



**REBOOZ
TORQUE**
TECHNOLOGY





Rebooz Torque Technology focuses on developing and implementing energy and construction solutions at an industrial level, specializing in green construction and green energy. By offering a wide range of engineering, procurement, and construction solutions, and by forming partnerships with sister companies, it has become a strong entity that meets the diverse market needs of various applications and industries, from small to large projects, all under the umbrella of Rebooz Torque Tech.

From Vision to Green Reality 



Mission

Providing innovative and sustainable building and energy solutions to various sectors through our expertise in green buildings and green energy. We offer comprehensive engineering and construction services, tailored to a variety of applications, from small systems to large-scale projects in the Middle East.



Vision

To be the leading force in transforming the industrial landscape in the Middle East towards sustainability by pioneering green construction and advanced green energy and building solutions for a cleaner, smarter future.

Rebooz Torque

Benefits



Sustainability

Drastically reduced carbon footprint, positive environmental impact.



Energy Efficiency

Off-grid clean energy generation 24/7.



Smart Integration

Enhancing the learning environment with cutting edge, eco-conscious technology.



Developing Construction

Developing construction to make it easier and transform it into an industry



Reducing Pollution

Reducing pollution by building without rebar



Cost Savings

Long-term operational savings.



Vision 2030 Alignment

Contributing to national goals for a sustainable and technologically advanced future.



Clean Energy Storage

Enabling the efficient use of clean energy sources and improving grid stability.

Our Companies & Partners





World's First Super Cooling Carbon Capture Solution.

Direct Air Capture & Clean Energy





Revolutionizing Clean Energy in Saudia

Integrating Rebooz Torque Clean Energy for a Sustainable City
& Industrial, Smart School & Sustainable Nature Preserves

Building a Future-Ready Environment Aligned with Saudi Vision 2030



The Vision for Education & Green Energy in Saudia



Saudi Vision 2030's Educational Mandate

Education is a core pillar of Vision 2030, aiming for a vibrant society and thriving economy.

Sustainability & Smart Cities

Vision 2030 champions the development of sustainable and smart cities, where education plays a key role in integrating cutting-edge technology with environmental responsibility.



World-class education with innovative curricula.



Creation of inspiring and sustainable learning spaces.



Investment in advanced educational technologies.

Challenge: Environmental & Energy Needs of Saudia



Growing Energy Demands

Modern schools require significant energy for lighting, cooling (especially in Saudia climate), and technology.



Infrastructure

Due to the remoteness, access to grid is scarce, therefore, a strong demand for decentralized power.



Environmental Impact

Traditional energy sources contribute to carbon emissions.



Operational Costs

High energy consumption leads to substantial long-term operational expenses.

Bringing The Most Advanced Technology To Saudia Arabia

Rebooz Torque Technology not only brings the latest green buliding technology to Saudia but also introducing the implementation of its latest collaboration in developed **Hydrogen, Wind, Solar, Carbon capture, Storage & Energy Positive Output technologies** to make Saudia the leader in implementing the latest and best technologies for green sustanaible development in Solutions and Energy in the Kingdom and globally.

Rebooz Torque Technology envisions with Saudia leadership to be the front runner in Green Building and Energy Technology for the future today.



Hydrogen



Wind



Solar



Carbon



Why CO2 Capture & Green Energy?

A novel Direct Air Capture (**DAC**) solution to disrupt the market using liquid nitrogen to liquefy CO2 and other gases to convert them to generate **carbon-free power**.

Cost effective - Low CapEx & OpEx as we've taken out all the power intense processes and generate our own clean power.

REVFRACC SYSTEM



REVFRACC SYSTEM

Scalability 5MW - 365MW Power Plant

REVFRACC

Geographically agnostic for deployment and modular. A modular system that captures more than 2000 tonnes of CO₂ per tower annually (70,000 per acre).

Power Generation & Utilisation

Generates enough base load to power your operations decarbonizing your supply of energy. Up to 80% savings on energy bills.

Cost Reductions

No Fans, Low OpEx - reducing carbon capture costs to a minimum.

Circular Economy

The ability to recycle CO₂ for utilisation in industries for: E-fuels, Food & Drinks and Cement & Concrete Manufacturing.

It reduces the reliance on fossil fuels usage and associated emissions.

REVFRACC SYSTEM

We Capture Carbon Making Clean Energy & Water

Patented REVFRACC Technology

A groundbreaking method to capture CO₂ & other gases directly from the atmosphere.

Generates Decentralized Power

Generate & supply clean power off-grid, 24/7.

Produces Clean Water

Extracts 25,000 liters of water for every ton of CO₂ captured. Capacity of 1.75B liter of water.

Scalability only 1 acre of land

Generating over 1.2 tWh on an (1) acre of land & saving over 70,000 tons of CO₂.

Key Differentiators

Off-grid power 24/7, Decarbonizing the environment affordably, OpEx is less \$10/mWh



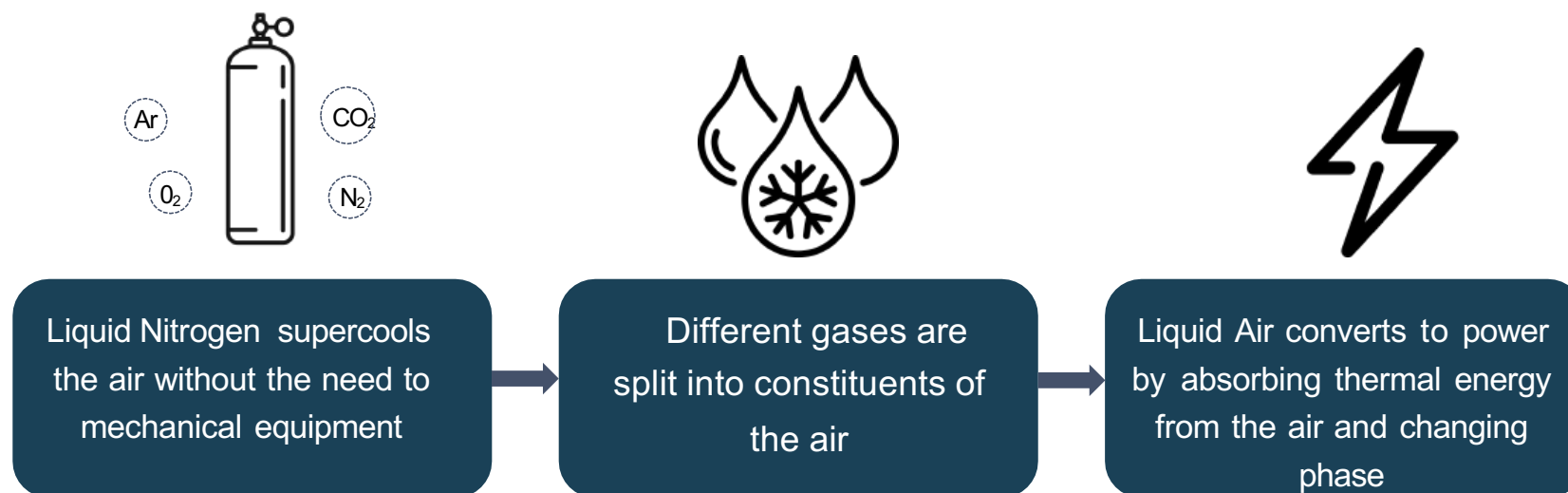
REVFRACC SYSTEM

- Seamless Architectural Fit:** Compact, modular units fit discreetly, on rooftops or in plant rooms, ensuring a visually appealing design.
- On-Site Clean Energy:** Generates carbon-free power, significantly offsetting the energy needs (lighting, HVAC, tech) and boosting energy independence.
- Fresh Water Supply:** Access to water from our decentralized system. This is essential for students and staff to have at the school or at facilities.
- Carbon Capture & Reuse:** Securely sequesters CO₂, permanently reducing carbon footprint with future potential for on-site educational or building material use.
- Enhances Sustainable Design:** Complements existing green building practices like insulation, natural ventilation, and smart systems for a truly holistic, eco-friendly energy solution.



REVFRACC SYSTEM

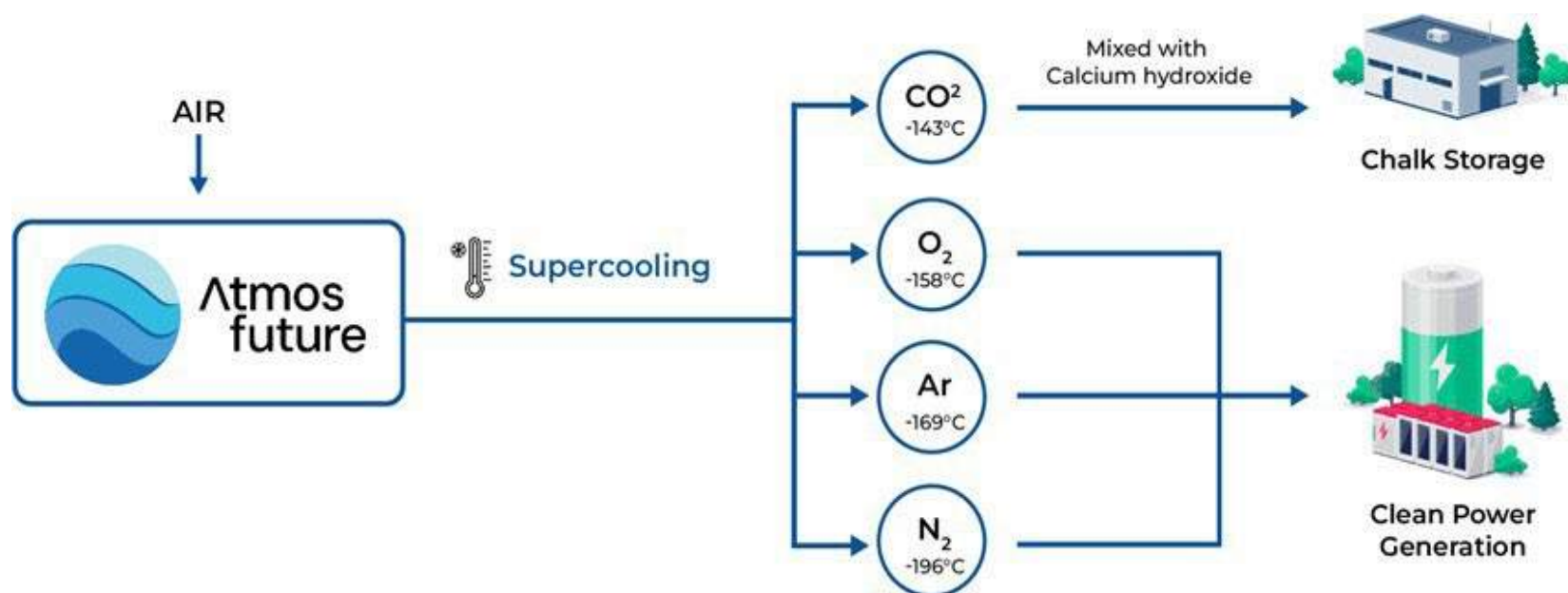
A novel method to capture Co₂ and generate clean power



REVFRACC SYSTEM

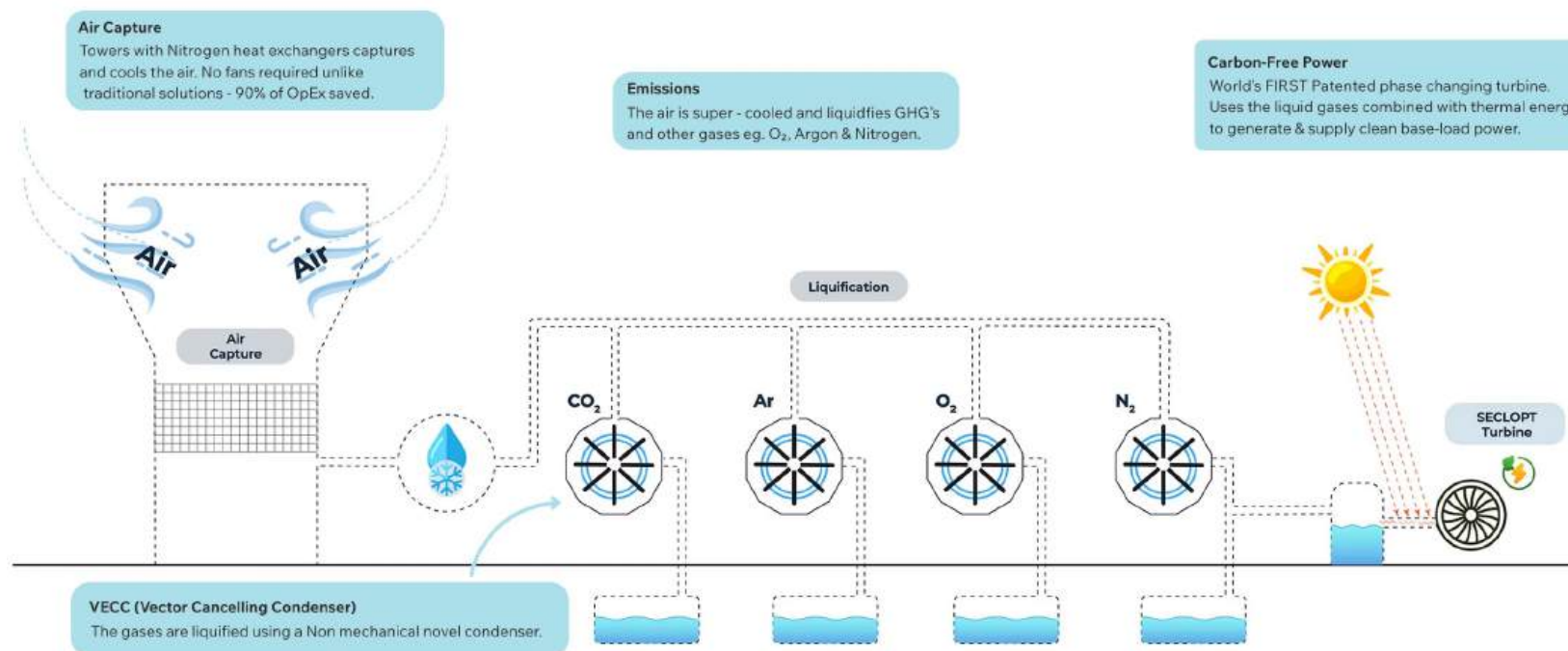
We supercool the air to capture carbon dioxide.

REVFRACC (Reverse Fractionation of Carbon Capture) is a patented Energy Positive Agnostic Direct Air Capture solution.



REVFRACC SYSTEM

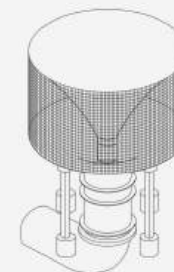
Technical



REVFRACC SYSTEM

Air Capture

We use 4 metre towers with a liquid nitrogen heat exchanger which cause contractions in the surrounding air pulling it into the towers. Compared to fans this requires far less energy and more effective in air capture. When you have a series of these towers it creates a natural vacuum.



VECC Vector Cancelling Condenser

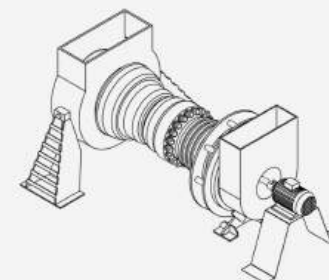
Our novel patented condenser works by using the force of air flow and directly the gas particles to collide and lose energy. Surrounded by the liquid nitrogen heat exchanger VECC rapidly liquefies the gases for storage and utilisation purposes.



Power Generation (SECLOPT)

Another patented technology is our phase changing turbine SECLOPT. This uses the liquified gases to change from liquid to gas and expand by 800 times its volume to generate clean power. The power generated is used to power the system and we have a huge base load to export and supply.

The process of recondensing and power generation continues in a cycle with the air being captured.



REVFRACC SYSTEM

CCUS application

Carbon Capture Technology

REVFRACC captures CO₂ from point sources or directly from atmosphere for utilization and storage.

Filtration Process

Starting at -140°C for contaminants, progressing to -197°C for nitrogen, with targeted collection at each stage.

Tower System

Uses 4-meter towers in arrays that efficiently pull air through nitrogen filter mesh.

VECC Chambers

Patented condensation chambers cool air progressively, separating atmospheric components without energy-intensive fans.

REVFRACC SYSTEM

Four-meter tower arrays

Efficient Air Capture System

Small towers arranged in arrays pull air through contraction via nitrogen filter mesh.

Cost-Effective Design

Towers up to four meters high provide economical carbon capture solution.

Liquid Nitrogen Priming

System initially powered by externally sourced liquid nitrogen to start operation.

No Energy-Intensive Fans

Passive air intake system eliminates need for power-consuming fan mechanisms.

REVFRACC SYSTEM

Nitrogen filter mesh

Contraction via mesh

Efficiently pulls air through nitrogen filter mesh in towers up to four meters high.

System priming

Uses externally sourced liquid nitrogen to initiate the air capture process.

Particle filtration

Outer mesh captures large particles while inner filter removes fine dust and debris.

Water condensation

Nitrogen mesh with thermal coupled heat exchanger nucleates and extracts water vapor from air.

REVFRACC SYSTEM

Outer particulate mesh

Large particle capture

Efficiently filters insects and other sizeable particles from incoming air through the tower system.

First filtration stage

Initial barrier that prevents contamination of subsequent filtration components in the REVFRACC system.

Cost-effective design

Simple yet effective mesh structure reduces maintenance needs while maintaining high filtration performance.

System protection

Guards internal components from damage, extending operational lifespan of the carbon capture technology.

REVFRACC SYSTEM

Inner fine particle filter

Removes dust and debris

Secondary filtration system captures fine particles before air reaches nitrogen mesh.

Precedes nitrogen mesh

Positioned strategically before water vapor condensation occurs in the system.

Essential filtration step

Ensures clean air enters condensation chambers for efficient carbon capture process.

Protects downstream components

Prevents contamination of sensitive equipment in VECC chambers and condensation systems.

REVFRACC SYSTEM

Nitrogen mesh condensation

Thermal coupled heat exchanger

Nitrogen mesh condenses water vapor from air through thermal coupling, enabling water nucleation and extraction.

Water extraction process

Filtered air passes through nitrogen mesh where water vapor condenses and collects for various uses.

Energy requirements

Condensing one kilogram of water requires approximately 2,260 kilojoules of energy from ambient air.

Passive air flow

System operates without energy-intensive fans, using natural contraction to draw air through the filtration system.

REVFRACC SYSTEM

Water extraction

Nitrogen mesh filtration

Captures water vapor through thermal coupled heat exchanger where water nucleates and condenses.

