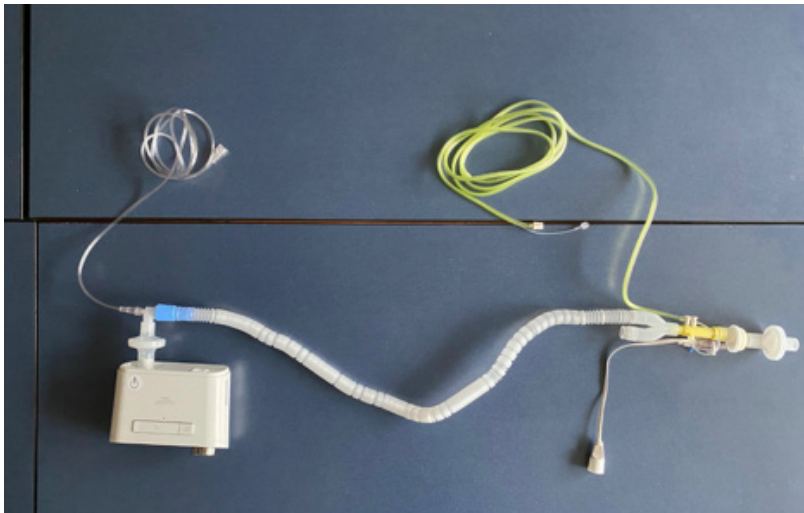


# Anesthesia Circuit with 3D Printed Connector Instructions

## 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



**Philips Respironics  
DreamStation**  
[Any approved BiPAP machine]



**Spirometry Tubing**

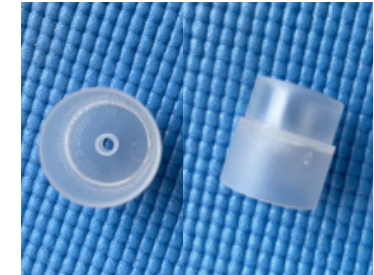


**Invasive Pressure Transducer**



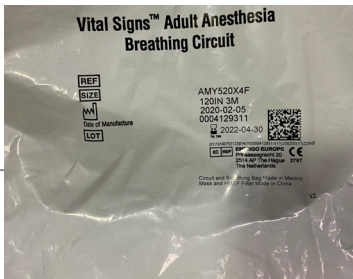
**Oxygen Extension Tubing**

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



**Fixed Resistance  
Connector Valve**

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



**Anesthesia Circuit  
Includes:**



**2X Viral Filters**



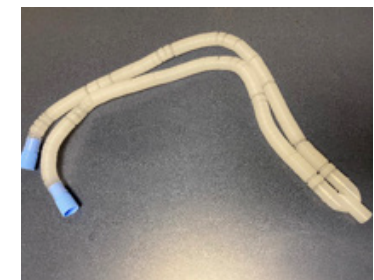
**Gas Sampling Tubing**



**Heat and Moisture  
Exchange Filter**



**Elbow**



**Y-Circuit**

# Instructions



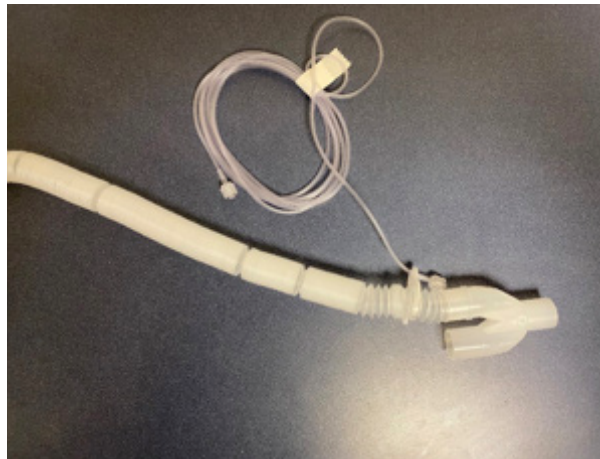
**1** Connect Viral Filter to the Ventilation Port.



