

**The Window to the World**



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# Panorama Windows Co. LLC

## 1. About Company

## 2. Company History / Profile

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03



## Company History and Profile

Panorama Windows Co. LLC selling high quality uPVC and Aluminium windows and doors manufactured at its latest state of the art factory based in Sohar, Sultanate of Oman. The factory started production in April 2009 and is now producing some 100,000 window and door elements per year.

### a. uPVC

Panorama is only using high quality raw materials. The elements are based on profiles and high quality fittings from European producers. All profiles are reinforced by galvanised steel. The profiles are of a special tropical formulation with a high concentration of Titanium Dioxide (TiO<sub>2</sub>), which prevent decolourisation due to UV radiation. The Glass is high quality thermal glass. Gaskets are of Neoprene (EPDM) a thermally stable elastomer, totally resistant to UV radiation and the tropical climate in the Middle East. More than 100 Mio uPVC elements based on this technology have been installed worldwide.

Panorama Windows is one of the European leading names in high performance uPVC windows and doors. Panorama windows are available in a range of styles and designs to suit every application, but have one thing in common, stylish good looks and outstanding thermal, sound, safety, and weather performance.

Panorama window systems are the ideal solution because of their attractive design and physical properties. The high insulating multi-chambered systems help minimise air conditioning costs and increase stability and security. Optimum sound-insulation provides peace and quietness while maintenance-free, waterproof and age-resistant material guarantees a long-lasting attractive appearance. The metal reinforcements ensure a high degree of security.

### b. Aluminium

Panorama Windows specialises in the fabrication and installation of Aluminium window and door systems, Curtain Walls, Glass and Aluminium Cladding, and Sky Lights.

The elements are made with high quality Aluminium profiles and fittings as specified by consultants, architects or clients.

Elements are tailor made according to customer requirements, design, and quality preferences. Panorama has standard solutions for a wide range of quality solutions ranging from the highest standard high security elements with thermal brake to lower priced solutions for budget constraint projects. The elements are available in a choice of colours and finishes.

Panorama understands the challenge of delivering stylish good looks with function and long-term performance. The Panorama range includes all styles of uPVC and Aluminium windows and doors in almost any architectural design.

# Panorama Windows Co. LLC

## 3. Company Objectives

## 4. Company Mission / Vision

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## **Company Objectives / Mission / Vision**

### **Panorama:**

- strive to be the customers first choice,
- focuses on customer requirements and provides excellent products and services at best value,
- do not compromise on standards and quality,
- only employ high performance staff who can achieve excellence in sales, manufacturing and services,
- has high priority to health, safety, and environmental issues related to operation and staff.

# Panorama Windows Co. LLC

## 5. Project Details

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## List of Major Projects

No	On-Going Projects	Contractor/Client	Scope of Work
1	Central Bank of Oman - Ph 2	Galfar Engineering & Co. SAOG	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors, Fire Rated Doors, Bullet Proof Windows and Doors, Demountable Glass Partitions
2	Royal Oman Police	Galfar Engineering & Co. SAOG	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors, ACP Cladding, and Canopy
3	Saraya Bandar Jissah, Villa Type B, C, D	Towell Construction Co. LLC	Aluminium Curtain Wall, Windows and Doors
4	Saraya Bandar Jissah - Staff Accommodation	Ghantoot Transport & Gen. Cont. L.L.C.	Aluminium Curtain Wall, Windows and Doors
5	Remal Castle	Arkan Majan International LLC	uPVC Windows and Doors, Aluminium Curtain Wall, Windows and Doors
6	Porsche Center Muscat	Teejan Trading & Contracting Co. LLC	Aluminium Curtain Wall, Windows and Doors
7	Building at Barka	Adham Bin Jamil Bin Rashid Al Rushaidi	Aluminium Curtain Wall, Windows and Doors, ACP Cladding
8	Sandan City at Halban	Towell Construction & Co. LLC	Aluminium Windows and Doors, ACP Cladding
9	94 Villas at Seeb	City Homes	Aluminium Windows and Doors
10	Royal Opera House - Ph2	Oman Shapoorji Company LLC	Aluminium Windows and Doors, Cast Aluminium Screens, Skylights, and Rolling Shutter

## List of Major Projects

No.	Finished Projects	Contractor/Client	Scope of Work
1	RCA Clinic at Salalah	Royal Court of Affairs	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors
2	Zeenath Date Factory, Tumarait	Al Ansari Trading Enterprise LLC	Aluminium Windows and Doors
3	Rahat Al Andar, Sohar	Hussain Fadhil	Aluminium Windows and Doors
4	Royal Philharmonic Orchestra Ph2	Royal Court of Affairs	uPVC Windows and Doors, Shower Doors
5	Safinat Boundary Wall	Al Turki Enterprises LLC	uPVC Windows and Doors
6	Breeding Center at Barka	Al Turki Enterprises LLC	uPVC Windows and Doors
7	Fourth Squadron Ladies Band	Al Turki Enterprises LLC	uPVC Windows and Doors
8	Sit out Area , BAB	Oman Shapoorji Company LLC	uPVC Windows and Doors
9	Saud Bahwan Plaza	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
10	Ghala Apartment	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
11	Sky Deck Apartments	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
12	104 Apartments	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
13	88 Villas	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
14	Supreme Court Building	Towell Construction & Co. LLC	Aluminium Curtain Wall and Windows and Doors
15	Muscat Golf Course-2nd phase	Towell Construction & Co. LLC	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors
16	Al Muna Residency	Al Quandeel Trading & Contracting	Aluminium Curtain Wall, Windows and Doors
17	Crown Plaza Hotel, Duqm	Galfar Engineering & Co. SAOG	Aluminium Curtain Wall, Windows and Doors
18	Nizwa Appeal Court	Galfar Engineering & Co. SAOG	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors
19	Rustaq Appeal Court	Carillion Alawi LLC	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors

## List of Major Projects

No	Finished Projects	Contractor/Client	Scope of Work
20	UES Project at Russyl	Carillion Alawi LLC	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors
21	Oman Investment Corporate Office	Teejan Trading & Contracting Co. LLC	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors, and Spider Glazing
22	Muscat Golf Course	Larsen & Turbo	uPVC Windows and Doors
23	Shanfari Building at Al Khuwair	Al Rawaj International Trad. & Cont.	uPVC Windows and Doors
24	9th Storey Building at Ghala	Al Manawir Contracting LLC	uPVC Windows and Doors, Aluminium Curtain Wall, Automatic Sliding Doors and ACP Cladding
25	Salman Properties	Tawoos Contracting	uPVC Windows and Doors
26	Dolphin Village	Yahya Construction	uPVC Windows and Doors
27	59 Villas at Quram	Towell Construction & Co. LLC	uPVC Windows and Doors
28	GCC Head Quarters Building at Quram	Al Nadha Al Omaniya	uPVC Windows and Doors
29	Independent Water Project-Al Ghubrah	International Water Treatment	Aluminium Windows and Doors
30	Residential & Commercial Building at Hail	Bu Haleeba Group	Aluminium Curtain Wall, Windows and Doors, Automatic Sliding Doors and ACP Cladding
31	Residential & Commercial Building at Qurum	Al Manawir Contracting LLC	uPVC Windows and Doors
32	Al Bayan College	Shakshy Engineering Services	Aluminium Curtain Wall, Windows and Doors
33	Teejan Co Operative Building	Teejan Trading & Contracting Co. LLC	Aluminium Curtain Wall, Windows and Doors
34	Sultan Special Force Parade ground at Halban	R. N. Khimji	Aluminium Windows and Doors
35	Al Sawai Commercial Building at Mowallah	Al Sawai International LLC	Aluminium Curtain Wall, Windows and Doors and ACP Cladding
36	MOD Pension Fund Building	Al Khalili Construction LLC	Aluminium Curtain Wall, Windows and Doors

# Panorama Windows Co. LLC

## 6. Client List

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## Client List

No.	Client
1	Al Adrak Trading & Contracting Co. LLC
2	Al Ansari Trading Enterprise LLC
3	Al Bahja Civil Construction Co. LLC
4	Al Khalili Group LLC
5	Al Manawir Contracting LLC
6	Al Nahda Al Omaniah Co. LLC
7	Al Qandeel Construction
8	Al Rasisa Trading Co.
9	Al Sawai International Co. LLC
10	Al Turki Enterprises LLC
11	Amana Contracting & Trading LLC
12	Arabian Technical Supplies LLC
13	ARC International LLC
14	Architectural City
15	Architectural Wall Systems
16	Argus Construction LLC
17	Atlantic Construction LLC
18	Blizzard Brothers LLC
19	BuHaleeba Group LLC
20	Carillion Alawi LLC
21	Century Contracting Co. LLC
22	Dawood Contracting LLC
23	Development Services & Maintenance LLC
24	Douglas OHI LLC
25	Eastern Overseas LLC
26	Embassy of the United State of America
27	Galfar Engineering & Contracting SAOG
28	Hussain Fahdil & Partners LLC

## Client List

No.	Client
29	IBN Khaldun Almadaen Engineering Consultants
30	International Contractors Co. LLC
31	International Water Treatment LLC
32	Larsen & Turbo (Oman) LLC
33	Majan City Trading & Contracting
34	Majan Engineering Consultants
35	Majees Technical Services LLC
36	Muriya Tourism and Development
37	Nadan Trading LLC
38	Nagajuna Const. Co. International LLC
39	Oman Engineering & Contracting LLC
40	Oman Shapoorji Construction Co. LLC
41	Orpic SAOC
42	R & N Khimji LLC
43	Royal Court of Affairs - DIWAN
44	Salalah Beach Tourism Development Co. SAOC
45	Shaksy Engineering Services LLC
46	Tawoos Contracting LLC
47	Technical Trading & Contracting Co.
48	Teejan Trading & Contracting LLC
49	Towell Construction Co. LLC
50	Towell Infrastructure Projects Co. LLC
51	Towell Talati LLC
52	Unique Contracting Co. LLC
53	Value Construction Services LLC
54	Watad Engineering Consultancy
55	White Modern City
56	Yahya Construction LLC

# Panorama Windows Co. LLC

## 7. Company Registration Certificates

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شهادة تسجيل تجاري (مرهون)

تشهد أمانة السجل التجاري بأن

نوافذ باتور اما ش م م

2007/08/08

بتاريخ

1024481

قد سجل/سجلت تحت رقم سجل تجاري

الشكل القانوني : شركة محدودة المسؤولية (خاضعة لقانون الاستثمار الاجنبي)

المركز الرئيسي: محافظة مسقط/بوشر/القرم

وذلك وفقا لاحكام قانون السجل التجاري رقم 74/3 م الصادر بتاريخ 1974/5/14 م وتعديلاته, واحكام قانون تنظيم و تشجيع الصناعة رقم 79/1 م الصادر بتاريخ 1979/1/4 م

