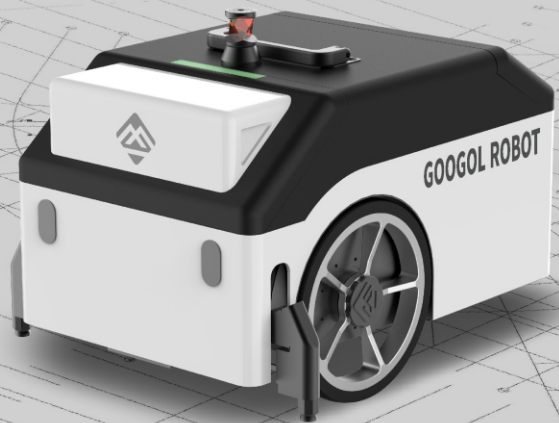


GOOGOL ROBOT

Manufacturer of
millimeter-level
marking robots for
100-meter scenarios



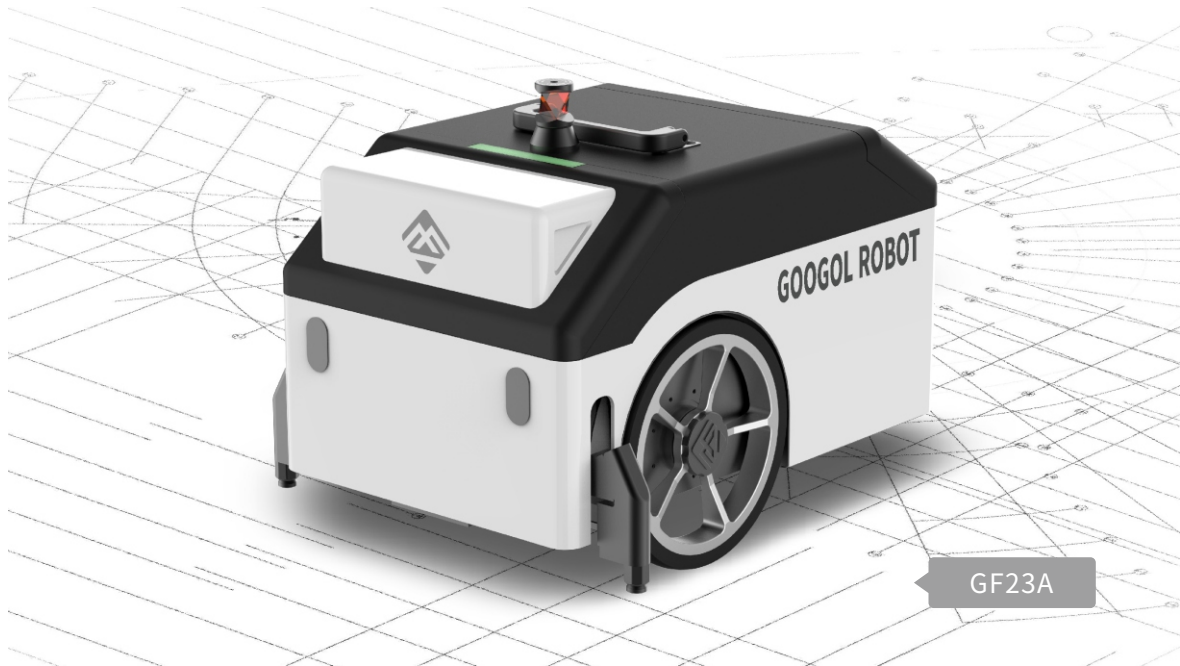
Founded in December 2020, Hunan Googol Robot Co., Ltd. specializes in millimeter-level marking robots for hundred-meter scenarios. Leveraging its outstanding product capabilities and independent core patented technologies, the company has successfully launched two star products: Layout Marking Robot and Football Field Marking Robot, and has expanded into scenarios such as heavy industry manufacturing, shipbuilding, as well as exhibition hall layout planning. Among them, Layout Marking Robot has won the honors of 'Hunan Provincial Industrial New Product' and 'Landmark Innovative Product,' demonstrating the company's technical strength and innovation achievements.

Widely recognized in the industry, the company has been awarded the title of "2023 Top 50 Leading Real Estate Technology Enterprises in China" by KPMG and has been selected as a key supported enterprise in the equipment manufacturing sector of Changsha's Smart Construction Industry Base. In collaboration with China Construction Fifth Engineering Division Corp., Ltd. (CSCEC), the company has established the 'CSCEC-GOOGOL Robotics Joint R&D Center' to deepen the integration of technological research and development with application practices.

In 2024, Layout Marking Robot has successfully entered the international market, ranking among the top globally in terms of competitiveness. Adhering to the mission of "creating precise, reliable, and highly adaptable millimeter-level marking robots for hundred-meter scenarios," Googol Robot is committed to make marking robot in hundred-meter scenarios more efficient and precise, striving to become the leading enterprise in this field globally.

