



# DMTSS

DEPLOYABLE MULTI-PURPOSE  
TACTICAL SHELTER SUITE

- DMTSS-1/2/3
- RACKBOX SHELTER
- MPU



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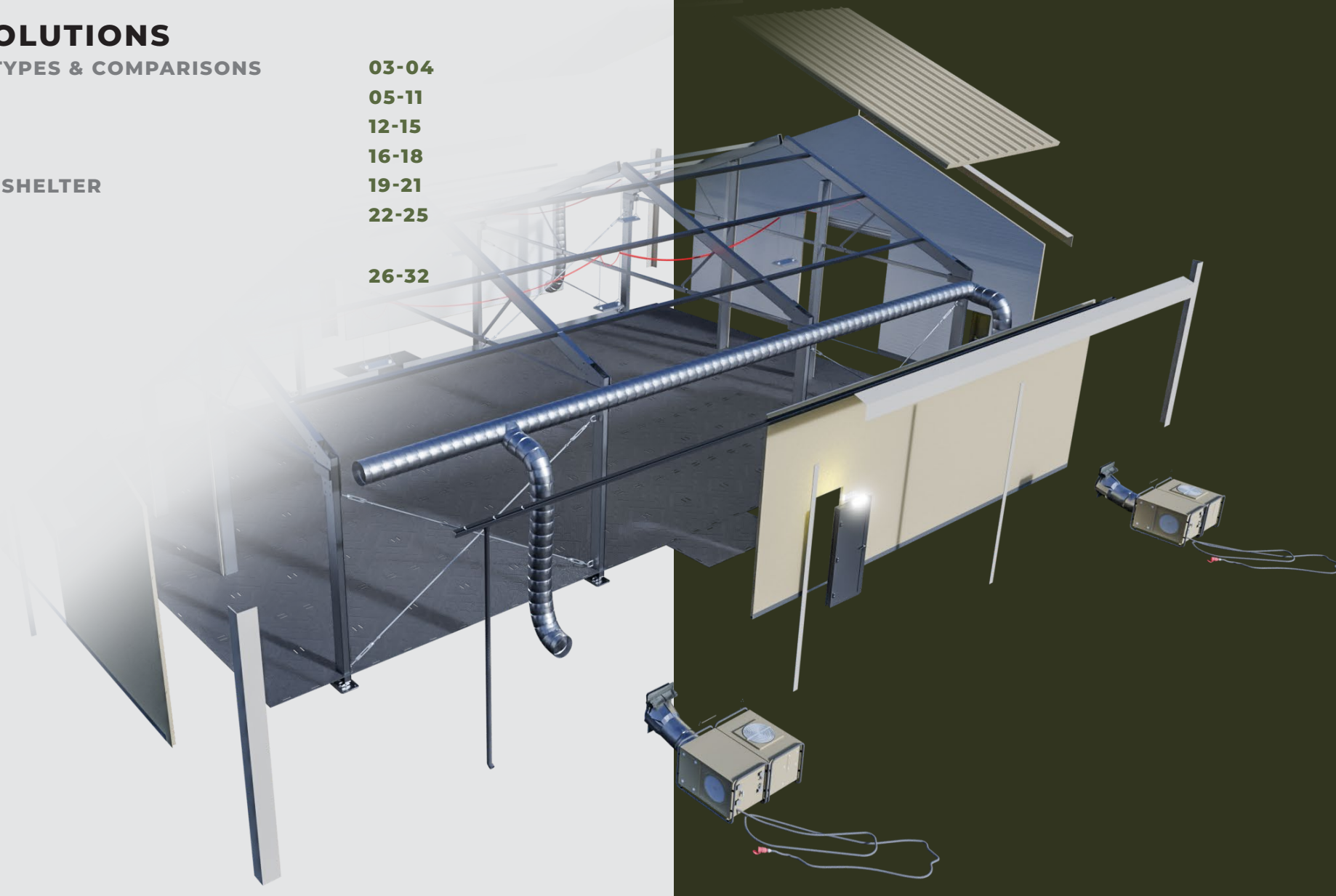
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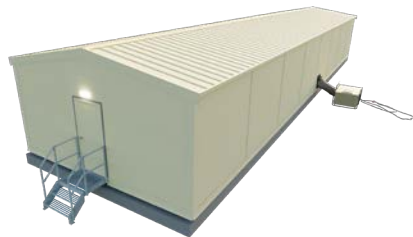


# 2023 // SHELTER TYPES AND CONFIGURATIONS

Tactical Shelters For Any Environment or Mission



**DMTSS/1**



**DMTSS/2**



**DMTSS/3**



**RACKBOX  
SHELTER**



**MPU**



**SHELTERS**

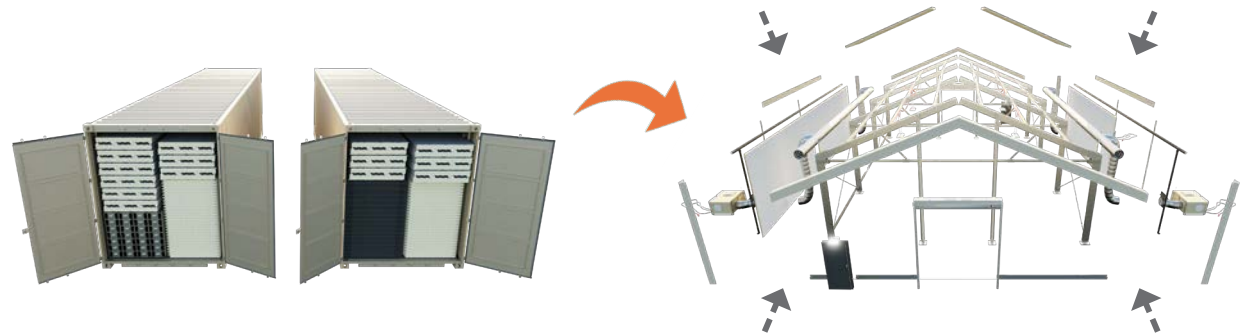
**\*EUROPE ONLY**

	DIMENSIONS (ft)		SITE CONDITIONS	EXTREME COLD	HVAC	MATERIALS
<b>DMTSS/1</b> <ul style="list-style-type: none"> <li>Maintenance</li> <li>Warehouse</li> </ul>	20' (w)	40' (l)	OCONUS -Gravel	YES	YES	Sandwich Board
	30' (w)	60' (l)				
	40' (w)	80' (l)	CONUS -Concrete Slab			
		100' (l)				
<b>DMTSS/2</b> <ul style="list-style-type: none"> <li>Billeting</li> <li>Office</li> <li>Classroom</li> </ul>	30' (w)	30' (l)	Level dirt/Grass/Gravel/ Concrete/Asphalt	YES	YES	Sandwich Board
		60' (l)				
		90' (l)				
<b>DMTSS/3</b> <ul style="list-style-type: none"> <li>Billeting</li> <li>Office</li> <li>Classroom</li> </ul>	30' (w)	30' (l)	Level dirt/Grass/Gravel/ Concrete/Asphalt	YES	YES	Sandwich Board Side Walls with Double Skin Fabric Roof
		60' (l)				
		90' (l)				
<b>RACKBOX SHELTER*</b> <ul style="list-style-type: none"> <li>Maintenance</li> <li>Storage</li> </ul>	40' (w)	40' (l)	Gravel/Concrete/Asphalt	NO	YES	ISO Containers with Sandwich Board Roof
		60' (l)				
		80' (l)				
		100' (l)				
		120' (l)				
<b>MPU1 - flat pack</b> <ul style="list-style-type: none"> <li>Billeting</li> </ul>	Standard		Gravel/Dirt	YES	YES	Sandwich Board
<b>MPU2* - ready assembled</b> <ul style="list-style-type: none"> <li>Billeting</li> </ul>	Standard		Gravel/Dirt	YES	YES	Sandwich Board