ملاحظات:



أمانة السجل التجاري

2017/08/07

1. تنتهي صلاحية هذه الشهادة بتاريخ

2. هذه الشهادة لإثبات التسجيل, وفي حالة طلب معلومات مفصلة يرجع إلى نسخة التسجيل المفصلة المصدقة من أمانة السجل التجاري

3. يجب تقديم طلب التجديد خلال مدة لا تتجاوز الشهر التالي لانتهاء مدة القيد طبقا للقرار الوزاري رقم 1986/121 م وتعديلاته

2012/08/14

بتاريخ

عيسى صالح الجهوري

طبعت هذه الشهادة بواسطة:







CR Number	1024481	(مرهون)	1024481	رقم السجل التجاري
Commercial Name	الاسم التجاري نوافذ بانوراما ش م م			
Legal Status	L.L.C (Subject To Foreign Investment Rules) شركة محدودة المسؤولية (خاضعة لقانون الاستثمار الاجنبي)			
Head Q	Muscat Governorate/Bawshar/AI Qurm محافظة مسقط/بوشر/القرم			
P.O.Box:	2837	Postal Code:	112	رمز بريدي: 2837
Telephone:		Fax:		هاتف: فاكس:
Email:	البريد الإلكتروني:			
Establishment Date:	08/08/2007	Duration:	Unlimited	تاريخ التأسيس: 2007/08/08 المدة: غير محدد
Registration Date:	08/08/2007	Active	-	تاريخ التسجيل التجاري: 2007/08/08 قلم
Expiry Date:	07/08/2017	تاريخ انتهاء السجل التجاري: 2017/08/07		
Fiscal Year End:	تاريخ انتهاء السنة المالية:			
Cash Capital:	900,000	Kind Capital:	0	رأس المال النقدي: 900,000 رأس المال العيني: 0
Total Capital (Omani Riyal):	900,000	رأس المال الكلي (بالريال العماني): 900,000		
No. of Shares:	900000	عدد الأسهم: 900000		
Share Value :	1.000	قيمة السهم: 1.000		
Percentage of Foreign Investment:	25.56	نسبة الإستثمار الأجنبي: 25.56		
Foreign Company Name	اسم الشركة الأجنبية			
Legal Status of Mother Company	الشكل القانوني للشركة الأم			
Country of Origin:	البلد الأصلي:			
Branches and Commercial Activities	الفروع و الأنشطة التجارية المسجلة			
Commercial Activities Registered in Headquarter	الأنشطة التجارية المسجلة بالمركز الرئيسي			
511003:Export and import offices	511003:مكاتب التصدير والاستيراد			





<b>CR Number</b> 1024481	(مرون)	1024481	رقم السجل التجاري
<b>Location:</b>			
<b>Branch Reg. Date:</b> 31/10/2007 <b>Branch ID:</b> 9796394			
Al Batinah Region/Sohar/ Sohar As Sinaiyah			
261099: Other activities related to manufacture of glass and glass products.			
انتاج النوافذ الزجاجية			
<b>Location:</b>			
<b>Branch Reg. Date:</b> 27/07/2009 <b>Branch ID:</b> 15934882			
Al Batinah Region/Sohar/ Sohar As Sinaiyah			
<b>Industrial Registration Number:</b> 10001218			
252003: Manufacture of builder's ware including doors, windows and their frames, shutters, blinds insulating fittings, coachwork etc of plastics.			
252003: Manufacture of builder's ware including doors, windows and their frames, shutters, blinds insulating fittings, coachwork etc of plastics.			

Partners/Board Members/Authorized Managers		أسماء الشركاء/أعضاء مجلس الإدارة	
<b>Name</b>	تورككر ماي	<b>الاسم</b>	الجنسية: الدنمارك
<b>Nationality:</b> Denmark		<b>نوع الهوية:</b> جواز سفر	رقم الهوية: 202288393
<b>ID Type:</b> Passport <b>ID Number:</b> 202288393		<b>الصفة:</b> شريك محدود المسؤولية	عدد ونسبة الحصص: 230000 ( 25.56 ) %
<b>Designation:</b> Limited Liability Partner		<b>تاريخ التسجيل:</b> 08/08/07	
<b>Num. and Percentage Shares:</b> 230000 ( 25.56 ) %			
<b>Registration Date:</b> 08/08/2007			
<b>Name</b>	صلاح بن مرتضى بن احمد سلطان	<b>الاسم</b>	الجنسية: عمان
<b>Nationality:</b> Oman		<b>نوع الهوية:</b> بطاقة هوية	رقم الهوية: 10908616
<b>ID Type:</b> ID Card <b>ID Number:</b> 10908616		<b>الصفة:</b> شريك محدود المسؤولية	عدد ونسبة الحصص: 670000 ( 74.44 ) %
<b>Designation:</b> Limited Liability Partner		<b>تاريخ التسجيل:</b> 08/08/07	
<b>Num. and Percentage Shares:</b> 670000 ( 74.44 ) %			
<b>Registration Date:</b> 08/08/2007			

Authorized Managers and Signatories		أسماء المفوضين بالإدارة و التوقيع	
			
أمانة السجل التجاري		مستخرج الشهادة:	
2012/08/14		عيسى صالح الجبوري	
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CR Number	1024481	(مرهون)	1024481	رقم المسجل التجاري
Name		الاسم صلاح بن مرتضى بن احمد سلطان		
Nationality: Oman		الجنسية: عمان		
ID Type: ID Card	ID Number: 10908616	رقم الهوية: 10908616	نوع الهوية: بطاقة هوية	
Designation: Authorized Partner	- Solely	- منفردا	صفة التفويض: شريك مفوض	
Authorization Type: Full			نوعية التفويض: كلي	
Authorization Limit: Unlimited			حدود التفويض: غير محدد	
Notes:			ملاحظات:	
Registration Date: 08/08/2007			تاريخ التسجيل: 2007/08/08	
Name		الاسم توركلر ماي		
Nationality: Denmark		الجنسية: الدنمارك		
ID Type: Passport	ID Number: 202288393	رقم الهوية: 202288393	نوع الهوية: جواز سفر	
Designation: Authorized Partner	- Solely	- منفردا	صفة التفويض: شريك مفوض	
Authorization Type: Full			نوعية التفويض: كلي	
Authorization Limit: Unlimited			حدود التفويض: غير محدد	
Notes:			ملاحظات:	
Registration Date: 08/08/2007			تاريخ التسجيل: 2007/08/08	
Name		الاسم جيتاشاندوان ميشاكات		
Nationality: India		الجنسية: الهند		
ID Type: ID Card	ID Number: 78860465	رقم الهوية: 78860465	نوع الهوية: بطاقة هوية	
Designation: Authorized Manager	- Solely	- منفردا	صفة التفويض: مدير مفوض	
Authorization Type: Full			نوعية التفويض: كلي	
Authorization Limit: Unlimited			حدود التفويض: غير محدد	
Notes:			ملاحظات:	
Registration Date: 04/08/2012			تاريخ التسجيل: 2012/08/04	

#### Registered Mortgages

#### الرهونات المسجلة

أمانة المسجل التجاري

2012/03/14



مستخرج الشهادة :  
عيسى صالح الجهوري

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صفحة 3 من 4



CR Number	1024481	(م.هـ.ن)	1024481	رقم السجل التجاري
<b>Lending Party</b>				الجهة الممولة
Registration Date	13/06/2009	2009/06/13		تاريخ تسجيل الرهن
End Date				تاريخ انتهاء الرهن
Expiry Date	12/06/2014	2014/06/12		تاريخ انتهاء صلاحية الرهن
Mortgage Value	280,000.000	280,000.000		قيمة الرهن
Mortgage Type	NORMAL	عادي		نوع الرهن
Grade	2ND	الثاني		درجة الرهن
Documentation Location	MOCI	وزارة التجارة والصناعة		مكان توثيق عقد الرهن
Reference Number	1066/09	1066/09		رقم توثيق عقد الرهن
Mortgage Coverage	Full	كلي		تغطية الرهن
<b>Lending Party</b>				الجهة الممولة
Registration Date	10/11/2009	2009/11/10		تاريخ تسجيل الرهن
End Date				تاريخ انتهاء الرهن
Expiry Date	09/11/2014	2014/11/09		تاريخ انتهاء صلاحية الرهن
Mortgage Value	304,000.000	304,000.000		قيمة الرهن
Mortgage Type	NORMAL	عادي		نوع الرهن
Grade	1ST	الأول		درجة الرهن
Documentation Location	MOCI	وزارة التجارة والصناعة		مكان توثيق عقد الرهن
Reference Number	2023/09	2023/09		رقم توثيق عقد الرهن
Mortgage Coverage	Full	كلي		تغطية الرهن

أمانة السجل التجاري

2012/03/14



مستخرج الشهادة :

