



Successful construction with PERI



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Singapore

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**Dear valued customers,  
Dear prospective customers,**

The course for the future is set. Over the next ten years Singapore is looking for an increase in annual productivity growth of 2% to 3%. The construction industry has been identified as a key sector in the nation's drive to meet the challenging productivity targets. The BCA (Building and Construction Authority) has launched the PIP (Productivity Improvement Project) under the

CPFC (Construction Productivity and Capability Fund) to help and encourage contractors to convert from utilizing conventional to innovative construction methods. As a partner of the Singapore construction industry, PERI recognizes that it is also our responsibility to provide the necessary support by introducing innovative and cost effective formwork and shoring solutions, which satisfy the local markets' requirements.

In recent years, PERI has successfully introduced various new systems into Singapore's construction industry:

**PERI UP Rosett**, the modular, yet flexible scaffolding

system is currently being used to construct the Sky Terraces at Anderson 18 condominium in a safe and efficient manner.

**MAXIMO**, the highly productive Wall Formwork System has allowed for efficient construction of "off form" shear walls with a height of up to 16 m in a single pour, for the NUS Staff House project at Kent Vale.

**GRIDFLEX**, the award winning Grid Slab Formwork for simple, efficient and safe installation for economical residential construction, has been utilized at the Tresalveo condominium project at Marymount.

The **RSC** Rail Climbing Safety Screen has been used and is currently in use

on multiple projects in Singapore. It has proven to ensure the workers safety and is therefore an established system in the local high-rise construction.

Please enjoy reading through this PERI Scope which showcases interesting examples of innovative and cost-effective solutions provided for our customer's challenging construction projects.

Bernd Kieslich  
Managing Director,  
PERI ASIA Pte. Ltd.

## Safe and efficient working conditions for high-rise structures

### Altez Condominium, Singapore

At 250 m high, the Altez condominium developed by Far East Organization will be one of the tallest residential buildings in Singapore's Central Business District. Construction work on the 62-storey high building started in June 2010 and is scheduled for completion in 2014.

To achieve the target of 6 to 7 day cycle per floor, from the typical floors, the contractor made the decision to use PERI's RCS Rail Climbing System and ACS Self Climbing System for both the internal and external core walls. For perimeter safety, RCS Rail Climbing Safety Screen will also be installed when the building reaches the typical floor level. To provide an integrated solution, PERI's engineers were able to incorporate the precast refuse chute and the concrete placing boom into the core wall designs.



#### Contractor

Woh Hup (Private) Limited

#### Field Service

PERI ASIA Pte. Ltd., Singapore



**Adrian Ong, Site Engineer:**  
"PERI has not only provided us with safe and reliable formwork systems, but also very good technical solutions and support at the job site."

An artist impression of the completed Altez condominium with 280 units of residences.  
(Courtesy of Far East Organization).





## Innovative solutions for a technically challenging project

### Crystal Pavilions at Marina Bay Sands, Singapore

At the Marina Bay, two attractive stand-alone glass-and-steel structures known as the Crystal Pavilions appear to float on the water. The design and installation of system formwork for the construction of the Crystal Pavilions had been technically challenging, as their walls have inclined areas in both directions which lead to arrises and valleys at 70° and 75°.

It was thus not surprising that the Project Manager for Wai Fong Construction Pte. Ltd., Chia Che Hieng said: "The design of the walls are tilted at 70°, this type of project would be difficult and time consuming to construct using conventional formwork."

In spite of the difficulties, PERI was able to provide good and fast solutions through the use of its VARIO GT 24 Wall Formwork System and ST 100 Stacking Towers.

Construction of the Crystal Pavilions started in December 2009 and was completed in 2010. The northern Crystal Pavilion will be housing a boutique concept store by Louis Vuitton. Whereas, the southern Crystal Pavilion will have two renowned nightclubs – Pangaea and Avalon opening in the near future.

A section of the VARIO GT 24 Wall Formwork System with the Marina Bay Sands hotel towers in the background.



**Chia Che Hieng, Project Manager  
Wai Fong Construction Pte. Ltd.:**  
"PERI has provided us with a solution and competent service, for a technically challenging project."

Workers preparing to remove the VARIO GT 24 Wall Formwork System.

