



## Lasco Japan Co., Ltd.

Headquarter / Factory 190-1 Kondo, Bessho-cho, Miki city, Hyogo 673-0451 JAPAN  
TEL 0794-86-0081 FAX 0794-86-2806

Yokohama Office Sumishin Shin-Yokohama No.2 BLD., 3-18-14, Shin-Yokohama,  
Kohoku-ku, Yokohama city, Kanagawa 222-0033 JAPAN  
TEL 045-534-6814 FAX 045-534-6782

Sendai Office 102-3 Shinmyou, Nakano-aza, Miyagino-ku, Sendai city,  
Miyagi 983-0013 JAPAN  
TEL 022-794-8631 FAX 022-794-8632

[www.lasco.jp](http://www.lasco.jp)



**Slopes**  
斜坡



**Hills**  
丘陵地



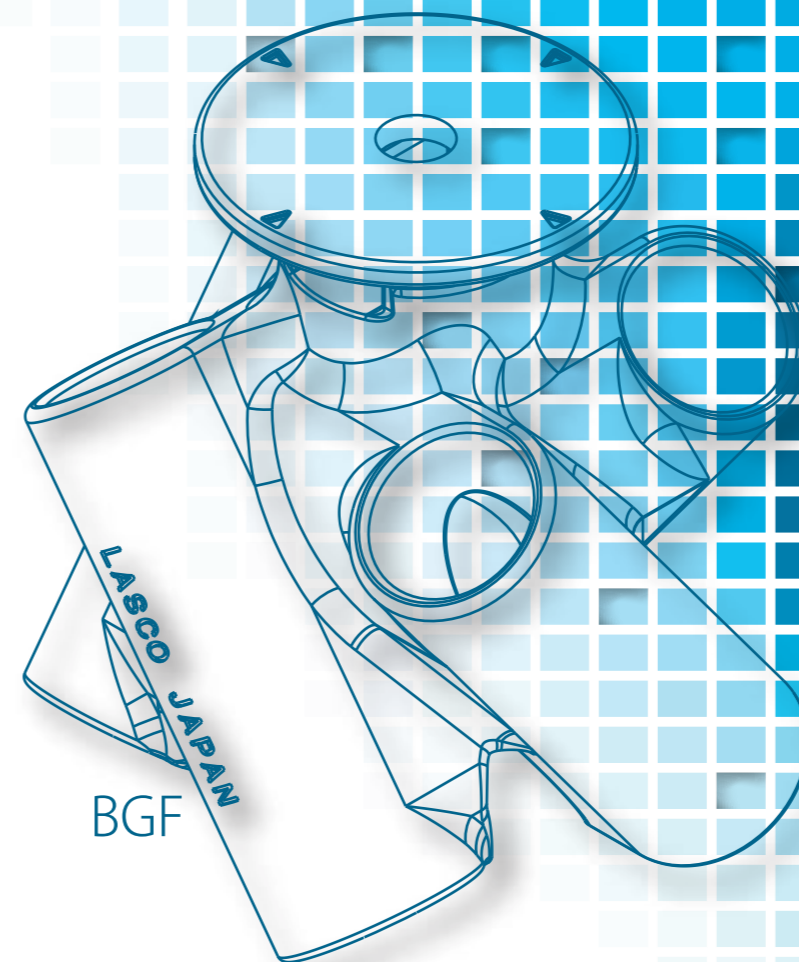
**Soft Grounds**  
鬆軟地基



**Without Heavy Equipment**  
重型機械難以進入地點



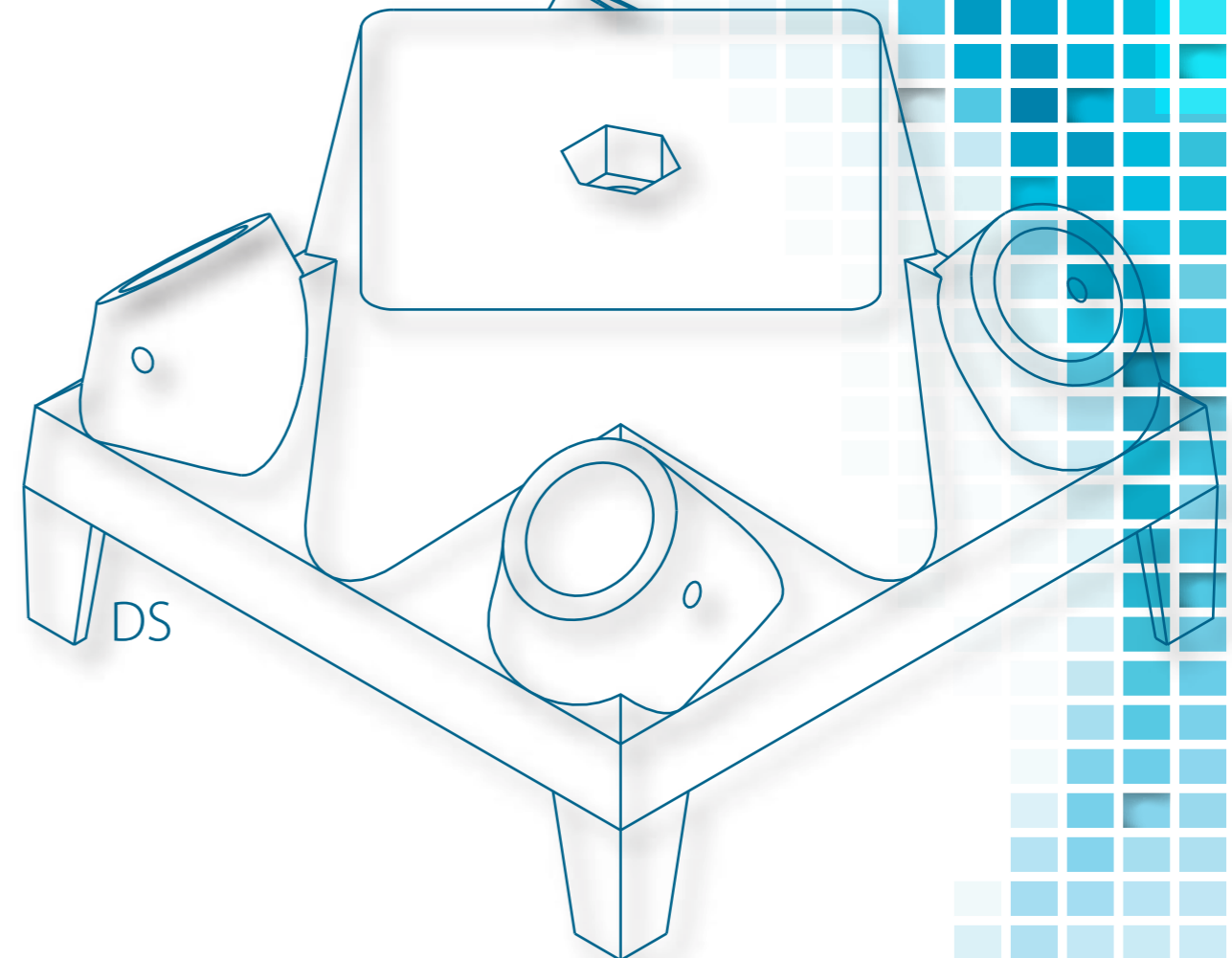
**Large Scale Projects**  
大規模太陽能發電



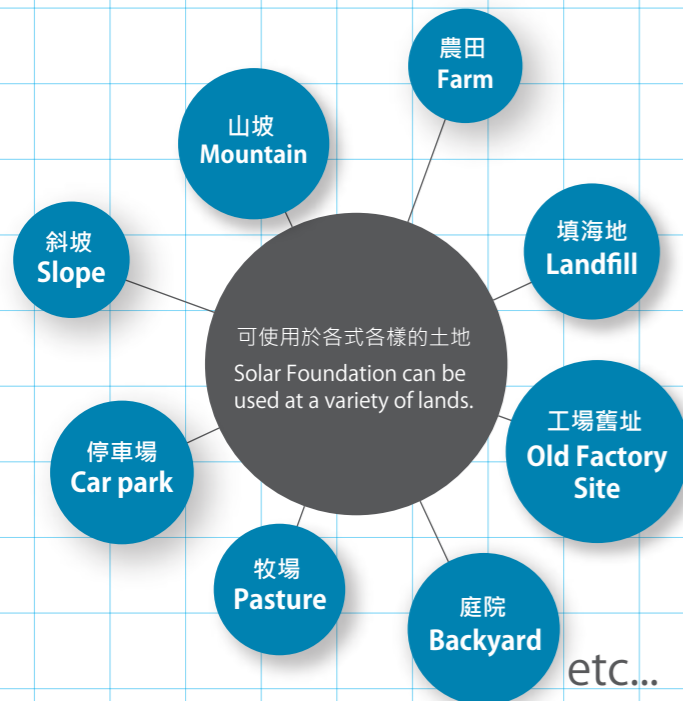
BGF

# SOLAR FOUNDATION

地面型太陽能發電用基礎



DS



Solar Foundation為固定的太陽能板塊與 4 根鋼管所組成。鋼管的長度會因地基的狀況與支架的反作用力不同而有所調整。以斜角設置在土中的鋼管就像樹木的根一般。因此比一般直打入地面的地錨，更能發揮較高的強度。

Solar Foundation consists of one fixing block and four steel pipes. The length of the steel pipes depend on the ground conditions and the reaction force of the mounting system. The steel pipes, which are diagonally driven into the ground, work like roots of a tree. Therefore, Solar Foundation is much stronger than a vertically installed anchor.



Solar Foundation可適用於各式各樣的支架。



也有製作可對應其它廠商支架的連接零件。



可以根據太陽能板的角度，支架的高度，擺放位置的組合需求來設計支架。

We can design a mounting system in accordance with your requirements such as panel angle, frame height, and array combination.

Solar Foundation can flexibly respond to various mounting systems.

We can offer custom-made fittings for other company's mountings.