عيسى صالح الجهوري

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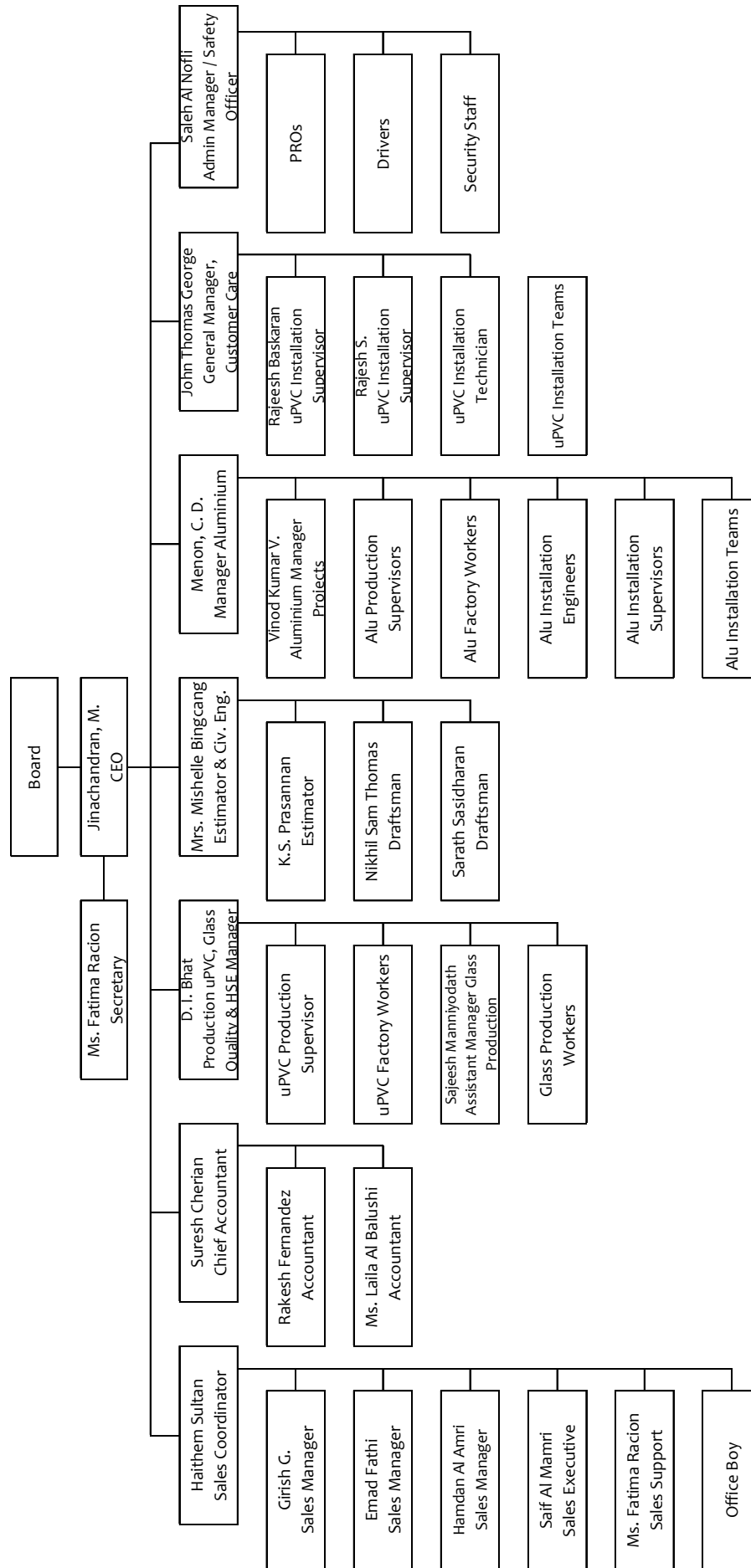
صفحة 4 من 4

# Panorama Windows Co. LLC

## 8. Organizational Chart

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

## Organizational Chart



# Panorama Windows Co. LLC

## 9. Plant and Machineries

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**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

## Factory

### uPVC Machines

- Double Headed Mitre Saw manufactured by Rotox GmbH, Germany. This machine is used for cutting the uPVC profile in the programmed size and angle.
- Circular Metal Saw manufactured by Pedrazzoli, Italy used for cutting the steel profiles used in uPVC reinforcement.
- Copy Router manufactured by Rotox GmbH, Germany. This machine is used for handle and key slot making in the profiles.
- Drain Slot Milling Machine made by Rotox GmbH, Germany used for making slots in the profiles to drain the rain water from the windows.
- End Milling Machine manufactured by Rotox GmbH, Germany used for milling the mullion at one end.
- Two Headed Welding Machine manufactured by Rotox GmbH, Germany used for welding of profiles at two ends for e.g. manufacturing of arch elements.
- One Headed Welding Machine manufactured by Rotox GmbH used for welding the arch elements with angle cuttings.
- Four Headed Welding Machine manufactured by Actual Maschinenbau AG Austria. All the four corners of the windows and doors can be welded in 48 seconds.
- CNC Corner Cleaning Machine manufactured by Actual Maschinenbau AG Austria. This machine cleans the welded joints automatically.
- Glazing Bead Saw manufactured by Rotox GmbH, Germany. This machine is used to cut glazing beads in the size required.
- Profile Heating and Bending Machines manufactured by Fux Maschinenbau G.m.b.H, Austria. The machines include one furnace to heat the profiles and a bending table with accessories to bend profiles to the desired shape for making arch windows.
- Stationary Screw Driver with automatic screw feed manufactured by GEVO GmbH, Germany. The machine is used to screw steel reinforcement to uPVC profiles.





## Aluminium Machines

- Electrical Double Head Aluminium Cutting machine manufactured by EMMEGI, Italy used for cutting aluminium profiles.
- Heavy Duty Pneumatic Copy Router, manufactured by EMMEGI, Italy used for making slots for handles, locks, and cylinders in aluminium profiles .
- Heavy Duty Pneumatic Corner joint Crimping Machine manufactured by Atla Coop, Italy. Corners are with this machine fixed by Crimping with Crimping angle inside the profile.
- Pyramidal full Hydraulic Arch Bending Machine manufactured by Tauring, Italy for bending aluminium profiles.
- Automatic Cutting and Feeding Machine manufactured by Altech, Italy for accurate cutting a high number of aluminium sections of constant.
- Heavy Duty Pneumatic End Milling Machine manufactured by Emmegi, Italy used for end milling of mullion profiles.



## Glass Machines

- Jumbo CNC glass cutting table with Shape Make manufactured by Maver Glass Machinery SRL, Italy. This machine cut automatically about 800 square meters of glass in 8 hours. Size of glass is fed to a computer from the production data recorded in the Klaes estimation and production software.
- Thickness of the glass is from 2 to 19 mm. Shaped glass can be cut with Autocad drawings fed to the computer of this machine.





- Cross Belt Grinding Machine. The edges of cut glass are smoothed out with the help of this machine.
- Glass Washer manufactured by Bassra Machine tools Ltd; United Kingdom. Cut glass is passed through this washer to wash, clean and dry the glass.
- Hotmelt Machine manufactured by Bassra Machine tools Ltd, United Kingdom. Butyl hotmelt supplied by Bostik in UK is melted in this machine and is applied in the double glazing unit to seal the edges of double glazing.



- Horizontal Roller Heart Reversing Flat and Bent Tempering Line by Guangdong Fushan Glass Machinery Co. Ltd; China. Cut glass passed through this machine for tempering.
- Automatic Horizontal Glass Straight-Line Four Sides Edger by Guangdong Fushan Glass Machinery Co. Ltd; China. The cut glass passed through this machine to smoother the four sides of the glass.





- Drilling machine by Guangdong Fushan Glass Machinery Co. Ltd; China. Pneumatic clamping, drilling on double sides, the up driller falling manually and the down driller rising automatically with hydraulic cushion.



- Glass Sandblasting Machine by Guangdong Fushan Glass Machinery Co. Ltd; China. The cut glass passed through this machine to blast varieties of figures on the surfaces of glass.
- Glass Straight-Line Edging Machine by Guangdong Fushan Glass Machinery Co. Ltd; China. The cut glass passed through this machine, suitable for straight-line edging with arris for various flat glass.

Small items such as riveter, electrical screw drivers, desiccant applicator, clamp table etc. to make high quality windows and double glazing units fast and accurate are not included in the list above.



# Panorama Windows Co. LLC

## 10. Manpower

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

## Manpower

### Board and Management

#### Board:

Salah Murtadha Sultan, Chairman  
Murtadha Sultan  
Dr. Thorkild W. Mai

#### Management:

Jinachandran, M., CEO  
Mishelle, R., Chief Estimator

### Manpower

Full Time Equivalent	No.		
Board Members		Sales & Marketing Coordinator	1
Full time working for Panorama	2	Sales Managers	4
Office Staff		Sales & Marketing Coordinator	5
CEO	1	Office and Sales	24
Customer Care, General Manager	1	Factory and Installation	
Admin Manager	1	Production Supervisors	3
Secretary	1	Site Engineers	3
Alu Manager	1	Supervisors	5
Alu Prod & Installation Manager	1	Factory Workers	64
uPVC Prod., Quality & HSE Manager	1	Installation Staff	79
Estimators / Draftsman	3	Security and Drivers	6
PRO	2	Factory and Installation	160
Chief Accountant	1		
Accountants	3	Total	184
Office Boy	1		
Office General	19		

# Panorama Windows Co. LLC

## 11. Previous Project Photos

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**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

**Carillion Alawi**

UES at Rusayl

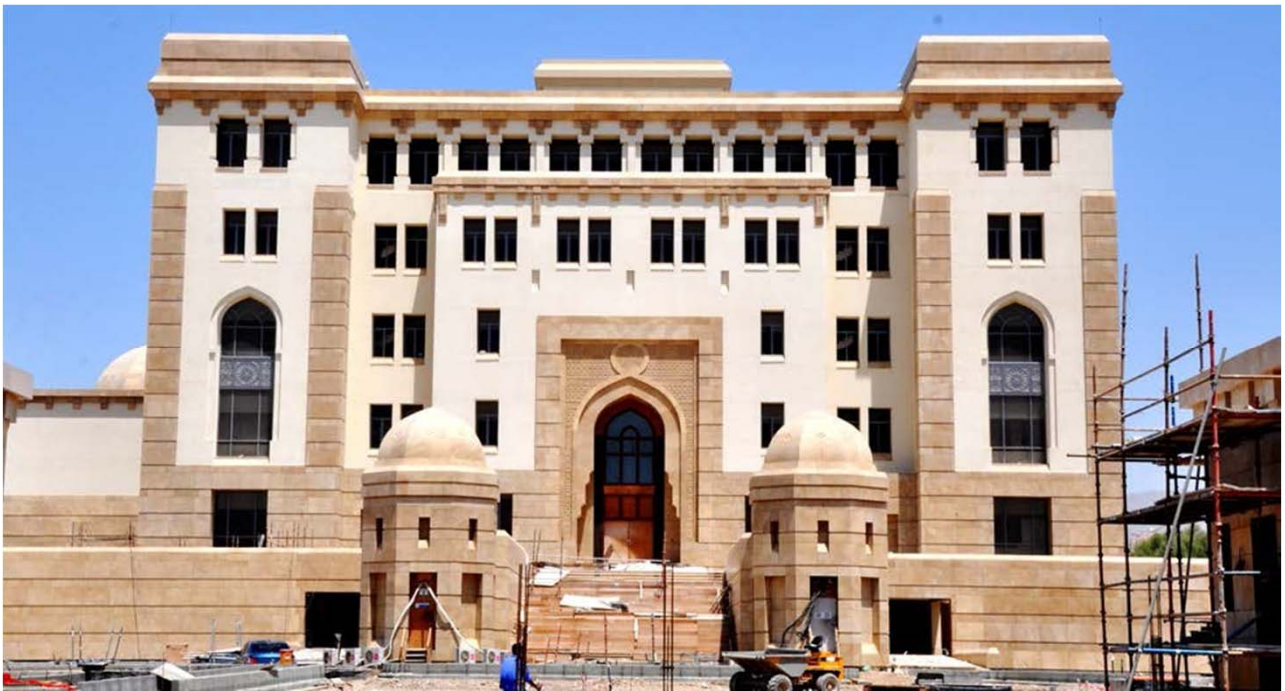
Consultant: Resolution Engineering Consultancy

