



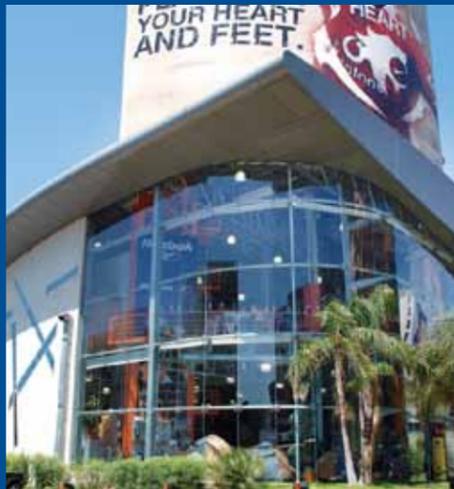
Horizontal  
Tempering  
Glass S.A.R.L.



## Horizontal Tempering Glass s.a.r.l.

Mkalles, Jisr El Bacha, Mar Elias Str., H.T.G. Building, Beirut, Lebanon  
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- Bullet Proof Glass ■ Stainless Steel Accessories & Hardware ■ Tempered Glass ■ Laminated Glass
- Double Glazing ■ Decorative Glass ■ Mirrors ■ Balcony Curtain System ■ Tempered Laminated Glass



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*"A satisfied customer is the best business strategy of all"*



## Introduction

HORIZONTAL TEMPERING GLASS is one of the leading glass processing factories operating in Lebanon and the MENA region.

Founded in 1995 the company has evolved from a small scale glass tempering plant to a leader in manufacturing and supplying superior quality of different glass products ranging from annealed, tempered, laminated, bullet proof and double glazed glass units.

### Primary Objectives:

-Improve production quality through strict devotion to international standards and quality control measures.

- Precise and quick delivery services.

- Sustain customer satisfaction, by providing good quality products and well managed customer services, through a qualified staff of professionally trained technicians, engineers and production control officers while abiding by the ISO 9001:2008 standards.

-Our team of engineers, production officers, department managers, operators and our top of the line equipments and machinery from major glass machines producers worldwide (Tamglass, Lisec...) favors accomplishments of all objectives HTG aims for.

To conclude, we at HTG believe in the saying:

*"A satisfied customer is the best business strategy of all."*

**Antoine Hajjar**

Partner

**Ibrahim Maalouf**

Partner



*"Glass is what we do best!"*



## Mission & Vision

### VISION:

"Our vision is to be the leader in glass processing and distribution in the MENA region, as well as the subcontractor of choice for high end projects in the construction industry"

### MISSION:

"We deliver our vision by ensuring total customer satisfaction through the provision of top quality products, just in time delivery and outstanding customer service"



# Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. 01 100 051328

TÜV Rheinland Cert GmbH certifies:

Certificate Holder:



**HORIZONTAL TEMPERING GLASS SARL**

Mkalles, Jisr El Bacha  
St. Elie Church Street – HTG Bldg  
Beirut  
Lebanon

Scope: Glass processing factory; supplying and installing the glass

An audit was performed, Report No. 051328. Proof has been furnished that the requirements according to ISO 9001:2008 are fulfilled.  
The due date for all future audits is 22-12 (dd.mm).

Validity: The certificate is valid from 2013-01-23 until 2016-01-22.

2013-01-23

  
TÜV Rheinland Cert GmbH  
Am Grauen Stein · 51105 Köln



DGA-ZM-58-95-00

www.tuv.com

 **TÜVRheinland®**  
Precisely Right.

## Quality Policy & Certificates

### Quality Policy:

The established policy of H. T. G. is to provide our customers with products and services that satisfy their needs and expectations in terms of quality, service, price, and delivered in conformance with the company's quality specifications or as laid down by the customer.

Throughout the continuous improvement of our products and processes, we aim to deliver to our customers products and services with zero defects fit for use matching the quality standards set by our management.

H. T. G. commits itself to continuous improvement, further expanding and increasing its competitive leadership in quality, cost and services in a joint partnership with their shareholders, employees, suppliers and customers.

The company's quality system is in accordance with the requirements of ISO9001:2008(expected certification date October 2012) and is considered to be the minimum standard set to be achieved by the company to ensure that the requirements of our customers are adhered to in all respects.