## 太陽能發電用支架 Mounting system for photovoltaic application

# SOLAR FOUNDATION

防颱能力佳  
面對颱風而有著驚人的承受度

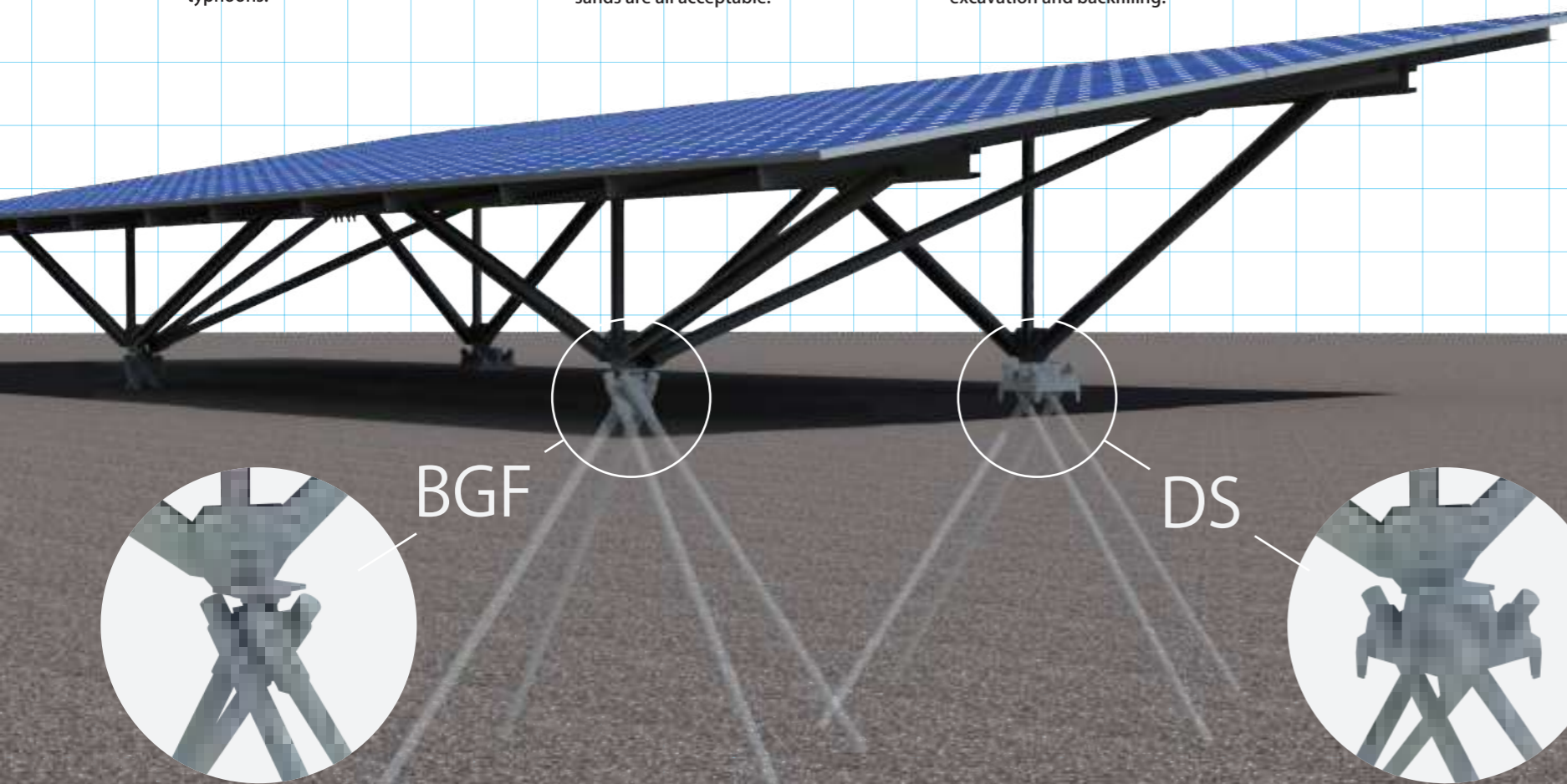
Strong against typhoons:  
It is extraordinarily strong against typhoons.

設置地點不受限  
鬆軟地基、斜坡、沙地等等

Applicable to various grounds:  
Soft grounds, steep slopes, and sands are all acceptable.

工期短  
不需地基改良、開挖、回填

Fast installation:  
No requirement of soil improvement, excavation and backfilling.



BGF

DS



\* 我司的工程團隊將會根據JIS標準來設計支架與計算結構。因此需了解設計風速，地基狀況等資訊。

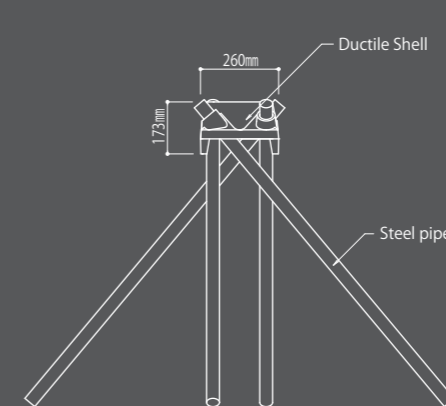
Our engineer team would properly design and calculate our mountings complying with JIS. We need the information about the design wind speed and the soil condition.

\*\* 太陽能發電設置地的地基工程通常會花費較多成本與時間。但Solar Foundation 不需地基工程即可設置。

The site preparation for a photovoltaic power plant is usually time and cost consuming. But Solar Foundation could be installed without any preparation works.

