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Part of SGS Group

# RYOBI-G

## CORPORATE BROCHURE

To be the preferred geo-solutions provider in Singapore and beyond.

# MESSAGE FROM CEO

Dr. Wang Hou (Joseph), PhD, the founder and (current) CEO of Ryobi Geotechnique International Pte Ltd (Ryobi-G) is an ambitious, progressive businessman. He is also a veteran Geotechnical Engineer with over 30 years of experience in the construction industry.



Dr Wang's career began at Mott MacDonald (Singapore) Pte Ltd as a Geotechnical Engineer. Soon after, he joined Maunsell Consultants Pte Ltd, followed by Presscrete Engineering Pte Ltd, to further his career, taking on and leading several high-profile geotechnical projects, making a name for himself in the construction industry.

At the peak of his engineering career, Dr Wang saw an opportunity to start his own business, which led to the founding of Ryobi Geotechnique in 2000. Under his guidance and vision, he has led the company from strength to strength, becoming a much sought-after engineering service provider in Singapore.

From securing multi-million-dollar contracts, generating millions of dollars in annual turnovers, to growing the company from a small team of 10 to an organization with over 530 staff in 4 offices spread across Singapore and Malaysia, Dr. Wang has achieved the highest level of success that anyone could hope for. But his ambition does not stop there, as he has set his sights to take the company to the next level, - beyond Singapore.

## Dr. Joseph Wang

CHIEF EXECUTIVE OFFICER (CEO)

RYOBI GEOTECHNIQUE INT'L PTE LTD

When I started this company, I understood that our greatest asset as a company is our people – which is why I made it our mission to focus on people development – *Develop Our People to Serve People*. This is the foundation on which Ryobi-G's services are built that expresses Ryobi-G's commitment to developing leaders that will drive the organization's performance and productivity, which in turn creates value for others.

The Why, Personal Growth, Teamwork, and Outcomes are the 4 components that make up the essence of our culture. It defines who we are, how we act, and what we believe is our duty when serving others. It is thanks to this philosophy, and our people, we were able to grow into the modern industry-leading organisation we are known today.

I am proud of how far we've come and looked forward to what's ahead.

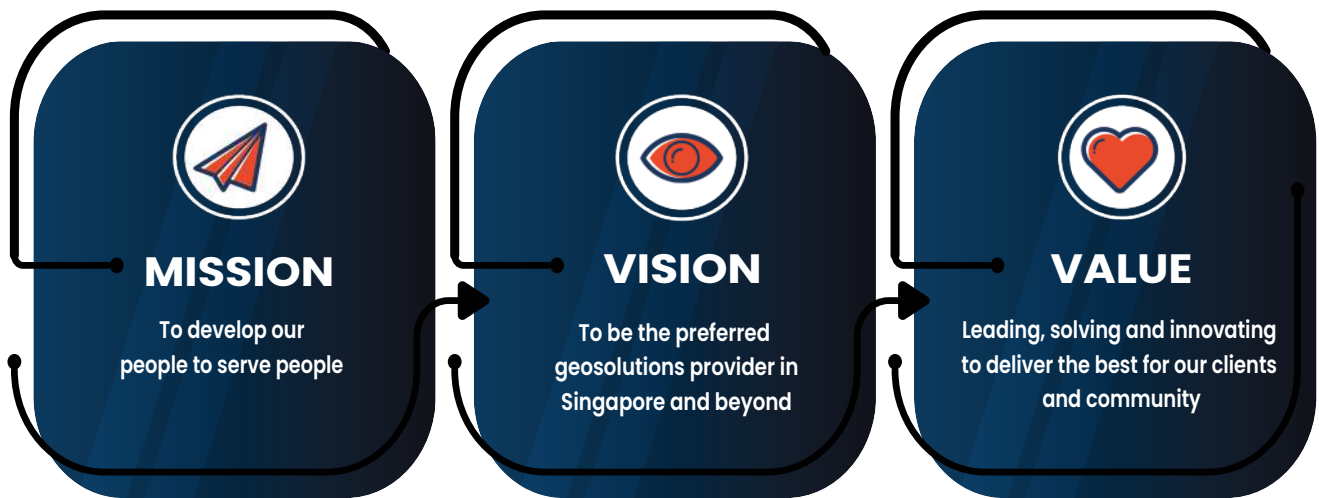
*Joseph Wang*

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# ABOUT OUR COMPANY

Ryobi Geotechnique International Pte Ltd (Ryobi-G) is a geotechnical service provider based in Singapore (HQ) and Malaysia. We offer a range of Engineering, Monitoring, Modelling & Imaging solutions that support our customers in their projects across multiple industries.