Aluminium Curtain Wall





**Towell Construction Co. LLC**  
Supreme Court at Ghubrah  
Aluminium Windows and Doors



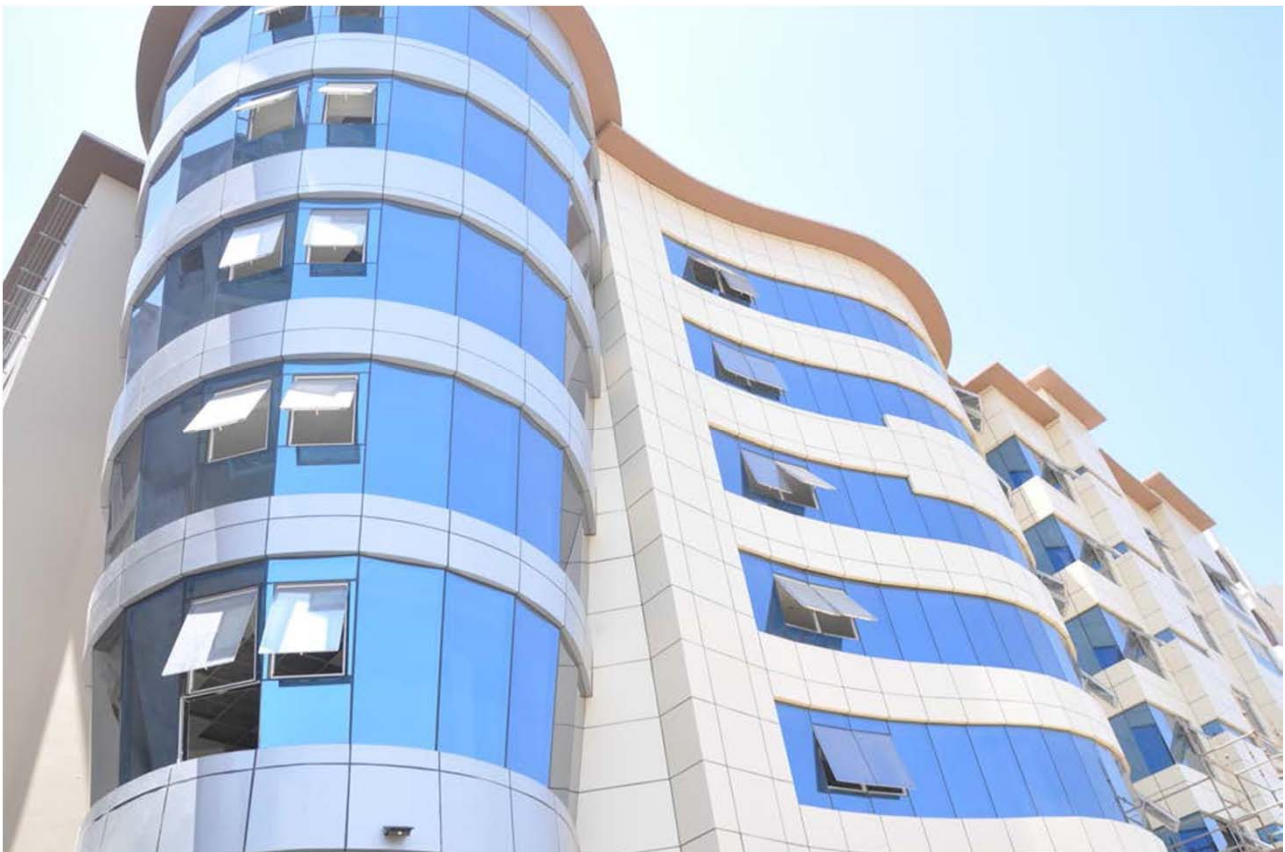
**Bu Haleeba Group LLC**

Muscat Residency at Al Hail  
Aluminium Windows & Doors,  
Structural Glazing, and Spider Glazing





**Al Manawir Contracting LLC**  
6-Storey Building at Al Qurum  
Aluminium Windows & Doors and  
Structural Glazing



**Teejan Trading & Contracting LLC**  
Oman Investment Corporate Office  
Aluminium Windows, Spider Glazing and Skylight





**Galfar Engineering & Contracting SAOG**  
Crown Plaza Hotel - Duqm





**Atlantic Construction LLC**  
Residential / Commercial Bldg. at Ghala  
Consultant: Engineering District  
Aluminium Structural Glazing



**Al Sawai**  
Commercial Building  
ACP Cladding with Aluminium Structural Glazing





**Yahya Construction**  
Dolphin Village



**Mehdi Jawad**  
Private Villa in Qurum  
Consultant: Abdulla Muqadam



**Towell Construction Co. LLC**  
16 Villas in Madinat Ilam  
Architect: Towell Talati



**Mr. Majid Hilal Al Ismaily**  
Private Villa in Al Khoud



**Towell Construction Co. LLC**  
Apartment Block in Ghala  
Architect: Towell Talati



**Larsen & Toubro (Oman) LLC**

Muscat Golf Course – 105 Apartments  
and 84 Villas in Muscat Golf Course  
Consultant: Cowi & Partners LLC



**Salman Properties**

Multi-storey buildings at  
Ghala Plot number 244 and 231  
Contractor: Tawoos



**Douglas OHI LLC**

Al Marrasy Building, Mathra  
Consultant: Huckle and Partners LLC



**Ali Mallalha**

Private Villa in Qurum  
Contractor: Al Habib





**Towell Construction Co. LLC**

Saud Bahwan Plaza,

Consultant: Kadri Consultants

Aluminium Windows and Curtain Wall

**Towell Construction Co. LLC**

Sky Deck: Apartments at Madinat Sultan Qaboos

Architect: Towell Talati

# Panorama Windows Co. LLC

## 12. Range of Products

**a. All Type of Aluminium Doors and Windows with Thermal and Non-Thermal System**

**b. Curtain Wall**

**c. Structural Glazing and Glazed Skylight**

**d. Glass Partitions with Spider Glazing**

**e. Aluminium Composite Panel Cladding**

**f. Shower Enclosures**

**g. All Type of uPVC Doors and Windows**

## Aluminium

### Main specifications



NAPCO

Technical Information on Aluminium Extrusions supplied by NAPCO

#### A. EQUIPMENT & CAPACITY

##### Major Equipments:

2000 MT Schloeman Press from SMS Schloeman, Germany

2800 MT Press from Daneili Breda, Italy

Two Anodizing Plants from SMS, Germany and Metachem, Germany

Two Powder Coating Plants from Ercon, UK

NATURALL, Wood Finish Powder Coating from EuroIacca, Italy

##### Current Capacity per Annum

Extrusion: 18000 MT

Powder Coating: 7000 MT

Anodizing: 6000 MT

#### B. GENERAL SPECIFICATIONS:

1) Alloy Range	AA 6060, 6063, 6005 & 6082 in T4, T5, T6 & T66
i. Chemical Composition	As per EN 573 - 3, EN 12020 - 1
ii. Mechanical Properties	As per EN 755 - 2
2) Max Profile Size CCD	Hollow: 210 mm max Flat: 230 mm max (Based on the profile design higher sizes can be taken up for extrusions)
3) Length	6800 mm max
4) Dimensional tolerance	As per EN 12020 - 2, EN 755 - 9
5) Profile Weight	150 gms /m to 15 kg/m





# NAPCO

## C. Product Range

NAPCO offers a range of over 4000 profiles to suit the architectural and manufacturing industry. NAPCO also develops exclusive dies for customers against their own designs.

- Aluminium extrusions in:  
Mill Finish  
Anodized  
Powder Coated and Natural Wood Finish
- Facade systems design from  
WICONA - Germany  
BRITAL - UK

## D. Anodizing

NAPCO has two anodizing lines employing sulphuric acid anodizing process offering a wide range of colour shades such as Silver, Bronze and Black with scope of development of other shades to suit customer requirements.

Specifications: DC Sulphuric Acid Anodizing  
As per EN 12373 - 1 and BS 3987 : 1991  
Qualanod Approved

## E: Powder Coating

NAPCO has two powder coating plants with IR curing oven. Polyester powder coating of over 200 RAL shades. The colour coat thickness, in exposed areas is around 60-80 microns.

NATURALL finish is available in nine combinations of wood patterns.

Specification: As per BS 6496  
Qualicoat Approved





TECHNAL® products provide:

- Original French world-class design
- Proven reliability and durability
- Leading-edge technology
- Tested for extreme weather-proofing
- High thermal & acoustic performance.
- Fully-recyclable aluminium parts

TECHNAL® products have been used on major projects across the Gulf, including Bahrain International Circuit, Bahrain International Airport Control Tower, Al Zamil Tower in Bahrain, The Palm Villas in Dubai, 23 Jumeirah Beach Residences Towers, Dubai Marina Towers, Prince Sultan Bin Abdulaziz City for Humanitarian Services in Riyadh, Al Sobaie Office & Commercial Towers, Sheraton Hotel, Half Moon village in Dammam, Al Mohaisin Centre, Habitat Showrooms and Crystal resort in Jeddah, Hilton Resorts, Universal and Al Asfour Towers in Kuwait, City Centre Mall, Golden Bay Tower, Al Mana Towers & La Cigale Hotel in Qatar, Four Seasons Hotel in Syria, Tala Bay in Jordan etc.



Technal Middle East  
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## COMPREHENSIVE OFFER

Technal Middle East has the strength of a global TECHNAL® brand and a history of 30 years in the region, while its products are backed by international quality standards and a strong technical support services.

Over the years, the TECHNAL® brand has been strengthened with new products to suit all markets needs. The range of complete systems and original parts meets all possible aluminium architectural needs in both residential and commercial buildings.

■ Technal Middle East has the capacity to design customized solutions for specific projects.

The TECHNAL® products range includes:

### Conservatories

- Ventilated roof
- Traditional roof

### Curtain walls

- Structural glazing
- 100% glass
- Unitized
- Traditional façade (grid, horizontal & vertical line)

### Skylights

- Sloped glazing
- Pyramid, dome or barrel vault designs

### Doors

- Double action
- Single action

### Guardrails

- Balustrades
- Glazed guardrails
- Decorative guardrails

### Interior fittings

- Decorative
- Simple partitions & stands

### Partitions

- Modular, removable
- Standard

### Shop fronts

- Beaded
- Burglar-proof

### Shutters

- Louver windows / jalousies
- Louver shutter
- Rolling shutters

### Windows

- Standard & concealed casements
- Inward or outward open
- Hinged, pivoting, projecting Tilt-Turn
- Sliders, horizontal, vertical
- Standard or thermal insulated

### Brise Soliel

- High-tech sun break solutions

# INSTALLUX ALUMINIUM

For more than 50 years, Installux Aluminium has been developing a complete offer of aluminium profiles and accessories for use in manufacturing windows, doors, façades, conservatories, guard rails, gates, fences, etc. Providing answers regarding energy consumption, imagining qualitative extensions, creating harmonious environments, etc. accompanying these developments means offering the most efficient solutions best adapted to today's lifestyles. More comfort and more character: Installux Aluminium's residential ranges allow everyone to invent their way of living.

