



vertex engineering

ڤيرٽيڪس انجنيئرنگ

# COMPANY PROFILE



*The Complete Solution for*

- *Survey Engineering*
- *Scan to BIM*
- *Geographic Information Systems*
- *Calibration Services*

[www.vertex.com.qa](http://www.vertex.com.qa)

# Introduction

The only way  
to do great work  
**is to love  
what you do.**



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## ABOUT US

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VERTEX ENGINEERING is a Qatari based Company specializing in the various fields of Surveying Engineering Project & Engineering Services; GIS, 3D Laser Scanning and Building Information Modelling, Structural & Deformation Monitoring; Reverse Engineering and Repair and Calibration Service of T&M Instruments.



# Company

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*Our mission is to be the first choice provider of the Surveying, Engineering Outsourcing & Maintenance Projects & Services with state of the art systems, equipment and services with complete back up support for our valued clients.*

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## DEDICATION

We are dedicated to serving, satisfying and retaining existing customers and to win new ones through excellence performance.

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## OUR VISION

To exceed the client's expectations by providing innovative, systematic and goal-orientated quality services and solutions to enable them to operate at fullest potential with competitive edge in modern industry.

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## OUR MISSION

To provide our clients with Efficient, Cost-Effective and Quality services and solutions by continuous review and improvement in our Services and Facilities taking into account the exact needs and expectations of our clients.

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## COMMITMENT

"We will never walk away from the project and the tasks you entrusted to us to fulfil and we will always put forth the effort and resources to do whatever it takes to complete and deliver your project on time"



## OUR VALUE



VERTEX ENGINEERING is a Qatari based Company specializing in the various fields of Surveying Engineering Project & Surveying Consultancy Services; GIS, 3D Laser Scanning and Building Information Modelling, Structural & Deformation Monitoring; Reverse Engineering, Quantity Surveying; Construction Cost Consulting & Outsourcing Services and Repair and Calibration Service of T&M Instruments.

Our mission is to be the first choice provider of the Surveying, Engineering Outsourcing & Maintenance Projects & Services with state of the art systems, equipment and services with complete back up support for our valued clients.



## OUR TEAM

Vertex Engineering has a highly professional and experienced team. Our Engineers are licensed, trained, and qualified. In order to keep them updated on the latest technology and products to enhance and manage security, we undergo regular training and attended courses. We have the ability, as well as hands on-experience, to handle multiple scenarios.



## SERVICES

We offer dynamic range of innovative and cost-effective solutions to various field in survey engineering including topographic surveys, Utility Mapping, As-Built surveys , Measured building surveys , Scan to BIM services, Monitoring and structural survey and Building Information Modelling.



## WHY CHOOSE US?

VERTEX ENGINEERING combines the latest in surveying technology and highly skilled staff to deliver cost-effective high accuracy surveys in both hardcopy and digital mediums, tailored to meet your requirements. See some of our recent survey projects.

- ❖ Professional & Friendly Staff
- ❖ Training & Technology
- ❖ One Stop Shop Approach
- ❖ Sustainable & Considerate
- ❖ Proven Track Record
- ❖ Honest Transparent Pricing

# Our Services

**THE PROFESSIONAL & FUN OF WORKING.**

Vertex Engineering is proud to offer the state of the art technology in Topographic Surveying, As-Built Surveying, Contour Mapping, Utility Scanning, 3D Modelling, Scan-BIM Services, Reverse Engineering, GIS , Pre-Construction & Post-Construction Survey Services, Survey Consultancy and Calibration Services. Since its inception, Vertex Engineering has developed an excellent sourcing network all over the Middle East.

Our surveyors provide many different types of surveys for projects that span a wide spectrum, whether you need a survey for your residential property, a new commercial building, or a city improvement, Vertex Engineering can help.



## **LAND SURVEY SERVICES**

We specialize in construction layouts, topographical surveys, boundaries, subdivision design, title and boundary surveys, pipelines, gas and oil well locations, unit surveys, digitising, map reproduction

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## **3D LASER SCANNING**

State of the art laser scanners capture more than 1 million points per second and capture everything in their field of vision, 360° horizontally and vertically. Vertex Engineering own ....