The quality procedures are mandatory and no deviations or alternatives are permitted. All the company's employees, whether directly involved with product quality or not, must comply with them and work through the policy set.

The Quality Department has been given the responsibility and authority to ensure that this policy is established, enacted correctly, implemented and that the quality system is periodically reviewed to improve its suitability and effectiveness.

It is our belief that a quality conscious company will build on its own reputation: therefore, a program of controlled quality is operated from day one that is receiving quality sensitive materials, all through the process in production till the final phase of dispatching the goods to our customers.

Each employee is made aware, and through continuous extensive training, of the need to improve performance and workmanship wherever and whenever possible in order to produce and provide the best quality products and services. This is reflected in job descriptions and operating procedures in addition to the support and encouragement given by immediate superiors.

In the End of the day, our policy and processes are reduced into one simple sentence:  
"A satisfied customer is the best business strategy of all"

**General Manager: Ibrahim Maalouf**

Signature:



Date: 27/03/2012



Bützberg, November 26, 2009

# Certificate

Glas Trösch AG Silverstar, CH-Bützberg is pleased to confirm that the company

**Horizontal Tempering Glass s.a.r.l.,  
Mkaless- Jisr El Basha – Mar Elias Str.,  
H.T.G. Building, Beirut - Lebanon**

is able to successfully process the following products:

**SILVERSTAR ENplus T  
SILVERSTAR COMBI T Silver 48**

Glas Trösch AG Silverstar



Volker Herrmann

Glas Trösch AG Silverstar  
Glasbeschichtungswerk  
Industriestrasse 29  
Postfach  
CH-4922 Bützberg  
Telefon +41 62 958 52 10  
Telefax +41 62 963 22 43  
e-mail: silverstar@glaströsch.ch  
www.glaströsch.ch  
Mwst-Nr.: 120298



GLAS TRÖSCH CERTIFICATE

## Certificates:

While working on becoming a better supplier for our customers and in order to provide their exact needs and expectations with the evolution of the glass world, HTG has taken the decision to work on becoming the first and only certified glass processor (for worldwide glass companies) in Lebanon. Accordingly, training sessions and auditing periods were held in our factory in order to enhance our staff's knowledge about high performance glazing, means of handling and processing such types of glass. Auditors from those various companies have spent months tracking our system, our production and our quality until we finally achieved the set goals.

Below is a list of certificates obtained referring to different types of high performance glass (solar and thermal) from SAINT GOBAIN & GLASTROSCH. Such certificates do carry an expiry date where auditors from those companies visit us yearly to ensure the quality of our production still meets their standards. Moreover, HTG is carrying on with the certification process with other companies such as Guardian glass hence maintaining our current status of being the only certified glass factory in Lebanon.



*"Our top quality is secured through our qualified staff"*



## Our Staff

- 150 skilled workers and trained personnel operating in a 5500 m2 factory on different machines and glass processing phases.
- Several Technical Teams operating on sites executing glass works in different projects.
- Architectural Department where architects and project managers are responsible for designs, studies, shop drawings and project executions
- Curtain Glass Department: Technical teams and administrative skilled people responsible for the execution of curtain glass systems for balconies, terraces, restaurants...
- A Quality team well trained and prepared to handle all the customer requirements and needs by providing the necessary service and product while meeting the ISO 9001:2008 regulations

"Your Safety comes first!"

## Tempering Line

### TAMGLASS HTF PRO E

Tempering Line (Last Generation)

- Origin: Finland

- Size: 2440 x 4500MM

Equipped with heat convection and Pro-E system for the tempering of specific coated glass.

### FEATURES OF TEMPERED GLASS

**A. Scope:** Tempered glass surpasses annealed glass in safety and functions. It is valued for its mechanical and thermal strength in addition to the breaking into small pieces causing less injuries than annealed glass.

**B. Process:** During the tempering stage, annealed glass enters tempering furnace with a temperature range varying between 615°C to 710°C depending on the glass thickness. After the glass exits the furnace it is rapidly cooled by a high pressure concentrated air. As a result, the tempered glass gets its added strength from the compressed surface rating 10 times stronger than annealed glass.