Since each project is unique, we have designed our products so that they adapt to all configurations: individual or communal housing, new constructions or renovations, architectural projects, etc. Each project can thus be considered with the same performance and aestheticism guarantee. Colours, accessories, finishes, shapes, etc. We offer you the best in aluminium; your projects now only have one limit: your imagination.



## QUALITY

Our aluminium mastery is based on rigorous quality procedures. All our technical data and information is thus subjected to certified tests by our teams and independent offices. We perform numerous tests each year to guarantee and certify the quality of our products.

Furthermore, the coated finishes of Installux Aluminium profiles comply with the profession's highest standards such as the Qualicoat (superior-quality aluminium powder coating), Qualmarine (maximum protection for projects subject to aggressive atmospheres - sea front, industrial pollution, etc.) and Qualideco (products produced in wood tones) quality labels thus guarantee you optimal colour fastness over time!



## ALUMINIUM

Aluminium is the most abundant metal in the earth's crust and has numerous advantages for environmental sustainability.

Three times lighter than steel while providing the same resistance, it is ideal for lightweight metal constructions. For the same reasons, transporting it is also more ecological.

It can be recycled indefinitely: today, around three-quarters of all aluminium produced is still in use. Furthermore, its reuse is energy-efficient. Its natural characteristics (it is very malleable) mean that shaping it also requires less energy than other materials.

Its advantages also benefit you: aluminium can be used to produce finer frames offering more natural light. Very corrosion-resistant, it limits the use of cleaning products.







EMIRATES EXTRUSION FACTORY L.L.C.



## GENERAL NOTES & TECHNICAL DESCRIPTION

*System studied and designed by Eng. Antonio Conte with tight collaboration of Technical Team of Emirates Extrusion Factory L.L.C.*

<b>Profiles weight and dimensions</b>	The indicated weight and dimensions are the theoretical and can vary in relation to the extrusion tolerances ( BS 1474 ), anodizing ( BS 3987 ) and powder coating ( BS 4842 ) of the profiles.
<b>Profiles extruded alloy</b>	AA6063, AA6061.
<b>Temper supply status</b>	T4, T5, T6
<b>Finishing</b>	Powder coated 60 - 130 microns ( BS 4842 ) Anodized 15 - 20 microns ( BS 3987 )
<b>Bar length</b>	Maximum length possible: for anodizing - 6.8m; for powder coating - 6.8m; for mill finish - 7.0m.
<b>Section type</b>	NOT EUROGROOVE
<b>Basic dimensions</b>	According with Geometric properties Diagrams
<b>Glass application</b>	Fix glazing by extruded spacer and extruded connector. Openable glazing by structural bond.
<b>Installation tolerance</b>	Between the inside of the frame fixing support and the outside of the aluminium openable frame it is preferable to keep an installation tolerance of 3 mm.
<b>Main characteristics</b>	The design of the system has been carefully studied to fit with the prevalent on the market accessories and can be machined by the usual kit of equipment available in any workshop. Compatible with GIESSE, SAVIO & Emirates Extrusion accessories.
<b>Options</b>	The design of the system has been studied for the manufacture of top-hung openable Windows, Structural glazing and Curtain Walling.



# EMIRATES EXTRUSION FACTORY L.L.C.



## PRODUCT SPECIFICATION

- 1 STANDARDS FOR REFERENCE
  - a. EXTRUSION - **BS EN 755 SERIES**
  - b. ANODIZING - **BS 3987 : 1991**
  - c. POWDER COATING - **BS 6496 : 1990**  
**QUALICOAT STANDARD**
- 2 ALLOYS CAN BE EXTRUDED : **AA6061**  
**AA6063**
- 3 TEMPER : **T4 (SOFT),**  
**T5 (MEDIUM) &**  
**T6 (HARD)**
- 4 MAXIMUM SIZE POSSIBLE
  - a. SOLID : **180 MM (CIRCUMSCRIBING CIRCLE DIAMETER)**
  - b. HOLLOW : **160 MM (CIRCUMSCRIBING CIRCLE DIAMETER)**
- 5 MAXIMUM LENGTH POSSIBLE
  - a. ANODIZING : **6.80 METERS**
  - b. POWDERCOATING : **6.80 METERS**
  - c. AGEING : **7.00 METERS**
- 6 TYPE OF FINISHES POSSIBLE
  - a. **MILLFINISH (SOFT & HARD)**
  - b. **ALL RAL COLOURS IN POWDER COATING.**
  - c. **ANODIZING**
    - : **SILVER** - **MATT & SHINY**
    - : **LIGHT BRONZE** - **MATT & SHINY**
    - : **MEDIUM BRONZE** - **MATT & SHINY**
    - : **DARK BRONZE** - **MATT & SHINY**
    - : **BLACK** - **MATT & SHINY**
    - : **GOLD** - **MATT & SHINY**
- 7 NORMAL STANDARD FOR COATING THICKNESS
  - a. ANODIZING : **16-20 MICRONS**
  - b. POWDER COATING : **60-120 MICRONS**
- 8 MINIMUM SECTION THICKNESS  
POSSIBLE : **1.20 MM**

Product Data

VI

Product Data



# ARABIAN EXTRUSIONS FACTORY

**Alloys:** AA6063, AA6060, AA6061 & AA6082

**Temper:** T-4 (Soft), T-5 (Medium) & T-6 (Hard)

Dimensional Tolerance : As per EN: 12020-2-2001, EN 755-9-2001

## ALLOY COMPOSITION EN - 573 - 3:2003

ALLOYS	%Si	%Mg	%Fe	%Ti	Cr	Cu	Mn	Zn	Others
6063	0.20-0.60	0.45-0.90	0.35	0.10	0.10	0.10	0.10	0.10	0.01
6060	0.42-0.48	0.37-0.43	0.15-0.19	0.02	0.025	0.02	0.02-0.04	0.025	0.03
6061	0.40-0.80	0.8-1.2	0.7	0.15	0.04-0.35	0.15-0.40	0.15	0.25	—
6082	0.7-1.3	0.6-1.2	0.50	0.10	0.25	0.10	0.40-1.0	0.20	0.05

— Other elements each .01, total 1.10

— Remainder is aluminium

## MECHANICAL PROPERTIES EN - 755 - 2 :1977

ALLOY	6063			6060			6061		6082	
TEMPER	T4	T5	T6	T4	T5	T6	T4	T6	T4	T6
Min ULTIMATE TENSILE STRENGTH (N/mm <sup>2</sup> )	130	175	215	120	160	215	180	280	205	290
Min 0.20%PROOF STRESS (Yield strength N/mm <sup>2</sup> )	65	130	170	60	120	160	110	240	110	250
Min % OF ELONGATION IN 50 mm	12	6	6	16	8	8	13	8	14	8

## MATERIAL SPECIFICATION : Alloy 6063

SPECIFICATION	UNITS	
SHEAR STRENGTH	155	(N/mm <sup>2</sup> )
ELONGATION ON 50mm	8	%
DENSITY	2.7	g/mm <sup>3</sup>
MELTING RANGE	650	Deg.C
COEFFICEN ON LINEAR EXPANSION	23x10 <sup>-6</sup>	Deg.C
MODULUS OF ELASTICITY	67000	(N/mm <sup>2</sup> )
FATIGUE STRENGTH (50x10 <sup>6</sup> Cycles)	75	(N/mm <sup>2</sup> )



## GENERAL NOTES & TECHNICAL DESCRIPTION

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## SPIDER & CANOPY FITTINGS



Spider Fittings  
Collage

[www.ozone-india.com](http://www.ozone-india.com)

5







## ARCHITECTURAL SPIDER FITTINGS



### STRUCTURAL GLAZINGS-SPIDER FITTINGS: (SS 316)

Transparent glass is now being increasingly used to enhance visibility of the interior elements of buildings from the outside. Transparent glass facades also serve to create an concept of space and openness give the signature of modern design.

With continuous advances in architectural technology. Glass Curtain Walls are finding increased usage in more and more applications. Glass curtain walls have evolved from to singular aluminium alloy frame to serialized frameless glass curtain walls. These would include Fin type, Hanger Type, Hanger plus spider fitting type and full spider fitting type.

Spider Fitting frameless glass curtain walls connect glass together in an open space using various types of light steel structures via various types of spider fitting members to form flexible and unobstructed curtain wall facade.

### UNIQUENESS OF A SPIDER FITTING LIES IN:

- Flexibility in forming structures which withstand wind pressure, also allowing larger areas to be covered.
- Maintaining Safety of Aluminium Alloy frame.
- Eliminate disadvantages of Aluminium Frame in restrictions of constructed structures.
- Provide unobstructed, full, neat and bright outlook to the Architectural Structure. Such systems also enhance the Artistic and Technical capabilities of Designers and Architects.

### CUSTOMISED FITTINGS FOR PROJECTS

Ozone is able to organise Special Purpose Stainless Steel Fittings for special applications (These are however subject to design quantity and lead time limitations).