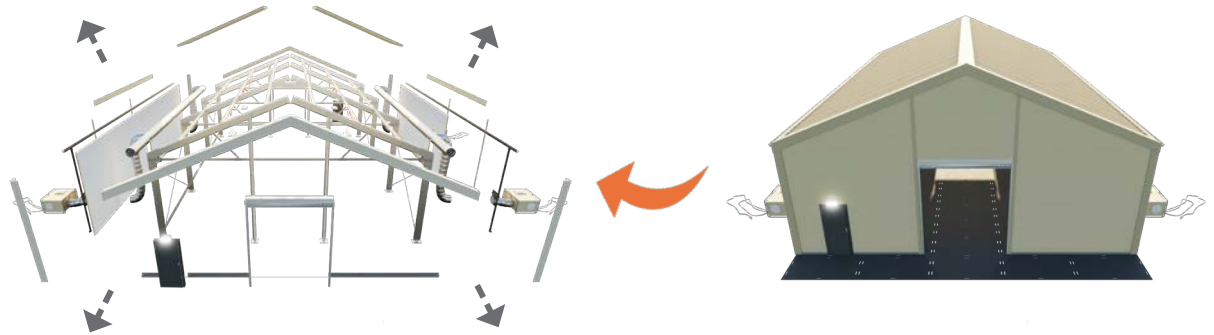
# DMTSS™ -1

MAINTENANCE & WAREHOUSE





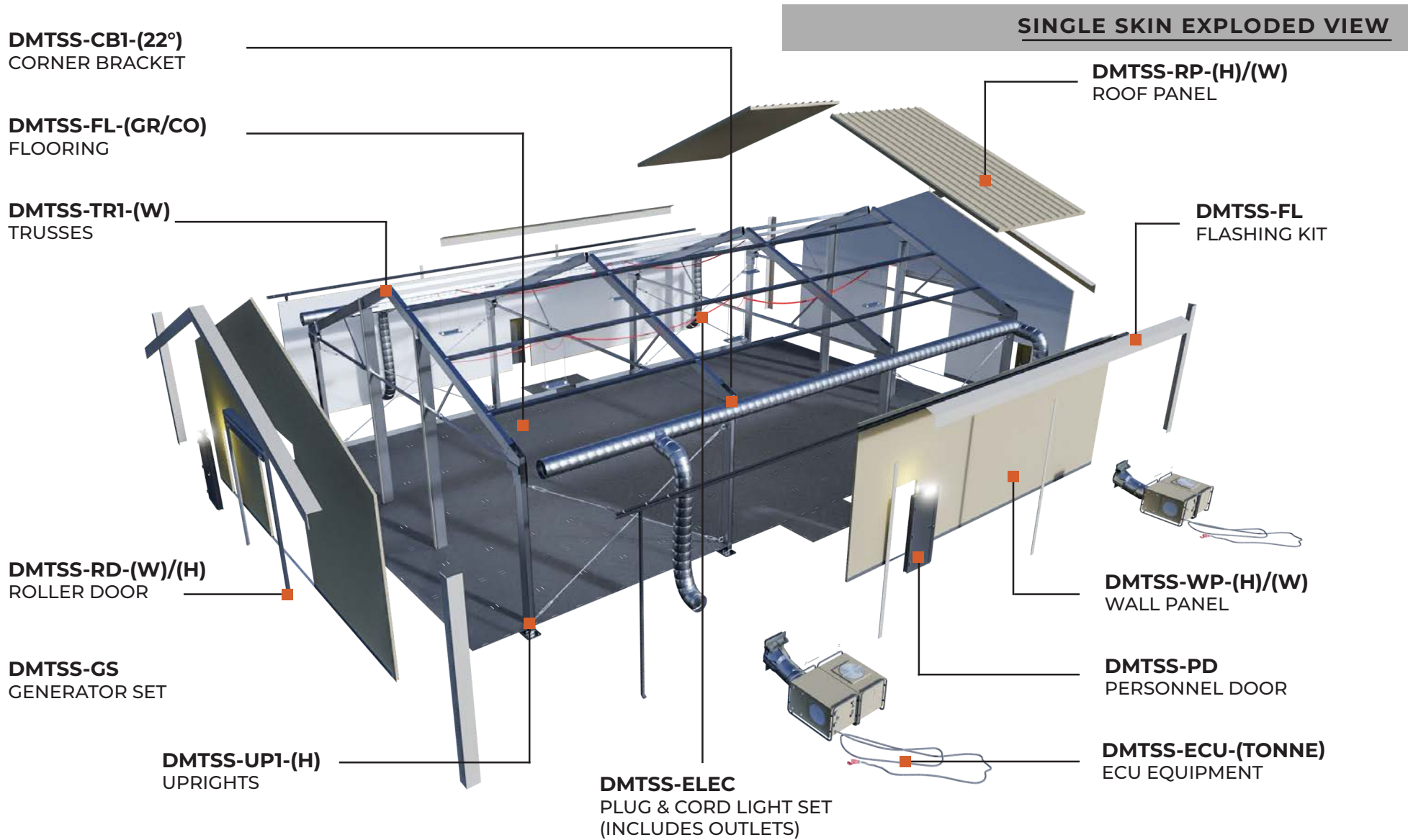
**EASILY RELOCATED, ERECTED, DISASSEMBLED,  
TRANSPORTED & RE-USED SHELTER EQUIPMENT**

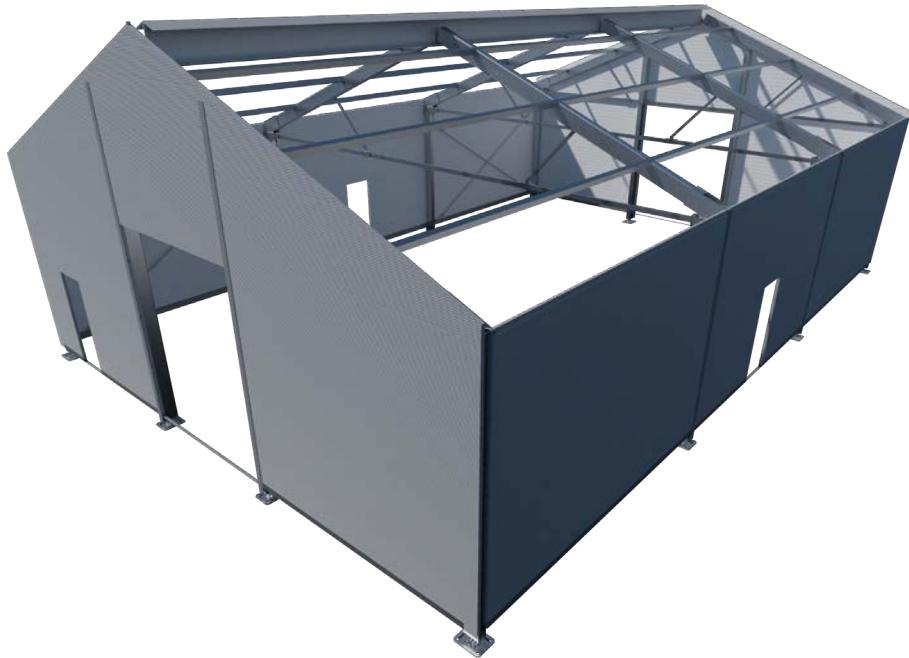


- HAS A 40 YEAR SERVICE LIFE
- EQUIPMENT SOLUTION WITH ALL THE BENEFITS OF A MILCON STRUCTURE
- ASSEMBLED AND DISASSEMBLED EASILY FOR REDEPLOYMENT TO OTHER AREAS OR FOR RETURN TO STORAGE WHEN NOT REQUIRED
- NO MAINTENANCE INTERVENTION IN THE FIRST 7 YEARS
- CAN BE STORED AND SHIPPED IN STANDARD ISO CONTAINERS
- CAN BE INSTALLED ON ANY SURFACE\*

