

# SAFE CAP

## SAFE ROOM/BUNKER

A plug & play system by Camp Operating Group (COG), a division of Enigma Alliance



Camp Operating Group's (COG) core business is the provision of turnkey life-support solutions in conflict-affected regions. COG's areas of expertise include the building of accommodation camps, clinics and water treatment facilities in the most challenging environments where the minimising of build-time due to the high risk environments is a priority.



## BIRTH OF SAFECAP

To reduce in-country build-time of the traditional Safe Room/Bunker construction in a conflict setting, which usually takes weeks, COG developed a bespoke 10mm thick steel-enclosed (walls, floor & roof) Safe Room/Bunker, known as SAFECAP which is supplied complete as a "plug & play" drop-in unit, manufactured and supplied with the following features as standard:

- AC
- Plumbing lines
- Electrical lines
- 2 x Toilets
- Wash Basin
- Faucet
- Lights and electrical sockets
- Bench-seating along inner walls
- Secondary roof structure to accommodate Overhead Protection (UN standard)

### SIZE OPTIONS:

SAFECAP units are available in two sizes, with fittings which allow for shipment as either a 20ft or 40ft container, namely:

1. SAFECAP-20  
(seats 12pax comfortably)  
2,440(W) x 3,100(H) x 6,000(L)
2. SAFECAP-40  
(seats 32pax comfortably)  
2,440(W) x 3,100(H) x 12,000(L)

### QUALITY STANDARDS:

Our SAFECAP units are manufactured entirely in Europe to the following standards:

- Steel is certified S355JR/S275JR or S235JR
- Welding Quality Control (ISO 3834-2)
- Production Control – Corrosion & Structural Design (0408-CPR-TA02172)
- Management System (ISO 9001:2015)
- Management System (ISO 14001:2015)
- Management System (OHSAS 18001:2007)

The standard version is encased in 10mm EU certified steel plate, and is usually surrounded by HESCO. ARMOX ballistic plating for doors is an available option.

## INTERNAL SEATING



## INTERNAL ABLUTIONS



FITTED ELECTRICAL AND PLUMBING LINES, WITH  
SECONDARY OVERHEAD PROTECTION STRUCTURE,  
INCLUDING PRE-DETONATION LAYER

ENTRANCE DOOR



## TECHNICAL SPECIFICATIONS | FULLY WELDED

### TECHNICAL SPECIFICATION

#### Design Parameters

- Sandbag Load 950 kg/m<sup>2</sup>
  - Wind Load 50 kg/m<sup>2</sup>
  - Chassis Live Load 500 kg/m<sup>2</sup>
  - Design Standards According to European Standards
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#### Structural System

- Foundation Concrete foundation
  - Structural Elements Special shaped steel
  - Steel quality is S355JR or S275JR or S235JR
  - Connections Connection with welding
  - Painting Corrosion Class C5
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#### External Surface

- Sandblast Sa2½
  - 240-micron BA900 (Kansai AltaN Brand) undercoat for exterior surfaces,
  - 60 micron BS867 (Kansai Altan Brand) topcoat for exterior surfaces, Ral 9002
  - Total 300 micron for exterior surfaces.
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#### Internal Surface

- 200-micron BA124 (Kansai Altan Brand) primer
  - Total 200 micron for internal surfaces.
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#### External Wall

- Wall Type Steel frame wall
- External Surface 10.0 mm trapezoidal steel sheet
- Steel Supports Structural steel
- Insulation Composite Panel
- External Surface 0,5 mm galvanised trapezoidal sheet ral 9002
- Insulation 50 mm Rockwool Sandwich panel U= 0,70 W/m<sup>2</sup>K
- Internal Surface 0,4 mm galvanized steel sheet, painted, Ral 9002

#### Internal Wall

- Wall Type Composite Panel
  - External Surface 0,5 mm galvanised trapezoidal sheet ral 9002
  - Insulation 50 mm Rockwool Sandwich panel U= 0,70 W/m<sup>2</sup>K
  - Internal Surface 0,4 mm galvanised trapezoidal sheet ral 9002
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#### Floor

- Floor Type Steel support profiles
  - Decking 20 mm Marine Plywood 600 kg/m<sup>3</sup>
  - Bottom Surface 2 mm 27/200 trapezoidal steel sheet
  - Insulation Mineral wool, Knauf Mineral Plus Ipb037 100 mm, U=0,37 W/m<sup>2</sup>K, 85 kg/m<sup>3</sup>
  - External Surface 10,0 mm steel sheet.
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#### Roof

- Exterior Cladding 10.0 mm steel sheet
  - Steel Supports Structural steel
  - Insulation Composite Panel
  - External Surface 0,5 mm galvanised trapezoidal sheet ral 9002
  - Insulation 50 mm Rockwool Sandwich panel U= 0,70 W/m<sup>2</sup>K
  - Internal Surface 0,4 mm galvanized steel sheet, painted, Ral 9002
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#### Secondary Roof

- Exterior Cladding -1 0,50 mm 27/200 galvanized RAL9002 painted corrugated sheet
- Steel Supports 1,20 - 3,00 mm galvanized U-C profiles.
- Exterior Cladding -2 20 mm Marine Plywood 600 kg/m<sup>3</sup>

## Finishing

- Floor 20 mm Marine Plywood + GRP
- Wall 0,4 mm galvanised trapezoidal sheet ral 9002
- Ceiling 0,4 mm galvanised trapezoidal sheet ral 9002

## Internal Doors

- Frame Aluminium
- Door Dimensions 700 x 2000 mm

## External Doors

- Type 10mm steel
- Frame Steel Frame
- Door Wing Double leaf steel
- Accessories Metallic door handles, 2 hinges
- Panic Bar Included
- Door Dimensions 1600 x 2100 mm Double Leaf

## BUILDING ELECTRICAL INSTALLATIONS

1. Standard system voltage will be 230V/400V and the frequency IS 60 Hz but could be adjusted to suit client requirements.

2. MCB box is provided for unit. MCB box will be PVC standard box. Protection class of MCB Box is IP42. All consumers in the container unit will be fed from this MCB box. MCB box will be provided according to client load Schedule.

3. Internal lighting system is with fluorescent type lighting fixtures. Lighting fixtures will have battery backup as standard.

4. Sockets will be 220 V, CEE7/7 standard, type F and 16A. Sockets will be single phase, 1- phase, 2- pole and 3- wire with ground. IP level of the sockets will be IP 54. Offered socket quantities and locations will be based on client requirements.

5. Cabling system installation will be according to European standards. NHXMH (halogen free, 300/500 V, unarmoured, solid conductor) cables will be used for lighting and small power circuits. For lighting fixtures 3x1.5 mm<sup>2</sup> NHXMH cables will be used and 3x2.5 mm<sup>2</sup> cables will be used for socket outlets. 3x4 mm<sup>2</sup> NHXMH cables will be used for A/C indoor units.

6. Lighting fixtures, switches & sockets cable installations will be surface mounted. PVC cable channel/trunking will be provided at the inner corners of the building. PVC conduits will be used for the walls from ceiling down to switch and sockets.

7. Earth bosses will be used for grounding connection for structure of the buildings. Earth bosses will be welded to the structure. Earth bondings from metal faces will be provided with H07Z1-K cables (450/750 V, Insulation Colour: yellow/green, Outer Sheath: N/A, Flame retardant, Conductor: Class 5 according to IEC 60228, Non-armoured)

10. Indoor A/C split units fed from MCB box. 1 no 20A maintenance (0-1) switch and feeder cable are included.

### CONTACT

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