Alubond® U.S.A					STD			TECHNICAL DATA SHEET		
					THICKNESS: 4mm		ALLOY SERIES: 1) 1XXX 2) 3XXX 3) 5XXX			
S.NO	PROPERTIES	TOLERANCE	STANDARD	UNIT	AL-1XXX	AL-3XXX	AL-5XXX			
1	Skin thickness	±0.05	As per manufacture	mm	0.5					
2	Weight	±0.5	As per manufacture	kg/m <sup>2</sup>	5.5					
3	Panel bow	±0.8 in length or width	As per manufacture	%	0.8% max either length or width					
4	Squareness	±5mm	As per manufacture	mm	5mm max					
5	Standard Width	± 2	As per manufacture	mm	1250 & 1500					
6	Panel Thickness	± 0.03	As per manufacture	mm	4					
7	Special width min quantity 2000sqm (incl 1000mm)	± 2	As per manufacture	mm	Upto 2000 max	Upto 1750 max	Upto 1750 max			
FIRE BEHAVIOUR PROPERTIES										
Fire behaviour		FR Classification	Section Number	Core	Document Number	Testing Agency				
8	Din 4102 part 1	B2	6.2	Flame Retardant additives added Low density polyethylene core	304838	EXOVA WARRINGTON-UK				
9	BS 476 part 6&7	part 6 class 0 part 7 class 1	6&7		5062	EXOVA WARRINGTON-UK				
10	EN 13501-1	E	1		230005025-2	MPA NRW GERMANY				
11	AS/NZS 1530	Ignitability index :0 Flame spread index :0 Heat evolved index :0 Smoke developed index: 0	3		FNE 9907	CSIRO MATERIALS SCIENCE & ENGINEERING				
MECHANICAL PROPERTIES										
12	section modulus(W)		DIN 53293	cm <sup>3</sup> /m	1.62	1.7	1.75			
13	Rigidity (Poisson's ratio μ = 0.3)		DIN 53294	KN cm <sup>2</sup> /m	2300	2320	2400			
14	Aloy		EN 573-3	.....	EN AW- 1100	EN AW- 3105	EN AW- 5005A (Al mg1)			
15	Elongation		EN 515	.....	H16/H18	H14/H16	H16/18			
16	Modulus of Elasticity		EN 1999 1-1	N/mm2	≥70000					
17	Tensile Strength of Aluminium		EN 485-2	N/mm2	R <sub>m</sub> ≥ 135	R <sub>m</sub> ≥ 140	R <sub>m</sub> ≥ 145			
18	0.2% Proof Stress		EN 485-2	N/mm2	R <sub>0.2</sub> ≥ 85	R <sub>0.2</sub> ≥ 90	R <sub>0.2</sub> ≥ 95			
19	Elongation		EN 485-2	%	A <sub>50</sub> ≥ 6	A <sub>50</sub> ≥ 5	A <sub>50</sub> ≥ 5			
20	Linear Thermal Expansion		EN 1999 1-1	mm/m @100°C	2.4					
CORE PROPERTIES										
21	Core		ASTM D 1238	.....	Excellent performance of LDPE Standard core					
22	Density		ASTM D792	G/cc	0.920-0.940					
23	Hardness		ASTM D 2240	Type shore D scale	55-65					
24	Color		.....	.....	Off white					
SURFACE FINISH PROPERTIES										
25	Type/finish		.....	.....	PVDF / FEVE					
26	Gloss @60°C		ECCA T2	%	20-45 / 20-80					
27	Pencil hardness		ECCA T4	.....	min HB					
28	Back coat		.....	micron	5 to 13					
ACOUSTICAL PROPERTIES										
29	Sound absorbtion factor		ISO 354	....	0.05					
30	Sound transmission Loss (Rw)		ASTM E90	dB	STC: 26					
THERMAL PROPERTIES										
31	Thermal resistance R		ASTM C518	M <sup>2</sup> K/W	0.007		0.009			
32	Temperature resistance			°C	-50....+80					

For More information please visit [www.alubond.com](http://www.alubond.com)



## Alstrong Aluminium Composite Panel technical Specification

The Aluminium composite panel should consist of 3mm thickness of core in which Low Density Polyethylene (LDPE) 70% & High Density Polyethylene (HDPE) 30% sandwiched between two Aluminium skins AL 3105 H16 / 3003 H 24 of 0.5mm thickness. Aluminium alloy sheet making a total panel thickness of 4mm. The weight of ACP should be 5.5 kg/m<sup>2</sup>. The top surface shall be finished with PVDF KAYNAR 500 based coating and service coating on the reverse side shall be with a polymer paint. Coating shall conform to AAMA standards. The Aluminium meets as per standard ASTM, EN, BS..

NO	ACP	STANDARD	UNIT	ALSTRONG
1	ACP Thickness		mm	4 mm (± . 2mm)
2	Al. Skin Thickness	-	mm	0.5 ( ± . 03 )
3	Weight	-	Kg/m <sup>2</sup>	5.5 Kg (± 5%)
<b>MECHANICAL PROPERTIES</b>				
1	Alloy	EN 573-3	-	AA 3000 Series
2	Temper	EN 515	-	H24
3	Modulus of Elasticity	EN 1999 1-1	N/mm <sup>2</sup>	60000 to 70000
4	Tensile Strength of Aluminium	EN 485-2	N/mm <sup>2</sup>	140 – 150
5	Elongation	EN 485-2	%	3
<b>CORE MATERIAL</b>				
1	Material	-	-	LDPE + HDPE
<b>SURFACE FINISH PROPERTIES</b>				
1	Type / Finish	-	-	PVDF
2	Pencil Hardness	ECCA T4 EN 13523-4	-	2 H
3	Humidity Resistance	ASTM D 2247		no change after 3000 hrs
4	Salt Spray Resistance	ASTM B 117		no sign after 3000 hrs
5	Finish Thickness		micron	25 – 28 micron
<b>ACOUSTIC PROPERTIES</b>				
1	Sound Absorption Factor	ISO 354		0.05
2	Sound Transmission Loss	ASTM E90	dB	25
<b>THERMAL PROPERTIES</b>				
1	Thermal Resistance (R )	ASTM C 1363	m <sup>2</sup> K/W	0.24
2	Linear Thermal Expansion	ASTM D-696	mm/m @100°C	2.4
<b>ADHESIVE FILM</b>				
1	Manufacture	-	-	DuPont
2	Color	-	-	white
3	Thickness	-	micron	50 – 70
4	Protective film on ACP	-	micron	80
5	Shelf Life of Protective film	-	days	45 days

ALSTRONG ENTERPRISES INDIA (PVT) LIMITED

Corporate office: E-40/3, Okhla Industrial Area Phase-II, New Delhi-110020 Tel: +91 11 43122777 | Fax: +91 11 43122888 Email: [info@alstrongindia.com](mailto:info@alstrongindia.com)  
Registered Office: 75, Khirki Village, Malviya Nagar, New Delhi- 110017

[www.alstrongindia.com](http://www.alstrongindia.com)

*The Concept of  
Space & Openness*



SHOWER HINGES & GLASS CONNECTORS



Shower Cubicle  
Hardware

**total**  
**VISION<sup>tm</sup>**

For details and concepts please refer "Frameless Door and Showers Ready Reckoner"

[www.ozone-india.com](http://www.ozone-india.com)

5

## Technical Data and Specifications

### Physical properties of uPVC Profiles and Windows

#### uPVC Profiles

The profiles for windows and doors are made of high impact hard PVC. They are manufactured through the extrusion of a mixture of thermoplastic polymer, polyvinyl chloride (PVC) as the main component and various additives.

The material bases for raw PVC are ethylene and salt. Ethylene is manufactured from oil feedstocks or LNG and chlorine manufactured from Sodium Chloride (salt). Ethylene and chlorine react to form vinyl chloride, a chemical gas which through polymerization produces PVC. The resulting product is a white powder. To increase the impact strength PVC for window profiles is mixed with an acrylic ester to form a copolymer. The copolymer is mixed with additives to improve:

- Mechanical strength, rigidity and hardness
- Impact strength with notch sensitivity
- Thermal stability for applicable in the temperature range from  $-30^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
- Abrasion resistance,
- Flame –resistant and self-extinguishing when away from the flame.
- Chemical and weather resistance
- Weldability
- Dimensional stability



### Physical properties of uPVC

Bulk Density (Specific Weight)	1.41 – 1.46 g/cm <sup>3</sup>
Tensile strength	44 N/mm <sup>2</sup>
Elongation elasticity coefficient	≥2.220 N/mm <sup>2</sup>
Impact strength (RT)	≥20 KJ/m <sup>2</sup>
Impact resistance (- 40°C)	No rupture
Linear expansion coefficient	0.8x10 <sup>-4</sup> /°K
Vicat softening temperature	78-82°C (Depending on the applied formula) Colour change should not go beyond level 4 of the grey scale in accordance with ISO 105- A 03
Weather resistance	

### Performance of windows

The windows comply to DIN 18055 or BS 6375: Part 1. The actual performance achieved depends on window style, design and size as well as profile combination used.

### Air Permeability

The air permeability shall be tested in accordance with BS 5368: Part 1, EN 42. The value shall be as small as possible to avoid energy loss for e.g. air-conditioning, maximum 1m<sup>3</sup>/m/hr at an air pressure of 10 Pa. typical value for VEKA tilt and turn windows, casements is 0.1m<sup>3</sup>/m/hr.

### Watertightness

The water tightness is tested in accordance with BS 5368: Part 2 EN 86. There shall be no leakage at a certain wind pressure, amount of sprayed water and time. Typical classification for tilt and turn is group B and C, 300 and 600 Pa.

### Wind Resistance

The wind resistance is tested in accordance with BS 5368: Part 3, EN 77. The maximum allowed deflection is 1/300 or 8mm between two edges of an insulating glass unit. Gust of wind is a repeated test (50 times) at +/- 1,000 Pa for classification "C". There shall be no permanent residual deformation, damage, or functional defects.

### Thermal Insulation

The thermal insulation value is an important factor to save energy for heating and air-conditioning. The VEKA multichambered profiles have a U-value of 1.4-1.8 W/m<sup>2</sup>K.

Using single, double or specially treated glass units the U-values range between 6.0-1.0 W/m<sup>2</sup>K where the smaller value is the better one.

### Sound Insulation

The double sealed window design (inside and outside weather stripping) along with the reinforced multichambered profiles results in excellent sound insulation. Depending on the chosen glass unit the reduction is Rw 30 dB-42 dB for e.g. noisy city centers.

### Fire Classification

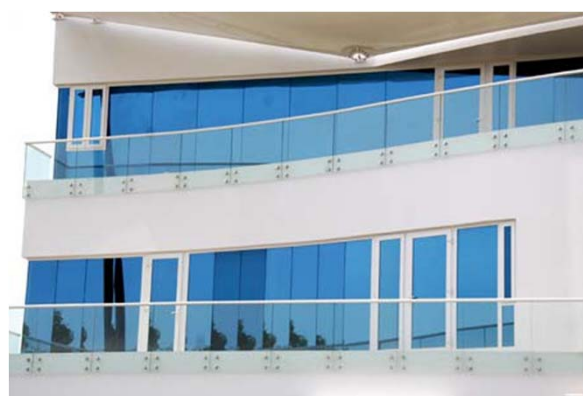
uPVC is classified as self-extinguishing. The VEKA material has been tested to BS 476: Part 7. It has a class one surface spread of flame. VEKA windows have been used for many years in high rise buildings in many countries in the world e.g. Jinan/China, Abu Dhabi/ UAE, besides Europe.

### Tilt & Turns, French, Side Hung Window

Maximum sash area is 2.1 m<sup>2</sup>

Maximum sash width 1300 mm

Maximum sash height 2150 mm



### Bottom and Top Hung

Bottom hung and top hung windows are mainly recommended for rest rooms where only ventilation is required. For these windows fix removable type fly screens are recommended if required.



**Sliding**

Sliding elements are smooth running, durability, easy operation and handling. Quiet and smooth running of the sash is ensured by bogies with premium needle roller bearings which can bear sashes of up to 140 kg in different designs. The sliding elements are locked by means of a standard window handle. Special drive rods with backsets of 7.5 mm and 15.5 mm are used to enable a positive mushroom-head closure between the frame and the sash materials.