Storage and uses

Collected water stored in tanks for irrigation, drinking and various applications.

Energy requirements

Approximately 2,260 kilojoules needed to condense one kilogram of water from air.

Air composition

Ambient air contains approximately 1% water by mass that can be extracted.

REVFRACC SYSTEM

Passive air intake

Small Tower Arrays

Four-meter towers arranged in arrays efficiently pull air through contraction via nitrogen filter mesh.

No Energy-Intensive Fans

System uses passive air intake instead of power-consuming fans for drawing air.

Contraction Creates Suction

Air condensation contracts volume up to 800 times, creating negative pressure that draws more air in.

Cost-Effective Design

Towers are economical and initially primed with externally sourced liquid nitrogen to start operation.

REVFRACC SYSTEM

Gas liquefaction alternative

VECC Technology

Patented low-cost, energy-efficient alternative to traditional gas liquefaction methods.

Collision Process

Pressurized gas exits tapered nozzles, colliding in spheres to cause condensation through energy loss.

Passive Air Flow

Condensation creates negative pressure, drawing more air without energy-intensive fans.

Multiple Chambers

Sequential cooling chambers separate different atmospheric gases at specific temperatures for collection and use.

REVFRACC SYSTEM

Multiple temperature stages

Temperature-specific capture

Different gases condense at specific temperatures, enabling selective capture through progressive cooling stages.

Cooling sequence

Starting at -140°C for contaminants, progressing to -197°C for nitrogen, with targeted collection at each stage.

Efficient separation

Each VECC chamber operates at precise temperatures to isolate specific atmospheric components for storage or utilization.

Component collection

Captures CO₂ at -142°C, oxygen at -185°C, argon at -191°C, and nitrogen at -197°C.

REVFRACC SYSTEM

CO₂ collection at -142°C

VECC Chamber Process

Air cooled to -142°C causes CO₂ to condense into liquid form for collection and storage.

Atmospheric Percentage

CO₂ makes up 0.04% of atmosphere, efficiently captured through condensation in specialized chamber.

Collection System

Condensed CO₂ stored in dedicated collection chamber for utilization or underground storage.

Energy self sufficient

Passive air flow system eliminates energy-intensive fans, using contraction principle for continuous operation.

REVFRACC SYSTEM

Oxygen/nitrogen separation

Oxygen Condensation Process

Cooled to -183°C , oxygen liquefies and contracts 861 times, then stored in liquid air cylinder.

Separation Efficiency

System captures oxygen (20%) and nitrogen (78%) separately, enabling multiple industrial applications.

Nitrogen Final Stage

Condenses at -197°C , contracts 690 times, stored and used as working fluid in closed loop system.

Energy Generation

Liquid nitrogen powers turbines in closed loop, while liquid air generates electricity in open loop.

REVFRACC SYSTEM

Electricity generation capability

Closed nitrogen loop

Liquid nitrogen flows through heat exchangers, creating pressure to power electricity-generating turbines.

Open liquid air loop

Liquid air cools outer heat exchangers before entering pressure chamber to generate additional electricity.

Self-sustaining system

Captures nitrogen as working fluid, eliminating need for external power sources.

Grid integration

Generated electricity can supply power grid or serve as decentralized energy solution.

The REVFRACC Edge

Output/Cost Per Annum:

Based on the technology deployed on an acre site we capture and produce annually:

70,000
Tons of CO₂

3000
GwH of clean power (net of the system requirements)

500,000
Tonnes of other liquefied gases

We've taken out all the energy intensive processes it only costs less than USD 50 per tonne of CO₂ to operate the system – including the power generation. That's over 90% less than other systems!

REVFRACC SYSTEM

REVFRACC SYSTEM Cost saving solution for customers



Scalability

Geographically agnostic. A modular system that captures 2000 tonnes per tower annually.



Cost Reductions

In-setting/Off-setting carbon emissions at £150 per T/Co2. Half the price of the average carbon capture market and over 75% cheaper than current costs



Power Generation & Utilisation

Supply of 600 gWh per annum with up to 50% reduction on energy bills.
Profit share of exported energy.

REVFRACC SYSTEM

The Potential for Direct Air Capture



Total Addressable Market (TAM)

Global ETS (Energy Trading Systems) Market



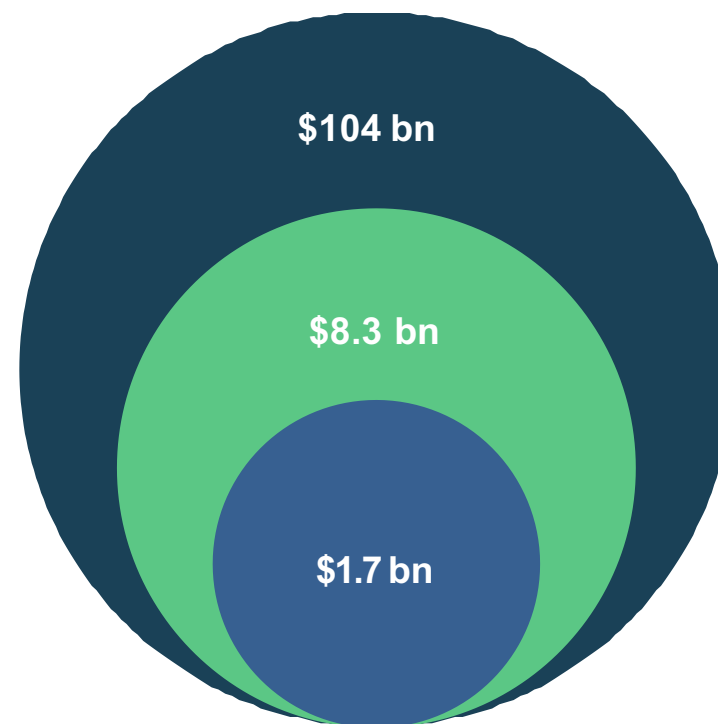
Serviceable Available Market (SAM)

EU ETS Combined Market based on 1.4bn
MtCo2 2024



Serviceable Obtainable Market (SOM)

EU ETS Steel Industry Emissions based on
1.4m MtCo2 2024



80%

Cheaper, Scalable & Permanent Removal Competitors main cost of capture is their use of fans. We reduce costs to **£30/ton** of CO₂



simply because there are no fans in our solution. Furthermore, we generate carbon-free power which is unique to other solutions. ■

	Reforestation/ Afforestation	BECCS	Soil Carbon	Carbon Mineralisation	Traditional DAC	Atmosfuture's REVFRACC
Low Cost	✓	✗	✓	✓	✗	✓
Modular	?	?	?	✓	✓	✓
Verifiable	✗	✓	✗	✗	✓	✓
Scalable	✓	✓	✓	✓	✓	✓
Low Land Space	✗	✗	✓	✗	✗	✓
Permanent	✗	✓	✗	✓	✓	✓

Alignment with Saudi Vision 2030



Economic Diversification

Championing local innovation and fostering a vibrant green economy through sustainable practices and technologies.



Environmental Sustainability

Making tangible contributions to climate goals, promoting cleaner air, and preserving natural resources.



Human Capital Development

Cultivating a new generation equipped with knowledge and passion for cutting-edge sustainable technologies.



"Schools Without Walls" Concept

Transforming educational infrastructure into dynamic, sustainable community hubs. Our smart, efficient design enables extended operational hours, fostering continuous learning and community engagement beyond traditional school functions.

Tech & Development Partners



Commercial & Strategic Partners

Innovate
UKBusiness
Growth**Shell**
StartUp **Engine**

green future investments ltd

rem:ve**Startupbootcamp**



Call to Action

Rebooz Torque Technology will transform Tabuk with new energy solutions including:

- **King Abdul Aziz School Complex**
- **Crown Prince Salman Nature Reserve Retreats**
- **Tabuk Manufacturing Zone**

And other related energy projects into a beacon of sustainability, offering a healthier, environment for its population & students.

We envision a **Tabuk** that not only educate but also inspires and demonstrates true environmental stewardship, setting a precedent for the entire region.

Powered by Rebooz



Hydrogen On Demand
20 NM3 - 100 NM3/h



Hydrogen On Demand 20 NM3 - 100 NM3/h

Powered by Rebooz



Rebooz Energy delivers high-purity hydrogen solutions through a versatile range of hydrogen generators designed to meet diverse demands. We also contribute to the development of hydrogen refueling stations capable of supplying fuel for cars, trucks, buses, and other hydrogen-powered vehicles.



Energy Carrier

Lightweight, efficient, storable, non-toxic, and emits only water when used.



Economy Decarbonizer

Replaces fossil fuels, cuts emissions, powers industries with clean energy.



Sustainable & Versatile

Clean, efficient, storage-free energy solution adaptable across industries and applications.



Multiple Source Options

Produced from water, biomass, natural gas, and renewable energy sources.



Electricity / Heat Generation

Used in fuel cells and combustion to produce electricity and heat.

Hydrogen On Demand Fuel Cell Generator 5 - 100 Kw

State of the Fuel Cell Generators for a greener future.

Supporting a greener future by producing clean electricity with high efficiency and low emissions. They operate silently, reduce reliance on fossil fuels, and utilize hydrogen or other clean fuels, enabling sustainable power for diverse applications and industries.



Hydrogen On Demand 20 NM3 - 150 NM3/h

150 Nm³/h PEM electrolytic cell for hydrogen production system

No.	Functional parameter	Qualification	Remarks
3	Hydrogen production system-PEM electrolytic cell		
3	Hydrogen production	3*50Nm ³ /H	
2	Oxygen production	3*25Nm ³ /H	
3	Number of single membrane electrodes		50 Pieces
4	Single rated current		

(Electric density is 1.5 A / cm²) 2610A

5	Single chip voltage	1.8-2.5V	
6	Energy consumption	≤4.8KW.h/m ³	
7	Electrolytic efficiency	70%-80%	
8	Working temperature	40-60°	
9	Hydrogen side working pressure	≤3Mpa	

10	Oxygen side working pressure	≤0.5Mpa	
11	Water quality	≥15 MΩ·cm	
12		≥99.999%	

13		50,000	
14	System size	40 ft container + 30 ft container	

3.1.2 Hydrogen production system-Gas management module

1	Hydrogen flow monitoring	0~ 150 Nm ³ /h	
2	Oxygen flow monitoring	0~75 Nm ³ /h	
3	The cathode pressure	Normal pressure of ~3 MPa	
4	Anodal pressure	Normal pressure of ~0.5 MPa	
5	Water removal rate	Must meet the water removal function within the full gas flow range, 99.9% Liquid water removal (50 μ m droplets)	
6	Overpressure protection	Overpressure protection for automatic discharge	
7	Nitrogen purging	Have low pressure blowing	
8	Gas sample	Normal pressure safety sampling	Sampling modules are optional

3.1.3 Hydrogen production system-water supply management module

1	Single-unit consumption of water flow rate	50 L/h	
	Flow range of a single circulating water unit	≥210 L/min	



Hydrogen On Demand 20 NM3 - 150 NM3/h



3	Pressure range of the circulating water	0~0.4 MPa
4	Temperature regulation range	At a room temperature of ~80°C, the pre-temperature rate was 10°C / 3min
5	Liquid level detection	The circulating water tank has the liquid level detection function
6	Automatic hydrating	The system automatically replenish water when the circulating water tank is insufficient
7	Conductivity detection	The equipment has the function of conductivity detection, the conductivity of deionized water exceeds the set value, and the conductivity is reduced by the deionizer to ensure that the conductivity of deionized water is used within the set range
3.1.4	Hydrogen production system-detection module	
1	Single input voltage	Monolithic voltage 1.8~ 2.5V, precision $\pm 0.25\%$ FS
3	Single input current	Range 0 to 2700 A with precision $\pm 1\%$ FS.
4	Electrolycell	
	Temperature monitoring	Room temperature of ~100°C, $\pm$ of 1°C,
5	Deionized water flow	≥ 210 L/min, $\leq \pm 0.1\%$ FS
6	Deionized water temperature	Room temperature ~80°C, $\pm 0.5^\circ\text{C}$
7	The deionized water conductivity	≤ 0.06 $\mu\text{S}/\text{cm}$
8	Gas temperature	Room temperature ~95°C, $\pm 0.5^\circ\text{C}$, sampling time <500ms.
9	gas pressure	Normal pressure: ~3 MPa, $\pm 0.5\%$ FS
10	Oxygen content in hydrogen	0-2% VOL or 0 to 20000 ppm Resolution: 0.01% VOL or 1 ppm Error accuracy: $\pm 1\%$ F.S.
11	Hydrogen content in oxygen	0-2% VOL or 0 to 20000 ppm Resolution: 0.01% VOL or 1ppm Error accuracy: $\pm 1\%$ F.S.
12	Hydrogen concentration	0~ 40000 pm, $\leq \pm 3\%$ FS
3.1.5	Hydrogen production system-Gas purification module	
1	Treatment of gas	150 Nm3/h
2	Raw material hydrogen purity	About 99.7%
3	Hydrogen gas purity after the treatment	99.999%
4	Hydrogen export pressure	0.1MPa~3MPa (adjustable)
5	Dew point (pure gas water content)	$\leq -70^\circ\text{C}$
6	Import and export pipe diameter	DN25 and DN15
7	Operating temperature of the deaerator	80~120 °C
8	Operating temperature of the dryer	normal atmospheric temperature
9	Dryer regeneration temperature	250°C~300°C
10	Operation cycle of the dryer	24 Hours
11	Annual running time of the unit	≥ 8500 h
12	Design service life	> 10 years (except for vulnerable parts)
13	External size	(Subject to the material objects.)
14	Weight	(Subject to the material objects.)

100kW Fuel cell distributed system



Output power
100kW
output voltage
AC380v
performance
efficiency
≥50%
water protection IP55
hydrogen purity
≥99.99% (CO<1PPM)
hydrogen
≥12bar
pressure
fuel
hydrogen
1520L/min
consumption
hydrogen
/
reserves
ambient
-10~40°C

Electric reactor
characteristics
temperature
ambient
humidity
10%~95%
bipolar plate
graphite plate
cooling medium
polyethylene glycol
the reactor
125kW
power
number of single 315 Pieces
cells

World First! Fuel Cell Generator 5 - 20 Kw with LPG Gas



Producing hydrogen on-site from widely available fuels like LPG, propane, eliminating the need for dedicated hydrogen infrastructure. This makes fuel cells a practical, scalable, and clean alternative to diesel generators, providing dependable power in both urban and remote locations.

The Rebooz POWER POD uses LPG as the hydrogen carrier!

Fully available in retail today Nation wide!

The POWER POD is a 5 to 20 kW power solution based on fuel cell technology. In the POWER POD, hydrogen is extracted from the fuel and converted into electricity in the fuel cell. The system can be integrated with existing onsite backup infrastructure to replace diesel generators and can be used in hybrid applications alongside renewable energy sources such as solar PV.

Luxury eco lodges Crown Prince Salman Nature Reserve

Conservation of pristine environments

Fuel Cell Generator



Future Proof

Designed for today's fuels and tomorrow's hydrogen, upgradeable for direct green hydrogen use.



Ideal Hydrogen Carriers

LPG and biogas are available now and harder to pilfer.



Lower OPEX

Less maintenance and fuel savings.



Greener Footprint

Fewer CO₂ emissions, low noise and no particulates.



Standalone or in Hybrid Systems

Integrate into existing solar/wind systems, 24/7, weather-independent, provide DC power to batteries.

Engineered for in field servicing, optimized for reliability.

Wind Energy on the Ground

State of the art flexible wind panels generate profitable zero carbon power.

New technology that changing how wind energy is captured, 2X more efficient than solar power at 1/3 space!

Wind Panels provide a new solution for wind energy in urban areas where traditional turbines are impossible.

Powered by Rebooz Energy





Wind Panel consists of numerous channeling ducts, where multiple independently working aerofoils are located. The aerofoils convert kinetic energy from wind to mechanical oscillations which are converged and converted into electricity. Our Wind Panels capture vast amounts of kinetic energy by having a comparatively large working surface area and density.

Carbon-saving

Our 1kW rated solution equates to over 0.5T of CO₂ per year.

More efficient

Captures more kinetic energy than conventional wind turbines.

Cost-saving

LCOE of up to 12p/kWh, dependent on wind energy availability.

Wind Turbine Energy Capture



Our Wind Panel consists of numerous channeling ducts, where multiple independently working aerofoils are located. The aerofoils convert kinetic energy from wind to mechanical oscillations which are converged and converted into electricity. Our Wind Panels capture vast amounts of kinetic energy by having a comparatively large working surface area and density.



Cost saving

LCOE of up to 12p/kWh, dependent on wind energy availability.



Flexible

Can be fitted to any existing buildings or structures.



Unobtrusive

Easier to obtain planning consent in sensitive rural locations.



Small footprint

Minimal impact on the environment and wildlife.



More efficient

Captures more kinetic energy than conventional wind turbines.



Inexpensive

Low cost, can quickly be mass-produced and deployed.



Carbon saving

Our 1kW rated solution equates to over 0.5T of CO₂ per year.



Long lasting

Has a long life with little maintenance required.

Rebooz EMS System To Control All Remotely



Intelligent Control

Automated operating modes – startup, idle, continuous, shutdown, etc.



Remote Monitoring & Control

Operating and managing from anywhere with real-time visibility.



Live Data Analytics

Real-time performance insights for smarter decision-making and predictive maintenance.



Proactive Safety Management

Built-in safety protocols and real-time system diagnostics for user and equipment protection.

Rebooz EMS Control Suite utilized in all products and services for easy AI control management.

Aluminum Battery Storage



Safety & Stability

Non-flammable / non-explosive, no thermal runaway & minimum need for costly fire suppression



High Efficiency

3-electron exchange, 95% Round trip efficiency. Smaller & lighter.



Affordable & Abundant

Aluminum is the most abundant metal on earth with a lower levelized cost at scale (\$150/kWh)



Sustainable

Recycled Aluminum, Recyclable Battery, Non-toxic / No dangerous heavy metals



The world's first completely rechargeable aluminum battery for safe, and affordable grid storage.

Longer duration batteries are essential to energy storage

Aluminum Battery Storage

	Al-CO ₂	Vanadium	Zinc-Bromine	Sodium-Ion	Li-Ion LFP
Max Discharge Time	8-24 hrs	6-12 hrs	4-10 hrs	1-4 hrs	0.5-4 hrs
Cycle Life	>10k cycles	>15k cycles	5k-10k cycles	2k-4k cycles	2k-6k cycles
Operating Temperature	-40°C to 100°C	10°C to 40°C	5°C to 45°C	-20°C to 60°C	0°C to 55°C
Safety	Non-flammable	Low Fire Risk	Low Fire Risk	Moderate Fire Risk	Stable
Levelized Cost	\$100-150/kWh	\$200-400/kWh	\$150-250/kWh	\$120-200/kWh	\$100-200/kWh
Material Cost	Al: \$2/kg; CO ₂ : \$0	\$30-50/kg	\$2-3/kg	low cost	\$12-15/kg
Supply Chain Risk	Abundant US Resource	Geopolitical Risk	Moderate Risk	Low Risk	China-dependent



Solar Energy



Go Energy Neutral

Sustainable Power for Data centres.
Save Big on Energy.