# GENERAL OVERVIEW

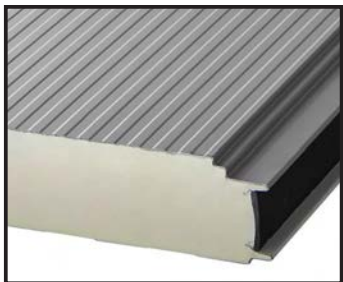
# DMTSS - 1





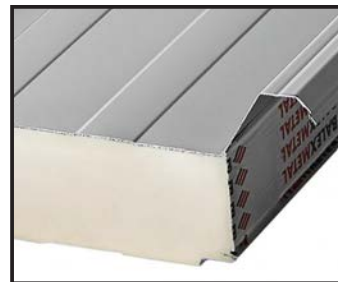
**DMTSS-WP-(H/W) DEMOUNTABLE WALL PANELS**

**Name** - PIR Standard wall sandwich panel (PU-PIR-W-PLUS)  
**Core** - Rigid polyurethane foam, PIR / density: 40 (+/-3) kg/m<sup>3</sup>  
**Steel grade** - S250GD, stainless steel (1.4301) (outer cladding)  
**Coat** SP Polyester Mat Pearl, Food Safe PVC(F), Aluzinc+Easyfilm, Cesar 65 Mat  
**Effective width [mm]** 1000 (Concealed fasteners)  
**Thickness** - 60mm (Higher Available)  
**Insulating efficiency, U<sub>c</sub> [W/m<sup>2</sup>K] (PIR)** - 0.39



**DMTSS-WP-(H/W) DEMOUNTABLE ROOF PANELS**

**Name** - PIR Standard roof sandwich panel  
**Core** - Rigid polyurethane foam, PIR / density: 40 (+/-3) kg/m<sup>3</sup>  
**Steel grade** - S250GD, stainless steel (1.4301) (outer cladding)  
**Coat** SP Polyester Mat Pearl, Food Safe PVC(F), Aluzinc+Easyfilm, Cesar 65 Mat  
**Effective width [mm]** 1000 (Concealed fasteners)  
**Thickness** - 60mm (Higher Available)  
**Insulating efficiency, U<sub>c</sub> [W/m<sup>2</sup>K] (PIR)** - 0.35



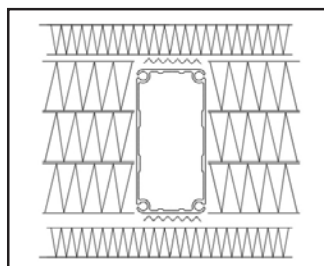


DOUBLE SKIN FOR COLD WEATHER AREAS



**DMTSS-IWI-(H/W) DEMOUNTABLE INNER WALL INSULATION**

**Name** - Mineral Wool Layer  
**Effective width [mm]** 1000 (Concealed fasteners)  
**Thickness** - 300mm (3 x 100mm)  
**Insulating efficiency, U<sub>c</sub> [W/m<sup>2</sup>K] (PIR)** - 0,075 W/m<sup>2</sup>K



Inner sandwich Panel - 60mm **DMTSS-WP**  
Ventilated Air Void - 50mm

Mineral wool layer - 3 x 100mm **DMTSS-IWI**

Ventilated Air Void - 50mm  
Outer sandwich Panel - 60mm **DMTSS-WP**

Personnel Door  
with deep frame

# GENERAL OVERVIEW - ANCHORING (CONUS/OCONUS)

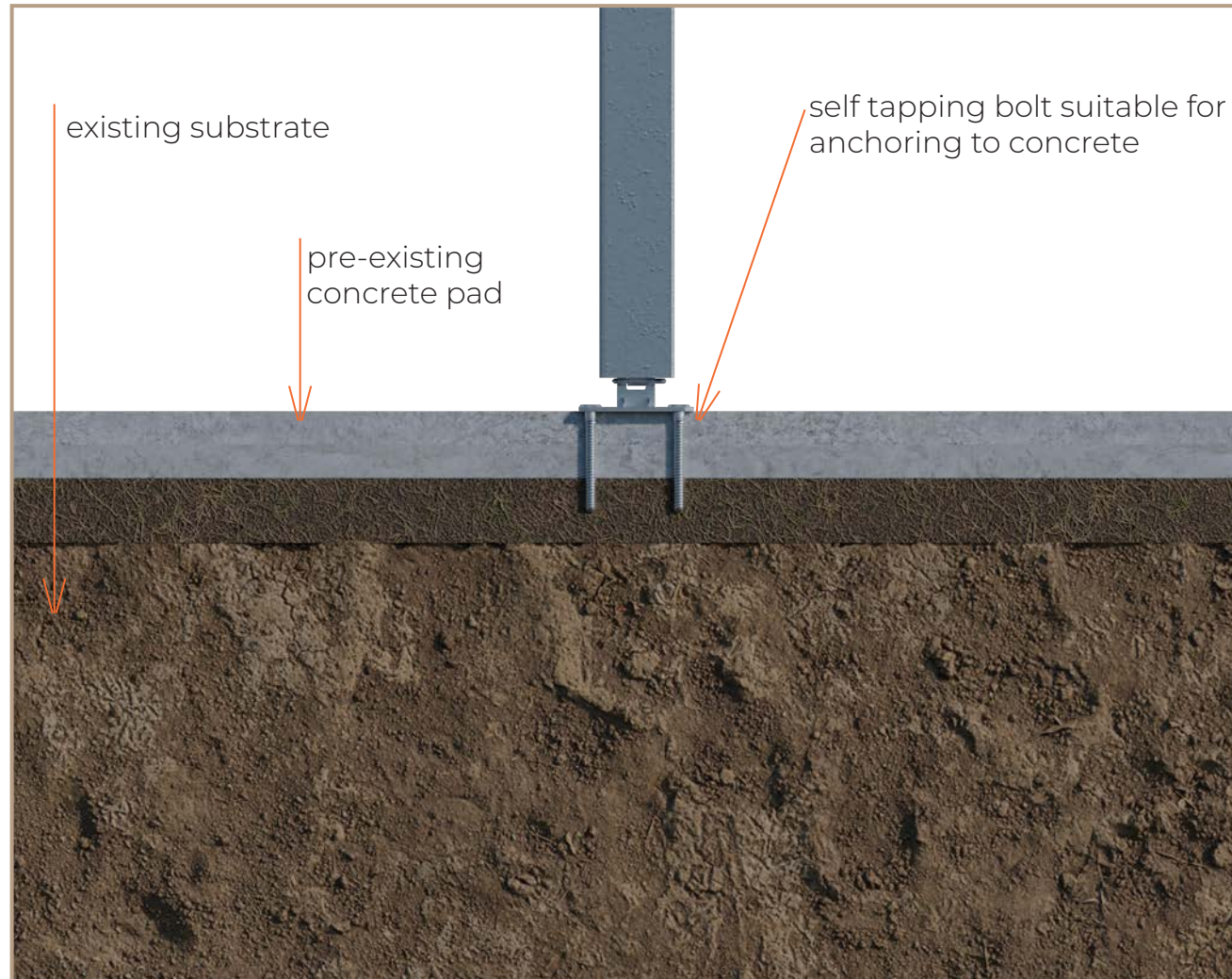
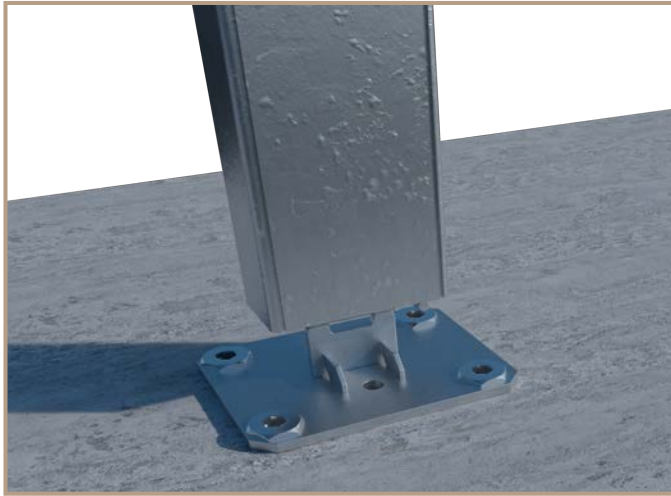
RELEVANT TO USA inc HAWAII and ALASKA. REST OF THE WORLD



