



COMO Modular Solutions is a division of COMO that specializes on design and build of modular and prefabricated site office facilities and accommodation. Our services also includes: (1) Solar Lights and (2) Marquee Tents.

At COMO our in house design team is ready to provide efficient, innovative, sustainable and cost effective solutions to meet our client's requirements.

Our team consists of architects, designers and engineers are able to offer comprehensive turn-key design solutions to suit our clients' needs.

Our knowledge and experience of the construction industry accommodation and site offices allows us to offer costs savings in numerous areas including utilities, especially waste water treatment and power generation.



Supporting our design team are an experienced fabrication, erection and construction division able to execute the projects in record time, as we are fully aware of time constraints in the mobilization period of projects. A turn-key camp with all civil works, paving, utilities, furniture, fixtures and fittings for 1000 persons can be commissioned within 20 weeks from a contract award.

Similarly a fully operational two storey site office of 1500 square meters can be commissioned in sixty days from a sand penetration. The units all carry the contract award.

Our units are 100% recyclable and fire resistant and offer excellent thermal insulation with UV values as low as 0.30 w/ m<sup>2</sup>k and joints are designed to prevent CE mark and meet European manufacturing standards including ISO 9001, 14001 and OSHAS 18001 as the units are modular they can be dismantled back to flat pack and easily be relocated. The effective life span of the units are in excess 20 years which ensures their economical viability.









## Integrated Management System Policy

COMO is committed to providing a services to our Clients which ensures best quality construction services whilst endeavoring to protect the environment in consideration with security, health and safety of employees and all others that might be affected by our operations.

To attain compliance we shall:

- Seek to establish, maintain and continually improve our Integrated Management System (IMS) in reference with the requirements of ISO9001:2015 (Quality), ISO 14001:2015 (Environmental) and OHSAS 18001:2007 (Health and Safety).
- Ensure compliance with current and future IMS legislation as applicable, relating to our operations, and any other initiatives or requirements to which Como may subscribe.
- Identify and understand the needs and expectations of all interested parties to comply on obligations and continually improve our IMS performance, prevent accidents and cases of work related ill health and maintain safe and healthy working environments.
- Identify and seek to reduce significant environmental aspect, health and safety risks, and prevent any pollution which may arise from our processes, operations and work activities.
- Empowering our employees by providing appropriate information and training to enhance and build their competencies by encouraging them to apply good practice both at work and at home;

COMO management is geared towards the periodical review, maintain documented information and to achieve objectives for the continual improvement of the Integrated Management System and to ensure relevance and applicability to the company and fulfill the commitments made in it.

A handwritten signature in blue ink, appearing to read "P. Stone", written over a horizontal line.

**General Manager**

Approved by:





# Company Organization Chart



PROJECTS LIST (Status as of 31 October 2018)						
SER. NO.	PROJECT NAME	MAIN CONTRACTOR	OWNER OF THE PROJECT	LOCATION	INCLUSIVE DATES	PROJECT AMOUNT (QAR)
1	CONSTRUCTION OF SITE OFFICE AND EXTERNAL WORKS FOR EPIC FIRE WATER NETWORK PROJECT	FERNAS CONSTRUCTION COMPANY, INC.	QATAR PETROLEUM	RAS LAFFAN	ONGOING	1,091,388.00
2	DESIGN, SUPPLY & INSTALLATION OF PREFABRICATED CANOPIES FOR QEWR PROJECT	BL HARBERT	RAYTHEON INTEGRATED DEF. SYSTEM	QATAR	ONGOING	603,457.47
3	SUPPLY & INSTALLATION OF MODULAR BUILDING FOR AL ENNA FESTIVAL	-	FISHER APPELT MARKETING	QATAR	ONGOING	310,217.75
4	SUPPLY AND INSTALLATION OF SITE OFFICE FOR THE EPIC FOR REPLACEMENT OF CRUDE OIL TRANSFER LINES AT DUKHAN	AL BALAGH	QATAR PETROLEUM	DUKHAN	ONGOING	387,968.00
5	DISMANTLING & ERECTION OF MODULAR CABIN	-	GULF EARTH MOVING WLL	QATAR	2018.06-2018.08	622,333.05
6	TEMPORARY MAN CAMP & FACILITIES FOR QEWR	BL HARBERT	RAYTHEON INTEGRATED DEF. SYSTEM	QATAR	2017.10-2017.12	12,513,462.87
7	ENGINEERING, FABRICATION, SUPPLY & CONSTRUCTION OF OFFICES FOR THE FIELD FACILITIES PROJECT	QATAR KENTZ W.L.L.	SHELL GTL	RAS LAFFAN	2016.10-2017.06	22,522,544.22
8	RELOCATION AND REINSTALLATION OF SITE OFFICES	DAEWOO	ASHGAL	AL THUMAMAH	2017.02-2017.08	807,500.48
9	CONSTRUCTION OF MODULAR BUILDING & WORKSHOP	GEM	NPP	MESAIEED	2015.09-2016.03	1,275,392.83
10	SUPPLY AND INSTALLATION OF MODULAR CABIN FOR SITE OFFICE	GEM	NPP	MESAIEED	2015.09-2016.03	1,736,462.81
11	DESIGN AND CONSTRUCTION OF MODULAR BUILDING FOR STAFF ACCOMMODATION FACILITIES IN DUKHAN SUPPORT SERVICES AREA (DSSA) AT ZEKREET, DUKHAN	COMO	TYCO QATAR FIRE & SECURITY	DUKHAN	2016.01-2016.07	913,554.81
12	DESIGN AND CONSTRUCTION OF SITE OFFICES FOR IDRIS MTS - 02 PROJECT	IDRIS SHP CONTRACTS	ASHGHAL	DOHA	2015.11-2016.04	3,956,278.00
13	LABORATORY EXTENSION WORKS	-	NOH2 JV (QDVC & BIN OMRAN)	RAYYAN	2015.10-2015.10	142,375.20
14	DESIGN & CONSTRUCTION OF GUARD HOUSE 12M <sup>2</sup>	-	DOHA ACADEMY	DOHA	2015.09-2015.09	30,654.02
15	DESIGN & CONSTRUCTION OF MODULAR BUILDING LABORATORY	-	GULF EARTH MOVING WLL	NPP SITE	2015.07-2015.09	555,035.15
16	SUPPLY & INSTALLATION OF MODULAR CABIN	-	ABDULLA AL KAABI TRADING	DOHA	2015.08-2015.08	22,000.00
17	SUPPLY & INSTALLATION OF MODULAR BUILDING LABORATORY	-	NOH2 JV (QDVC & BIN OMRAN)	RAYYAN	2015.05-2015.07	1,120,168.96
18	SUPPLY & INSTALLATION OF MODULAR BUILDING	-	NOH2 JV (QDVC & BIN OMRAN)	RAYYAN	2015.06-2015.06	162,755.00
19	DESIGN & CONSTRUCTION OF MODULAR BUILDING SITE OFFICE	-	BUTEC & MURRAY ROBERTS	QSTP	2015.05-2015.06	793,933.13
20	SUPPLY & INSTALLATION OF MODULAR BUILDING KITCHEN & MESS HALL	-	COFELY BESIX MANNAI FACILITY MANAGEMENT	DUKHAN	2015.05-2015.06	225,000.00





