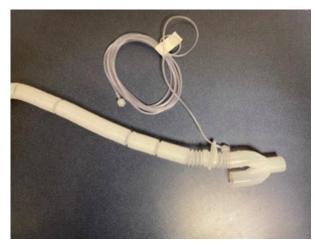
Connect Viral Filter to the Ventilation Port.



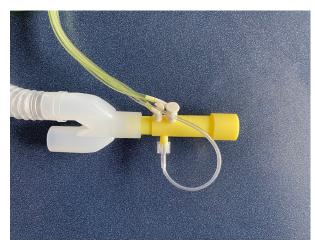
Attach the Elbow.
Attach Oxygen Tubing [small end connects]
to the Gas Sampling Port [smaller tube].



Attach one end of the Breathing Circuit to the other side of the Elbow.



Remove the Limb that is not connected to the Elbow. It should rip right off. If it does not rip off, may need to cut tubing [varies by manufacturer]. Leave the Endtidal CO₂ on the other Limb that is part of the circuit.



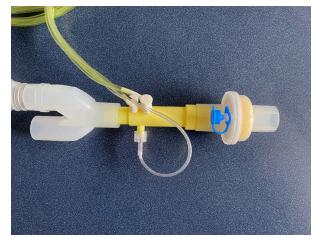
If Spirometry is available, place yellow tube to the base of the Y.

Proceed to Step 6B if Spirometry is not available.

Instructions



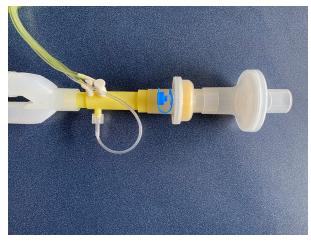
Brian Mayrsohn M.D., M.S., Shan Zhao M.D., Ph.D., Nigel Maitland M.D., Feroz Osmani M.D., Paul Philipsberg, Cheuk Yin Lai, MD.



Attached the HME to the Spirometry Tube.



Attach the HME Filter to the bottom of the Y. Attach the Viral Filter to the HME. Proceed to Step 8.



Attach the Viral Filter to the HME.



Attach the Fixed Resistance
Connector Valve to the end
of the other Y piece that is open.



Attach the Invasive Pressure Transducer to the HME Gas Sampling Port.

If there is no Gas Sampling Port on HME, you can place the Invasive Pressure Transducer on the Spirometry CO₂ Gas Sampling Port.

The ${\rm CO_2}$ Sampler can then go onto the other side of the Stockcock. Make sure it is open three ways.



If there is no Spirometry Tubing in the circuit, connect the Invasive Pressure Transducer to the HME Gas Sampling Port.

Place the ${\rm CO_2}$ Sampler to other side of A-line Stopcock. Make sure it is open three ways.