# DMTSS - 1

## FIXING INTO: EXISTING CONCRETE PAD

- Anchoring is via self tapping bolts (depth of bolt is indicative, actual depth will be ascertained depending on project requirement).
- Typical DMTSS concrete slab depth is 250mm (10inch)



example of self tapping anchoring bolts

# GENERAL OVERVIEW - (OCONOS)

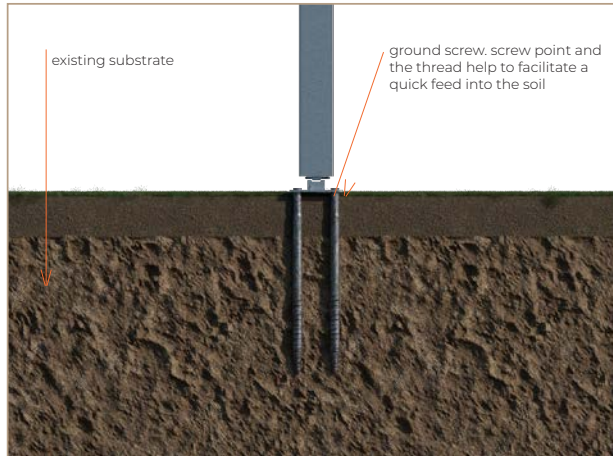
RELEVANT TO REST OF THE WORLD ONLY - NOT ALLOWABLE IN USA



# DMTSS - 1

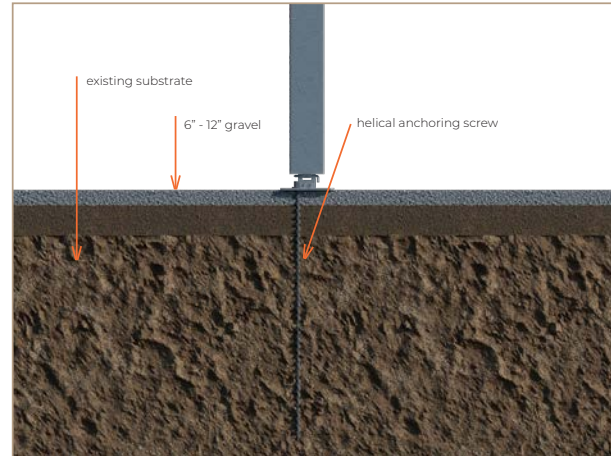
## FIXING INTO: SOIL (VARIOUS COMPOSITIONS)

- Anchoring is via ground screws (ground screw shown is indicative)
- Ground screw type will be ascertained depending on project/site requirement.
- No earth displacement



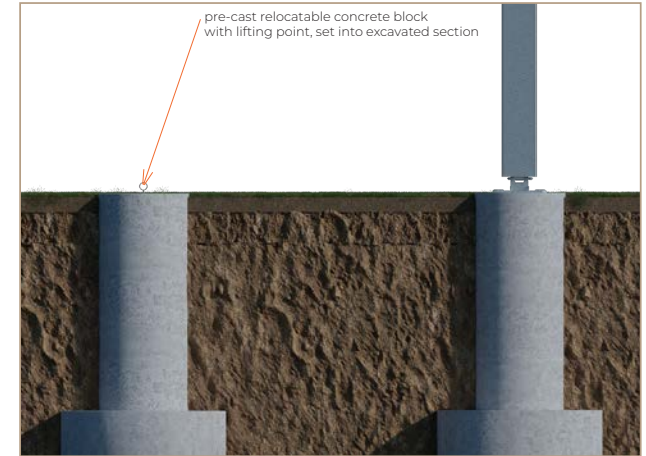
## FIXING INTO: 6-12" RAISED GRAVEL SECTION/EXISTING SUBSTRATE

- Chosen site is treated with new raised gravel section (6" to 12")
- Anchoring is via . spiral ground anchors (depth of screw shown is indicative, actual depth will be ascertained depending on project requirement).

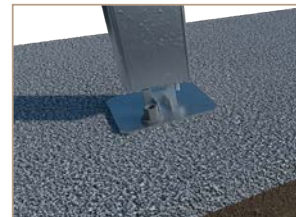


## FIXING INTO: PRE-CAST, RELOCATABLE CONCRETE BLOCK WITH LIFT POINTS

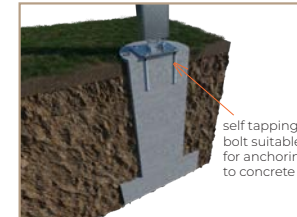
- Block is positioned using forklift and set into excavated section
- Anchoring is via self tapping bolts (depth of bolt is indicative, actual depth will be ascertained depending on project requirement).



example of ground screw



example of helical fixing type



section thru shown for clarity



# GENERAL OVERVIEW - FIRE SUPPRESSION & DETECTION SYSTEMS



Be advised that these features are not currently specified, supplied or included in either design or quotation by BANAIR and remains the responsibility of the client at all times.

# DMTSS™ -2

BILLETING-OFFICE-CLASSROOM  
HARD ROOF





## 1 SPECIFICATION

### FRAMEWORK

-DMTSS™ products are designed and manufactured using proprietary custom designed extrusion structural aluminum.  
Frames anchored with galvanized steel feet to existing pad

Wind Rating - 107mph, Risk Category II spec.  
5lbs/sqft snow loading

### DUCTING

12" Spiral Duct:  
(8) 4" x 16" Registers Evenly

### LIGHTNING ROD PROTECTION

Included

### LIGHTING

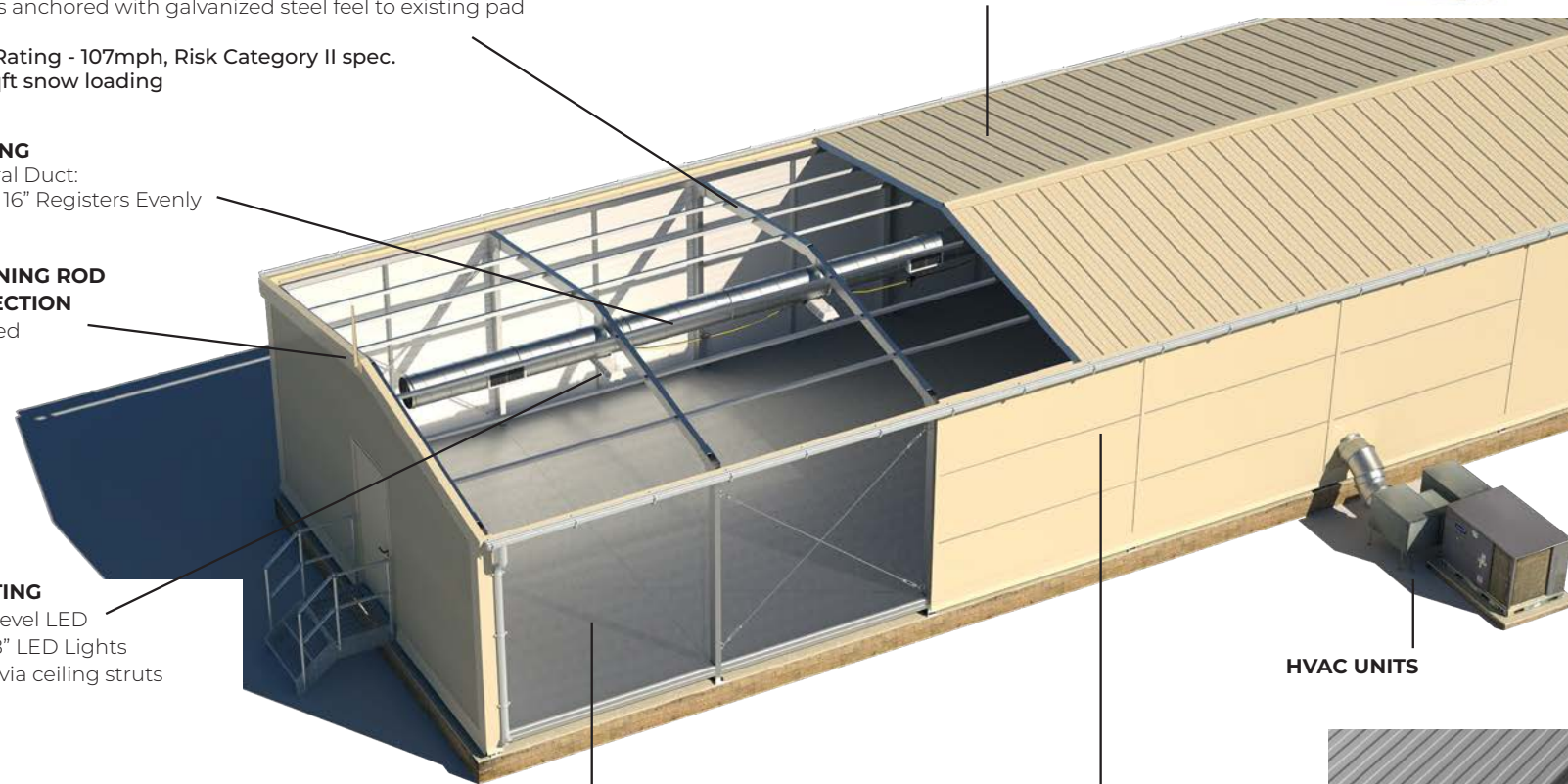
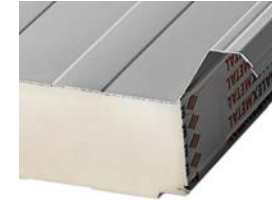
Low-Level LED  
12"X48" LED Lights  
hung via ceiling struts