**C. APPLICATION OF TEMPERED GLASS:** Frameless Glass Doors, Partitions, Shop Fronts, Curtain Walls, Balustrades, Curtain Glass Systems for Balconies & all Glass Panels including Hotels and Notches.

**D. Glass Products Tempered by Pro-E:** Soft and hard coated glass with emissivity lower or equal to 0.029.



"Bringing you the best..."



## Lamination Line

### PRE LAMINATION

TAMGLASS AK-line for pre-laminated glass fully automatic where glass is sandwiched and prepared to be compressed in the autoclave.

- Size: 2500 c 4500MM
- Origin: Finland.

### AUTOCLAVE

TAMGLASS AK 3000  
Autoclave machine fully automatic

- Size: 2500 x 4500MM
- Operation: up to 12 tones of pre-laminated glass panels are placed on a special wagon inside the autoclave where the panels undergo a cycle ranging from 2 to 6 hours depending on the glass thickness present with a pressure of 12 bars and a temperature of 135°C



*"We don't settle but for a perfect execution"*



## Double Glazing Line

### E-KANG TECH AUTOMATIC DOUBLE GLAZING LINE.

Origin: South Korea

Size: 2500x3600MM

Semi-automatic machine manufactured under a license from St. Gobain, equipped with all necessary features to manufacture double glazed units made up of different types and thicknesses of soft and hard coated glass.

#### FEATURES:

- 8 brushes for Low-E glass cleaning
- Automatic coating detectors
- Edge deletion machine
- Polyurethane: Silicone substances for different insulated glass products.



## Glass Pre Processing Machines

### BAVELLONI EDGING MACHINES

Beveling and edging machines:  
4 Bavelloni new generation edging and polishing machines for all glass sizes and thicknesses.



### DRILLING MACHINES

Horizontal Drilling machine from BAVELLONI (Italy)  
Vertical Drilling machine from Drilling Masters (Italy)  
Horizontal Fully Automated Drilling & Milling CNC Machine, (Forvet Italy)



## Automatic Cutting Table

### LISEC CUTTING MACHINE

LISEC Fully automatic cutting table  
-Origin: Austria  
- Size: 3210x4200MM  
-Speed: 90M/min  
-Tolerance: +- 0.15mm



### BAVELLONI CUTTING MACHINE

BAVELLONI Fully automatic cutting table  
-Origin: Italy  
-Size: 2600x3700MM  
-Speed: 120M/min  
-Tolerance: +- 0.12mm



# Products



## DOUBLE GLAZED UNITS

Scope: Two panes of glass enclosing a hermitically sealed airspace. It is known for its high sound and thermal insulation. It gives great benefits especially when low-e and high performance glass are used.

Application: Curtain walls, building facades....



## TEMPERED GLASS

Scope: Tempered glass surpasses annealed glass in safety and functioning. It is valued for its mechanical and thermal strength, in addition, it breaks into small pieces causing fewer injuries.

Application: Frameless glass doors, partitions, shop fronts, curtain walls, balustrades curtain glass systems for balconies, etc...



## TEMPERED LAMINATED GLASS

Scope: when safety, security, sound control, shatter resistance and optical clarity are required the use of tempered laminated glass is a must.



## BULLET PROOF GLASS

Scope: Bullet proof glass is the glass that is capable of stopping different bullet calibers.

Glass thickness ranging from 18 to 60mm in multi layers of glass with PVB to withstand different kinds of ammunition fixed from different arms and distances.