	Minimum	Maximum
Sash width	600 mm	2,000 mm
Sash height	650 mm	2,400 mm
Sash size		4.8 m²
Sash weight		180 kg



**Tilt and Slide**

Panorama tilt and sliding system is designed for safe opening and closing of the window for ventilation and cleaning. The excellent sealing ensure high protection against rain, damp, thermal, sound, and draft insulation due to excellent sealing properties. Burglar resistant fittings are optional for customers requiring special protection.

	Minimum	Maximum
Sash width	600 mm	1,650 mm
Sash height	420 mm	2,300 mm
Sash size		4.8 m²
Sash weight		150 kg







## Glass

Typical specifications of commonly used Single and Double Glass:

Glazing	Double 6 mm STOPSOL CLASSIC CLEAR (#2) 12 mm Airspace 6 mm CLEAR	Single 6 mm STOPSOL SUPERSILVER DARK BLUE (#2)	6 mm STOPSOL CLASSIC BRONZE (#2)	6 mm STOPSOL CLASSIC DARK BLUE (#2)	6 mm STOPSOL CLASSIC CLEAR (#2)	6 mm STOPSOL CLASSIC GREEN (#2)
Direct Energy Transmission (Te)	38	30	29	20	46	22
Energy Reflection (Pe)	23	12	11	10	21	11
Total Energy Absorption (ae)	39	58	60	70	33	67
Solar abs Glass 1 (ae (1) )	34					
Solar abs Glass 2 (ae (2) )	5					
Solar factor (g)	46	45	45	38	55	39
Shading coefficient (SC)	0.53	0.52	0.52	0.44	0.63	0.45
UV Transmission (UV)	13	15	5	8	17	5
Ug-Value (W/(m <sup>2</sup> .°K))	2.8	5.7	5.7	5.7	5.7	5.7

# Panorama Windows Co. LLC

## 13. Approvals Copy from Previous Client

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

Sultanate of Oman  
Royal Court Affairs  
Technical Office for Tender Committee  
The Palace - Muscat

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



سلطنة عُمان  
مُؤَدَّةُ الدَّيَارِ السُّلْطَانِيَّةِ  
الْمَكْتَبَةُ التَّقْنِيَّةُ لِللِّجَانِ الْمُنَافَسَاتِ  
الْقَصْر - مَسْقَط

Ref : MTC/REG -43/2012 - 2125

Date : 10 May 2012

**Panorama Windows Co. LLC.**  
**P.O. Box: 379, Sohar**  
**Postal Code: 322.**

**Fax: 26 701 703**

After Compliments,

**Registration of Companies with the Royal Court Affairs**  
**For Fabrication, Supplying and Installation of**  
**UPVC & Aluminium Doors & Windows.**

We refer to your Letter Ref: 1/RCA/March/2012, Dated: 28/03/2012.  
This is to inform you that your Company has been Registered with the  
Royal Court Affairs, Technical Office for Tender Committees. You will be  
invited in our future Tenders for Supplying and Installation of UPVC &  
Aluminium Doors & Windows.

Regards,

8

**Eng./Habib bin Ismail Al-Suwaid**  
**Director General of Technical Office**  
**For Tender Committees**



CC: Registration File

ARH-PANORAMA - RCA-REG - (CORR - 43) 10/07/2012

**SULTANATE OF OMAN**

**Ministry of Defence**  
Office of the Under Secretary  
P.O. Box 113 Muscat  
Postal Code 113



**سُلْطَانَةُ عُومَان**  
**وَزَارَةُ الدِّفَاعِ**  
**مَكْتَبُ الْوَكِيلِ**  
م.ب. ١١٣ مسقط  
الرمز البريدي: ١١٣

هاتف: ٢٤٣٣٥٢٩٧

فاكس: ٢٤٣٣٥٩٨٤

البريد الإلكتروني: dmri@modus.gov.om

الرقم: ١٦.٣٣ - (٢٠١٢) ١٤٧٤٢ / ١٠١٠١

التاريخ: ٠٥ شعبان ١٤٣٣ هـ

٢٥ يونيو ٢٠١٢ م

- المحترمون  
فاكس: ٢٦٧٠١٧٠٣

الأفاضل / نوافذ بانوراما ش.م.م  
الرمز البريدي: ٣٢٢ ص ب: ٣٧٩

الموضوع: تسجيل شركتكم لدى الوزارة

إيماء إلى خطابكم حول رغبتكم تسجيل شركتكم في وزارة الدفاع، نود أن نؤكد لكم بأنه قد تم تسجيل شركتكم في هذه الوزارة وفقا للأنشطة المذكورة في الملحق المرفق بشهادة التسجيل.

عليه يرجى إرسال مندوبكم إلى المكتب الخارجي لأمانة لجنة المناقصات بالبوابة رقم (١٤) في معسكر المرتفعة لاستلام أصل الشهادة أنفة الذكر وذلك بين الساعة التاسعة و الواحدة بعد الظهر من يوم السبت إلى يوم الأربعاء من كل أسبوع.

هذا وتفضلوا بقبول فائق الاحترام،،

مختار / ضابط مدني (٣٥)  
زكي بن محمد بن أحمد البوسعيدي  
نائب مدير دائرة بحوث الأسواق والمعلومات





سلطنة عُمان  
وزارة الدفاع  
مكتب الوكيل  
مسقط



رقم التسجيل :  
رقم المستفيد بالوزارة : ١٤٧٤٧  
رقم السجل التجاري : ١٠٢٤٤٨١

## شهادة تسجيل

نشاهد مكتب وكيل وزارة الدفاع بأن / نواف بن نورا ش.م.م

مقره / مقرها الرئيسي في / صحار قد تم تسجيله / تسجيلها كمصنع بالدرجة الممتازة تحت الرقم المذكور أعلاه للأنشطة بالملحق المرفق، وذلك وفقا للأحكام والنظم المعمول بها في وزارة الدفاع.

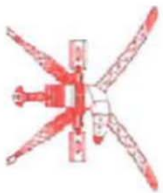
تبدأ صلاحية هذه الشهادة بتاريخ ٢٣ / ٠٦ / ٢٠١٢ م وتنتهي صلاحيتها بتاريخ ٢٢ / ٠٦ / ٢٠١٧ م

### تنبيه :

- يجب تقديم طلب التجديد قبل شهر من تاريخ انتهاء التسجيل.
- تنشأ أوامر الشراء للموردين بعد التأكد من صلاحية التسجيل.
- إذا لم يجدد المورد تسجيله فسيعتبر لاغيا.
- هواتف للاستفسار : ٢٤٣٣٦٠٤٩ / ٢٤٣٣٦٠٩ / ٢٤٣٣٥٨٠٣
- البريد الإلكتروني : dmri@modus.gov.om

يعتمد : دائرة بحوث الأسواق والمعلومات





Under Secretary Office

Market Research & Information

User :D15196

### Suppliers With Detailed Report

Supplier Name/No: PANORAMA WINDOWS COMPANY(14742)

Site: SOHAR

Address: P.O.Box-379 , PC-322  
Oman

Tel -26701700 Fax -26701703 Email:INFO@PANORAMAWINDOWS.NET

Contact Name: MR. EMAD FATHI

Owner: SALAH MURTATHA AHMED SULTAN

C/R No. 1024481 App. Dt. 23-JUN-12 Exp. Dt. 22-JUN-17 Type LOCAL Grade 1

Commodity	Product	Manufacturer	Brand	Supplier Role
ALUMINIUM PRODUCTS	ALUMINIUM: DOORS AND WINDOWS			MANUFACTURER
BUILDING MATERIALS	BUILDING M: UPVC DOORS			MANUFACTURER
ALUMINIUM PRODUCTS	ALUMINIUM: BUILDING MATERIAL			MANUFACTURER



# Panorama Windows Co. LLC

## 14. Project Completion Certificate

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

## Letters of Appreciation

**ARC**

international llc



أرك العالمية ش.م.م

Arc / PMS / 1093 / 10

20 June 2010

M/s. Panorama Windows Co. LLC  
P.O. Box - 379  
Postal Code - 322, Sohar  
Sultanate of Oman

Attn: Mr. Salah Murthada Sultan

**Muscat Golf course project – "MUSACT HILLS"**  
**Supply and Installation of UPVC Windows & Doors**

In the advent of recent heavy rain and wind associated with cyclone PHET, the windows installed by your company M/s. Panorama Windows Co. LLC, proved beyond doubt our recommendation of your products at the above project. Apart from all the salient features of your product which enabled your product to be selected, it is indeed worth mentioning that your windows provided full protection and there was absolutely no sign of water leak / penetration.

We, Arc International LLC, as the Technical Advisor to the Muscat Golf Course Project – "Muscat Hills", offer our sincere appreciation for your Windows & Doors and assure our full endorsement of your products.

Thanks and regards,

**P.V. Dasappan**  
Managing Director & Project Management Consultant

---

ص.ب: ٨٣٣، الرمز البريدي: ١١١، سلطنة عمان، هاتف: ٢٤٤٧٨٤٩٨، فاكس: ٢٤٤٧٨٣٠٢، س.ب: ١/٧٩٤٦٥/٥  
P.O. Box 833, Postal Code: 111, Sultanate of Oman, Phone: 24478498, Fax: 24478302, C.R. No.: 1/79465/5  
البريد الإلكتروني: E-mail: arc\_oman@hotmail.com



**LARSEN & TOUBRO (OMAN) LLC**

C.R. No. : 1/40304/4



**لارسن وتوبرو وشركاه (عمان) ش.م.م**

س.ت : ١/٤٠٣٠٤/٤

Ref: LTO/MGCP/NSC/PWC/105  
31<sup>st</sup> January 2011

Tel: 24564342  
Fax: 26844289

M/s Panorama Windows Co.LLC  
P O Box: 2837, Ruwi  
Postal Code-112,  
Sultanate of Oman.

**Kind Attn.: Mr. Thorkild W.Mai - CEO**

**Project: Muscat Golf Course Project – Villas, Apartments & Infrastructure.**  
**Sub: Supply and Installation of UPVC Doors & Windows**

Dear Sir,

The Management is highly pleased to inform that, M/s.Panorama Windows has successfully completed their scope of work (Supply and Installation of UPVC Doors & Windows) to our satisfaction and client/consultant approval.

Wishing similar success in their future assignments.

Thanking you,

Yours faithfully,

For Larsen & Toubro (Oman) LLC.