### FLOORING

- Aluminum: Custom ruggedized aluminum suspended floor system throughout the structure for flooding protection.
- Rubber Matting Optional: Anti-static, anti-slip and sound deadening liner for all flooring.

### EXTERIOR ROOF CLADDING

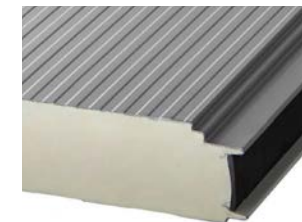
PIR Standard roof sandwich panel  
Core: Rigid polyurethane foam, PIR / density: 40 (+/-3) kg/m<sup>3</sup>  
Steel grade: S250GD, stainless steel (1.4301) (outer cladding)  
Thickness 60mm  
PU warrant with certified fire resistance

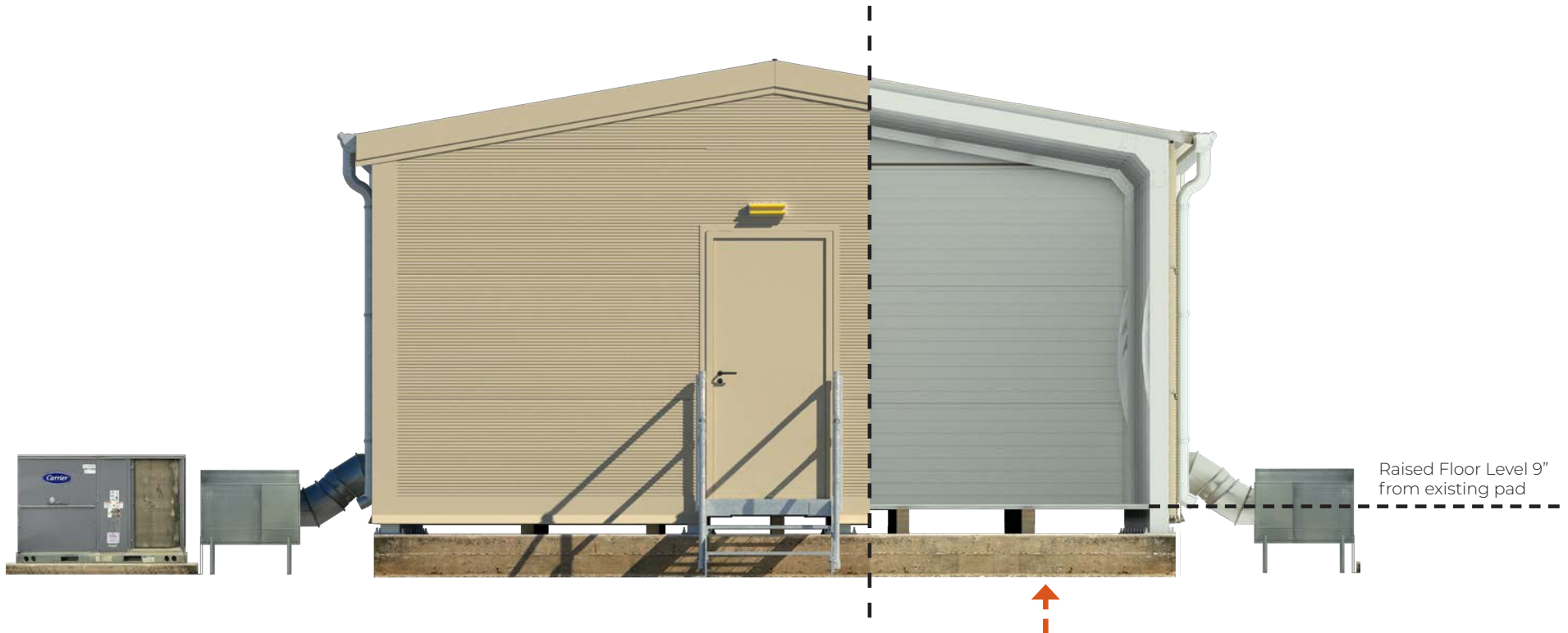


HVAC UNITS

### EXTERIOR CLADDING

Poli-urethane foam insulation, PIR = polyisocyanurate  
PU warrant with certified fire resistance.  
Steel grade: S250GD, stainless steel (1.4301) (outer cladding)  
Thickness 60mm  
Concealed fasteners





**FLOOR SYSTEM**

Aluminum Frames anchored with galvanized steel feet to existing concrete pad.  
BANAIR custom aluminium floor plank sits on pressure treated lumber sections to stop the floor from bouncing and raise structure from ground for protection against flooding.