**Main Contractor**  
McConnell Dowell South East Asia Pte. Ltd.  
**Sub-Contractor**  
Wai Fong Construction Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore



# PERI systems help to accelerate the construction progress and reduce wastage

Hyflux Innovation Centre, Singapore



The Hyflux Innovation Centre sits on an 1.7 hectare site located in Bendemeer and will house Hyflux's new global headquarters. Construction of the 10-storey building started in September 2010 and will have a gross floor area of 32,000 m<sup>2</sup> when completed by the end of 2011.

The contractor Lian Soon Construction is no stranger to PERI as they have bought and used PERI formwork systems. For core walls and columns,

they used the CB 240 Climbing and VARIO GT 24 Column Systems. For slabs, the PD 8 Table System and ST 100 Stacking Towers were the obvious choice for them for its reliability and speed.

According to Lian Soon Construction's Site Manager Mr David Lee, the use of PERI's formwork systems allowed them to do their work twice as fast with less wastage.



**Contractor**  
Lian Soon Construction Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

**David Lee, Site Manager:**  
"PERI formwork systems are easy to use and the technical support is good."

A view of the neatly arranged PD 8 Table System within the building.



PD 8 Table System and ST 100 Stacking Towers were used for casting the slabs and the VARIO GT 24 Column Formwork System for the columns.



PERI's various formwork systems used at the job site can be seen along Bendemeer Road.



# Special column solutions and high shoring realised with re-usable system components

Rolls-Royce Seletar Campus, Singapore



ST 100 Stacking Towers being used to construct the 3-storey Advance Technology Centre for the Rolls-Royce Seletar Campus.



Rows of ST 100 Stacking Towers arranged neatly within a building at the job site.



A VARIO GT 24 Column Formwork System incorporated with corbels standing at an impressive height of 13.50 m.

The Rolls-Royce Seletar Campus is a \$700 million investment in Singapore by the Rolls-Royce Group plc to build a Trent aero engine assembly and test facility, a

wide chord fan blade manufacturing facility, a regional training centre as well as an Advance Technology Centre. The contractor had to cast a total of 42 columns with

corbels. For this, they chose the VARIO GT 24 Column Formwork System, each of the column formwork was erected to a height of 13.50 m.

Columns to this height could not be achieved using conventional formwork. For the slabs of the buildings, the quick assembling ST 100 Stacking Towers were used up to a height of 10.80 m.



The superstructure of the 154,000 m<sup>2</sup> facility situated at the Seletar Aerospace Park was completed in March 2011.



**Xue Bing, Site Manager  
San Tai Construction (S)  
Pte. Ltd.:**

*“Using PERI formwork systems ensure the completion of your project in a fast, clean and environment-friendly manner.”*

**Main contractor**  
Sato Kogyo (S) Pte. Ltd.  
**Sub-contractor**  
San Tai Construction (S) Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

# Efficient and cost-effective construction for large slab areas

## Sheng Siong Supermarket Warehouse & Office, Singapore

A 5-storey high warehouse and office was built for Singapore's well known supermarket chain, Sheng Siong Supermarket at the Mandai Link area.

Construction work started in November 2009 with the use of the VARIO GT 24 Wall Formwork System for casting of the pile caps for this industrial development.

For the core walls, the CB 240 Climbing System was used. The columns of the building were concreted using the VARIO GT 24 Column Formwork System. For casting the slabs with heights of up to 6 m, the PD 8 Table System was used.

According to the Site Manager Teh Wei Chee, it took about 9 to 10 days to cast an area of 16 m x 16 m (256 m<sup>2</sup>).

If they were to use conventional formwork, it would not have been possible or it would have taken 2 to 3 weeks to complete the same floor area. Mr. Teh further pointed out that the use of the PD 8 Table System provided better safety and did not result in as much wastage of plywood. The building was completed in late January 2011.



**Contractor**  
MA Builders Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd.,  
Singapore

**Teh Wei Chee, Site Manager:**  
"PERI's products are safe, time and cost-effective."

PD 8 Table System in the foreground with the CB 240 Climbing System in the background.



