

30 Men H₂S Shelter



Uniteam 30men H₂S shelter (SIP) is a highly customized solution built for easy transport and relocation at Malaysia offshore platform. It is made up of 4 sets of containers (2x40', 1x20' and 1x10'), has an A-60 fire rating. The sealing between the containers is solved by Uniteam patented GSSP gaskets which ensuring quick deployment of SIP on-site with minimal downtime to the ongoing production. Moreover, all equipment is IECEX certified and can be used in Zone 1 or Zone 2 hazard area.

The solution consists of PLC control system, F&G system, HVAC system, PRP system and UPS (Solar power and inverter) system.

The SIP is divided into four areas, with positive pressure system, except Bottle bank room, Muster room and Equipment room with pressure 50~75pa, Air lock is 25~50pa.

Muster Room: One 40ft container has long bench for 30 men, below of bench designed storage for 30 sets of breathing masks and portable gas detectors for emergency escape. Fresh air ducts arranged on the ceiling for internal room ventilation. Workstation and monitoring system in the room where H₂S shelter can be remotely controlled from Onshore.

Air Lock: One 10ft container, Internal and external doors equipped with EX electromagnetic lock to control interlock system indicated by the status lights. Airlock air inlet and outlet equipped with balancing dampers to adjust internal room pressure. External recess wall have EX mimic panel for personell to know the system runing status.

Equipment Room: One 40ft container internal room installed PLC system, Power Distribution Panel, Air Handling Unit (AHU), Pressure Reduction Panel (PRP) and Inverter system. Equipment room have double doors for entrance and easy access for maintenance.

Bottle Bank Room: One 20ft container for storage two groups of compressed air cylinders and EX compressor. The cylinders are connected by manifolds. The compressor designed to provide 51m³ per hour fresh air to the bottle bank, the compressor with filter can ensure that breathing air is safe and reliable for people. The compressor can be remotely started.

Specification

Structural

2x40ft High Cube Container	Size: L x W x H 12192 x 2438 x 2896 mm
1x20ft Bottle Bank Container	Size: L x W x H 6058 x 2438 x 2896 mm
1x10ft Air Lock Container	Size: L x W x H 2991 x 2438 x 2896 mm

Insulation	50mm Rockwool + 25mm B15 panel
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Fire rating	A-60 fire rating
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Doors	Gas tight and A-60 Fire rating
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Painting	Offshore painting
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Evacuation time	30 men 1 hour + 1 hour redundant
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Electrical

UPS (Solar power & Inverter)	One hour for emergency
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Cables	Offshore cables (Low smoke halogen-free tape armor)
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EX zone approval	IECEX & ATEX, Zone 1 / Zone 2 / safe area
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Instrumentation

EX Detectors	H2S, CH4, Temperature, Smoke, Heat, etc.
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Airlock	With interlock system activated in emergency situation
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Over pressure	50~75Pa in Muster room/Equipment room/25~50Pa in Airlock
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HVAC

AHU	EX compressors & motors, with redundant system
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AC External	IECEX & ATEX, zone 1
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PRP and Bottle bank

Pressure Refunction Panel	480m ³ /h air flow
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Bottle bank	1080m ³ , 300bar
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Compressor	ATEX, 300Bar working pressure, 51m ³ /h
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Breathing air duration	1hour +20%, 1hour +20% redundant
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