## **ENGINEERING SURVEY**

At Survey Solutions we have a background in design engineering, contracting and civil engineering projects, giving us a detailed understanding of the survey needs .....

# MAIN TEAM

We have a large pool of qualified and experienced engineering professionals covering major discipline in Survey Engineering, 3D Scanning Experts, BIM, Project Management and Operation / Maintenance. Our core engineering database of the engineers and designers have had extensive experience both in the design offices and at construction sites and have first-hand exposure to working in demanding international environments.



## GIS SERVICES

Geographic Information Systems (GIS) captures, stores, analyzes, manages and presents data linked to location. Vertex Surveying stays current with ArcMap (ESRI Software)....



## BUILDING INFORMATION MODELLING

BIM as a process is a holistic approach to design and construction, which provides intelligent information and a shared knowledge resource that is available .....



## CALIBRATION AND SERVICE CENTER

Vertex Engineering has always offered high-quality calibration and repair services for your survey equipment, but now our workshop is even better.



# Surveying Services

## TOPOGRAPHIC SURVEYING

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Topographic surveys are true to scale maps, drawings, models and 3D files which include all natural and man-made features. These features are represented by contours, text, symbols, and spot levels..

We capture data at your project using many traditional and advanced survey techniques some of which include high precision GPS, total station, UAV and laser scanner. The collected data is processed in-house through the use of dedicated mapping software and stringent QA procedures to ensure we deliver consistent and reliable results.

Our topographic survey division is committed to deliver the survey you want whether that be traditional deliverables such as AutoCAD, MICROSTATION and hard copies or newer deliverables such as Civil 3D and REVIT

## CONTOUR MAPPING

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A civil engineer studies the contours and finds out the nature of the ground to identify suitable site for the project works to be taken up. By drawing the section in the plan, it is possible to find out profile of the ground along that line. It helps in finding out depth of cutting and filling, if formation level of road/railway is decided.

## SETTING OUT SERVICES

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Setting Out is the process of transferring the coordinates of a building, road or structure from design drawings to the ground/site.

We use high precision total station and GPS for setting out. Total station is generally used on high precision building and structure works with GPS used on civil contracts such as road and infrastructure projects. We supply setting out points in whichever coordinate system you require and to millimeter / sub-millimeter accuracies.



## **CONSTRUCTION SURVEYS**

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The basic motive of the so-called construction surveys is to stake out reference points as per the design that will guide the construction of newly designed / planned structures or buildings. These services are of great assistance to check manual errors from creeping in during various stages of execution of a designed construction at site, launching of constructed ship from dry dock, Verticality and tilt check for high rise buildings etc.

## **PRE - CONSTRUCTION SERVICES**

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A pre-construction survey is the depiction of existing condition of the target site and neighbouring infrastructure prior to the commencement of a construction design activity. This survey provides the client with an accurate database about the condition of the area. This survey is also undertaken as a tool asset mapping at the site.

## **AS - BUILT SURVEYS**

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An as-built survey is normally performed in order to compare the position and dimension of a constructed feature compared to its designed dimensions and position. As-built surveys form a vital part of the quality control in any construction project. As-built survey reports are sometimes resorted to as and when some issue regarding contractual obligations arise.

## **SURVEY CONTRACTING AND CONSULTANCY**

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Vertex Engineering can attribute to its name without doubt, one of the best-in-class team of surveying professionals.

As it is, we provide the service of our team to third party consultants and companies on contract basis.



# 3D Laser Scanning Services

## 3D LASER SCANNING

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As-built records of assets are often out of date or non-existent, laser scanning provides as-built data quickly, bringing the asset to your desktop. State of the art laser scanners capture more than 1 million points per second and capture everything in their field of vision, 360° horizontally and vertically. Vertex Engineering own a variety of different high-spec laser scanners which can produce the laser scan data that is required for your project.

Laser scanning produces point clouds and bubble views which bring the scanned area to your desktop without the need for any site visits anymore. The data can easily be linked to a variety of design packages which allows for efficient design work in a fully 3-dimensional environment.

