

Operation instructions for the safe use of oxygen and acetylene Integra® cylinders

1. Ensure you have the correct PPE (safety goggles, gloves, etc.).
2. Have a CO₂ or dry powder fire extinguisher located with or near the cylinders.
3. Connect the quick-fit connector/flashback arrestor to the hose end, making sure it is the correct way round; the non-return valve end of the hose goes to the torch; red for acetylene and blue for oxygen. You will need a 19mm spanner for the quick-fit and normally a 21mm spanner for the hose end, this may vary depending on the manufacturer.
4. Slide the quick-fit connector over the outlet spigot on the cylinder. You will hear it click into place. Check it's secured correctly by trying to remove it without pushing the release sleeve. Repeat this for operation for both cylinders.
5. Ensure the pressure adjusting screw on both regulators are wound back fully, anti-clockwise.
6. Check the tightness of all connections to the torch and ensure the torch valves are closed.
7. Open both cylinders using the black open/close valve.
8. Turn the pressure adjusting screw clockwise, on the oxygen cylinder to set the correct outlet pressure required for the type of nozzle fitted. This information is normally found with the nozzle, as supplied by the manufacture.
9. Open the oxygen valve on the torch and reset the pressure. This allows the pressure to be set correctly, as the pressure required is based on the system in use.
10. Once you have set the pressure correctly, close the valve on the torch. You have now also purged the oxygen hose.
11. Repeat steps, 7, 8 and 9 for the acetylene cylinder.
12. Perform leak detection: using leak detection fluid, suitable for use with oxygen, check all connections and torch valves for leaks.
- 12a. If a leak is found, isolate the cylinders and depressurize the system. Check for damage and/or tighten the connection that was leaking.
- 12b. Pressurise the system, as above and check again.
13. Fit a blank nozzle to the torch end and open both valves on the torch.
14. Now check for leaks around the base of the nozzle.
- 14a. If no leaks are present, you can now light the torch, using the correct type of spark lighter, for the fuel gas you are using. Pistol or open back type are recommended for acetylene. **Matches or gas lighters shall not be used.**
15. First open the acetylene torch valve slowly and ignite the gas, increase to reduce smoke if necessary. Then open the oxygen valve slowly and adjust until a suitable flame is achieved for the application.
16. To shut down the system, turn off the fuel gas supply valve on the torch first followed by the oxygen supply valve. **In the unlikely event of a sustained back fire or flashback, you must turn the oxygen supply torch valve off first.**
17. When you have finished, you must isolate the cylinders with the black open and close valve.
18. Open both torch valves to release the pressure.
19. Now wind the pressure adjusting screws on both cylinders, fully anti clockwise. The outlet pressure dials on the cylinders should now read zero.
20. Stow the hoses in a safe manner and ensure the hot torch nozzle is not in contact with any part of the system, including the cylinders.

If you follow the steps listed above, you will be operating the system correctly and safely.

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