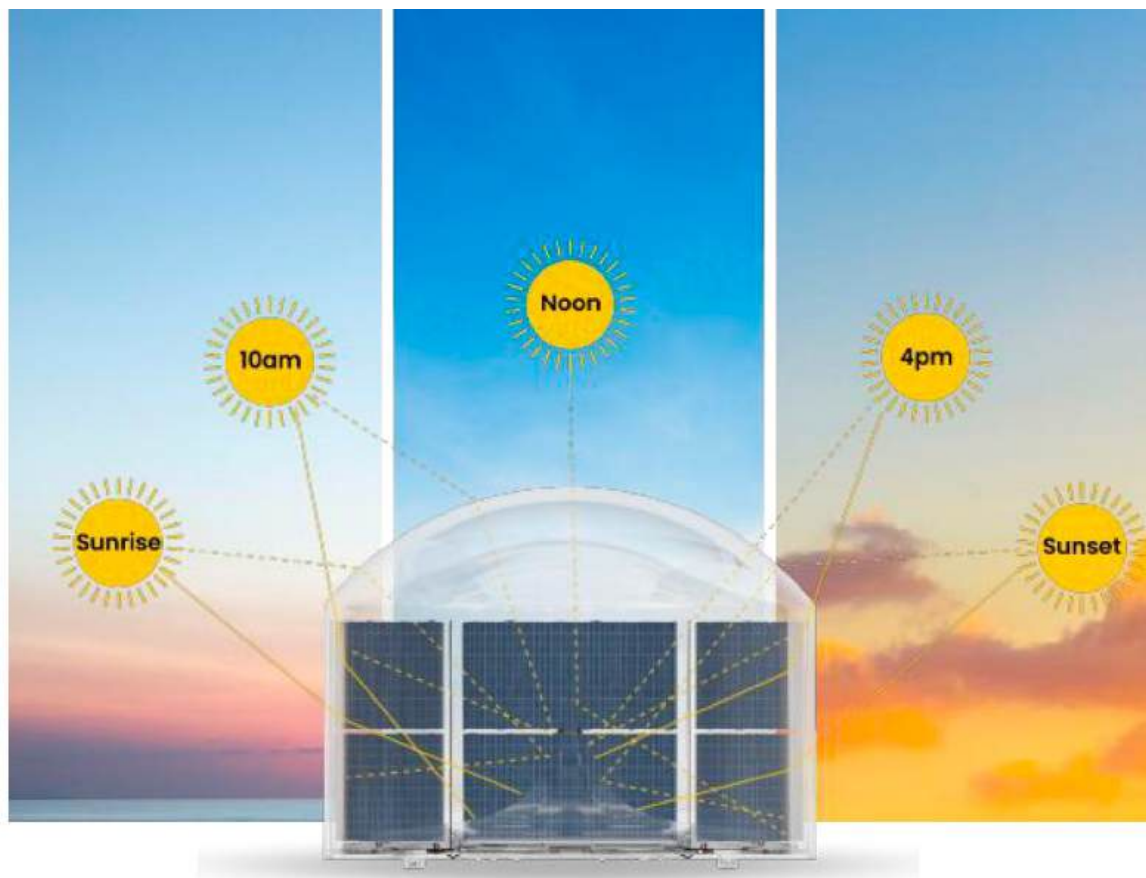
01
3–8X more power, on 10% of
the land

02
More light. Less land. Ready to
scale

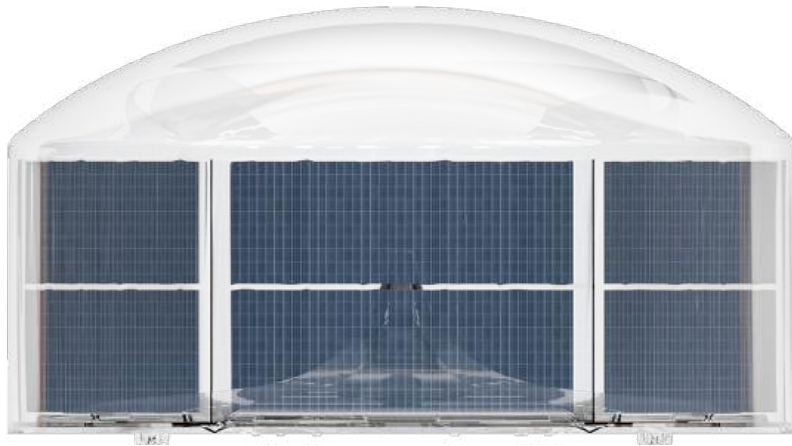
03
Closing the Infrastructure
Gap through Integration

04
Deploys fast to match climate
timelines

05
Profitable by design, integrated
for speed



Solar Energy



World first patented technology for Solar: Total Internal Photonic Absorption(TIPA) is a three dimensional PV device which allows internal reflection inside the device such that the statistical chance of photon/phonon - electron interaction is increased. Add to this reflection increases the likelihood that a photon will be at an optimal angle of incidence to be absorbed by the PV cell.

Broadly speaking TIPA produces a minimum 33% more electricity per given surface area than an equivalent flat panel. The three dimensional design means that TIPA produces more power throughout the day compared to a flat panel and TIPA does not need special orientation.

Waste to Energy Plant Modular



Processing all kind of waste

Municipal Solid Waste

Plastics, Tyres, Textiles, Carpets

Paper, Woods, Foods

Medical Wastes

Animal-By-Products

Coal, Oil Sludge

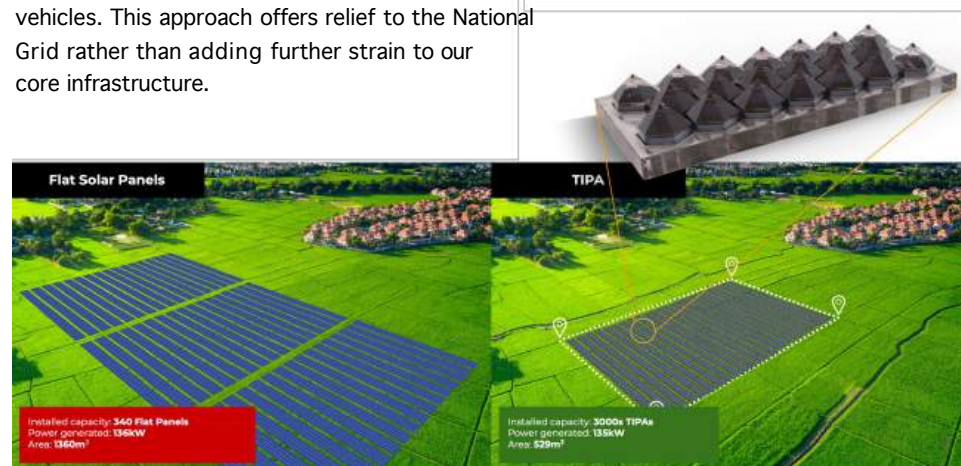
Biomass

Agricultural Wase

Solar Energy Capture

Horizontal & Vertical

TIPA cells can be utilized either vertically or horizontally. Our vertical solution generates 3 times more energy per given area, while our TIPA Tree-like vertical structures can easily achieve over 10 times the energy production per square area. This represents a fundamental shift in solar energy generation, accelerating our progress towards net zero. It's an ideal solution for remote EV charging stations, especially as the world transitions to electric vehicles. This approach offers relief to the National Grid rather than adding further strain to our core infrastructure.



6lwp H

Our horizontal solution brings 3X the power at the same are of land.

- A flat base design with a concave mirror
- Use a half-mirrored lens.
- Features mirrored sides.
- Position TIPA so that the transparent portion faces SW or aligns with the optimal zenith for the location.

6lwp V

Our Vertical solution brings 5-8X the power at the same are of land.

- TIPA V is the bifacial version of TIPA.
- Generates more energy during sunrise to 10:30 AM and 3:00 PM to sunset.
- A cross-shaped mirror with triangular reflective acrylic peaks at the base.
- Ability to retrofit any lamppost globally.
- eV infrastructure off grid, can be achieved tomorrow.

6lwp HV

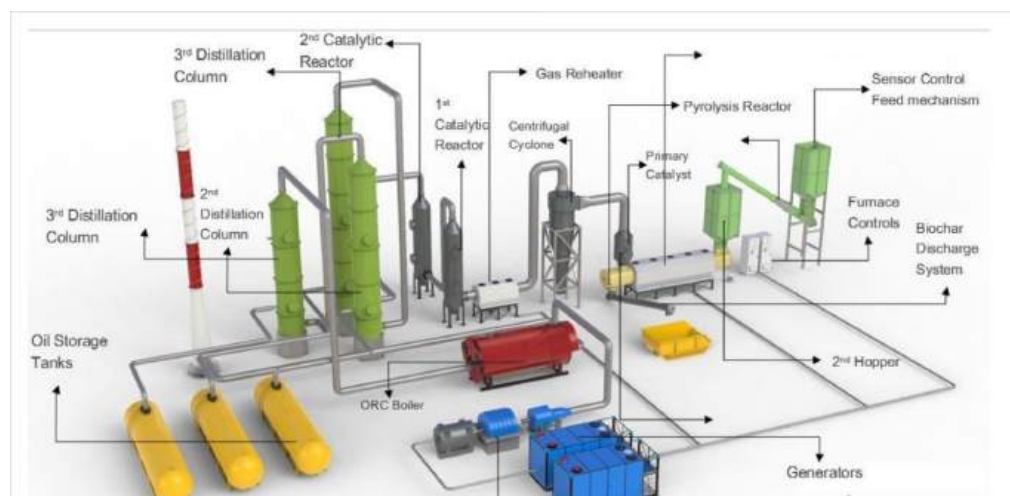
Our hybrid solution brings 8X the power at the same are of land.

- Half of the body is mirrored on the side opposite to the SW or peak zenith side.
- Half of the lens is mirrored on the side facing SW or the peak zenith side for the specific region.
- Designed for use on lampposts, where it provides the best configuration, even with a Rosette design.
- Requires the same mirror configuration as TIPA H and TIPA V.

Waste To Energy

PLANT FUNCTIONALITY

- * Zero Waste & Zero Emissions
- * Fully automated continue plant
- * Electrical heating
- * Catalytic conversion _ Hydrotreating
- * Bio refinery _ Fractional Distillation
- * 100% carbon capturing



Waste To Energy

COMPARISON

32% efficiency

Delivery timeline is 5 to 7 years

Plant value is from \$250m to \$1.5b

Cannot operate on a small scale

Cannot operate without PPA & grid connectivity

End product is only electricity

Does not process all types of waste

Burning of the waste, oxidation

Produce high level of emissions

Produce additional waste

85% efficient

Delivery timeline 6 to 8 months

Plant value from \$20m to \$250m

Operates on a small scale & large

Operates without PPA & grid connectivity

8 different products

Process all types of waste & biomass

No burning, no fumes, 100% clean

Produce zero emissions

Zero waste performance



Fiber Reinforced Concrete



Torque Tech

We are a sister company to a leading manufacturer of structural elements and advanced products made from fiber-reinforced concrete (GRC), with over forty years of experience in innovation. The company holds four patents, offering innovative and sustainable solutions that contribute to enhancing construction efficiency and reducing environmental impact. Our products exceed 14, most notably GRC roofs and walls, as well as lightweight precast hollow core panels for green building systems, shell structures, and blast-resistant cleanrooms. By using advanced technology and high-quality materials, we aspire to achieve a healthier and more sustainable built environment.



Our Philosophy

We in Torque Tech had been correct the building method line to be less weight & can hold 5 time its weight in Safe way & with reduction in materials & energy consumed while fabrication & using very efficient in fire & natural disasters which have the needed environment - tall harmony.



Ants can hold 7 times its weight



Eagles & Hawks can carry 4 times their weight



Normal Person Can Carry Double his weight

Why Green Building ?



During installation

Zero wastes: no raw materials to mix or pour, no painting needed to complete onsite application, so no waste is left behind

Reducing Co₂ emits by 90% less than the precast concert:

Because of the Lightweight of the Torque panels system it reduces the fuel of transportation & lifting machines



Usage of the building:

It's a fire stop material & non flammable: Passing the ASTM E11998- test

Reducing Co₂ emits: The low thermal conductivity of Torque panels system (0.3 w/m.k) panels reduces energy consumed for Heat-ing & Cooling by 50% less than the tradition- al building



It's durable: Torque panels system is a durable, long lasting, non shrinkage & non creeping material contains no steel to rust, this reduces the need for replacement, repair and repainting. The durable nature of GRC makes it earth friendly. durable products reduce the environmental impact of their production .

Anti pests: Torque panels system is unaffected by termites and its use as a replacement for wood reduces or eliminates the need for toxic pesticides



Pre manufacturing:

Raw material is a natural Regional Material: pure Sand + cement + potable water + A.R fiber (made from pure sand) which all exists in most of the world countries



During manufacturing:

A few material used: Torque panels system use no steel, only 20% of cement & sand used in traditional building, which means reducing in the emitting of Co2 comes from steel & cement manufacture by 80%



The fiber used is safe for human: Our A.R fiber used in our manufacturing for the Torque panels system has a thickness Equal to 14 - 20 micron, while the unsafe fiber is equal to 3 micron which make our fiber un-breathable while

Reducing the energy consumed by 80% less than precast concrete: Achieve increasing levels of energy performance because of the prerequisite which Design the budling piping, water supply which makes standard to reduce and economies impacts associated with excessive energy use

Reducing the insulation materials: The low thermal conductivity of Torque panels system reduces the insulation material (0.3 w/mk) that's because of GRC is an insulation material itself which reduces the Co. emitting from the insulation manufacture

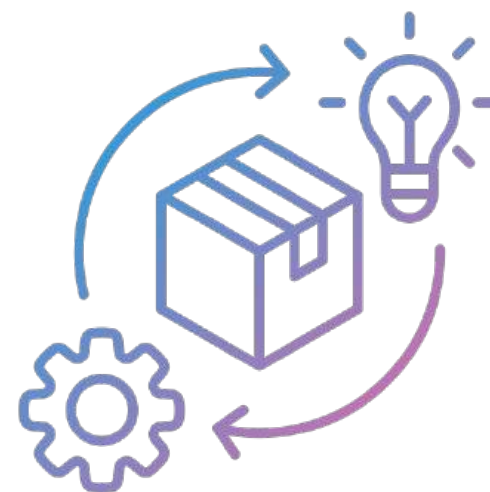


our
brands



torque
Systems

Our Product



About the Product

torque
panels

A complete system of precast, light weight & considered as green buildings made of concrete developed with silica reinforced with fiber. The First system in the world to rise Five stories without rebar and by only using 20% of cement it saves Energy , Money , workers and time .

It also the first precast building system suitable for exporting in containers because its weight is 20% of the traditional construction.

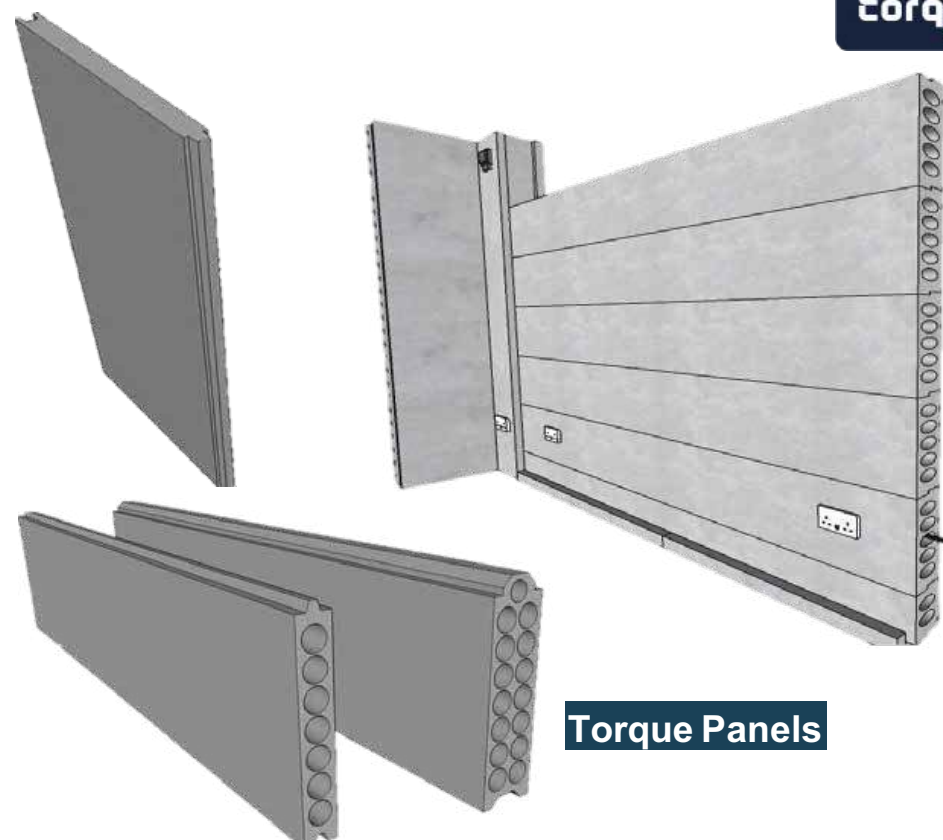


Wall Panel Classifications

- Walls 10 cm thick Prestress G.R.C. Hollow core Panels consist of two layers of G.R.C with sound and heat insulating nerves and spaces between them and all the pipes and electrical outlets are buried inside them, as well as special cavities are made for water supply and drainage pipes and the height of the walls is 3 meters
- The walls are installed together by special interlocks on the outer perimeter of the walls
- The walls are load-bearing and structurally equipped to carry the ceiling and the upper floors with complete safety and fixed to the floor concrete using a GRC section fixed with steel screws

Wall panel classifications

Wall panel module (width)	Wall height	Wall thickness M2	Weight	Vertical load
120 cm	up to 3.6m	10cm	40 kg/m ²	10 ton/mL
120 cm	3.6m-4.8m	12cm	45 kg/m ²	10 ton/mL
120 cm	4.8m-6m	14 cm	50 kg/m ²	10 ton/mL