PROJECTS LIST (Status as of 31 October 2018)						
SER. NO.	PROJECT NAME	MAIN CONTRACTOR	OWNER OF THE PROJECT	LOCATION	INCLUSIVE DATES	PROJECT AMOUNT (QAR)
21	SUPPLY & INSTALLATION OF MODULAR BUILDING SITE OFFICE	-	BUTEC & MURRAY ROBERTS	QSTP	2015.05-2015.06	205,999.13
22	SUPPLY AND INSTALLATION OF MODULAR TOILET BLOCKS AND PARTITION WORKS	-	COFELY BESIX MANNAI FACILITY MANAGEMENT	DUKHAN	2015.03-2015.05	719,360.00
23	SUPPLY & INSTALLATION OF MODULAR BUILDING SITE OFFICE	-	GULF EARTH MOVING WLL	NPP SITE	2015.04-2015.05	141,000.00
24	DESIGN AND CONSTRUCTION OF MODULAR BUILDING CLINIC	-	DOREX ENGINEERING	SHAHANIYAH	2015.04-2015.04	51,831.65
25	DESIGN & CONSTRUCTION OF SITE OFFICE	BUTEC	QATAR FOUNDATION	DOHA	2014.11-2014.12	633,779.03
26	DESIGN & CONSTRUCTION OF SITE FACILITIES AND LAYDOWN AREA	LS CABLE & SYSTEM	QATAR PETROLEUM	RAS LAFFAN	2014.07-2014.10	1,379,346.00
27	MODULAR BUILDING FOR PMC SITE OFFICE	COMO	MEDCO	MESAIEED	2014.05-2014.05	254,974.00
28	CONSTRUCTION OF TEMPORARY SITE FACILITIES	MEDCO	NEW PORT PROJECT	MESAIEED	2012.07-2013.01	44,842,914.80





## TECHNICAL SPECIFICATIONS: MODULAR BUILDING







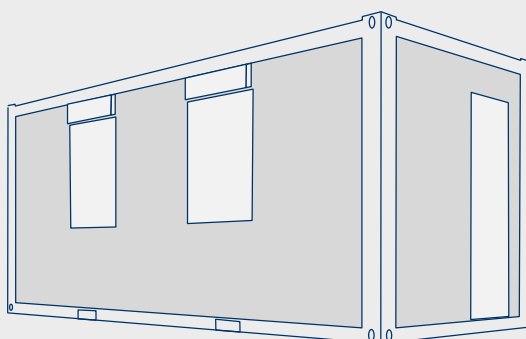
## I. GENERAL

The standard container for various purposes is suitable for international container transport. It is of appropriate external dimensions and has connections for lifting and fixing or compounding

The container is designed as a light construction consisting of floor and roof frames and corner profiles. The construction enables compounding of individual containers in longitudinal and transverse directions without limits. It is also enables compounding container in 2 floors in height (ground floor + first floor), or in 3 floors in height for warehousing of these containers (ground floor + 2 floors).

The wainscots of the container are made of light insulation panels and offer pleasant climate in the interior due to their building and physical properties. Used materials are environment friendly.

Containers will be delivered as flat-packs (in Trans-packs 660 mm high) with completely pre-assembled floor (with PVC floor glued over) and ceiling (with all electrical installations build in, such as el. Box, lamps, wires). During transport of trans-packs a steel non-slip insert is placed between each ISO corner to secure containers from sliding. The construction of the trans-pack is solid enough to enable transport and handling by forklift till 4 units at a time. Material shipped inside the trans-pack is packed so as to ensure complete immobility during the transport by all kind of roads.



## II. BUILDING SPECIFICATION

### DIMENSIONS (ISO Standard 1161)

#### Basic 20' Container dimensions:

External length / inner length	-----6.055 m / 5.855 m
External width / inner width	----- 2.435 m / 2.235 m
External height / inner height	-----2.810 m / 2.525 m





## STEEL FRAMEWORK

**Material** : Cold Formed Steel profiles in a thickness of 2 to 4mm, steel quality S235 JR (EN 10029) or similar.

**Surface Working** : Sand blasting in a quality of Sa 2.5 (ISO 8501), High Solid paint coating in nominal dry film thickness 120µm (ISO 12944-5).

**Fittings** : 8 corner pieces (dimensions according to ISO standard 1161), rainwater pipe in the roof framework.



**Corner Posts** : 4mm cold rolled steel profiles with Q345B steel quality screwed to the roof and floor frame with triangular plate

## FLOOR

**Bottom Sealing Plate** : 0.5mm thick galvanized steel sheet (subject to different steel finish)

**Insulation** : 100mm thick Glass wool with density of 22kg/m<sup>3</sup>

**Floor** : 18mm Fiber cement board with 1.8mm vinyl floor cover

**Forklift beam** : Forklift pocket distance is 2050mm with inside pockets of 250 x 72 mm dimensions. Steel cross members with omega profiles, Q258B, thickness = 2mm, 7 pcs