### GLASS FITTINGS

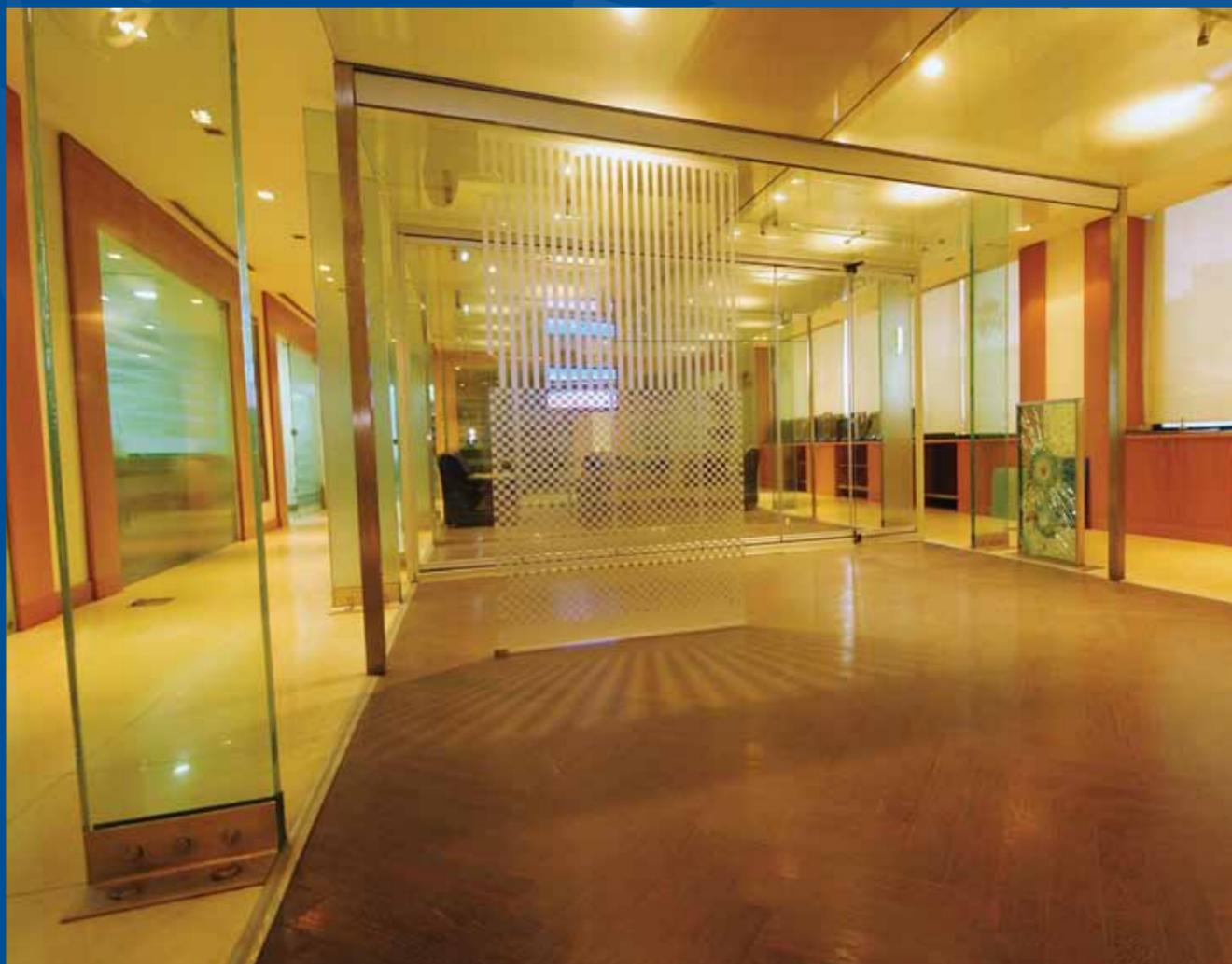
Glass fittings ranging from stainless steel spiders, clamps, handrail accessories in addition to other types of different accessories are available in our stock.



### STEEL & STAINLESS STEEL STRUCTURE

Scope: We provide technical analysis in addition to the installation, for glass facades that are to be installed using a steel or stainless steel structures. The structures would obtain the aesthetic look the architect would like to see while providing the technical characteristics required for safety purposes.

Application: Spider facades, bullet proof facades, canopies, skylights... All require a structure on which the glass would be installed.

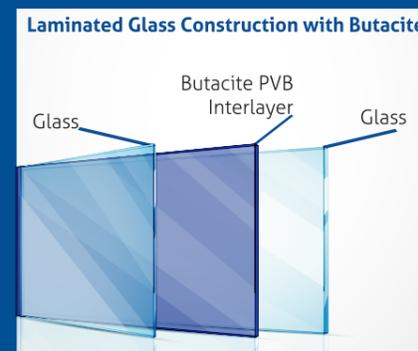


### BALCONIES CURTAIN GLASS SYSTEMS AND FOLDING DOORS

Curtains glass systems are becoming more frequently used since they provide a convenient way of adding more space to residential and commercial areas.