## 20+ Years Experience

Ryobi-G has been providing quality geotechnical services and solutions for over 20 years, establishing ourselves in the process as reliable and dependable go-to solutions providers in South East Asia.



## 530+ Team Members

Our 530+ strong workforce consists of Singaporeans, Malaysians, Burmese, Chinese, Indians, and Bangladeshis spread across 4 different offices in Singapore and Malaysia.



## 100+ Ongoing Projects

Each year, Ryobi-G, is actively involved in a number of projects, in both public and private sectors for a diverse range of industries.



## 1000+ Projects Completed

In the 20+ years Ryobi-G has been operating, the company has completed over 1000 projects in both, private and public sectors in Singapore and overseas.

# OUR MANAGEMENT

Ryobi-G's growth and overall success can be attributed to the leaders of the company. Their personal values mixed with company's clear mission, vision, and values, is what shaped the organisation into becoming a modern, forward-thinking business that is set on becoming an industry leader, providing quality service to Singapore and beyond.



*"Great leaders genuinely care for others and have a keen ability to find the best in people."*

**-- Dr. Wang Hou**

## **Dr. Wang Hou (Joseph)** Chief Executive Officer

Dr. Wang Hou is a founding member of Ryobi-G. Over the years, he has held multiple roles as a leader in the company, playing an important role in developing the company, advancing the technical capabilities of the company, making Ryobi-G one of the most versatile, sought-after solutions provider in the market.



## **Luo Changwei** Chief Operating Officer

Mr. Luo is the co-founder, and (currently) the Chief Operating Officer (COO) of Ryobi-G. His technical prowess, combined with a keen-eye for business opportunities, and connections in the industry has helped the company grow, securing lucrative deals consistently year after year, turning Ryobi-G into a profitable and technical powerhouse sought after by many in the industry.



## **Kong Sio Keong** Technical Director

Mr. Kong joined Ryobi-G in 2015 as the Technical Director of Ryobi-G with over 40 years of experience in the industry. His technical expertise as a Geotechnical Specialist, combined with 40+ years of experience working on grand-scale construction projects around the world was pivotal in taking Ryobi-G to the next level, guiding the company as they took on work for larger projects with increasing complexity.

# OUR COMPANY HISTORY

From humble beginnings, Ryobi-G has grown as a business building on its successes, our vision as a company has always remained the same.

*Below is a timeline which highlights some of the key moments in Ryobi-G's life since its inception in 2000.*



## 2000

### The Founding Year

The company was founded in Singapore as Ryobi Geotechnique Pte Ltd by Dr Wang Hou (Joseph), Ryobi-G's current Director and CEO.



## 2001

### First Overseas Project

Awarded our first overseas project under engineering and slope stabilisation in Batam.

Aside from being the starting point for our involvement in overseas projects, these experiences greatly contributed to our subsequent success in winning orders for large overseas projects.



## 2005

### International Operation Expansion

Establishment of Ryobi Geotechnique International Pte Ltd (RGI) and Ryobi Geotechnique (M) Sdn Bhd in Malaysia.

Building on our reputation as a leading geotechnical provider in Singapore, the RGI team has now grown to over 530 members, and has worked on various projects in 6 different countries (Singapore, Malaysia, Philippines, China, Indonesia and UAE).



Ryobi-G has come a long way since its inception to becoming a major player in the industry with over 530 workforce delivering best-practice, community-defining infrastructure, industrial, environmental, and social projects globally.

As a result, our services have earned widespread recognition across multiple industries for providing quality, innovative and practical solutions to challenging projects. This would not be possible without our drive to always look for ways to better serve our clients and community.

*20+ years of growth is never a simple task. Given its highs and lows, Ryobi-G has gone from strength to strength, never settling on past achievements and failures, only to learn and build from it. This is our journey.*



## 2007

### First Million Dollar Mark

Ryobi-G is awarded its first and second multi-million dollar contracts – soil investigation, and instrumentation works.



