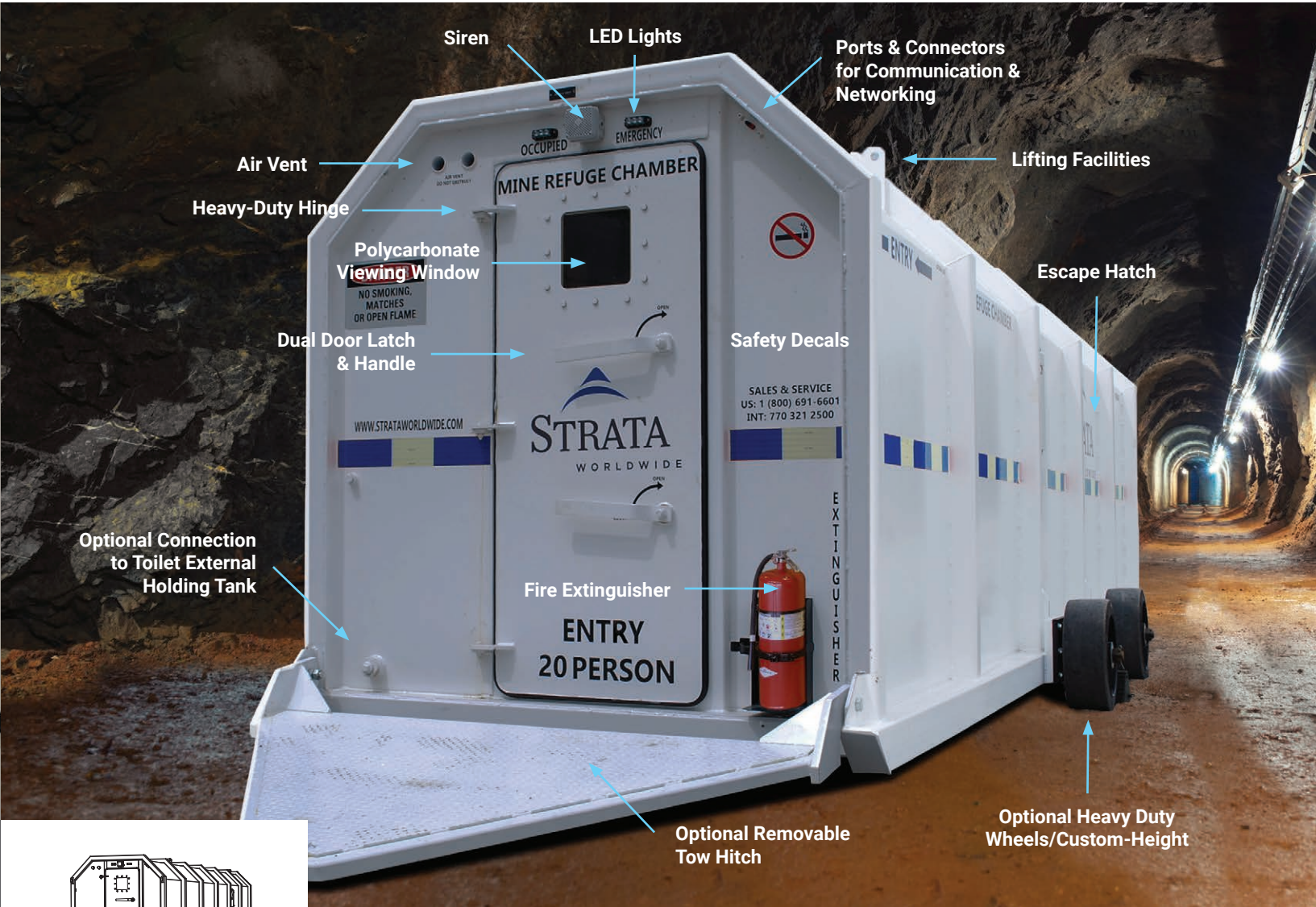# Strata Emergency Refuge Chamber ERCX

Including the Latest in Advanced Technology

# Strata Emergency Refuge Chamber ERCX

Emergency Refuge Shelters are complete safety systems built for the critical purpose of providing a safe-to-breathe, isolated atmosphere when the breathing air in the working section has become compromised. They are ideal for incidents such as a fire outbreak, ventilation failure, sudden release of toxic gas or a gas-related explosion. They are intended for use when self-escape is not possible.