# DMTSS™ -3

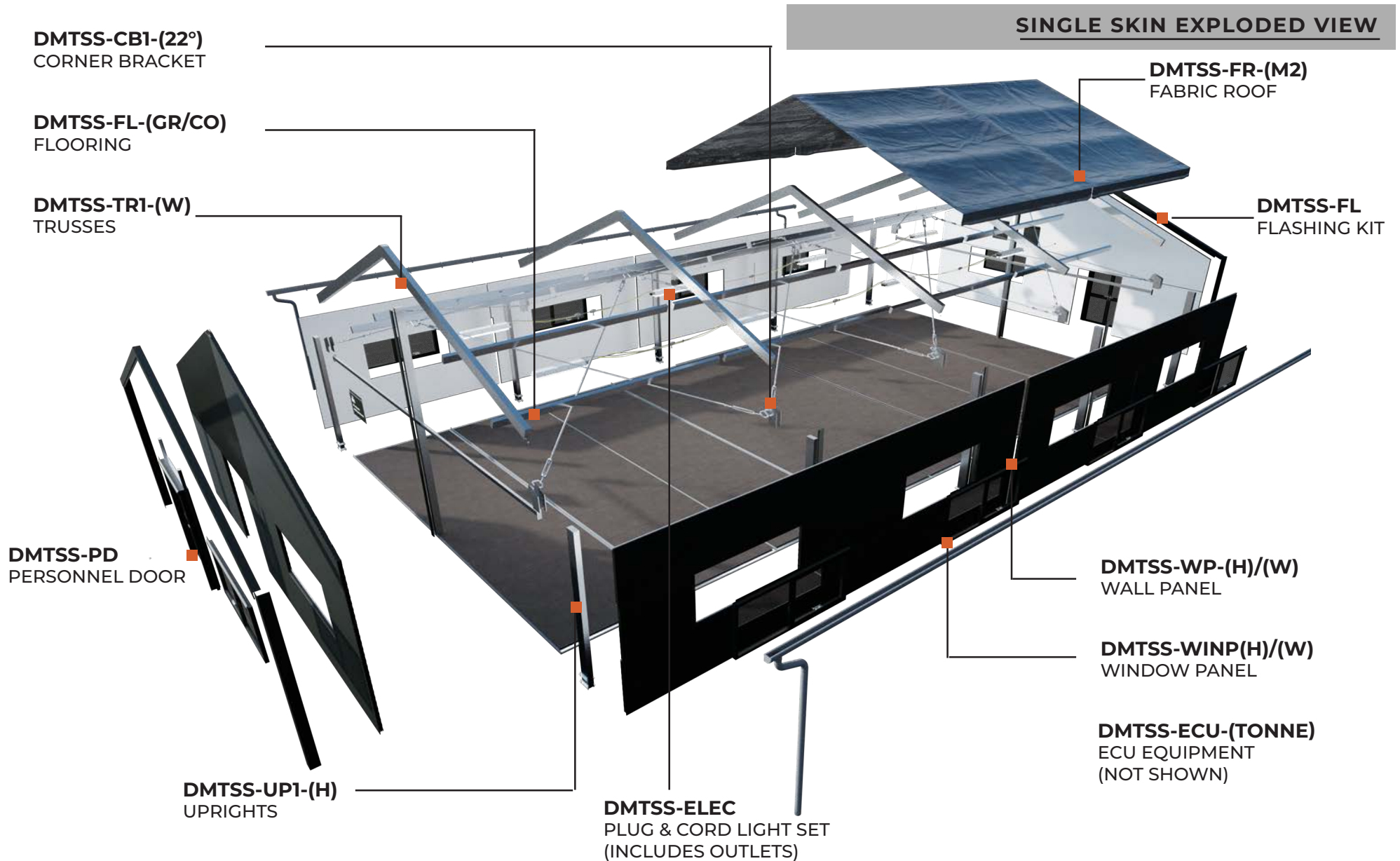
BILLETING-OFFICE-CLASSROOM  
FABRIC ROOF





# GENERAL OVERVIEW

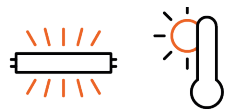
# DMTSS-3



## GENERAL OVERVIEW

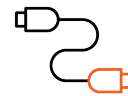
### Features:

- Double door entrance at each end
- Perimeter windows
- Flat panel heaters x 4 (2 each end)
- LED strip lights daisy chain / plug and play.
- 2 x 400mm holes blanked off each end (for optional use with ECU with electrical heating and air conditioning cycles, along with forced fresh air ventilation and dehumidification)
- Sandwich board insulated walls



### CONTROLLED CLIMATE

- Insulated wall
- 3 layer roof insulation
- Easy ECU integration



### POWER SUPPLY

- Plug and Play

# **RACKBOX SHELTER**<sup>TM</sup>

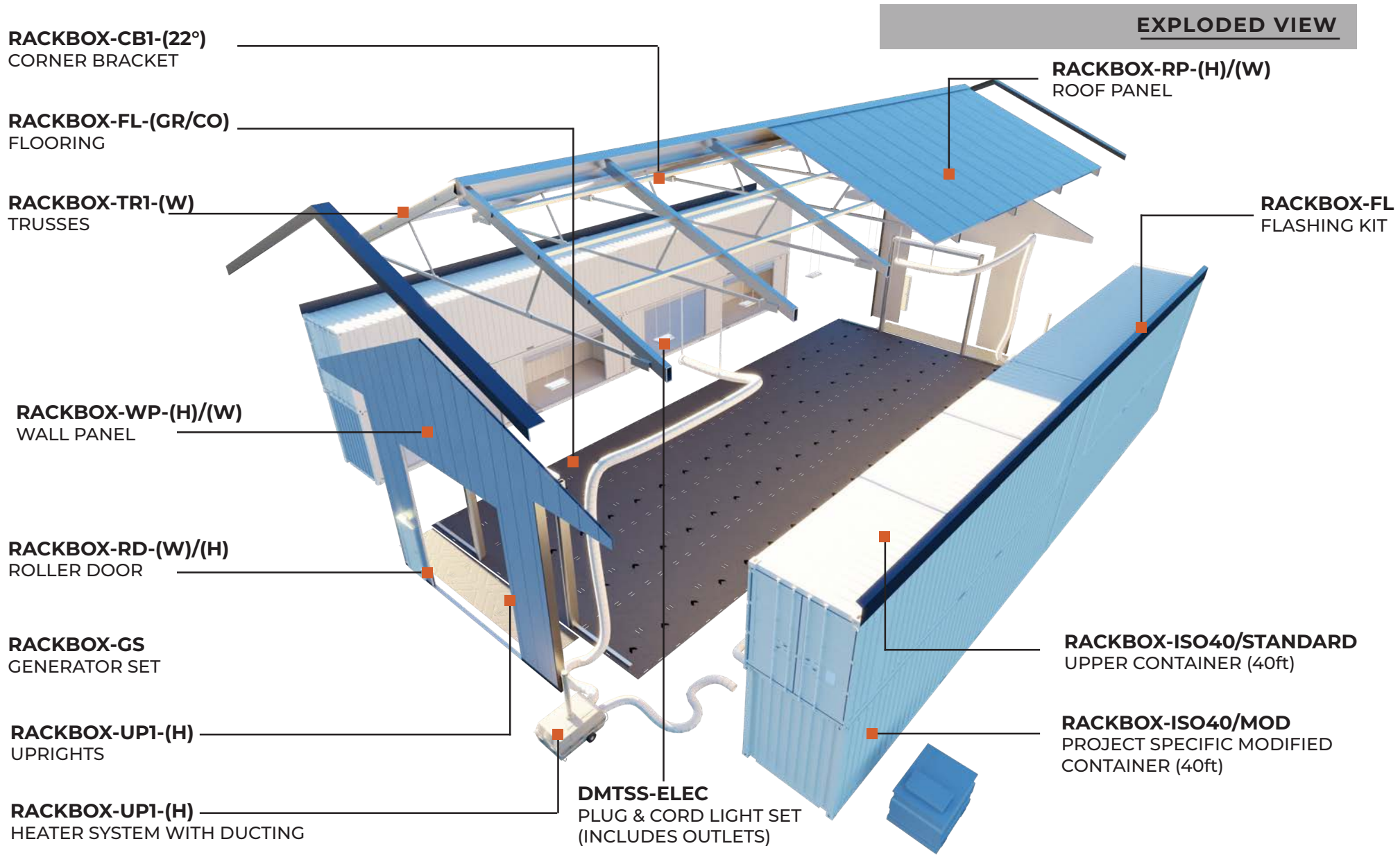
HARD WALLED CONTAINER ASSEMBLY/SHELTER

(ONLY AVAILABLE IN EUROPE)