## 2010

### Recognition Of Excellence

In 2010, Ryobi-G was presented with the SME Growth Excellence Recognition award.

This recognition not only underscores our achievement as a fast moving and rapidly growing business but also recognizes our continuous work progress in becoming a leading geotechnical solutions provider in the industry.

To date, Ryobi-G has grown to be a reputable company and has been recognized by numerous renowned organizations in Singapore and internationally.



## 2021

### Grow To Serve

In early 2021, Ryobi-G was officially acquired by SGS, a Swiss multinational testing, inspection, and certification company.

This acquisition serves as a platform for Ryobi-G to expand its operations globally, combined with SGS's expertise, resources, and shared values, enabling us to better serve our clients and community.



# PROJECT HIGHLIGHTS

Over the years, Ryobi-G has taken on a wide variety of challenging projects. Whether they are big or small, simple or complex, we strive to offer the best possible solution(s) for any given task. Here are some examples of projects we've worked on in the past:



## GEOSURVEY

### Geophysical Mapping and Trial Trenching

The largest (by land-size) job we have completed to-date – a 2 year long contract to map parts of Singapore.



## GEOMONITORING

### Multistorey High-Rise Mixed-Used Development

Provided site investigation and structural monitoring on-site during construction.



## GEOSYSTEMS

### Slope Monitoring

Developed a system that helps to monitor slopes in real-time, and a corresponding early alert-warning system.

## ENGINEERING

### Downhole Casing Installation Through CAT 4 Rocks

10 month drilling operation carried out on a sensitive remote site.



## 3D LASER SCANNING

### Image-Based 3D Capture of Heritage Buildings

Using laser scanning to create highly accurate 3D models of heritage buildings in Singapore.



## SOIL INVESTIGATION

### Land and Marine Soil Investigation Works

Carried-out investigation work as part of land reclamation study in Singapore.



# 1370+

completed projects  
as of 2023

# 90+

ongoing projects  
as of 2023

# SGD 360 MIL

worth of contracts  
completed as of 2023

# WHY CHOOSE US?

Ryobi-G is committed to providing exceptional service for every project awarded regardless of scale and/or complexity, delivering what is required to the best of our abilities.



## ***Excellence in Performance***

Over the years, Ryobi-G's commitment to excellence, adaptability, and seeing a job through to the very end has benefitted us, greatly, propelling our status as a well-respected, dependable geotechnical solutions provider in the industry. We greatly appreciate all those in the past who gave us the opportunity to prove our worth and are committed to our path of development and innovation with the aim of achieving operational excellence.



## ***Proactive***

Ryobi-G takes pride in offering a great customer experience and overall customer satisfaction. From assessing the problem to providing a solution, our teams are committed to working closely with the contractor and/or client every step of the way to ensure that the best solution is provided for the project at hand.



## ***Innovative***

Ryobi-G promotes a culture of continuous creativity and proactive innovation. We actively invest in research and development and promote the use of technology in our services wherever possible. Our innovative approach combined with our constant support for professional development within the company is what sets us apart from the competition.



## ***Cutting-Edge Technology***

Solutions to problems evolve as quickly as technology advances. We at Ryobi-G are always on the lookout for the latest piece of technology which keeps us at the forefront of the industry. Which also enables us to stay competitive and provide the best possible solution for our clients no matter the project type.



## ***Accredited and Certified***

We, as a company, hold ourselves accountable to uphold industry standards and regulations by ensuring that we are certified and accredited with all that is necessary for a project. Whether it be international standards such as ISO, or local (Singaporean) standards like bizSAFE, SAC-IB, and SAC-SINGLAS, we put the utmost priority in getting what is necessary to give our clients the confidence, assuring them that their project will be completed to the highest professional and technical standard.



