

Standard Star Army Airlock

There are times when personnel must exit a spacecraft to perform extra-vehicular activities. Airlocks provide a controlled means of transitioning from the interior to the vacuum of space without loss of environment. Airlocks typically come in four, eight person locks. Regardless of size they all contain the following:

Controls

Mounted on the wall of the chamber is the airlock control panel. This controls venting and pressurizing the airlock as well as opening the two doors. Depending on conditions beyond the external door, the lock will switch from white to red illumination when cycling.

A secondary control panel is located in the ship's interior next to the Interior door that allows cycling the airlock.

There is an emergency manual control on the exterior of the hull to allow opening the exterior door when power is not available. Use of this mechanism vents the atmosphere inside the airlock. Attempting to use this when the ship has power will trigger a security alarm, but the control can not unlock the hatch.

There is also an emergency manual control in the pressure chamber to allow manual cycling of the airlock.

External Pressure Door

The exterior door is built to withstand great pressure and damage. The exterior of the door is usually composed of materials similar to the ship's outer hull. The door is tapered with the outer edge slightly smaller than the back, and has a thin layer of gasket material. When the door slides closed, pneumatics then push against the back of the door forcing it tightly against the hull creating an airtight seal.

Pressure Chamber

The pressure chamber is the space between both doors. This room is designed so that the walls, floor and ceiling are reinforced to resist hard vacuum. There is typically more than one storage locker for storing EVA equipment.

Storage Locker

These are the typical contents of the airlock storage locker.

- Lanyards with d-clips
- Zero G tool kit
- Tethers
- AMES repair kit
- Replacement [air shooter](#) canisters
- Emergency oxygen tank

Interior door

The Interior door is basically an [emergency blast shutter](#).

Operation

Exiting

1. Person opens the airlock using the interior control panel, and then steps in.
2. Individual should then seal and check their [Star Army Environmental Suit, Type 28 \(AMES\)](#) or other self contained suit.
3. Person then uses the chamber control panel and selects cycle.
4. The airlock then issues an audio warning, and yellow caution lights flash.
5. The airlock then pumps the atmosphere out of the chamber. As pressure approaches 0 psi, the lighting in the chamber switches based on exterior illumination.
6. Outer door pneumatics then retract releasing the door, and the door is then drawn back into the hull.

Entering

1. Person enters the airlock, and ensures no obstruction to the exterior door.
2. Individual then presses cycle on the chamber control panel.
3. Yellow caution lights flash as exterior door slides into position.
4. Outer door pneumatics engage forcing door into position.
5. Airlock then pumps atmosphere back into the chamber.
6. When atmosphere reaches the same as the ship's interior the control panel displays "Pressure Equalized".
7. Person then opens interior door.

Optional

Some vessels have an optional version called a docking airlock. The dock has an extra-long, extending flexible docking tube with an automatically adjusting end connector that is able to connect to nearly any other ship's airlock.

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