Torque Panels

Roof Panel Classifications

The ceiling is 12 cm thick Prestress G.R.C. Hollow core Panels consists of two layers of G.R.C with sound and heat insulating nerves and spaces between them

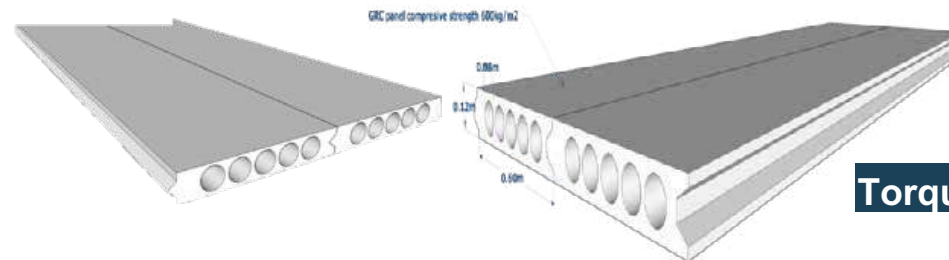
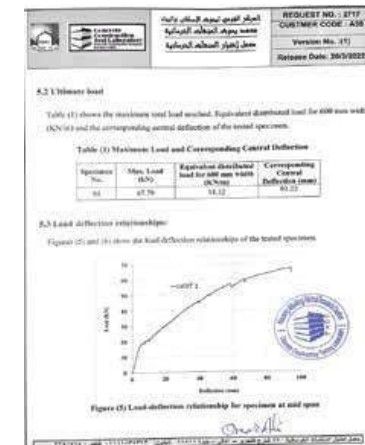
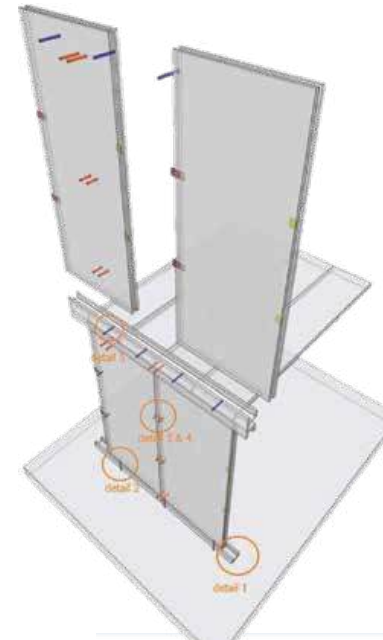
The ceiling can withstand live loads of 1ton/m²

The ceiling panels are installed together by interlocking on the outer edge of the panel

The ceiling panels are fixed to the G.R.C walls by special G.R.C sections

The ceiling is inclined to a degree that allows rainwater to drain

The joints between the ceiling panels are closed by G.R.C mortar poured on site



Torque Panels

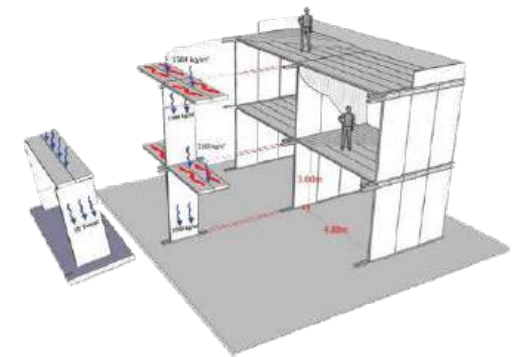
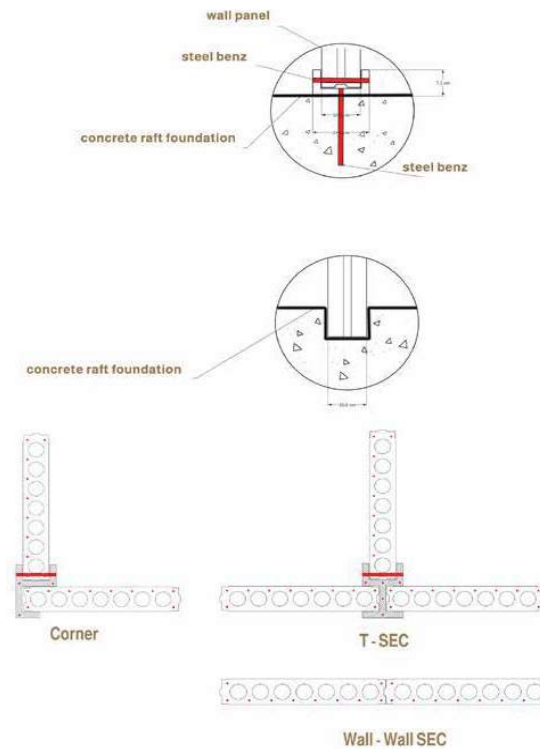
Columns & beams



Columns and beams are Prestress G.R.C Hollow core panels To bear loads and moments with complete safety



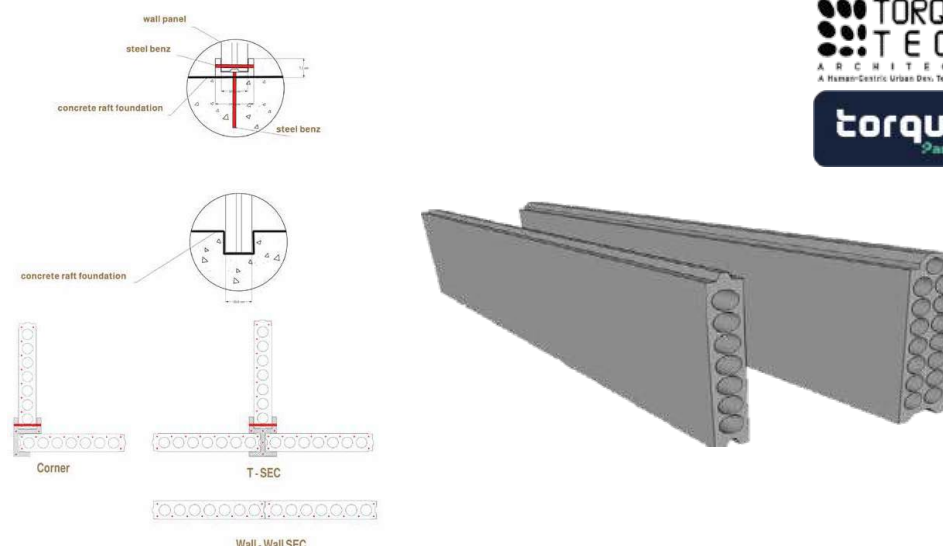
Columns and beams are installed mechanically with interlocking



For complete building equipped with Turk Panels system

Torque Panels physical properties

Weight of square meter of one floor	Kg/m2 140
Earthquake resistance	Up to 8REKH
Fire Rated (according to BS 476 PI 4)	incombustible
Fire resistance (according to BS 476 PI 8)	0-4 hours depending on construction
Spread of flame (according to BS 476 PI 7)	Class 1(Zero spread)
Smoke (according to ASTM SIP 4422-67)	2-6 hr. negligible smoke
Thermal Conductivity	w/m.k 0.3
Earthquake resistance	Up to 8REKH
Sound absorption	8 mm sheet 50 dB at 4000 Hz
Water permeance	0.01-0.4 ml/m2 min on 8 mm thick
Water absorpsion	%1
Freezing & thawing (according to Din 278)	No visible or mechanical change
Abrasion Resistance	0.27-0.30 cm ³ volume loss than normal concrete

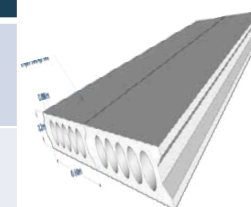


Wall panel classifications

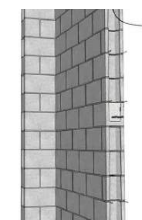
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120 cm	3.6m-4.8m	12 cm	45 kg/m2	10 ton/mL
120 cm	4.8m-6m	14 cm	50 kg/m2	10 ton/mL

Comparing Turk Panels to Traditional Construction

Approach items	Units	Traditional concrete residential building, two-storey villa, 235 m	Residential building with Turk Panel system, two-storey villa, 235 m
Existence of excavation and backfilling works	-	Yes	nothing
Foundation works	-	Yes	Armed base 20 cm above ground level
Wooden and casting works inside the site	-	Yes	nothing
Electrical and plumbing works	-	Yes	Buried inside walls during manufacturing
Brick building works	-	Yes	nothing
Plastering works	-	Yes	nothing
Presence Finishing works	-	Yes	Internal only

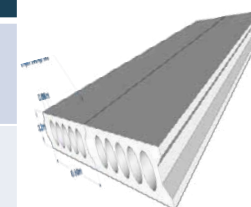


1#

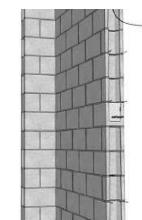


Comparing Turk Panels to Traditional Construction

Approach items	Units	Traditional concrete residential building, two-storey villa, 235 m	Residential building with Turk Panel system, two-storey villa, 235 m
Total thermal transferability	W/M/S	2.3	0.03
Amount of cement	KG	82.40	16.48
Amount of iron	KG	35.34	Zero
Amount of fiberglass	KG	Zero	33
Amount of thermal insulation from polystyrene	KG	Zero	360
Energy used in manufacturing iron	kwh	7.068	Zero
Energy used in manufacturing cement	kwh	10.072	1.071

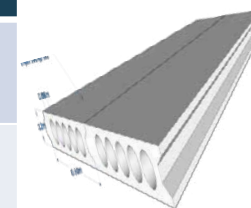


2#

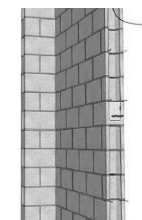


Comparing Turk Panels to Traditional Construction

Approach items	Units	Traditional concrete residential building, two-storey villa, 235 m	Residential building with Turk Panel system, two-storey villa, 235 m
Energy used in manufacturing GRC	kwh	Zero	1,410
Used in manufacturing polystyrene	kwh	Zero	36
Energy used in cooling the building per year Energy	kwh	23,500	11,667
Total energy used in manufacturing materials	kwh	17,780	3,642
Savings percentage in cooling energy	percentage	Zero	38%
Savings percentage in cooling per year manufacturing materials	percentage	Zero	84%
Cost of electricity consumption for	US \$	116 \$	65 \$

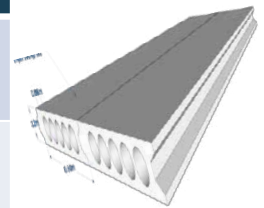


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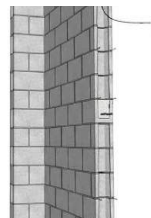


Comparing Turk Panels to Traditional Construction

Approach items	Units	Traditional concrete residential building, two-storey villa, 235 m	Residential building with Turk Panel system, two-storey villa, 235 m
CO2 emissions Energy Cooling	KG	7,833	4,889
CO2 emissions for manufacturing energy	KG	2,570	316
Cost of eliminating emissions Energy Cooling	US \$	69,8 \$	13,18 \$
Time period required to transport building materials	DAY	20	1
Time period required to erect the building	DAY	132	5
building materials and erecting the building	-	Big	Small
Labor cost relative to building construction cost	percentage	35%	5%



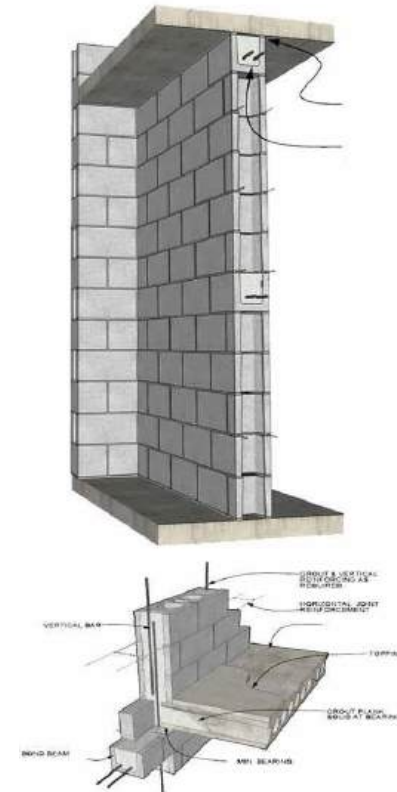
4#



Integration system of roof panels with traditional construction

Product Idea

The idea of this system is based on the integration of ceiling slabs with any construction system



The importance of the Product

- Our project complies with all health, environmental and safety requirements
- Environmentally friendly and cost-effective by not using rebar up to the fifth floor
- It aims to make homes accessible to everyone and those with limited income



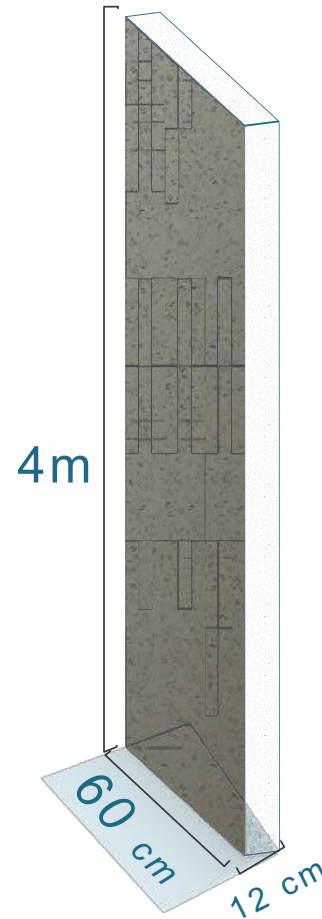
What's

Torque

Houses

Panel

?



TORQUE SYSTEM PANEL

Prestress Torque Houses Panel hollow core panels slabs, pre-cast and pre-tensioned, without steel reinforcement, made of concrete developed with silica and reinforced with fiber, 60 cm wide, 12 cm thick at 4 meters long, withstands 2.8 tons/square meter, loads, and loads that increase with thickness.



2.8

Stands
Tons/square Meter

Torque System Panel

it can be installed on the structural beams of the building in the tower instead of the traditional slabs.

Thus saving 80% of the building's steel reinforcement , 90% of the tower construction time and 30-40 % of the construction cost



30-40%

Cost Saving



90%

Construction
Time



80%

Steel
Reinforcement



What makes us Different of other precast solutions ?

zero
steel

zero steel
“rebar”
upto 5th
floor

20%

using only
20% of cement
per sq.m of
traditional
building
which makes
us to save 80%

75%

75%
availability of
raw materials

Affordable

Price
affordability
which makes
every citizen
own home

Decorative

Can be done
for exterior &
interior walls
and decorative
from the same
materials.

Speed

The speed of
construction is
incomparable
with
traditional
buildings

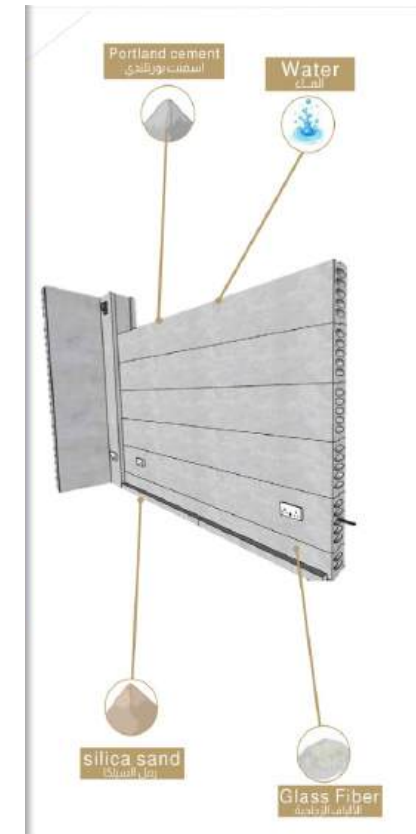
The Product & Components



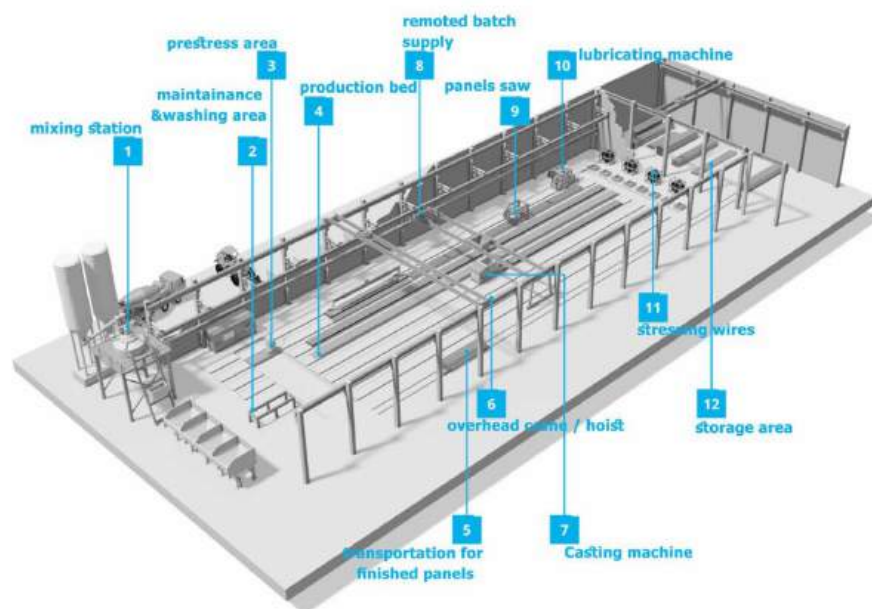
G.R.C. Hollow core Panels

The G.R.C mixture consists of potable water, ordinary portolan cement and (Fin Silica). The mixture is reinforced with AR fiber and some additives are added to reduce mixing water without affecting workability and some other additives for the purpose of cohesion between the granules, provided that these additives do not conflict with each other, such as the ratios of sand to cement, the ratios of water to cement, the ratios of fiber to cement and the ratios of the rest of the additives.

