



# Aithre Refilling Instructions for Aviators

DO IT YOURSELF: REFILLING INSTRUCTIONS



## GENERAL FILLING INFORMATION

- The Aithre bottle is very easy to refill in less than 1 minute
- Cost per 47L fill is approximately \$0.50-\$1.00 in oxygen
- Transfilling adaptors from Aerox and a supply tank required
- Supply tank can be another portable FBO-filled tank

## TRANSFILLING THEORY

- Transfilling is process of transferring 'pressure' from a supply tank to a destination tank
- The supply tank will be a gas company supplied tank (e.g. NORCO) or another aviation portable oxygen tank filled by your FBO
- Transfer is made by connecting the supply and destination tank and opening the supply valve
- Pressure will automatically equalize between the supply tank and the destination tank to 'fill' the destination tank
- Each fill will gradually decrease the pressure in the supply tank
- A cascade of tanks can be optionally used to top off the destination tank



## USING AN FBO-FILLED PORTABLE OXYGEN TANK AS A SUPPLY TANK

- Fill your aviation portable tank at an FBO
- Hookup your aviation portable tank to the Aithre bottle using the Aerox adaptor
- Open the aviation portable tank valve to transfer oxygen pressure (slowly to minimize heat)
- Close the aviation portable tank valve and disconnect the Aerox adaptor
- Repeat until aviation portable tank requires refilling
- Optional: use a cascade of aviation portable tanks if desired to 'top off'
  - Transfer from the lower pressure supply tank first
  - Close the lower pressure supply tank valve
  - Transfer from the higher pressure supply tank second
  - Close the higher pressure supply tank valve
  - Repeat fills over time until exhausting lower pressure supply tank
  - Refill the lower pressure supply tank and move the formerly higher pressure supply tank to the lower pressure supply tank position



## USING A GAS-COMPANY SUPPLY TANK

- Contact your gas supply company (e.g. Norco)
- Rent your supply tank and have it delivered full of oxygen
- Hookup the supply tank to the Aithre bottle using the Aerox adaptor
- Open the supply tank valve to transfer oxygen pressure (slowly to decrease heat)
- Close the supply tank valve and disconnect the Aerox adaptor
- Repeat until supply tank requires refilling
- Optional: use a cascade of supply tanks if desired to 'top off'
  - Transfer from the lower pressure supply tank first
  - Close the lower pressure supply tank valve
  - Transfer from the higher pressure supply tank second
  - Close the higher pressure supply tank valve
  - Repeat fills over time until exhausting lower pressure supply tank
  - Refill the lower pressure supply tank and move the formerly higher pressure supply tank to the lower pressure supply tank position





## REQUIRED AEROX ADAPTORS

- Single supply tank option (best for use with aviation portable tank as supply tank)
  - FA540-72-G filling hose/gauge for single tank
  - FAM-PB3 filling adaptor
- Cascade supply tank option (best for use with gas company supply tank)
  - FBO transfilling kit with all hoses and adaptors for 2 supply tanks
  - Includes the FAM-PB3 adaptor
  - Includes a slow fill dial to control fill rate and minimize heat
  - Expandable to 3 or more supply tanks

## WARNINGS: TRANSFILLING IS SIMPLE, BUT CAN RESULT IN SERIOUS INJURY OR DEATH

- Follow Aerox guidelines for transfilling and detailed instructions including with adaptors
- Oxygen is a fire accelerator
- Breaking valve off full cylinder results in missile
- Not verifying connections can cause hose to be a whip
- Not using correct tools can result in injury
- Aithre bottles should not be refilled for any of the following reasons
  - Burns of any kind
  - Level 2 or greater surface damage as defined by DOT regulations
  - After disassembly or modification
  - Regulator damage
- Do not store oxygen cylinders in high temperature locations.
- Do not use oxygen near an ignition source
- **Oxygen used in the presence of an ignition source or flame can cause a fire resulting in severe personal injury or death**
- Do not disassemble or separate the Aithre bottle or regulator
- Avoid dropping or shocking the bottle or regulator
- Do not use if there is any oxygen leak or visible damage to the Aithre bottle or regulator
- Read and follow the Aithre Safety Data Sheet



## **AITHRE SUPPORT**

Support for Aithre products is available on our website [www.aithreaviation.com](http://www.aithreaviation.com), phone 208-481-8310, and email [support@aithreaviation.com](mailto:support@aithreaviation.com)

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