## ARCHITECTURE

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### APPLICATIONS:

*Façades inspection:* 3D dimensional inspection of building shells and facade components before final assembly.

*Scan-to-BIM:* Delivering real world information into BIM models.

*Built environment:* Precise geometrical recording of existing properties as the basis for conversions or extensions.

*Space optimization:* By prior creation of 3D models.

## REVERSE ENGINEERING

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### APPLICATIONS:

*Reverse engineering:* Copies of products and components for which there are no construction plans and/or CAD data available

*Interior fixtures and fittings:* Precise 3D CAD documentation of complex interiors of ships, cars or aircrafts as a basis for planning of conversions

*Manufacturing documentation:* Complete 3D documentation of the manufacturing status of complex machine components



## CONSTRUCTION

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### APPLICATIONS:

**Structural analysis and maintenance:** Rapid and cost effective control of the specified load-bearing capacity of supporting structures as well as wear and tear.

**Construction progress monitoring:** Seamless capture and monitoring of construction progress for legal and technical documentation.

**Free-form components inspection:** Precise dimensional check of complex components such as free-form shape elements.

**Deformations control:** Documentation of deformation processes and monitoring of countermeasures.

## CIVIL ENGINEERING & SURVEYING

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### APPLICATIONS:

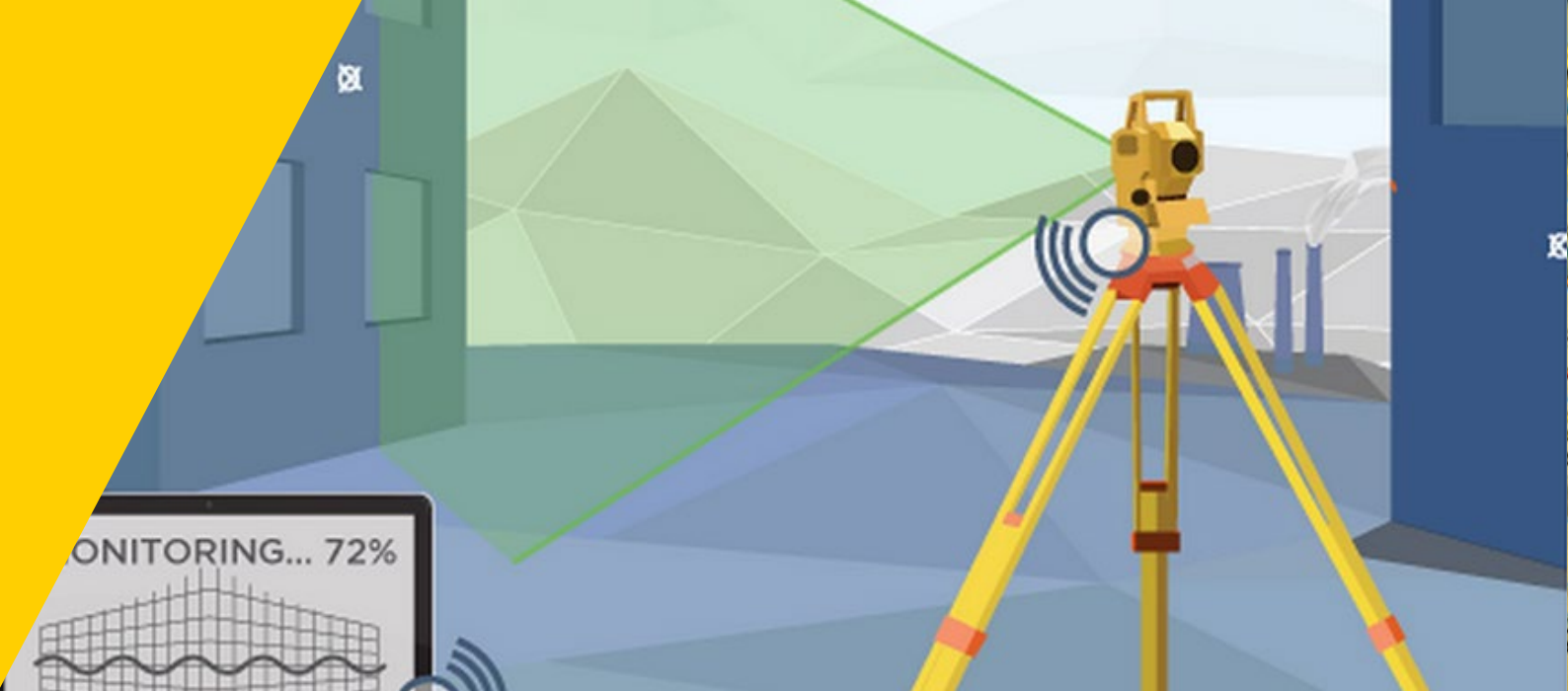
**Scanning of large or distant objects:** Due to the extra long range of the Focus S350, all kinds of high, long or difficult to access objects can be easily scanned and analyzed.