**Permitted loading** : 2.00 kN/m<sup>2</sup>

**Coefficient of thermal conductivity** :  $k = 0.33 \text{ W/m}^2\text{K}$



## ROOF

**Top Cover Plate** : 0.5mm thick galvanized steel sheet, double folded along the whole cabin length.

**Insulation filling** : 100mm thick Glass wool with density of 22kg/m<sup>3</sup>

**Ceiling** : 9mm Gypsum board covered by 0.5 galvanized steel sheet.

**Permitted loading** : 1.50 kN/m<sup>2</sup>







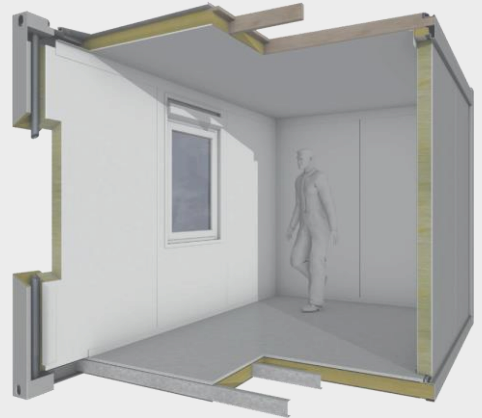
## WALL PANELS

**Wall Thickness:** 60mm covered by 0.5mm galvanized and coated steel sheets on both sides

**Insulation** : 60mm mineral wool with density of 120 kg/m<sup>3</sup>

**Available items:** – Full

- Door
- Window
- Air conditioning
- Sanitary Window
- Half
- Double (only with windows or doors)
- Fixed Glazing



**Permitted Wind** : 90 km/h (25 m/s) – terrain category III

**Sound Insulation** : 30 – 36 dB

## ▶ PARTITION WALLS

**Wall Thickness:** 60mm covered by 0.5mm galvanized and coated steel sheets on both sides

**Insulation** : 60mm mineral wool with density of 120 kg/m<sup>3</sup>

**Available items:** – Full panel

- Door panel
- Window panel
- Half panel





## DOOR

**Material:** Aluminum alloy or steel door,

**Specifications:-** Aluminum frame with triangle wrap-around sealing

- Door blade with galvanized steel sheets on both sides
- Right or left hinged
- Inward or outward opening

**Dimensions (Nominal):**

Aluminum doors : 625x2040mm  
870x2040mm  
1800x2040mm

Steel Door : 870x2040mm  
1800x2040mm



## WINDOWS

**Material:** Aluminum frame with insulated glazing

**Specifications:-** White frame color

- Sliding type

**Dimensions (Nominal):** Sliding Window = 800x1100mm







## CONNECTION KITS (BETWEEN BASIC CONTAINER UNITS)

Basic Container units have enclosed all needed material for joining of them together and consist of:

- Joining Consoles
- Sealing rubber
- Floor inserts (Chip wood panel 22mm thick / plywood 18mm thick; PVC floor cover)
- Ceiling masks (galvanized and painted steel sheet metal; mineral wool)
- Wall masks (chipboard panel, mineral wool)

## ELECTRICAL INSTALLATIONS

**Voltage** : 110V – 240V, 50Hz

### **Network connection** :

CEE-connection plug / socket, 5-pole, 32 A, 400 V, mounted on the outer wall of the container recessed into top frame in upper corners of a shorter side wall.

### **Inner distribution system** :

Electric distribution box, NyM-J cables of suitable dimensions (6.0 mm<sup>2</sup>, 2.5 mm<sup>2</sup>, 1.5 mm<sup>2</sup>), surface mounted.

### **Protection** :

Protection power supply FI-switch (40/4E-0,03A), automatic fuses (B-characteristics) of suitable power (10A, 16A, 3x20A)

### **Earthing** :

galvanized connector with a cross clip of dimensions 60 x 60 mm welded on the bottom frame.