**G.Ramasubbu**  
**Project Manager**

TO P.O.  
31 JAN 2011  
AT 9:40 AM  
@

P.O. Box : 598, Ruwi  
Postal Code : 112  
Sultanate of Oman  
Tel. : (968) 24797445, 24797466, 24762200  
Fax : (968) 24797024  
E-mail : Intom01@omantel.net.om /  
: Itogen@omantel.net.om



ص.ب: ٥٩٨ روي  
الرمز البريدي: ١١٢  
سلطنة عمان  
تليفون: ٢٤٧٩٧٤٤٥، ٢٤٧٩٧٤٦٦، ٢٤٧١٢٢٠٠ (٩٦٨)  
فاكس: ٢٤٧٩٧٠٢٤ (٩٦٨)  
البريد الإلكتروني: / Intom01@omantel.net.om  
Itogen@omantel.net.om :



دوجلاس او ايتش اي ش.م.م

**DOUGLAS OHI LLC**

CIVIL ENGINEERING AND BUILDING CONTRACTORS

P.O. Box 1639, P.C. 114, Hay Al Mina, Sultanate of Oman, C.R. No. 1/12445/5

Tel.: 24590540 (12 Lines), Fax: 24594857, E-mail : ohidoug@omantel.net.om



24<sup>th</sup> Jan 2011

Panorama Windows Co. LLC

P.O. Box 379

P.C.322

Sohar

Sultanate of Oman

Dear Sirs

UPVC Windows

Just a short line to thank you for the service and quality of your product you have been installing on our sites over the last 18 months.

All of our clients have been very happy with your product.

We have put you under pressure at times in short notice installations and you have not let us down at all.

Keep up the good work.

Yours Faithfully

Douglas OHI LLC.

Neil Pidcock

Joinery & Interiors Division Manager



DOHI/B46a/07/03

AN ISO 9001, ISO 14001 & OHSAS 18001 CERTIFIED COMPANY



GROUP OF COMPANIES IN ASSOCIATION WITH THE



Inter serve GROUP OF COMPANIES, U.K.



DOUGLAS OHI LLC.

# Panorama Windows Co. LLC

## 15. Quality, HSE Plan / Policies

**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman, Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panaromawindows.net](http://www.panaromawindows.net)  
**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03

## **Health Safety and Environmental Policy of Panorama**

### **Health**

Ensure that workers and office staff is not getting in contact with dangerous materials and that the working environment is clean and safe.

### **Safety**

#### **General**

- Ensure that Panorama staff working or visiting 3rd party sites at any time respect and act according to HSE regulation and standards for the sites.
- Ensure that the workplace is safe.
- Evaluate machines and appliances based on safety standards prior to acquisition and only procure high ranked equipment.
- Warning signs shall whenever required be provided in the language of the workers.
- Machine operators shall be trained and fully aware of safety measures.
- Ensure that the safety equipment on machines and appliances are working at all time.
- Test fire hydrant system weekly.
- Ensure that Product Safety Specifications are available for Raw Materials and Finished Products.
- Prevent unauthorised staff to enter the production area without special permission and only in guidance of a member of management or a production supervisor.

### **Working Conditions**

- Provide air condition in the office and air fans in some areas of the factory shed.
- Ensure appropriate ventilation.
- Provide good illumination.
- Provide noise reduction when required.
- Provide washing facilities and toilets.

### **Protective Clothing**

- Provide helmets for installation and factory staff.
- Provide safety shoes.
- Provide protective eyeglasses to factory workers and installation staff.
- Provide ear protection for operators of the saws.
- Provide hand gloves.
- Have a First Aid Box available in the Office, in the Factory Shed, and with the Installation Teams.

### **Environment**

- Sell uPVC and steel waste for recycling to product traders before the skips are full.
- Dispose of packing material and other waste in an orderly manner according to the regulation and standards set by the Sohar Industrial Estate.
- Maintain and keep the factory clean and tidy any time.
- Ensure that toilet and bath facilities are clean and kept in a good condition.

### **Training and Awareness**

Ensure that all members of staff are aware of the HSE Guidelines and carry out practical training whenever required.

### **HSE Committee**

The HSE Committee of Panorama with the following members:

CEO, Operations Manager, and Supervisors shall meet once every second month to address, review, and improve HSE issues and awareness.

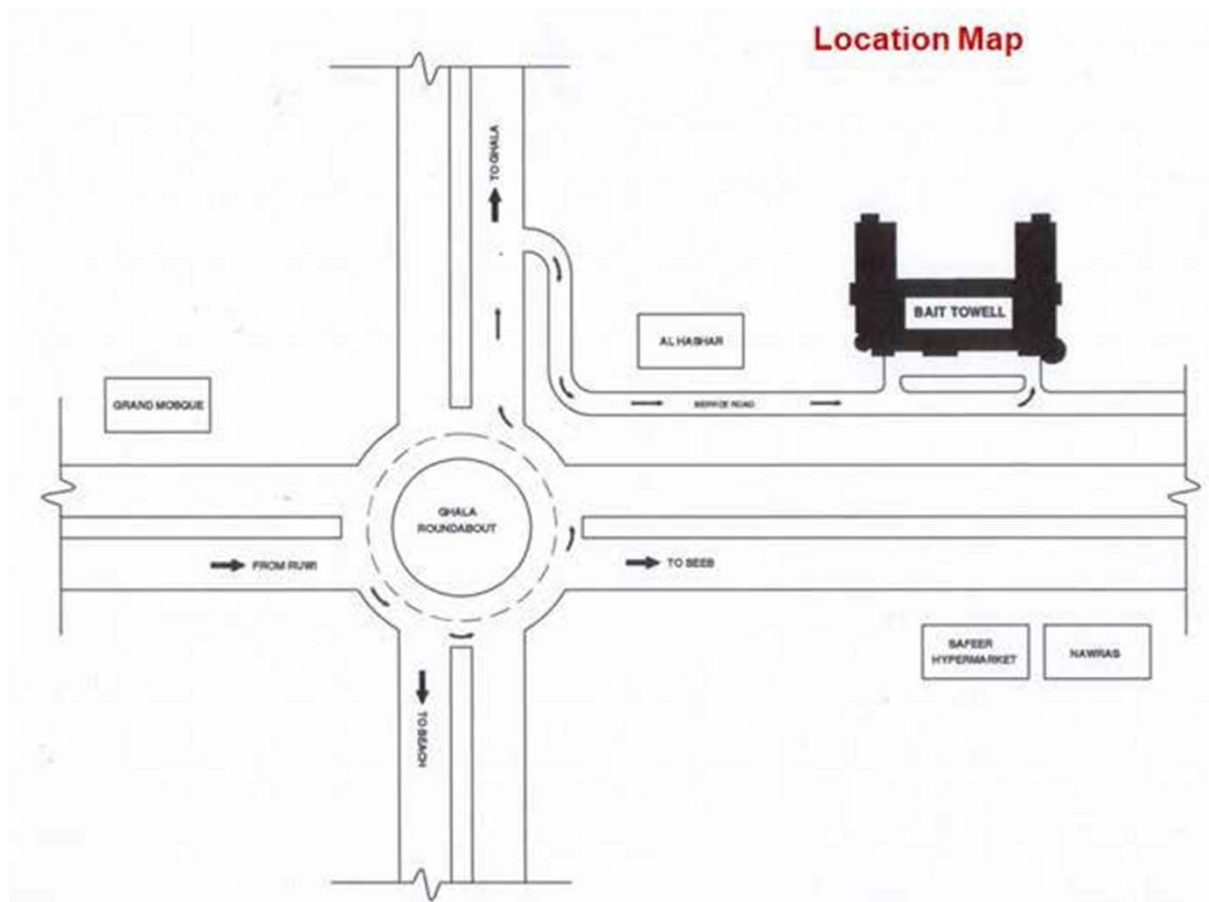




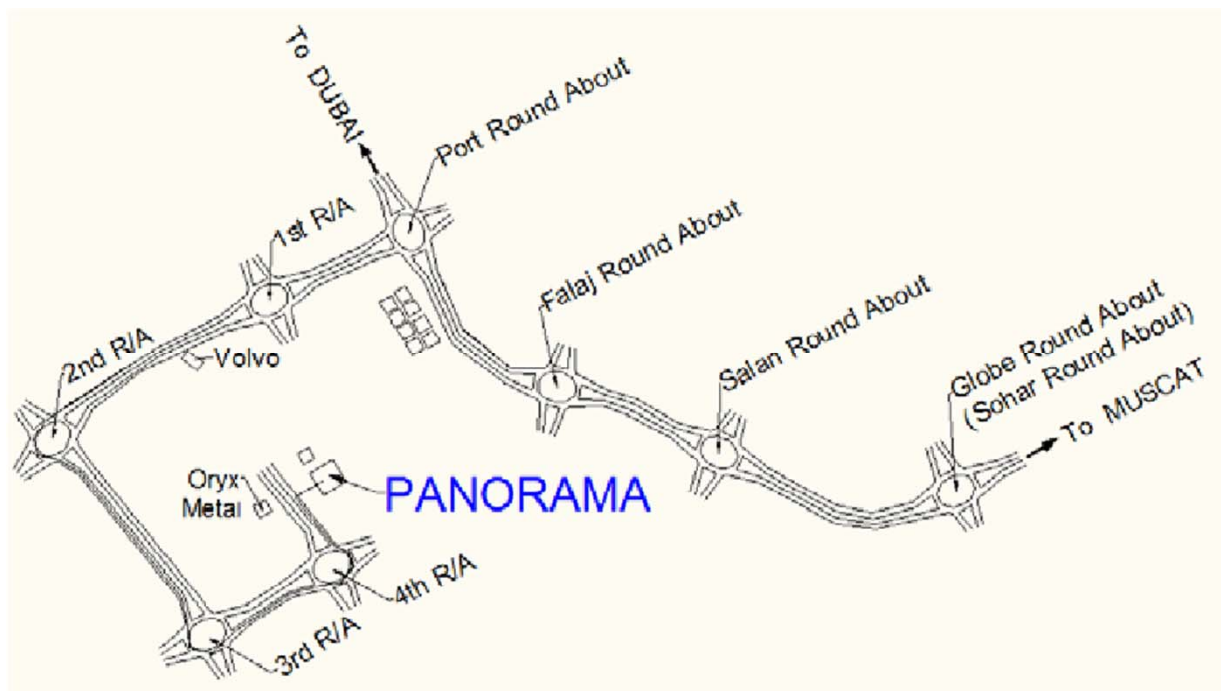




## Muscat Sales Office



## Sohar Factory



**Sales Office** Towell Group Headquarters, First Floor, Bait Towell, Azaiba, Muscat, Sultanate of Oman,  
Tel.: +968 245 265 09 Fax: +968 245 261 98, [info@panoramawindows.net](mailto:info@panoramawindows.net), [www.panoramawindows.net](http://www.panoramawindows.net)

**Factory** P.O. Box 379, P.C.322, Sohar Industrial Estate, Sultanate of Oman, Tel.: +968 267 017 00 Fax: +968 267 017 03