**Project supervision:** Whenever there are excavations, bridges, towers, open-pit mines, roads, rail ways, reservoirs, pipelines to be built, there is a need for close monitoring of the individual project phases to meet the project's requirements.

**Deformation monitoring:** Determining if the surveyed structure or object is changing shape or moving. Saves time and rework during construction.

**Large volume calculation:** When measuring loose material in bulk, e.g. in barges, silos or in warehouses, large volume determination on a regular basis is an important consideration. Laser scanning allows for fast, accurate and reliable dimensional calculations.

**Quality control:** Precise laser scanning ensures that the final as-built condition fit design intent and minimizes the chance of potential problems.



# Engineering Survey

## UTILITY & MONITORING SURVEY SERVICES

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Utility survey services:

Underground Utility Surveying is the process of mapping subsurface utilities using a combination of geophysical and land surveying techniques.

We use a wide range of cutting edge technology such as Radio detection and many other in-house processes and procedures to ensure we provide you with the most accurate and reliable underground utility information possible for your project without the need for costly excavations.

## VOLUMETRIC CALCULATION

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We provide our services in volume estimations of the stockpiles and the 3D representation of the same. We provide interactive GIS representation of the same upon request. We offer inventory survey services to our clients to estimate their stock inventory on quarterly, half yearly or yearly basis to support their stock auditing.

## SETTLEMENT/MOVEMENT MONITORING DURING CONSTRUCTION

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Monitoring is the systematic measurement and tracking of the shape, dimension or position of an object, structure or building.

Monitoring is generally conducted over a set period of time at intervals specific to the task. The objective of the monitoring exercise is to determine the movement and the frequency of the movement.

Our experienced surveyors and management team can develop custom designed monitoring solution to suit your needs. The solutions are extremely dynamic and range from just one surveyor visiting your site annually to 24-hour automated monitoring systems with instant updates sent to your phone or computer.



# GIS Services

## **GEOGRAPHIC INFORMATION SYSTEMS**

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Geographic Information Systems (GIS) captures, stores, analyzes, manages and presents data linked to location. Vertex Surveying stays current with ArcMap (ESRI Software), and is currently operating ArcGIS 10. This mapping software allows for dynamic interaction with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography, and processing tools that can be implemented within the ArcGIS 10 environment by offering the utilization of GIS technology we open the doors to new deliverables, as well as aiding clients in productivity and record keeping. So whether you are interested in file conversion, interactive mapping or a mapbook application, Vertex Surveying has the tools and resources for all of your mapping needs.

## **OUR GIS SERVICES INCLUDE, BUT AREN'T LIMITED TO:**

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- ❖ Geo-Database Design
- ❖ Mapbooks & Land Use Maps
- ❖ Data Modelling & File Conversion
- ❖ Mobile GIS Solutions ,Data Collection
- ❖ GIS Needs Assessment
- ❖ System Design & Integration
- ❖ Data Conversion & Migration
- ❖ Spatial & Quantitative Analysis
- ❖ Non-Spatial Data & Photogrammetry
- ❖ Resource Management
- ❖ Raster To Vector Translation
- ❖ GIS Integration and Consulting



# BIM Services

## BUILDING INFORMATION MODELLING

We Make the Complex Simple....

