



CITF PA19-027

PLT 300 Layout System



PLT 300 PRODUCT INTRODUCTION

Applicant Name:

Hilti (Hong Kong) Limited

Product Name:

PLT 300 – Layout System

Specification :



- Core Functions:
 - Automatic stationing the full jobsite layout integrate with BIM objects
- Technology Used:
 - Digit robotic total station
- Construction Process involved:
 - Full jobsite layout
- Key Improvement in Construction Process:
 - Productivity
 - Self-levelling mechanism
 - Auto stationing capability
 - Green beam for increased visibility
- Job Reference:

Specification	PLT 300
Single measurement accuracy	3 mm @ 50m (ISO 17123-5)
Measurement range	1.5m – 100m
Targeting distance	100 m
Layout distance	50 m
Angular working range	HZ: 360° V: 225°
Environmental Rating	IP 55
Operating temperature	-20°C to + 50°C
Battery / Operating Time	B22 2.6 / 5 hours
Communication Type	WiFi 802.11 a/b/g
Auto tilt compensation range	± 5°
Guidelights	Red / green integrated
Laser	Class II green
Camera	5x optical zoom 10 fps video transmission
Weight	5.3 kg

Project Name	Type of project	District	Extent of adoption
West Kln Gov Office	ASD	Yau Tsim Mong	Overhead application
HK Science Park Expansion stage 1	Private	Tai Po	Overhead application
Kuo To Shan Residential Project	Private	Tai Po	Overhead application
Macau Airport Fire Station	Gov.	Macau	"BIM to Field" execution



PLT 300 INNOVATIVE FEATURES

- **Core Technology:**
 - Full jobsite layout using 2D and 3D CAD data
 - Point layout using CAD data
 - Easy and accurate arc layout
 - 1 person layout and measuring
 - Green beam laser for high visibility point layout, even in bright conditions
 - Integrated with BIM objects for Hilti consumables
- **Comparison with current practice and popular models:**
 - Trimble RPT600 Station
- **Comparison with similar Pre-approved list products and competitors:**
 - Trimble BIM 放樣機器人 RTS771

First Launch Date: Apr 2018
Awards (if applicable): NA

Productivity

- **Advanced Layout vs Traditional**
Methods: Up to 100 points per day with traditional layout. Up to 500 points per day with advanced layout.
- **Quickest setup:** One button press to turn on, self-levelling and automatic stationing.
- **Powerful capability:** Work with large DXF/DWG files: 20+ MB.

Ease of Use

- **No need for data preparation:** take the DXF/DWG file and use it directly without creating or selecting points
- **Easy on-site modifications:** Stakeout intersections, corners and anywhere on a DXF&DWG file
- **Clearest layout:** Everything you need on one screen
- **Onsite training and technical support**

PLT 300 ADOPTION EXAMPLE

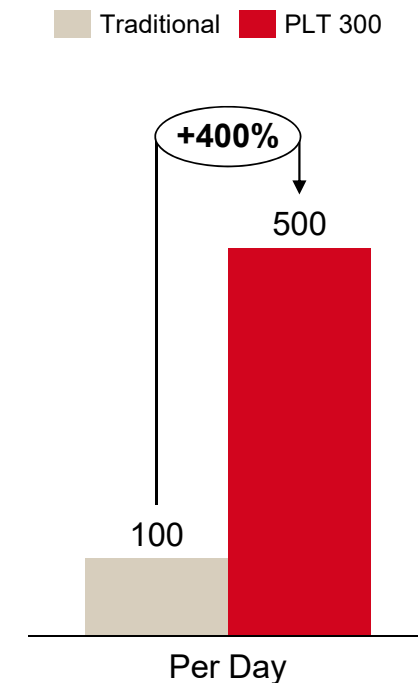
- Project for Illustration: East Kowloon Cultural Center, 2020
- Work Process: In the layout process (Measuring)
- Use/ Function in project:
 - Plotting layout and setting out in excavation work
 - As-built area calculation for amendment
 - Integrate with CAD file to achieve “BIM to Field”



BENEFIT – PLT 300 PRODUCTIVITY

- Improve productivity by:
 - Improved efficiency
 - One-man operation
- Traditional Output:
 - 100 layout points per man-day
- Output by PLT 300:
 - 500 layout points per man-day
- Total Saving in Man-days:
 - 400 points & 1 labor
- Total Saving in Project Period:
 - Supposing 5000 points in 1 project
 - Traditional Output cost: 50 days (5000 points ÷ 100 points by traditional) x 2 labor (\$1000per day) = \$100,000
 - PLT 300 cost: 10 days (5000 points ÷ 500 points by PLT 300) x 1 labor (\$1000 per day) = \$10,000
 - Improvement : 90% saving cost

Output Differences



Cost Differences