## GENERAL OVERVIEW

# RACKBOX SHELTER



## GENERAL OVERVIEW ↓

# RACKBOX SHELTER



**RACKBOX SHELTER on  
Concrete Slab**



**RACKBOX SHELTER direct  
to existing surface with  
Rubber matting**



**RACKBOX SHELTER  
interior. 40ft container  
with hinged doors and  
RACKBOX shelving**



**RACKBOX SHELTER  
interior. 40 ft modified  
container with roller  
shutter access**

all images - illustrative purposes only

# MPU™

MODULAR PERSONNEL UNIT



# GENERAL OVERVIEW ↓

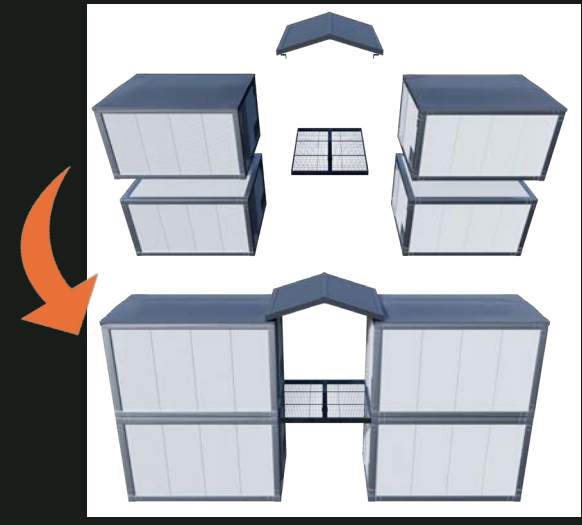
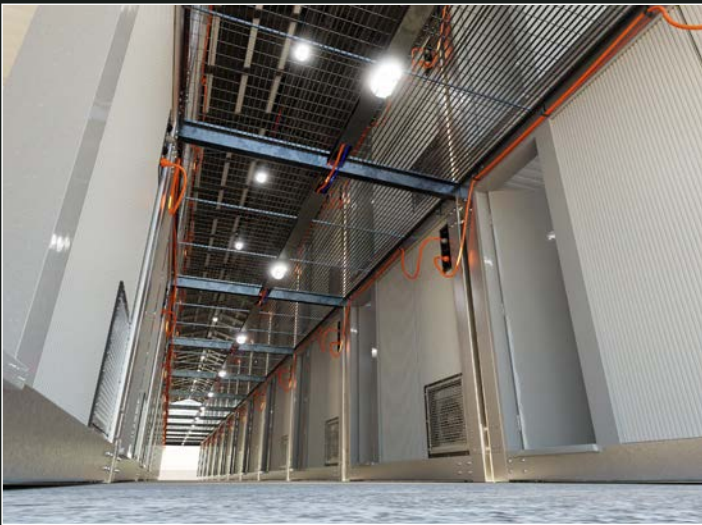
# MPU



- DESIGNED FOR UNLIMITED EXPANSION
- MULTI PURPOSED
- SECURE
- MULTI ENVIRONMENTAL
- BOLTED FRAMEWORK - FAST ASSEMBLY

GENERAL OVERVIEW ↓

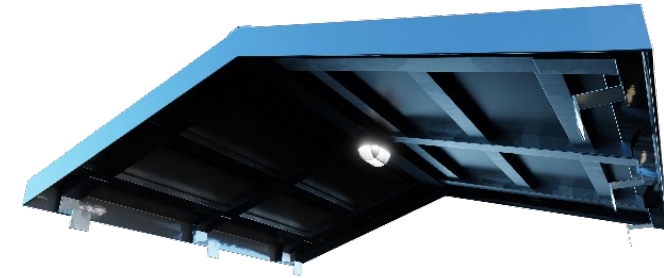
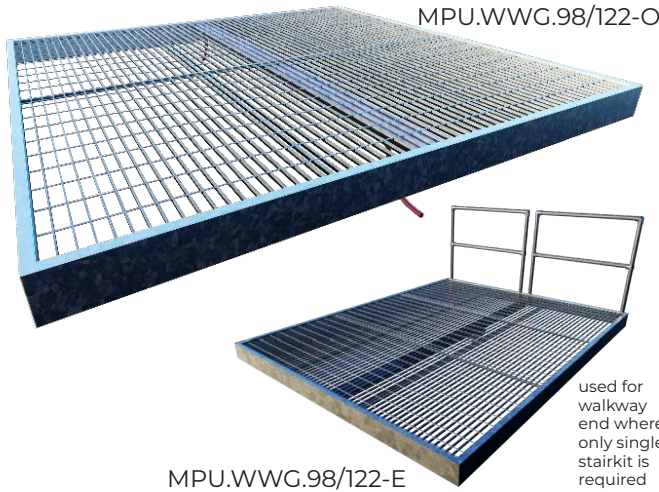
# MPU - EXPANSION





# GENERAL OVERVIEW ↓

# MPU - EXPANSION



## STAIRKIT

MPU.SK.L/TR-10 or MPU.SK.R/TR-10

Stairkit with handrail and landing

• Landing Height	8'-4"
• Treads (pre-landing)	10
• Landing -" (l) x _"(w)	112" x 42"
• Left Handing/Right Handing	L/R
• Finish	TBC
• Quantity	VARIABLE

## WALKWAY GRATE

MPU.WWG.98/122-O or MPU.WWG.98/122-E

Walkway Sections. Typically 1 section as shown per 4 x MOTC Module Assembly

• Width	97"
• Length	96"
• Cable Management Conduit/Light	Y
• Finish	GALV
• Quantity	VARIABLE - 1 PER 4 x MPU BAY

## ROOFKIT

MPU.RK.115/123/4

Roof Sections. Typically 1 section as shown per 2 or 4 x MOTC Module Assembly

• Width	115"
• Length	123"
• Roof Pitch	4°
• Finish	TBC
• Cable Management Conduit/Light	Y
• Quantity	VARIABLE - 1 PER 4 x MPU BAY

cover strips between bays may be required to create seal

# SHELTERS

Associated inclusions and extras

1. PLUG & PLAY ELECTRICAL

2. RESTRACK

3. HVAC

4. FLOORING



# PLUG & PLAY ELECTRICAL DISTRIBUTION & LIGHTING



# GENERAL



## PLUG & CORD ELECTRICAL / LIGHTS SETUP

Aids fast assembly and disassembly of each classroom

**Name** - RST@ circular connector, IP66/68(3 m; 2 h)/69, male, 3-pole, low voltage, signal brown

- Rated voltage: 250 V
- Rated current: 20 A
- Rated impulse voltage: 4 kV
- Type of protection: up to IP66/68(3m; 2h) / 69
- Terminal cross-section: 0.75 - 6.0 mm<sup>2</sup>
- Cable diameter: 6.0 - 10.0 mm (H05VV, H07RN-F)
- Housing material: PA66, V2
- Sealing material: NBR
- Connections per pole: 1
- Marking: 2, 1, PE
- Halogen-free: yes

## ELECTRICAL PACKAGE INCLUDES THE FOLLOWING SPECIFICATION:

NIC-EIC CERTIFIED ELECTRICAL INSTALLATION, EACH STRUCTURE CONSISTING OF:

Either 32A 'Blue Plug' socket or wired isolator for connecting to customers own power (no power generation included)

- Distribution Board
- 4 x LED strip lights per classroom (8 total)
- Emergency exit lighting above each door
- 4 off double power sockets per classroom (Locations TBC)
- 2 x flat electrical 2Kw panel radiators per classroom

Optional Upgrades

- Exterior Lighting
- Other on request

## APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	✔
DMTSS TYPE 2	✔
BERTHER	✔
RACKBOX SHELTER	✔
MPU	✔



# RESTRACK ↓

# GENERAL



EACH RESTRACK SLEEPS 12 (6 EACH SIDE)

FOCUSED SOLUTION FOR HIGH-DENSITY

GENEROUS BERTH SPACING WITH ROOM FOR PERSONAL KIT

IDEAL FOR USE IN EXISTING BUILDINGS

## APPLICATIONS:

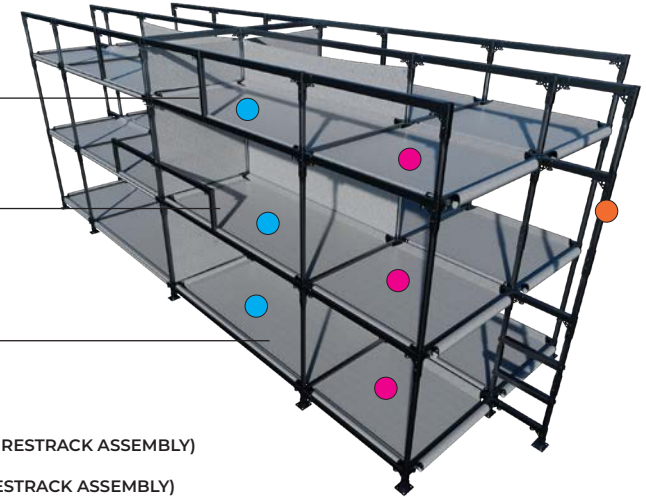
**DESIGNED FOR  
MILITARY, NGO & CIVILIAN**