Vertex Engineering is a leading BIM consultancy, working behind the scenes with some of the country's biggest clients, contractors and consultants. We have a dedicated team of Information Managers, Technologists, Architects, Surveyors, Programmers and Construction Professionals aboard our team, all of which are passionate about BIM

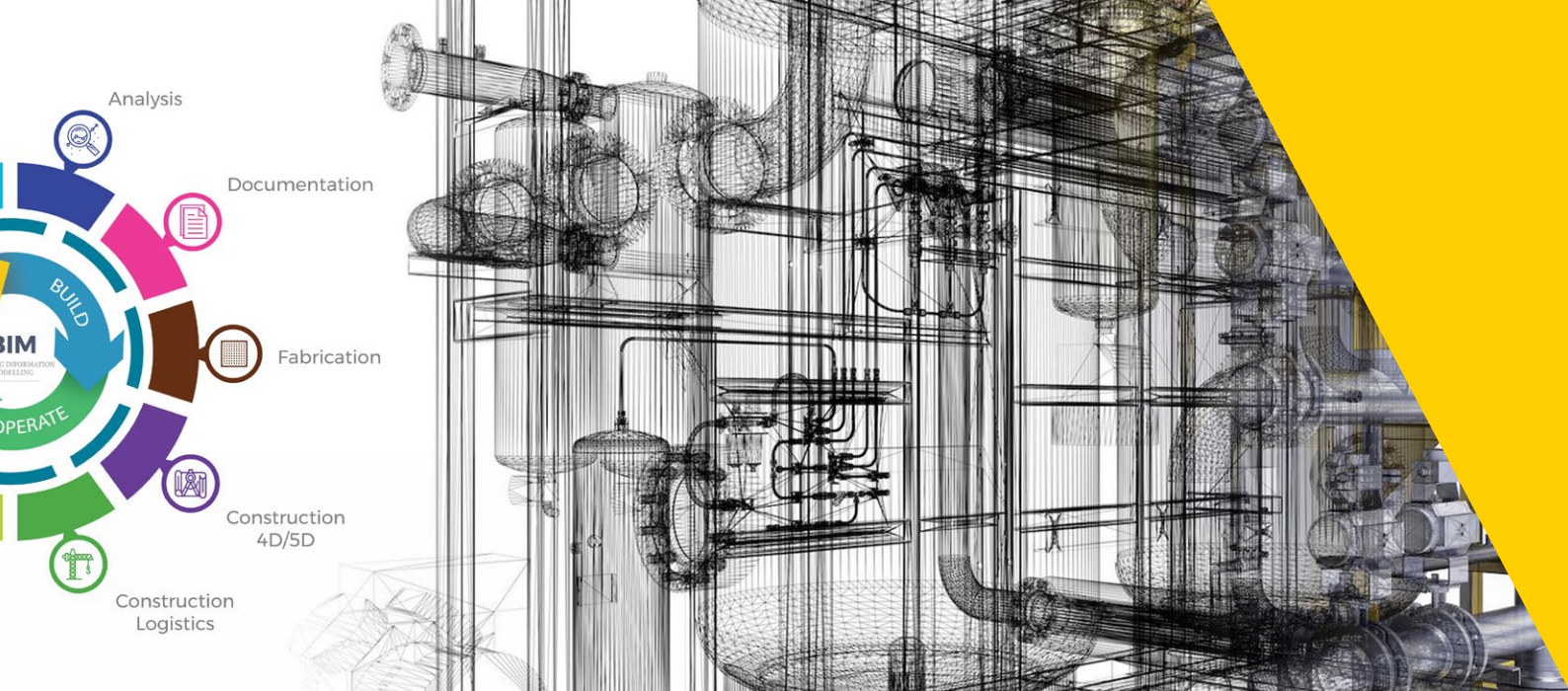
OUR BIM SERVICES INCLUDE, BUT AREN'T LIMITED TO:

### BIM COORDINATION

A Building Information Model can greatly enhance capabilities for the review and the quality control of design information. Errors and omissions traditionally buried in disaggregated two-dimensional drawings can be visually detected and resolved during project reviews. These dimensionally accurate models can be clash and clearance checked, allowing spatial conflicts between systems to be automatically detected and resolved.