### **Fittings** :

- Main distribution board IP-55
- Single fluorescent lights 1x58 W
- Surface mounted 10A switches 220V
- Surface mounted sockets 220V (British type), 13A
- British type 15A surface mounted socket for AC
- 32A, 5 pole, 380 V industrial socket – 01 nos male socket and 01 nos female socket in each container
- 9V, battery operated, smoke detector
- Main distribution board with cables, Dome of fluorescent lights, Smoke detector and surface mounted industrial sockets are pre-assembled on the ceiling.
- 30L, 80L, 500L water heaters, as mentioned in the layout drawings

## SANITARY INSTALLATIONS

### **Distribution of Sanitary Water** :

poly-propylene pipes ½" and ¾" (DIN 8077/Din 8078), surface mounted; allowed working pressure max. 4 bar

**Waste pipe** : PVC pipes, diameters 50mm and 110mm, surface-mounted





## SANITARY INSTALLATIONS (cont.)

### Fittings :

Ceramic sink of dimensions 395/340 mm, mounted on the wall, with mixing tap, and mirror 600/400 mm and plastic shelf.

Ceramic toilet pan with a PVC toilet seat, low mounted flush tank of 9 l capacity, and toilet hand spray.

Monolith polyester shower cabin, 800/800 mm with a PVC curtain and mixing shower tap.

Wall mounted ceramic urinal with the dimensions of 380/335 mm and flush valve mounted on the wall.



## COLOUR, SIGNWRITING

Complete steel construction and walls are painted in grey-white colour (RAL 9002). Doors and windows are in white colour.

Identification No. on each container, marked in Black colour.

## COMPLIANCE WITH INTERNATIONAL STANDARDS

Accredited for the design, manufacture and supply of Containers and roof structures:

ISO 9001:2000 Quality Management System

ISO 14001:2000 Environmental Management System

ISO 18001:1999 Occupational Health and Safety Management System – Specification

## WARRANTY

Complete container with all components, including equipment have one (1) year warranty against defects in material or workmanship, under the conditions described in warranty declaration

## LIFESPAN OF THE CONTAINER

The container's effective life span is twenty (20) years under normal climatic conditions with regular maintenance.

## POSSIBILITIES OF CONTAINER MOUNTING

On a flat solid surface (one layer of containers)(asphalt, concrete,...)