(Hight Shear Mix) must be used to mix the G.R.C mortar and presses to compress the components of the mixture. These components and the casting method must give the product a stress Crushed not less than 800kg/cm with resistance to friction and abrasion, resistance to salts, acids and sea iodine, non-flammable at all, non-conductive to electrical current, not susceptible to the reproduction of insects or the growth of fungi and microbes, and sound and heat insulator



Manufacture Line



Key plan

1	mixing station	capacity 500kg/batch
2	maintainance area	maintainance , washing area & preseption chamber
3	prestress area	
4	production bed	steel sheets
5	transportation for finished panels	
6	overhead crane / hoists	for loading & weighing
7	casting mashine	
8	remoted batch supply	
9	panel cutting saw	
10	lubricating machine	for smooth releasing products
11	stressing wire/fiber	high tension carbon steel / finnest japanese fiber
12	storage area	

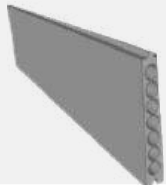


product on beds



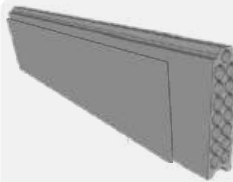
product on beds

Product Types



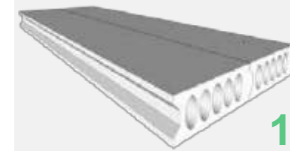
Wall

60cm - 120cm



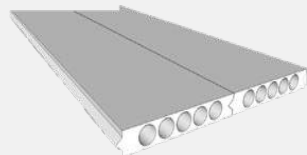
Wall Double

More 120cm



Roof

12cm - 14cm



Roof

3 cm - 8 cm



Beams

Features Of Our Precast System



It is fire stop material & non flammable passing tge ASTM E119-98 Test



Reducing loads on foundations



Extending the building's lifespan



No waste during installation



Anti-insect and rodent



100% it is environmental friendly because of the environmental pollution coming from the rebar industry



Reducing the cost of the facility



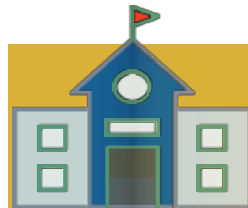
The speed of construction is incomparable with traditional buildings

Who is our target customer?

Our targets sectors are :-



Residential



Governmental



Commercial Sectors



Schools



Hotel

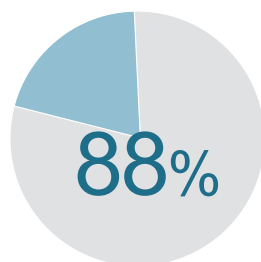


Resort

Uses

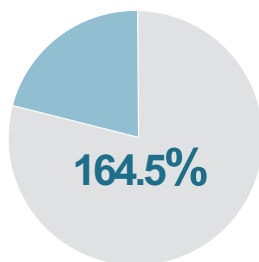
- Private and public residential villas
- Desert environment buildings for mining companies and military units
- Tourist villages, coastal and hotel buildings
- Construction of caravans and environmental circular units, light ramps over old buildings, covers and canopies, exterior coverings and decorations, rooms that prevent the spread of pollution and bacteria
- Highly resistant materials to climate changes
- Fireproof and high sound resistance materials
- 80 % finished product
- Withstands earthquakes up to 8 Richter

Why you should invest with us ?



ROI

Return on investment



IRR

Internal rate of return



NPV

Net present value

Share information

Capital raised 18,500,000 USD

Factory production capacity

300

working days

2

shefts

slabs



400 sq.m

per day (60,000 sq.m)

walls



800 sq.m

per day (120,000 sq.m)



one of the innovative green Building House products registered under three patents in King Abdul-Aziz City

Countries that approved the modern building system Saudi Arabia, Jordan, oman , Egypt,Qatar& etc

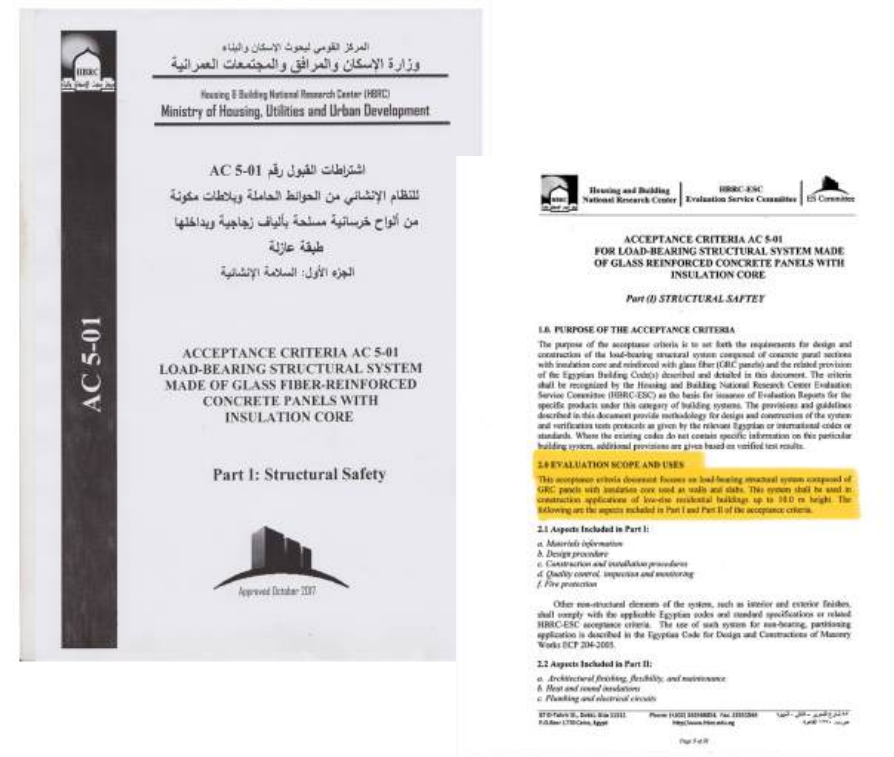
General



1. What is the maximum number of floors officially approved today ?

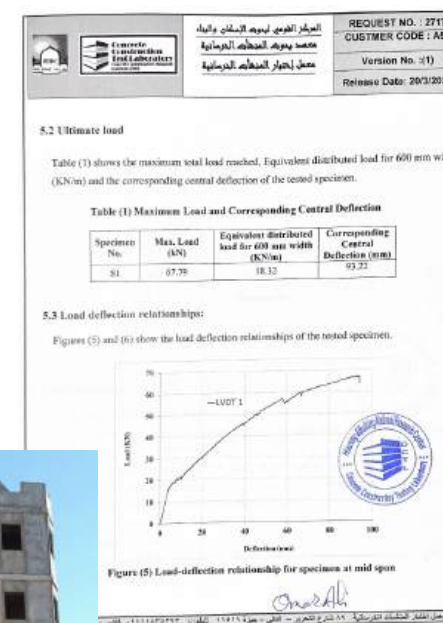
From 1985 until 2010, Torque Panel was a sandwich panel consisting of two layers of silica-reinforced concrete with a polystyrene insulating layer between them, This system was approved by the Egyptian Housing Research Center as a wall bearing system that rises ten meters or three stories.

In 2011, Torque Panel was modified from sandwich panels to hollow core panels (without polystyrene), also made of silica-reinforced fiber reinforced concrete. The system was approved by various consulting firms for four-story buildings and penthouses.



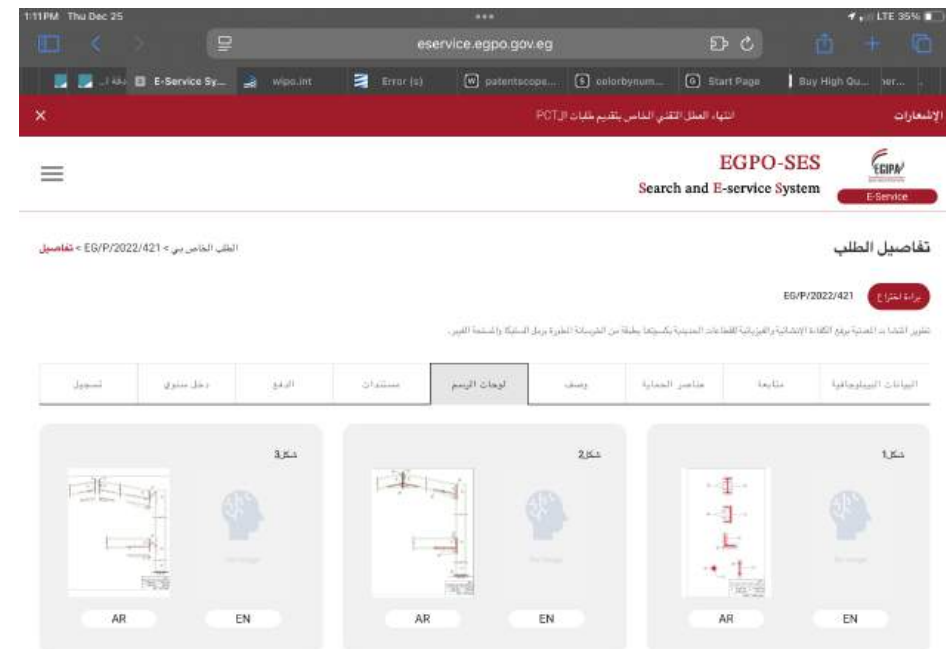
In 2022, the system was developed into G.R.C. Hollow Core Panels Prestress. According to the Housing Research Center's test dated 20/3/2022, a tork panel slab with a load-bearing capacity of 2.8 tons/m^2 was tested with a thickness of 11 cm, a span of 4 meters, and a width of 60 cm. Based on this test, the consulting authorities authorized us to construct load-bearing wall buildings up to 5 stories high, This enabled us to create structural frameworks, columns, and beams for use in towers.

In 2022 A patent has been registered for - Composed Section G.R.C- Steel, which has enabled us to create structural columns and beams for use in high-rise towers



2. What is the maximum number of floors officially approved today? And from which authority?

The patented structural system EG/P/2022/421 Composed Section G.R.C- Steel allowed us to achieve exceptional heights, based on laboratory tests demonstrating the structural capacity of the columns and beams compared to steel sections.



A load test was conducted on one of the slabs in the Murooj Jeddah project. The project consists of two floors topped by a skylight on the third floor, and the height of each floor is 5.80 meters



4. How was the system's seismic performance assessed ?

The seismic performance of the system was evaluated by the Jordanian Ministry of Housing through the University of Jordan.



THE UNIVERSITY OF JORDAN
FACULTY OF ENGINEERING AND TECHNOLOGY
OUTREACH CONSULTATION UNIT

Conclusion:

For the same room and weights, sustained cyclic loading for about 15 minutes with no cracks appeared until maximum amplitude reached at 60 kN/m cyclic load. This loads that maintain duration that is mostly occurs with medium density earthquakes could be resisted effectively.

The construction system has the following advantages:

The system provides high additional factor of safety to that required by the ACI-code in all aspects of design, flexural, shear, deflection and compression. It ensures effective transfer of shear forces for full composite behavior through the GFRP fibers which are distributed to a mesh on both sides of the panel. It provides good resistance to dynamic loads. It provides good resistance to lateral dynamic loads that might result from earthquake. It has a relatively low applied lateral loads from earthquake because of the relative light weight that this system has.

Erection of construction is quick and easy because the panels are light weight. The construction method is simple, easy to understand. The construction method does require skilled labor.

The panels can be cut quickly and easily to any size or to variety of particular shapes to suit architectural design concepts, particularly, as they are precast members. Cutting of openings for windows and doors is fast and easy through special molds. Bracing of panels to be held in required position is simple, easy, and fast. Fixing of frames for doors and windows is simple, easy and fast. Installation of utilities is simple, easy and fast. Additional beams and columns may be required for medium to large spans. The system has continuous reinforcement through random and mesh distributed GFRP fibers, provides a monolithic structure through proper distributed connections at joints and has little stress concentrations. The system provides excellent thermal and sound insulation because of the local-in polystyrene core. There is good joining materials (concrete and steel reinforced) and forms. The system has complete design flexibility. The concrete thickness could be different and increased if needed. The polystyrene core could be of different thickness. Multi-panels walls could be constructed.

2- Two walls are subjected to cyclic, uniformly distributed load perpendicular to the weak axis. The maximum amplitude of cyclic load was 41 kN/m and the minimum was 10 kN/m. The duration of each cycle was 2.7 seconds. The load versus time appears in Figure 42. The total time the wall can carry before cracks appear is as follow:

- a- The first specimen tolerated the cyclic load for 50 seconds, and this is about 18.5 cycles of load. The deflection difference between the maximum and minimum loads was 2.5mm.
- b- The second specimen tolerated the cyclic load for 35 seconds, and this is about 13 cycles of load. The deflection difference between the maximum and minimum loads was 2.8mm.

c-

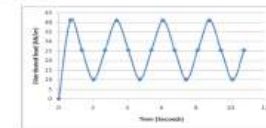


Figure 42: Load versus time.

- 3- The final wall is subjected to cyclic loads perpendicular to the strong axis. The maximum amplitude of cyclic load was 41 kN/m and the minimum was 10 kN/m. The duration of each cycle was 2.7 seconds. The deflection difference between the maximum and minimum loads was 0.73 mm. No cracks appear for 8 minutes of loading. So, the load's maximum amplitude is increased to 48 kN/m and the deflection difference became 0.95 mm. This load continued for 4 minutes and no cracks happened. After that, the maximum amplitude increased to 55 kN/m and sustained for 4 minutes. The deflection difference was 1.15mm. Finally, the last increase was to 60 kN/m for the maximum amplitude. The difference deflection was 1.6 mm. The cracks appeared after 1 minutes and 5 seconds. The flow of load is shown in Figure 43.

The cracks resulted from cyclic loading is apparent in Figure 44. Figure 45 shows the room and device used for dynamic test.

5. Is this system usable in government tenders or does it require full structural approval ?

When using lightweight, newly constructed buildings in government agencies, only the system's approval by a consultant or consulting firm is required

Ministry of Housing
Land & Technical Affairs

وزارة الإسكان
وكالة الوزارة للأراضي والشؤون الفنية

BTSI - Technical Review

Technology :- "Concrete panels reinforced with Glassfiber" - Structural system consists of GRC panels with insulation core used as load bearing walls & slabs "TORQUE PANELS- Owned & produced by DAR AL-BENAA AL- ARABY"

Issue Date :- 02.feb.2020

#	Requirements	Availability		Observations
		Yes	No	
Recommendation No objection to the proposed Technology- "Concrete panels reinforced with Glassfiber" - Structural system consists of GRC panels with insulation core used as load bearing walls & slabs "TORQUE PANELS- Owned & produced by DAR AL-BENAA AL- ARABY" For up to two-story residential units only. Subject to Design by the Approved Consultant as per SBC, Mock-up and Testing for Structural Integrity, Durability, Fire rating, Acoustic rating and Thermal insulation (without thermal bridging noted) We MOH reserve the rights to reject this method of construction irrespective of the above results from the mock-up due to social acceptance issues. The following observations should be taken care : 1-Structure design to suit the architecture plans, soil test reports of the project & meet all SBC requirement regarding such seismic and wind loads, which is again subject to approval of local consultant approved by MOMRA & MOH (for MOH Projects). Design methodology presented in HBRC acceptance criteria Report "attached" must be taken in consideration during design phase. 2-Any welding related to structural integrity shall be certified by a third party. 3-GRC panels with insulation core will only be accepted when offer integrity to the surfaces of panels including support required (without special methods) for hanging items kitchen cabinets, wash basin, water heaters, A/C units, shelves, TV etc.,. 4-Method of connection and grouting (if any) between all the construction elements (walls, slabs, stairs...etc) in order to ensure structural, thermal and ingress protections shall be reviewed with the supervision consultants. 5- Method of connecting different MEP embedded services between two modules / panels, it's continuity and durability to be clarified. This is applicable for all wet and electrical services 6- The concealed MEP services (If not embedded at the factory) - How these will be embedded at site? Method to be agreed with the consultant including repair. 7- Fire rating , thermal insulation & acoustic insulation subject to design to meet SBC & other concerning authorities requirements. 8-Fire rating test reports complete with smoke emission classification shall be submitted, demonstrating its compliance with SBC, NFPA and Civil Defense requirements. 9- Wet areas & roof waterproofing requirements shall be clarified and approved by the specialist. 10- The above comments shall be addressed and approved by the consultant, prior to commencement of construction.				
Disclaimers 1. The above review is limited to technical aspects of the proposed technology only (Phase:1) which doesn't release the company from complying with the requirements of the local authorities having jurisdiction. 2. The capabilities of the company shall be demonstrated in the next phase to BTI team once technical review is complete and the team agreed to proceed to next phase (Phase: 2). 3. The proposed technology, it's specific assembly for the agreed housing products and materials used etc., are subject to approval of the authorized third party consultant who will be appointed by the developer during design and supervision phases of the project (Phase:3).				

6. Has any government project been implemented within Saudi Arabia using this system ?

- Centers for Guiding Lost Pilgrims
Ministry of Hajj 1998
- Military Barracks - National Guard 1997
- Al-Huda Beach 2003



Certificates & Patents



International and local certificates and patents



1. WO/2023/284931 FIBRE RODS AS AN ALTERNATIVE TO IRON REBAR AND WHICH CAN BE SHAPED AND STRENGTHENED ONSITE USING MANUAL EQUIPMENT WO - 19.01.2023

Int.Class B32B 5/02 **Appl.No** PCT/EG2022/000026
Applicant TURK, Ragai, Mahmoud, Madbouly
Inventor TURK, Ragai, Mahmoud, Madbouly

Disclosed is a rod that is an alternative to iron rebar and is made from alkali-resistant silica fibre, basalt fibre and other additives. The rod can be bent, shaped and strengthened onsite using manual tools, to obtain the required reinforcement for concrete buildings under international building codes. The rod can withstand three times the tensile stress of iron and has a high flexibility coefficient and high shear strength. The rod is joined and bonded in the cement mixture by means of chemical bonding resulting from molecular exchange, thereby providing high-strength concrete, and is corrosion resistant, thereby providing durable concrete. Where there is risk of fire, the rod prevents concrete bond failure because it does not expand with heat. The rod has one third of the weight of iron and therefore provides savings in relation to the building foundations. The construction pollution resulting from the manufacture of the rod is 80% less than that resulting from iron rebar production, and the low cost of the raw material and manufacturing of the rod saves money in comparison with that of iron.



2. WO/2023/193871 COMPOSITION OF FIBRE-REINFORCED CONCRETE ENHANCED WITH SILICA SAND FOR COVERING METAL SECTIONS IN METAL STRUCTURES WO - 12.10.2023

Int.Class E04D 1/16 **Appl.No** PCT/EG2023/000005
Applicant TURK, Ragai, Mahmoud, Madbouly
Inventor TURK, Ragai, Mahmoud, Madbouly

The subject matter of the present invention relates to a composition of fibre-reinforced concrete enhanced with silica sand for covering metal sections in metal structures by covering beams, angles and plates with a layer of fibre-reinforced enhanced concrete, wherein the covering mixture consists of: ordinary quick-setting Portland cement, silica sand, water, fibre (chopped strands), fibre mesh (woven), longitudinal twisted strand fibre, a polymer, a super plasticizer, silica fume (microsilica) and polyvinyl acetate, and wherein the covered metal sections are assembled together by means of welded mounting plates at the ends of the sections.