### COBIE PRODUCTION

We are able to facilitate and have proven real world experience of delivering COBie Data Drops in accordance with the UK Government requirements by providing a wide range of services to manage, validate and deliver COBie on your project.



## BIM IMPLEMENTATION

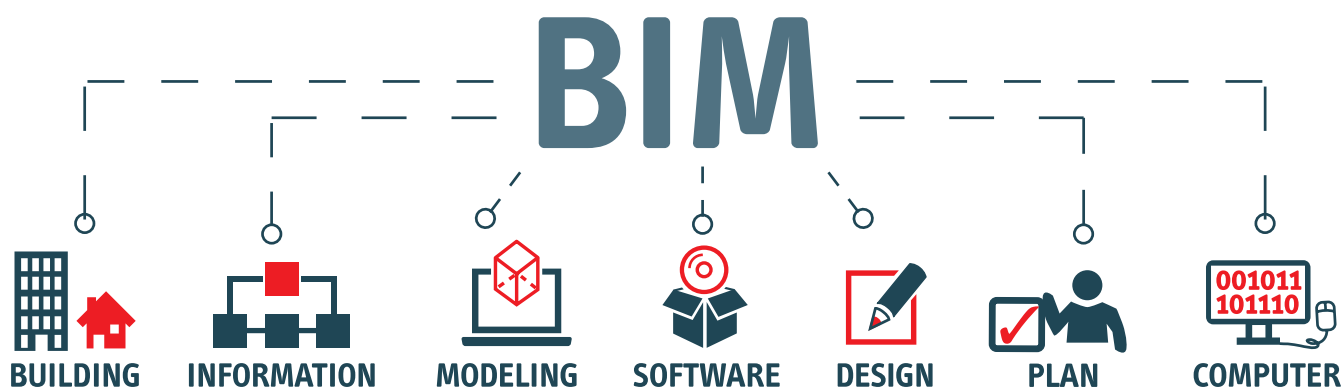
Our consultancy team can work with you to develop your BIM implementation strategy and coordination. We will provide impartial advice on how to use BIM within your business. We will look at the value and relevance of BIM processes to your business and some of the cultural challenges in terms of working practice that need to be addressed.

## DIGITAL SURVEYING AND SCAN TO BIM

Our Qualified digital survey team can capture site information using the latest laser scanning technology and convert the raw data into a format which can be utilised by the project team. This reduces time on site, as well as risk and cost and is perfect for existing buildings

## QUANTITY ESTIMATING AND COSTING

We can extract quantities and dynamically link cost data for materials, labour and plant hire costs into the Building Information Model. Adding cost to the model allows a live view of budget and spend analysis during the planning and construction.



# Calibration Service Center



## OUR NEW WORKSHOP VERTEX CALIBRATION

We have recently upgraded our workshop.

Vertex Engineering has always offered high-quality calibration and repair services for your survey equipment, but now our workshop is even better.

You can rest assured that your equipment will be as accurate as possible.

**Send your Inquiry Now**  
**+974 4016 5460 / 61**  
**Service@vertex.com.qa**

## OUR SOLUTION OFFERS

Our calibration and repair services are designed to be affordable, high-standard and quick turnaround.

We offer:-

- ❖ 5-day turnaround on calibration and repair jobs
- ❖ All manufacturers covered (Leica, Top Con, Trimble, Sokkia, Nikon, Geomax, Fluke, Megger, Extech, Radio detection, Cable Detection, Crowcon, Drager, etc.)
- ❖ Highly qualified workshop engineers
- ❖ Constant updating throughout the job.
- ❖ Affordable prices