# Versatile and fast slab formwork systems for fast track project

School of Science and Technology, Singapore



**Hadrian Renardianto,**  
**Project Engineer:**

“The ST 100 Stacking Tower can be installed quickly and is an easy to use system. On top of that, the support and coordination from PERI for this project have been good.”

The School of Science and Technology which opened its doors in January 2010, is a secondary school that offers a four-year curriculum with



emphasis on applied learning. Construction of their new permanent campus at Commonwealth Avenue West started in February 2010. PERI's ST 100 Stacking Towers and PD 8 Table System are being used to con-

struct one 5-storey science block, one 5-storey classroom block, one 5-storey administration block and one 4-storey sports hall. Construction work for the school has been targeted to be completed by mid August 2011.

ST 100 Stacking Towers with a height of 4.63 m, 8.85 m and 12.90 m are being used for the sports hall.



ST 100 Stacking Towers and PD 8 Table System are being used to construct the slabs of the building.

**Contractor**  
Sanchoon Builders Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

# Simple handling and short concreting cycles with VARIO and CB climbing units

Rolls-Royce Engine Test Facility, Singapore



**Jia HongJun, Site Manager**  
**BHCC Construction Pte. Ltd.:**

“I will recommend the use of PERI formwork systems as they have enabled us to meet our project schedule and save about 20% manpower.”

The Rolls-Royce engine test facility is part of their multi-million dollar investment to build a campus with multiple facilities at the Seletar Aerospace Park. The facility which commen-



ced construction in May 2010 is meant for the assembling and testing of large civil aviation engines such as the Trent 1000 that is being used for the Boeing 787 Dreamliner.

CB 240 Climbing System was used for casting the walls of the engine test facility with some walls reaching more than 20 m high. ST 100 Stacking Towers were used for casting of slabs.

CB 240 Climbing System was used for casting the walls of Rolls-Royce's Trent aero engine test facility at the Seletar Aerospace Park.

**Main contractor**  
Sembcorp Design and Construction Pte. Ltd.  
**Sub-Contractor**  
BHCC Construction Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

The use of the two types of formwork systems has helped the contractor to meet their project dead line which resulted in manpower savings.

# MAXIMO Panel Wall Formwork used by innovative contractor for the first time in Singapore

NUS (National University of Singapore) Staff House at Kent Vale, Singapore



Located at Kent Vale, a project involving the construction of one block of 25-storey and two blocks of 24-storey residential housing for the staff of NUS started in March 2010.

For this project, it is the first time the MAXIMO Panel Wall Formwork is being used in Singapore. The system has been combined with the PERI UP scaffolding for high walls and columns and toget-

her with the RCS Rail Climbing System for the gable end walls. The SKYDECK Aluminium Slab Formwork and ST 100 Stacking Towers are being used for the slabs and high volume beams.

To enhance efficiency, the contractor decided to use the MAXIMO Panel Wall Formwork and the PERI UP access platform in tandem. In this way, the site team was able to cast 16.45 m high



columns (60 cm x 32.5 cm) and walls (30 cm x 53.5 cm) in one pour. With the integration of the MAXIMO and the PERI UP access platform, the unit as a whole can also be crane-lifted, eliminating the tedious work of dismantling and reerecting of formwork. As a result, they were able to cast a five-storey high wall in three days instead of the usual 15 days.

MAXIMO panel wall formwork system is being installed together with the RCS Rail Climbing System for casting of the gable end walls.



**Kew Yuan Chun, Project Manager and Mylene V. Aguinaldo, Senior Formwork Engineer:**  
“The MAXIMO and PERI UP makes work easier. We were able to cast 5-storey high columns and walls in one pour and achieve off-form finish.”



A MAXIMO panel wall formwork system erected up to a height of 16.45 m with an integrated PERI UP access platform at an even higher height at 18 m.

**Contractor**  
Tiong Seng Contractors (Pte) Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore



## Easy – fast – safe GRIDFLEX Aluminium Slab Formwork

Tresalveo Condominium, Singapore

### Contractor

Kimly Construction Pte. Ltd.

### Field Service

PERI ASIA Pte Ltd., Singapore



### Raymond Lee, Project Manager:

*“The assembly of the GRIDFLEX is very easy and safe and therefore, very fast.”*

The Tresalveo Condominium is a free-hold development consisting of one 21-storey and another 22-storey building with a total of 176 units by developer Soon Lian Realty Pte Ltd. Construction work started in September 2009 and the condominium is expected to be ready by September 2011.