Strata's chambers are easily tailored to meet local, federal and industry regulations.
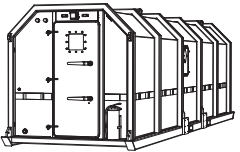
DIMENSIONS

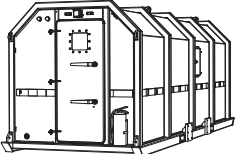| Occupancy/Size	ERCX-10	ERCX-16	ERCX-22	ERCX-26
Length m/feet	4.9 / 16	6.4 / 21	7.9 / 26	9.5 / 31
Width m/feet	2.3 / 7.5	2.3 / 7.5	2.3 / 7.5	2.3 / 7.5
Height m/feet	2.3 / 7.5	2.3 / 7.5	2.3 / 7.5	2.3 / 7.5

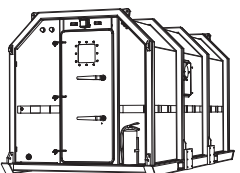*Final weights differ depending on selected time duration
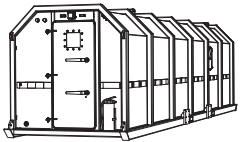
ERCX-26-PERSON

ERCX-22-PERSON

ERCX-16-PERSON

ERCX-10-PERSON

EXTERIOR COMPONENTS - FRONT

Airlock Compartment *Optional
- Separate compartment sectioned off from main chamber to help minimize entrance of air contaminates.
- Selection of heavyweight PVC curtain or secondary steel door.
- Includes switch panel for chamber powering, lights and siren.

  *OPTIONAL purge air system to flush potential air contaminates.

  *OPTIONAL wall mounted CO gas detector.

Connection to Mine Network
- Bulkhead ports and connectors for connection to facility networks and communication devices.
- Custom communication and remote monitoring devices, including Wi-Fi access, VoIP phones, mine phones, cameras, gas detectors, atmospheric monitoring systems and more.

  * OPTIONAL integration of Strata IMACC System (pg 5)

Wheels and Towing Package *Optional
- Wheels and towing package to facilitate maneuverability and minimal wear-and-tear.
- Heavy duty axles and solid, highly resistant rubber wheels.
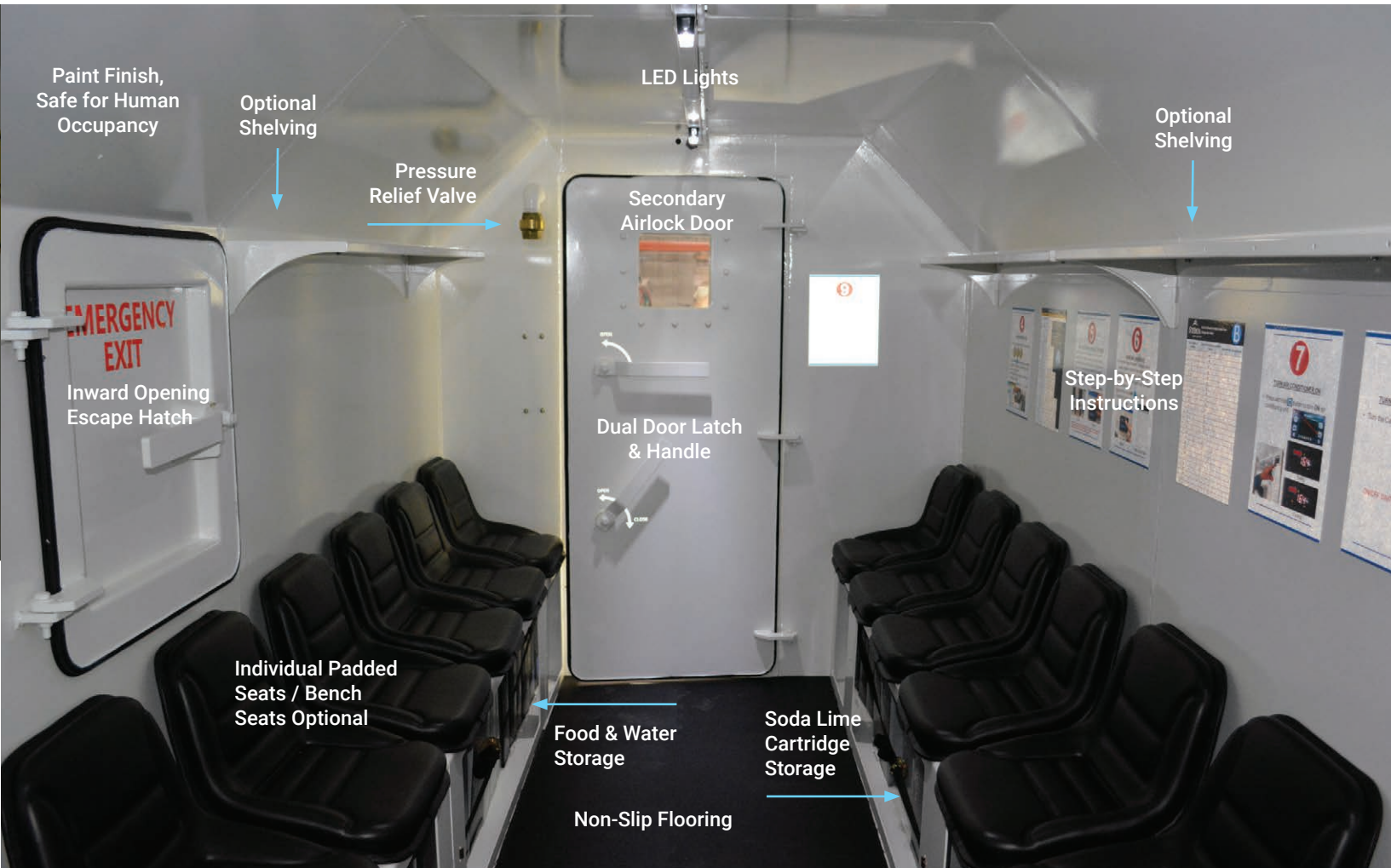
  *OPTIONAL upgrade to high clearance wheels.