# AWARDS AND CERTIFICATIONS

The quality of Ryobi-G's operations and broad service offering standards are upheld by the following accreditations and awards:

## QUALITY CONTROL & SAFETY MANAGEMENT CERTIFICATES



## CONTRACTOR REGISTRY

CW02:  
Civil Engineering

CR08:  
Piling Works

CR12:  
Ground Support &  
Stabilisation  
Works

CR15:  
Site Investigation  
Works

SY05:  
Electrical &  
Electronic  
Materials, Product  
& Components

## GENERAL BUILDER LICENSE & SPECIALIST BUILDER LICENSE

General Builder  
Class 2

Specialist Builder  
(Piling Work)

Specialist Builder  
(Ground Support and  
Stabilisation Work)

Specialist Builder  
(Site Investigation  
and Stabilisation  
Work)

## AWARDS

Singapore SME 500 Company  
2008 Safety Management  
System with BCA

SME Growth Excellence  
Award Year 2010

# OUR CLIENTS

Ryobi-G operates across diverse sectors, and industries, with clients ranging from private owners to local authorities. Some of the key organisations we have worked with include:



## Manufacturing

Caterpillar Inc.  
Abbott Manufacturing Singapore Pte Ltd



## Defence

Defence Science &  
Technology Agency, Singapore



## Real Estate

CapitaLand  
Lendlease Group  
JTC Corporation



## Environment & Water Resources

Singapore Food Agency  
Public Utilities Board, Singapore  
National Environment Agency, Singapore



## National Development

National Parks Board, Singapore  
Housing & Development Board, Singapore  
Urban Redevelopment Authority, Singapore



## Transport

SBS Transit Ltd  
Changi Airport Group  
Land Transport Authority, Singapore  
Maritime and Port Authority of Singapore



## Infrastructure

SP Group  
China Railway  
Shanghai Tunnel  
Sembcorp Industries



## Education & Health

National University of Singapore  
Nanyang Technological University  
Ministry of Education, Singapore  
Ministry of Health Singapore



## Civil Engineering & Construction

GS E&C  
Obayashi Corporation  
Hyundai Engineering and Construction  
KTC Civil Engineering & Construction Pte Ltd

Taisei Corporation  
Samsung Construction  
Hyundai Engineering and Construction  
China Communications Construction Company

# OUR HAPPY CLIENTS & FEEDBACK

Feedback from our clients helps us to continuously improve our services across the industry. Here are what some of our past clients have said about their experience working with Ryobi-G:



“ Job was satisfactory. ”

*JTC Coporation*



“ Good job. Excellent. ”

*Nanyang Technological University*



“ Excellent job. ”

*Maritime and Port Authority of Singapore*



“ Good work.  
Was satisfied with the job. ”

*Greatearth Construction Pte Ltd*



“ Overall job was good, particularly  
with work progress and deliver. ”

*Surbana Jurong Consultants Pte.Ltd*



# COMPANY PORTFOLIO

Our project portfolio is extensive, containing a mix of Geotechnical, as well as Modeling & Imaging projects in the public (government-related) and private sectors. To find out more information about our past projects (track record), you can get in touch with us via email and/or phone.

*Please refer to the last page for contact details*



# OUR SERVICES

Ryobi-G provides a comprehensive range of Geotechnical, Modelling & Imaging services to clients, ranging from soil investigation and geophysical survey to geotechnical engineering and 3D geospatial data collection via laser scanning.