For the first time in Singapore, the GRIDFLEX Aluminium Grid Slab Formwork is being used. Using the GRIDFLEX, the contractor was able to achieve an average of 40 m<sup>2</sup> per man-day, requiring just half the usual manpower. Besides the GRIDFLEX, the RCS Rail Climbing Safety Screen

provided added safety to the workers as they were being protected from falling from height at the slab edge.

The crane-independent RCS Perimeter Climbing Protection Panels also release valuable crane time for other operations on the site, resulting in cost savings.

### GRIDFLEX key features:

- light weight – the GRIDFLEX panel (200 mm x 100 mm) is only 20 kg
- few components – only 3 system components
- safe – GRIDFLEX panel is safely formed from the level below
- free choice of plywood

A worker erecting a standard element: The element is hooked in from below at one end and swivelled upwards at the other end with the shuttering aid.



The yellow colour-coded element allows for longitudinal compensation to minimize infill areas.



GRIDFLEX provides an accessible laying area for the plywood sheeting. The beam spacing is only about 13 cm.



# Auto-climbing formwork solutions for core walls and safety screen

Anderson 18 Condominium, Singapore



Tower B of Anderson 18 condominium with the ACS Self Climbing System and RCS Rail Climbing System fitted. Below is the PERI UP Rosett being used for shoring purposes. Construction of the 156 units development started in February 2010.



Designed by Pritzker Prize winner architect Jean Nouvel, the Anderson 18 condominium will have two 36-storey blocks situated in the prime Anderson neighbourhood. For casting of the core walls,

the ACS Self Climbing System and RCS Rail Climbing System are being fitted onto Tower B. PERI UP Rosett is being used for shoring of the Sky Terraces on both Towers A and B. The highest shoring

**Contractor**  
Tiong Aik Construction Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore



**Abdul Majid, Senior Manager (Projects):**  
“PERI have shown that they are technically competent to work out tailor-made solutions. They have provided very good support to us.”

height recorded is 28.80 m. In addition, both towers utilise the rail climbing RCS Safety Screen around the exterior of the buildings for additional safety.

# ST 100 Stacking Towers – The most suitable high load tower for any requirement

United World College of South East Asia, Singapore



A worker erecting an ST 100 Stacking Tower. Everything on the ST 100 is simply slotted together without the need of any bolts or pins. For lower heights, the ST 100 does not require any diagonals but, nevertheless, has a high load-bearing capacity.

**Contractor**  
China Construction (South Pacific) Development Co. Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore



Construction of the East Campus of the United World College of South East Asia in Tampines started in April 2009. The campus sits on a 5.5 hectares of land. Among the numerous facilities there are a 15-storey boarding flat, two educational blocks, multi-purpose halls, three sports halls, Olympic size

swimming pool, full-size soccer field and many others.

PERI supplied the ST 100 Stacking Towers to the contractor for concreting the slabs of the campus. The ST 100 can be assembled quickly as the parts are simply slotted together without the need of any



**Lim Joo Chuan, Deputy Project Manager:**  
“I recommend the use of the ST 100 for the ease of assembly and efficiency. The service provided by PERI were also prompt.”

bolts or pins. In addition, it only has five system parts and can be used for shoring purposes due to its high load-bearing capacity

Construction work for the whole campus was completed by February 2011.



**Ng Sze Tat, Project Director:**  
 “We made the right choice in using PERI as we have been given very strong engineering and logistics support to resolve any problems on site.”

ST 100 Stacking Towers erected up to a height of 21 m for casting the transfer floor slab with a thickness of 4 m.



## High productivity and safety with system formwork

Marina Bay Suites, Singapore

The Marina Bay Suites is a 66-storey luxurious residential building located in the heart of Singapore’s Marina Bay Financial Centre.

The building designed by world-renowned architect Kohn Pedersen Fox Associates, will have 221 units and is expected to be completed in July 2013.