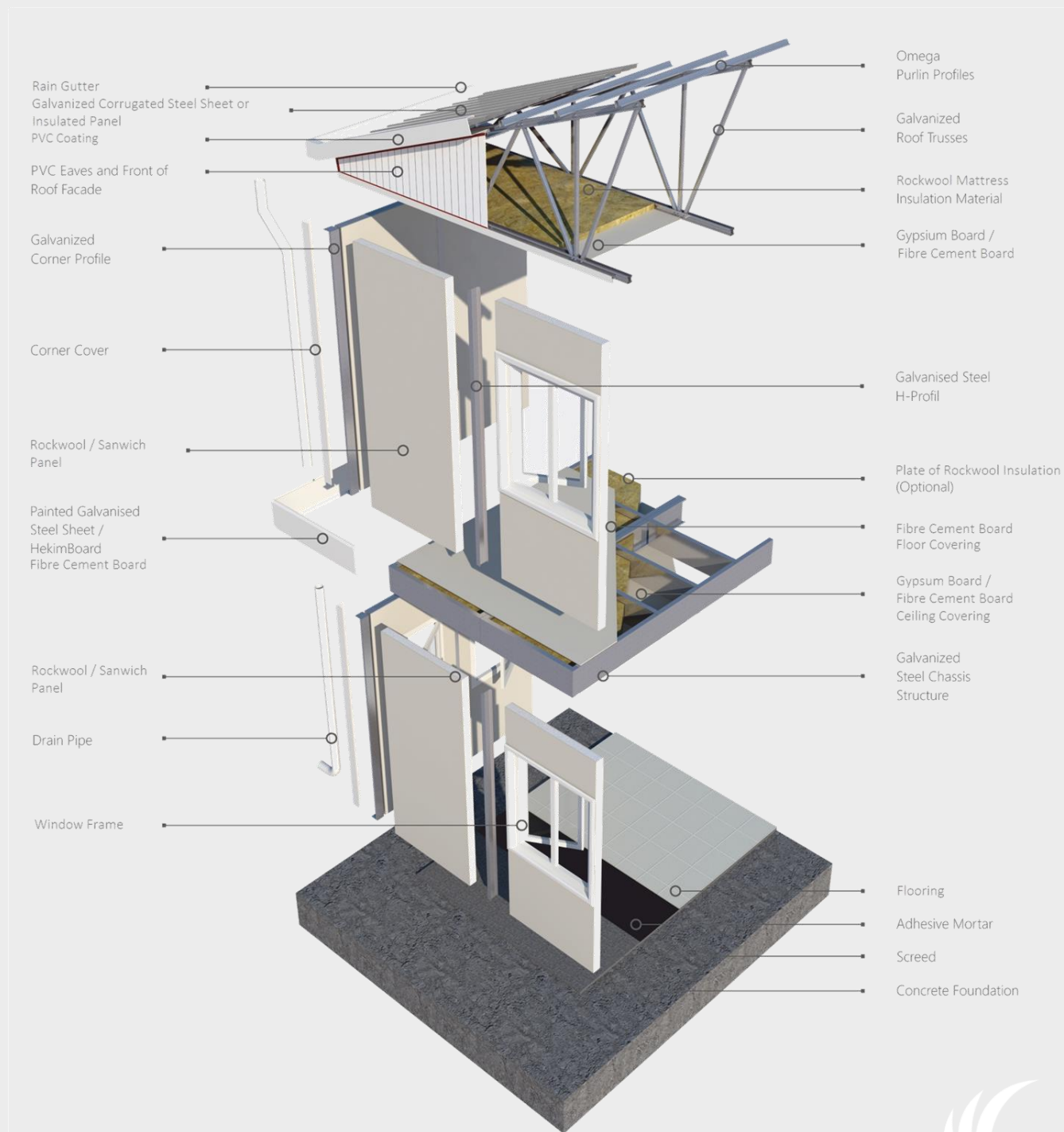
On point foundations (concrete blocks, dimensions approx. 300/400/100–300 mm, 6 each per 24' container and 4 each per 12' container circumferences)





## **TECHNICAL SPECIFICATIONS: PREFABRICATED BUILDING**







## Sample Designs





# **FIRE TEST**

**MF COMPOSITE PANEL**  
**(USED BY COMO MODULAR SOLUTIONS)**

**&**

**PIR COMPOSITE PANEL**  
**(USED BY OTHERS)**



## MODULAR SOLUTIONS MF COMPOSITE PANEL



## OTHERS PIR COMPOSITE PANEL



## MODULAR SOLUTIONS MF COMPOSITE PANEL



AFTER 20 MINUTES OF THE  
TEST, THE FIRE  
AUTOMATICALLY  
EXTINGUISHES ITSELF

## OTHERS PIR COMPOSITE PANEL



AFTER 13 MINUTES OF THE  
TEST, THE FIRE BECOMES  
INTENSE PRODUCING LOTS  
OF FUMES THAT REQUIRES A  
FIRE FIGHTER TO  
EXTINGUISH IT.