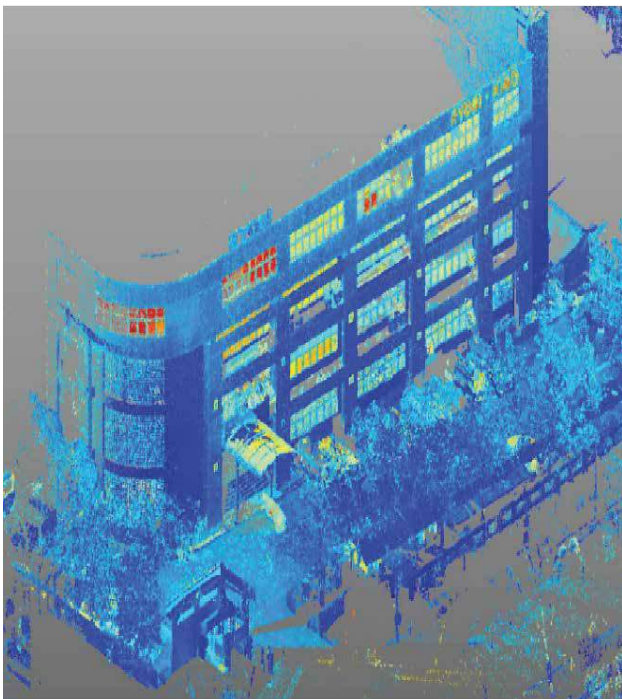
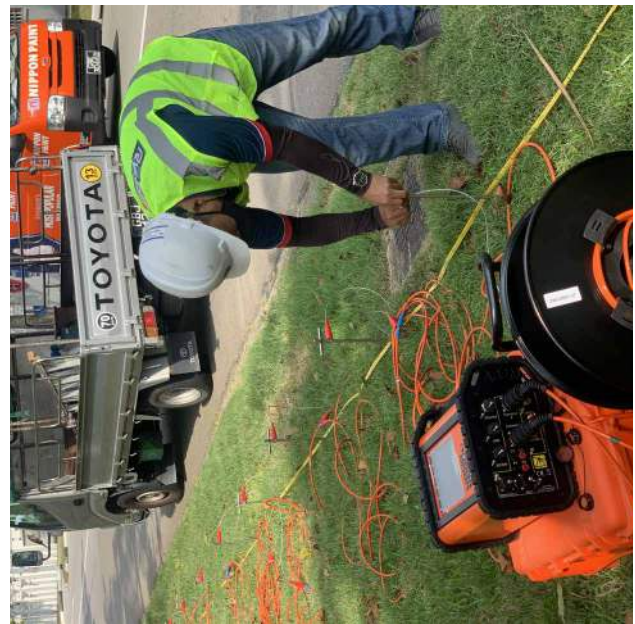


## GEOTECHNICAL

Our geotechnical services offer a broad spectrum of assessments for surface and subsurface examination of your site.

Leveraging our extensive experience of various ground conditions and advanced instrumentation, we are able to characterize and evaluate soil samples, conduct site evaluation and screening to help you thoroughly understand the risks and opportunities of your project site.

We provide site investigation, laboratory testing, professional consultancy services, and problem solving through design and monitoring of the ground and substructures.



## MODELLING & IMAGING

We at Ryobi-G utilize modern-day techniques such as 3D Laser Scanning, and Drone Photogrammetry to provide our clients with quality data that can be used in inspection, data acquisition, and modelling applications across a wide range of industries.

The techniques and equipment used in our data acquisition services provide access to data from sites that would traditionally have been considered dangerous and / or costly to attain using conventional methods.

With our capabilities, we can help save time and cost while offering the highest quality data available on the market in the safest way possible.



# OUR GEOTECHNICAL SERVICES

Ryobi-G employs an interdisciplinary approach combined with in-depth expertise to tailor-suited design solutions and solves our client's challenges in various geotechnical fields. Below are the geotechnical services we provide:

## GEOTECHNICAL ENGINEERING



Geotechnical engineering is fundamental to all construction. It facilitates monitoring and analyzing of the surface/ subsurface condition of a site before constructing the foundation of a structure.

Leveraging on our experience and competent team, Ryobi G provides a wide scope of geotechnical engineering services including major items, namely slope repair and stabilization work, grouting, micropiling, soil nailing and anchoring works.

Ryobi-G works closely with the client to develop cost-effective approaches to meet their specific needs. With the state-of-the-art investigative approaches and efficient design alternatives, we provide solutions that will best suit the site conditions.

### *Our geotechnical engineering services include:*

- ✓ Micropiles
- ✓ Relief Well
- ✓ Soil Nailing
- ✓ Underpinning
- ✓ Recharge Well
- ✓ Concrete Repair
- ✓ Ground Anchors
- ✓ Guniting/ Shotcreting
- ✓ Earth Retaining System
- ✓ Geocells/ Erosion Control
- ✓ Geotechnical Design and Analysis



*Geotechnical engineering applications were Ryobi G's flagship services back in 2000. After years of continuous improvement, Ryobi G is now a leader in geotechnical engineering works in Singapore, securing key projects in public and private sectors. transforming Singapore's civil infrastructure.*

### Applications include:

*Soil improvement, soil support, slope stabilization, deep excavation, basement construction, road construction, soil/rock reinforcement, earth retention, repairing concrete work and underpinning.*



# GEOTECHNICAL INSTRUMENTATION



Ryobi-G has been offering comprehensive geotechnical instrumentation services on projects throughout Singapore for over two decades.