The ST 100 Stacking Towers were installed up to a height of 21 m by the contractor to

cast a 6-storey high transfer floor slab with a thickness of 4 m. The Stacking Towers are easy to erect and have high load bearing capacity. With the 50 cm high stacking frame, all heights up to 22.29 m can be easily assembled, without requiring any additional planning.

To prevent the possibility of workers or objects from falling from height as the building gets higher, the rail climbing RCS Safety Screen

are being installed onto the facade of the building.

Project Director Mr Ng Sze Tat said: “We made the right choice in using PERI as we have been given very strong engineering and logistics support to resolve any problems on site.”

The Marina Bay Suites with the RCS Rail Climbing Safety Screens surrounding the building shell ensure optimum safety for workers.

**Contractor**  
 Woh Hup (Private) Limited  
**Field Service**  
 PERI ASIA Pte. Ltd., Singapore



# ST 100 Shoring Tower and PD 8 Table System – fast and cost-effective shoring solutions

nex Mega Mall at Serangoon Central, Singapore



**Contractor**  
Zhang Hui Construction  
Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd.,  
Singapore

## Tan Tian Seng, Director:

“We have chosen to use PERI form-work systems as they are faster, less labour intensive and suitable for this project.”

A 6-storey mega shopping mall known as “nex” was been constructed at the Serangoon Central area, sitting above the North-East Line of Serangoon MRT station. Construction work using PERI’s PD 8 Table System and ST 100 Stacking Towers started in July 2009. The PD 8 tables were flexibly used for typical heights of 4.50 m to 9.20 m with the largest table measuring an area of 19.80 m<sup>2</sup> (3.30 m x 6.00 m).

The robust and easy-to-assemble ST 100 Stacking Towers were used for shoring up to a height of 24.65 m.

The \$1.3 billion mega mall opened its doors in late November 2010. Amongst the attractions at the mall are more than 400 specialty shops, a 10-screen cineplex, a hypermarket, a public library, a 500-seat food court, a 24-hour zone with shops and F&B outlets, plus a new 16-bay bus interchange taking up a portion of the ground floor of the shopping centre.



ST 100 Stacking Towers standing at an impressive height of 24.65 m.



PD 8 tables and ST 100 Stacking Towers are being used to construct the slabs.



A view of the mall with the PD 8 Table System.

# Customised formwork solutions for an infrastructure project

## Slip Road Widening from SLE to BKE, Singapore

A view of the slip road still under construction with some PERI formwork on the steel struts.

Photo showing the underside of a bridge with PERI's steel walers and GT 24 girders.



An infrastructure project that required the widening of a slip road from the Seletar Expressway (SLE) to the Bukit Timah Expressway

started in August 2009. The road widening covers a distance of 500 m with 60 m of it being a bridge. One of the key challenges of the

project was to avoid any possible damage to six water pipes under the bridge, that carry water from Malaysia to Singapore.

**Contractor**  
Quek & Quek Civil Engineering Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore



**Zhang YanQing, Project Engineer:**  
"PERI was able to provide us with formwork systems that were well-designed and with good safety."

PERI was able to provide a solution to the contractor by customising the designs of its PERI UP and ST 100 Stacking Towers.

# Safe, easy and quick formwork systems for the construction of a cruise terminal

## International Cruise Terminal, Singapore



**Chen YuanBi, Safety Officer San Tai Construction Pte. Ltd.:**

"I like PERI formwork systems as they are fast, safe and easy to use. Based on my estimate, we are 3 times faster than with conventional formwork."



VARIO GT 24 Column Formwork was used for casting columns on the second floor of the building.



The ground breaking for the construction of the International Cruise Terminal in Marina Coastal Drive was held in October 2009. The terminal has an area of 28,000 m<sup>2</sup>, equivalent to the size of three

football fields. To achieve a fast and cost-effective solution, PERI's VARIO GT 24 Column formwork system was used to cast the columns for the terminal. For slabs, ST 100 Stacking Towers

were used in combination with the PD 8 Table System. The \$500 million terminal is owned by the Singapore Tourism Board and is expected to be completed at the end of 2011.

PD 8 tables are cost-effective and can be used for large slab areas if needed.