Our balcony glazing system takes up very little space when the glazed units are open. The system is extremely easy to use and can be opened completely for cleaning. It protects spaces from noise, dirt, rain etc...

The system is constituted of special aluminum profiles and tempered glass for additional safety.



### LAMINATED GLASS

Scope: Laminated glass has the capability to incorporate a variety of glass combinations of clear, tinted or reflective.

- It reduces the transmission of sound.
- When broken, laminated glass has the tendency to remain in the opening.

Applications: Skylights, spider facades, roof glazing, stair cases.....

## Some of Our projects

As a final word, it is important to add that the projects found in this catalogue represent only a small sample of our real work and executions done around the world.

We picked a bouquet of our finest projects in order to give you an idea about how things are done at our company.



### HIGH PERFORMANCE AND SPECIAL GLASS PROJECTS (SUPPLY ONLY)

Project: SAYFCO TOWER

Supply of 8.76mm laminated Sound Control – 12mm Air Space – 8mm COOL LITE ST 120 Tempered

Execution: DANTZIGUIAN ALUMINUM

Owner: Sayfco Holding

Location: Zalka Highway



Four Points Hotel

### GLASS STAIRS, STAIR CASES & BRIDGES DECORATIVE WORK

Project: Four Points Hotel

Contractors: KOKACHE Ent.

Location: Verdun



Palladium Project

### HIGH PERFORMANCE AND SPECIAL GLASS PROJECTS (SUPPLY ONLY)

Project: Palladium Project

Supply of 6mm tempered Energy Advantage glass (Pilk.) – 12mm Air Space – 6mm Tempered clear and multi-laminated Lite-Floor Glass

Execution: STAL

Owner: Mouawad Investments

Location: Down Town Beirut



House of Hyundai

### HIGH PERFORMANCE AND SPECIAL GLASS PROJECTS (SUPPLY ONLY)

Project: House Of Hyundai

Supply of laminated jumbo 20.76mm clear glass

Execution: S.T.A.L

Location: Jal el Dib Highway



O&C Fresh Market

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: O&C Fresh Market  
 Architect: Georges Samarani  
 Location: Antelias Highway



Silkcor Offices

**INTERNAL OFFICE PARTITIONS**

Project: Silkcor Offices  
 Architect: Nicolas Bakhaazi  
 Location: Beirut Central District



Roadster

**Curtain Glass Systems**

Project: Roadster Diner  
 Location: Zalka Highway



Doueihy Bldg.

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: Doueihy Bldg.  
 Architect: Circle Hitti  
 Location: Zalka Highway

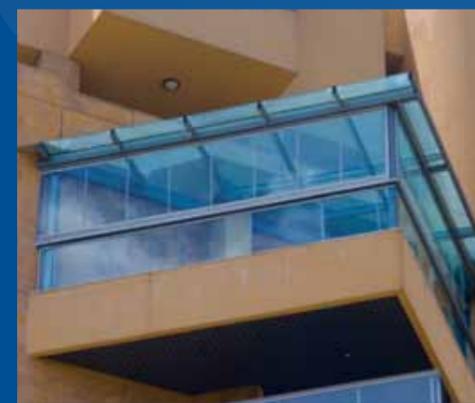


Carpet Plus

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

**GLASS CANOPIES & SKYLIGHTS**  
**GLASS STAIRS, STAIR CASES & BRIDGES**

Project: Carpet Plus  
 Architect: Leda Keuchgeurian  
 Location: Hamra & Dbayeh Highway



Majed Costantine Bldg.

**CURTAIN GLASS PROJECT**

Project: Mjajed Costantine Bldg.  
 Location: Antelias



La Tour Bakery

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: La Tour Bakery  
 Architect: Pierre Dagher  
 Location: Zahle



Maisons et Parquets

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: Maisons et Parquets  
 Glass facades with spider system fixation supplied and installed by HTG  
 Architect: Joseph Nabaa  
 Location: Sin El Fil Highway



**HIGH PERFORMANCE AND SPECIAL GLASS PROJECTS (SUPPLY ONLY)**

Project: Parallel Tower

Supply of Double glazed units composed of 6mm tempered COOL LITE ST 120 – 12mm Air Space – 6mm tempered clear glass