## WHAT WE DO

We are able to calibrate and repair a wide range of equipment including

- **SURVEY EQUIPMENT CALIBRATION**  
Levels, Laser levels, Total stations, Pipe lasers, Digital levels, Precise levels, Theodolites, GPS survey equipment, Machine control, Safety Equipment, Cable detectors, Signal generators, Gas monitors, Tripods, Winches and Fall Arrest kits, Escape kits
- **ELECTRICAL CALIBRATION**  
Ammeter Calibration (Clamp-on), Calibrator Calibration (Hand-Held, Transmation, Other models from leading manufacturers) Clamp meter Calibration, Contour Probe Calibration, Decade Box Calibration ...
- **PRESSURE CALIBRATION**  
Barometer Calibration +1m bar, Compound Pressure/Vacuum Gauge, Dead Weight Tester, Hydraulic, Pneumatic, Density Meter Calibration...
- **TEMPERATURE CALIBRATION**  
Hygrometer Calibration, Oven/Furnace Uniformity Surveys, Psychrometer Calibration – Dew Point, Sling, Thermocouple Calibration, Thermometer Calibration...



## OUR EQUIPMENTS

Our new workshop boasts some of the most advanced Calibration and repair tools in the industry.

Our group of 3 collimators allow us to calibrate levels, laser levels, pipe lasers, etc. to a very accurate standard. The fact that we have three also allows us to deal with a greater number of instruments per day.

We also possess FLUKE Multi Product Calibrator ,FLUKE Precision Multi Meter, Oil Dead Weight Tester, Field Metrology Well, IR Calibrator, GE Druck Pressure Generating Station, GE Druck Dry Block Temperature Calibrator, GE Druck Multifunction Calibrator,

Our in-house equipment is regularly calibrated and is traceable to industry national standards.

In short, we now offer a one of the country's leading calibration workshops. Why go anywhere else?

### FLEET MANAGEMENT

Vertex Calibration are able to offer a full fleet management service.

This means you can hand the majority of your fleet management responsibilities over to us to look after for you.

1. We log, calibrate and repair your full fleet.
2. We provide reminders when calibration is due.
3. We organise collection of items.
4. We calibrate and repair your equipment as and when required.
5. We return items.

### ACCREDITATION & TRAINING

Our expert team of workshop engineers are highly experienced in offering calibration and repair services.

We have received manufacturers training from many of the leading manufacturers that we work with.

# Our Rentals



## 3D LASER SCANNER

Our 3D Laser Scanner Rental section is varied and is sure to suit your 3D Laser Mapping needs.



## GPS GNSS SYSTEM

Rent GPS Systems from us and get the best. We carry scalable equipment that offers precision.



## TOTAL STATION

You can rent Total Stations that can keep up can make a huge difference in workload.



## DATA COLLECTORS

We are equipped with different models of Data Collectors from Trimble™ and Leica available for rent



## UTILITY DETECTORS

Trying to locate underground utilities can be difficult without the right tools. we understand this dilemma.



## DUMBY LEVELS

We are equipped with different types of automatic levels available for rent.

# The Client



Over the last decade and more, we have worked with both high profile national and international brands, Here's a list of our clients.



GE Oil & Gas

QD-SBG  
CONSTRUCTION



LARSEN & TOUBRO

QATAR  
AIRWAYS القطرية

قطر ستيل  
QATAR STEEL

Keppel Shipyard



HLC HABTOOR  
LEIGHTON  
GROUP

midmac  
contracting company w.l.l.

مدماك  
شركة مدماك للمقاولات ذ.م.م.

beIN SPORTS

FCC  
FYAP

قطر للبترول  
Qatar Petroleum



Nakheel  
LANDSCAPES



مطار حمد الدولي  
Hamad International Airport  
قطر QATAR

## CONTACT US

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Office No 9, Second Floor,  
Building No 242, C-Ring Road,  
Doha - Qatar



Tel: +974 4016 5460 / 61  
Fax: +974 4016 5462



[info@vertex.com.qa](mailto:info@vertex.com.qa)

[www.vertex.com.qa](http://www.vertex.com.qa)



**vertex**engineering

فیرتیکس انجنیرینگ

**Quality is the priority** of  
what we do in our business through the process.

**Get a quote : +974 4016 5460 / [info@vertex.com.qa](mailto:info@vertex.com.qa)**