# PROJECTS PHOTO GALLERY







## MEDCO Project







## MEDCO Project







## MEDCO Project





## MEDCO Project







## MEDCO Project





## MEDCO Project







## MEDCO Project





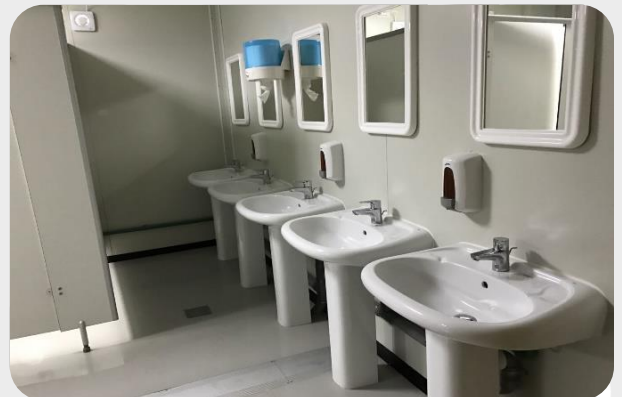
## SHELL Project







## SHELL Project





## B.L. Harbert Project







## B.L. Harbert Project







## Others







## Others



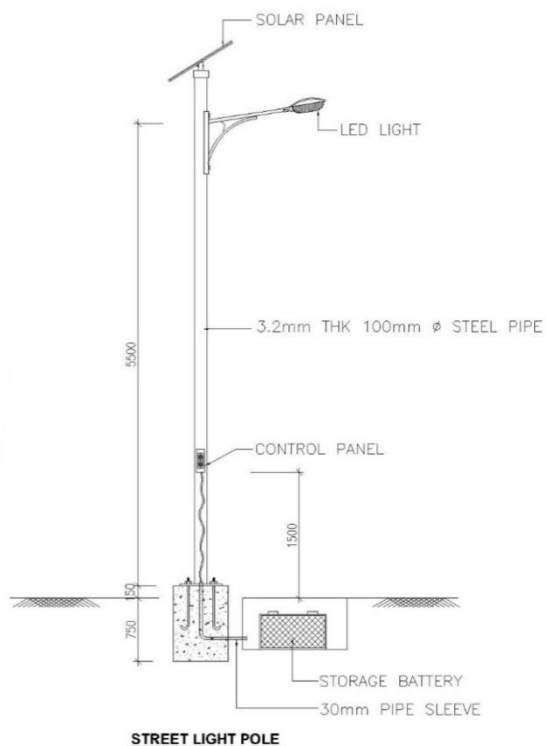


**SOLAR STREET LIGHT SYSTEM**



**MARQUEE TENTS**





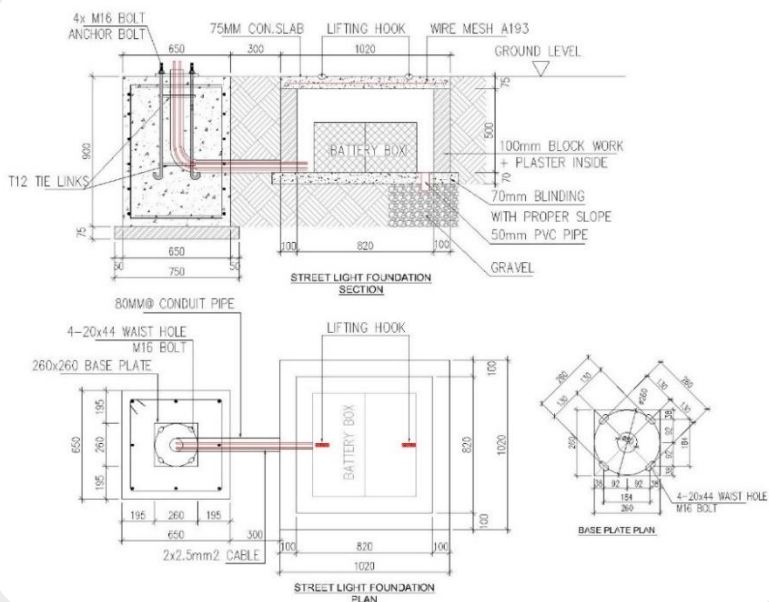




## SOLAR STREET LIGHT

### Specifications and Warranty

COMPONENT	CODE NUMBER
<b>Solar Panel</b>	<b>650000001</b>
100W Monocrystalline silicon conversion efficiency is 17%, lifespan 25 years, 3 years warranty	
<b>Battery</b>	<b>650000020</b>
Jelled valve-regulated battery, lifespan is 4-6 years, 3 years warranty	
<b>Controller</b>	<b>650000040</b>
Multiple functions, preventing over charging and over discharging, light time control.	
<b>Battery Box</b>	<b>650000060</b>
Fully sealed waterproof, with heat preservation, lifespan 20 year, 3 years warranty.	
<b>LED Light</b>	<b>650000080</b>
40W Osram LED, 3years warranty	
<b>Light Pole</b>	<b>650000100</b>
6m high, hot dipped galvanized, wind resistant, 30 years life span.	