Execution: BIFEM PARALU

Owner: DAC Holding

Location: Sin El Fil Highway



**Bank of Beirut**

**GLASS CANOPIES & SKYLIGHTS**  
**FRAMELESS FACADES WITH STAINLESS STEEL**  
**STRUCTURES**  
**BULLET PROOF FACADES**

Project: Bank of Beirut

Architects: Serge Brunsy, Bernard Khoury

Location: All branches



**Mike Sports**

**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL**  
**STRUCTURES**

Project: Mike Sports

Architect: Pierre Dagher

Location: Zalka Highway



**Regent**

**SHOP FRONT FACADES**

Project: Regent

Architect: Georges Bchara

Location: Zalka Highway



**Louis Vuitton**

**SHOP FRONT FACADES**

Project: Louis Vuitton

Contractor: Chimetal Italy

Location: Down Town Beirut



**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: Senses Club  
Location: Kaslik

Senses Club



**FRAMELESS FACADES WITH STAINLESS STEEL & STEEL STRUCTURES**

Project: Feminin Pluriel  
Architect: Ernest Badwi  
Location: Location: Dbayeh

Feminin Pluriel



**BULLET PROOF FACADES  
INTERNAL OFFICE PARTITIONS**

Project: Salamoon Jewelry  
Architect: Claude Messir  
Location: Ain el Mraisse

Salamoon Jewelry



**INTERNAL OFFICE PARTITIONS**

Project: FFA Headquarters  
Architect: AFKAR Offices  
Location: Beirut Central District

FFA Headquarters



**GLASS STAIRS, STAIR CASES & BRIDGES**

Project: C & F  
Location: Zalka Highway

C & F



**GLASS STAIRS, STAIR CASES & BRIDGES**

Project: Fransesco Smalto  
Architect: Afkar Offices  
Location: Beirut Central District

