

ASSESSMENT & PREPARATION

Oxygen Concentrator

Oxygen concentrators produce 85–95.5% oxygen from ambient air using two sieve beds

USE FOR

Nearly **all sick infants** may benefit from oxygen therapy

STANDARD OF CARE

Target SpO₂ is

- **90–95%** for patients **on** O₂
- **90–100%** for patients **off** O₂

1 TURN ON DEVICE

Plug in concentrator and turn on device

Allow to run for 5 minutes OR until indicator light shows appropriate concentrations of oxygen are reached



2 PREPARE DEVICE

Adjust regulators to desired oxygen flow level

A Connect correctly sized nasal prongs or tubing to oxygen port

B Check that flow comes out of nasal prongs



3 PREPARE PATIENT

Follow hand washing protocol, wear gloves if needed

Assess nasal patency, suction if secretions are present

Insert nasal prongs and place gauze under tubing to protect skin

Secure tubing with tape



4 MONITOR PATIENT

Monitor using a pulse oximeter

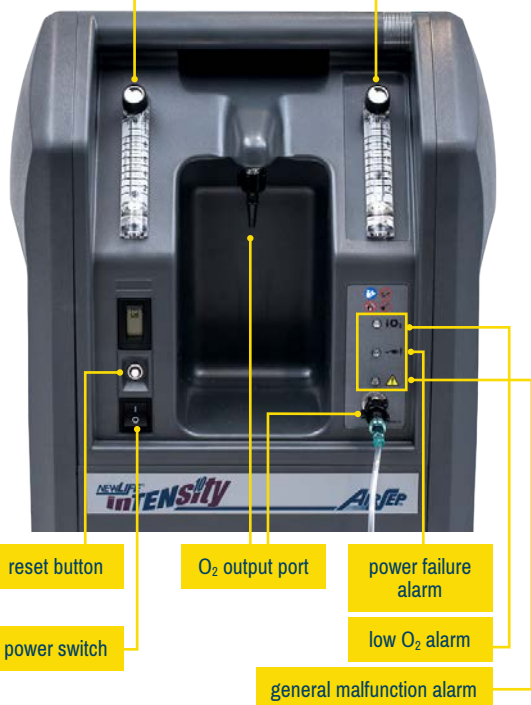
Adjust regulator flow up and down. Patient saturation goal is 90–95%

Assess RR, HR, work of breathing, and nostril patency while on oxygen therapy

If oxygen flow is more than 1 L/min and saturations less than 90%, consider switching to CPAP



O₂ regulator & meter



reset button

O₂ output port

power failure alarm

power switch

low O₂ alarm

general malfunction alarm

? COMPLICATIONS

- Hypoxia
- Hyperoxia
- Nasal blockage
- Necrotic septum

! Target saturations for infants on oxygen are 90-95%. Any amount of oxygen given without appropriate monitoring of oxygen saturations can cause harm.

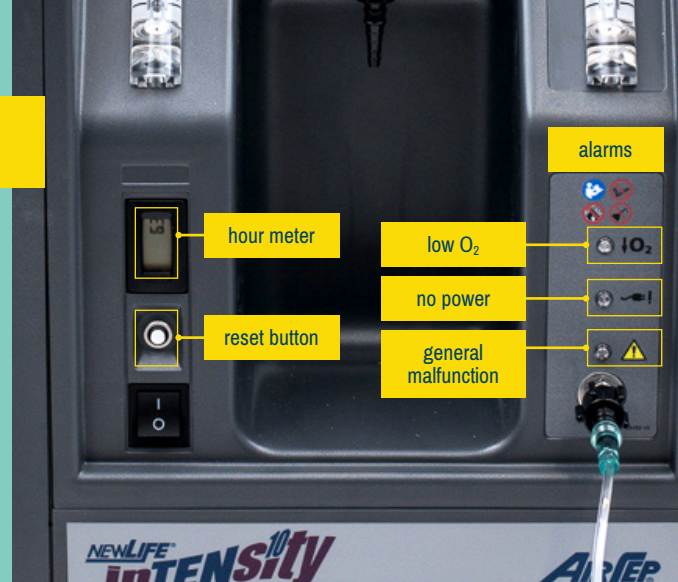
! DISINFECTION & INFECTION PREVENTION

- **Clean hands with soap and water or alcohol before and after handling materials that will be used on patients**
- Begin reprocessing oxygen tubing according to ward guidelines immediately after use
- Clean oxygen concentrator unit housing and regulators using gauze and 70% alcohol after every use
- **Refer to the General Infection Prevention Module**

REPAIR & MAINTENANCE

Oxygen Concentrator

Units should be located 30–35 cm away from the nearest wall to ensure that air can freely flow into the oxygen concentrator



⚙️ DAILY MAINTENANCE

Always wipe the oxygen concentrator with alcohol using gauze or a cotton swab before first use and between patients

⚙️ PREVENTIVE MAINTENANCE

Fine particle and gross particle filters should be checked weekly

Oxygen concentrator should be turned on and allowed to run for **at least 15 minutes every week** if it has not been in use

If the oxygen concentrator is **not turning on**

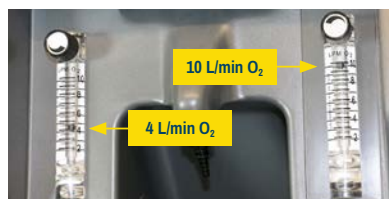
- Check that the power cable is plugged into a socket
- Check that socket is turned on and has electricity
- Push the reset button

If the oxygen concentrator is turning on but **there is no flow**

- Connect nozzle to oxygen port
 - Check port for debris or blockages
- If debris is seen, clean using a cotton bud or forceps wrapped in gauze and soaked in alcohol

If the low oxygen concentration **alarm is on**

- Check the gross particle filter for dust and debris
 - If dirty, replace filter with spare, clean filter
 - Check if set flow rate (L/min) is within maximum machine specifications
- If the set flow rate exceeds capacity, lower flow rate to within capacity limits



If alarm still sounds after reducing within capacity limits **OR** fine particle filter appears dirty, contact the maintenance department

When it's time to **clean the filter**

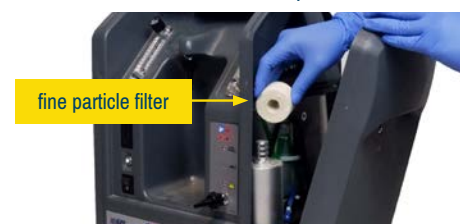
Turn off the device, then remove the back of the unit

If available, replace dirty filters with clean ones and turn back on for use

Gross particle filter:
Place in lukewarm, soapy water. Rinse with clean water and place in shaded area until completely dry



Fine particle filter:
Do not wash this filter in water it should be checked weekly by the maintenance department



! CONTACT A TECHNICIAN OR MAINTENANCE DEPARTMENT IF DEVICE CONTINUES TO NOT WORK PROPERLY AFTER ADDRESSING THE COMMON ISSUES !