**Main contractor**  
Sato Kogyo (S) Pte. Ltd.  
**Sub-Contractor**  
San Tai Construction Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

# PERI solution provides safe access and protection

Working Platform at Marina Bay Sands, Singapore



A closer view of the working platform with PERI UP Rosett scaffolding, GT 24 and VT girders and steel walers.



The 4.55 m high working platform at the North entrance of the Marina Bay Sands Tower 3.

PERI UP Rosett scaffolding has been used with the GT 24 girders and steel walers to create the working platform.



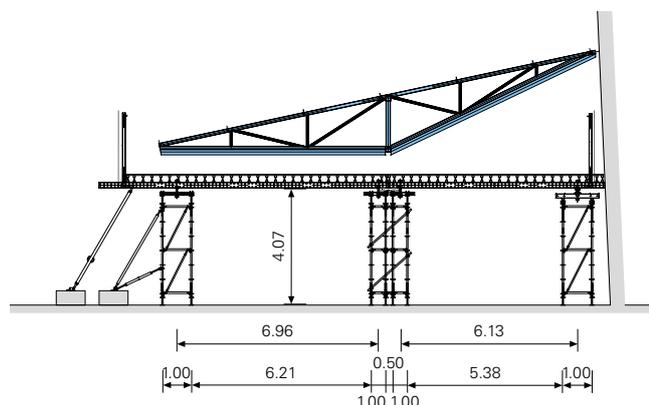
**Contractor**  
Prime Structures  
Engineering Pte. Ltd.  
**Field Service**  
PERI ASIA Pte. Ltd.,  
Singapore

**Rajarajan Moovendan,**  
**Planning cum Site Engineer:**  
"The PERI UP Rosett was a fast and very easy to use system especially with the `gravity lock` feature. My men could also learn how to use it very quickly."

At the North entrance of the Marina Bays Sands Tower 3, a canopy was being constructed since February 2011. The project required the contractor to provide safe access to people and vehicles while the construction work was being carried out within the vicinity of the hotel.

To meet this requirement, the contractor opted to use the PERI UP Rosett scaffolding in combination with GT 24 girders and steel walers to erect a working platform in front of the entrance of the hotel. The platform had a height of 4.55 m high and an area of 285 m<sup>2</sup>

(15 m x 19 m). A PERI UP Rosett mobile scaffold with a maximum working height of 2 m and a PERI UP Access Staircase was also used by the contractor to carry out their work.



A cross section of the of the 285 m<sup>2</sup> working platform.

# Speed and quality finish for project in Vietnam

The Azura, Da Nang, Vietnam



**Main contractor**  
Tan Ky Construction Corp. (TAKCO), Vietnam  
**Sub-Contractor**  
HACT Construction, Vietnam  
**Field Service**  
PERI ASIA Pte. Ltd., Singapore

**Nguyen Tan Loi,  
Site Manager:**

**“We are extremely satisfied with PERI formwork and scaffolding systems as we were able to work safely, faster and always achieve good concrete quality.”**



A 34-storey high luxurious residential apartment in the making.



The contractor was able to achieve a 5 to 6 days cycle per floor with PERI's formwork systems.

Located in Da Nang in central Vietnam next to the Han river, a 34-storey high luxurious residential apartment known as The Azura is currently being constructed within the World Trade Center Da Nang complex. Construction work began in December 2009.

When completed in the first quarter of 2012, the building will have a height of 178 m and it is just the first of sev-

eral high-rise buildings that will be built in the development. Although Tan Ky Construction is working with PERI formwork systems for the first time, they are extremely satisfied with the formwork solution and the performance of the chosen systems. These include the VARIO GT 24 formwork systems for walls and columns, the CB 240 Climbing System for core walls, ST 100 Stacking Towers,

MULTIFLEX and MULTIPROP Systems for slabs of the building.

Tan Ky Construction is able to achieve a 5 to 6 days cycle per floor which surpasses their initial plan of 6 to 7 days. They also feel they could accomplish even faster results in good weather.

The Azura building is being constructed and sits just next to the Han river in Da Nang, Vietnam.



# PERI – The Service Provider

## We offer more than just products

The broad range of PERI equipment and systems offers the perfect solution for every requirement. However, the PERI range of services goes far beyond production and system equipment sales and rental.