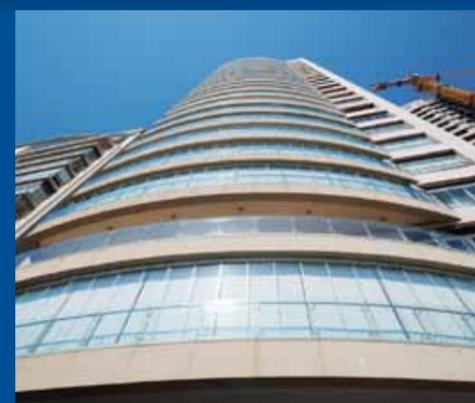
Fransesco Smalto



**GLASS STAIRS, STAIR CASES & BRIDGES**

Project: Hajj Electromachine  
Architect: Marwan El Hajj  
Location: Sin el Fil

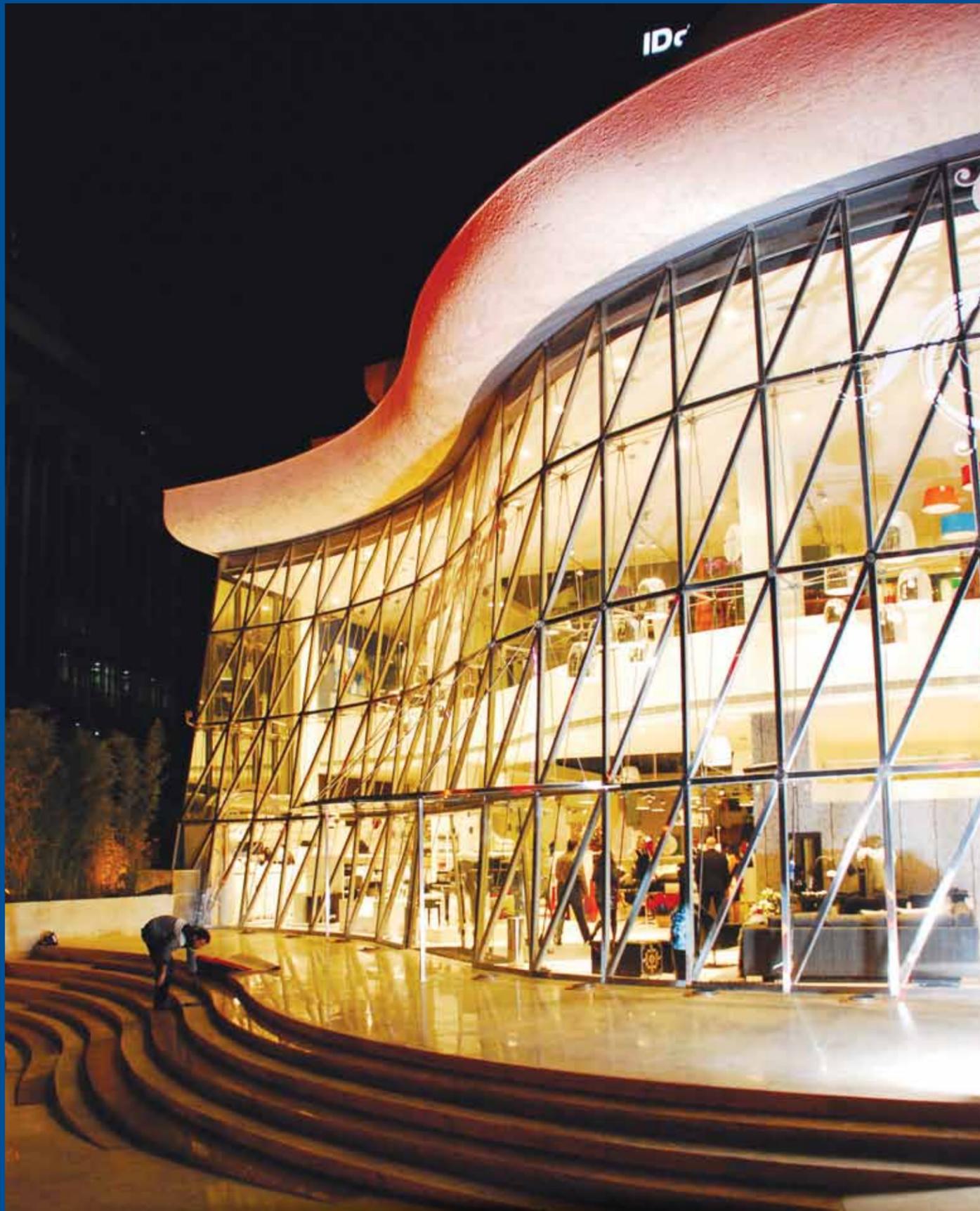
Hajj Electromachine



**CURTAIN GLASS PROJECTS  
GLASS & STAINLESS STEEL BALUSTRADES**

Project: Bahri Gardens  
Location: Ramlet el Baida

Bahri Gardens



**GLASS CANOPIES & SKYLIGHTS**

Project: ID Design Showroom  
 Architect: Sami Doumit  
 Location: Horch Tabet



Four Points Hotel

**SHOP FRONT FACADES**

Project: Zuhair Murad  
 Architect: Tarek Chidiac  
 Location: Mar Mkhayel  
 supply and installation of jumbo crystal clear glass  
 by HTG



Fransabank

**BULLET PROOF FACADES**

Project: Fransabank  
 Contractor: Maroun Slailaty  
 Location: Hazmieh



Verdun Gardens

**SHOWER CABINETS AND ROOMS**

Project: Verdun Gardens  
 Developer: HORIZON  
 Contractor: GENECO  
 Glass partitions in rooms and balconies supplied and  
 installed by HTG



Residential

**DECORATIVE WORKS**

Project: Residential

# Projects Abroad

## PROJECTS IN THE ARAB & GULF REGION

### JORDAN

- KEMPENSKI HOTEL - Dead Sea
- ISHTAR VILLAS - Amman

### SYRIA

- FOUR SEASONS HOTEL - Damascus

### KSA

- SAKURA RESTAURANT - Crown Plaza Hotel Jeddah

### IRAQ

- ROTANA HOTEL - Erbil

### KUWAIT

- Al Shaab Beach Resort

## PROJECTS IN AFRICA

### NIGERIA

- V.I SQUASH COURTS - Lagos

### BORKINA FASSO:

- SODEC Bldg. - Ouagadougou

### ANGOLA:

- LG SHOWROOMS
- ELECTROMAX SHOWROOMS