\*\*\* 使用手持的電動工具即可進行Solar Foundation 的設置。

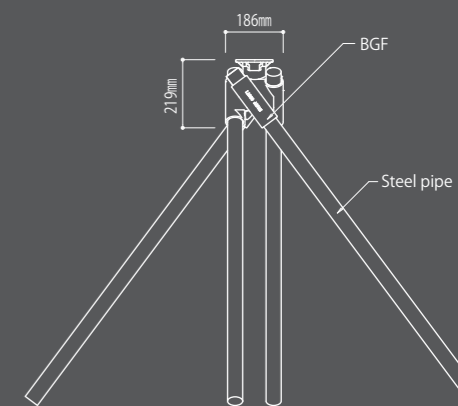
Solar Foundation can be installed with a handheld power tool.



DS (Ductile Shell)

重量：11kg  
材質：DS ... Ductile  
鋼管 ... STK400 (熱浸鍍鋅)

Weight : 11kg  
Material : DS ... Ductile iron  
Steel pipe ... STK400 (Hot dip galvanizing)



BGF (Base Ground Foundation)

重量：8.5kg  
材質：BGF 零件 ... 鑄鋼  
鋼管 ... STK400 (熱浸鍍鋅)

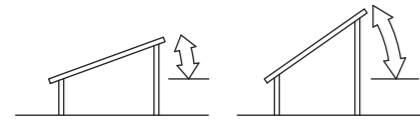
Weight : 8.5kg  
Material : BGF ... Cast steel (Hot dip galvanizing)  
Steel pipe ... STK400 (Hot dip galvanizing)

\* BGF 施工法擁有自一般財團法人日本建築綜合試驗所 (GBRC) 所取得的「建築技術性能證明」。  
The BGF construction method has received the "Certificate for Building Technology Performance" from General Building Research Corporation of Japan (GBRC).

\*\* 鋼管的長度會根據負重與地基條件而有所調整。  
The pipe length is determined by the load and the soil conditions.

模組的設置形式 Installation forms of modules

1. 模組的安裝角度 Mounting angle of solar modules



模組的設置形式  
Any angle is available to produce.

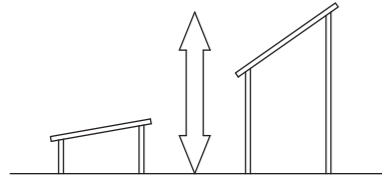


安裝角度5°  
Mounting angle: 5°



安裝角度20°  
Mounting angle: 20°

2. 支架的高度 Height of solar arrays



可自由設定  
Any height is configurable.

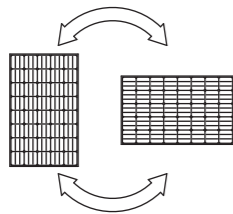


距離地面較近的施工案例  
Height near to the ground level



在柱子下方保留空間的施工案例  
The case of using long posts to make a space

3. 橫放·直放 Placing solar modules vertically or horizontally



兩種都可製作  
Both directions are available to produce.