GOOGOL ROBOT

LAYOUT MARKING ROBOT



Product Presentation

Layout Marking Robot is an intelligent construction equipment that can automate the task of marking out construction layouts. It is mainly applied to the marking tasks in the fields of electromechanical installation, decoration installation, main structure, and other scenarios in the construction industry. This robot utilizes millimeter-level high-speed motion coordinate tracking and positioning technology to achieve high-precision marking within a 60-meter operating radius of $\pm 2.5\text{mm}$. By importing and automatically analyzing construction CAD drawing files through a tablet PC, it can automatically plan the marking path. Its efficiency is particularly remarkable for complex and irregular marking tasks such as curves and oblique lines.

Efficient Operation

Simple operation
Automatic execution

Reliable Accuracy

High speed motion accuracy $\pm 2.5\text{mm}$

Stable Performance

Not afraid of high temperature
Endurance up to 4h

Active Obstacle Avoidance

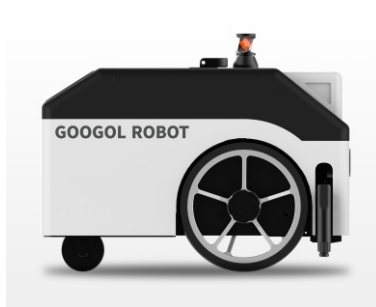
Lidar real-time detection

Product Parameter (The third-generation machine)

| | |
|------------------------------------------------------------------------------|-----------------------------|
| Working accuracy: 60m \pm 2.5mm (360° prism/LN-160 laser) | Operating speed: > 1.5km/h |
| Inkjet mode: Needle inkjet / Thermal bubble inkjet | Working radius: < 130m |
| Character printing: Font height 50mm, Support Chinese、English and numbers | Job temperature: -10~55°C |
| Applicable ink: Water-based ink, black, red two colors | Job mode: Dynamic job |
| Endurance: >4h Replaceable battery (24V10AH) | Control hardware: Tablet PC |
| Size: 435mmx280mmx290mm(prism-free) | Total weight : 16.5KG |



front



flank



behind

The significant advantages compared to the second-generation machines:

- 11.5kg lighter and smaller in size
- High-speed electromagnetic valve controls inkjet printing, with negative pressure ink supply
- Compatible with different color inks
- Improved efficiency and accuracy in curved operations
- Compatible with both Chinese and English characters, as well as numbers in printing
- Remote automatic software upgrade

Nozzle optional

◆ Needle inkjet (standard configuration)



- Unique needle-type inkjet technology, suitable for concrete ground.
- Low requirements for ground cleanliness, no need for vacuuming. The ink lines are clear and distinct, and the ink marks do not easily disappear after being stepped on.
- The minimum distance from the wall marking is 20 millimeters, which can meet the needs of almost all line segments in the construction field.



Punch-type concrete ground special ink

- Available colors: black, red
- Net content per bottle: 200ml
- Length of lineable per bottle: > 2km
- Suitable environmental temperature: 5°C - 40°C

◆ Thermal bubble inkjet (standard configuration)



HP cartridge (water-based ink)



- Suitable ground: permeable ground
- Optional colors: Black, Red, Blue
- Single line drawing length: 2km
- Working temperature: 5°C ~ 40°C

HP cartridge (solvent-based quick-drying ink)



- Suitable ground: smooth ground
- Optional colors: Black, Red, Blue
- Single line drawing length: 2km
- Working temperature: -25°C ~ 42°C

Applicable scenario



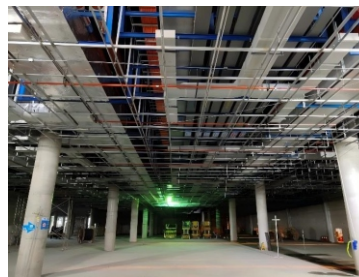
Layout marking for decoration and renovation structure arrangement



Main structure layout
(for non-small-sized residential units)



Layout for secondary structure construction

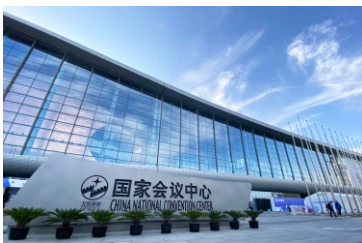


Installation, positioning and layout of mechanical and electrical pipelines



Ceiling installation, positioning and marking

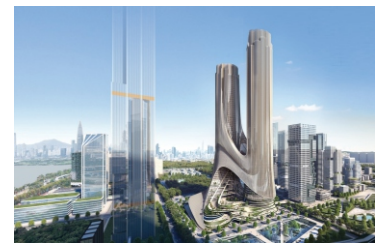
Application Case



Beijing National Convention Center Phase II project



Shanghai Grand Opera House Project



Shenzhen Bay Super Headquarters Base C tower project



Hong Kong Kai Tak New Acute Hospital Project



Changsha International Convention and Exhibition Center project



Nantong Haimen District Hospital of Traditional Chinese Medicine new hospital project

Honor and Qualification



Cooperative Partner



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