International and local certificates and patents



3. WO/2023/198262 HOLLOW ROOF WO - 19.10.2023
SLAB MADE OF PRE-CAST PRE-TENSIONED CONCRETE ENHANCED WITH SILICA SAND AND FIBRE BUT WITHOUT REBAR

Int.Class C04B 38/08  **Appl.No** PCT/EG2023/000006
Applicant TURK, Ragai, Mahmoud, Madbouly
Inventor TURK, Ragai, Mahmoud, Madbouly

The subject matter of the present invention relates to a modular hollow core roof slab made of pre-cast pre-tensioned concrete enhanced with silica sand and fibre but without rebar. The roof slab contains ordinary Portland cement, silica sand, water, zirconium dioxide-containing fibre, polyvinyl alcohol, a super plasticizer, silica fume (microsilica) and polyvinyl acetate, wherein the size of the roof slabs, cast in a modular grid form, is increased from 60 cm to 120 cm in width and the slabs are reinforced with fibre in three directions, a pre-cast roof slab being mounted mechanically on conventional concrete or metal building beams after the structural framework of the building has been established from foundations and columns.

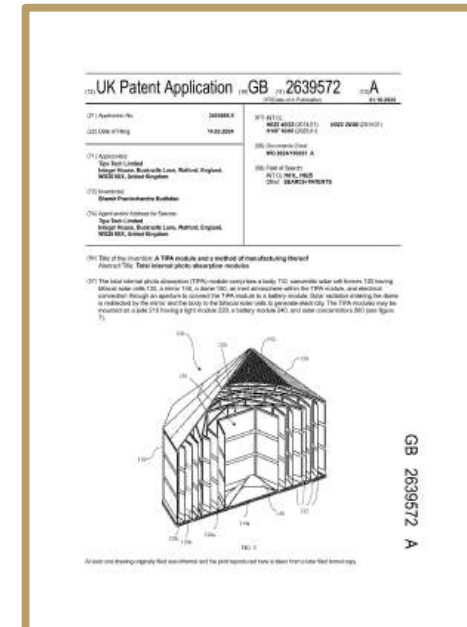


4. 28669 THE SAFE OVAL CHAIR EG - 19.02.2018
FOR THE AIRPLANE WHICH TURNS TO A CLOSED CAPSULE THAT LANDING SAFELY WITH THE PASSENGER AT SEA OR LAND ON EXPLOSION OR CRASH

Int.Class A61G 7/10  **Appl.No** P/2011/0273
Applicant رجاى محمود مديولى تركه
Inventor رجاى محمود مديولى تركه

SAFE OVAL CHAIR FOR THE AIRPLANE WHICH TURNS TO A CAPSULE ONCE PLAN GOES ON EXPLOSION OR CRASH CAPSULE MADE FROM FIVE TYPES OF MATERIALS INCLUDE THREE TYPES OF FIBERS WHICH PROTECT THE PASSENGERS FROM FIRE AND EXPLOSION PRESSURE .THE CAPSULE MOVE SLIGHTLY INSIDE RAILWAY GROVES . WHEN THE DOOR OPEN , CAPSULES WILL SLIDE OUTSIDE BY THE EFFECT OF THE AIR SUCTION. ON EXPLOSION CAPSULES WILL SPREADING IN THE AIR AND A PARACHUTE WILL OPEN FOR SAFE LANDING , AND DURING HITTING THE WATER A FLOATER IS OPEN TO MAINTAIN FLOATING . THE CAPSULE IS CONTAINING A FIRST AID KIT, SURVIVAL KIT, COMMUNICATION AND SOS DEVICES , AND A GUIDE MONITOR .

International and local certificates and patents



ISO Certification



Local Patents



وزارة الدولة لشئون البحث العلمي
Ministry of State for Scientific Research



وزارة الدولة لشئون البحث العلمي
Ministry of State for Scientific Research

Local Accreditation Certificates

National Housing and Building Research Center of the Arab Republic of Egypt

REQUEST NO.: 2717
CUSTOMER CODE: ASH
Version No.: (1)
Release Date: 29/3/2022

المركز القومي لدراسة الإسكان والبناء
معهد بحوث المنشآت الخرسانية
معمل اختبار المنشآت الخرسانية

5.2 Ultimate load

Table (1) shows the maximum total load reached. Equivalent distributed load for 600 mm width (KN/m) and the corresponding central deflection of the tested specimen.

Specimen No.	Max. Load (kN)	Equivalent distributed load for 600 mm width (kN/m)	Corresponding Central Deflection (mm)
31	67.79	18.32	93.22

5.3 Load deflection relationships:

Figures (5) and (6) show the load deflection relationships of the tested specimen.

Figure (5) Load-deflection relationship for specimen at mid span

ThermalLab
Building Physics Institute (BPI)
Housing & Building National Research Center (HBRC)

Company Name: Arabian Const. House for Prefab. Building
Testing Name: Thermal Transmittance
Sample Code: BPV711/104
Delivery Date: 03/09/2017

Material Type: Glass fibre reinforced concrete panel
Delivery No.: 0161806
Testing Date: 19-13/09/2017

THERMAL PERFORMANCE EVALUATION OF

Glass Fiber Reinforced Concrete Panel for

ARABIAN CONSTRUCTION HOUSE FOR PREFABRICATED BUILDING

Bader Industrial city 6th zone - no. 32
Cairo - EGYPT

Sep., 2017

1/8
P.O. BOX 1738
El-Dokki, El-Dokki, Cairo, Egypt

REQUEST NO.: 2717
CUSTOMER CODE: ASH
Version No.: (1)
Release Date: 29/3/2022

المركز القومي لدراسة الإسكان والبناء
معهد بحوث المنشآت الخرسانية
معمل اختبار المنشآت الخرسانية

Test Report of Hollow Core Slab

For Dar al Banaa for Green Prefab Building Company

Project: Geracia - Iraq

1. Introduction:

According to the request of "Dar al Banaa for Green Prefab Building" Company for testing hollow core slab received at 2-3-2022, the test was performed in Concrete Construction Testing Laboratory (CCTL) in Housing and Building National Research Centre, Egypt. The test results and observations are presented in the following sections. The test was performed on 9/3/2022.

2. General:

Request Number: 2717
Customer: Dar al Banaa for Green Prefab Building Company
Producer: Dar al Banaa for Green Prefab Building Company
Address: Bader industrial city - Cairo Suez road no.32, zone 6,
Email: info@acturk.com
Number of Samples: 1 Specimen.

3. Description of Specimen:

The specimen delivered by Dar al Banaa Company was a glass fiber reinforced concrete hollow core panel of length 4000 mm, width 600 mm and thickness 110 mm.

Local Accreditation Certificates

Ministry of Housing in the Kingdom of Saudi Arabia

Ministry of Housing
Land & Technical Affairs
وزارة الإسكان
وكالة الوزارة للأراضي والتقنية

BTS - Technical Review
Company Name - Manshar Al Tawheed (ST) International For Modern Industries Co.
Technology - Concrete panels reinforced with Glassfiber - Structural system consists of GRC panels with insulation core used as load bearing walls & slabs "TORQUE PANELS- Owned & produced by DAR AL-BENAA AL- ARABY"
Issue Date - 02 Feb 2020

#	Requirements	Availability Yes / No	Observations
1	Proposed Technology- Brief		
1.01	Company to provide data on the proposed technology with technical write up and/or A/V presentation	✓	
1.02	Is this technology proven elsewhere		Technology has been used in several countries
a. within KSA		✓	Completed and awarded orders by project factor
b. elsewhere in the world		✓	
1.03	List of projects by region shall be submitted with type and quantity of different prototypes	✓	
1.04	Is the technology used patented assembly or custom made assembly?	✓	
1.05	Is patented assembly for these patterns available for other (Government and private)?	✓	
1.06	Acoustic performance, Thermal performance, Seismic etc.,	✓	
1.07	Any other item which may illustrate on the proposed technology	✓	
2	Method of Construction		
2.01	Step by step method of construction from design, fabrication, handling, transportation, construction / assembly, completion, finish etc., to be clarified with a method statement	✓	
2.02	On-site or Off-site factory?	✓	
2.03	On-site, Space and other requirements within or nearby project?	✓	
2.04	Off-site, Location of off-site factory and type of fabrication / production at factory to be clarified	✓	
2.05	On-site and off-site works to be clarified	✓	
2.06	Logistics plan including type of modules, its size, handling at site factory & at site, transportation etc., to be clarified	✓	
2.07	List of dependencies from outside KSA such as materials, formwork, machinery or any special materials etc., to be clarified	✓	
2.08	Submit drawings / sketches showing cross section of the proposed assembly with all dimensions and its specifications	✓	
2.09	Clarify on the dimension type and its assembly / joint etc.,	✓	
2.10	Clarify on the method of assembly, joint and statement for finishes, fire, impact and acoustic performance	✓	

Ministry of Housing
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وكالة الوزارة للأراضي والتقنية

BTS - Technical Review
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Issue Date - 02 Feb 2020

#	Requirements	Availability Yes / No	Observations
3	Compliance of the proposed technology		
3.01	Is this technology approved under KSA? If yes, list those governmental agencies	✓	
3.02	Is this technology approved under Middle East? If yes, list those governmental agencies, countries and independent third parties	✓	
3.03	Is this technology approved elsewhere in the world? If yes, list those governmental agencies, countries and independent third parties	✓	
3.04	Is this technology compliant with Saudi Building Code?	✓	
a. If Yes, please demonstrate its extent of compliance		✓	
b. If No, what is the proposed method to get it complied?		✓	
3.05	Is this technology compliant with KSA Civil Defense requirements?	✓	
a. If Yes, please demonstrate its extent of compliance		✓	
b. If No, what is the proposed method to get it complied?		✓	
3.06	List of international codes and extent of compliance	✓	
4	List of material and its code compliance		
4.01	List of materials used to be clarified - Concrete, Steel, Polystyrene, Fiberglass etc.,	✓	
4.02	Specification of the individual material to be confirmed with its code compliance test by KSA	✓	
5	Particular requirements		
5.01	Structural analysis & calculation show of the proposed assembly for various prototypes such as Villas (2 1/2 Story), Townhouses (2 1/2 Story) and Apartment/ G+3 story buildings to be clarified	✓	Calculation done for a villa model of 4 stories
5.02	Technical limitations of the technologies, if any, to be clarified, such as number of stories, size of modules etc.,	✓	
5.03	What is the tested fire rating of the wall and slab? Please provide with details of assembly and certifications	✓	
5.04	What is the tested thermal insulation of the wall and slab? Please provide with details of assembly and certifications	✓	
5.05	What is the tested acoustic insulation of the wall and slab? Please provide with details of assembly and certifications	✓	
5.06	Any tests on seismic done? If yes, please share those details	✓	
5.07	Is the slab or wall assembly tested for up, side opening or clear etc.,	✓	
5.08	If yes, should the customer contact you or anyone can contact modification?	✓	
5.09	If anyone concerned, what are the procedures to be taken?	✓	
5.10	What is the warranty for the structure and the year warranty for MEP Works will be supported by the company from KSA, as per the requirements of the authority having jurisdiction?	✓	Company shall offer including company guarantee the safety of the building and structure for at least 20 years

Ministry of Housing
Land & Technical Affairs
وزارة الإسكان
وكالة الوزارة للأراضي والتقنية

BTS - Technical Review
Company Name - Manshar Al Tawheed (ST) International For Modern Industries Co.
Technology - Concrete panels reinforced with Glassfiber - Structural system consists of GRC panels with insulation core used as load bearing walls & slabs "TORQUE PANELS- Owned & produced by DAR AL-BENAA AL- ARABY"
Issue Date - 02 Feb 2020

#	Requirements	Availability Yes / No	Observations
6	Recommendation		
6.01	No objection to the proposed Technology "Concrete panels reinforced with Glassfiber" - Structural system consists of GRC panels with insulation core used as load bearing walls & slabs "TORQUE PANELS- Owned & produced by DAR AL-BENAA AL- ARABY" for up to two-story residential units only. Subject to approval by the Approved Consultant as per SBC, Mock-up and Testing for Structural Integrity, Durability, Fire rating, Acoustic rating and Thermal insulation (without thermal bridging noted)		
6.02	We MOH reserve the rights to reject this method of construction irrespective of the above results from the mock-up due to social acceptance issues.		
6.03	The following observations should be taken care : 1- Structure design to suit the architecture plans, soil test reports of the project & meet all SBC requirement regarding such seismic and wind loads, which is again subject to approval of local consultant approved by MOMRA & MOH (for MOH Projects), Design methodology presented in HBRC acceptance criteria Report "attached" must be taken in consideration during design phase. 2- Any welding related to structural integrity shall be certified by a third party. 3- GRC panels with insulation core will only be accepted when offer integrity to the surfaces of panels including support required (without special methods) for hanging items kitchen cabinets, wash basin, water heaters, A/C units, shelves, TV etc., 4- Method of connection and grouting (if any) between all the construction elements (walls, slabs, stairs, etc) in order to ensure structural, thermal and ingress protection shall be reviewed with the supervision consultants. 5- Method of connecting different MEP embedded services between two modules / panels, it's continuity and durability to be clarified. This is applicable for all wet and electrical services 6- The concealed MEP services (if not embedded at the factory) - How these will be embedded at site? Method to be agreed with the consultant including repair. 7- Fire rating, thermal insulation & acoustic insulation subject to design to meet SBC & other concerning authorities requirements. 8- Fire rating test reports complete with smoke emission classification shall be submitted, demonstrating its compliance with SBC, NFPA and Civil Defense requirements. 9- Wet areas & roof waterproofing requirements shall be clarified and approved by the specialist. 10- The above comments shall be addressed and approved by the consultant, prior to commencement of construction.		
7	Disclaimers		
7.01	The above review is limited to technical aspects of the proposed technology only (Phase 1) which doesn't release the company from complying with the requirements of the local authorities having jurisdiction.		
7.02	The capabilities of the company shall be demonstrated in the next phase to BTS once technical review is complete and the team agreed to proceed to next phase Phase 2.		
7.03	The proposed technology, it's specific assembly for the agreed housing products and materials used etc., are subject to approval of the authorized third party consultant who will be appointed by the developer during design and supervision phases of the project (Phase 3).		

Construction Laboratories - in the Kingdom of Saudi Arabia



CREATIVE GEOTECHNICAL LAB

شركة المبدعون الجيوتقنية المخبرات
CREATIVE GEOTECHNICAL LABORATORY
JALALIYAH HAYATUNNABAH AL-SAYED ST., 1ST FLOOR, 1ST STAGE, AL-SAYED ST., JALALIYAH STAGE
P.O. BOX 333333, ADDIS ABABA, ETHIOPIA
E-MAIL: INFO@CGL.LB

Sound Transmission Test

TEST REF: ASTM E 336

Project:	Sales Center Building for the Murug Jeddah Project	Date:	3-May-2025
Client:	Union of Consultants & Arabtec Construction House	REF No.	
Location:	Nakla Al Sham Road, Jeddah, Kingdom of Saudi Arabia	EQTEC USE	

Description	Room, surrounded by Hollow Core Wall
Room Dimension	3.55 m x 2.15 m
Equipment Used	Sound Level Meter

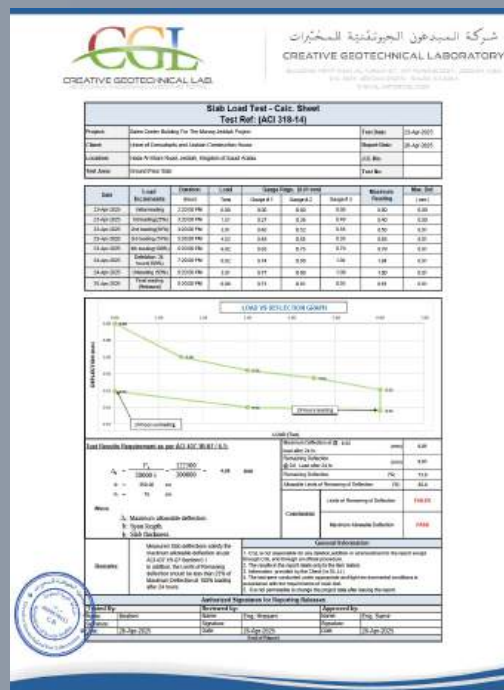
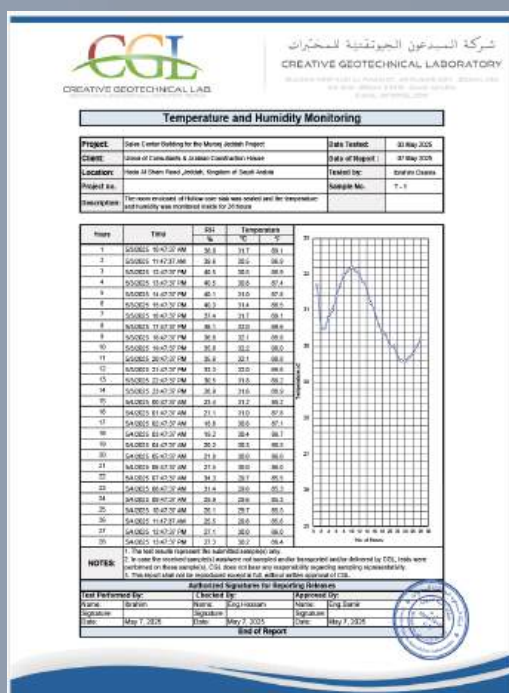
No	Description	Result (dB)
1	Door open with loudspeaker	88.1
2	Door closed with loudspeaker	105.3
3	Door closed without loudspeaker	Low, 60.0
4	Door open without loudspeaker	43.9

Authorized Signatures for Reporting Releases

Performed By:	Checked By:	Approved By:
Name: Ibrahim	Name: Eng. Hussam	Name: Eng. Sameh
Signature	Signature	Signature
Date: May 3, 2025	Date: May 3, 2025	Date: May 3, 2025

End of Report

Construction Laboratories - in the Kingdom of Saudi Arabia





Arcadia

is a leading company specializing in infrastructure development, project management, and investment facilitation.

Through strong international partnerships and exclusive global agencies, we offer comprehensive solutions in the construction, energy, and infrastructure sectors.

With our commitment to innovation, sustainability, and engineering excellence, Arcadia manages and delivers high-quality projects that meet international standards.

Our mission is to connect global expertise with local opportunities, building solid foundations for growth and development, and creating sustainable value across various sectors.



OUR SERVICES

1.

CONSTRUCTURE

Delivering high-quality residential commercial, and industrial projects with precision and efficiency

2.

INFRASTRUCRE

Developing strong and sustainable foundations through roadworks utilities, and essential public service

3.