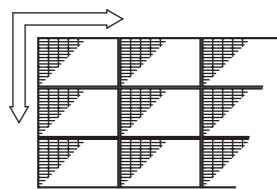


橫放  
Vertical pattern



直放  
Horizontal pattern

4. 行數·列數 Number of lines and rows



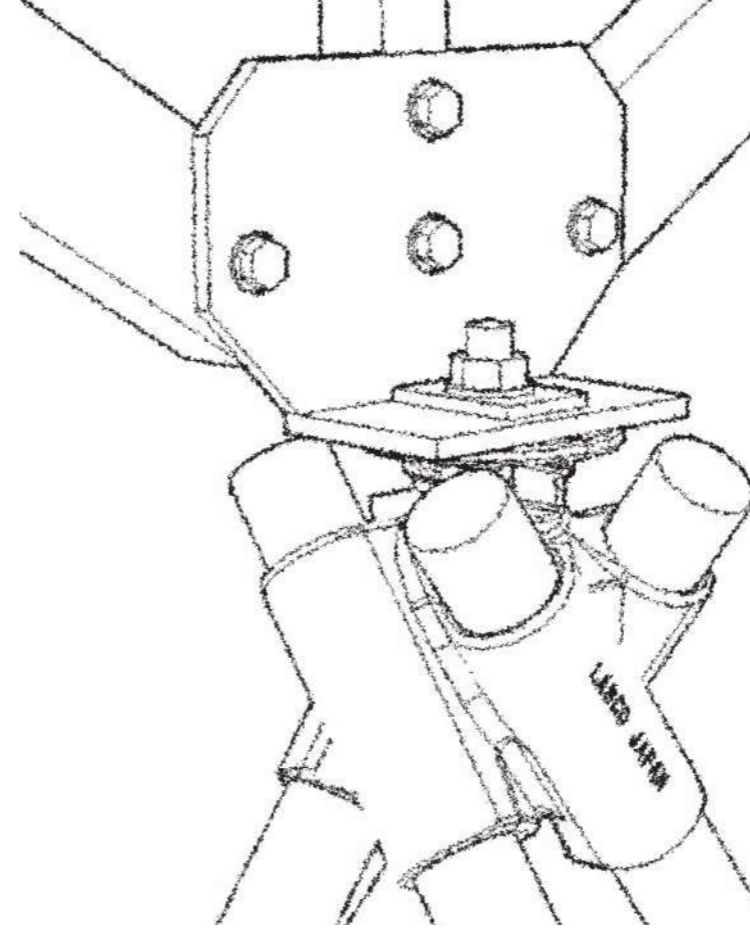
可自由設定  
Any numbers are configurable.



行數5  
5 rows pattern



行數10  
10 rows pattern



工程實績  
Construction results

- CASE 1 斜坡  
Slopes
- CASE 2 丘陵地  
Hills
- CASE 3 鬆軟地基  
Soft Grounds
- CASE 4 重型機械難以進入地點  
Places where heavy equipment can't approach
- CASE 5 大規模太陽能發電  
Large Scale Projects



Project: Torikai-ura Place: Hyogo prefect., Japan

傳統建設太陽能發電系統的施工法，會使用重型機械施工，以地錨與水泥來建設基礎工程。但簡易基礎施工法的「Solar Foundation」不需使用重型機械。此基礎施工法可對應各種各樣的地盤，且可靠人力施工。不論發電系統的大小，均被使用在各式各樣的場所，並都獲得良好的評價。

下一頁將介紹至今為止工程實績的一部分。

In order to construct solar power plants by conventional methods like using piles and concrete foundations, it is necessary to make grounds flat by using heavy equipment.

But "Solar Foundation" is one of the simplest method to make foundations. It has been highly evaluated because it can adapt to various grounds and it doesn't require any heavy equipment when installing.

It has been used in many places not only small places like a backyard or a car park but also large scale solar plants.