  *OPTIONAL upgrade to extreme duty wheels.

Fire Extinguisher
20lb (9kg) ABC dry chemical fire extinguisher.

*OPTIONAL additional units

- DANGER NO SMOKING, MATCHES OR OPEN FLAME
- Air Conditioning with Dehumidifying
- O2 Monitor
- O2 Cylinders with Individual Regulators
- Fan
- Fan
- Soda Lime Change-out Timer with AV Alarm
- CO2 Monitor
- Volt Meters

- Paint Finish, Safe for Human Occupancy
- Optional Shelving
- LED Lights
- Optional Shelving
- Pressure Relief Valve
- Secondary Airlock Door
- EMERGENCY EXIT
- Inward Opening Escape Hatch
- Dual Door Latch & Handle
- Step-by-Step Instructions
- Individual Padded Seats / Bench Seats Optional
- Food & Water Storage
- Soda Lime Cartridge Storage
- Non-Slip Flooring

/equipment /interior components

BREATHING AIR SYSTEM

Onboard Stand-Alone Breathable Air System

- Strata ActiveAir™ carbon dioxide scrubber equipped with a built-in fan system actively circulates air through soda lime to remove the CO2.
- Soda lime packaged in spill-proof cartridges for easy handling and elimination of airborne dust.
- Premium grade soda lime 11-year shelf life from date of manufacture (DOM)
- Built-in automated timer with audio visual alarms for cartridge change-out schedule. Back-up chart provided.
- Individual cylinder, valve-mounted regulators with flow meters, to provide regulated O2 supply.

* OPTIONAL built in O2 and CO2 gas detectors with digital read-outs

OPTIONAL COMPONENTS

Air Conditioning and Dehumidifier

- Highly efficient Mitsubishi 220/230 VAC 50/60 hz air conditioning unit.
- Heat produced by humans and CO2 scrubbing over a long period could create an uncomfortable and hazardous environment for the occupants.

Automated Oxygen System

Strata's automated O2 system automatically adjusts cylinder flow rates and keeps O2 concentration at safe levels. This eliminates the need for a person to monitor levels and make adjustments manually. Periodic monitoring is still required.

Multi-Gas and Environmental Monitoring Station *Optional

- **Sentro8 SensorStation** is a complete, integrated environmental sensing system placed inside the chamber.
- Up to eight channels for gas, environmental and power supply monitoring.
- LED display, AV alarms, control relays, datacomms.
- Flexible options with simple changing of compatible Sentro sensing modules or remote sensors.

Carbon Monoxide Conversion System *Optional

The Strata CO Converter is a battery-operated, self-contained catalytic CO remover that is magnetic mounted to the chamber wall.

Food and Water

Individually packaged emergency water and food provided.

2.25 quarts (2.1L) water and a 2000kcal food bar per person per day are stored under the seats and have a 10-year shelf life.

First Aid

First aid kit to suit the number of occupants, and a foldable stretcher for transporting injured persons are stored under the seats.

Private Sanitation

Lavatory situated in the airlock or concealed with an opaque privacy curtain.

Portable chemical toilet with a 5.5-gallon (21L) water reserve tank and tissue paper.