### Technical solution

Due to their in-depth understanding of the needs of our customers, our engineers are able to develop the best project-related solution. The services include, if required, static calculations as well as assembly plans for special formwork. Although 90 % of all formwork project requirements can be covered using standard equipment from the broad PERI product range, a special construction is, however, sometimes more cost-effective – and it is exactly here that the engineers apply their expertise with great effect.



### Logistics

PERI has the world's largest rental equipment pool and supplies its customers reliably, fast and with a high level of flexibility. "Just in time" deliveries and return deliveries – according to the particular construction schedule.

For very large material requirements, the local team works closely with other logistic locations thus ensuring an optimal delivery service to the construction sites.



### Onsite support

PERI formwork instructors provide an extensive professional briefing onsite. This means that any improper handling is avoided and the risk of accidents is greatly reduced. Using the systems even more efficiently accelerates the construction progress.

### Training

Our training programme includes both seminars with specified content and individualised courses. In so doing, we support our customers by enabling them to find out about the latest formwork and scaffolding technologies for more efficiency and to be able to pass on this knowledge.



The illustration featured in this brochure are photographs taken at a particular time on a construction site. This is why the safety details shown cannot be considered as final.

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**PERI ASIA Pte. Ltd.**  
No. 1 Sims Lane #06-10  
Singapore 387355  
Phone +65 6744 2989  
Fax +65 6744 3693  
pha@periasia.com  
www.periasia.com

# PERI showcases productivity-enhancing system formwork to Ministers

BCA Academy, Singapore

The National Productivity and Continuing Education Council (NPCEC) was set up and tasked by the Singapore government to improve productivity in the construction industry.

Deputy Prime Minister Teo Chee Hean who chairs the NPCEC visited the BCA Academy on 15 October 2010. He was accompanied by Minister in the Prime Minister's Office and Second Minister for Finance and Transport Lim Hwee Hwa, Senior Minister of State for National Development and Education, Grace Fu and other senior executives from the BCA.

PERI formwork systems such as the SKYDECK, GRIDFLEX, PERI UP Rosett and TRIO were amongst the various productivity-enhancing products in the construction industry that were show-cased to the DPM and his entourage.

A range of PERI formwork systems on display during a ministerial visit at the BCA Academy.



PERI Formwork Instructors doing a demonstration of the SKYDECK Aluminium Panel Slab Formwork for the VIPs.



Deputy Prime Minister Teo Chee Hean (centre) and Minister in the Prime Minister's Office and Second Minister for Finance and Transport Lim Hwee Hwa (right).



In 2010, the Singapore government was looking at ways to upgrade the skills and capability of our workforce and to improve the productivity of the construction industry.

To actualise the above targets, a \$250 million incentive funding scheme known as the Construction Productivity and Capability Fund (CPCF) was launched and made available to construction companies, SMEs and sub-contractors.

The CPCF covers three key areas: Workforce Development and Skills Upgrading, Technology Adoption and Capability Building.

Under the umbrella of Technology Adoption, funding can be obtained through Mechanisation Credit (MechC) and Productivity Improvement Project (PIP).

PERI's range of formwork systems have been known to help construction

companies increase their productivity and safety. As such, contractors and sub-contractors who purchase or lease PERI formwork systems, may be able to get funding from the above two schemes under Technology Adoption.

For more details, please call the CPCF hotline at 1800-325 5050 or visit the BCA website at [www.bca.gov.sg](http://www.bca.gov.sg).

# Fast – Safe – Flexible GRIDFLEX Aluminium Grid Slab Formwork



## Fast

The standard field is formed using only three system parts: elements, plywood and prop. The easy to handle parts and a element weight of 9.5 kg/m<sup>2</sup> simplify the forming process.



## Safe

The girder grid design of the GRIDFLEX automatically forms an accessible working area which provides a high level of safety when laying the plywood sheets.



## Flexible

The telescopic function provides a flexible two-dimensional adaptability in both transverse and longitudinal directions with the elements.



**PERI ASIA Pte. Ltd.**  
**Formwork Scaffolding Engineering**  
No. 1 Sims Lane #06-10  
Singapore 387355  
Phone +65 6744 2989  
Fax +65 6744 3693  
pha@periasia.com  
www.periasia.com