MEP

Offering complete Mechanical, Electrical, and Plumbing solutions that ensure functionalit safety, and efficiency in every project

4.

TRADING

Supplying reliable construction materials related to our vendors and sister companies and equipment to meet diverse project requirements

Core Values

HONESTY AND INTEGRITY

We uphold commitment to integral and distinctive dealings toward our clients, partners, and company personnel as well as working together in pursuit of achieving the vision and mission of our organization.

ACCOUNTABILITY

We take conscientious actions as an organization in conformity to time and requirements in carrying out and accomplishing our projects.

EXCELLENCE AND COMPETENCY

We are result oriented and we strive hard to do and achieve the highest quality project and services.

TIME

Armed with capable staff and equipped with modern Computer Aided Design (CAD) system and drafting equipments for accurate and quick preparation and review design EmcoTech take the significance and strict observance of time in meeting deadlines for both preparation and execution of projects.

COMPETITIVE QUALITY

Exceeding the expectations of the community in the areas of our responsibility Clients are assured with competitive, innovative and total quality service and project packages.



OUR VENDORS



Revolutionising connectivity through advanced copper and fibre solutions (End To End Solution). Delivering reliable and future-ready infrastructure, leading innovation in data centres and FTTx networks.



OUR VENDORS

H3C

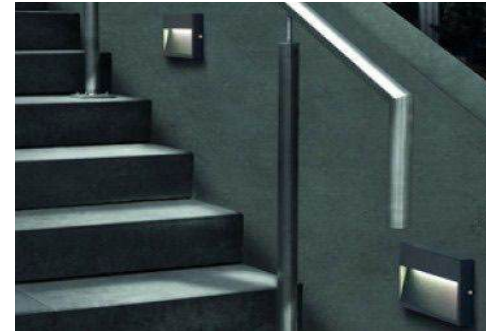
Global leader of Digital solutions. Dedicated to research & development, manufacturing, consultation, sales, and services of Digital solutions. We provide one-stop comprehensive Digital solutions covering Cloud Computing, Big Data, Interconnectivity and Security, and IT consultation services.



OUR VENDORS



Provider of complete professional lighting solutions for all project types. With expertise in designing and manufacturing fixtures, we create tailored solutions that connect people through light, while keeping pace with the latest innovations in lighting technology.



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A certified manufacturer of electrical distribution panels in partnership with Schneider Electric, providing safe, efficient, and durable solutions for residential, commercial, and industrial sectors with the highest international quality standards.



OUR VENDORS



An Egyptian joint stock company specialising in the manufacture of electrical pipes, hoses, and accessories, delivering high-quality products that meet international standards for the electrical industry.



Our Clients



Contracting Companies



Museums, Hotels and Clubs



Engineering Consulting Offices



Ministries and Authorities





Contracting Companies





Museums, Hotels and Clubs





Engineering Consulting Offices





Ministries and Authorities



Projects Around The World



Business Regions

35 + Years of experience

18+ Countries & Regions

3260 + Projects

No.1 Market Share 20 Consecutive
Years in Fiber-reinforced concrete

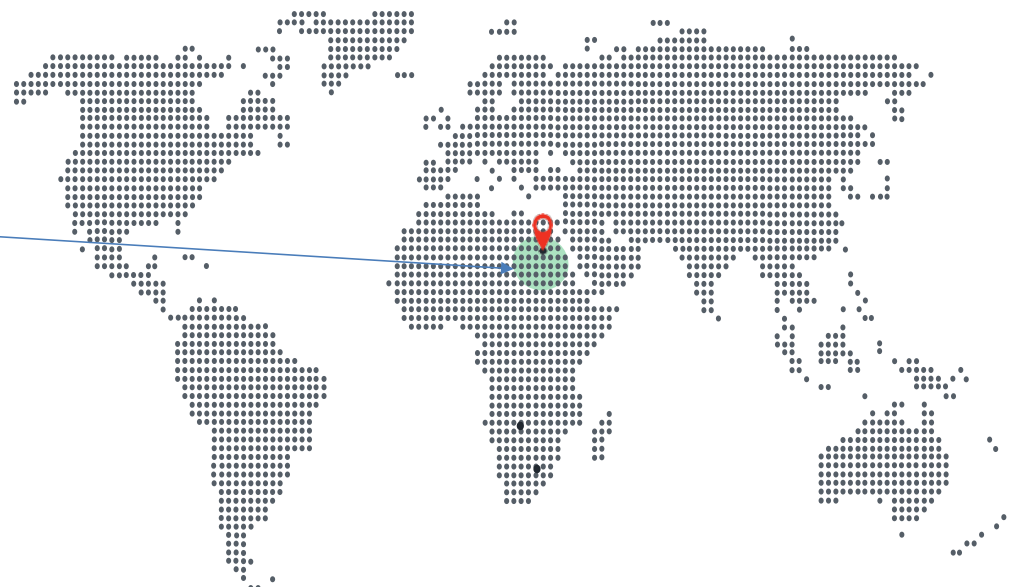


Some of Our projects implemented





Egypt



35 + Years of experience

1269 + Projects

No.1 Market Share 20 Consecutive Years in
Fiber-reinforced concrete



HOTELS & RESORTS\$

- SOFITEL HOTEL & CASSINO - (BMS for HVAC, Cold stores, Lighting, & FF)
- SHERATON CAIRO - Installation of Boiler Room (2 Boilers each 1 Ton Steam)
- HURGHADA MARRIOT - BMS for HVAC system
- LE MERIDIAN HOLIPLIES - BMS for hot water system
- CROWN PLAZA SHARM - Steam plant & Kitchen equipment (2 Boilers 1 Ton each)
- HOLIDAY INN SHARM - Supply & Install for hot water Boiler (1 Ton Steam)
- HAUZA BEACH SHARM - HVAC System (200 Ton Chilled water system & 350 DX concealed units)
- Grand ROTANA SHARM - Steam network Installation for kitchen & Laundry.
- SUN RISE HURGHADA - BMS for HVAC system
- INTERNCONTINTAL SHARM - Steam network Installation
- HILTON-Dream Land-6th of October - Fire fighting system
- 3 Corners Hotels-El Goanna - Energy Auditing
- SHAHRAZAD HOTEL - Smoke Management system, Pressurization system
- La Gouna Bay-Ain Sokhna - Air conditioning system renovation

Cairo Airport Parking

- Fire fighting system (Supply & Install)
- Fire alarm system (Supply & Install)

Cairo Logistic Center – Cargo Cairo Airport

- Plumbing Network (Supply & Install)
- Fire Fighting Network (Supply & Install)
- Chilled water System with total 300 TR (Supply & Install)
- Light Current system (Supply & Install)

The primary HubEgyptAir-CairoAirport

- Fiber Optics Solution



New Alamein Towers

Ceiling and beam installation

Location	New Alamein, EGY
Main Contractor	Dar El Bena
Client	Egy Gov.
Consultant	ECG
Scope of Work	Ceiling & Beam
Capacity M2	12,377 M2
Amount	43,319,500 EGY
Project Status	Done - 2016



Attorney General's building

Facades + Fiber Concrete Structure

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Egy Gov.
Consultant	ECG
Scope of Work	concrete structure
Capacity M2	8,799 M2
Amount	30,796,500 EGY
Project Status	Done - 2014



Al-Nabila Village

Complete Building

Location	Hurghada , EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	SABBOUR
Scope of Work	Residential Complex
Capacity M2	14,227 M2
Amount	49,794,500 EGY
Project Status	Done - 2012



Egyptian Museum, Tahrir Square

Annex Building

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Ministry of Tourism
Consultant	E.C.G
Scope of Work	concrete structure
Capacity M2	19,477 M2
Amount	87,646,500 EGY
Project Status	Done -2009



Sharm El Sheikh Museum

Annex Building - Mummy Floor

Location	Sharm El Sheikh , EGY
Main Contractor	Dar El Bena
Client	Ministry of Tourism
Consultant	ECG
Scope of Work	Mummy Floor
Capacity M2	2,355 M2
Amount	18,840,000 EGY
Project Status	Done - 2015



Jolie Ville Hotel

Facades + Fiber Concrete Structure

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	ADEC
Scope of Work	concrete structure
Capacity M2	22,433 M2
Amount	100,948,500 EGY
Project Status	Done - 2018



Shatby Restaurant Complex

Facades + Fiber Concrete Structure

Location	Alex , EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	CEC
Scope of Work	concrete structure
Capacity M2	4,680 M2
Amount	18,720,000 EGY
Project Status	Done - 2009



Saraya Hotel and Casino

Facades + Fiber Concrete Structure

Location	Alex , EGY
Main Contractor	Dar El Bena
Client	Egy Army
Consultant	Engineering Authority
Scope of Work	concrete structure
Capacity M2	17,639 M2
Amount	61,736,500 EGY
Project Status	Done - 2022



German University

Facades + Fiber Concrete Structure

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Ministry of Higher Education
Consultant	ADEC
Scope of Work	Laboratory building
Capacity M2	9,311 M2
Amount	32,588,500 EGY
Project Status	Done - 2016



Cairo University, 6th of October

Central Laboratories Building

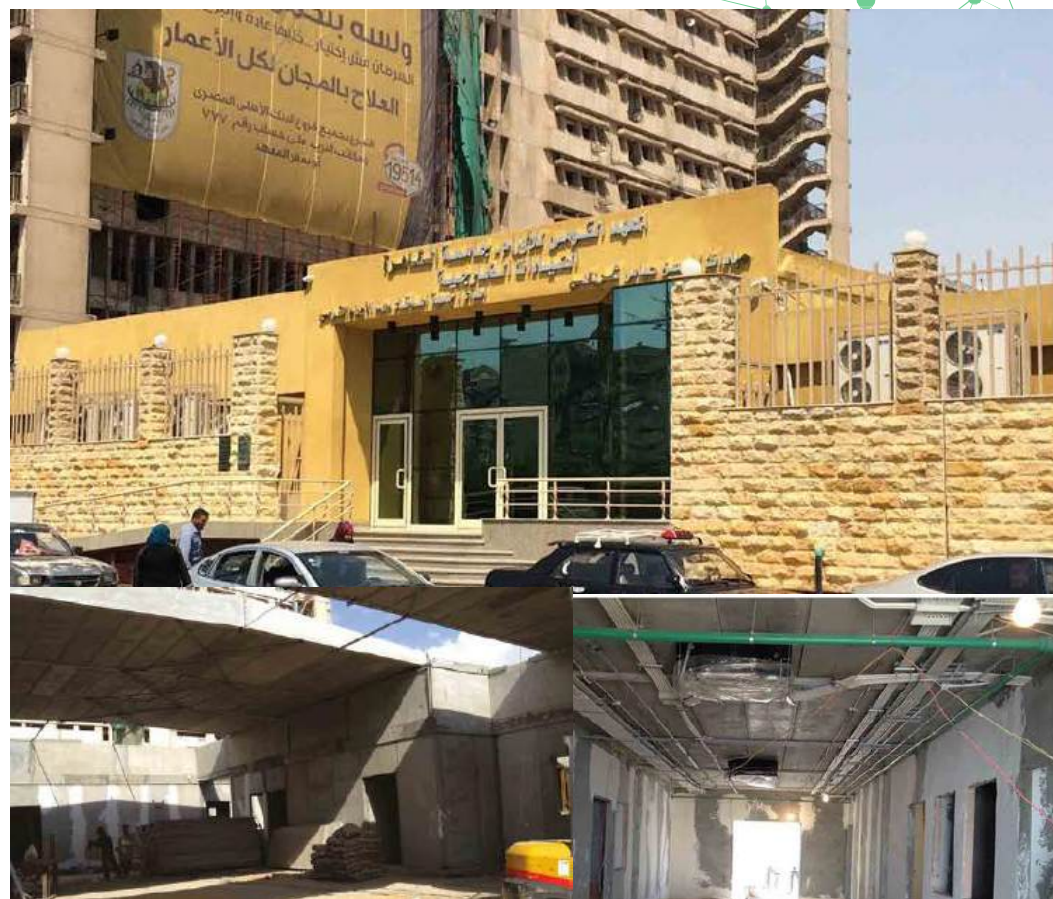
Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Ministry of Higher Education
Consultant	ECG
Scope of Work	Laboratories Building
Capacity M2	6,488 M2
Amount	29,196,000 EGY
Project Status	Done - 2019



Cancer Institute

Outpatient Clinics Building

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Ministry of Health
Consultant	ECG
Scope of Work	Outpatient Building
Capacity M2	18,425 M2
Amount	82,912,500 EGY
Project Status	Done - 2010



Playa Resort North Coas

Facades + Fiber Concrete Structure

Location	North Coas, EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	SERYY
Scope of Work	concrete structure
Capacity M2	28,485 M2
Amount	142,425,000 EGY
Project Status	Done - 2022



Judges Club building

Adding two floors to a historic building

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Ministry of Justice
Consultant	ADEC
Scope of Work	two floors
Capacity M2	3,688 M2
Amount	16,596,000 EGY
Project Status	Done - 2012



Radisson Blu Hotel

Adding 3 floors Facades + Fiber Concrete Structure

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	EL GABALY
Scope of Work	Adding 3 floors
Capacity M2	3,465 M2
Amount	15,592,500 EGY
Project Status	Done - 2018



Sonesta Hotel

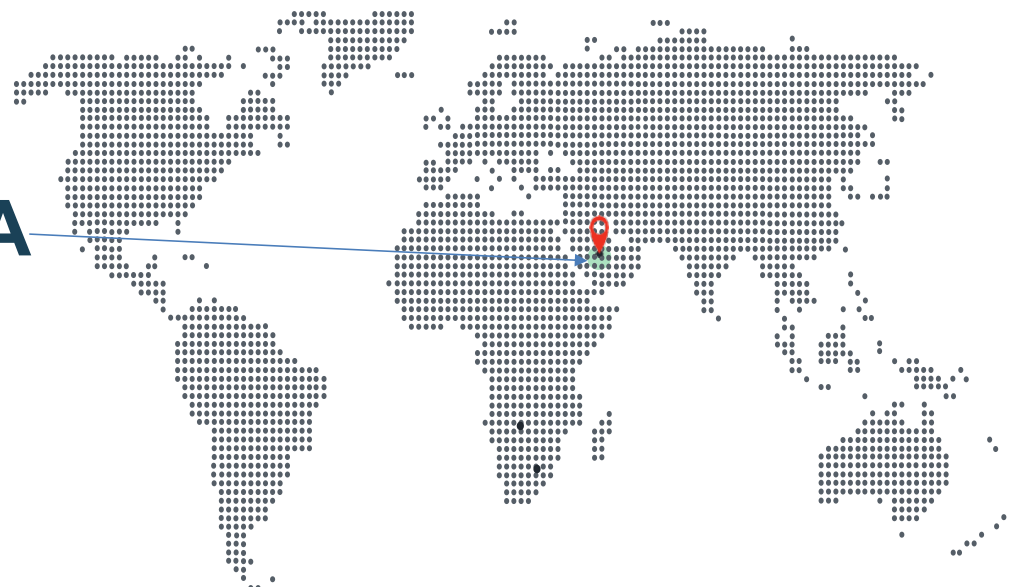
Adding 4 floors Facades + Fiber Concrete Structure

Location	Cairo , EGY
Main Contractor	Dar El Bena
Client	Private
Consultant	EL GABALY
Scope of Work	Adding 4 floors
Capacity M2	5,344 M2
Amount	24,048,000 EGY
Project Status	Done - 2020





SAUDI ARABIA



35 + Years of experience

18+ Projects

No.1 Market Share 20 Consecutive Years in
Fiber-reinforced concrete

Murooj Jeddah

2 floors Facades + Fiber Concrete Structure

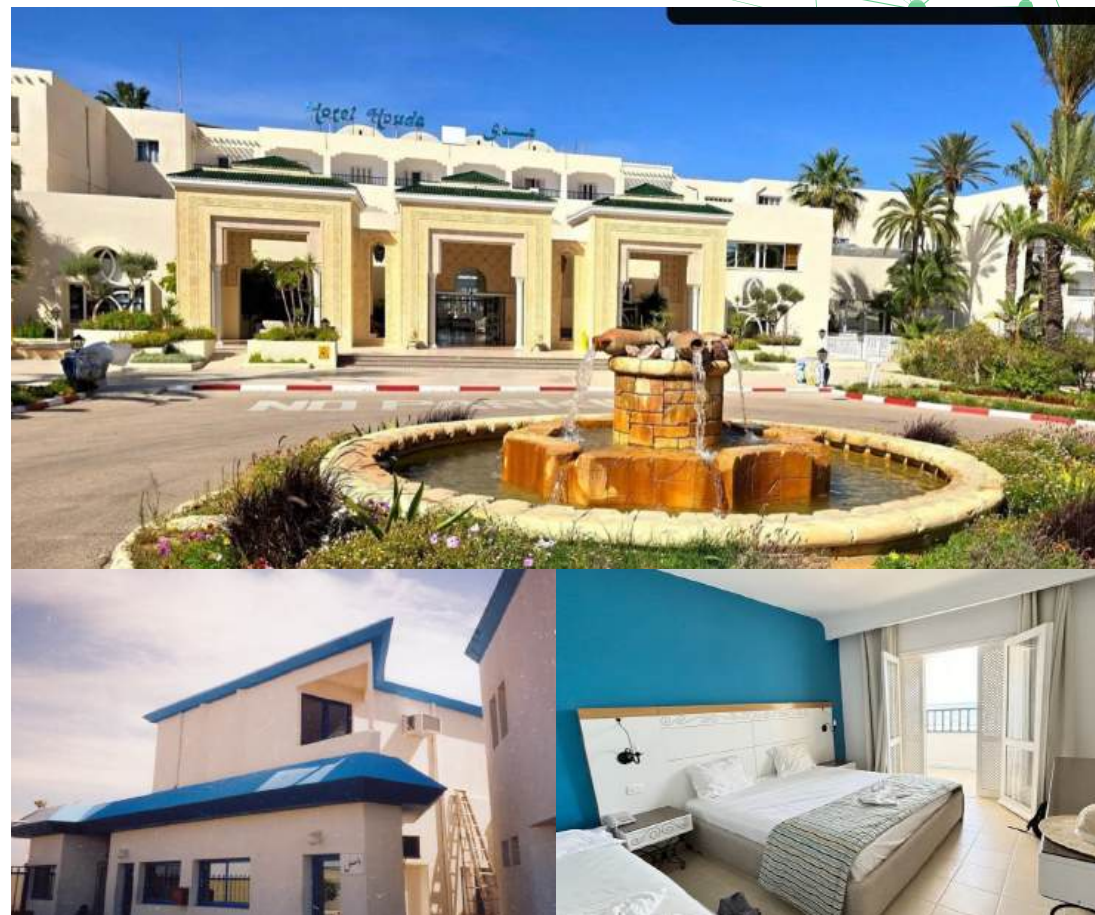
Location	Jeddah , SA
Main Contractor	Consultants Union
Client	SUMOU
Consultant	Muharram Bakhum
Scope of Work	2 Floor Building
Capacity M2	2,040 M2
Amount	9,180,000 SR
Project Status	Done - 2025