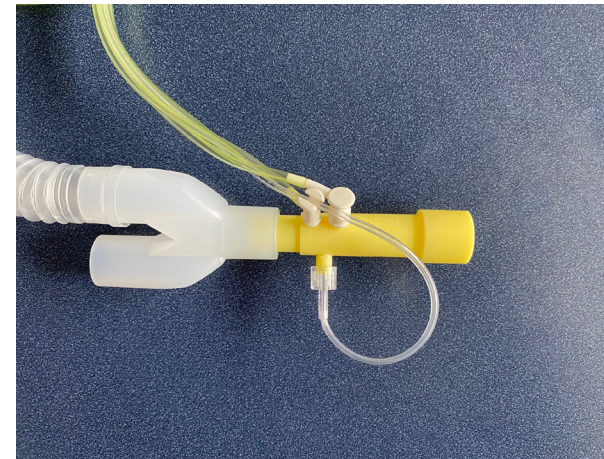
**2** Attach the Elbow.  
Attach Oxygen Tubing [small end connects] to the Gas Sampling Port [smaller tube].



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

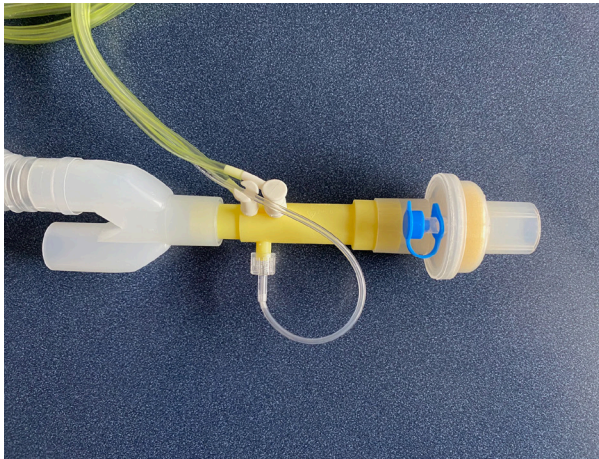


**4** Remove the Limb that is not connected to the Elbow. It should rip right off. If it does not rip off, may need to cut tubing [varies by manufacturer]. Leave the Endtidal CO<sub>2</sub> on the other Limb that is part of the circuit.



**5** If Spirometry is available, place yellow tube to the base of the Y.  
**Proceed to Step 6B if Spirometry is not available.**

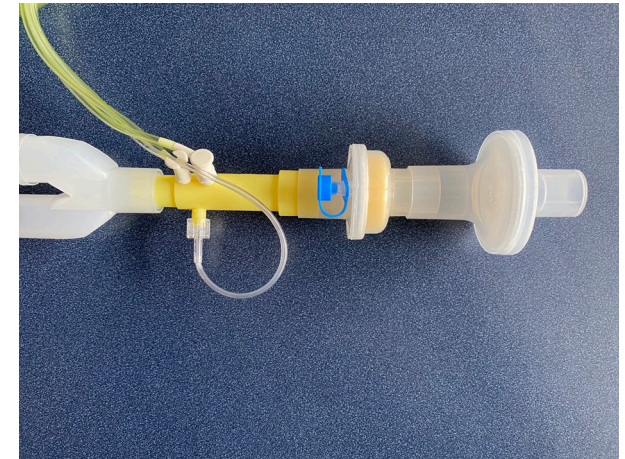
# Instructions



**6A** Attached the HME to the Spirometry Tube.



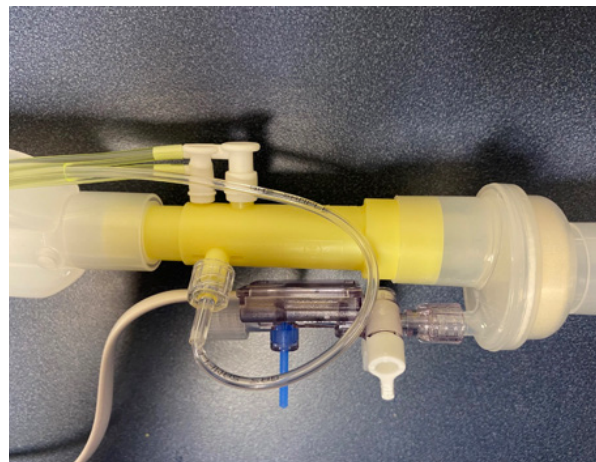
**6B** Attach the HME Filter to the bottom of the Y. Attach the Viral Filter to the HME. Proceed to Step 8.



**7** Attach the Viral Filter to the HME.



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



**9A** 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 CO<sub>2</sub> Gas Sampling Port.  
The CO<sub>2</sub> Sampler can then go onto the other side of the Stockcock. Make sure it is open three ways.



**9B** If there is no Spirometry Tubing in the circuit, connect the Invasive Pressure Transducer to the HME Gas Sampling Port.  
Place the CO<sub>2</sub> Sampler to other side of A-line Stopcock. Make sure it is open three ways.