CASE 1 斜坡 Slopes



Project: Sanda-city

地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



Project: Slopes at a car park

地點：京都府・日本  
Place: Kyoto prefect., Japan



Project: privately owned land

地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



Project: Tarumi-city

地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



Project: Ai-Ai Baseball park

地點：滋賀縣・日本  
Place: Shiga prefect., Japan



Project: Toyooka-city

地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



CASE 2 丘陵地 Hills



Project: Takahari-city  
地點：岡山縣・日本  
Place: Okayama prefect., Japan



Project: Akaiwa-city  
地點：岡山縣・日本  
Place: Okayama prefect., Japan



Project: Takashima-city  
地點：滋賀縣・日本  
Place: Shiga prefect., Japan



Project: Goshiki-town  
地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



Project: Uji-city  
地點：京都府・日本  
Place: Kyoto prefect., Japan



Project: Nanbu-town  
地點：鳥取縣・日本  
Place: Tottori prefect., Japan



CASE 3 鬆軟地基 Soft Grounds



Project: Shimonoseki-city  
 地點：山口縣・日本  
 Place: Yamaguchi prefect., Japan



Driving steel pipes



Project: Yamatokoriyama-city  
 地點：奈良縣・日本  
 Place: Nara prefect., Japan



Project: privately owned land  
 地點：岡山縣・日本  
 Place: Okayama prefect., Japan



Install columns after mounting foundations

CASE 4 重型機械難以進入地點 Places where heavy equipment can't approach



Project: Kume-country  
 地點：岡山縣・日本  
 Place: Okayama prefect., Japan



Project: Toyohashi-city  
 地點：愛知縣・日本  
 Place: Aichi prefect., Japan



Hard to approach because of narrow road



Project: Ohno  
 地點：兵庫縣・日本  
 Place: Hyogo prefect., Japan



CASE 5 大規模太陽能發電 Large Scale Projects



Project: Akune-city

地點：鹿兒島縣・日本  
Place: Kagoshima prefect., Japan



Project: Takarazuka-city

地點：兵庫縣・日本  
Place: Hyogo prefect., Japan



Project: Nasu-city

地點：栃木縣・日本  
Place: Tochigi prefect., Japan



Project: Narita-city

地點：千葉縣・日本  
Place: Chiba prefect., Japan



Project: Uji-city

地點：京都府・日本  
Place: Kyoto prefect., Japan



Project: Koumi-town

地點：長野縣・日本  
Place: Nagano prefect., Japan



Project: Noda, Demizu-city

地點：鹿兒島縣・日本  
Place: Kagoshima prefect., Japan



Project: Satsumasendai-city

地點：鹿兒島縣・日本  
Place: Kagoshima prefect., Japan



# INSTALLATION PROCESS

工程順序



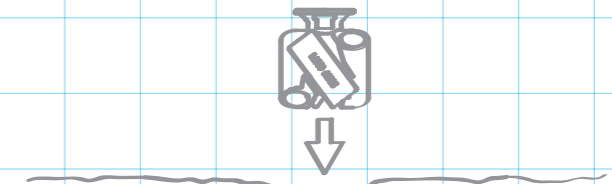
**01** 搬入建材  
Carrying in Materials



**02** 測量基礎位置  
Surveying



**03** 調整高度  
Leveling



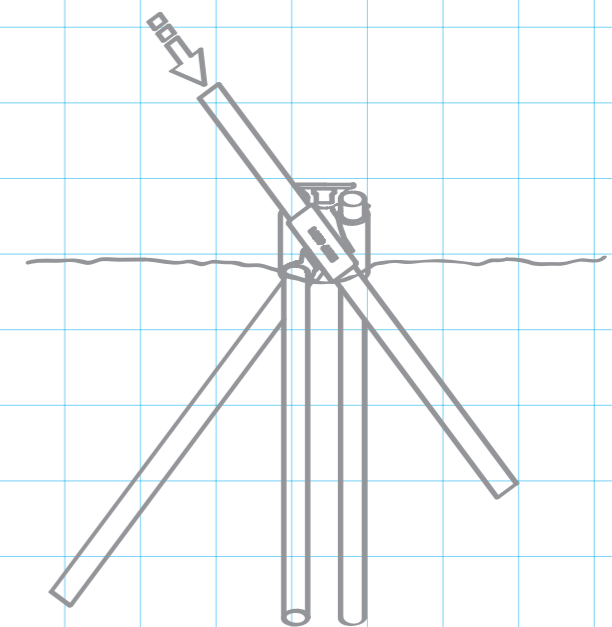
**04** 釘入鋼管  
Driving Steel Pipes



**05** 基礎設置完成  
Completion of Foundations



**06** 安裝柱腳零件  
Installing Brackets



**07** 支架組裝  
Assembling Mountings



**08** 太陽能板安裝  
Fixing Solar Panels



**09** 完成  
Finish!