## Sample Designs





All tents are available in a variety of colors, styles, sizes, and patterns.



Our customized products can meet kinds of needs from our clients.



The highest quality and safety standards are what we adhere to.



Each tent is manufactured in accordance with EU structural engineering certification.



Modular Tent



Geodesic Dome Tent



Warehouse Tent



Clear Tent



Arcum Two Story Tent



Hangar Tent







COMO W.L.L. has been continually building values since its foundation.

Quality, Technology and Adaptability have been the foremost values adopted by the company. The concern for quality is nurtured at every level.

Being at the technological forefront of our business has further strengthened this commitment to excellence.

Our workforce is not only highly qualified but also highly adaptable. The ability to take on challenges has enabled us to successfully execute projects that have been new to our experience.

COMO offers a full range of services.

#### Services Offered:

- ☐ Architectural / Fit-out Works
- ☐ Civil Construction
- ☐ Construction Management
- ☐ Pre-Construction Services
- ☐ Public/Private Partnerships
- ☐ Modular Building Solutions
- ☐ Kitchen Designs and Construction
- ☐ Mess designs and Construction
- ☐ MEP Services

#### Sectors:

- ☐ Oil & Gas Industry
- ☐ Chemical Plants
- ☐ Sewage Treatment Plants
- ☐ Water Pump Stations
- ☐ Sub Station
- ☐ Power Plants
- ☐ Marine Works
- ☐ Industrial Buildings
- ☐ Commercial Buildings



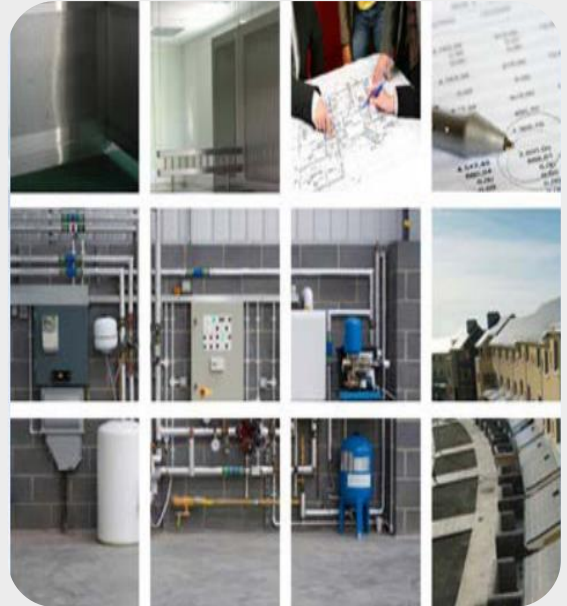


COMO FMS is a Full Facilities Management Services company formed in 2002. The company currently manages Residential, Commercial and Industrial projects. It specializes in the field of support services, providing expertise, management, distribution and logistics supports to renowned, multinational clients

FMS uses a state of the art CMMS system in all its practices (Infor EAM-Enterprise Asst. Management) and ensures that all its projects are managed with optimum efficiency and one of the proud member of International Facilities Management Association - IFMA, British Institute of Facilities Management - BIFM and is OHSAS 18001:2007 certified

## Services Offered

- ☐ Call Center (Arabic / English)
- ☐ Civil & Architectural works
- ☐ HVAC System & Electrical Systems
- ☐ Building Management System
- ☐ Green Building Management System
- ☐ Housekeeping and Cleaning
- ☐ Security
- ☐ Pest Control
- ☐ Waste Management
- ☐ Landscaping
- ☐ CCTV
- ☐ Catering







# como

MODULAR  
SOLUTIONS

COMO W.L.L., P.O. Box 14156, Doha, State of Qatar  
Tel.: +974 4406 2162 | Fax: +974 4487 9986  
Commercial Registration No.: 99244

Email: [modular.solutions@comoqatar.com](mailto:modular.solutions@comoqatar.com) Website: [www.comoqatar.com](http://www.comoqatar.com)