Al Huda Beach Resort

Administrative building and villas

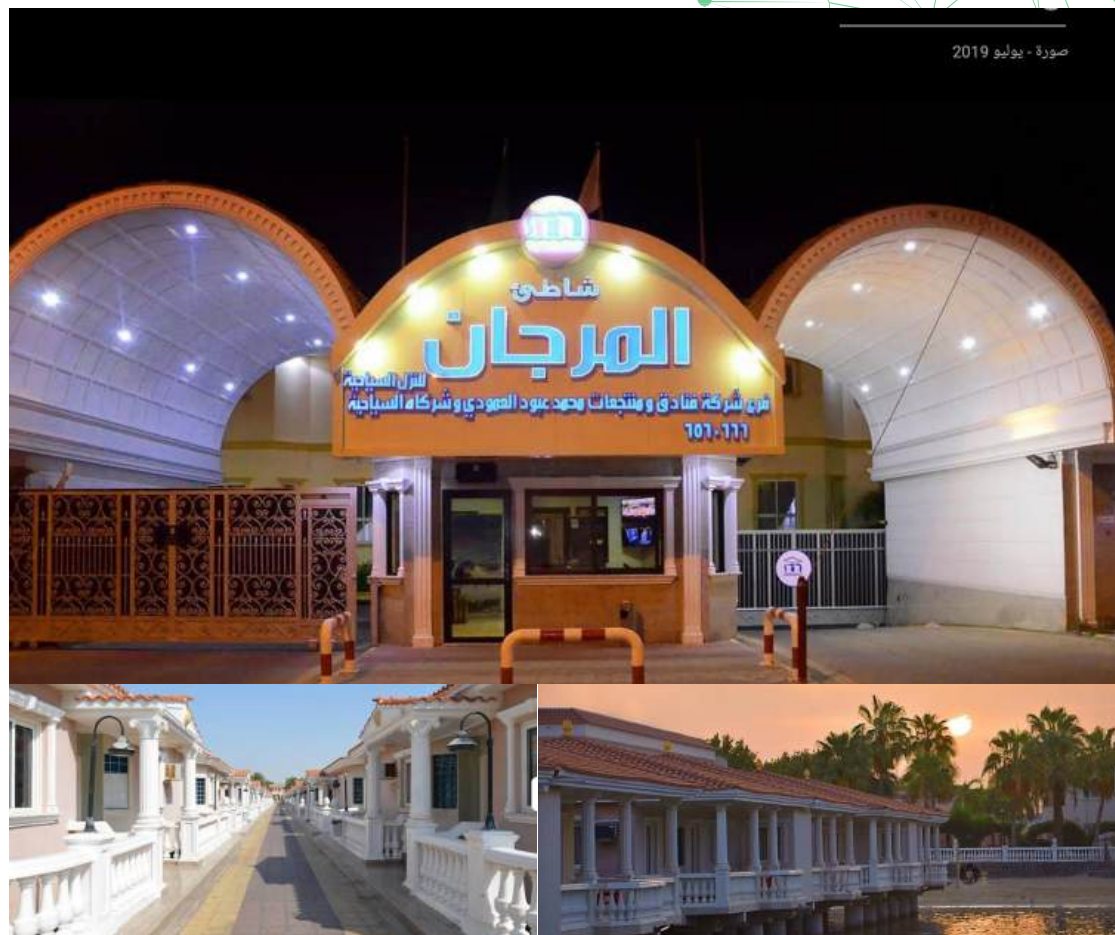
Location	Jeddah , SA
Main Contractor	Al Hani Co.
Client	Private
Consultant	Al Farsi
Scope of Work	concrete structure
Capacity M2	5,322 M2
Amount	7,980,000 SR
Project Status	Done - 1996



Al Murjaan Beach Resort

16 villas

Location	Jeddah , SA
Main Contractor	Al Naghi Co.
Client	Private
Consultant	Al Farsi
Scope of Work	concrete structure
Capacity M2	2,944 M2
Amount	5,299,200 SR
Project Status	Done - 1994



Al Waseema Beauty Center

3 floors Facades + Fiber Concrete Structure

Location	Jeddah , SA
Main Contractor	Al Hani Co.
Client	Private
Consultant	Al Jamjoom
Scope of Work	concrete structure
Capacity M2	2,110 M2
Amount	3,798,000 SR
Project Status	Done - 1994



Military barracks

Administrative and residential buildings

Location	Jeddah , SA
Main Contractor	Al Hani Co.
Client	National Guard
Consultant	Al Jamjom
Scope of Work	concrete structure
Capacity M2	3,166 M2
Amount	5,698,800 SR
Project Status	Done - 1995



Ministry of Hajj

Hospital + 12 Hajj Guidance Centers

Location	Jeddah , SA
Main Contractor	Al Hani Co.
Client	Ministry of Hajj
Consultant	Al Jamjom
Scope of Work	concrete structure
Capacity M2	2,400 M2
Amount	4,320,000 SR
Project Status	Done - 1993





JORDAN

35 + Years of experience

8+ Projects

No.1 Market Share 20 Consecutive Years in
Fiber-reinforced concrete



Private residentia

1 floors Facades + Fiber Concrete Structure

Location	Amman , Jordan
Main Contractor	Manar Co.
Client	Private
Consultant	Manar Co
Scope of Work	concrete structure
Capacity M2	755 M2
Amount	188,750 US Dollar
Project Status	Done - 2014



Private Residential

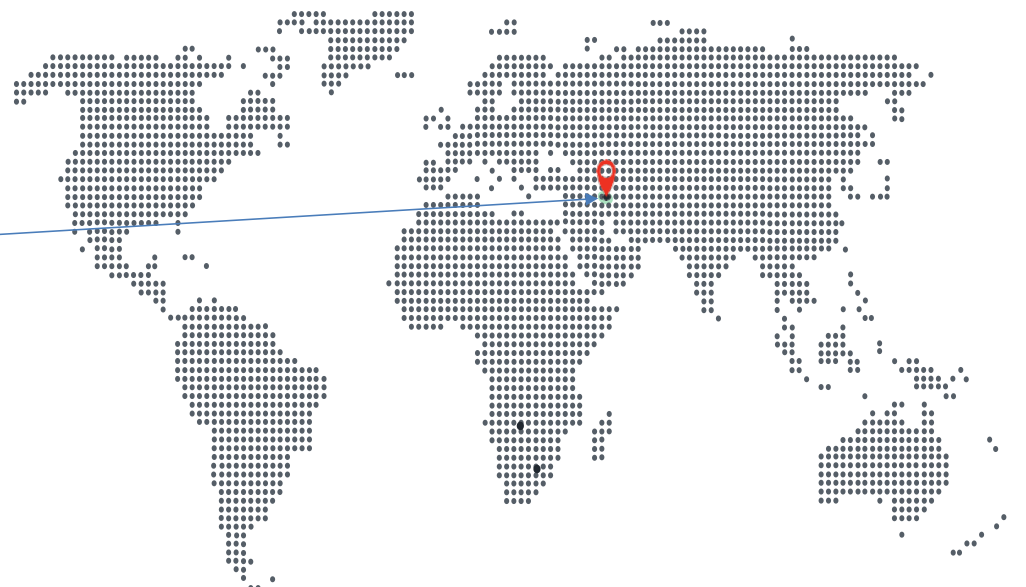
2 floors residential villa complex

Location	Amman , Jordan
Main Contractor	Manar Co.
Client	Private
Consultant	Manar Co
Scope of Work	12 Villa
Capacity M2	3,120 M2
Amount	780,000 US Dollar
Project Status	Done - 2016





IRAQ



35 + Years of experience

32 + Projects

No.1 Market Share 20 Consecutive Years in
Fiber-reinforced concrete

Private Residential Buildings

2 floors residential Buildings complex

Location	Al Basra , Iraq
Main Contractor	Al Nublaa Co.
Client	Private
Consultant	Ficon
Scope of Work	6 Buildings
Capacity M2	1,980 M2
Amount	792,000 US Dollar
Project Status	Done - 2015



Private Residential Buildings

2 floors residential Buildings complex

Location	Al Basra , Iraq
Main Contractor	Al Nublaa Co.
Client	Private
Consultant	Ficon
Scope of Work	60 Buildings
Capacity M2	14,400 M2
Amount	5,040,000 US Dollar
Project Status	Done - 2017





LIBIA



35 +

Years of experience

6 +

Projects

No.1

Market Share 20 Consecutive Years in
Fiber-reinforced concrete

Private Residential Buildings

4 floors residential Buildings Complex

Location	Tripoli , Libia
Main Contractor	Al Israa
Client	Libia Army
Consultant	Al Israa
Scope of Work	12 Buildings
Capacity M2	10,560 M2
Amount	4,224,000 US Dollar
Project Status	Done - 2017





OMAN

35 +

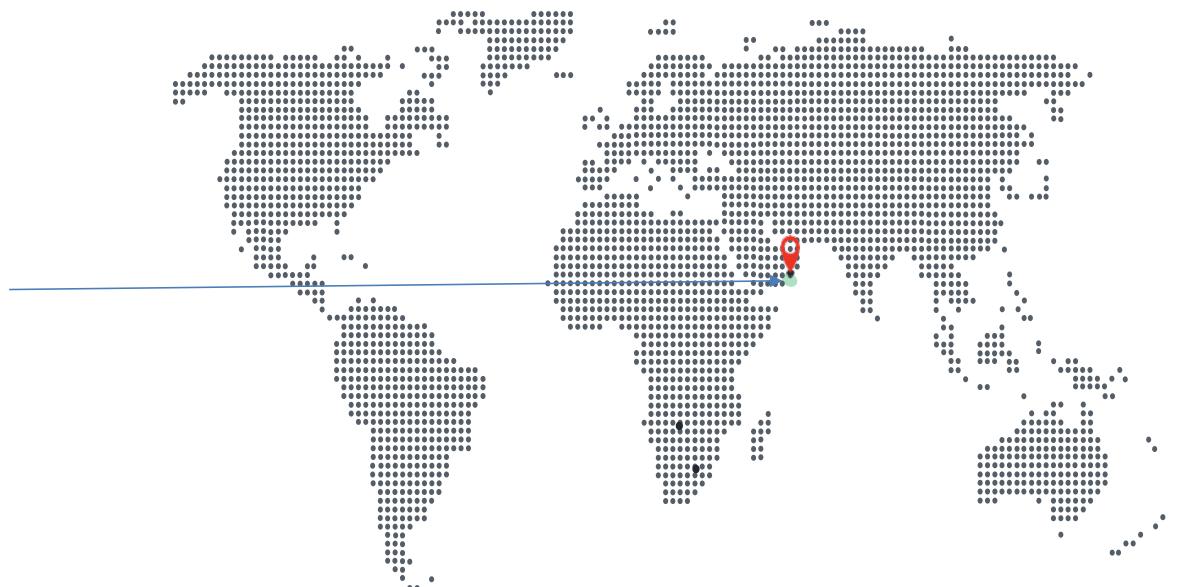
Years of experience

44 +

Projects

No.1

Market Share 20 Consecutive Years in
Fiber-reinforced concrete



Private Residential Villa

2 floors residential Villa

Location	Masqat, Oman
Main Contractor	Dar El Bena
Client	Prince Haitham
Consultant	Muscat Municipality
Scope of Work	Residential Villa
Capacity M2	1,650 M2
Amount	660,000 US Dollar
Project Status	Done - 2018



Private Residential Villa

Residential Villa Complex

Location	Masqat, Oman
Main Contractor	Dar El Bena
Client	Prince Haitham
Consultant	Muscat Municipality
Scope of Work	12 Residential Villa
Capacity M2	2,256 M2
Amount	902,400 US Dollar
Project Status	Done - 2017





QATAR



35 +

Years of experience

22 +

Projects

No.1

Market Share 20 Consecutive Years in
Fiber-reinforced concrete

Shopping Mall

Mall

Location	Doha , Qatar
Main Contractor	Dar El Bena
Client	Private
Consultant	Dar El Bena
Scope of Work	Mall
Capacity M2	6,430 M2
Amount	3,536,500 US Dollar
Project Status	Done - 2019



Private Residential Villa

Residential Villa Complex

Location	Doha , Qatar
Main Contractor	Dar El Benaar
Client	Private
Consultant	Dar El Benaar
Scope of Work	8 Residential Villa
Capacity M2	1,920 M2
Amount	960,000 US Dollar
Project Status	Done - 2020





NAMIBIA

35 +

Years of experience

3 +

Projects

No.1

Market Share 20 Consecutive Years in
Fiber-reinforced concrete



Residential Villa Complex

Villa Complex 2 floors

Location	Windhuk , Namibia
Main Contractor	Ministry of Transport
Client	Ministry of Transport
Consultant	Ministry of Transport
Scope of Work	22 Residential Villa
Capacity M2	5,390 M2
Amount	2,587,200 US Dollar
Project Status	Done - 2019



Some projects
under implementation



Benha University

4 Lecture halls

Location	Banha , Egypt
Main Contractor	Dar El Bena
Client	Ministry of Higher Education
Consultant	ADEC
Scope of Work	6 Lecture halls
Capacity M2	3,400 M2
Project Status	Under Construction

Egypt



Tourist Resort

Villa Resort

Location	North Coast , Egypt
Main Contractor	Dar El Bena
Client	Private
Consultant	SABBOUR
Scope of Work	55 Villa
Capacity M2	12,100 M2
Project Status	Under Construction

Egypt



Tourist Resort

Villa Resort

Location	Marsa Matrouh , Egypt
Main Contractor	Dar El Bena
Client	Private
Consultant	ADEC
Scope of Work	112 Villa
Capacity M2	120,096 M2
Project Status	Under Construction

Egypt

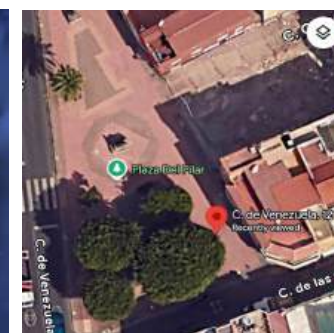


Residential Project

8 Repeated Buildings

Location	Canary, Spain
Main Contractor	Tomas Gunzalis
Client	Private
Consultant	Moralis
Scope of Work	8 Building 3 Floor
Capacity M2	15,360 M2
Project Status	Under Construction

CANARY ISLAND

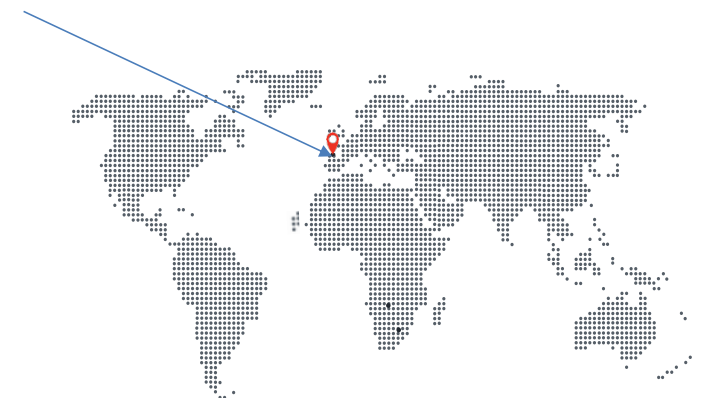


Residential Project

11 Buildings

Location	Canary, Spain
Main Contractor	Tomas Gunzalis
Client	Private
Consultant	Moralis
Scope of Work	11 Building 5 Floor
Capacity M2	30,250 M2
Project Status	Under Construction

SPAIN



Future projects 2026 - 2030 AD





SAUDI ARABIA

Makkah

Residential Project

Arim Makkah Complex

Location	Makkah , Saudia
Main Contractor	SUMO
Project	Residential Complex
Consultant	Moharam Bakhoun
Scope of Work	940 Residential Villa
Capacity M2	263,200 M2
Expected value	473,376,000 SAR
Project Start	Jun - 2026

Tabouk

Residential Project

Residential Green Complex

Location	Tabouk , Saudia
Main Contractor	Al Mehaileb
Project	Residential Green Complex
Consultant	Tabuk Municipality
Scope of Work	330 Residential Villa
Capacity M2	92,400 M2
Amount	166,320,000 SAR
Project Status	May - 2026

Tabouk

Renewable Energy Station

University of Tabuk Station

Location	Tabouk , Saudia
Main Contractor	University of Tabuk
Project	Energy Station
Consultant	University of Tabuk
Scope of Work	The first renewable energy plant in Saudia
Capacity M2	1,860 M2
Amount	8,500,000 SAR
Project Status	May - 2026



Egypt

North Coast

Residential Project

Residential Tower

Location	North Coast , Egypt
Main Contractor	Damac
Project	Residential Tower
Consultant	Moharam Bakhoun
Scope of Work	92 Floor
Capacity M2	62,560 M2
Expected value	344,080,000 EGY
Project Start	Oct - 2026



Spain

Valencia

Residential Project

Residential 11 Buildings

Location	Valencia , Spain
Main Contractor	Tomas Gunzalis
Project	Residential Green Complex
Consultant	Moralis
Scope of Work	11 Building 5 Floor
Capacity M2	30,250 M2
Expected value	15,125,000 US \$
Project Status	Nov - 2026



Panama

Tocumen

Construction of a Seaport

Tocumen Pacific Port

Location	Tocumen , Panama
Main Contractor	Maritime Authority
Project	Seaport
Consultant	Luis Alberto
Scope of Work	Tocumen Pacific Port 2600 hectare
Capacity M2	2,600 Ha
Expected value	5,244,366,000 \$
Project Status	Sep - 2026



To Start Agreement , Welcome to Contact Business Development Director
Mr. Ahmed Moustafa



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info@rebooztorquotech.com



2. Feasibility Study

We start with a detailed assessment of King Abdul Aziz School Complex, Crown Prince Salman Nature Preserve Retreats & Tabuk new manufacturing location of establishing 165 to 360 plant energy need and space.



3. Design & Engineering Phase

Our experts will collaborate closely with architects and engineers to ensure the system is seamlessly integrated into your the suggested infrastructure.



4. Installation & Commissioning

Our plug and play solutions can be up and running in 6 to 18 months (depending product implementation).

Next Steps

Thank You



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TECHNOLOGY