- SUPPORTING TRAINING EXERCISES
- SURGE BILLETING
- LOGISTICAL SUPPORT AREAS
- NATURAL DISASTER / CRISIS
- HUMANITARIAN HOUSING
- CAMP ACCOMMODATION
- FESTIVALS, EVENTS, FUNCTIONS

ACCESS TO TOP BUNK VIA LADDER (SEE ILLUSTRATION)

ACCESS TO MID BUNK VIA GROUND (SEE ILLUSTRATION)

ACCESS TO LOWER BUNK VIA GROUND (SEE ILLUSTRATION)



● EQUIPMENT AREA (12 AREAS PER RESTRACK ASSEMBLY)

● SLEEPING AREA (12 AREAS PER RESTRACK ASSEMBLY)

● TOP LEVEL ACCESS LADDER (ONE AT EACH END)

12 x SLEEPING AREAS  
12 x EQUIPMENT SPACES  
2 x ACCESS LADDERS



## HVAC (OPTIONAL) STANDARD

# GENERAL

### OPTIONAL UPGRADE FOR FULL ECU INTEGRATION

#### ECUS PROVIDE:






- Forced fresh air ventilation and regular air changes
- Electrical heating
- Air conditioning
- Dehumidification



#### AC-M18 FEATURES

- > Operation temperature range cooling: +20C to +60C
- Operation temperature range heating: -32C to +20C
- Sound level: max 59dB(A) at 3m
- Dimensions 780 x 1450 x 1140mm
- Height: no higher than 785mm (24 units into a 20' High Cube ISO Container)
- Weight 206kg (the new unit with micro coil condenser will have this weight).
- Two adjustable fresh air intakes 0-320 m3/h
- Automatic phase surveillance
- Possibility for sequential start-up.
- Dual filter solution
- Internal/external airflow: 2500/5600 m3/h
- Duct connection:  $\phi$ 400
- Hidden control panel
- Internal fan must have a high- and a low speed selector for low noise night time operation
- No tools for set up required
- Aluminium sheet metal body in steel frame.
- > Chassis must be hung up in anti-vibration dampers

### APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	
DMTSS TYPE 2	
DMTSS TYPE 3	
RACKBOX SHELTER	
MPU	

## HVAC (OPTIONAL) COLD WEATHER OPTION






# GENERAL



VA-M40MKII – TENT HEATER FEATURES

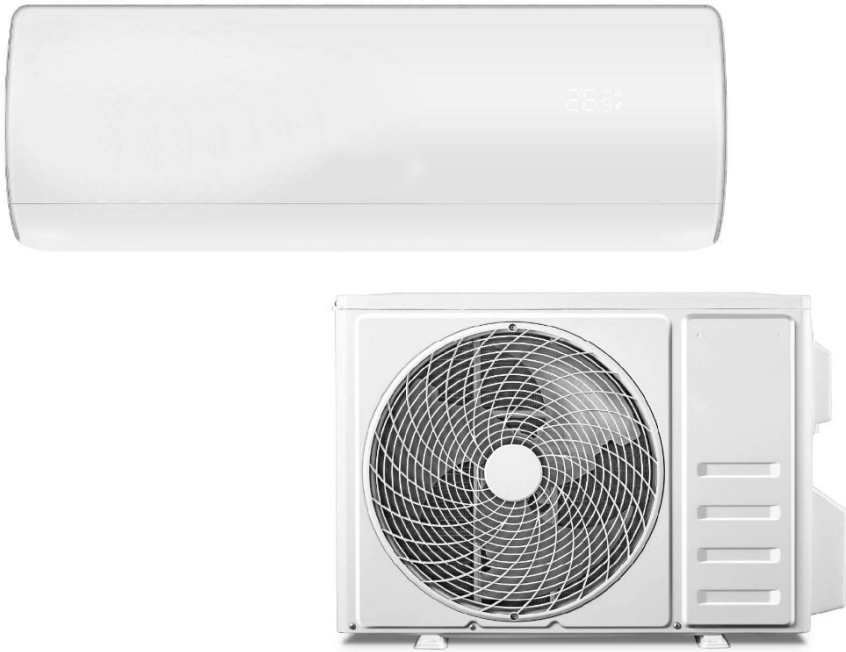
-> Registered NSN number	Yes
Operating temperature range °C	-40 – +30
Heat output kW	38
Air flow m <sup>3</sup> /h	2,200
Sound level @ 1.5m dB(A)	60
Protection class	IPX4
Max. fuel consumption l/h	3.6
Power supply V/Hz	230/1ph/50
Max. power consumption W	1,055
Air discharge temperature °C	80
Flex duct connection Ømm	225
Product size (h x l x w) mm	890 x 1400 x 700
-> Weight kg	129

### APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	
DMTSS TYPE 2	
DMTSS TYPE 3	
RACKBOX SHELTER	
MPU	

## HVAC (OPTIONAL) SMALL UNIT






# GENERAL



### FEATURES

·	Cooling Power (BTU)	9,000
·	Cooling Power (kW)	2.7kW
->	Lowest Temperature	16Degrees
·	Maximum Cooling Area (m2)	26m <sup>2</sup>
·	Number of Fan Speeds	3
·	Power supply	220-240V/50hz
·	Max. Hose Length	25Metres
->	Installation	Easyfit wall mounted

### APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	
DMTSS TYPE 2	
DMTSS TYPE 3	
RACKBOX SHELTER	
MPU	

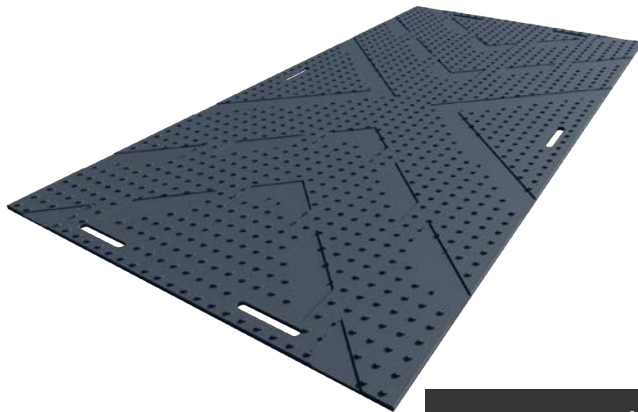
# GENERAL

## ↓ MATTING (HIGH SPEC)

DMTSS-FL-(GR/CO)

### EUROMAT® HEAVY DUTY TEMPORARY ACCESS MAT

- Supporting loads up to 80 tonnes
- Material: 100% recycled or virgin High Density Polyethylene (HDPE)
- Size: 2410mm x 1200mm x 12mm (7'-11" x 4' x 0.5")
- Weight 35kg



#### APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	✓
DMTSS TYPE 2	✗
DMTSS TYPE 3	✗
RACKBOX SHELTER	✓
MPU	✗

## ↓ MATTING (LOW SPEC)

DMTSS-FL-(GR/CO) FGV-LD

### LIGHT DUTY TEMPORARY ACCESS MAT

- Supporting loads up to 10 tonnes
- Material: 100% recycled Low Density Polyethylene (LDPE)
- Size: 2410mm x 1200mm x 10mm (7'-11" x 4' x 0.4")
- Weight 27kg



#### APPLICABLE TO

SHELTER TYPE	TYPICAL USE
DMTSS TYPE 1	✓
DMTSS TYPE 2	✗
DMTSS TYPE 3	✗
RACKBOX SHELTER	✓
MPU	✗





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