



The M-7800 Series Medical Air Lock is a dual lock system that comes with a full diameter entry lock.

The system is designed and built to comply with ASME-PVHO-1 and other applicable industry standards. The system is designed and built to provide medical treatments to tunnel workers transported outside the tunnel work site. A Medical Air Lock is normally used as a top-side chamber for providing extended duration treatments.

The chamber and related support systems come enclosed in a standard dry shipping container. The systems are equipped with a fully detached-type control console.

Medical Air Lock is typically rated for up to 6 occupants however, they can be tailored to fit specific occupancy needs. Normal pressure range for commonly used applications range from 75 psig (~5 bar) to 150 psig (~10 bar).

NOTEABLE FEATURES of PCCI Hyperbaric Systems (PHS) Containerized Medical Air Locks

- Spacious & aesthetically designed interiors.
- Easy to use controls, that require no electric power for operation in case of emergency.
- Equipped with attachable or detachable type control console options.
- Most daily control functions can be accomplished from the control console.
- If containerized option is taken, the system comes completed in a 25' x 27' long dry container for protection of the system and controls against hazardous environments. Container space is insulated and adequately air conditioned.
- Equipped with NFPA 99 compliant water based fire suppression deluge and handline system.
- Designed for easy handling and transportation.
- Provided with optional coupler for quick and easy mating with Shuttle Chamber.
- Battery and electrically operated dual lock communication system with sound power phones as backup.
- Mirror/Override controls and indicators for pressurization and depressurization from inside the lock.
- Equipped with silencers on inlet air supply and exhaust lines inside & outside for adequate noise attenuation.
- Control console provided with emergency battery operated illumination for operation in dark if necessary.

Medical Air Lock

SPECIFICATIONS

Chamber Capacity:

Inner/Main Lock 6 Persons Seated or 2 Supine Persons
Outer/Entry Lock 2 Persons Seated

System Performance:

Max allowable working pressure 135 psig (9 bar)
Pressurization rate 1 to 15 psi/min

Internal Diameter: 78 inches (2.0 meters) inside diameter (both locks)

Overall Length:

Vessel Only: 15 feet (4.61 meters)
Container: 25 feet (7.69 meters)

All Doors: Round, 30 inches (762 mm) diameter clear opening

Clear Head Room: 72 inches (1.84 meters)

Windows/Viewports: 5 (five), 10 inches (254 mm) diameter viewports, 2 viewports provided in doors and 3 in shell

Lighting:

Type: Internal BIRNS 12 VDC lights or equivalent.
Quantity: 3 lights in Main Lock, 1 in Entry Lock (2 lights installed on control console for console area illumination)

Standard Seating:

Flip-up type bench set

Weight:

12,000 lbs (5,443 kg)
18,000 lbs (8,164 kg) installed in a dry container

Control Console:

Attachable or detachable type

Press and Depress Rate:

Controllable from 0 to 20 cubic feet per minute

BIBS Stations (Oxygen Inhalation Equipment):

6 in Main Lock, 2 in Entry Lock

Fire Fighting/Suppression System:

Deluge System (Primary):

NFPA 99 compliant water based deluge system will be provided in both locks

Handline System (Backup):

NFPA 99 compliant water based handline system will be provided in both locks. The Main Lock will have two spray lines and the Entry Lock will have one.

O2 Analysis:

Dedicated oxygen analyzer monitor Oxygen levels in both locks.

Communications:

Primary:

Single-channel 3-station system for console operator and inside attendants.
Each interior station includes a talk-back speaker with a parallel fitting for a push-to-talk (PTT) headset for use by an inside attendant.

Optional Items:

Air conditioning system for Main Lock.

8.3 inches (211 mm) ID Food Lock (Medical/Food Service Lock) with doors on both sides.

Clamp type coupler (24 or 30 inches) for quick and easy connection with a shuttle chamber.

Caisson gauges inside both the locks to monitor the lock pressures from inside. Gauges has dual scale in PSIG and Bar or

ATA as per customer requirements.

Carbon scrubber and monitor.

All PHS hyperbaric systems are designed to fully meet the current edition of all applicable codes including:

ASME PVHO-1; "Safety Standards for Pressure Vessels for Human Occupancy" latest edition

ASME Section VIII, Division 1, "Unfired Pressure Vessels" latest edition

OSHA Guideline for Compressed Air (per 1926-803 Standards) and (per 296-36 WAC Standards)

CAOSIA CLASS 1, Div. 2 requirements where applicable.

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