We use instruments in and on the ground and structures to measure vibrations, groundwater, slope movement, settlement, and many physical and chemical attributes of things in geotechnical and geologic.

## *Our instrumentation services includes:*

- ✓ Tiltmeter
- ✓ Extensometer
- ✓ Vibration Meter
- ✓ Inclinator In Wall/Soil
- ✓ Water Standpipe/ Piezometer
- ✓ Building/Ground Settlement Marker



*The geotechnical instrumentation and monitoring services at Ryobi-G have resulted in significant cost savings and help our clients to minimise risks, both during the construction process and during the 'in service' life of their infrastructure.*

## Building/Ground Settlement Marker



Building settlement markers are installed on the columns of existing structures or buildings to determine any inheritance settlement or heave. The type of settlement markers to be used varies with the site conditions.

## Inclinometer In Wall/Soil



Portable vertical inclinometer probe used to obtain segment inclination through vertically installed inclinometer casing which makes gradual displacement with subsoil movement.

## Tiltmeter



A tiltmeter is used to monitor changes in the inclination of a structure. Tiltmeter data can provide an accurate history of the inclination of a structure and early warning of potential structural damage.

## Vibration Meter



The vibration meter is typically used to monitor vibration intensity on a structure. It is available on a real time basis, which allows continuous data to be accessed and alerts key personnel when a vibration limit is exceeded so that immediate remedial action can be taken.



## SOIL INVESTIGATION

Soil investigation covering both land and marine exploration works remains one of the flagship services of Ryobi-G. It identifies different soil/rock strata for the site of interest.

Boreholes are usually drilled by our drilling rigs using Rotary Wash Boring Method to obtain representative test data and good quality soil samples which are subsequently sent to our geotechnical laboratory accredited by SAC-SINGLAS for analysis.

Our team of engineers and laboratory personnel are highly trained in analyzing soil/rock samples to provide meaningful data.

In addition, all of our laboratory tests are carried out in accordance with recognized international standards; e.g. British Standard (BS), Eurocodes and American Society for Testing and Materials (ASTM) for test compliance and quality assurance.



*Ryobi G is proud to be the only service provider in Singapore to have the high capacity Dilatometer Test. This test is able to determine the strength and lateral stiffness of rock under high pressure up to 30MPa. Dilatometer testing is gaining prominence in the local context due to the growing demands from many deep underground works in rock formations.*



## SCOPE OF IN-SITU TESTING SERVICES & SAMPLING



### SCOPE OF IN-SITU TESTING

1. Standard Penetration Test (SPT)
2. Standard Cone Penetration Test (CPT)
3. Prebored Pressuremeters Test (OYO & Menard)
4. Vane Shear Test
5. Single Packer Test/Double Packer Test
6. Rising Head Permeability Test / Falling Head Permeability Test
7. Acoustic / Optical Televiwer Logging
8. Dilatometer Test
9. Hydraulic Fracturing Test
10. Plate Load Test
11. Pumping Test
12. Mackintosh Probe Test
13. Dynamic Cone Penetration Test
14. Field Density Test
15. Downhole Seismic Test
16. PS Suspension Logging

### SAMPLING

#### Undisturbed Sampling

1. Thin-walled Tube Sample
2. Piston Sample
3. Mazier Sample
4. Block Sample

#### Disturbed Sampling

1. Split Spoon Sampler
2. Driven Thick-walled Tube Sample
3. Bulk Sample

### REPORT

Full reports with recommendation on foundation system, ERSS (TERS), slope analysis, and settlement analysis, etc

# LABORATORY TESTING

Ryobi-G operates Singapore Accreditation Council (SAC) accredited geotechnical testing laboratories in Singapore. SAC recognizes our geotechnical laboratory compliance to the requirements of ISO / IEC 17025 and SAC-SINGLAS for meeting the demands for good quality soil/rock/concrete testing services in the local and regional industries.

Equipped with state-of-the-art equipment and experienced team, Ryobi-G provides laboratory testing of soil, rock and other materials for site characterization, geotechnical design, quality control and performance assessment purposes.

Ryobi-G puts great stress on prompt, efficient, but careful sample handling. We undertake sophisticated testing and assist our clients with packing the materials and transporting samples to minimize any possible sample disturbance.