*OPTIONAL external storage tank

IMACC System for Smart Safety

Intelligent Monitoring, Alert, Communication and Control System

Upgrade emergency safety and preparedness with Strata's IMACC system. An intelligent connection between chambers and the surface.

STRATA IMACC BASICS – Connectivity between the Chamber and Surface

Real-time emergency communication and monitoring

- VoIP Phone
- Video Streaming with multiple views
- Sensor Data for Monitoring
    - Internal gas levels
    - Internal temperature & humidity
    - External power supply
    - External air supply flow and pressure
    - Battery voltage
    - Door open/closed

Long-term remote maintenance and sensor monitoring

- Battery Voltages
- Battery Charger Function
- External Power Source Voltage
- Chamber Tampering/Access

STRATA IMACC ADVANCED – Achieve the BASICS and add full integration into operation network for Remote Control, Custom Viewing, Data Logging and History Reporting

Place and identify chambers on interactive mine map

- Select individual chamber for detailed view and status monitoring
- Video streaming with multiple views. Full or split screens
- Remote control of systems and equipment with sophisticated input capabilities
    - Sensor alarm thresholds
    - Air conditioner settings
    - Consumable's expiration dates and change-out scheduling

Log data and view history within custom date ranges

- Alarm histories
- Sensor readings
- Recorded video
- Custom report generation

Labels on image: AC/DC Inverter · Air Conditioner · Mine Power Disconnect Switch · Air Filtration for External Air Connection · External Air Source Monitoring System · Air Conditioning Battery Back-up

IMACC System for Smart Safety – The Basics
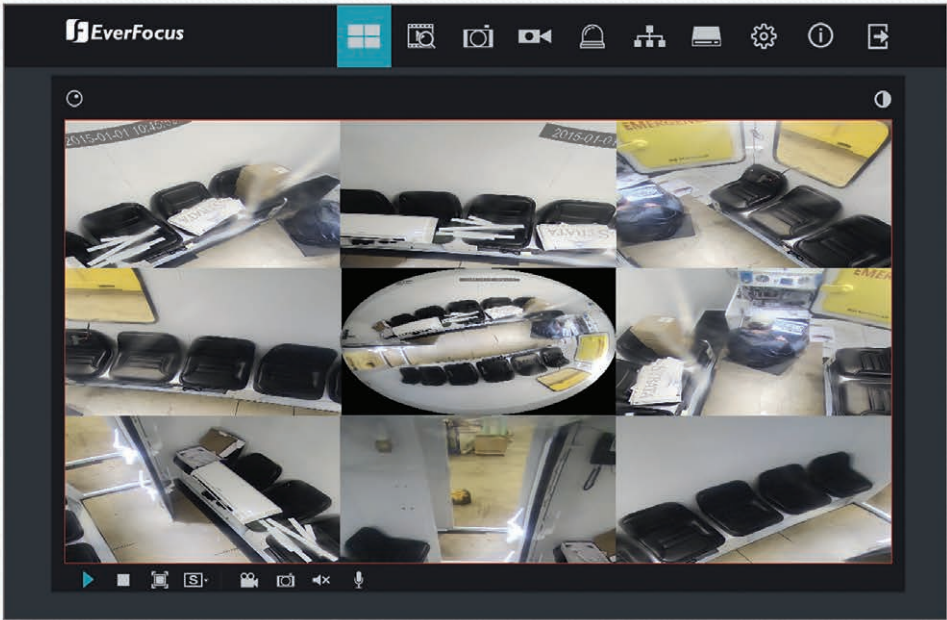
EXTERIOR COMPONENTS - REAR

OPTIONAL COMPONENTS

Compressed External Air Connected through Filter System

Chambers can be connected to external main air lines for an indefinite supply of air. Air flows through a high-quality filter system to clean the air and remove potential oil, water, odor and organic compounds (taste).

The air flows through a silencer to reduce noise level at the release point inside the chamber.

CO Detection & Diversion Line

A solenoid valve incorporated into the filter system to detect carbon monoxide in the external air source. If detected, an audible alarm sounds, and the air is automatically re-routed to be released outside the chamber.

External Air Source Monitoring System

Measures the flow rate and pressure of compressed air entering the from the external air lines.

More than a Supplier...

Strata works closely with customers to fully understand individual operation and project needs. On-site and remote service capabilities ensure ongoing customer support during and following installation.

/strata protect

Strata **Emergency Refuge Chamber** ERCX

AMERICAS

8800 Roswell Road, Suite 145
Sandy Springs, GA 30350 USA
TF: 800-691-6601
T: 770-321-2500
F: 770-321-2520
info@strataworldwide.com

www.strataworldwide.com/mining