*Our geotechnical laboratory is operated by highly experienced engineers. We are also able to provide prompt response for periodic & specialised testing, quick turnaround for testing large volumes of samples, and we strive for continuous development of in-house testing controls.*



## SCOPE OF TESTING SERVICES



### SOIL PHYSICAL PROPERTIES

- |                       |                       |
|-----------------------|-----------------------|
| Bulk Density Test     | Sieve Analysis        |
| Moisture Content Test | Hydrometer Analysis   |
| Particle Density Test | Atterberg Limits Test |

### SOIL STRENGTH & PERMEABILITY CHARACTERISTICS

- |         |              |                                |
|---------|--------------|--------------------------------|
| UC Test | CD Test      | Constant Head Triaxial         |
| UU Test | Direct Shear | Permeability Test              |
| CU Test | Test         | Falling Head Permeability Test |

### COMPRESSIBILITY CHARACTERISTICS

- One-dimensional Consolidation Test

### CONCRETE STRENGTH CHARACTERISTICS

- Compressive Strength Test for Concrete Cube and Core Samples

### ROCK STRENGTH CHARACTERISTICS

- Unconfined Compressive Strength (UCS) Test  
Point Load (PL) Test



# VIBRATION & TREMOR MONITORING



Ryobi-G offers a comprehensive set of vibration monitoring services to help you monitor and control the impacts of vibrations on people and facilities in various environments.

Our technology helps clients determine the cause of excessive vibrations and reduce their impacts, respond to complaints about vibrations, demonstrate compliance with project requirements, and manage claims of alleged damage from vibrations.

*Our vibration & tremor monitoring services include:*

✓ **Micro-Vibration Monitoring**

Ryobi-G’s micro-vibration monitoring system is specially designed to detect low scale ambient vibrations.

These vibrations may adversely affect facilities that house sensitive equipment such as MRI scanners and cause errors, although they may not be perceptible to human senses.

✓ **Real-Time Tremor Monitoring**

Ryobi-G’s Tremor Monitoring System (RG-TMS) capability in picking up small tremors that are not obvious to people, does not only help in saving costs, but most importantly, it helps to save lives.

Our system is also equipped with real-time features, making it possible for the user to access the data anytime and anywhere.



*Ryobi-G monitoring system offers the benefits of an integrated system with Real-time Monitoring, Alert System, and Systematic Recording of data. With such features and real-time data generated by our system, immediate remedial action or mitigating measures can be taken as soon as possible.*

## Applications include:



### ASSESS

Determine whether the vibration data acquired exceeds acceptable limits.



### INVESTIGATE

Identify and verify vibration sources and transmission paths.



### MITIGATE

Recommend and implement modifications/adjustments to achieve the ideal reduction in vibration level.

# GEOPHYSICAL SURVEY



Geophysical surveys are a common practice for any site investigation that requires non-invasive means of examining the subsurface properties of the Earth. This is done through using special equipment at ground level to measure, analyze, and interpret the physical fields underground.

Like many industries, it gained popularity in construction as a commercially viable survey method due to its ability to cover large areas at low cost.

*Our geophysical survey techniques includes:*

- ✓ Resistivity Test
- ✓ Borehole Radar Test
- ✓ Electrical Imaging (EI)
- ✓ Downhole Seismic Test
- ✓ Crosshole Seismic Test
- ✓ Borehole Magnetometer
- ✓ Seismic Reflection (FL) Test
- ✓ Seismic Refraction (FR) Test
- ✓ Ground Penetrating Radar (GPR)
- ✓ Downhole PS Suspension Logging Test
- ✓ Multi-channel Analysis of Surface Wave (MASW)



*Ryobi-G adopts a comprehensive approach in designing the most effective geophysical survey solution for each unique project requirement. This is done by integrating more than one method seamlessly into a single solution; a suitable combination of geophysical survey techniques.*

## Applications include:

- Soil/rock profile imaging (2D or 3D).
- Locate fracture/cavity in bedrock.
- Identifying the depth of existing piles.
- Detection of void/cavity/soft zone, ground water table/ wet zone.
- Cross-hole tomography between boreholes, detection of underground structures.
- Underground obstruction (e.g. boulder, structures, reinforcement, sea wall & services/utilities, etc).



# OUR MODELLING & IMAGING SERVICES

Ryobi-G employs the latest industry-standard techniques combined with cutting-edge technology to collect and process data electronically. Further details outlining the modelling & imaging services we provide can be found below.

## 2D & 3D DRONE PHOTOGRAMMETRY

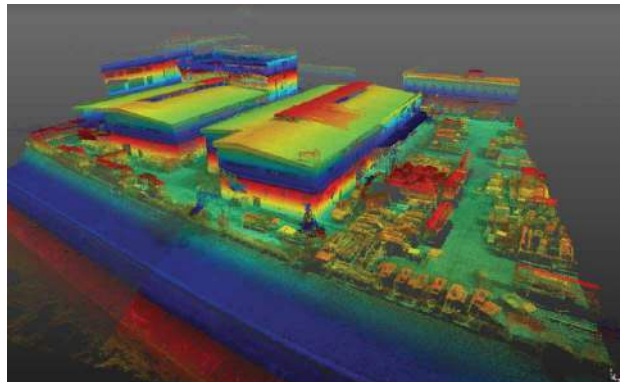


Drone photogrammetry consists of taking aerial photographs to give a representative picture of a site, or an object. It has brought a significant impact on the data acquisition world and it is changing the way we document, study, and respond to conditions in both natural and manmade environments.

Using our drones, we offer high-resolution maps for the purpose at the most affordable cost. Ryobi-G platform provides a set of tools for visualizing, measuring, and storing data. Intuitive commands allow the user to visualize a site in 2D or 3D. Which includes support for orthophotography, digital surfaces, and 3D models.

### *Our enhanced deliverables includes:*

- ✓ 3D point cloud
- ✓ 3D mesh model
- ✓ 2D orthomosaic map
- ✓ 2D orthofacade image



*With a drone, it is possible to carry out topographic mapping of the same quality as the highly accurate measurements collected by conventional methods. But in a fraction of the time and improved safety.*

### Applications include:

- Produce geo-referenced 3D modelling of buildings and plants to revise and update existing drawing records.
- Produce 2D orthofacade imaging of large rock faces for tunnel design work.
- Produce 2D orthofacade imaging of buildings to identify visible surface defects.
- Produce geo-referenced 2D orthomosaic to inspect required installation within a construction site.





# 3D LASER SCANNING

3D Laser Scanning (3DLS) is a remote mapping and imaging technique which uses lasers to capture an object’s digital representation in a 3-dimensional space as efficiently and as accurately as possible.

We at Ryobi-G use world-class 3D laser scanning equipment from renowned brands such as Leica® and Faro® to ensure the data we collect meets the highest of industry standards. This enables us to create digital (3D) representations of large, complex structures such as building interiors, processing plants, as well as dynamic environments like construction sites.

Applications for data collected from 3D laser scans are used regularly by professionals to help with decision making throughout a project’s life cycle(s) across various sectors and industries. From point cloud registration, to rendered digital 2D scale drawings and / or 3D models - and everything in between, we have the resources to deliver results.



*Ryobi-G’s 3D laser scanning services offer clients the ability to collect large amounts data safely, efficiently, and economically – saving the client time, money, and above all, the safety of all onsite.*



## INDUSTRIES WE’VE WORKED IN



### INFRASTRUCTURES

- Tunnels
- Reservoirs
- Barrage
- Roads
- Railway tracks

### INDUSTRIAL

- Refineries
- Plants

### BUILDINGS

- Offices
- Warehouses
- Multistorey apartment (exterior & interior)

### OTHERS

- Historical/Heritage Parks
- Plantations

# BROCHURE

## 2000-PRESENCE

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### Singapore:



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Tel: +65 6369 7100  
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Email: [rock@ryobi-g.com](mailto:rock@ryobi-g.com)  
Website: [www.ryobi-g.com](http://www.ryobi-g.com)

### Malaysia:



Ryobi Geotechnique (M) Sdn Bhd  
31-5, Block E1, Jalan PJU 1/42, Dataran  
Prima, 47301 Petaling Jaya, Selangor



Tel: +603 7880 2684



RYOBI G IS NOW PART OF SGS, THE WORLD'S LEADING  
TESTING, INSPECTION AND CERTIFICATION COMPANY.



Ryobi G